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My Life and Experiences

BY

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TO MY PARENTS

To whose affectionate care in my early life I owe everything I was able to achieve in later years

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Photograph of Delegates Attending the Joint-Session of the Indian Academy of Sciences and National Academy of Sciences. *facing page 332*

Group Family Photograph *facing page 358*

PREFACE

IT affords me great pleasure to write this brief Preface to the autobiography of my esteemed teacher and father-in-law, Professor Mohammad Abdur Rahman Khan, retired Principal Osmania University College.

In fact, for several years, I was persistently persuading him to publish these Memoirs, but every time he was giving evasive replies and postponing the issue, as he is the last man to try to step into limelight. At last my labours were crowned with success through the good offices of my friend, Mr. R. V. Pillai, who has rendered a notable service in printing this interesting and instructive autobiography. He is intimately acquainted with Prof. A. R. Khan, and is moved by a genuine admiration for him.

A perusal of this instructive life provides lessons for the guidance of present and future generations of this country. At the moment, when the world is drifting towards a crisis, threatening to engulf civilization, the writings of Prof. Khan provide an object lesson to avoid another world conflagration.

It would be superfluous to comment in this Preface on his life-work, which is so clearly described by himself in the autobiography. But I may venture to point out some considerations on which his modesty forbade him to dwell.

The advancement of University education in Hyderabad is undoubtedly due to his zeal, patience and perseverance. The scores of books in the Translation Bureau, the hundreds of trained scholars in the country, and the unique buildings of the University, are a permanent and outstanding testimony to the work he has rendered quietly and unassumingly all his life. He has been undoubtedly instrumental in raising the reputation and status of the Osmania University, and his students and admirers have turned to him time after time for guidance and inspiration.

After fifteen years of severance from active participation in the work of the University, he is still busy writing books during the day, and gazing at the stars during the night. His energy is not 'meteoric,' but is unfailingly persistent. His enthusiasm for scientific research and literary pursuits is a consuming fire which can never be extinguished. It seems that his most prominent attribute is his capacity for mental work, beyond the ordinary standard of human achievements, as he possesses a variety of endowments—a facile pen for several languages, and ability to acquire proficiency in whatever branch of learning he might apply his mind to.

His achievements in various fields of work have earned for him an international fame, as may be judged by the compliments paid to him by eminent scholars of Europe and America.

In his personal disposition, the pervading characteristic is his universal sympathy, genuine fellow feeling, free from the remotest approach to narrowness of mind or bigotry. His virtues, strength of character, self-

sacrifice, devotion to duty, may serve as models without exaggeration. Having set up a high ideal of righteousness for himself, he is often impatient of any departure he may rightly or wrongly notice in others; but like a true citizen of the world, he prays to God for their amelioration. He tries to live a truly scientific life. During epidemics, he takes every possible precaution to avoid infection; perhaps it is for this reason that he is still hale and hearty and can ride a bicycle for miles at a stretch, inspite of the remonstrance of his relatives and friends. However, these oddities and idiosyncracies are insignificant in comparison with his other sterling qualities.

In the main, it would be no exaggeration to say that his life has been an epitome of the social and academic history of the Osmania University, as well as a faithful record of his previous experiences. His story moves in a glow of tragedy and triumph. I quote here a few lines from an English version of an Urdu poem entitled: 'Mohd. Abdur Rahman Khan,' by a gifted poet of the Osmania University, the late Sahebzada Mohd. Ali Khan Maikash, in his book 'Laments and Smiles.' He says:

"In Thine eyes there is a sparkle of true Vision.
In Thy heart the radiance of Mount Sinai;
Thou art like the Kohe-Nur Diamond among the
precious stones of the Deccan."

"The hem of thy garment is as magnanimous,
as the rain cloud of munificence.
Thy foot-prints unfailing guides for us in the path
of life."

"Thou hast lost in the battle of life, but so nobly as
to prove thy real victory.
In championing the cause of Right, Thou hast trampled
under thy feet the mischief wrought by Wrong."
"Thy zeal and ardour reveal aspiration for fulfilment
of aspiration;
Thy company is a pyrotechnic display of learning
and scholarship."

I have quoted these verses, not by way of a panegyric, but because I hope that many a young man may learn from them what may be done in the course of a single life, to develop and improve one's own character and attainments, for there is a higher element and a more positive lesson in this record of life spent in the service of one's country and in the pursuit of knowledge.

Begumpet,
May 16, 1951

Mirza Mahmood Ali Beg
B. A. (Hons.) London
Hyderabad Educational Service

Copy of a letter from Sir William Barton,
British Resident, Hyderabad - Deccan

The Residency, Hyderabad,
March 11, 1928.

Dear Mr. Abdur Rahman Khan,

Very many thanks for your letter and copy of your report. The report is very interesting. I think your deputation must have had excellent results. You covered a great amount of work in a very brief period.

It was a great pleasure to have the opportunity of seeing so much of you on board the Ranpura.

With best regards,

Yours sincerely,
WILLIAM BARTON.

Copy of letter from Sir Joseph Larmor, Sc. D., F. R. S.
Late Lucasian Professor of Mathematics in the University of Cambridge.

HOLYWOOD,
NORTH IRELAND.
March 12, 1940.

To
Principal A. R. Khan.

Dear Sir.

I have read with much interest the valuable report on the Zodiacal light which you have kindly presented to me. You bring out some significant facts new to me, the shadows flitting along it and the Zodiacal band. I had written a paper connecting it with analogies of Saturnian rings and of cometary bodies, but have put it aside until a civilized world of peace is regained. It is not so long ago that the Solar System with its very precise Newtonian relations furnished the main problems of Astronomy. Now it has wandered away into nebulous regions which otherwise would not have tempted exact exploration.

The tone of your memoir puts me in mind of the classical Arab Astronomy of ancient times which I hope will have opportunity to revive.

Very faithfully,
JOSEPH LARMOR.

Would the Zodiacal band arise from greater concentration in depth along the direction of the observer's motion on the Earth?

Copy of Air Mail letter from Dr. Philip Wernette, President, The University of New Mexico, U. S. A.

(Received on 31st October, 1947)

OFFICE OF THE PRESIDENT,
ALBUQUERQUE.
October 21, 1947.

Professor Mohd. A. R. Khan,
President, Hyderabad Academy,
Begumpet, Deccan, (India).

Dear President Khan,

The Research Associateships in the Institute of Meteoritics of the University of New Mexico are complimentary appointments made in recognition of individual contributions of outstanding importance in the field of meteoritics. Appointees to these positions will be listed as honorary members of the staff of the Institute of Meteoritics: and will be accorded the the research and publication facilities provided by the Institute.

The Director of the Institute of Meteoritics has informed me that in recognition of your important personal contributions to meteoritics as evidenced by your numerous publications on this subject and by your indefatigable activity as an observer and investigator of meteoric and meteoritic phenomena, an invitation to become a Research Associate has been extended to you and is met with your acceptance. I therefore take great pleasure in transmitting to you at this time official notification of your appointment as a Research Associate of the Institute of Meteoritics of the University of New Mexico.

Yours sincerely,
PHILIP WERNETTE.
President.

Copy of a letter from Major-General J. N. Chaudhuri, O.B.E.

Military Governor's Residence,
Bolarum, (Deccan)
October 26, 1948.

My dear Sir,

Thank you very much for the reprints of some of your more recent scientific papers which I received the other day. It was extremely good of you to remember and I am most grateful to you. The subject matter is of considerable interest to me.

I apologise for the delay in acknowledging your letter but as you know I have been away on tour and also to the neighbouring provinces.

Yours sincerely,
J. N. CHAUDHURI.

Mohd. Abdur Rahman Khan Esq.
Retired Principal, Osmania University College,
Begumpet, Deccan.



MOHD. ABDUR RAHMAN KHAN

CHAPTER I

EARLY LIFE AND FAMILY HISTORY

I WAS born on 5th October 1881 in a house in Mukhtar Ganj, a northern suburb of the City of Hyderabad. My ancestors belonged to the orthodox Maulawi class and lived originally at Ghazni in Afghanistan. Haji Abdul Ghani Khan, my paternal grandfather's paternal great-grand-father, was a saintly man, who left Ghazni for pilgrimage to Mecca via India. Travelling right down to Madras he set sail to Jiddah in the Pilgrim's ship. On returning to Madras from his pilgrimage of the Holy Cities, he was invited by his disciples to stay at Arcot (then a flourishing city under a Muslim Nawab). There he married in a prosperous and well-connected family of Arab (Ansari) extraction.

On the downfall of Arcot, Haji Abdul Ghani Khan's son, Abdur Rahim Khan and grandson, Mohammed Khan (with a few other relations) took up service with the British Government and joined the Indian army, rising in due course to the highest ranks then available to Indian officers. They came over to Hyderabad on retirement. My grandfather Dawud Khan practised for a time as Yunani Hakim, but shortly afterwards entered the service of H. H. the Nizam's Government as an officer in the newly formed First Cavalry Regiment conducted on the Silahdari system, and contributed

much to the success of the system by purchasing a considerable number of Silahdaris himself and persuading others to do the same.

Later my father, Mohd. Nazar Ali Khan followed his example and was held in great esteem by the entire military department on account of his superior knowledge and clear exposition of military tactics, having published a number of useful manuals on the subject in Urdu.

While the family was living at Chadarghat my youngest uncle, Mahmud Khan in his boyhood entered the City High School (opened some years previously by H. H. the Nizam's Government in the new scheme of public education). A good student, proficient in English he was appointed a cadet in the Third Lancers Regiment and rose in due course to the rank of Lieutenant Adjutant, retiring finally at the close of his career, as a major, commanding the Fourth Infantry.

Another uncle of mine named Abdullah Khan died in the prime of his youth leaving a daughter about four years old. Her mother dying soon after the child's birth, the luckless infant was brought up by my mother (being at the time childless) and became later a good student of domestic economy and Persian. (A maternal uncle of my grandfather, Moulawi Husain Mohiuddin was a scholar of great learning in Persian and Arabic and a poet of some renown both at Arcot and Hyderabad Deccan. He left his library of Persian classics to my father, and my cousin and I made full use of it as we grew up.)

My mother came of a strictly religious family of well-to-do Khaishgi Pathans, who had also hailed from

Arcot after a brief sojourn in Mysore. I was only five when my mother died, but remember enough of her sweet temper and loving nature towards her adopted daughter and myself—in fact towards all her own and her husband's relations. She suffered from chronic illness (not correctly diagnosed in those early days of scant medical knowledge, as to whether it was tuberculosis or scrofula ; but she bore her hard lot heroically, for she had lost no less than seven children (six male and one female) before they were a year or two old. I was the last and under the circumstances naturally a great favourite with my parents and grand parents.

Some years after my mother's death my father married his young sister-in-law, who bore him two daughters and two sons. I was generally looked after by a widowed paternal aunt—a strict disciplinarian, but kind and sympathetic at heart like David Copperfield's aunt Betsy Trotwood.

I had the advantage of receiving a sound training in classical Persian at home. Maulawi Ilah Dad Khan, a cousin of my mother's was a great scholar of Arabic and Persian, and living in retirement from government service, very kindly helped me to master many of the classics at an early age.

Before I was five years old my father put me in a newly opened kindergarten school (with Maulawi Mohibbe Husain as head master who became in later life a great pioneer of female education in Hyderabad). I owe much to the Maulawi Saheb for his brilliant method of instruction through play. The school was soon merged into the Madrasa-i-aliya (Nobles School with H. P. Hodson M. A. (Cantab) as Principal at the time), to

serve as its Primary department. One of the rare good features of the school was its collection of mineral and petrological specimens, stuffed birds, with charts of astronomical and geo-physical phenomena. I was a silent observer and admirer of these objects. One phenomenon, prominently displayed in a map—a shower of meteorites, possibly that of Pultusk, 1868 made a profound and life long impression on me.

By double-promotion I soon joined the Madrasa-i-aliya, the Middle and High school section of the Nizam College. In the fourth form I read the rudiments of Arabic grammar and language. J. W. Edwards, a Eurasian master was in charge of English, mathematics and history and was a gifted teacher. A great Persian scholar Maulawi Abdul Ali Waleh, taught us Persian. After passing the middle school examination in the first class I was introduced to Physics and Chemistry. S. Andrews a B. A., B. Sc., of the University of London, taught us these subjects. Without hesitation I say that it was Prof. Andrews' teaching that captured my heart in favour of Experimental Science. Poor though our school laboratory was, even from the standard of those early days and the text books H. E. Roscoe's Chemistry and Balfour Steward's Physics Primers every experiment was successfully demonstrated and produced a firm impression on my mind, so much so that I delighted in reading by myself at home Ira Remsen's Chemistry, Wilson's Inorganic Chemistry and Ganot's Introduction to Natural philosophy (a non-mathematical resume of the bigger treatise on Physics), D. E. Jones' Heat Light and Sound and the same author's Examples in Physics.

I was a fairly good athlete and won several prizes for high jump, long jump, 100 yards flat race, hurdles race, a quarter mile race and putting the weight. I learned to swim afterwards and practised Indian gymnastics at home, encouraged by a maternal uncle of my father, a man of splendid physique, notwithstanding his advanced age.

Early in 1898 I entered the first year class of the Nizam College (after matriculation from the University of Madras), the subjects of study being English, Persian Greek and Roman History, Mathematics (comprising Euclid, Algebra and Trigonometry of a fairly good standard). We had the choice of Physiology or Physiography. Regular provision was available for the study of the former subject, but I chose the latter as it ensured a continuation of some Physics and Chemistry along with an introduction to Geology and Astronomy, subjects leading to field-work and observation of heavenly bodies, which I was delighted to indulge in. In my private study of these subjects I was helped by Prof. Andrews. A great calamity soon befell the College, as Andrews died in the summer vacation of 1898 from an attack of typhoid and I had to wait till the second term of 1899 before any tutorial help could be obtained from the new Professor. Dr. Aghornath Chattopadhyaya, who was the first Indian to get the D. Sc. degree (in Chemistry) from the University of Edinburgh.

It is a matter of national regret that Dr. Aghornath's life was literally wasted in Hyderabad. A favourite pupil of Crum-Brown, Hope Prizeman, Baxter Physical Science Scholar and a gifted teacher of Organic Chemistry, he was first appointed Principal of the

Hyderabad College. For some reasons this College was abolished and its classes were transferred to the Madrasa-i-aliya which was elevated to the status of a College under Principal Hodson. The building was unsuited and the equipment inadequate. Still the College struggled on and made steady progress. By way of compensation, Dr. Aghornath was provided for with an appointment of equal or nearly equal salary as a member of the Government Board of Education. He soon got out of touch with Scientific laboratory work altogether but his genius as a scientist and man of original ideas remained untarnished. At Andrew's death when the Professorship of Science fell vacant at the Nizam College, Dr. Aghornath received orders to take charge of it. Had the College been affiliated to the University in Higher Chemistry (designated as Branch II. B) and an adequately staffed, well-equipped laboratory existed at the College, the arrangement would have been an ideal one (except for loss of prestige of Dr. Aghornath). As it was, under the existing circumstances, it was impossible for Dr. Aghornath to feel at home in his new surroundings.

In December 1899 I passed the F. A. Examination of the University of Madras and joined the B. A. Class. Prof. P. H. Sturge, M. A. (Cantab) was Vice Principal and Professor of History. He had been bracketed first in first class at the Economics Tripos and was an exceptionally good teacher. I was much tempted to take up History and Economics as my optional subject in his class; but my old love of Experimental Sciences compelled me to go over to the Science side, though I knew very well that it was not very popular at the

time. All the same I started working with a zeal and, earnestness I had never displayed before, but such is the irony of fate, my father died suddenly of heart-failure only a few weeks after my joining the B. A. class ! The whole world looked gloomy, and although my father had left some little property, there was no cash to meet our immediate expenses, my uncle very kindly came forward to relieve us of our immediate difficulties and helped to represent our case to the kind consideration of Government. At last my father's long and meritorious services were appreciated by Government, and through the good offices of a maternal uncle, several of my father's old friends and the then Financial Secretary (Nawab Imad Jung Senior) a scholarship of fifty rupees a month was sanctioned for me for two years.

Thus relieved from immediate want I applied myself with redoubled vigour to my studies. For want of proper guidance in physics at the College I availed myself of the use of a valuable work just then published by Longmans, Green & Co., Dr. W. Waton's (larger) Text-book of Physics. I found it after my own heart ; but it covered a course somewhat more advanced than that required by Madras and was less descriptive. Like a fanatic I clung to it and let the Madras syllabus take care of itself. For Chemistry as a subsidiary I followed Newth's Inorganic Chemistry and for practical work in qualitative chemical analysis the well-known Owens' College Junior Course. Applied Mathematics (confined only to Statics and Dynamics) was covered by Loney's Elements.

In those days degree examinations (whether involv-

ing practical work or not) were held in Madras and "mufassil" students had to go there to try their luck. Myself with two other Muslim candidates from the Nizam College found free lodgings at the house of a friend of my father, in Royapettah, our cook from Hyderabad looking after our meals and mess arrangement. It was at Madras only that I saw the sea for the first time one evening—a sight never to be forgotten.

December is a month of rains in Madras. During the days of our examination we had a typical cyclone. The city streets were actually flooded with water and we had a practical demonstration of the philosophy of local people going about bare-foot in the most fashionable quarters, from the meanest pedestrian to the owner of the costliest brougham! Some days after the examination in second language subjects we had to face the examination in optionals. All went well with me until the night before the examination in Advanced Physics (two papers carrying the highest marks). That night I had a most virulent attack of diarhoea. By 3 a. m. I almost collapsed and asked one of our Hyderabad companions to wire to my relations at home that I was passing away! It was raining cats and dogs; all attempts to reach a telegraph office ended in failure. By 8 a. m. however, I revived (thanks to the relief provided by my companions and the people of the house), and weak as I was, insisted on going to the examination. With difficulty I was put into a hired carriage and reached the examination hall, more like a spectre than a living human being, the questions set were quite decent and in normal circumstances I could have given

a very good account of my knowledge, but physical weakness pulled me down, and by the close of the day I had barely enough strength to hire a carriage and return to our lodgings. During the rest of the examination period I felt somewhat better, but I missed a first class and had to be content with a high second in my optional subject. My knowledge of classical Persian got me the first place in first class in the second language section. In English language and literature I had not aimed at achieving anything higher than a mere pass and got what I had tried for.

In 1901, only three candidates graduated from Hyderabad in the B. A. examination, so I was congratulated by all my relations, friends and well-wishers on my success. Mr. (later Sir) George Casson Walker was the Assistant Minister of Finance at the time. In response to a letter from him to Mr. E. A. Seaton (then Principal, Nizam College) to send him a graduate with a sound knowledge of Urdu to be trained as an unpaid probationer, I was recommended in appropriate terms and at once took up my duties at the Finance office: writing in English, abstracts of cases submitted to the Assistant Minister. After a few months Mr. Walker went away to England on a long leave and his scheme for the appointment of a graduate in training fell through.

It must be remembered that in those days the H. C. S. examination system (started some years earlier) had been held in abeyance for an indefinite period, there was provision for award of scholarship for higher studies in Europe and British India, but at the time I finished my College career, only influence without any regard

to academic qualifications counted for success. All the same my application for a European scholarship was strongly supported by the entire Educational department from the College Principal, the Director of Public Instruction, the Home Secretary to Government, the Assistant Minister of Education but nothing came out of it. In the meanwhile the two years for which my scholarship of Rs. 50 per mensem was sanctioned came to an end, and I had to look out for appointment wherever I could find a chance.

Curious as it may sound it was in this period of unemployment that I indulged in the grand luxury of voracious reading: Higher Mathematics, Astronomy, Muslim History and Modern English Literature. At last after a temporary employment in the Educational section of the Home Secretariat I got appointed as Assistant Lecturer in Science at the Nizam College, entirely through the kind offices of my old teacher and Principal, Mr. E. A. Seaton. My duties were somewhat arduous, I had to maintain discipline among the Madrasa-i-aliya boys (who had got somewhat out of control during my predecessor's time), be in residence at the school boarding house and teach physiography to the first and second year College students besides helping in the demonstration and practical work of the B. A. classes in Physics and Chemistry. Any such thing as systematic reading for a higher examination was out of question but I had excellent opportunities for general reading.

Soon afterwards a University Commission from Madras inspected the College. Member of the Commission-in-charge of the Science side finding the laboratory

inadequate disaffiliated the College in B. A. Science work. So Dr. Aghornath was placed on the Persian list and I was put in charge of the entire department (without increase of salary or allowance). It was during this time that I picked up Organic Chemistry and put up practically all the apparatus described in Newth's Chemical Lecture Experiments. I regret to say these experiments contributed only to the childish delights of the school boys without rousing in them a desire for scientific inquiry. To be frank, Science in those early days was much despised and scientists were regarded more as jugglers and entertainers than exponents of the Divine Laws of Nature.

After my appointment at the Nizam College the elder of my two sisters got married to Mohd. Rejalullah Saheb, an assistant in the Mahallat (Palace) Hospital, and was living a happy life. Dr. Rejalullah's people were well-known in our neighbourhood, as his uncle was regarded as a saintly man with a number of well-to-do disciples. My other sister was married to a young mansabdar (Sarfekhas Department) without much knowledge of English but a courteous and kind-hearted young man, named Mohd. Azizuddin Khan. The elder of my two brothers, Abdur Rahim Khan was a very popular student at the Madrasa-i-aliya and gained distinction in football, as the strong centre-forward of the College and School first eleven. My youngest brother Abdul Karim Khan was quite a beginner at this time, reading in the primary forms of a local school.

The Musi floods of September 28, 1908, wrought havoc in the City and suburbs, killing about 20,000

people in one night and rendering an immense number homeless. My rented house also collapsed, but just a few minutes earlier we managed to vacate it with the help of my gallant brother Abdur Rahim Khan and servants lent by a Rajah friend of mine. My sister, Mrs. Azizuddin Khan, living closer to the river, lost most of her valuables, but escaped unhurt with her husband, and his relations. This calamity she could have borne lightly, but her health was also undermined. Never very robust, within a couple of years she developed galloping consumption and died. Her death came as a sudden blow to me. I felt I must leave India, by way of a change, if not permanently, at least for a couple of years. But the College authorities would not let me avail myself of the leave on private affairs I was entitled to (of course on half pay), as there was no one else to look after the Science Department. Correspondence was going on for the appointment of an Englishman as Professor of Science, till then I had to carry on the existing classes.

The advent of Halley's Comet in 1910 gave me a further impetus to study Astronomy. I had translated into Urdu some chapters of Sir John Herschel's Outlines of Astronomy and, guided by the information published in Nature on Astronomical Topics, was a regular observer of Planets and Meteors.

In the spring of 1911, B. C. McEven, a young Science (Chemistry) graduate of the University of London (1st Class Honours in B. Sc.), with strong recommendation from Prof. Sir William Ramsay, was appointed Professor of Science. I was promoted to the

grade of an Assistant Professor on a fair increase of salary and succeeded eventually in getting two years leave for higher studies in Europe, one year on half-pay and the next on no pay.

CHAPTER II

MY FIRST VOYAGE TO EUROPE

I SECURED a second class berth on the P. and O. Mantua that left Bombay on Saturday the 22nd April, 1911. Luckily B. C. McEwen also obtained permission to spend three months summer vacation in England and we became fellow passengers.

On board the ship I was introduced to an entirely new life, radically different from the one I was accustomed to in Hyderabad. The majority of the passengers were of course English (men, women and children). There was an appreciable number of Indians also, the most important among them being the Maharajah Gaikwar of Baroda, (to whom I was presented along with other Indian passengers by his household tutor, Mr. Desai, after some days). Nawab Imadul Mulk Bahadur (Mr. Syed Husain Bilgrami), retired Director of Public Instruction, Hyderabad Deccan, who knew me well, was a member of the Council, Secretary of State for India, and was travelling by the same boat. Mr. Desai, Roop Narayan (a law student from Delhi), and Sitaram Kooriah a Punjabi piece-goods merchant proceeding on business to Manchester, were my constant associates on board the ship. Mr. Desai turned out to be a friend of Mr. D. K. Hardikar, at that time Professor of Mathematics at the Nizam College, and naturally evinced great interest in Hyderabad. From

the well-stocked library of the Maharajah he lent me a number of books to read when time hung heavily after promenading on the deck and lounging.

The voyage was very pleasant and I made observation on every thing new that attracted my attention. Some of the facts here noted may be considered trivial but curiosity had induced me to enter them in my diary. It will surely do nobody any harm to read them.

(1) *Saturday*, 22nd April. Passengers had to go in auxiliary boats to the steamer anchored at some distance from the pier. Very refreshing breeze; hardly any one on board showed signs of home-sickness. After a good tea we lounged on the deck, watching the grey shore melting gradually into invisibility. In the evening the wind blew somewhat strong. Later, the green phosphorescence of the sea water produced a fine colour effect when the movement of the ship caused white air bubbles and foam to mix promiscuously with the water.

(2) *Sunday* 23rd April. At 1 p. m. by the steamer clock, a notice was put up on the main deck, giving the ship's position as in Long. 67°.13′. Lat. 17°.28′. Distance run from Bombay 334 miles. Distance to Aden 1324 miles. (A similar notice was put up daily at the same hour).

Saw a number of large porpoises following in the wake of the ship in "leap-frog" style.

(3) *Monday*, 24th April. Sea very smooth. Long. 60°. 10′. Lat. 15°. 47′. Distance run during past 24 hours 418 miles. Distance to Aden 906 miles. Played quoits in the afternoon. The sea was most beautiful, a bright

meteor shot down to the south east, in the early part of the night.

(4) *Tuesday*, 25th April. Wrote some letters for posting at Aden. Struggled through a French newspaper lent by a man attached to the Maharajah of Baroda's retinue. Very hot in the day, no breeze. At night Polaris appreciably low in the sky.

Long. 53°.11″ Lat. 14°.28″. Distance run 412 miles. Distance to Aden 494 miles.

(5) 26th April. At 1 p. m. the notice announced: Long. 46°.30″. Lat. 13°.1″. Distance run 399 miles. Distance to Aden 95 miles.

At 5 20 p. m. reached Aden. Did not get down to the port. Uninviting scenery, rocky and barren coast, scorched view all round. Marconi Telegraph Station a prominent sight. Fresh breeze started towards evening. Watched moveable tanks bringing in fresh water for the ship. Shallow gulf, sea-gulls in plenty. Left Aden at 8-30 p. m.

(6) 27th April. Early in the morning the African coast came into view, also an island with a light-house. Deck cricket played mostly by youngsters. Sea rather billowy. 5 or 6 ships passed till 1 p. m. Long. 42°.6″. Lat. 14°.55″. Distance run 260 miles. Distance to Suez 1048 miles.

(7) 28th April. No land was visible till 12 noon. Two ships were sighted. Long. 38°.45″. Lat. 20°.28″. Distance run 382 miles. Distance to Suez 664 miles. Cricket match between second saloon and first saloon passengers. Flying fishes in the sea. Saw P. and O. Egypt pass by. British flag on the Mantua held half-

way up the mast. Strong breeze in the evening developed into a cold northerly wind; atmosphere somewhat cloudy.

(8) 29th April. Fine morning, but no sun visible. Cool fairly strong breeze. Passed two ships. Low foundation light-house. Long. 35° 20. Lat. 25° 44. Distance run 368 miles. Distance to Suez 296 miles. Sky cleared up in the afternoon. African coast discernible in the distance like a long line of greyish clouds. Lovely sunset, turning the colour of the African hills into greyish blue, somewhat akin to that of the sea-water. Coast on the Asiatic side came gradually into surrounding view. Revolving light from the light-house in the the gulf.

(9) 30th April. Early in the morning the Egyptian coast appeared fine silvery grey in the west. Finally Suez came into view. There was a roll-call and medical inspection of passengers, and the ships crew had their beds carried for disinfection. Boats carrying the Egyptian flag (displaying a large crescent and star in the centre with a narrow rectangle in one corner) came round in numbers. Desai was jubilant to see the Egyptian officers in authority over the ship at roll-call. The Asiatic coast and the African hills appeared to be of stratified limestone and marl. Water of the canal shallow and of yellowish-green colour. Passing through the canal had a view of the old and new town of Suez. Gare de Geneffe close by. Notice announced the distance from Port Said to be 79 miles. Passed a British ship. All ships ordered to go with a speed of only one mile an hour. Canal Service boats and dredgers were

at work. After leaving Suez it looked as if the path lay through an old shallow lake.

(10) 1st May. Reached Port Said; saw a numbers of French and other steamships in the harbour. We were not allowed to land to see the Port, owing to a suspected case of plague on board the ship having got down at Aden; and the ship had to stop in the harbour the whole day (by way of quaranteen, perhaps), its passengers listening to the doubtful music of polyglot songsters and songstresses plying their trade in small boats, and watching agile Arab boys diving in the water after pennies and other coins thrown by sporting loungers on deck.

De Lessep's statue a modest tribute to engineering enterprise, put us in mind of the world-wide effects of healthy co-operatian between scientific genius and sound capitalism—what a contrast to the modern abuse of scientific invention and waste of natural and artificial sources of energy !

(11) 2nd May. Nothing particular to note. Long. 27° 36. Lat. 33° 24. Distance run 278 miles. Distance to Marseilles 1236 miles.

(12) 3rd May. Sea rather rough, cold strong wind; felt somewhat indisposed. Kept thinking of the proud old days of Muslim supremacy in the Mediterranean from the 8th to the 16th century. Long. 20° 59. Lat. 35° 53. Distance run 359 miles. Distance to Marseilles 877 miles.

(13) 4th May. Ship entered the strait of Messina. Italian coast visible at 8 a. m.—Reggis on the Italian side and Messina on the Sicilian side making the most picturesque view so far beheld. Left the strait at

11 a. m. Saw a large water-spout at 12 noon near the Italian coats, wind perceptibly cold (curious boats with a man standing upright in each, holding on to a mast rising from the middle). During this part of the voyage I could not help thinking of the Aghlabid conquest of Sicily completed in 902 when Ibrahim II. took Tauramina and reduced the country round Jabal-al-Nar (Mount Etna).

The Lipari Islands came later into view. Between and 2 p. m. passed Stromboli. The volcano was feebly active coulds of vapour being ejected from the crater and swept away from the eastern to the western side of the huge rock. Long. 15° 30. Lat. 38° 30. Distance run 323 miles. Distance to Marseilles 554 miles.

(14) 5th May. Passed by Sardinia first and then Corsica, through the strait in between the two islands. Long. 9° 26. Lat. 41° 18. Distance run 328 miles. Distance to Marseilles 226 miles. Much headache at lunch time.

(15) 6th May. Arrived at Marseilles early morning. Wondering with what feeling Khairuddin must have surveyed the sea-port when his fleet of 50 ships entered the harbour in 1543 at Francis I's invitation. Walked up to Notre-Dame de la Garde that commands the entire sea view; saw from there Chateau D'if going over scenes from Dumas' Count of Monte Cristo in imagination. B. C. McEven had formed his own company and I was free to roam about as I liked. The first thing I did was to send a cable to an old pupil of mine Abu Sayeed Mirza in London, then studying for the Bar to meet me at Victoria.

In the city I bought picture post-cards and a book of

French-English conversation. Girls in shops were very gay, chatty and courteous. I purchased later a cold luncheon basket of roast fowl and refreshments to serve on the P. L. M. train next morning. Went sight-seeing later, up and down the city by tram, finding a poor knowledge of French no great impediment to getting on fairly pleasantly in France, if one is prepared to risk a little cash! I had a counterfeit coin slipped into, my hand with small change at a jolly provision vendor's, but this I realised too late.

My boots at the time happened to be of Indian make of a peculiar style then much in fashion in Hyderabad, the upper part all woven from strips of leather, to keep the feet cool. It was a hot day at Marseilles, a Frenchman passing by looked at them admiringly, and with "Pardon Monsieur" actually touched them to feel what stuff they were made of and whether they were of English design or Indian. I explained to him in English helped with much gesticulation and a sprinkling of French words at my command that the design was Indian. Whether he comprehended all this or not I do not know; but he went away complimenting the boot trade of India.

In the afternoon I went back to the station for reservation of my seat and luggage. As the train was not going to start for Paris before 8-10 p. m. I spent some time at the Cafe Athenian close by. A Dutch "guide" from a neighbouring hotel, volunteered to show me in a brief motor-trip some of the gayer quarters of the city (like la Canebiere, so extolled by Dumas) and helped me to run through a fair amount of English gold coin. These self-recommended guides are a great nuisance in

European cities and must be avoided always even at the risk of being considered rude. After a good dinner however I returned to the station at the time appointed for the Paris Express to start. B. C. McEwen also returned in time and we travelled in the same compartment, and were glad to feel every stroke of the engine take us nearer to good Old England.

(16) 7th May. We reached Paris at 11-30 a. m. and got into Paris Nord Train, without going into the city for sight-seeing. My lunch basket made me independent of restaurant service, and B. C. McEwen telling me that he expected his father (Mr. J. P. McEwen) from London at Calais, we were anxious to reach that sea-port as early as possible. This we did punctually at 3-30 p. m. but Mr. J. P. McEwen was not there. As the boat for Dover was soon to start we got into it at once and, it being an unusually fine evening, feasted our eyes on the beautiful scenery on both sides of the Channel as the boat reached near its middle.

We arrived at Dover in the evening before dusk. Here also we missed B. C. McEwen's father so he was naturally anxious as to what could have happened to prevent his coming over. Afterwards we found that he unfortunately missed his boat. The train reached Victoria at 8 p. m. (being late by some 50 minutes). Abu Sayeed Mirza and his brother Mr. Ahmed Mirza received me cordially and I accompanied the former to his lodgings at 91 Wood Lane W. while B. C. McEwen took a taxi and drove to his father's at 9 Northbrook Road S. E., promising to write soon.

CHAPTER III

VACATION LIFE IN LONDON

Next day (Monday, the 8th May) I went out with Abu Sayeed Mirza through St. James's Park, Hyde Park, Trafalgar Square, finally to Thos. Cook's main office (at that time located at Ludgate Circus, E. C.). I settled my bank matter with the firm having opened an account before leaving Hyderabad and drew some cash. Abu Sayeed Mirza and his Aligarh friends (Syed Ross Masood among them) had found out a handy tailor (J. H. Greene) in Ludgate Hill and I ordered a new lounge suit at his shop. The whole day was thus occupied. On returning to my lodgings in the evening I wrote to the Secretary, the Royal College of Science, South Kensington, asking for a copy of curricula of studies at the College and an admission form to read for the London B. Sc. Honours Examination.

I had read much about the exceptionally high standard of training open to Science and Engineering students at this celebrated College. Professors H. L. Callendar, John Perry, the Hon. R. J. Strutt, William Watson were well-known to me through their books and published research, so I had almost made up my mind before leaving India to study at this very institution.

The very next day I had an answer from the College

with a copy of its Prospectus and other literature advising me to make a personal call and get into touch with the professorial staff. On Friday the 12th May (after recovery from a slight cold that was troubling me even from Marseilles) I went to the Royal College of Science and was very much impressed by its imposing buildings (the Physics and Chemistry blocks, the Mechanics and Metallurgy department, the Royal School of Mines and the Central Technical Institute or the Old City and Guilds College—all merged into the Imperial College of Science and Technology). The Bessemer Laboratory was not yet started and the Union Society building was just rising from its foundation. The Secretary advised me to read for the Associateship of the Royal College of Science a three-year course and appear for the London University Examinations as an Internal Student; or if I could be excused from attending the first year course I could finish the work in two years but would have to appear as an external student of the University. This was confirmed on personal reference to Professors Sir Edward Thorpe (Chemistry) John Perry (Mathematics and Mechanics) and H. L. Callendar (Physics).

In response to a letter of invitation from B. C. McEwen I went on the 16th from Charing Cross by train to Hithergreen station, S. E., but could not arrive at the appointed time. Mr. J. P. McEwen and his sons had come to receive me at the station, but not finding me went back home, leaving word with the Station Master to direct me to 9 Northbrook Road, Lee (where the McEwen family was then living), on my subsequent arrival. At lunch time I found the entire family,

Mr. and Mrs. J. P. McEwen, Atholl, Miss Vera, Clement and Basil. An old College friend of Basil's Dr. May was also there. We enjoyed a most hearty meal and an all round conversation about India and Europe in general, the University College, London, and the Nizam College, Hyderabad in particular. I was a guest of the McEwens till the 18th of May, going out with Mr. J. P. for long walks to Blackheath and the Greenwich Observatory and conversing about Sir Edwin Arnold's poems and Rudyard Kipling's prose work on India.

B. C. McEwen took us all one evening to His Majesty's Theatre to see Sir Herbert Beerbohm Tree's acting in Shakespeare's Midsummer Night's Dream. On the 18th we went to University College, London, to meet Sir William Ramsay (of Argon, Neon, Krypton, Xenon and Helium fame), but he had left early that day. So I returned to my lodgings in London and went by myself to Gower Street the next day. Dr. May introduced me to Sir William and as I was to specialise in Physics (especially Electricity and Optics) Sir William very kindly took me over to Sir Ambrose Fleming of wireless fame; but he happened to be out, so we called on Prof. Miers, then principal of the University of London. On way back to my lodgings I saw Mr. William Briggs, Principal, Tutorial College, to find out if I could appear straight off at the very next examination of the London Inter. B. Sc., as an external student. This could not be done.

The White City Exhibition at Shepherd's Bush was then in full swing and I had a little recreation there once or twice. I had now moved into 103 Edith Road,

West Kensington. Mr. Syed Ross Masood (grandson of the great Muslim Educationist, Sir Syed Ahmed Khan of Aligarh, then reading for the Bar, after having taken his degree from Oxford) and Mr. Ahmed Mirza were living at the time in the same street (at No. 12) and I called on them on the 20th and had a long talk about the courses of study in Science at the Cambridge and London Universities. I had decided to join the Royal College of Science, London, but the College was closed for the long summer vacation so I took up a course of studies at the Tutorial College with Mr. C. W. C. Barlow in Advanced Mathematics and with Mr. Shepherd in Practical Analytical Chemistry.

On June 1st B. C. McEwen left for India. I saw him off at Charing Cross and later roamed about St. Paul's Cathedral (designed by Sir Christopher Wren in 1675 and completed in 1710 at an estimated cost of £850,000 defrayed mostly by a tax on coal entering the Port of London), Cheapside (of John Gilpin's fame) and their environments. Having now settled down to regular studies in the day and sight-seeing in the evenings, my time was fully occupied. London was a great open book to me. Steeped as I was in Dickensian lore I revelled in visiting the scenes the great novelist has depicted in his Sketches by Boz and other works bearing on London.

On 22nd June, at 8-30 a. m. I went to Trafalgar Square and watched the procession of King George Vth's Coronation from the foot of Nelson's statue, in spite of rain, crowd and scant accommodation. Next day a similar procession was observed passing along the main road from Hyde Park Corner, not far from the

Statue of Achilles, built by women's subscription in honour of the Duke of Wellington. There were grand illuminations that night all over London and I walked up to Piccadilly and Haymarket etc. to see the show. The effect was beautiful, but as night advanced the crowd became very noisy. Happening to pass some of the poorer quarters I was shocked to find large numbers of men tipsy and women drunk!

Tower of London

On the morning of the 24th I went out cycling to see the Tower of London. Passing nearby Tower Hill I could not help thinking of the various unfortunate great persons who were executed there on the scaffold as traitors in the 16th, 17th and even the 18th centuries (like Sir Thomas More, beheaded in 1535, Thomas Cromwell, Earl of Essex 1540, James Fitzroy, Duke of Monmouth 1685 and Simon Lord Fraser of Lovat 1747). It was probably under the influence of these gloomy associations that Dickens put Quilp of the Old Curiosity Shop in this inauspicious locality to ply his disreputable trade.

I spent several hours sightseeing in the Tower—a mass of tall buildings by the side of the Thames, (in charge of a Governor and some quaintly dressed wardens known popularly as Beef-eaters), surounded by thick high battlemented walls shaped like a crude pentagon. Though at one time a royal residential palace its later use as a prison and place of punishment for political sinners has rendered its reputation rather gloomy. I saw the White Tower where Sir Walter Raleigh was incarcerated, the Bell Tower, the Traitors' Gate aud the

Wakefield Tower where the Crown Jewels or Regalia estimated at 3 million pounds sterling value, or perhaps only their replica are usually kept. At present it was announced that the Regalia had been taken out for Royal use during the Coronation.

While passing through the Bloody Tower, and Beauchamp Tower etc. a number of horrible events of past British history were painfully revealed, like the beheading of Anne Boleyn, of the Countess of Salisbury, of Lady Jane Grey, etc. within the Tower itself and the burning of some notable heretics. The corner where the two innocent Princes believed to have been put to death by the order of Richard III was also pointed out. In the armoury I saw in addition to the axe with which Lord Lovat was beheaded and the cut in the block, a number of Oriental and European weapons and armours, (ancient as well as mediæval) among others, two armours of Henry VIII weighing 81 lbs. and 100 lbs. respectively! I saw also the Duke of Wellington's uniform as Steward of the Tower, General Wolfe's cloak in which he died before Quebec, 2 Blenheim drums, several guns from Corfu and a host of other interesting objects too numerous to mention.

Returning home I learnt that Mr. Ahmed Ali Khan, a former pupil of mine now reading for Engineering at Manchester had called and left an invitation card for dinner on the 26th at his place in Oxford Gardens. There I found a number of Hyderabad people (Mr. Khaja Ismail attached to Nawab Sultan-ul-Mulk's staff, Mr. Syed Arifuddin, a state scholar, reading for Engineering and a son of Raja Lalta Pershad). The dishes were

mostly Indian and reminded us of our happy homes in Hyderabad.

Cycling in the heart of London with its tremendous traffic of all descriptions and designs from the lumbering horse-van to the swift motor car and steam-bus, is a most dangerous means of locomotion and must never be attempted by outsiders. In the distant suburbs or the countryside, no doubt, it is a most enjoyable recreation. The following day (12th June) I had to see Mr. Barlow about some mathematical problems at Red Lion Square. It was a fine day and I was tempted to go cycling. Near Holborn, trying to avoid a clumsy motor bus my tyre slipped and I hurt my knee badly. On returning home I found the pain severe and passed a sleepless night. Mr. Ahmed Mirza called next morning and very kindly helped me wash the wound with antiseptics and dress it. Other Indian friends learnt of the accident and inquired after my health. It was indeed very obliging of them. One of the great benefits of residence abroad is the spontaneous growth of fellow-feeling and sympathy—a great factor in the development of character and nation-building.

Generally speaking, my life in West Kensington comprised study at home during the day, the monotony being relieved by meeting Mr. J. P. McEwen once a week (on a Saturday or Sunday) at the offices of Curtis and Harvey, manufacturers of explosives at 3 Grace Church Street, E. C., or at his house at 9 Northbrook Road, Lee, for tea or dinner, a stroll up Blackheath and conversation about education and economics in India with special reference to Hyderabad; or by meeting an Indian acquaintance or old pupil at our

lodgings in the evening. The summer of 1911 was exceptionally bright—in fact the finest and brightest within the memory of the oldest inhabitant of London at that time, and we could go out walking long distances. (Once I went cycling with Mr. Clement McEwen far into the country to distant St. Mary's Cray and back). It was thus that I became acquainted with Mr. Tasadduq Ahmed Khan Shirwani of Aligarh, Mr. Mohd. Yusuf (who became later a Minister of Education in U. P.), Mr. Syed Husain, a brilliant young speaker and a number of other non-Hyderabad Indians in Europe. Many a time Abu Sayeed Mirza, his friend Mr. Singh and I went together after a lunch or tea to the Kew Gardens and admired the flowers in summer bloom there.

On most days I rambled alone round about Kensington and Hyde Park, often visiting the Natural History Museum with its splendid collection of meteorites, the Science Museum in Exhibition Road with its fine ship models and scientific apparatus etc. Occasionally I went to the main building of the British Museum in Bloomsbury, near Russell Square, with its vast collection of rare books and manuscripts, Egyptian mummies (particulary among these being that of a pre-dynastic Egyptian placed in a crouching position, exhibited in the first Egyptian Room, Case A, a dolichocephalic or long-headed man with reddish-tinted hair, preserved with the knees bent to a level with the top of the breast, and the hands placed before the head), and Grecian statues etc. Once (on 15th July) I spent the greater part of the day with Mr. Ahmed Mirza at the London Zoo. In spite of all these recreations and facilities life in lodgings

was very trying from want of family sociability. There was always a feeling of loneliness, so, through the introduction of Mr. and Miss McEwen I went to live (on 22nd July) with Mrs. Fraser, as a paying guest, in her own house at 44 Micheldiver Road, Lee, S. E. Mrs. Fraser had lived with her husband in India a long time ago for a number of years. One of her sons (youngest perhaps), Mr. Edward Fraser was reading for Holy Orders at King's College, London, and a daughter of hers, Mrs. Scarth was living with her husband and little Vera at Manor Park Road near by.

Mrs. Fraser was temperamentally very kind and sympathetic. She talked of her husband's military life in Northern India (under Lord Roberts). Mr. Edward Fraser and I played tennis in the local public garden with several young ladies of Mr. Fraser's acquaintance. My old friends, the McEwens were even more friendly than before. Mr. J. P. McEwen with his business experience in London helped me purchase at the Civil Service Stores an excellent watch for a reasonable price showing marvellously correct time—an indispensable instrument for a student of Science. He introduced me to the Agent of the London and Provincial Bank, Lewisham Branch, and I opened a current and fixed deposit account with the bank, my remittances from Hyderabad being paid through Mr. J. P. In the evening I taught a little astronomy to Miss Vera and she tried to teach me English music, but I regret to say my unmusical ear made me a very indifferent pupil and we had to give up the attempt. Mr. and Mrs. Scarth were also very friendly. I went to meet them at the Greenwich Park to hear the band play on Sundays,

and entertained them with my recollection of young David Copperfield's life at Salem House on Blackheath under the tyranny of Creakle and the doubtful tutelage of James Steerforth. Blackheath is interesting to Muslims as it was there that Manuel Palacologus (one of the last Greek Emperors of Constantinople) was entertained by Henry IV. and his English Court at the beginning of the 15th century when the Emperor visited Western Europe asking for help against the threatening power of the Ottoman Turks.

Time passed happily in this way till the end of July; on the evening of the last day of the month I was taken by Mr. and Mrs. Scarth to a very convivial party connected with a marriage ceremony at Mrs. Brown's in the neighbourhood where I met some nice young ladies of good education from the city. The host and hostess were very hospitable and the society most amicable.

Bad news from home

Next morning came a bolt from the blue in the shape of a letter from home intimating that my sister's husband lay struggling between life and death under an attack of cholera! There was still some hope of his recovery at the time of posting the letter and I clung to it most desperately. My English friends tried to cheer me up by taking me to Grove's Park after a good tea with me at Mr. Fraser's. A couple of days later Mr. and Mrs. Scarth went to Fily and Scarborough for a short change and I saw them off at the London Bridge Station. 7th August being a bank holiday Mr. J. P., Miss Vera and Athol took me to Sir John

Lubbock, Lord Avebury's High Elms from Bromley, and after a good tea in a tea garden near Hay's Common we rested on the bench erected on the spot where William Wilberforce (1759-1833) and William Pitt (1749-1807) sat on a memorable day in 1788 and decided on the Emancipation of Slavery in the British Colonies.

Next morning, however, my home letters broke the news of the death of my brother-in-law; stunned with grief, I ran to my Indian friends in the West suburb of London for consolation and sympathy. Unfortunately they had either left the station for the sea-side or were out on some engagements of their own in the City. On returning home I found a letter from Mr. W. J. Prendergast of the Oriental faculty of the Nizam College saying that he and his daughters had come over from Oxford for a few days and, having put up at Bedford Place, went out walking in search of my residence at Lee (a distance of several miles!); all their attempts to find my house ending in failure they requested me to see them at their lodgings. This I did with Mr. E. Fraser the next day and we had a long conversation about our respective occupations in England and possible complications in European polities arising from the Kaiser's chauvinistic attitude towards France.

Short Trip to Deal

By the following mail I wrote to my uncle at Hyderabad to kindly look after my sister's affairs; her pension from the Sarfikhas Dept. etc. until I returned from Europe. To drown my sorrow I availed myself of an invitation from the McEwen family to come for a

couple of days or so to Deal where they were then putting up on a holiday trip.

Edward Fraser and I started at 4 p. m. on the 19th of August on our bicycles. The journey from London to Deal is 72 miles. We decided to put up at Rochester for the night and start early next morning after seeing some of the places described in Dickens's 'Pickwick Papers' etc. Each of us engaged a room at the Royal Crown Hotel for supper, bed and breakfast. The bed was scrupulously clean and the meals wholesome and substantial. Early next morning we passed the Bull Hotel, the Castle Bridge, Nun's House, (of Pickwick Papers), Restoration House (Satis House of Great Expectations) etc. of Dickensian association in Rochester and left the town at about 8 a. m. We struggled up the long steep incline of Chatham, a battleship was anchored in the Medway. Passing Milton and Faversham we reached Canterbury by 12-30 p. m. and, refreshed with a sandwich and ginger beer lunch, reached Deal by about 2 p. m.

We put up at the Swan Hotel, our charges being very moderate from Sunday supper to Tuesday breakfast, lunch and tea being of course excluded. I had to pay something extra for separate sleeping arrangements in a house nearby. Mr. J. P. McEwen and Miss Vera were stopping at the Walmer Castle Hotel, a much larger establishment with tennis courts but now completely full. Walmer is a seaside resort close to Deal and is important on account of its being the residence of the Warden of the Cinque Ports, hence the name given to the Hotel by its enterprising proprietors. The landlady

Mrs. Logan had lived seven years in India and at lunch time next day recounted to us some of her experiences there, dwelling mostly on the savoury Indian dishes (like pilao, kichdi, prawn curry and sweets) she used to enjoy. It was tantalising to hear her conversation as it sounded to me like the account of a Barmecidal feast from the Arabian Nights! The sea breeze was refreshing and after a modest breakfast in the morning I had a good long swim in the sea against a deflecting current; no wonder I did ample justice to the hot English lunch at the hotel.

The seashore at Deal is pebbly, not sandy as in other places. There were the usual seaside recreations: bathing (mixed), rowing, musical concert on the pier, Punch and Judy show etc. etc., and above all good tennis with four young French students learning English at Carter House nearby. One of them, M. Boidin became very friendly with me and talked of the growing hostility of Germany to France. He gave me his home address, 20 Rue Louis le Grand, Paris and we promised to correspond in English and French by way of exercise for both.

On 22nd August, after a swim in the sea Fraser and I started on our way back to London. After about a mile from Deal I cycled back to say goodbye to some of my acquaintances there whom I had forgotten in our hasty departure. This was accomplished soon and I left Deal again at 10 a. m. and caught up Fraser at Canterbury in front of the Cathedral by 11-15. We stopped to see this old sanctuary. Its ancient grandeur, Henry II's quarrel with the Church, Thos. a Becket's unfortunate murder (1170) his subsequent burial there

and the flow of pilgrims to his tomb from all parts of England (out-done by the visits of American tourists in modern times), Chaucer's Canterbury Tales, Edward, the Black Princes's Victorious Career (1330-1376) closed long since and his coffin in the crypt covered with complete armour; all these flashed before me as I gazed around in mute admiration inside that noble work of mediæval architecture, for a considerable time.

As we came out of the Cathedral a newspaper lad sold me a photograph of the 'House of Agnes' ('Ouse of Hagnes as he pronounced it), and I could not help recalling the sweet memories of ecstatic delight with which I had read the Dickensian romance of young Trotwood's love with Agnes Wickfield in that charming old Cathedral town. It started raining in earnest (changing from what a local lad graphically described as only 'spitting'), so we got into a railway train at Dartford and reached Lee at about 6-30 p. m., somewhat tired and wet but greatly recouped in health and energy.

* * *

My acquaintance with the French students at Deal gave me a further incentive to the study of French and I began to read in earnest books on Science in that language, like Hartog's Lectures Scientifique etc.

On the 30th of August, happening to go up to Town I was grieved to see posters all over the place announcing the death of H. H. Nawab Mir Mahboob Ali Khan, Nizam of Hyderabad—a most generous and kind-hearted Ruler and an acknowledged Faithfull Ally of the British Government.

About a week later I went sightseeing after lunch, past Thames embankment and much admired Cleopatra's Needle, a gift of Mohammad Ali, Pasha of Egypt and founder of the present Khedival dynasty, to the British Government. It is a beautiful obelisk of red granite made at Heleopolis from a single rock quarried at Syene, by the order of Tothmes III (1500 B. C.). It was lying prostrate at Alexandria (while its companion, now at New York, stood erect) till it was brought to London in 1878 through the munificent gift of £10,000 by Dr. Erasmus Wilson. measures 68½ feet and is 8 feet wide at the base, bearing inscriptions on its sides by Ramesis, the Great. After dinner I went to the Lyceum Theatre to see the Royal Divorce, staging Napoleon's divorce of Josephine and the last phases of his militant career in Europe. On way back to Lee (at midnight) the weather being remarkably clear, looking up I saw not far from the zenith, a fine comet which turned out to be Brooks 1911 C. The sky being clear again on the 15th I showed it to the McEwen family and Edward Fraser. It was then in Hercules.

The Royal College of Science, South Kensington, was to re-open on the 4th of October so I wanted to go and live somewhere in its neighbourhood, to save time spent daily on railway journey. Mr. Ross Masood recommended to me a house (38 Longridge Road in Earl's Court) where Dr. Ziauddin Ahmed of Aligarh had put up some years ago. It was rented by Mrs. Ataullah, widow of a Turkish Consul at Singapore. She lived there with her two daughters (Miss Khairun Nisa and Miss Khadejah Hasanah) and a son, Abu Bakr Rushdi Bey. Several Indian students (mostly

from the Punjab) were living there at the time as paying guests. I called on Mrs. Ataullah on 21st September and fixed up my residence at her house from the 30th.

A letter from Mr. Rushdi informed me that the Id-ul-fitr (Ramadan festival) would be celebrated on the 23rd at the Holborn Restaurant; but on going there I was greatly disappointed to find that (through inadvertence) no arrangements could be made for saying prayers, though a number of Muslims of various nationalities (including the Turkish Embassy Imam and Mr. Rushdi) had gathered there for the purpose. I accepted Mr. Rushdi's invitation to be his guest at the 'Id' dinner at his house and met there quite a number of gentlemen from India and other countries. The subject of our conversation was mostly Turkey placed now in a desperate situation owing to exorbitant demands from the European Powers.

CHAPTER IV

I JOIN THE ROYAL COLLEGE OF SCIENCE

OCTOBER 1911 began with gloomy prospects for the Muslim world. Italy presented Turkey with an ultimatum to leave Tripoli. Her North African empire was hashed to pieces ever since her Navy was crippled by her European foes, her home-politics were in a chaos, her subject races were insulting her with the open or implied support of the powers, her finances had sunk low and her greedy neighbours were "plucking her best plumes." All this was due as much to her own past mistakes as to the determined policy of Europe to "turn the Turk out bag and baggage." In vain did I turn over the pages of the British daily newspapers to find one line of sympathy with poor Turkey, the Daily Telegraph being excepted. I went to live with the Turkish family at Earl's Court partly hoping to hear at first-hand good news of Turkey's rejuvenation and progress, but it was destined that I should join with them in their mourning over her calamities and defeats! A visit to the Turkish consulate (near Liverpool Street Station) with Rushdi Bey brought no encouraging news.

In this despondent mood I joined the second year class of the Royal College of Science, London and tried to drown in hard work my sorrow at Turkey's impending crisis. The College (an integral part of the

Imperial College of Science and Technology with the Royal School of Mines and the City and Guilds Institute) provided the highest training in Pure and Applied Science, Mechanics, Geology, Physics, Chemistry, Botany and Zoology. Professor H. L. Callendar, chief professor of Physics and Director of the Physical Laboratories, after seeing the syllabus of studies for the B. A. degree examination of the University of Madras exempted me from attending the first year course in Physics and got the authorities concerned to excuse the first year course in Chemistry also. So I had to take up in the first term of session from 4th October 1911 to 9th February 1912, Part I Mechanics (Machine Drawing, Theory of Elasticity, Strength of Materials, turbines and centrifugal pumps, steam and gats engines), Graphics, Mathematics B and C (Higher Algebra, the differential and integral calculus with differential equations), with ample laboratory work and a fair amount of Electrical Engineering both theoretical and practical at the City and Guilds Institute.

Professor John Perry's lectures on Mechanics were very stimulating. There was a personal touch in all that he said and talked about. His references to the work he had done for Japan at the time he was professor there with Prof. James Thomson (Lord Kelvin's brother) and Prof. Ayrton—when, as he once remarked, there were no maps of the land drawn to scale after trigonometrical survey—were highly interesting. Assistant Prof. A. R. Willis though recently recovered from a stroke of paralysis was a most painstaking lecturer. Assistant Prof. J. Harrison who taught us graphics was not much of a lecturer but was full of original ideas in

the handling of practical mathematics and mechanics. Mr. P. T. Wrigley, our Mathematics lecturer was a very hard working man, solving for us daily on the black-board scores of problems and, I am afraid, expecting us also to solve as many at home, unmindful of the limited time at our disposal for home work! Prof. T. Mather, a former Colleague of Prof. Ayrton at the College was a genius in designing apparatus and electrical measuring instruments etc. He supervised the practical work of the students in the laboratory and was the Director of the entire Electrical Department. Lecture work was entrusted to Prof. G. W. O. Howe and I say without the least hesitation that a more lucid exponent of electrical engineering could hardly be found.

On the evening of the day the College re-opened a protest meeting was held at the Institute of Journalists condemning the action of Italy and I attended it with my Turkish and Indian friends. The hall was packed with men and women of all nationalities and some eloquent speeches were made by prominent Englishmen etc. (including Sir Harold Cox, editor of the Edinburgh Review), in sympathy with Islam.

My College fees for the full Session of the second year amounted to £37/- and I paid the amount in advance; books and mathematical instruments cost me additional 7 or 8 pounds sterling.

Machine Drawing was my weakest subject, having had to take it up at a time of life when I was past 25 years of age and had to compete with youngsters who had taken to it almost from their cradle. I am afraid Mr. A. E. Stone, one of the assistant demonstrators who coached me in that subject found me a very

awkward pupil. He complimented me, however, on my knowledge of higher Algebra and English Literature (especially the works of Charles Dickens—some of which, by the way he got as a present at a subsequent prize-distribution at the College). I may mention here that my English fellow students at the Royal College of Science were mostly brilliant scholarship holders (Royal, County-Council, etc.) Some of the younger boys coming from the Dockyard Schools to specialise in Mechanics knew (in the words of F. H. Newman, a fellow student at the time, who later became professor of Physics at the University College of South West of England, Exeter) as much Mathematics at the age of 16 as others at 60, but their object being merely the application of Mathematics to Science, they had no taste for Pure Geometry and mathematical rigour. All the same they almost always did well in their technical life later on, and it was mainly for such scholars that the Mechanics Section of the Royal College of Science provided training.

Until the College closed for the winter vacation I was busy on week days from morning till evening with College routine, sometimes almost without break. On returning to my lodgings the main topic was the Turco-Italian War, Enver Bey's heroic attempts to rush succour to the Turkish garrison in Tripoli and the 'benevolent' attitude of almost the whole of Europe towards Italy. Mr. Ross Masood and his friend Mr. Mohd. Mir having shifted to No. 74 in our street we now met pretty often and discussed the war situation gloomily. Messrs. Qazi Zuhur Husain and Mohd. Fathullah studying for an Engineering degree at the City and

Guilds College were living at No. 38 itself and along with other Indian students subscribed liberally to the Turkish Red Crescent Society. A frequent visitor was Mr. Syed Irfan Ali of Bihar who knew Mr. Justice Amir Ali of Calcutta (then President of the Islamic Society, London). He was ready with all sorts of schemes to persuade the British Government to intercede in favour of Turkey, but they could obviously lead to nothing.

On 18th October the Foote Mineral Co. of Philadelphia sent me a box of minerals in their natural crystalline forms, illustrating the main types discussed in Crystalography (by way of exchange for several pounds of a variety of Hyderabad zèolites I had shipped to them some months ago from India).

On some evenings I read the History of English Literature with Miss Khairun Nisa who was preparing for her London matriculation examination. I visited my old friends at Lee (the McEwen family, Mrs. Fraser and Mrs. Scarth) occasionally on a Sunday or met Mr. J. P. McEwen at the Charing Cross station on a Saturday afternoon to roam about what he called my part of London.

On 28th October going to a farewell at home at 21 Cromwell Road, got up byMr. Syed Irfan Ali for a friend of his (Mr. L. R. Zahid) returning to India, I met a Turkish gentleman named Ibrahim Edhem who was learning practical Electrical Engineering with a well-known British firm in London. I introduced him and Mr. Rushdi, later to Mr. J. P. McEwen at his house as he was curious to see modern Turks and talk with them about the present war. Mr. Edham had a good

command over the Turkish languague and wrote occasionally for the foremost nationalist paper in Constantinople viz. Tanin. In later life he was destined to play an important part in the industrial development of Republican Turkey. On 4th November I took Mr. J. P. McEwen to the Victoria and Albert Museum to attend a Swiny lecture on Geology, illustrated by lantern slides but in the middle of the lecture the condensing lens cracked through unskilful handling of the electric arc lamp and the result was disappointing.

Two days later the students' Physical Society at the College held its first meeting of the Session with new office bearers and Prof. Callendar opened it with his inaugural lecture on the specific heat of water. It was quite a different matter to read an account of the investigation in a text-book, from the actual investigator's masterly dissertation. As is well-known, Prof. Callendar's measurements represented the limit of accuracy attainable.

South Kensington is a swell quarter of London and Earl's Court closely adjoining it, shines with something of reflected glory. It enjoys the advantages of a local Exhibition bearing its name and is patronised largely by gay sightseers during summer. The nightside of London is charming even to ascetic students; but its pleasures are not always innocent and must be carefully avoided. Many a brilliant career has come to an untimely and even ignominious end by yielding to its temptations. One or two other incidents not connected with College life deserve mentioning. On the evening of 20th November the Suffragettes having decided to enter the Houses of Parliament without

permission, thousands of spectators (myself and Rushdi Bey among them) gathered round the place to see Mrs. Pankhurst's disciples attempt to force their way into the building and get arrested under the lime-light of photography.

Mr. Ibrahim Edhem had come to live at No. 38 with us. In his company or Rushdi Bey's I had occasionally practised target shooting at a local Rifles Club, but when our Indian community sought to join the club *en masse* the application was not granted.

On 1st December, a Friday, Id-ul-Duha prayers were said by a large Muslim congregation at Caxton Hall. I met there Messrs. Khaja Ismail and Syed Ali Raza of Hyderabad, the latter was an old school-mate of mine but was now reading for the Bar Examination with a State scholarship.

Our Technical Electricity examination was to take place on the 18th and Kagan, a Russian student of the Royal School of Mines who was my partner in laboratory work, came to read with me my lecture notes (for which, by the way, I got cent percent marks). I asked him to take tea with my Turkish friends at tea time, but he felt rather shy. He was not very keen on Technical Electricity and got himself excused later from attending the class. At that time Russia was very backward in Science and Industry, possibly even more than India, but within a few years the Soviet Republic worked wonders through its skilful programmes of Economic plannings.

Mr. and Mrs. McEwen invited me to a quiet Christmas dinner at their house. Their elder sons were now in

South Africa and the third, B. C. McEwen was at Hyderabad, so I returned to my lodgings early in the afternoon. Some changes had taken place here also. Mrs. Ataullah had gone away to Constantinople and the boarding house was now managed by Miss Khairun Nisa with the help of a house-keeper. Miss Khadijah was specialising in embroidery at the School of Art Needlework. Rushdi Bey had joined the Regent Street Polytechnique. A graduate of the London University in Modern Languages (Mr. Straunders by name) was giving lessons to pupils at No. 38 in French and German. He became rather friendly with me and on the last day of the year, he, his wife and sister took me as their guest to a German restaurant in Piccadilly (Appenrodt's, I think) and saw the New Year in amidst great jubilations and national toasts.

The Christmas vacation lasted up to 10th January 1912. I stayed all the time in London. Home letters from India were full of mournful news. The bubonic plague had broken out for the first time most violently at Hyderabad. Whole families were being wiped out, people being as yet ignorant of the highly contagious character of the disease. A number of my own relations, including my maternal aunt, maternal uncle and one of his young daughters fell victims to it. A gloom overhung the whole of Hyderabad. My paternal uncle vacated his house at Gosha Mahal (coterminous with mine) and took my brothers and sister along with his family to a place about 20 miles from the city, where he owned some landed property. The evacuation gave much relief and peace of mind. But the plague raged over the whole of winter and took a more terrible toll

of lives from the city population than the Flood of 1908. It may be imagined how worried I must have been at that time.

But life must have some recreation to buoy up the spirit. I sought solace in learning to skate at the Earl's Court rink in the evenings. On the 11th of January Rushdi Bey took me to West Hampstead to meet Mr. Montague at his house. Many Turks and not a few Englishmen and Indians had gnthered there to thank Mr. Montague for volunteering to fight on the side of Turkey in Tripoli in a chivalrous spirit. He described the hardships to which the Turkish soldiers and Arab patriots were subjected in this struggle of helpless valour against militant villainy.

In return for their hospitality on New Year Eve, I took Mr. and Mrs. Straunders (on 14th January) to a sumptuons dinner at Lyon's Popular Cafe. Mr. Straunders worked himself up to such a passion on the atrocities of the Italians in Tripoli that he looked ready to charge them if he could but get at them! Luckily, however, such an opportunity did not occur.

Eastern nations now on their downward path can rarely rest in peace even for short intervals. There was a regular "Strangling of Persia" in the words of Mr. Morgan Schuster at the time, and geniune friends of that unfortunate country like Prof. Edward G. Browne of Cambridge, Mr. Ramsay Macdonald, M. P. and others made strong speeches resenting the attitude of the European Powers towards Persia at a Great Demonstration held on 15th January at the London Opera House, Kingsway under the auspices of the Persia Committee, Trafalgar Buildings, Charing Cross,

An earnest appeal was made by Major Syed Mohd. Hasan Bilgrami (step-brother of Nawab Imadul-Mulk) to the intelligenzia of Oriental countries to combine and devise adequate means of checking the incessant encroachment of the West on the East. Prof. Browne displayed before them a gigantic map of Persia which he said, was the largest extant, and humourously remarked that Persia was the only country in the world where the wife's mother was welcomed.

There were some happy evenings also in this period. On 31st January I went with Rushdi Bey to the Holland Park Skating Rink Carnival and enjoyed fine music and display of elegant skating. Abu Sayeed Mirza and Saduddin were also there along with a number of students from the Royal School of Mines. We returned at 2-30 a. m. next day. That night I had my first experience of a copious snow-fall.

I have to record here a painful event which shows how hazardous it is for a young man of indifferent health and limited means to go over to Europe for a lengthy course of studies. On 7th February I attended the funeral obsequies of an Indian youth named Khurshid Ali Khan who was long suffering from pulmonary troubles (it was said) and died in a London public hospital under tragic circumstances. The Islamic Society arranged for his burial according to Muslim rites in the Muslim section of the New Cemetery at Willesden, near the grass-covered graves of Mrs. Ataullah's mother and Haji Mohammad Doolie. A fairly good number of Indian students took part in the performance of the burial ceremonies; most of us were strangers to the unfortunate youth during his life-time.

Mechanics Part I Examination took place on the 9th of February, the date of termination of our first term. There were more questions on Engineering than on Pure Mechanics; but on the whole I did well.

CHAPTER V

SECOND TERM — SECOND YEAR COURSE

(12th February to 28th June 1912)

THE plague at Hyderabad had brought grief and misery into almost every home, having deprived many a family of its main supporter or bread-winner. In spite of my own heavy expenses in England I was able, through economy and previous arrangements in respect of my ancestral property (small, but reliable) to provide for the up-keep and education of my youngest brother at Hyderabad. My second brother, Md. Abdur Rahim Khan, was steadily rising in employment in the recently opened Electricity department. Tne Director, Mr. Gamlen, I was told, had formed a good opinion of his charater and abilities. My widowed sister's pension was about to be sanctioned in recognition of her husband's past services. I was thus free to pay more attention to my own personal affairs. The Nizam College was at first affiliated for the degree examination in Physics, but that affiliation was withdrawn in Dr. Aghornath's time. Mr. B. C. McEwen coming with the strongest support from Sir William Ramsay had specialised in Chemistry and was best suited for conducting advanced classes in that subject. So it was felt that I should take an Honours degree from the London University in Physics and specialise in some branch of that subject. Of my two years study leave the first

year on half-pay was to terminate about the end of June 1912, and as the State was to be benefited by my higher qualifications it was but fair that I should be allowed to continue my studies on the same terms till I took my degree.

I was to take my Intermediate Examination in Science as an External Student next July and in the event of success even with the *minimum* time possible I could not take the Final Examination in Honours before October 1913. Few students think even of rushing through these examinations in this way, but that was the only course open to me in those hard days. So I took it. In the second term at the College we had the option to choose either Geology or Physical Chemistry. I chose the latter as likely to be more closely connected with Physics, though I had a great liking for Geology through my study (and teaching) of physiography at the old College. Assistant Prof. J. C. Philip was in charge of the class. A methodical lecturer, clear and precise, he encouraged students to read original papers published in the Journal of the Chemical Society and lecture on them to their Colleagues in class, answering questions, if any, from the audience. I was allotted a paper by Ramsay and Young on measurement of Vapour pressure. The other subjects of the Associateship Course were Technical Electricity, Graphics and Practical Geometry with B and C Mathematics (continued from the first term) and Practical Physics.

Two young naval officers, Lieutenants Ahmed Jamal and Saleh Murad had recently joined the City and Guilds College. Living at Eardley Crescent near by we got introduced to one another. I had known for some

time Captain Enver Bey, also of the same College, who was living with his sister in the neighbourhood and was a friend of the Ataullah family. On 21st February Ahmed Jamal moved into No. 38 and in the midst of these Turkish friends our Indian community felt quite at home. We occasionally visited the West End and indulged in some recreation or sight-seeing—a dinner party at Lyon's Corner House, a cinema show or a trip to the Hendon aerodrome.

On the 17th of March, Abu Sayeed Mirza called and disclosed the sad news of the death of his father, Maulawi Aziz Mirza, a former Home Secretary to Government at Hyderabad. I condoled with him in his bereavement. On the 29th the College closed for the Easter vacation and Lieutenant Ahmed Jamal left for Portsmouth to meet his younger brother undergoing a course of practical training there. He invited me to spend a few days at that naval station, but I was very busy preparing for the approaching examinations and scraped up some time for reading books on Wireless Telegraphy also. Returning from Portsmouth on 13th April Ahmed Jamal went to live with Saleh Murad and contemplated going back to Constantinople at an early date.

A Short Trip to Paris

The vacation nearing its termination, I decided to spend a week or so in Paris. An annular eclipse of the Sun was expected to be visible there on the 17th. Though I knew it to be not so important astrophysically as a total eclipse (which I had not seen yet), it was a phenomenon worth observing. Hoping thus to combine amusement and knowledge I left London for Brighton

at 9-10 p. m. on the 14th April and put up at Cambridge Hotel for the night. Next morning Rushdi Bey arrived to spend the day with me. Grim rumours of the sinking of the British White Star liner, Titanic, largest ship afloat at the time (of 45,000 tons displacement), on her maiden voyage across the Atlantic, from collision with a drifting iceberg, were rapidly spreading all over the country. Out of a total of 2,224 people on board the ship as many as 1503 perished in the disaster, including among the dead W. T. Stead of the Review of Reviews and C. M. Hays, President of the Grand Trunk Railway. I went over to New haven in the evening and taking the scheduled boat crossed over to Dieppe in the middle of the night. At 8 a. m. next morning (16th April), I got down at Gare St. Lazare, Paris and put up at a handy hotel at 22 Rue Dorset, Place Clichy, near Montmartre, where English was spoken. After breakfast, I called at 20, Rue Louis le Grand for M. Boidin whom I had met at Deal. His sister met me and said in tolerable English that he was out and would return rather late. Thereupon I bought an excursion ticket at Thomas Cook and Son's at Place de l'Opera and went out sight-seeing round about Paris, with a polyglot company of tourists, in a large char-a-banc.

We drove along the boulevards des Italiens, Bonne Nouvelle, St. Denis, past Place de la Republique, Boulevard Beaumarchais; Place de la Bastille to Boulevards St. Germain and St. Michel and the Latin Quarter. While on our way we got down to see the famous cathedral of Notre Dame (founded as early as 1163 and finished about 1240) with its mediæval

decoration, and the Pantheon (originally Church of Sainte Genevieve, built 1765, but secularised and renamed during the French Revolution) of special interest to students of Science from Foucault's classical pendulum experiment to prove conclusively the rotation of the earth on its axis. We went past Jardin des Luxembourg, Odeon Theatre, Jardin des Plantes, thence along Rue de Rivoli, past Musee des Louvre, Place du Carrousel, Jardin des Tuileries and Place de la Concorde, returning finally to Place de l' Opera. Place de la Concorde is claimed by Parisians to be the finest place in Europe. The spot at the Place polluted by the guillotine during the stormy days of the Revolution is now graced by a fine red Assuan granite, a gift of Mohammad Ali Pasha of Egypt. At dinner at the hotel I met two young Americans from "Bountiful," Utah, U. S. A. After supper I went alone to see Nannie at the Gaumont Picture Palace, advertised as 'le plus grand du Mond'.

On the 17th I saw the annular eclipse of the Sun from the train en route to Versailles (about 11 miles S. W. of Paris), with my new American acquaintances. We entered the Palace built by Louis XIV. It is a magnificent pile of buildings with an extensive park, full of historical associations and is said to have cost 10 million pounds sterling. A guide conducted us through la galerie des Glaces and la galerie des Batailles. On hearing the harangue about the painted pictures in the latter gallery I could not help recalling with a smile Matthew Prior's reply (while England's representative at the French Court) to the question whether the King of England had any such decorations

"The monuments of my master's (King William's) actions are to be seen everywhere except in his own house." We had a splendid time in the gardens and l' Orangerie. We saw the Grand and the Petit Trianon, the Royal bed-chambers, state-coaches etc., etc. Under the influence of companionship in those unique surroundings we became very friendly, exchanged addresses and took snapshots, promising to correspond with one another on our return home. When America was about to declare war on Germany in the last Great War, Alvin Sessions, the more good humoured of the two, having settled down in some electric installation business at Utah, wrote to me a nice letter (passed by the Censor) with kind remembrances from D. M. Davis his chum.

As I write these lines I have a complete picture of those happy days and beautiful surroundings clear before my mental vision. How time passes! How we change and how the world changes! The Palace of Versailles itself has seen in the course of its history, Royal Fetes and entertainments giving place to democratic demonstrations like the meeting of the States General in 1789; then the disastrous War with Prussia ending in proclamation of the King of Prussia as Emperor of Germany in 1871. How differently has destiny dealt with the two momentous treaties signed there! While the one that followed the American War of Independence in 1783 has brought the English-speaking countries into a common fold, bridging over the Atlantic chasm as it were, the other of 1919 has involved the whole world into most terrible War ever waged! We returned to our hotel late in the afternoon and par-

taking of a hearty dinner all three of us went to see the silly 'Red Mill' Moulin Rouge in Place Clichy–dedicated avowedly to "Son Altesse l'Amour." Music and dancing *(of all ages and climes)* constitute the chief feature of this and in fact of all similar places of entertainment in Paris. I am inclined to think, however that the principal source of income to the proprietors is the vast quantities of wine and other drinks imbibed by the 'ladies' of the establishment at the expense of luckless visitors. The wonder is how in spite of all this ceaseless dissipation they manage to preserve their health and good looks !

Next day the two American tourists left for London, having come from Haarlem, globe-trotting. On payment of three francs I was taken by lift to the top of the Eiffel Tower (built entirely of iron for the Paris Exhibition of 1889, height 984 ft.) It commands a fine view of Paris and the adjoining country, and is used as an important wireless and meteorological station. Later in the day I visited the Hotel la Dome and la Chapel des Invalides and spent a good deal of time inspecting the tomb of Napoleon Bonaparte and other relics, including an effigy of his white horse, Wazir under its natural skin preserved there to commemorate his connection with France and signify the homage paid to him by the French nation. This done I walked down Pons Alexandre III, Avenue des Champs-Elysees up to Arc de Triomphe and returned to my hotel for rest.

The next morning was spent in seeing the Musee Jardin du Luxembourg, Place du Senate and Musee du Louvre where I purchased several cheap copies and picture post cards of some of the finest works of art

deposited there. While taking refreshments at the cafe in front of Theatre Francais two well-dressed fellows entered into conversation with me in English. They tried to discuss Indian politics with apparent sympathy and from Indian point of view, but I was on my guard. Their real object was to show me round "the gayer quarters of Paris." When they proposed this subject eventually I curtly declined their offer. Many an inexperienced foreigner in Paris is decoyed into danger-our situations by the uncalled for 'guidance' of such men mostly foreigners themselves but, with deeper knowledge of the darker side of the city! In the evening I went to the Avenue de l' Opera and saw an instructive film illustrating the pleasure-seeker's inevitable end: "De Princes' Study in Paris" and just walked through the Taverne Olympia.

On the 20th April I went again to Arc de Triomphe and walked along Champs-Elysees. At Carlton Hotel I consulted an aviator (recommended by the proprietor of my hotel) about taking a joy-flight over Paris, but no arrangement could be made that day and I had resolved to leave the city by the next morning train. M. Boidin's people having invited me to their house I called on them after visiting the Church de la Madeleine and Jardin des Tuileries. Young Boidin was there with his father and sister. After a brief conversation and offer of refreshments I bade them adieu. They were tradesmen in happy circumstances, the whole family being engaged in business, as is often the case in Europe. To overcome a feeling of depression due to loneliness at hotel I went after supper to the weird and fantastic cabarets du Ciel et de l' Enfer in Place Clichy.

St. Peter figured in one and Mephistopheles at the other. How the local Catholic Church allows such blasphemy is a marvel; but the intention of the proprietors is evidently harmless—just to devise something sensationally unique to attract pleasure-satiated customers, and so the cabarets continue.

Next day, at 10-30 a. m. I left Paris for London. The voyage from Dieppe to Newhaven was splendid. As we approached the English coast, Seaford presented a magnificent view. All the passengers had come up on the deck; some were returning from their Swiss or Italian tours. I was much struck by the attachment of a pale English lad to his weak (perhaps convalescent) mother presumably of good family, judging from a Sloane Street address on their luggage. We reached Newhaven at 6-5 p. m. I was glad to find myself again on British soil. By 7-30 I returned to my lodgings in London.

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Our College re-opened on 23rd April. Professors H. L. Callendar, John Perry, T. Mather and J. C. Philip recommended my staying yet another year to finish the Associateship course and take B. Sc., Honours. Armed with these recommendations I applied to the Principal Nizam College for extension of leave on half-pay. In the meanwhile I worked on steadily and arranged with Profs. Callendar and Mather to do some practical Wireless Telegraphy at the City and Guilds College with Prof. G. W. O. Howe. Routine apart, there are a few incidents worth recording. On 4th May Prof. Henri Poincare of Paris, (1854-1912) (admittedly the greatest mathematician of his time) brother of

Raymond P., (1860-1934) President (1913-1920), delivered a lecture in French on Time and Space, under the auspices of the University of London. Mr. J. P. McEwen being interested in such matters and possessing a fairly good knowledge of French I obtained a ticket for his admission also to the lecture. He met me at the Albert Memorial (a monument 175 ft. high built in memory of Albert Prince Consort, husband of Queen Victoria, and terminating in a 15 ft. bronze-gilt figure of the Prince, in a sitting posture, wearing the robes of the Garter), and we went to the University lecture hall after tea. There were present of course many leading men of science and mathematics, besides several distinguished visitors. The lecture was pronounced to be a masterpiece of elegance and exposition but my novitiate in the language and Mr. J. P.'s 'distaste' for dynamics precluded our doing adequate justice to it. I was able however to learn the gist of it by subsequent perusal of Poincare's published works.

Having joined the College Tennis Club and playing at its lawns in Shepherd's Bush, I represented the College in a tennis match against the Goldsmith College at New Cross. Science students need no introduction to this College as it was here that Edwin Edser, an old Associate of the Royal College of Science, lectured as professor of Physics and wrote his lucid texts on Heat, Light and General Physics, read (and assimilated) by thousands of students all over the English-speaking and English-understanding world. Students in the suburban institutions of London are mostly supported by scholarships and work under great difficulties, availing themselves of cheap workmen's tickets in the morning

and evening trains. It is really they who form the backbone of the technical and industrial classes of the metropolis. As a rule, they are good-natured, sociable and friendly-disposed towards strangers. We were entertained with good tea and cheerful conversation after the match.

At about this time our Indian (or Eastern) community at No. 38 began to break up and move into different quarters for various reasons. I also contemplated a change of habitation but still in the vicinity of our College. On 18th May Dr. and Mrs. Philip were at home to students of Physical Chemistry at their residence (17 Fairfax Road, Chiswick). We were entertained with choice refreshments, fine music and interesting conversation, scientific as well as literary. Both the host and hostess were highly obliging and that evening was remembered as one of the pleasantest we had during our course of studies at College. It was midnight when I got back home.

On June 1st I moved into 14 Nevern Place only a few streets from No. 38 Longridge Road. Mrs. Blackburn was the proprietress and lived there with her handsome unmarried daughter. There were a number of paying guests among whom I may mention Mrs. Olnitz (nom de plume, Mrs. Caroline Corner), a talented English lady with several successfully published works to her credit; Mrs. Fisher who had lived in her younger days at Oxford; Mr. Horley, a well-connected old gentleman doing nothing in particular except perhaps chaperoning Miss Blackburn, whether she stood in need of it or not. Some former boarders also visited the place occasionally. Mr. Nadir Cooper from India who

at one time read for the Bar but gave up studies because, as he alleged, his examiners would not let him through! He was now planning to open a boarding house for Indian students with Indian cooking etc. An Engineer from one of the British Colonies (judging by his accent), Mr. Desbleds (as for as I can remember the correct spelling), who was perhaps a former student of Prof. Mather, engaged in teaching aeronautics, was also a welcome visitor. I met these people rarely being frightfully busy with my approaching examinations.

Of my old Turkish friends, Lieutenant Ahmad Jamal left for Constantinople sometime in the third week of June. Rushdi Bey dropped in during the evenings and went with me for a stroll. An old pupil of mine from Hyderabad, Mr. Saduddin reading for the Bar called somewhat frequently to see me both here and at No. 38 while I was living there. On a memorable afternoon (23rd June), feeling tired of the hard grind I was then undergoing, I went with Saduddin and Rushdi to Richmond and we hired a rowing boat for the evening on the Thames. In trying to land on a difficult part of the bank the boat was in danger of overturning. I was the only occupant who knew swimming, so to prevent a catastrophe I jumped into the water where the current was rather swift, but reached the shore all right and the boat resumed its normal disposition. There was no possibility of drying the clothes so I had to walk all the way to the railway station and perform the railway journey in my cold wet garments. Luckily I did not fall ill. Had I not jumped into the water my companions would undoubtedly have come to grief.

At about this time we had our Second Year Examin-

ations at the College and I passed in all securing first classes in mathematics and graphics. University Examination in Intermediate Science for External students started from 1st July with Theory papers. These I did very well. The examination of External Students in Practical Chemistry was generally supposed to be a tough job. I brushed up my knowledge of qualitative and gravimetric chemical analysis by arranging with Mr. A. Bramley of our Chemistry department to work in the laboratory from 7th July to 17th daily and continuously from 9 a. m. to 6 p. m. Being thus fully prepared I did well in both the practical examinations in Chemistry. Physics Practical was exceedingly simple and I was looking forward to an easy success in the entire examination. Our Summer vacation extended from 29th June to 2nd October. After the examinations I was free to take rest, indulge in reading light literature or go out cycling in fine weather to such interesting places as the Hampton Court Palace, Hampstead Heath etc. Mrs. Olnitz took me one evening to the "Nobodies Club" at the Quadrant Restaurant where I was introduced to the Secretary, Mrs. Morison, her niece and a number of Indian and foreign gentlemen. My old friends at 9 Northbrook Road, Lee, were of course, constantly in touch with me and I was their frequent guest.

Some Cheerful News from Home

Home news about this time was satisfactory; the plague had subsided. Mir Yousuf Ali Khan, Nawab Salar Jung was appointed Prime Minister of Hyderabad; my brother in the Electricity department was getting

fairly good rise and my leave extension was passed by the College Board of Governors and I was promoted to the provincial A grade of service. On 7th August I received intimation of success in the London University Intermediate Examination in Science. On the 12th I had a letter from my uncle saying my sister's pension was also sanctioned.

Relieved of anxieties I indulged in sight-seeing. On the 14th I visited Madame Tussaud's famous wax-works at Marylebone Road. The admission fee to the main building was one shilling. Marie Tussaud was a Swiss Modeller in wax, modelling at first only heads of leaders of the French Revolution. Coming over to London at the beginning of the 19th Century she founded her Exhibition of wax figures of notable persons of ancient and modern times. After her death her own effigy was displayed : a short thin figure bent with age. Notable among the effigies was that of a Russian giant (over 7⅓ ft. high, if I recollect all right), standing in a corner with a dwarf close by. In addition to effigies there were exhibited relics of people in limelight relating to their most important achievements. The goggles worn by Burgess in his recent cross-channel swim were also on view. By paying an extra six pence one is admitted to the back rooms displaying various articles pertaining to the life of Napoleon Bonaparte and the famous coronation robes of George IV, so unceremoniously ushered in by Thackeray in his Four Georges. Close by is the Chamber of Horrors with figures of some of the most notorious criminals of all times, the guillotine which beheaded Louis XVI and Marie Antoinette and other objects of ghastly associations. In the album

of autographic mementoes by distinguished visitors I read among others the following :

ناصر الدین شاه قاچار

هنگامے که در لندن اقامت داشتیم بتماشاگے مدرسه سید امدیم
واین چند کلمه برسم یادگار دریں البما نوشتیم - سنه ۱۲۹۷ هجری

Nasserdin Chah Kadjar, 1873

A Trip to Bournemouth

During this summer London was uncommonly wet. Rain came pouring day and night. I decided to go down to Bournemouth for a couple of weeks by way of change. On 12th August I started in the afternoon from the Waterloo Station by the London and South Western Railway, having previously arranged by letter for board residence at the Mansfield Boarding House, West Cliff Gardens. I arrived before dinner and met at the hotel a number of English people mostly from Bristol, Gloucester etc. It rained here also as in London. Early next morning the weather clearing up I saw the long stretched sea-board with the pier carried far out into the sea. On either side of the pier there were steep banks cut by deep narrow ravines, locally called chines, covered by beautiful vegetation. After dinner I went out alone for a long walk along the seaside and up the pier, my present isolation from relatives and friends put me into a poetic mood and I composed some of the most passionate verses I turned out in Urdu. Years afterwards Mrs. Sarojini Naidu heard them at Hyderabad and appreciated them. Soon however the boarders got to know one another and on the following morning I had a dip in the sea, but there could be no

swimming, the weather being very rough and the water swelling up into huge waves along the entire sea-front every now and then. The only other bather was a youngster whose companion was all the time persuading him to come away. In the evening it became calm and I was invited to play tennis for an hour at the Winter gardens.

On August 20th we got up a picnic party from among the boarders and after a fairly long tram-ride engaged a rowing boat at Tuckton Creek. Myself and another strong man took the oars and rowed up the swollen Stour. In spite of continuous rain we enjoyed the outing thoroughly and did ample justice to our stock of sandwiches, chocolates and ginger beer. Some snapshots were taken and the day passed off delightfully. After dinner we saw on the cinema screen scenes from R. L. Stevenson's Treasure Island. Bournemouth having been at one time a favourite resort of that great invalid.

On the morning of the 21st we took the 10.50 boat (Empress of India) for Weymouth, calling at Swanage for a short while to inspect its caves. Later we went up the battleship Neptune anchored in the neighbourhood. One of its petty officers told us that with 320 lbs. cordite the vessel fired 850 lbs. shot at a range of 10 miles. On our way back the boat pitched and tossed badly with the result that every one on deck was seasick. Next day our party of young men and women went on board the Bournemouth Queen to the Isle o White, passing the Needles, Totland Bay and Freshwater Bay. After a drive in a hackney cab on the island we rested for a while on the new-mown hay and enjoyed a good sandwhich and apple lunch. We walked

past Tennyson's monument and discussed the chances of war with Germany. In the districts and in fact in all places where a man can be judged at once with his actions and behaviour (instead of by conventional reputation or report) I met always with good-fellowship and even cordiality. On our return voyage the sea became exceedingly rough but I had by now become fairly well 'acclimatised.'

There was no abatement of rain all these days so we stayed in the common sitting room at the boarding, house or at the pier. My knowledge of Charles Dickens and his characters surprised my fellow-boarders many of whom were pretty well-read, and I became very popular with them. On the 27th we again went to the Isle of White and spent a good deal of time at Osborne House seeing Indian gifts and presents to Queen Victoria, among these a silver casket from Hyderabad of fine local workmanship.

My home letters were redirected to me at Bournemouth and I came to know of my brother's engagement to my uncle's daughter at Hyderabad. Holiday-makers kept changing; most of the last week's batch had left and fresh ones came in, among whom was a West-Indian boy named Fernandez, living with his English guardians. He joined me in rowing. I swam every morning in the sea and cycled down the chines in fine weather. At last on 31st August I left Bournemouth for London by 6.30 p. m. train. Almost all the guests came to see me off at the station—an incident I shall never forget. It was 11-30 when I reached Nevern Place.

* * *

I passed some of the happiest days of my life at this house. It was here that I began to receive cheerful news from home and learnt of success in my University Examination. While living here I visited the National Gallery and admired its Art treasurès. Once (on 6th September) on way to the Imperial Institute with Mrs. Olnitz to see the Durbar presents from Indian Princes, Canadian, South African and other Exhibits, I was advised by her to try a hand at journalism, but I had decided to devote my life to Science and never wavered from that path. Mr. Rushdi Bey kept asking me to return to 38 Longridge Road and I did so on September 7th after meeting Mr. E. A. Seaton, now guardian of Hyderabad State scholars (who had called for me some days ago) at his temporary London address (at 283 Oxford Street), and seeing little Miss Llewellyn at the Vaudeville Theatre at a matinee performance, in company with Mr. J. P. and Miss Vera McEven.

I had a letter again from Mr. Seaton asking me to lunch on 9th September and requesting my presence at the Victoria Station at 7 p. m. to receive a fresh batch of State scholars and provide special accommodation for a son of Rajah Murlidhar (Sadrul Maham Sarfe-khas Dept.), about this time the most influencial man in State service after the Prime Minister; I did so. Some of my old pupils residing at the time in London also came up. The Continental Express brought three sons of Maulwi Ahmed Husain Saheb (late Sir Amin Jung K. C. I. E.), Peshi Secretary to H. H. the Nizam, along with his son-in-law Khaja Altaf Husain and half-brother Khatib Abdul Lateef and Syed Mohd. Azam

and Ali Akbar—the last four being my old pupils at Hyderabad. Ghulam Husain also formed one of the party and Mr. Seaton mistaking him for Rajah Murli dhar's son entrusted him to my charge. The mistake was however soon found out, the expected youth feeling sea-sick on the way returned to India from Aden. I advised Ghulam Husain to put up at 21 Cromwell Road for the time being and Mr. Seaton fixed up quarters for the remaining scholars under his guardianship.

We said our Idul Fitr prayers at the Caxton Hall, St. James, on 12th September. Lateef, Altaf and the three sons of the Peshi Secretary were there with a number of other Hyderabadis. I asked the five of them to tea next day at No. 38 and we formed a nice little party, Mrs. Fisher a former acquaintance at Nevern Place also coming in. Latif wanted to read for his London matric and the aducation of the others was chalked out by Mr. Seaton himself in accordance with previous instructions from home.

A Trip to

Antwerp, Brussels and the battlefield of Waterloo

Our summer vacation still continued and we got tired of the rainy weather in England. A Belgian acquaintance suggested a visit to Brussels—the Villette of Charlotte Bronte, via Harwich—the historical route that the earlier Kings of the House of Hanover loved to go by on their way to their favourite Herrenhausen. None of my Indian or English friends could be found to accompany me. Touring on the Continent is the privilege of the rich aristocratic or poor literary classes of the British Isles. Only under

exceptional circumstances would the average Englishman be persuaded to go to a Continental seaside place in preference to his own, and who can find fault with him for this patriotic predilection? I had to start again alone on my second Continental tour that year, but contrary to my usual practice, underestimated the expenses that would have to be borne, misled by accounts of people who had no personal experience; and so had to put up with much inconvenience.

On September 17th after dinner I got into the train at Liverpool Street station for Harwich and, taking a boat there, reached Antwerp the following morning at 8-30. The channel crossing was comparatively smooth and the quiet voyage up the mouth of the river Scheldt enabled such of the passengers as had got up early, to watch the flat country on either side of the river studded here and there with wind-mills and pairs of big Flemish horses moving placidly under the ploughman's yoke.

Without stopping at Antwerp I went straight on to Brussels which I reached by 9-30 a.m. and put up at 'Grand Hotel Cosmopolite', an inexpensive but comfortable hotel, facing Gar du Nord. After a hearty lunch and good rest to get over the fatigue of the voyage, I went out for a walk to the station and adjoining boulwards at about 4 in the afternoon. The tourist's first impulse is to buy views of the places he visits and send them home. In all European cities in those days almost every shop front displayed an assortment of cheap picture post-cards, with the universal hall-mark 'Made in Germany'. After this interesting occupation and a little sightseeing, full justice was done to a French

dinner at Taverne Emile and the 'events' of the day were brought to a close by visiting a neighbouring cinema and retiring to bed.

The next morning — September 19 — I got up refreshed and the day was fine — a veritable contrast to the foul weather prevailing in London at the time I left for Belgium! What more pleasant occupation could there be for a visitor of Brussels under such circumstaces than to call at Thos. Cook's office at 41 Rue de la Madeleine and join the Tourists' party on its way to the field of Waterloo?*

A fare of 16 francs provided one with a comfortable seat in a char-a-banc amidst a motley gathering of men and women from almost all parts of the globe, but mostly from America. We swept past the beautiful bois de la Cambre and soon reached the Old Post Relay where the Duke of Wellington had put up his head-quarters before the battle of Waterloo. The building is labelled "Au Quartiere General de Wellington" and is used at present as a cafe restaurant embellished with an advertisement poster at the entrance, inviting visitors to Heinz's Sauce, Tomate and Sauce Moutarde!

We were led to the chamber which served as Wellington's bed-room after his return from the famous ball given by the Duchess of Richmond, at her residence in Brussels, on the night of June 15.

As everybody knows, this ball has been immortalised by Byron's verses in Childe Harold's Pilgrimage, entitled

* I have not had the benefit of reading Gleig's story of the Battle of Waterloo, cited by Thackeray, but tried to see everything at first-hand.

"the Eve of Waterloo"—though as a matter of fact, Byron recounts the memorable fight of June 16th at Qautre Bras, in which the Black Brunswickers, (led by Frederick William, Duke of Brunswick) hurled themselves against the lightning charges of Marshal Ney and British perseverance stopped the rout of the faint-hearted Belgian Hussars.

Thackeray, in Vanity Fair, with the privileged novelist's omniscience, gives an even more graphic account of this ball when he describes in ruthless detail George Osborn's dissipation—his intending infidelity to poor Amelia and intrigue with saucy Rebecca, until he is brought to his senses by Captain Dobbin's whispering into his ear "the enemy has passed the Sambre and our left is already engaged. Come away. We are to march in three hours."

The bed-chamber was used at the time as an interesting museum. The guide pointed out with mathematical accuracy the actual furniture used by Wellington and the various arms picked up on the field subsequent to the great battle. The party then reached the Farm of Mont St. Jean, where Wellington had put up his *extemporised* field hospitals for the Allies while the main British Force was entrenched between the Farm and the Ohain Way. To one of these hospitals Lieutenant-Colonel Alexander Gordon, aid-de-camp to the Duke was transferred after he had his leg carried off by a cannon ball, while conveying the Duke's orders. He expired there the next day after the battle while the Duke was drafting his report of victory.

It will be remembered that, during the eventful hundred days that followed Napoleon's escape from Elba,

he found all Europe up in arms against him, with only France (minus the old royalists) willing to stand by him. His only chance lay in preventing a union between the Allied army under the Duke of Wellington in front of Brussels and the bulk of the Prussian forces under Blucher, then on their way to effect a juncture. If he could defeat these two, one after the other completely, he was free to deal at leisure with the hordes of Russians and Austrians whose fighting value he never rated high.

With rapid marches "he contrived with two-thirds of his army to beat the Prussians at Ligny, while the British at Quatre Bras were just able to hold their own against the other third, but were not strong enough to help the Prussians, Napoleon's right course was either to crush the Prussians or to fall with his whole army on Wellington, but he lost time and the allies were able to retreat almost unmolested.

"The British and Prussians withdrew to Waterloo and Wavre, while Napoleon despatched one third of his army under Grouchy, to hold the Prussians in check and two-thirds to attack Wellington. Wellington, however, arranged his troops so that his best men held three advanced posts—the chateau of Hougoumont and two sets of farm buildings on the slope of a slight valley, while his main body was arranged behind the brow of the rising ground in the rear. The strength of this position enabled him to hold out against all Napoleon's attacks till Blucher, who had left a fourth of his force to resist Grouchy, brought up the other three divisions to his support and arranged his forces at right angles to Wellington's left flank. Thus forced to fight two

armies at once, Napoleon made a desperate effort to break through the British line but the steadiness of the British Guards in the centre foiled him, and at the very moment when this occurred the Prussians seized his main line of retreat. The consequence was that his army was completely dispersed, almost all his luggage and artillery falling into the hands of the allies.

Napoleon himself fled to Paris and then to Rochefort where he surrendered himself to the captain of a British man of war (Bellerophon)."

This brief account quoted from a popular text-book (Cyril Ransome's Short History of England, Longmans. 1924) may be supplemented by the remarks that up to the very last moment Ney was not sent for from France to take over the command of the army—Napoleon had apportioned to attack the English. Ney was thus unacquainted with the material he was to employ. "During the 16th June the whole of Count d' Erlon's corps marched and counter-marched between Quatre Bras and Ligny without firing a shot in either battle owing to conflicting orders received from Napoleon and Ney." Another blunder was Grouchy's failure to unite his communications with Napoleon's while engaging the Prussians at Wavre. He drifted away more and more from that direction (vide Sir Edward S. Creasy: The Fifteen Decisive Battles of the World, Dent and Sons, London).

To resume the story of our own tour, the party was conducted to the Farm of La Haye Sainte, to occupy which position the almost bravery was shown by the opposing armies in the fight near Waterloo.

To quote from E. Desaix, Editeur, Bruxelles, "the

Prussians appearing towards Chapelle St. Lambert, Napoleon saw that he must hurry. After a brief but terrible cannonade (80 guns to a battery), he sent Marshal Ney (popularly known as the bravest of the brave) and Count d' Erlon against the Haye Sainte occupied by the Prussians of Baring. These latter, sheltered by the thick walls repelled several attacks of the divisions of *Alex* and Donzelot, but were at last massacred. Of 1,000 defenders only 42 escaped death !"

In commemoration of the heroic efforts made by the various belligerents and to perpetuate the memory of the brave officers and soldiers that perished on the field of battle several monuments have been erected near La Haye Sainte (French spelling La Haie Sainte) and its environments. We saw Colonel Gordon's monument, the circumstances under which he met his death being already described. Close by stands the monument erected in 1818 by Hanoverian officers in memory of their comrades-in-arms who fell in defence of La Haye Sainte. There is also the monument built in memory of 4,000 soldiers who fell commanded by Bulow in the desperate struggles of the French before their final break-up on June 18th.

A French memorial, representing the Eagle wounded to death, by Gerome was inaugurated on June 28, 1904 near the same farm, under the auspices of the military Association "La Sabretache." It was at this spot that the French army suffered most heavily and the Old Guard in the last phases of the battle, shattered by the bayonet attacks of the British Guards and surprised by the Prussian under Blucher, refused to surrender, and forming into squares perished to a man, shouting "La

Guarde meurt, mais ne se rend pas." The Old Guard dies but does not Surrender !

We visited also the Farm of *Hougoumont,* where the right wing of the Allies was firmly entrenched. E. Desaix thus recounts the fierce fighting that took place at the Chateau on June 18:— "After having allowed the ground to dry a little, as it had been soaked by showers, the Emperor posted on the heights of Rossomme, gave the signal to attack. The divisions of Reille and Prince Jerome Bonaparte made an impetuous attack on the defenders of Hougoumont, who were sheltered by hedges and by walls pierced with loop-holes. After seven attacks, the French penetrated into the court yard under a terrible fire (from Byng's Brigade). They set fire to the house. The day after the battle, the fire not having completely consumed all the dead, it is said, they filled with dead bodies the well in the yard. Of the Old Hougoumont only a few ruins remain. The chapelle has been preserved in a fairly good state." The well, alleged to have contained 300 corpses, was in a dilapidated condition and was enclosed by wooden railings.

Under the shadow of the beech trees that formed a border of the Farm, we were shown the graves of Jean Lucie Blakeman and Sergeant-Major Cotton.

We proceeded later to the Farm house where Wellington and Blucher met during the rout of the French army, congratulating and hailing each other as conqueror. This famous farm house is labelled La Belle Alliance and is now used as a cafe restaurant.

Finally we went up the mound "erected in 1825-26 with soil taken from the tragic ditch of Ohain, where

the magnificent charge of the French cavalry (Kellerman's) broke down. This mound 50 metres in height supports a lion in cast iron measuring 4.50 metres in length and weighing 18,000 kilos. The monument was erected on the spot where the Prince of Orange was wounded whilst leading the Dutch-Belgian troops."

Readers of Victor Hugo's Les Miserables will recall references to this 'ditch' or 'sunken road' where young '*Marius*' lay wounded under a heap of dead bodies.

The church at Waterloo is also a fine sight. Its dome was built in 1690 and the other parts re-built in 1855. Its architecture is somewhat foreign to Belgium they say. In the inside of the dome numerous commemorative plates bear the names of the officers of the allied forces who perished in the battle of Mont St. Jeans on June 18th.

Our guide at the La Haye-Sainte farm and the Lion mound was an ex-army Englishman disabled from service. He gave a vivid account of the various episodes connected with the battle of Waterloo, but in his references to the Belgian soldiers that took part in the victory and the owners of the farm houses above-mentioned, he was far from courteous. He summed up his comments that the battle of 1815 was a regular blessing to the people of Belgium, as it brought thousands of tourists all the year round, whose sojourn in their country was a source of great revenue to them. He evidently forgot his own share of the profit!

In spite of these enormous earnings it must be admitted, the farms were maintained in a by no means sanitary condition, so that the tourists had to undergo in places severe trials of their olfactory nerves—the

sarcastic guide consoling the hypersensitive American and other ladies by the remarks "Ozone, Mesdames!"

At the Lion Mound, one of tourists inquired whether the Lion was an emblem of British Victory at Waterloo. This elicited from the guide a facetious remark that he would not like to see the British Lion stand with its tail between the hind-legs like the Dutch Lion on the mound.

The fact is Belgium has had a very chequered career in modern European history. She came under Austrian rule in 1714; was annexed by France in 1795. After the battle of Waterloo she was united with Holland to form the kingdom of Netherlands and became an independent and neutral kingdom only so late as in 1830. The Dutch Lion was cast and put at the time Belgium formed a part of the Netherlands.

The bulk of the tourists, with their usual privilege, kept discussing the battle of Waterloo and the causes that led to the downfall of Napoleon. The Belgians, owing to the tie of a common language, have always been sympathetic towards France and, through her, to Napoleon. In September 1912, with the fear of Prussian militarism and the openly aggressive policy of Kaiser William, there was all the more reason for them to sympathise with the fallen hero. But there were many impartial judges who, while admiring the unrivalled military genius of this wonderful man, unhesitatingly averred that he was one of the most unscrupulous self-seekers that ever tyrannised over the human race. He appeared at a time that was most opportune for the advancement of a man of great military skill and

boundless ambition unhampered by scruples of conscience. There was thus nothing mysterious or preternatural in the rapid rise to power and influence of such a man under such circumstances. But his downfall was equally certain when the hypnotised world saw through the glamour that had surrounded him. History repeats itself over and over again. After Napoleon many a tyrant has risen to power and influence, on the field of battle and the platform of politics, in various countries, but on reaching his climax sooner or later has had as tragic a downfall as the exile of St. Helena.

On our way back we passed through the Congo Museum. The treatment of the African tribes at the hands of the Belgians was at that time severely criticised in the press. I was not in a mood to admire the "improvements" laid claim to by the Belgian officials in their African colony.

The party dispersed at Cook's office in Brussels and I returned to my hotel. In the afternoon I joined the excursionists that motored in the public parks and squares, past the chief buildings, like Gare du Midi, Maisons des Tailleurs et de Victor Hugo, Palais de Justice, la Grand Place Colonne du Congre's Arcade de Cinquantenaire, etc.

After dinner I went to Palais d' Ete, a music hall in boulevard Anspach and found some of the performances really very clever and entertaining, like the wheel walk and the gymnastic feats of two 'complementary' and equal sized monopied athletes. From the music hall I returned to the hotel for rest.

Early next morning September 20, I called at Cook's and, by way of precaution sent a cablegram to their

head office in London, asking for some remittance. From there walked up to the church, picture gallery, etc. and after lunch, mounted the dome of Palais de Justice and enjoyed the beautiful panorama view of the city and surrounding country.

Walking through the principal streets I noticed that Belgium produced some of the finest fruits one could get, especially apples and pears. There was of course any amount of lace of every variety, with beads of all manner of pretty designs. The proprietoress of an Oriental embroidery firm in London, whom I knew, had asked me to get her quotations concerning certain specimens of beads then much in vogue among her customers, and I was glad to obtain first hand information from a good emporium in Brussels.

After dinner I went out for a stroll and entering a restaurant was astonished to see a tipsy 'American' youth surrounded by a bevy of painted beauties and simply throwing away gold coins on drinks for his companions! There was no doubt about Brussels being a gay city. I suppose it had to provide for the amusement of its wealthy visitors, an act of hospitality which well repaid the trouble taken! Some such excuse is put forward by the citizens of Paris whenever they are criticised for the rather discreditable or even disreputable amusements for which this great city is famous.

From personal experience, however, I can say that one could live much cheaper in Brussels than in any other European capital that I have visited. But if one in bent on throwing away money one can do that in Brussels as well as in any other place in the world.

I got up rather late next morning—September 21

and went to see the Cathedral. Later in the day I made some necessary purchases as that was going to be my last day in Brussels. When I paid my hotel bill and left for the station I could not help thinking of the prodigious part this city and its adjoining country had played in the past great wars of Europe: of the victories of Marlborough and Eugine in the reign of Queen Anne and of Wellington and Blucher in the days of George IV.

Thackeray's creative genius, in his Esmond and Vanity Fair, has invested these times with life and characters that will ever keep fresh in one's memory the stirring events of those by gone days. Who can forget the Popish intrigues of Father Holt, the Jesuit priest, to place the young Pretender on the throne of England; the unassuming bravery of Major O' Dowd and the Spartan fortitude of his funny consort Peggy during the cannonade near Mont St. Jean? I wondered whether the war-clouds slowly gathering at the time round Europe would again and again burst over Belgium. I had no idea at the time, of what was destined to happen twice again not long afterwards and how it involved the whole world!

I left Brussels the same evening and reached Antwerp in an hour or so. A visit to its superb cathedral of later Gothic design induced me to stay there for a day, forgetting that the following day happening to be a Sunday, there would be no boat available for Harwich. It was too late, however to catch the boat that evening. So I put up at a modest hotel in the city and sent an express letter to Cook's at London, reminding them to hurry up their remittance by wire. I had my return

ticket to London, but my supply of cash required very careful supervision, lest I should get stranded in Belgium.

Antwerp is by no means a large city, but its Flemish associations, its art treasures and collections of the masterpieces of Rubens and Van Dyck, place it on an even higher footing of importance than Brussels. I determined to 'do' Antwerp, but for lack of cash, more like a 'tripper' than a tourist.

After dinner I walked to the fine square near the station. A Flemish youth soon came up and tried to explain the fortifications of the city, but I am afraid I could not follow much of what he said.

Next morning—Sunday, September 22, after a very frugal repast I walked up the Musee Royal des Beaux-Arts, a fine building of excellent design and spent a long time enjoying the beautiful paintings of Rubens and Van Dyck. Thence I proceeded on foot to the quay and Musee Plantin. There I kept myself occupied the whole afternoon. Antwerp has retained its Flemish characteristics and traditions, in spite of its long contact with French influence. The writing on the posters, the accent of the citizens and their general deportment disclosed plainly that the union of Antwerp with Brussels was only a political one.

On my way back to the hotel I entered the cathedral and admired the beautiful *Tableaus* of Scriptural scenes executed therein and its artistic *'Chaire'* and stalls. At dinner time I returned to the hotel, worn out by walking and ceaseless occupation, but happy for having amassed a large store of interesting knowledge. After

a supper of biscuits, cheese and fruit I retired to bed and enjoyed a sound and happy sleep.

My hotel bill being thus kept down I was able to prolong my stay in Antwerp till the evening of Monday the 23rd, without any serious difficulty. I may mention, by the way, that the choicest pears I ever enjoyed anywhere were at Antwerp. The whole of Monday I was out sightseeing; I promenaded the Avenue des Beaux Arts, passed by Theatre Flamande and saw the Athene Royal and the statue of Van Dyck. Refreshed with a frugal lunch I saw the statue of Leopold I, and Banque National, the busy quarter of *Hansa Huis* and visited Banque des repositoire des fonds publiques.

The Agent of this bank spoke English fluently and was quick in confiding to me that he enjoyed the personal friendship of a well-known Indian Prince who, he said, patronised Antwerp very much. According to his version Antwerp was a city of great amusements and pleasures, but I had neither the will nor the ability to prolong my stay in the city even for another day—my lean purse having shrunk to its lowest limits. So, wishing him goodbye, I returned to the hotel and after a hearty repast of bread, butter and coffee got on board the steamer leaving for Harwich.

Early next morning at 5-30, September 24, I got down from the boat, much tired with fasts and peregrinations, but the hospitable air of Old England and its cheerful seashore soon refreshed me and I reached Liverpool Street station by 8 o'clock. In another half an hour I was back in my old rooms. After a hot bath and change when I sat down to breakfast the maid handed over to me an urgent letter from Cook's.

I opened it hastily and, to my great surprise, found in it a draft for the remittance I was so anxiously expecting at Antwerp.

With a smile I put it in my pocket and after a little thinking concluded that the error might have arisen from some ambiguity in the wording of the cablegram despatched, in French, from Brussels. Later in the day, however, when I called at Cook's office, at Ludgate Circus, to inquire about this letter the Superintendent expressed his regret at the inconvenience I was put to, admitting that the error lay with his office.

CHAPTER VI

I JOIN THE THIRD YEAR CLASS AT COLLEGE

FROM 25th September to 1st October, the date on which the College was to re-open I utilised my time mostly in reading higher mathematics. For recreation I visited the Kensington Arts Gallery or cycled to Mortlake and Kew in fine weather. One day I took Khatib Abdul Lateef who had now come to live at No. 38 to the Regent Street Polytechnic to arrange for his preparing for the London matriculation examination, and one night to the Criterion Theatre to see 'A Young Man's Fancy'—a poor performance altogether.

On 29th September I called at 9 Northbrook Road, Lee, and was grieved to find Mrs. McEwen much worried over her daughter's health. A change, it was recommended, would do her good, and her parents were desirous of bringing this about.

On returning from College, the day it reopened, I found Mr. Seaton waiting for me with a belated scholar from Hyderabad, Syed Anwarullah, seeking for admission. I took them to the Registrar, London University, and it was decided that Anwarullah should first pass the London matric and then join the School of Economics, Kingsway, to take the B. Sc. in that subject. He and his brother Syed Asadullah lived in

the same locality as myself at Hyderabad. He read for sometime at the Nizam College after passing the Intermediate examination from Aligarh. It may be pointed out that even the revised rules of the State Scholarship Committee demanded only a certificate of passing the Intermediate examination of an Indian University or the Cambridge Senior Local as minimum qualifications for the award of a scholarship, and the majority of the successful candidates possessed no higher qualifications, hence their difficulty in getting admisson to the London University in those days.

In the first term of our third year course we had to attend 30 lectures from Prof. H. L. Callendar, between October and next February, on thermometry, conduction and radiation of Heat, advanced thermodynamics and the dynamical theory of gases. After Lord Kelvin's death Prof. Callendar was undoubtedly the greatest authority on Heat, and in accuracy of measurements and correction of small errors in experimental work he was supreme in the 19th and early 20th century. General Practical Physics was in charge of Dr. H. Moss the senior demonstrator (under Prof. W. Watson and Dr. S. W. J. Smith)—an experienced teacher and collaborator with Prof. Callendar in several of his famous researches. Prof. Alfred Fowler, pupil of the great Sir Norman Lockyer, was in charge of the Astrophysical laboratory. He had already a number of epoch-making discoveries to his credit, in series spectra of ionised elements. A more sympathetic teacher ready to help students in their experimental difficulties is hard to find. Spectroscopy was a subject in which I was deeply interested and Prof. Fowler's laboratory was the

most suitable place for it. Scores of Indian scholars after me (and several before me) learnt practical spectroscopy as Prof. Fowler's students. The laboratory was equipped with the most up-to-date apparatus: large Littrow, small Littrow, Concave grating, Zeeman Effect accessories, etc., etc.

This year was the most important of my educational career as I had access to the highest authorities in the most advanced branches of Physics and worked in one of the best equipped laboratories in the world. (In the second term we attended Prof. the Hon. R. J. Strutts' lectures on conduction of Electricity through gases and allied phenomena; Cathode Rays, Canal Rays and Rontgen Rays; Photo-Electric Effect and radio-activity. As a pure experimentalist few men could come up to the Hon. R. J. Strutts' standard. We attended also Prof. W. Watson's lectures on abstract wave-motion, the electro-magnetic theory of light and electric waves; also Dr. S. W. J. Smith's lectures on Electrolysis, magnetism and Crystal Optics. Captain Sir William Abney's lectures and demonstration experiments on Colour Vision were most instructive and entertaining. In higher mathematics I took up the D. and E. Classes at the College (comprising Gamma functions, Elliptic integrals, elements of elliptic functions; simultaneous differential equations, partial differential equations; harmonic analysis; Fourier's theorem, Bessel functions, spherical and ellipsoidal harmonics, attractions; applications of generalised Co-ordinates, Spinning tops and gyrostatic motion, hydrodynamics).. The list of mathematical subjects looks staggering for an experimental physicist, but the modern tendency is to develop both

the experimental and mathematical sides of physics and no man can pretend to a sound knowledge of the subject unless he is well trained in both. The system of training at the Royal College of Science provided a fair grounding in the main branches of advanced mathematics. Proficiency could, of course be acquired only by prolonged application and practice. It was under the influence of this training that I was able in due course to design the Nizam College laboratories and to develop the science, mathematics and research departments of the Osmania University, not to mention some of my own researches in Optics and astrophysics.

The Balkan war clouds darkened the political horizon of Europe at this time, and the entire Muslim world was destined to go soon into mourning over the approaching destruction of Turkey. My heart ached to hear the bad news but I tried to forget my sorrow in hard work and studies. On October 16th I was so much depressed that I could not help going to the Turkish Embassy (at 69 Portland Place) with Rushdi Bey and interview the Naval Attache about the real situation.

About this time I made some new friends and acquaintances in London. On 20th October (a Sunday) Mr. Eric Lawrence, son of the owner of the firm of Opticians, Lawrence and Mayo (who did a flourishing business in India, taking large contracts for supply of Optical instruments to the Indian Army, with branches in several large cities in the East) met me at dinner as a guest of K. Abdul Lateef. Next Sunday he took Lateef and myself to his house for dinner at Kilburn. His mother and sister received us cordially, Mrs. Law-

rence had been to Hyderabad with her husband some years ago and we talked of several friends they had made there, including of course Maulawi Ahmed Husain Saheb, the Peshi Secretary. We met before dinner an elderly friend of Mr. Eric's, an engineer named Montague Shann, who had lived for a number of years in China (with perhaps some Chinese blood in his veins) a well-read gentleman, full of hopes for doing away with all wars and aggressions through his pet scheme of unified universal currency! Messrs. H. Moss and W. F. Boryer from the teaching staff of the Royal College of Science, who helped me with private lessons in physics and advanced mathematics respectively, also became very friendly and gave me now and again some important news about the work done in the various departments, sometimes also hints of a personal nature concerning their senior colleagues.

Dr. Abdul Majeed, a practising advocate from the Punjab was in London at the time and took an active part in getting up a protest meeting (on 1st November) at a place in Tudor Street near the Blackfriars' Bridge, against the policy of Europe towards Turkey. Rushdi Bey also read a spirited paper in English (which I had touched up) recounting the history of European 'crusade' against the Ottoman Turk. Among new acquaintances were M. Sadi Bey, Editor of the Turkish Liberal paper 'Iqdam' and Mr. Fuad Ataullah elder brother of Rushdi Bey, who criticised the policy of the Committee of Union and Progress, then in power at Constantinople.

On 20th November we said our 'Id-ul-Duha prayers at the Caxton Hall. I met there Shafiq Bey of the

Turkish Embassy, the Naval Attache. Arif Bey and an Egyptian medical gentleman, Dr. S. Gouda who said that the contributions to the Turkish Relief Fund from Egyptians residing at the time in London amounted to over 200 pounds sterling. After prayers Dr. Majeed made a brief speech and recommended cabling to India for financial aid to Turkey. It was here that I met Mr. Haroon Khan Sherwani (who later served as Professor of History at the Osmania University College when I became its Principal in 1924), and took him to our 'Id lunch at No. 38.' A few days later (on the 26th) Mr. J. P. McEwen came to tea with me and met Messrs. Abdul Lateef and Syed Anwarullah at the same place. Two days later we had a prize distribution at the College. Some very interesting speeches were made by the Rector and other officers revealing the past history of the Imperial College and its development. I congratulated Mr. A. E. Stone of the mechanics department on his getting a number of books (mainly on English Literature) as prize Students of Technical Science in England were badly in need of books on literature.

As a practical sympathiser with Turkey I also subscribed rather liberally (in contrast with my limited resources) to the Turkish Relief Fund, the Red Crescent Society etc. The Islamic Society of London, of which I had become a member, also rendered valuable service in collecting subscriptions for Turkey. At this period I had to do much strenuous work at the College. A number of severe tests had to be passed in advanced Thermometry and Calorimetry, Colour Vision and Spectroscopy etc., and I did so. By way of relief and

recreation, I welcomed a day's outing to Southend with Lateef, as guest of Eric Lawrence, whose people were staying there at the time (on 7th December). We had lunch and stayed on till tea with interesting conversation. Next day I saw Dante's Inferno at the Kensington High Street Cinema; invited my class fellow Clarke to dinner on the 11th at the Cabin restaurant, Piccadilly; visited Miss Khadijah at her new offices in Baker Street (of Sherlock Holmes' fame) designated as "Deja and Co., Embroidery Experts." Another evening took Rushdi Bey to the Lyceum theatre to see Dickens' Oliver Twist. It was a nice performance; Fagin's ravings and hallucinations on the night preceding his execution appeared to me (as acted on the stage) to be more natural to the occasion than what is depicted in the great novelist's masterly work.

On December 18 occurred our College Conversazione I had asked the McEwen family to attend it as my guests, but the distance being long and the health of all the members (only 3 at present in London) far from good, they could not come. I had excellent time with my class-fellows: Clarke, Nelthorp, Shaw, Bachrach and Merheim. There were nice refreshments, excellent tea and pastry, and, above all, most carefully arranged scientific exhibits of the highest quality and standard. Very interesting popular lectures were delivered by past and present students on diverse scientific subjects, with beautiful demonstration experiments; from electric waves to osmotic pressure, from manufacture of aluminium films and foils to high explosives, too numerous to observe and enjoy, let alone describing them. The Bessemer Laboratory was just then opened. It was a

treat to pass through it and see its equipment. There was a nice concert party also and we all returned to our lodgings very late indeed.

Next day, the 19th December, I was invited to Mr. Shann's marriage with Miss A. Ethel Warren at the Friends' Meeting Place in St. Martin's Street. The bride and bridegroom were evidently quakers. I presented them with a silver photo-frame. Mr. Eric Lawrence and Miss Lawrence were also there. I was introduced to a number of Balkan (mostly Greek) ladies who talked of Ahmed Riza, and his sister, Sultan Abdul Hamid Khan's iron regime and the failure of the Committee of Union and Progress to save Turkey from the disasters of the Balkan War. I listened to their harangues without comment. I was probably the only true friend of Turkey in that gathering and knew also that no human policy or diplomacy, no reform or re-adjustment could possibly save Turkey at present from her greedy neighbours, mainly on account of her own past mistakes and incompetence.

A Short Trip to St. Leonards and Hastings

On Chritmas Day there was a good dinner and tea party at No. 38. A number of speeches were made by ladies and gentlemen there assembled. After supper I went out for a stroll with Rushdi Bey and early next morning rushed off breakfastless to catch the train at Victoria for St. Leonards. My good old friends—Mr. and Mrs. McEwen had-asked me to spend a few days with them at that sea side resort where they had gone out for a change with Miss Vera. It was an awfully wet morning when I started, but the weather improved

somewhat by 9 a.m. when the train reached St. Leonards Station. Mr. and Mrs. McEwen were there to receive me and I put up with them at 12 Church Road, Warrior Square. The seashore presented a very uncommon sight—huge waves rising to enormous heights and breaking up into sheets of spray, and beating against the shore with great violence! We remained indoors during the rest of the day. Mr. McEwen and I went out for a walk next morning. I purchased a copy of Hood's Poetical works as present for the family and at their request wrote in it a Persian quatrain in imitation of Omar Khayyam, complaining not of the sorrows of life (as in the original), but of having to forego the amenities of London:

زیں شہر کہ بود مدّتے منزل ما
عیش و طرب و نشاط شد حاصل ما
افسوس کہ دہر دوں قرار ے ندہد
رفتیم و ہزار حسرت اندر دل ما

"This city where we sojourned for a short while contributed to our comfort, happiness, and gaiety. But fate, alas! is averse to continuity of condition. We had to leave the place full of yearnings and regrets."

Mr. and Mrs. McEwen entertained me right royally. We had stuffed Turkey, roast-fowl and Christmas pudding with fresh fruits and nice drinks. We talked of the days of King Harold and William, Duke of Normandy, of the battle of Hastings and its consequences. We were all in good spirits and I am sure the outing did Miss Vera McEwen also a lot of good. The next day (28th December) I left St. Leonards at 10-24 a. m. and reached Victoria by 12-40 p. m.

On returning to No. 38 I found the family about to break up. Two of the members went over to 28 Warwick Road. It was clearly unpleasant to stay on under such circumstances so we were all looking out for a general dispersal.

CHAPTER VII

MY LAST TERM AT THE ROYAL COLLEGE OF SCIENCE

TEACHING at the Royal College of Science paid more attention to the technical aspect of Science than philosophical and as such did not aim at preparing candidates directly for the London B. Sc. Examination in Pure Science. There were barely nine months left for me to get ready for the Final Honours examination in Physics, so I had to keep myself heavily engaged in the vacations also. During winter the days were short and depressing. My health deteriorated rapidly, but I had to work on without interruption. My only recreation at this time was an occasional visit to a West-end theatre, music-hall or cinema, usually alone, but sometimes with Lieutenant Saleh Murad or a casual London acquaintance. One evening (3rd January) I went to Charing Cross to see Mr. and Mrs. P. H. Sturge off to India, from where they had come on a short holiday. On 4th January I heard very good news from home: my sister's pension was sanctioned and she received her late husband's arrears of pay also, out of which she remitted to me for safe-keeping Rs. 1,500 (O. S. equivalent to £ 86-3-5 sterling). This sum I deposited in the London and Provincial Bank.

The College re-opened on the 13th and my work got multiplied. From 22nd January, every Wednesday

afternoon I attended for a term Professor Ambrose Fleming's advanced lectures on Wireless Telegraphy at University College, Gower Street. They were of post-graduate standard and were attended largely by physicists and radio-engineers from different countries. I had to supplement them with the Professor's lectures delivered during a previous term. Mr. W. F. Boryer gave me private lessons to assimilate Class D. mathematics at the Royal College and I found them useful in following Prof. Fleming's lectures.

One or two incidents relating to this period are worth recording: on 11th January Mr. Eric Lawrence invited me and Lateef to a lecture at Caxton Hall by the Iranian missionary, Abdul Baha, in Persian, followed immediately by an English translation by his son or assistant. The audience consisted mostly of elderly spinsters who, we all hoped, got some worldly consolation with "spiritual enlightenment" from the lecture. We had supper at the Boulogne and later Mr. Eric took us to Mr. and Mrs. Shann at Kilburn, where we discussed the future of Europe (and of India) over cups of coffee.

On January 14th I went with a lady friend to the Albert Hall to witness on the screen scenes from the life of Jesus Christ—'From Manager to Cross'. The hall was packed with men and women, most of the men belonging to the ecclesiastical profession. We liked the performance immensely and left the hall with a deep sense of reverence.

On the 25th Eric Lawrence and Lateef met me and Rushdi at Charing Cross and we walked down to the

National Picture Gallery, had tea at Lyon's as Lawrence's guests and later I took the party to the Middlesex Theatre of Varieties to see a rather noisy show. We had no idea of the type of people that usually patronised this theatre. By way of compensation for the disappointment I took my guests to the Boulogne and we enjoyed there a hearty supper.

On the 28th I had my examination in wave-motion, Electromagnetic theory and Electrostatics, and did fairly well. A few days later Prof. A. Fowler gave us a very entertaining lecture on Solar atmosphere at the College Physical Society meeting. Most of my time during these days was spent in the College laboratories and the Science Library at South Kensington to which students of the Royal College had free access.

On 8th February I left 38 Longridge Road and put up at 32 Nevern Place (Beaufort House) close by. The proprietress of this boarding house was Mrs. Barrett, an elderly lady rather punctilions but mindful of the comforts of her boarders, most of whom were single old ladies with small but steady incomes and equally steady powers of digestion. There was also a bright English widow with her little daughter. They had enjoyed for a time some of the comforts of British official life in India, being the guests of the Commissioner of an important province. An old Norwegian Engineer who said he had a hand in the design of a part of the G. I. P. Railway, a German student of modern languages, Mr. Muller from Munich with whom I took regular lessons in German and a cheerful young cadet from the Military College at Woolwich also lived. There, the last mentioned only for a few

days. The society was congenial and the food excellent. I would have continued to live comfortably at Beaufort House for a long time. My study leave was sanctioned on half-pay and I expected to receive my arrears also. But in trying to help a friend in London I had to lend a pretty big sum of money which was likely to remain unpaid for a long time. I resolved therefore to economise drastically until such time as was necessary to restore me to my normal financial position. The simplest way was of course to change into cheaper quarters and I moved to 23 Lexham Gardens on 29th March.

In the meanwhile I gradually regained my normal health and on February 26 visited the Greenwich Observatory with the members of our College Physical Society. The outing was arranged by Reynolds the Secretary of the Society and we spent a long time inspecting the various telescopes and their accessories, in particular the instrument (Meridian Circle) used by Bradley in the first quarter of the 18th century in his attempt to detect the parallax of the fixed stars which ended in failure but led to the discovery of the constant of Aberration and the Earth's Nutation. It was marvellous how such delicate measurements could be made with the comparatively crude apparatus then available. From the Observatory I walked down to my old friends at Lee and entertained them with my account of the excursion.

A couple of days later, Prof. the Hon. R. J. Strutt very kindly gave me, Mr. Jevons (then an assistant demonstrator in the Physics department) and one or two other men in the final class a free pass to attend

his lecture at the Royal Institution on active nitrogen which he had discovered recently and was attracting attention all over the scientific world. Among the audience were Lord Rayleigh, Sir William Crookes, Sir J. J. Thomson and a number of other distinguished scientists. Prof. Charles Vernon Boys (whose son was at that time a fellow student at the Royal College) was helping in the demonstration as professor-in-charge of the Royal Institution laboratory. After the lecture we saw some of the historical apparatus used by the Prince of pure experimentalists, Michael Faraday, to demonstrate the generation of electric currents by the rotation of a coil in a magnetic field (which constitutes the foundation of modern electrical engineering), the galvanometer to detect currents due to self and mutual inductance, the sealed tubes for liquefaction of ammonia and chlorine, etc., etc.

On 2nd March after returning from a visit to my friends at Lee I heard of Syed Anwarullah's illness at 38 Longridge Road and went there to make inquiries. He was reported to be suffering from pneumonia, but was under good medical teatment.

The Oxford and Cambridge boat race on the Thames came off on the 13th and I went to see it with an Egyptian student named Fahmi. From Hammersmith Broadway we walked to Barnes Bridge and on payment of a shilling each got a seat on the top of a house near the river. Cambridge was leading from the start, but all of a sudden the Oxford crew pulled vigorously and won. The roof was overladen with spectators and it was our good fortune it did not collapse. We heard of several such accidents on similar occasions.

Death of a Hyderabad student in London

On the 18th while travelling by motor bus in Kensington High Street Victorine, the maid at No. 38 told me all of a sudden that Mr. Anwarullah was dead. I got down immediately and went to the house only to hear the sad news confirmed. The house-keeper said that the patient was for some time progressing favourably, but all of a sudden he collapsed. No one had taken the trouble to inform me or any other Hyderabadi when the illness took a dangerous turn, for such a thing must surely have happened before the final collapse. Next day I availed myself of leave of absence from the College and went with Mr. Seaton by bus to Swanage Road, Wandsworth to arrange for the funeral etc. with the Secretary of the Islamic Society in London (Mr. Abdul Ghani, a law student from the Panjab). He was out but I left an urgent note for him. He called on me immediately he saw the note and on inspecting the dead body wrote a formal death certificate. We made arrangements for burial at the Willesden cemetery after going through all the official formalities. On the 20th all the friends and acquaintances of the deceased in London gathered at No. 38. Maulavi Khaja Kamaluddin, a Muslim missionary from the Panjab who happened to come to England by the same boat that brought Syed Anwarullah, superintended the funeral obsequies. We accompanied the coffin to the Muslim section of the cemetery and after saying prayers in the open, deposited the dead body in its grave. Thus ended the career of a promising young man, gentle, kind hearted and straight forward, far away from his kith and kin. May God

rest his soul in eternal peace.

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Our College closed next day for the Easter vacation and I was free to assist Mr. Seaton in settling the late Mr. Anwarullah's liabilities and assets. I knew that he had deposited a sum of £ 86 sterling at my suggestion at a local bank. The receipt was missing; but the bank acknowledged the transaction. Mr. Seaton in his official capacity as guardian of State scholars proceeded to recover the money for the deceased's relations. A number of formalities had, of course, to be gone through and took much time and attention. In the meanwhile I was authorised to obtain from the proprietress whatever there was of Syed Anwarullah's property and hand it over to Henry S. King and Co's agent for transfer to Hyderabad. This I did on 4th April.

The gloom of this period of the vacation was dispelled by some bright and cheering incidents. One night (22nd March) I went to see Charlie's Aunt at the Coronet Theatre. It was meant to depict undergraduate life at Oxford and would have been free from silly nonsense but for "Charlie's Aunt" getting up trees and making a fool of the father of one of the boys to fall in love with 'her'! On the 24th after a hearty lunch and tea at the house of my good friends in Lee I went to Greville Lodge at Kilburn in response to an invitation to dinner from Eric Lawrence. Eric, his sister and myself formed the entire company. We had a sumptuous dinner and diverse conversation about London examinations and recreations. A few days later I

received an extra remittance from home of £70 which relieved me of a number of annoying hardships. But the Turks suffered defeat after defeat in the Balkan War. On 27th March I read of the fall of Adrianople, and Constantinople itself was threatened but for the gallant defence at Chatalja.

On 3rd April while taking Lateef to University Tutorial College for his lessons in Practical Chemistry with Mr. Shepherd, I saw a number of posters announcing the proceedings of a law siut brought forward by Lord Alfred Douglas against the publishing of certain passages from Oscar Wilde's De Profundis. It raked up memories of an unfortunate period of British literary history and for a number of days students discussed nothing but Oscar Wilde, his friends and his poetry.

I was glad to go back to work at the College when it re-opened on the 15th and Prof. Callender started his lectures on thermodynamics. Two days later I took Mir Alam Ali (one of my old pupils at the Nizam College, now reading at Oxford and coming off and on to London for his Bar dinners and lectures) to the Albert Hall to listen to a magnificent orchestra; but I am afraid neither of us had the true musical ear to appreciate fully the grand performance.

A meeting of the Physical Society of London took place in our College on 25th April and Dr. S. W. J. Smith very kindly invited me to attend its procedings. Several papers were read and discussed. I remember one by Mr. Bower on geometrical optics. It occurred to me that it would be advantageous to apply for a fellowship of the Society before returning to India and I did so after taking my Associateship of the Royal

College of Science.

Life at Lexham Gardens was far from congenial. The occupants of the boarding house kept changing week after week and I felt the atmosphere depressing. My examinations were very near and much hard work had to be done at home in peace and quiet. I advertised in the papers for living in a distant suburban family. It was answered by Mrs. Powell of Cawood, 28 Maberly Road, Upper Norwood, near Crystal Palace. I made a personal call at the house. Its site and surroundings suited me and the terms were also reasonable, so I moved into it on the 3rd of May. Mr. Powell was a dealer in Austrian plush hats and had his office in the city. The family consisted of several boys and girls. The eldest son was employed at Thomas Cook and Son's in Paris. The next boy named Charles, a grown-up daughter and her fiance worked with the office establishment in the city. Two younger boys were at the Shoreham Grammar School and the youngest girl and boy stayed at home. There was an extensive garden attached to the house which kept the family usefully employed on Sundays and other holidays. A German girl named Martha Hocks of good family from Crefeld helped Mrs. Powell in housekeeping in return perhaps for board and lodge. She had a most charming friend, Hilda Wilde who lived in the neighbourhood and called on her once or twice a week. I got a monthly season ticket for travelling to and from Victoria and started daily at 9 a. m. for College.

At Cawood I prosecuted my studies uninterruptedly. On week days I returned home from College for an early dinner and shut myself up in my study till late at

night. On Sundays Charlie usually took me out for a long walk. Once we went by train to Croydon and Purley and from there walked down to Coulsdon Common, returning home after tea at the Fox Inn. My bicycle was borrowed by Rushdi Bey who was now apprenticed to a Chinese aviator with his aerodrome at Shoreham and learnt flying on the Wong aeroplane. Hearing of B. C. McEwen's arrival at Lee on a short holiday from Hyderabad I went one fine afternoon (7th May) by bus No. 75 to Lee. It was a long monotonous ride but I felt refreshed all the same. I was glad to meet B. C. McEwen and hear from him all the latest news about Hyderabad and my people. On return journey I went by bus only as far as New Cross and then got into the train for Upper Norwood, saving much time thereby. A week later I took McEwen as my guest to the Strand Theatre to see the Chaperon—a thrilling story with fine acting by "Mr. James".

A flying visit to Oxford

Prof. Callendar's lectures being over I availed myself of an invitation from Mir Alam Ali at Oxford. Leaving Paddington by the 1-45 p. m. train on 16th May I reached Oxford in about an hour. There was much boating activity on the river Isis—"Eights and Bumping." Alam Ali took me on the Lincoln Barge for tea. We met Mr. Seaton also starting the boat of Queen's College, from where he had graduated. After roaming by the riverside and seeing some of the Colleges I went to the Opera as Alam Ali's guest to listen to the instrumental and vocal music of the Huguenots. The

performance lasted till very late in the night and I retired to my apartments engaged for the night, in the small hours of the morning. As I was in a hurry to go back to London I took the 2 a. m. Express and reached Paddington at 11-3. Mr. J. Guild, an Assistant Demonstrator at the Royal College who had helped me with his notes on Dr. Smith's lectures on the magnetic properties of metals etc. was waiting for me at the South Kensington station, Snatching a hurried lunch at the station restaurant I took him as my guest to the Prince of Wales's Theatre to see Martin Harvey in the Taming of the Shrew—a fine matinee performance. We had tea at the Coventry and I returned home to my work by about 7 p. m. Mr. Guild, it is a great pleasure to note, joined the National Physical Laboratory in 1914 and was awarded the Duddell medal in 1943 for his design of scientific instruments of surpassing accuracy. He is the twentieth Duddell medallist.

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On May 18, after a heavy day's work, I was watching a convivial party at Mrs. Powells'. Mr. West her would-be son-in-law, Miss Hocks and Miss Wilde and Charlie were enjoying themselves with music and extemporised dancing, when Rushdi Bey was suddenly announced. He came all the way from Shoreham with his aviator's kit, and wanted me to accompany him to town. He showed me a cutting from a Shoreham newspaper, describing his progress in aviation—meant (as I came to know later) to serve as a recommendation for financial help from the Turkish Embassy, in his professional training. We dined at the Waterloo

Restaurant, and fearing it would be too late to get back to Cawood I put up at Haxell Hotel for the night. Next day Rushdi Bey took the train for Shoreham and I went straight to College after breakfast. In the evening Mr. Gandhi, a Bombay graduate, specialising in metallurgy at the Royal School of Mines, asked me to attend a meeting of the Indian Science Association where he read a paper on the need for Industrial Education in India. Mr. Cheshire of the I. E. S., then on special duty at 21 Cromwell Road, and a few other Englishmen were also present.

On 24th May Mrs. Powell requested me to accompany her and Miss Hocks to the Croydon Reparatory to see Candida by Mr. Bernard Shaw. I found nothing extraordinary about the play but the ladies seem to have liked it much.

A letter from Mr. J. P. McEven intimated that Basil left for India on the 29th, he and Miss McEven accompanying as far as Paris.

4th June was Derby Day and I could not help going to see the race and some possibly enduring characteristics of its motley assembly of spectators so graphically depicted by Dickens in his story of Little Nell. As is well known the race caused much sensation ; Craganoor was first announced winner but afterwards the award was cancelled. A foolish suffragette, Emily Wilding Davison, out of sheer bravado, crossed the race course while the horses were running and got killed by the King's horse Anmer at Tattenham Corner, causing wide spread annoyance.

Our College course was nearing its end; a group photograph of the third year Physics students was taken

with the professorial and teaching staff on June 6. The same day, in response to an urgent telegram from Rushdi Bey saying he was taken suddenly ill, I took the 1-55 p. m. train to Shoreham and was pleased to find that his illness was more imaginary than real. The outing disturbed me in my preparation for examination, but the 'blow' of the sea proved invigorating and I redoubled my application to work. 11th June was our last working day in the laboratory.

Our final examination for Associateship in Physics began on June 17. In the morning I was a bit unlucky in the choice of experiment for practical examination. I chose the conductivity of electrolytes by the Dolczalek electrometer method and lost much valuable time in setting up the over-sensitive instrument. But in the afternoon I had to make and use a capillary electrometer for potentiometer measurements. My knowledge of glass blowing enabled me to get splendid results. The written examinations came off on 27th and 28th June. I was fully prepared for them and answered well.

CHAPTER VIII

FINAL EXAMINATION AND PREPARATION FOR HOMEWARD JOURNEY

THE Associateship work completed, I was free to enjoy my holidays for a short while at least. My good friends at Lee intended going to Margate shortly and asked me to spend a few days there. Though I had lived so close to the Crystal Palace I had seen but little of it. On 1st July a lady friend very kindly consented to accompany me to the Palace. It was a fine afternoon. We visited the rivers, caves, statues, paintings and the aviary etc. There was such a lot to see and talk about. We had nice tea listening to the fine music in the garden. My time for leaving England was fast approaching so I wished to see as much of my old friends as possible. The Crystal Palace, a glass and iron structure, some 1,600 feet long, designed by Sir J. Paxton, was put up originally at Hyde Park and served as the Great Hall of 1851 Exhibition. It was later removed to Sydenham. It was here that I saw it. It is non-existent now!

The McEwen family was very friendly disposed towards me. Among my happiest experiences in Europe I reckon this friendship with the family. Mr. J. P. McEwen continued to write to me even after my return to India until death overtook him in the influenza epidemic after the Great War.

I could not forget my friend Mr. W. F. Boryer either.

He had asked me once (on 13th June) to his house (5 Beechmore Road, Battersea Park) for supper and revision of Class D. mathematics. He accepted my invitation to accompany me to Crystal Palace on 4th July, and in spite of rain, we had a pleasant evening there, with music, refreshments and small talk about the College I was about to, say good-bye to its staff and fellow-students.

The Powells were about to go to Yarmouth for their summer holidays and I wished to live near the London University to work for my B. Sc. Final Examination in October, so I bade them good-bye on 5th July and put up at 28 Warwick Road, Earl's Court (Beau Sejour), whose French proprietor M. Lacire was already known to me through Rushdi Bey. The house was almost empty at the time except for a Dutchman named Van Rood and a Latin American student and his Belgian friend. I lived in seclusion, shut up with my studies almost all day. Occasionally I went to the old College to meet Dr. H. Moss to see a new apparatus or get a practical difficulty solved. On some evenings I went alone or in company with a casual London acquaintance to the Earl's Court Exhibition or the theatre—e. g. to see Martin Harvey in the Only Way, depicting Dickens' Tale of Two Cities at Prince of Wales's, Within the Law at the Haymarket, etc. I went to the Lords' cricket ground to see the match between Oxford and Cambridge on 8th July. Messrs. P. T. Wrigley and H. Klugh of the mathematics department at the R. C. S. and City and Guilds College were comparing notes.

My trip to Margate was brief. I left Victoria at

9 a. m. on the 12th of July and returned on the 18th at 12 noon, two hours' journey each way. Clement was indisposed and the ladies had to wait on him. Mr. J. P. McEwen and I roamed about the pier in the mornings, once walking as far as the Fort, at another time to Broadstairs. One morning we went round the fleet in a motor boat. The presents (to serve as mementos) which I had brought from London were much appreciated. I received intimation from College of my success in the Associateship examination and we all rejoiced over it. There was news in the papers about the Balkan War taking a miraculous turn in favour of Turkey owing to the fierce battles then raging among the Balkan allies over their spoils.

Immediately after my return from Margate on the 18th I caught the 1-55 p. m. train for Brighton. Rushdi Bey received me at the station. I could see at once that his health was broken, the hard mechanical life of an apprentice in aviation not at all agreeing with him. We spent a nice evening at the Black Rock and had a dinner at the Cairo Cafe. He went back to Shoreham next day and I followed him later to see his aeroplane but returned to Brighton the same evening. On the 20th it was exceptionally fine and I swam in the sea with some noteable swimmers. Later in the day I hired a rowing boat and saw Jebez Wolfe swimming between the two piers. He was a strong man but seems to have had ill luck in his attempts to swim the Channel. Perhaps he was in training again for a fresh attempt. I met at the sea front my Belgian fellow boarder Delleurs and his friend Turies (?) a French boy from the Islands of Seychelles in the Indian Ocean.

After tea I took the return train for Victoria and arrived there at 6 p. m.

A week's trip to Berlin

Rushdi Bey's apprenticeship at the Shoreham aerodrome coming to an end his younger sister, Miss Khadijah Hasanah and brother, Fuwad Bey were leaving for Constantinople by a rather circuitous route on account of the Balkan war. They asked me if I would accompany them as far as Berlin. Tired of travelling twice on the Continent alone, I considered this to be a good opportunity of spending a week in Berlin—though my companions would probably leave the city earlier. I left Victoria Station with the party at 8-30 p. m. on 23rd July. My second class return ticket cost £ 5-2-9. I posted my home letters at Folkestone at 10.30, and the party reached Flushing at 4 a. m. next morning. German officers inspected the luggage of passengers at Goch on the frontier—with us a mere formality. We had excellent lunch in the train and reached Berlin at 5 p. m. local time—an hour ahead of Greenwich.

A motor bus took us to Friedrichstrasse and I put up at the Central Hotel. My companions went into apartments in the neighbourhood. On the 25th after breakfast at Victoria Cafe in Unter den Linden, I called on Miss Khadijah and her brothers and we all went to the Post office and thence to the Postal Museum in Leipzigerstrasse. We had good gansebraten lunch at very reasonable price (1.25 mark) and walked in Unter den Linden and the Tiergarten, passing through the famous Brandenburg Gate (erected in 1788-91). The

Quadriga of Victory that surmounts this gate is made of copper and was taken by the French in 1807, but was returned in 1814, when adversity began to overwhelm Napoleon Bonaparte. Feeling thirsty (the day being hot) I took a glass of lemon squash, for which I had to pay one mark, whereas an equal quantity of beer is incomparably cheap. No wonder the Germans—male and female—drink beer by the gallon at a time. Next day we all went to see the Kaiser's Winter Palace. They made us put on felt sandals beneath our footware (gratis) to prevent damage to the polished marble floor. A guide was engaged who charged us two marks per head to show the various apartments and their contents. There were no fewer than 250 fine horses in the Royal stables.

For convenience I also moved into apartments near my companions. On the 27th we all went by private bus (fare 50 pfennig each) to the Berlin Zoological Gardens. The main entranee (haupteingang), known as the Elephant gate is built in the Japanese style. The Antelope House is designed in Moorish style and has a group of Centaurs in front. The Ostrich House is built in the Ancient Egyptian style. The beasts of prey (like tiger, leopard, puma etc.) were kept in the open (even in winter, it was said). A large number of spectators, mostly women, were looking at them. The Aviary contained among others, rare birds of Africa and South America etc. We rested for a while in our apartments during the day, my companions made preparations for the resumption of their journey to Constantinople via Odessa. I saw them off at the Friedrichstrasse bahnhof at 12-33 o'clock. Not feeling

inclined to sleep I roamed about in the Tiergarten (once a royal deer park, now a place of general recreation) till 3 a. m. Going to bed later I enjoyed sound sleep till 9 o'clock.

After breakfast I promenaded in the Passage and took a Tourist ticket at Thomas Cook's for visiting the principal places of Berlin, in the Company's large autobus. An Egyptian gentleman (said to be of Princely rank) and a number of American men and women were among the party. Just before starting we had our group photograph taken seated or standing in the bus. We passed the Nationalgalerie—an imposing edifice built in the form of a Corinthian temple with an equestrian statue of Frederick William IV, at the top of its extensive flight of stairs, the pedestal embellished with allegorical figures. The building contains several sculptures in bronze, also a number of fine paintings. From here we passed, more or less in succession, the Stadthaus, Dome, the Royal Palace (with the Guard at their morning Parade), the arsenal (Zeughaus) the University, thence through Kaiser Wilhelmstrasse, Unterden Linden and Brandenburger Tor to the Tiergarten, seeing the Reichstag building, Bismarck Denkmal (statue), statues of Von Moltke (victor of konig gratz and chief of the general Staff in the Franco-Prussian War of 1870-71) and Von Roon, Konigsplatz with its statues of Emperor Frederick III and Empress Victoria, busts of Von Helmholtz and Von Hofmann; onwards through the Sieges Allie, past the Column of Victory with its 32 marble statues of Brandenburg-Prussian rulers; Rosengarten, statues of Goethe and Lessing etc.—along Charlottenburg Chausie towards

Potsdam. The German guide was naturally voluble in his descriptions of the monuments visited and historical accounts of the events they commemorated.

Returning from the long motor drive I made some purchases in Friedrichstrasse. Asking a smart shop-girl whether a dainty little purse of woven wire was made of real silver or German-silver she told me archly that what was known as German-silver in England was called English silver in Germany, I am afraid I cannot guarantee the correctness of this statement. An act of civility on my part had induced the German guide of the morning trip to purchase for me a ticket to see Flirtation in St. Moritz at the Eis-arena in Admiral palast, that evening. He was present there to take me to my reserved seat. The Kaiser was expected to come to the show; there was a great rush and the seats were all occupied. The performance was excellent and finished off by 11 o'clock.

Next morning, the 29th, I got up early and made preparations for my return journey to England. Later I walked to the University (decorated on either side of the entrance with the statues of Hermann Von Helmholtz and Wilhelm Von Humboldt (elder brother of the renowned naturalist, Alexander Von H. of Cosmos fame; and at one time Minister of Education in Germany). I lunched at Restaurant Karl listening to the music of a conzert; then tired of sight seeing and pleasure hunting, sat down for a while in the Park near the Column of Victory. After dinner at Aschinger's in Georgianstrasse I got into the 10-28 p. m. train at the Friedrichstrasse railway station, on route for England.

Next day I took the boat at Flushing and arrived at

the Channel port of Queenborough on the Isle of Sheppey at 6 p. m. A fast train brought me there to Victoria at 7-30 p. m.

* * *

While in Berlin, wishing to send a number of picture post cards to my friends in London and elsewhere, but unable to find a post office or post box near by I asked a man in an imposing uniform (looking like a policeman) to direct me to one. He politely volunteered to post the lot himself. One of my fellow travellers expressed doubts about the post cards ever reaching their destination, and so it really happened. Beyond ordinary greetings and news of holiday making there was nothing written on the cards to rouse any suspicion. I am afraid the man, whoever he was, wanted to take advantage of my ignorance; but stamps and all, he could not have made more than a mark or two at the most!

I applied myself once more to my studies in right earnest, working the whole day and going out only at night for a walk or other recreation: once to see the Marriage Market at Daly's Theatre, once again to the Haymarket to see Edith Goodall and Mabel Russell in Within the Law, at another time (with Mr. Van Rood) to see George Roby at the Palladium, at yet another to the Empire Music Hall. In one of my evening walks I went to Chelsea and saw Thomas Carlyle's house (No. 24) in Cheyne Row and his statue. Some of the greatest pleasures of life in London are its cheap, short period trips to the seaside. Whenever I felt tired of overwork I availed myself of one of these, e.g., to

Brighton on the 13th and 17th and to Southend on the 25th August. On the first of these trips (to Brighton) I gave to the South Coast Stone Co., 32 King's Road, a large sheet of New Zealand jade valued at £1 sterling, obtained in exchange from the Foote Mineral Co., of Philadelphia, U. S. A., for cutting into sleeve links, vest buttons etc. I received the lot back from Birmingham on payment of only 11 shillings.

A German student of English, L. Rock, living at Edith Road, West Kensington, wished to exchange with me German-English conversation, once a week. I agreed to it, the help received from the Tutorial College in Scientific German proving inadequate. The arrangement lasted from 16th August to 4th October, and was found to be useful. I was still in touch with my friends at Lee. On 19th August I went with Miss Vera McEwen and Miss Gordon, her godmother to Lee Cinema to see Quo Vadis, wellknown work by Henry K. Sienkiewicz (1846-1916) Noble Prizeman (Literature, 1905).

On 21st August I had Mir Alam Ali and Mirza Abdul Hasan from Oxford as my guests at lunch. M. Lacire entertained us with dainty French dishes. The same afternoon I went to these gentlemen for lawn tennis at 78 Elgin Cresent, where I met two more people from Hyderabad, Messrs. Shah Mirza Beg and Sajjad Mirza. The new Secretary of the Islamic Society, Mr. Jalal Shah and his Cousin Baqar Shah were also there. At Jalal Shah's request I paid £1 to the Islamic Society as my donation.

Shortly after my return from Berlin, Miss Khadijah Ataullah also returned from Constantinople and I was

grieved to hear from her news of the sudden death of her English partner in the embroidery business (Deja and Co., embroidery experts). Her brothers being away in Turkey she was hesitating, at the time whether to carry on the business alone or wind it up. Her English friends encouraged her to continue and, like a privileged old friend of the family, I also did what I could to keep up her spirits.

On 2nd September the Muslim community in London celebrated Id-ul-Fitr at the Caxton Hall. Khaja Kamaluddin conducted the Id prayers as Imam. Amongst others, Khatib Abdul Latif and Fathullah were also present and I heard there of Mr. Alma Latifi's appointment as D. P. I. at Hyderabad. On the 24th I received a letter from Mirza Raza Khan, an old pupil of mine, now reading for the M. B., Ch. B. degree at Edinburgh, saying that Shaikh Abdul Aziz Shawish, an Arab nationalist was planning a Modern University at Madina under the auspices of the Sultan of Turkey and asked me to accept a professorship there, after graduating from London. I naturally asked for further particulars from responsible persons and the matter stopped at that.

Two days later I went to Somerset House with Mr. Abdul Lateef at Mr. Seaton's request to offer ourselves as securities for him in the matter of transfer of the late Syed Anwarullah's estate—a mere formality really. Mr. Seaton advised me not to put much faith in Shaikh Shawish's University scheme as it would take years to materialise and assured me of tolerably good prospects on return to Hyderabad. On 1st October I sent a cheque for £14/6 to the P. and O. S. N. Co. at Leadenhall

Street towards payment of the balance of my return fare to Bombay, via Port Said, having decided to travel by the Continental Express, making separate arrangements with Thos. Cook and Son.

About this time I performed (through private arrangement with Dr. Moss) a number of advanced experiments in the College Physical laboratory, of a type not covered by the A. R. C. S. Course, but necessary for the University Examination—mostly on geometrical and physical optics. In response to my cablegram Mr. P.H. Sturge, Principal Nizam College advanced to me a sum of £ 40 sterling, which enabled me to provide for the rather expensive journey through Vienna, Budapest, Bukharest, Constantinople and Cairo. On 5th October I supped at Eric Lawrence's house where I met his father, cousin and other relations, including Mr. Syed Mohd. Azam of Hyderabad now reading at Cambridge for his Natural Sciences Tripos.

Lateef living nowadays with a nice English family (Mr. and Mrs. Child) at New Barnet, met me somewhat frequently at Beau Sejour (28 Warwick Road). Altaf Husain also dropped in occasionally. Saleh Murad and Mir Alam Ali accompanied me on some evenings to the theatre—to Garrick's (for the Real Thing), to the Lyric (for Love and Laughter), or the Vaudeville (for Collision), etc. On the 28th I asked Mr. J. P. McEwen to tea at South Kensington restaurant and we had a prolonged talk about the new regime at Hyderabad, in particular about Basil McEwen's appointment (in addition to his old post at the Nizam College) as boarding house-master to the sons of Paigah Nobles on a handsome additional salary.

I was told that Basil intended coming over to London on a year's furlough on my return to India, with the possibility of my officiating for him at the Paigah Boarding also.

At about this time, Dr. Moss informed me that I could prolong my stay at the Royal College doing higher research in Spectroscopy or Magnetism—as the Professors had formed a very favourable opinion of my capabilities—with a College scholarship (which could not, of course, meet all my expenses of living in London, but would suffice if supplemented by adequate help from home). I could not expect support from the Nizam College authorities, as further training (for D.Sc., for example) was not a part of their original programme, and as a matter of fact, two years' study leave on half-pay (without special influence at home) was considered a rare concession at the time, made in favour of academic progress, mainly out of respect for the strong recommendations from the distinguished professorial staff of the Imperial College! I thought it best, therefore, to return to India, and whether fortune smiles on me or not, devote myself exclusively to Science, overcoming all obstacles in the way of equipment and finance by patience and perseverance. As to how far I succeeded in my resolve, future events will show.

B. Sc. Honours examination in Physics (for External Students) started on 27th October—Paper on Heat in the morning, on Light in the afternoon. Next day there were again two papers, one on Classical Electricity and Magnetism and the other on Modern Electricity. On the 30th and 31st we had a paper on Properties of Matter and Sound, and Essay writing respectively. I

wrote on the Electron Theory. Vague rumours of Bohr's theory of atomic structure were in circulation at the time in our College Physical Society meetings, but first hand knowledge was lacking. What I wrote in the Essay paper was, I fear, by no means quite up to date knowledge. My handwriting too went against me, for I was informed later by Dr. Moss that he had heard it remarked by a responsible person that it required a very patient examiner indeed not to lose his temper while valuing my answer-book! [All the same I passed with Honours, my result being cabled to Port Said by Dr. Moss in due course, to await my arrival there.] On 4th and 5th November we had our practical examinations; the first day I had to determine Poisson's Ratio for a copper bar from clastic and anticlastic radii of curvature; and on the second, to plot hysteresis curves for iron and steel by the magnetometer method—both straight forward questions, but for the former I had to improvise my own apparatus on the spot and for the latter to set up the mirror magnetometer ab initio. In spite of all this I performed the experiments and got fairly good results. Mr. C. T. R. Wilson of Ionisation Track Apparatus fame was the examiner; he was well aware of my difficulties and appreciated my efforts to overcome them.

The examinations being over, I could take a little rest and indulge in some harmless recreation before leaving for home. Lateef called in the evening of the last day of examination after supper and seeing me in a cheerful mood suggested going to Adelphi Theatre to see the Girl from Utah. We did so and found the play interesting. 8th November, a Saturday, I reserved for

a special treat. I lunched with an Oriental friend at the Cathay restaurant in Regent Street enjoying hot Chinese and Indian dishes; thence we went to Regent Quadrant Cinema and after a refreshing drive to Nunhead had a delightful dinner at Romano's in the Strand.

Next day I went to Lee to bid final goodbye to my dear old friends, the McEwen family; later to Mrs. Blackburn and her daughter at Nevern Place. The following day (10th November) was Id-ul-Duha festival and I said prayers with my Muslim friends at the Caxton Hall. Many Indian friends of Turkey had assembled there on that day. The horrors of the Italian and the Balkan Wars were quite fresh in the memory of everybody. Mr. Muhammad Ali, Editor of the "Comrade," who had come over to Europe on his famous mission to plead for the cause of the Turks, was present. So was Mr. Zafar Ali Khan, proprietor of "The Zamindar," Mr. Khaja Kamaluddin, the Lahore missionary, conducted the prayers as Imam, and at the end made a stirring speech. He was followed by Mr. Muhammad Ali, who impressed the audience immensely by his brilliant eloquence and delivery. For the first time it was made known publicly to Musalmans in London that members of the younger Muslim generation were about to break away from their predecessors in their political creed and dogmas. Mr. Sayyid Amir Ali (then President of the Islamic Society) was by no means mildly criticised regarding his avowed policy and the Anjuman-e-Khuddanm-e-Ka'bah was introduced with its ambitiows programme.

Mr. Seaton met me at the Hall after prayers and showed me a copy of the inscription on the late Syed Anwarullah's tomb (which I had written out at his request and posted to him on 26th October,) and the report he was going to forward to H. H. the Nizam's Government about the settlement of the late scholar's estate and other matters connected with it. I had to rush off to the bank to make sundry arrangements and was late for lunch at the Corner House. On returning to Beau Sejour I met Murad Bey who gave letters to some of his friends in Stamboul, among whom was Osman Sa'di Bey, Chairman of the Wireless Telegraphy Commission, appointed by the Turkish Government.

Miss Khadijah Ataullah and her friend Miss James very kindly accompanied me to Charing Cross station to say goodbye. Quite a large number of Indian and English friends like Messrs. Mir Alam Ali, Khatib Abdul Lateef, Saduddin and Eric Lawrence were present at the station to see me off. A hearty shaking of hands was followed by a loud "bon voyage" and the train started for Dover at 9 p. m.

CHAPTER IX

HOMEWARD JOURNEY

In Paris

I REACHED Paris the next day and put up at Hotel Malesherbe near Boulevard Hausmann. After calling at Thomas Cook's, posted cards to friends in London and went round sightseeing. Paris was, of course as gay as ever; but I felt I was looking at it in a dream. I saw the city but did not feel that I was in it.

On 12th November I left Paris by Gar-de-l' Est on way to Vienna at 9 a. m. and lunched in the train. A Roumanian traveller got into conversation with me. We passed Nancy, Strassburg, Munich etc. The Rhine appeared too small a stream to draw any attention. After supper I tried to snatch a little rest but at the Austro-German frontier had to get up for giving " bakhshish " or money present to the customs officials, although there was nothing in my luggage that demanded such action. After the present they did not insist on examining my portmanteaus or hand-bag.

In Vienna

Reached Vienna on the 13th at 8-50 a. m. and was much impressed by its general air of cleanliness and urbanity. The station employees were obliging and spoke English well. Called at Cook's for currency exchange and put up at Hotel Matchaserhof—then much frequented by English speaking travellers.

After a long ramble in the city and lunch at the hotel I rested for a while. Then walked to the Danube from the North-West station to Crown Prince Rudolf bridge. Thence by tram to Stephen Place (Cook's office close by.) Again a long walk in Francis Joseph Konig Strass, and it was evening when I returned to the hotel. Vienna appeared at the time to be a very rich city--well illuminated, respectable and sedate looking—but by no means merry or gay like Berlin or Paris. Its streets were studded with promenading soldiers in fine uniforms. Here and there a Bosnian soldier would be seen sauntering in bright military costume with his Turkish fez worn rakishly awry.

I sat down to a frugal supper at the hotel, went rather early to bed and dreamed of Old England.

Left the hotel on the 14th after an early breakfast. There were just 25 minutes to catch the train for Budapest at Staatbahnoff. So I got into a taxi and arrived not a second too soon. I had barely entered the train when it started. Running short of local coin I tipped the chauffeur a British shilling for his remarkable speed. But the poor man did not know the value of the coin, turned it one way and the other and ruefully pocketed it, thinking perhaps that it was some counterfeit stuff! The scenery on both sides of the railway track in Hungary was simply glorious, with fine lakes and mountains. Country people dressed in gaudy coloured garments added to the picturesqueness. My fellow travellers in the compartment were an English-speaking foreign lady and gentleman. The lady seeing I had run short of local money readily exchanged a Cook's bank note o

20 shillings for Hungarian money. It was very good of her to do so.

In Budapest

At 2 p. m. we reached Budapest and with the help of a Cook's interpreter arrived at the Hungarian Pension close to the station, Nyugotepalyaudvar. The table was liberal and English was spoken. The proprietress was obliging and evinced a warm sympathy for India and the East—being of Magyar descent.

After a little rest I got ready to go out sightseeing. The landlady advised me to proceed from Tuez-Korntstrass to Andrassyut, thence by the underground to Foldalate-Cizellater, and from there to Vaczi-utza (chief business place) and onward to the Danube bridge ; then back to the Pension by car. I am afraid I do not know how to pronounce these names, nor am I sure of the correctness of their spelling. As far as I can remember, I had entered them in my diary at the landlady's own dictation. I followed this route with scrupulous accuracy but not without further help from a Roumanian youth in its later stages. The buildings looked robust and imposing. The inhabitants of Buda were generally dark, the better class women had something of the hidden beauty of the East, but the men were as a rule inclined to be fat. The fattest man I ever saw was an Austrian or German, I think, who was struggling to get edgeways into a tramcar. It was a marvel he ever got in. Anatomical flexibility does not seem to be an exclusive attribute of the feline race. The most overbuilt man can sometimes—it would appear—acquire this faculty during an emergency !

The river view was glorious. I spent sometime watching the panorama. Then taking car No. 31 (which reminded me, by the way, of the old Chelsea car from Earl's Court), returned to the Pension. A good supper was laid on the table, but the gentleman seated next to me was a Russian with strong anti-Turkish views and a tendency to inflict them on his fellow guests. After a brief expression of feelings against the Committee of Union and Progress, the party then in power at Constantinople, and seeing that I was not going to agree with him in his views he turned to a discussion of the weather and finally left the table.

After breakfast next morning (15th November) I took car No. 33 to Lanczhid, thence to Kiralya var (the King's palace) which was unfortunately closed owing to an outbreak of what was dubbed 'Roumanian' cholera. I enjoyed, however, the beautiful scenery on both sides of the river. The statue of Prince Eugene of Savoy overlooks the Danube and it reminded me of the great battles he fought with the Ottoman Turks. Matya's templain (church) was also a fine view. At the Fisher Bastion figures Hunyadi Janos's statue standing on foot by the side of the river. Though a Hungarian hero, it seems that the respect shown to him was not unmixed with a certain amount of disgust—possibly because of his character. At the market place only country women held sway and seemed to vie with one another in the output of adipose tissue. Neither Austrian coinage nor Austrian postage was current in Hungary.

(Years afterwards, when the Great War had ruined almost everybody in Austria and Hungary I had a

mournful letter from this landlady in which she contrasted her pre-war prosperity with her final bankruptcy and personal afflictions. I hope she recovered some of her former good fortune and buoyancy of spirits as her country resumed its normal condition.)

I left for Roumania the same day and reached Orsova at 1-30 a. m. Cook's people had omitted to give ticket from Orsova to Varciorova, so I had to pay the extra fare in Austrian money. The passport inspection was a protracted business. Mine was of course an English passport signed by Sir Edward Grey and so I had not much inconvenience, but I don't think the other passengers who were mostly of Balkan extraction got off so easily.

A Hungarian, who spoke tolerable English, extolled the beauties of Buda and enumerated the amusements I had missed during my stay at that gay city for lack of time (and company perhaps!) It may have been so. But I was anxious to reach the magic city of Constantinople as quickly as possible. What little time I could give to Buda was due only to its geographic position and historical association with Turkish conquests.

We reached Bukharest at 12 noon and I got down for lunch, took the tram to Boulevard Elizabeth near the National Theatre and lunched at Restaurant Carpatzi. Sent postcards home and to friends in London. Walked back to the station. Bukharest seemed to have a fairly good population of Turks.

On board the boat

The train arrived at Constanza on the Black Sea at about midnight. I got on board the Roumanian boat

"Principia Romanus" for Constantinople. There were one or two Englishmen travelling by the same boat. All around me either French was spoken or Roumanian or Greek. I saw three Turks, rather elderly, talking glibly to Greek girls who happened to know a few words of English. After a supper of bread, butter and marmalade with some indifferent tea to wash down the stuff, I got into my cabin to get what sleep I could. There was better breakfast next morning. The scenery became more and more attractive as we approached the Bosphorus until at last when we got into the narrow Strait leading up to Constantinople every traveller—man, woman and child flocked on to the deck and gazed in rapture on, what most probably is, the most picturesque scenery on earth. The round domes and needle-like minarets of mosques rose in majestic grandeur above the general level of house tops. All along the coast line a peculiar charm pervaded. The meanest hut and the most imposing palace were alike covered with a mysterious veil of indescribable beauty which seemed somehow either to rise from the ground or descend from the sky. The boat glided imperceptibly through the water until at last it halted at the landing place. Then followed the usual rush. People hurried from the shore to meet the passengers, porters ran to and fro and carried down the luggage.

I was asked on arrival at Constantinople by several hotel runners from Pera whether I would go to Pera Palace Hotel or the Tokatleon etc. But I had made up my mind to mix unreservedly with the people of Turkey and get as true a picture of Turkish life as possible. So I decided to go to Hotel Masarrat on the other side of the Golden Horn. I am sorry I did so, for the Hotel

was poorly furnished and lacked even ordinary comforts. Some patriotic young Turks had recommended it to me in London as a purely Turkish enterprise and a few Indian gentlemen seem to have patronised it before. It did not much matter, I suppose, for I stayed most of the time with my Turkish friends with whom I had got acquainted in London. Before I met my friends I had some difficulty in settling terms of business with the hotel manager who knew neither English nor Persian. At last, with the aid of a Turkish lad who was reading in the local American College and some Persian cigarette merchants in Stamboul, engaged for myself as "comfortable" an apartment as was available. I then went out to seek my friends at Kasim Pasha, when, wonder of wonders! Who should great me at the entrance to the new Galata Bridge, but my friend Rushdi Bey!

The first thing to do was to go with Rushdi Bey to a shop, buy a fez and don it in place of the English hat. Later we went to Pera and promenaded its streets until it was time for Rushdi Bey to catch his boat home. I dined at a neat lokanda in Stamboul. The service was prompt and the food delicious.

The next day (the 18th) I was up early and after a hearty Turkish lunch called at Cook's in Rue Cabristan, Pera, but the day being a Tuesday, the office was closed till 2 p. m. So I had to go there again later in the afternoon to receive my letters, redirected from London. The afternoon was passed in sight-seeing with Rushdi Bey in Grand Rue de Pera and Bon Marche.

On the 19th I proceeded again to Pera, bought the latest number of the "Daily Telegraph" at an English

bookstall and walked to the Turkish Admiralty at Kasim Pasha. There I saw Osman Saadi Bey and requested him to forward a letter of mine to Lieutenant Ahmed Jamal, another Turkish gentleman who was very friendly with me in London. As I was going back to my hotel I almost collided with Ahmed Jamal! We were overjoyed to meet so unexpectedly. He took me to various cafes frequented by his friends and fellow officers. After introducing me with a brief speech in Turkish, Jamal invariably treated all assembled to coffee and cigarettes. A refusal would have been regarded as lacking in courtesy. So I had to imbibe the strong coffee whether it agreed with me or not.

We then went to Jamal's friend Captain Mahmud Bey's house whose father Rahmi Pasha was an Admiral in Sultan Abdul Hamid's regime, but was exiled to Rhodes by the young Turks. Mahmud's house showed signs of affluence and was more or less furnished in European style. He spoke English but was dissatisfied with his lot and talked of trying his fortune at the court of the Amir of Afganistan.

At his house, however, I met a number of spirited young Turks who were active members of the Committee of Union and Progress—among others, Noori Bey, a Civil Surgeon, Ata Bey, Dockyard Master—an elderly man who had been to England and Osman Bey, an architect. An important semi-religious ceremony was to take place at one of Mahmud Bey's friends the next day and I was invited to it. Mahmud further asked me to tea after dinner that same evening and we then parted.

Jamal took me to his house for dinner. There I met his father-in-law. Ahmed Bey, Engineering Commander at Stamboul. We did full justice to the dinner which was purely Turkish. We talked of the Balkan War and the miraculous escape of Constantinople from capture by the allies, when they had threatened Chatalja. From Jamal's we went to Mahmood's for tea and coffee, as previously arranged. Mahmood received us cordially and the party discussed the history of the Italian and Balkan wars and the causes of the discomfiture of the Turkish army under Nazim Pasha. The Committee of Union and Progress was doing its utmost for the general uplift of the country, especially its education and defence, but was sadly handicapped for lack of adequate finances. In spite of terrible disasters much had already been effected mainly through the intense patriotic feeling that was roused and stimulated among the masses. If peace could be assured even for a few years, Turkey would soon rebuild her great army and recover most of her lost possessions in Thrace and Macedonia. Even now there were signs of economical improvement. Indigenous industries like the manufacture of fez, towels, carpets, etc., had been started with Turkish capital and labour and were working profitably.

We proceeded thence to cafe Turque which was then the favourite resort of the young members of the Committee of Union and progress, and I met there Ismail Bey, a clever young Engineering sub-lieutenant and aviator.

On the 20th Jamal and I went to the neighbouring cafe after breakfast. Noori Bey joined us and we

walked to the quay where we saw the battleship *Masoodia* purchased from Italy. Noori Bey, then showed us the marine hospital. It was an excellent institution run on perfectly modern lines. Several additions were made to the building after the Revolution. Salahuddin Bey, a young medical officer, trained in France showed us the X-ray department and some of the radiographs taken during the Balkan war. It was a great credit to the young Turks to have equipped this important institution adequately with modern fittings, surgical implements, electric machinery, etc., and also with well qualified staff. We then went over to the Engineering Department nearby and there met Jamal's brother Enver Bey who had recently returned after a course of practical training at Portsmouth. He introduced me to Nashaat Bey who was in charge of the institution. Though somewhat advanced in years he was an enthusiastic member of the young Turk party, ready to do his utmost for the welfare of his country. It was then lunch time and we went over to the Officers' Mess closeby. There I was introduced to several other officers, one of whom spoke very good English and was keen on knowing about India and Afghanistan.

Later we saw the arsenal, then in a sad plight, neglected and starved. It was rumoured that negotiations were in progress to place it in charge of a sympathetic English expert borrowed from the British Government. We then took a boat and saw the famous *Hamidia, Barbarossa* and *Turgat* lying at anchor. I went thence to Masarrat hotel and after a little rest went back to Jamal's to go with him to the invitation given by his friend in connection with a 'quasi'-religious ceremony.

The party was very convival, with music in purely Turkish fashion. A Jewish jester was entertaining the guests with a humorous story of a Mohajir from one of the abondoned provinces of the old empire.

Next day (Friday 21st November) after a walk by the quay I went to a Turkish "hammam" and enjoyed a good bath. Though perhaps not very sanitary it was certainly very comfortable with well-regulated temperatures. Just after the bath while the customers were still perspiring they were served with hot coffee and cigarettes in the rooms set apart for changing dress. One could stay there till the perspiration stopped and thus chills and colds were avoided. By the time we were ready to come out of the "hammam" the Friday prayers were over. In spite of my precautions the weather being unusually cold and chilly, I felt feverish and returned to the hotel only to pass a restless night. I realised that my clothes were not warm enough for the cold weather of Stamboul. Besides the cold I was threatened with severe colic due perhaps to the strong coffee I had to imbibe so often in the company of my Turkish friends. With them it was a matter of daily habit. For me it was a great trial. But I had to submit to it for the sake of courtesy. As a last resource it occurred to me that a kindly lady friend who came to see me off at the Charing Cross station had bought for me a large-sized crystal of menthol to relieve me of my headache. This I tasted and felt much relieved. The next day (22nd November,) I got up from my bed very weak and depressed. Took a glass of soda water for breakfast at Pera. Purchased the latest number of the 'Reviews' and the 'Daily News' at a stall opposite the

underground terminus. Had a talk with a young Turk from Beyrut who spoke good English. Sent cards home and to friends in London. On returning to the hotel I learnt that Hilmi Bey had called for me. Soon, however, Rushdi Bey arrived and we went out for a walk to the Tomb (Maqbara) of Sultan Mahmud.

Rushdi Bey then proceeded to the Ministry of Education to receive instructions concerning his appointment as Professor of English at College de Saltein, Damascus. When he returned we went to call on *Khalida Khanum Adib*, but I learnt at her house that she was under treatment at a hospital. We felt sorry for her and walked over to the famous mosque of St. Sophia, thence to the Military Museum and the beautiful new park nearby, connected with the romantic visit of Kaiser William to Constantinople on his way to Eastern pilgrimage (of Jerusalem and Damascus), in the autumn of 1898. Rushdi Bey went home and I passed another restless night of ague and fever. Towards morning, however, I perspired freely and recovered.

On the 23rd November Jamal called at the hotel early in the morning. We lunched together and waited at the hotel cafe for Jamal's step-father, Husamuddin Bey and Rushdi. While we were thus waiting Asaad Bey from Beyrut, who had taken an active part in the Balkan war, came up and gave a most graphic account of the events. In due course Husamuddin Bey arrived and we walked up to the Sublime Porte—once a most august and important institution but now reduced almost to insignificance. There I was introduced to Jamal's uncle and to Talaat Bey (who rose soon afterwards to great power and authority).

Jamal's father then took us by tram to the Statue of Liberty—Abidai Hurriyat. It was a fine piece of architecture—a cannon pointing upwards, but nothing like what Stead unjustly described as a Challenge to Heaven. All the heroes of the Revolution (including the brave and wise Mahmud Shevkat, who was ruthlessly assassinated only a few days ago) have been buried here. The place commanded a fine view. At some distance was the OK maidan (Arrow plain). We went to the spot where, it was held, Sultan Mohammad II, the conqueror, had knelt in thanksgiving immediately after the fall of Constantinople to his victorious arms. The wireless installation was nearby. We passed by Tashkishla barracks and took refreshments at a Turkish restaurant listening to the tunes of national music. I returned to the hotel and enjoyed a happy sleep.

The 24th was uneventful day. I walked alone to Pera, had a lemon squash at the Tokatleon restaurant and bought the " Daily Telegraph " and the " Daily Mail, " also two books : Sevastapol and Pierre Loti's Desenchante at the English bookstall. Later went to a cinema closeby, a rather gloomy looking place of doubtful amusement. The film, I believe, was German, got up to ridicule France and Napoleon Bonaparte. After some shopping and a hearty dinner at " Progress Ottoman" restaurant I returned to the hotel and was soon engrossed in the story of Desanchante

Khairuddin Bey, an Army Officer, called as promised, on the 25th. He spoke only Turkish and had a smattering of Arabic. We managed somehow to understand each other, and went to a covered bazaar of Sultan Abdul Hamid's time. There I bought some embroidery

work done by Turkish girls. Then after lunch we went to Saraskariat (War office), later to Sultan Bayezid Jamia and ascended its great tower. A grand panorama of Constantinople and its surrounding country opened out before us. A galaxy of mosques, palaces and gardens, almost as far as the eye could see, with the Golden Horn and its flotilla of boats and sailing craft set in between. Afterwards we went to the palace of the Shaikhul Islam. A long talk with his Chief assistant in Persian was followed by a longer one with the Shaikhul Islam himself. He was a tall and venerable looking person and held the Musalmans of India in great esteem for their sympathy with Turkey and pecuniary aid at the time of her greatest crisis. At parting he entrusted me with the message to my Indian friends that Turkey was deeply sensible of the generous financial and moral support that Muslim India had voluntarily offered to her and for which Turkey would always remain grateful. Khairuddin Bey then left me and I spent the rest of the evening at Jamal's in Kasim Pasha and then returned to the hotel.

The 26th dawned with a very cold morning. After lunch I went to 107 Rue Cabristan (Cook's office in Pera) to arrange for my voyage to Alexandria by a Russian boat. I was asked to call next Saturday, the 29th for berth number and ticket, etc. I went back to Stamboul and walked in the Park in spite of the excessive cold and incipient hail. Dined alone in Pera and later bought the usual English newspapers and with them a copy of Hall Caine's "The Eternal City."

Thursday, the 27th was another uneventful day. After a good bath in a neighbouring *hamman* I went to Kasim

Pasha for Jamal but learnt that he had gone to his father's. On way back to the hotel I purchased some very fine fruits in Pera. Turkey enjoys a good harvest of excellent fruits: apples, pears, grapes, melons, etc. After a late and lonely dinner I read Hall Caine's book till the night was far advanced.

The 28th was a Friday. So I got ready for the prayers. The Sultan (Mohammad Rishad) was to go to the mosque of Dowlma Baghcha and I made up my mind to be there and see the Salamalik ceremony in the bargain. There was not much time left, so I hired a cab and drove at break-neck speed to Dowlma Baghcha. A strong bodyguard waited at the mosque in smart uniform. The khutba was stirring and every word was distinctly heard. After prayers I saw the Sultan pass out of the mosque not far from me. He was tall and venerable looking, rather prematurely old, but full of piety and benevolence. I walked in the wake of the Sultan's bodyguard for a distance and returned later to the hotel. There I learnt that Jamal and his brother had called while I was away. So I went to Jamal's at Kasim Pasha and met him and his friends including a pious looking gentleman, named Farouq Bey, who spoke French and Persian and was well-versed in Soofism. We talked of Maulana Room and his Mathnavi so long that it was dinner time. Besides it started raining rather heavily. So we decided to stay at Jamal's.

The next day being Saturday (the 29th) I went to Cook's after breakfast, got my boat ticket, cashed some British currency notes, and received letters redirected from London. On going back to the hotel I learnt that Rushdi Bey had called. Wrote letters home and posted

them at the newly built post office, designed in purely Turkish architecture.

Thence I went with Jamal to say goodbye to his father at the Duyoone-Milliah. From there went to the Turkish Navy subscription office. I am afraid the people who conducted the business there were far from condescending. Their knowledge of geography also did not amount to much. I returned rather disappointed to the hotel.

The next day (30th) was my last in Constantinople. Jamal called early in the morning. Rushdi Bey also came up and asked if I could postpone my departure for a day to meet some of his near relations. I told him my boat was sailing the same day so I was sorry I could not stay any longer. We all three went to a photographic studio in Stamboul and got photographed in a group. I settled my account with the hotel manager and left for the quay. The steamer "Peter the Great" was in the harbour, but there was time yet to start. So I put my luggage into my cabin and got down to the shore to spend the remaining time with my friends.

They took me to Abdallah Effendi's Victoria hotel and we all had refreshments. It was raining but, as it was to be our last day together, we roamed about in a carriage until it was nearing the scheduled time of departure.

At last we got on board the ship, (Pere le Grande). Jamal and Rushdi asked me to take a long and lingering view of the great historical city so romantically situated on the meeting place of Europe and Asia. I did so and the picture is still fresh in my memory. We then said

goodbye to one another and parted. It was indeed a very sad parting.

On my return to India, for a time, I had some nice letters from Jamal. Though his English became more and more unintelligible I could still understand what his honest heart was struggling to say. But the Great European War soon put a big barrier between me and my Turkish friends. The last I heard of Jamal was that he died like a true soldier on the field of battle. May God rest his soul in peace. He was a true Musalman, gentle, trustworthy and brave. Rushdi Bey wrote to me from Damascus some months after my return to India, a very pathetic letter describing the sad financial plight of Turkey. I sent him some books on English literature to help him "profess" at College de Saltein. But he gave up the job soon afterwards and, according to the latest report, has settled down in London. I had a letter or two from Saleh Murad while he was still at the City and Guilds College. London. Later I came to know that he was a professor at the Engineering College at Gumus Suyu, Stamboul. After a silence of over 20 years we corresponded with each other and hope to keep in touch.

I am afraid I have not been able to say much about the general conditions of Turkey and her diplomatic activities in those memorable days. Such an important event as the march of Enver Bey to take possession of Adrianople, which happened at about that time, has been left out. My object was only to get to know the cultured citizens and young officers of Turkey with whom I could mix freely at the time and fraternize, and thus understand the pure Turkish mind in its native

simplicity and candour. As evident from this account, they responded cordially to my feelings of good will and friendship.

Turkey no doubt ceased long ago to be the great Muslim Power that she was in the days of Sultans Salim and Sulaiman. But her Muslim population, whether of the old type or new, has intrinsically remained as honest, kind-hearted and brave as ever. It is on account of these qualities, I think, that the Turks have survived such severe trials and catastrophes. Any other nation would, perhaps, have succumbed long ago.

CHAPTER X

FROM CONSTANTINOPLE BACK TO INDIA

ON December 1st the ship passed through the Dardanelles between the Sea of Marmora and the Aegean Sea, a narrow strait about 40 miles long and only 1 to 4 miles broad; strongly fortified on both sides. Its low snow-clad hills looked beautiful in the morning. A German passenger on his way to Smyrna introduced himself and spoke enthusiastially about the impregnability of the Turkish fortresses. No Turkish battleship was, however, posted. After dinner I met a Turkish gentleman (named Shamsuddin Bey) also bound for Smyrna. He spoke to me (in Persian and Arabic) about French and Greek influence in the seaport, the interior with its large Turkish population continuing to be still entirely under Ottoman control. There was a charming Russian damsel full of blushes, who spoke English fluently. She was proceeding with her invalid brother to Alexandria, apparently on medical advice. An Italian lady with distinct Arab features asked me in Arabic about India. The scenery around us was simply glorious especially as we passed alongside of the Island of Mitylene.

Next morning the ship anchored at some distance out at sea near the port of Smyrna. The Russian girl and her brother asked me if I would accompany them in a rowing boat to see the town; but I was deeply absorbed in reading Hall Caine's "The Eternal City" and stayed

on board. Shamsuddin Bey, the German passenger and a few others got down at Smyrna aud we resumed our voyage onwards.

The Piraeus and Athens

We reached the Piraeus on the morning of December 3. After morning tea, while the ship was at anchor my Russian fellow-passengers, two Armenians and myself got down to see the Acropolis and to run up to Athens for a few hours. We walked past the temple of Theseus, up the Acropolis (citadel of ancient Athens), to the Amphitheatre and the Temple of Jupiter. Parthenon, Propylaea, Erechtheum and other ruined Temples. I sat down for a few minutes and contemplated the ruined glory of handsome Hellas. Such is the way of the world ! the finest civilization unprotected by efficient military power is no match against determined brute force. History keeps repeating itself; what happened to Greece happened to Rome and to Arabia!

Pepper and olive trees adorned the slopes of the hill. We walked past Thos. Cook's office, then by the electric train to Athens and back. The Greeks appeared to be very progressive, enterprising in trade, commerce and industry. A small Turkish boy at the foot of the Acropolis accosted me and said he was a Muslim like myself, his family having settled down in Greece when it was still a Turkish Province. I placed in his hand a small Turkish coin and he looked well-pleased. Our lunch on the ship consisted of 'kelka '— a tinned Russian fish, bread and butter, figs and tea. There was a picturesque flotilla of French cruisers and destroyers in the harbour near by—with no friendly intention, I

am afraid, towards the unfortunate Turk under the anti-Asiatic policy of Europe at that time! The Russian damsel enthusiastially cheered the naval officers on deck and asked me why I did not join her. I looked into her face with regretful silence and she guessed my answer.

Egypt

Next day while passing by the rocky island of Crete the ship rolled badly and practically every passenger was sea-sick, except myself. The Russian damsel and her invalid brother lay helpless in their cabins. I had finished the Eternal City and was reading Sevastopol. Crete reminded me of its early indebtedness to Moorish adventurers from Arab dominated Spain and its fate after Christian control. The boat reached Alexandria in the morning of 5th December (the day the B. Sc. Examination results were expected to be declared in London); but coming from countries where cholera had broken out at the time, it had to be in quarantine till about 2 p.m. and passengers were allowed to land after examination by a French medical man assisted by an Italian. Thos. Cook's representative conducted me to Hotel du Rome near the Bourse. After a hot bath and dinner I went out for walk in the Nubar Pasha Gardens. Dates and date palms were seen every where in abundance. The fruit was sweet and juicy but the stone inside was large, unlike that of the Holy Cities or Arabia.

Next day at 9 a.m. I got into the train for Cairo and reached the city at 12. 15 p.m. I put up at Hotel Bristol-du Nile near the Uzbakiyah Gardens and after lunch engaged an Arab guide (Syed Abu Sayeed) for 20

francs to show me the town and the pyramids (at Gizeh). We went to the Azhar University but it was closed that day in honour of the return of the sacred Mahmil from Makkah—a function celebrated annually since the days of the Mamluk Sultan Baybars (1260-1277 A. D.). We saw the procession taking the Mahmil up to the Citadel. At about 2.30 p.m. we travelled by tram to Gizeh crossing the Nile by a long bridge. It was a sight to see the river lying as still as a lake. We ascended the Grand Pyramid—up its incline of terraced stone—a by no means easy performance, and entered the interior by the forced passage of modern times, effected before the discovery of the real entrance, buried in the sand.

As everybody knows this pyramid was erected by Cheops of the 4th Egyptian dynasty in the third millennium B. C. It is now slightly truncated and measures 451 feet from base to top vertically; the original height when complete and covered with plaster is believed to have been about 481 feet. Its slant side along a corner is said to measure 612 feet at present. We passed through the galleries and saw the Queen's and King's separate apartments. The direction of the true entrance is held to point towards the North celestial Pole as it appeared at the time the pyramid was built; but it has altered since then, through the effect of Precession of the Equinoxes. Coming out of the pyramid I hired a fine-looking dromedary and got myself photographed in front of the Sphinx and the Grand Pyramid. It was not so very long ago that the Sphinx was excavated from the drifting sand of the encroaching desert. It is generally believed to represent King Khafre

It was long past sunset by this time. There was no chance of visiting the other pyramids that stand out in line with the first. But luckily it was a bright moonlight night and I set out with the guide on our Camels to the Sakkara Sarcophagus, a few miles in the interior of the desert. It was a very enjoyable ride, the hot afternoon giving succession to a cool pleasant evening, due to rapid radiation through the diathermanous atmosphere. I returned to the hotel for dinner and enjoyed a most refreshing sleep.

The following morning (7th December) after breakfast I walked past the Uzbakiyah gardens, via Shari Muhammad Ali to the Fort and mosque of the same name. From the Fort one can enjoy a fine view of the tombs of the Old Fatimid Caliphs on one side and the extensive Maidan and tops of the Pyramids on the other. I recalled to mind the past history of this great city—its foundation by the Arab conquerors, its extensions and decorations during the glorious reign of Sultan Salah-al-Din and under its subsequent Mamluk Rulers, until finally captured by Sultan Salim (1517). I returned to the hotel by lunch time. Most of the large shops appeared to belong to French and German merchants, some small ones only being owned by the Egyptians themselves.

I left Cairo at 3 p. m. and returned to Alexandria at 6-20, putting up again at Hotel du Rome for the night. Early next morning I left Alexandria by 9 a. m. train for Port Said, changing at Benha on the way. The train reached Ismailia at 1-10 p. m., the surrounding sand tracts presenting everywhere a scorched, sunburnt appearance. I got down at Port Said at 3-30 and

calling at Thos. Cook's office found a cablegram from Dr. Moss congratulating me on my success in the B. Sc. Honours examination. The P. and O. Morea for Aden had not yet arrived, so I put up at the Imperial Hotel—a modestly furnished place with a high-sounding name. The Egyptian papers at the time were jubilant over Lord Headly's conversion to Islam at the hands of my old acquaintance Khaja Kamaluddin of India. After dinner I walked down to De Lessep's statue and spent sometime at Cafe Splendid.

On 9th December I made a few purchases at a Muslim merchant's shop (named Mohd. Mansy) ; he knew English and was well-informed about what was going on in the Islamic world. He expressed heartfelt regrets (and surprise) at the scandalous defeats of the Turkish army under Nizam Pasha by the Greeks and other petty Balkan races. I got on board the Morea at 2 p. m. soon after its arrival in port. At the quay some silly questions were put to me by local non-Muslim detectives about my political views and I could not help smiling while answering them. A Bombay Engineering student returning from Manchester (named Pradhan) and two Australians coming by the Morea became acquainted with me and we all went to Cinema el Dorado and later to the Eastern Exchange Hotel for a game of billiards returning to the boat somewhat late at night.

The Isis brought the outgoing mails from Brindisi next morning and with it came Messrs. Mohd. Ali and Wazir Hasan, returning to India from their delegation to Europe. The Morea raised her anchor at 9-30 p. m.

We passed through the Suez Canal, alongside of Ismailia and the town of Suez. There was a dance on the upper deck but I did not watch it owing to headache.

It was full moon on 13th December. There was a tug of war between the first and second class passengers. I lent Pradhan my *Himru* shairwani for a fancy dress concert and occupied myself most of the time talking to Messrs. Mohd. Ali and Wazir Hasan about my experiences in Turkey and the question of so-called emancipation of women in the Muslim world.

On the 14th the ship passed the islands of Hanish in the Red Sea. I lent to Mr. Mohd. Ali my copy of Pierre Loti's Desenchante and he lent me his recent issues of the Hamdard Urdu paper he was editing. At dinner time the ship passed the island of Perim and I posted letters to several people in England, using English stamps.

The boat reached Aden on the 15th and the passengers bound for Bombay changed into S. S. Arcadia, a small vessel, at 7 p.m. On 20th December at 2 a.m. we began to see the coast of dear old India and we landed after breakfast at Bombay. Messrs. Shawkat Ali (elder brother of Mr. Mohd. Ali, Qader Bhai and Ata Muhammad, etc., of the Anjuman-i-Khuddam-i-Ka'bah, received the delegates of the Mission at the harbour. At their request I stopped for a day at Hotel Majestic with the other guests of Sir Ibrahim Rahmatullah, to witness the welcome accorded to the Mission by the Anjuman Zia-ul-Islam, Bombay, meeting Maulana Khajah Hasan Nizami, Editor of Tauhid and a number of others in the limelight of politics at the time, but

keeping aloof from all demonstrations. At night there were five speeches in Urdu by Mr. Wazir Hasan (Secretary Muslim League) and Mr. Mohd. Ali, M. A. Jinnah, Bar-at-law, presiding.

On the 21st Messrs. Mohd. Ali and Wazir Hasan went off to Delhi and I called at the Turkish Consulate in the evening and had a long talk with Khalil Khalid Bey, the Consul, about the Committee of Union and Progress, the Balkan War and Indian sympathy—also his book "Diary of a Turk." He referred enthusiastically to the help given by Maulvi Abdul Basit of Hyderabad.

I started for Hyderabad Deccan by the night train; Maulana Khajah Hasan Nizami and others kindly accompanying me to the station. My uncle came to receive me at Wadi and we reached Hyderabad in the evening of the 22nd. A large number of relations and friends came to receive me at the station and garlanded me. My sister and brothers wept for joy and all the relations at home gave me a regular ovation. I thanked God Almighty for my safe and successful return home.

PART II

CHAPTER XI

I RESUME MY WORK AT THE NIZAM COLLEGE

I REJOINED my duties at the Nizam College on December 23, 1913. Various friends and old colleagues called either at home or at the College to inquire about my studies in England and the tragedies of the Turco-Italian and Balkan Wars which I had seen at close quarters, Mr. Syed Asadullah came to ascertain the details of the circumstances that led up to the death of his brother, Syed Anwarullah in London. I called on Nawab Salar Jung Bahadur, then Prime Minister of Hyderabad on the 26th and on Nawab Tilawat Jung, Assistant Minister, P. W. D. on the 28th. I had a long talk with Mr. Akbar Nazar Ali Hydari also (then Home Secretary) on the 29th about Turkey and my educational career in Europe. On January 1st 1914, the Nadwat-al-Muslimin, Hyderabad invited me to a special At Home and very kindly garlanded me after a nice little speech about my work and travels in the West by Hakim Maqsud Ali Khan Saheb. As guest of my former pupil Mr. Mir Mahmood Ali Khan (then an A. D. C. to the Prime Minister), at a dinner at the Nizam Club on the 12th., I met a number of old friends and acquaintances—some new ones also. My uncle took me to Col. Nawab Sir Afsar-ul-Mulk, on the 13th where I had an opportunity of describing to

some of my military friends there the unhappy state of south-eastern Europe as I saw it.

On 22nd January I returned to Mr. Sturge, with many thanks, the money he had kindly advanced on the eve of my departure from London and took early steps to pay back to my sister the sum of Rs. 1500 which she had placed at my disposal in England. On April 28, Mr. McEven went on furlough, but only for four months and I succeeded to his work at the Nizam College, the Paigah Boarding being handed over to Mr. P. F. Durand.

During my study leave the College was transferred from the old Rumbold Kothi building to the Asad Bagh owned formerly by Nawab Fakhr-ul-Mulk, Assistant Minister, Education department. There was more accommodation here, on the whole, than at the old site. The main building at the Asad Bagh was occupied by the College Arts classes; the next best, by the school classes of the Madrasa-i-Aliya; and a smaller building by the Primary department. An out house abutting on the main road, facing the Fath Maidan was allotted to the College and School Science classes. It had some six or seven rooms mostly small, with a fairly large hall converted into a lecture theatre provided with an old demonstration table. Owing to this limited accommodation the College could hardly admit more than 20 students every year to its Intermediate Science Classes (senior and junior combined). In the degree class, Physics (comprising Properties of Matter and Dynamics with Heat and Light or Electricity and Magnetism) was taught only as a subsidiary subject to Mathematics.

It was obviously impossible under such conditions to

aim at anything higher than mere routine work. I resolved to move the authorities to build adequate laboratories worthy of the reputation of the College. For a long time even at the Rumbold Kothi site, Government had shown willingness to build a good laboratory for the College, but all sorts of obstacles appear to have come in the way, which it would be utterly useless to discuss here. Fresh attempts were made every now and then, but without any tangible result. Meanwhile Mr. Alma Latifi, I.C.S. took over charge of the Educational Department as Director. He was keen on Oriental languages, but recognised the value of experimental science also in modern education. I spoke to him, Mr. Hydari and other members of the Board of Governors of the College, whenever I got an opportunity, about the importance of science in the material advancement of a country, but the psychological moment had not yet arrived.

My appointment as professor in the "European" grade

My position as an assistant professor at the College was anomalous. There was nothing to prevent Government from promoting me to the professor's grade, except their own rules framed at a time when few Indians with original scientific work to their credit or honours degrees from the leading Universities of Europe were available. As a result of this the first grade at the Nizam College was regarded as being reserved only for English graduates. The rules had to be modified first. On March 22, 1914, the Board decided to modify the rules and promote me to the first grade. It took over a year to obtain formal sanction for modifying the rule, sometime in April 1950.

The question of my promotion was taken up at a subsequent meeting (held on August 7 while Mr. K. Burnett was officiating Principal), when it was definitely resolved to appoint me Professor of Physics in the first grade and move for affiliation of the College in both Physics and Chemistry for the degree examinations of the University of Madras. I heard of formal sanction of this by Government on June 25, 1916. The question of building the laboratories and their equipment could now be dealt with more practically.

In the meanwhile sweeping and far-reaching changes were taking place all over the world and important educational schemes were under contemplation of Hyderabad. I shall first mention a few incidents that affected my own uneventful life. The Physical Society of London informed me on February 14, 1914, of my election to its fellowship. Prof. Callendar sent me a good certificate from London. On 30th March Mr. Littlehails inspected our College Science department (with reference to the work that was done at the time), in a sympathetic mood and went away satisfied. On 9th May I was appointed by Government a member of the High School Leaving Certificate Board. On 6th June the Registrar, University of London wrote to me officially that I was awarded the degree of B. Sc. (Hnos.) at the last Convocation and sent me a formal certificate concerning the same. My brother made a number of enemies in the Electricity department and resigned his post on July 11. Lieut. Ahmad Jamal sent from Constantinople a parcel of home-made Turkish towels and fez as specimens for opening friendly trade between India and Turkey, on July 30. I was looking forward to a

good " rapprochement " between the two countries in this way when, all of a sudden, the Great War of 1914-18 shook the world from one end to the other.

On June 28, a Servian assassinated Archduke Franz Ferdinand of Austria at Sarajevo in Bosnia and the militant spirit of war-seeking Europe burst forth in all its fury. Austria declared war on Servia on July 28; Russia mobilised; Germany sent ultimatums to Russia and France and finally, on August 4, England declared war on Germany. All the efforts of the Hyderabad Government were now concentrated on supporting the entente powers. There were two lectures at the Nizam College on the cause of the war by Major Shuttleworth on 12th and 14th September. The escape of the German battleships, *Goeben* and *Breslau* to Constantinople in an evil hour induced Turkey to enter precipitately into the war on the side of Germany and close the Dardanelles, as a result of which Great Britain declared itself to be at war with that unfortunate country on 22nd November.

Death of my brother, M. Abdur Rahim Khan

Nawab Salar Jung resigned his Prime Ministership on or about 29th November and two days later on 12th Moharram my brother Abdur Rahim Khan got drowned in a lake some 20 miles from Hyderabad, in his rash attempt to fetch a wild duck I had shot from the tank bund. He was on the opposite side of the lake, and in spite of my remonstrations, appeals and prayers, rushed into the weed-entangled water. By the time I could run up round the bund and stop him by sheer force, he had passed into the thickest part of the weeds and perished.

He was barely 24 years of age and his young wife (my uncle's own daughter) was expecting to be a mother shortly! I was mad with grief, helpless in the midst of the wild marsh and jungle. Succour at last arrived from the neighbouring Jagir (Dundgal) of Nawab Salar Jung, where my uncle had put up for the Muharram holidays; and the youthful corpse was pulled out of the water with the help of men paddling on extemporised floats. People from all over the surrounding country came to mourn the death of the unfortunate youth and I conveyed his dead body in a covered cart at night to Hyderabad for burial. For months after this calamity our house was the scene of intense grief and mourning, until at last a posthumous child was born to my brother's widow. He was named Abdul Latif Khan. He and his mother lived with me and my sister and youngest brother until I came to Begumpet. The rest of the family continued to stay at my old house at Gosha Mahal for the education of the boy.

Services rendered to the Educational Department.

It was a well-known fact that the syllabuses (of Elementary Science, Combined Science and Mathematics and Optional Physics and Optional Chemistry) in the H.S.L.C. course required drastic revision and re-adjustment. The work was entrusted to a Committee of High School science masters and I was asked to serve as its Chairman. The first meeting took place in the office of the Director of Public Instruction on 17th December 1914 and I reorganised the entire scheme and got it passed by the H.S.L.C. Board at its meeting on 13th June 1915. Later I drew up a list of typical experiments

to be performed by Optional Science students and recommended to the Department a minimum set of apparatus and chemicals, etc. to be purchased for all the High Schools—thus ensuring good science teaching in the Dominions and the prospect of getting students well-grounded in Science in the Intermediate Science classes.

The Director of Public Instruction and the Chief Inspector of Schools (Mr. N. G. Welinkar) requested me to undertake a regular inspection of the Government and State-aided high schools and report about the efficiency of their Science classes, as far as possible, every year on an allowance. It meant very hard work for me as I had to do this in addition to my legitimate duties at the Nizam College. Urban schools could be easily managed on Sundays, but for the district schools like Warangal, Bidar, Gulbargah and Aurangabad, a touring programme had to be prepared with the utmost skill to provide for efficiency of work and economy of time. Generally Mr. Welinkar and Mrs. Englar (Chief Inspectress of Girls' Schools) also timed their tours to synchronise with mine, and the result was very advantageous to the Schools and the Educational Department in General. The poor Science teachers were a bit nervous at first, fearing the inspection to be stilted and spectacular; but as my object was to help the uninitiated with the latest methods of teaching Science by means of experiments rather than text-books and I tried to solve every possible difficulty for them, they looked forward to my inspections with enthusiasm. My recommendations to the Department secured for the schools good library books and efficient apparatus.

The first year's inspection began with Mahboob College, Secunderabad on 16th December 1914, and was brought to a close with the inspection of the Aurangabad High School from 18th to 21st Febrary 1915, My first tour to Bidar I shall never foget. Mrs. Englar, Mr. Welinkar and I started in a hired motor-car (No rail-road yet connecting the place with Hyderabad.) On Febuary 6. 1915, at about 9 a.m. One of the tyres burst on the road after a run of only 30 miles; one trouble after another kept harassing us and we managed to reach Bidar (a distance of 80 miles in all from Hyderabad) at 7 p.m. I found Bidar a picturesque town, not so old-fashioned as a former inspection report described it; but lacking the facilities of railway and telegraphic communication, at least four days behind time in every intellectual activity. On the other hand, its ruined fort and tombs of the Barid Shahi Kings, Mahmud Gawan's schools (struck by lightning) and other monuments of past grandeur, not to forget its local metal works and unexplored mineral resources, make it a most interesting object of study to new comers and a powerful incentive for research by its permanent residents. We had even worse luck on the return journey, when immediately after starting, on the evening of February 8, the car had another tyre and tube burst. Having exhausted his stock of spare tubes the chauffeur stuffed the tyre with fine straw, after every 10 or 12 miles run the whole night,and it was 9 o'clock next morning when we reached the Moosapet railway crossing. Here the car came to a dead stop and could not move a yard farther! I had my lecture at 10 a.m. at the College, so I sent a messenger to Nawab Sultan-ul-Mulk's sons at Sultan Bagh near

by to pick me up on their way to Madrasa-i-Aliya. They did so, and on reaching the College I managed to send a relief car to fetch the rest of the party home !

It may be of interest perhaps to know how the other schools were inspected : I inspected Madrasa-i-Aizza on December 20. 1914, at 1.30. p.m.—Mr. Tate, Head Master ; All Saint's Institution on December 21, at 2.30 p.m.—Father Garbelli, Rector; Warangal H.S. on January 9, 1915—Mr. Syed Mohammad Jafri, Head Master ; Gulbargah H. S. on the 17th—Mr. Kirkpatrick, Head Master; City H. S. on the 23rd—Mr. Fazl Mohammad Khan, Head Master. This inspection of High School Science departments continued as an annual affair till 1922, with a break in 1920. In the course of all these years I did not miss a single lecture at the Nizam College, though I had to put up with much inconvenience and sometimes even hardship.

The Hyderabad Educational Conference

Early in 1915 a band of young graduates and enthusiasts of the Dar-ul-Ulum Oriental College (most active among whom were Maulvis Mohammad Murtaza, Abdul Basit of Turkish Relief Fund fame, Mir Akbar Ali, editor and proprietor of the local Urdu daily, Sahifah and Mirza Mohammad Beg, Tahsildar, Revenue Department), with the co-operation of a number of energetic men in the educational and public service, had organised a bold scheme, under the designation of the Hyderabad Educational Conference with a view to supplement the efforts of the Government Educational department to relieve the hardships of needy scholars, and spread education throughout the length and

breadth of the Dominions. They took the *intelligenzia* of Hyderabad fully into their confidence. I was also invited to take part in this activity and I did so wholeheartedly. One of the most important objects of the Conference was to provide ends and means for imparting higher education in Arts, Science and Technical subjects through Urdu, the Court and popular language of the Dominions. Maulvi Mohd. Murtaza's untiring devotion won for him the Secretaryship of the Conference. Mr. Akbar Nazar Ali Hydari was approached and he gladly entered into the spirit of the movement. On 1st March 1915 the Conference held its first general meeting at the Town Hall. Mr. Hydari read his Presidential address in Urdu, giving expression to the feelings and wishes of the educated public of Hyderabad and suggesting useful methods of realising the objects aimed at. It was enthusiastically approved by the public in general. The resolutions passed by the Conference carried great weight and won the support of the teachers and the taught and paved the way for the foundation of the Osmania University in due course. My speech on the importance of Science in modern education came off on the following day.

* * *

Mr. McEwen went off to Europe on war work on the 16th of April 1915, and I took charge of the entire Science department at the Nizam College. The first thing I did was to separate the Intermediate Junior and Senior classes in Science (on July 8) by a careful re-adjustment of the time table and of course imposing longer periods of work on myself. I remember well

that before my scheme for creating the post of an Assistant Professor of Physics was sanctioned I had to work for four consecutive hours on Mondays in the afternoon, in addition to heavy work in the morning—a fact which secured for me the sympathy of Mr. R. I. R. Glancy, Assistant Minister of Finance and a new member of the Board of Governors, when he came to know of it in connection with my scheme for increase of laboratory contingencies and staff. By this means the number of annual admissions to the Science classes was more than doubled and a larger number of students began to take up optional Science in their school courses.

Nawab Imadul-Mulk Bahadur (Maulvi Syed Husain Bilgrami) knew me even before his retirement as the Director of Public Instruction, Hyderabad. One of his sons, Syed Aqil Bilgrami (later Nawab Sir Aqil Jung) was a student in the first year at the Nizam College when I was reading in the pre-matriculation class; another, Syed Mahdi Husain Bilgrami (later Nawab Sir Mahdi Yar Jung) was my fellow-student in the matric, and we were great friends at the time—occasionally going out riding, (once meeting with an accident that might have been very serious,) or walking in the country round about the city (the last, as far as I can remember, being on 24th February 1921, in the hills bordering the Balkapur canal, as far as the Droog lake.) I called on Nawab Imadul-Mulk on 15th March 1914 and had a most delightful conversation with him on the subject of Arab culture and science, on which he was very keen as may be judged from the support he gave to the Asafiah Library and to Mulla Abdul Qayyum's.

Dairat-al-Maarif, an institution for publishing rare Arabic manuscripts, that has since acquired recognition in the world of Oriental research.

Maulvi Ahmad Husain Saheb (later Nawab Sir Amin Jung) was Peshi Secretary at the time and his private library was one of the best English libraries in the city. His son-in-law and brother were my pupils before they went to England, and as already stated met me pretty frequently in London. On 19th June 1914, I met the Maulvi Saheb, by appointment, for the first time and had very interesting conversation with him on a great many topics, from mathematics and astronomy to history and literature. He had a great admiration for my professor of mathematics, Prof. John Perry, for his breaking through the barriers of that fortified subject.

I learnt at Mrs. Sarojini Naidu's, the sad news of the death of her father, Dr. Aghornath Chathopadhyaya, my old professor at the Nizam College, in Calcutta, and we had a public condolence meeting at Secunderabad on the afternoon of 19th march 1915, the Morning being devoted to holding a general meeting at the Town Hall, Hyderabad, in memory of the honourable Mr. Gokhale, who had died recently. Mrs. Sarojini Naidu's poem (the Gift of India) and Nawab Nizamat Jung's (India to England) on the great War, were very popular at about this time and were published profusely. I used to be a somewhat frequent visitor at Mrs. Sarojini Naidu's in those days. It was there that I first met a number of notable people from British India, like Prince Hamidullah of Bhopal, Messrs. Sindhi and Abdur Rahman Bijnori etc.

Having called at the Residency at Hyderabad, I was

invited to an At Home there on 15th December 1914, and was introduced to Col. Pinhey, the Resident and Major Minchin, the first assistant to the Resident. A number of such occasions arrived during my term of Government service. On October 9th 1915, living tableaus of scenes from the Mahabharata were got up in connection with the war, in which several well-known persons, both English and Indian took part.

Mr. Khaja Ḳamaluddin (my old acquaintance in London) was in Hyderabad during November 1915 and lectured at the Nizam College, Islamiah High School, Secunderabad, the Nizam Club, Krishna Theatre and at some private houses also, on the subject of his missionary work in the West. They were very popular and I attended most of them.

In the Christmas holidays of that year, I ran up to Bombay for a week putting up at Watson Hotel; and on 28th December heard Mr. Justice Abdur Rahim's presidential address at the All-India Muslim Educational Conference at Poona, meeting there (not for the first time) Mr. Aftab Ahmad Khan, father-in-law to Mr. Syed Ross Masood, and Dr. Ziauddin Ahmad of Aligarh. In Bombay I attended Mr. Mazhar-ul-Haq's presidential address at a grand meeting of the Muslim League on the 30th. Next day I saw Mrs. Sarojini Naidu at the Taj Mahal Hotel.

Some interesting scientific work

Fearing a shortage of petrol during the War, Mr. Wakefield, the Revenue Secretary had asked the Industrial department to devise economical methods of

obtaining pure alcohol from the mhawa flower, so extensively used in the Dominions for preparing cheap liquor. An ether plant was also under contemplation, it was said. Mr. Gamlen, the Mint Master and Director Electricity department was reported to be aiming at a reliable method of making acetone on a large scale—a burning question during those critical times. I had distilled good alcohol from fermentation of the juice of tamarind fruit (obtained locally in large quantities) in a sporting attempt to find a cheap substitute for champagne, and the results of my experiments were known to many people outside the college laboratory.

My old school friend, Mr. Syed Abdullah (maternal uncle to Nawab Salar Jung) called on me unexpectedly on 26th June 1945 with a message from his friend Nawab Shah Yar Jung (once my class-mate at the Madrasa-i-Aliya) that the Nawab wished to extract sucrose from the mhawa flower, instead of getting impure liquor, as was the usual practice. He was willing to instal a small chemical laboratory under my supervision at his house and asked me, in return for a small honorarium, to carry on the research. I told him I had grave doubts about the success of his enterprise, but he assured me that his main object was to learn some practical chemistry in this way. I agreed to the transaction with the consent of the Principal, Nizam College and worked at the problem for a few months. No sucrose was extracted but Shah Yar Jung and his youngest son both took a great liking for experimental science and I left them at that stage.

While working in their laboratory I had once occasion to estimate the quantity of calcium carbonate in specimens of local limestone, known commonly as 'kankar'. In one specimen the percentage was as high as 64, the rest being the silicious nucleus generally very irregular. About the mode of formation of this substance, my own observations lead me to conclude that the main supply of calcium carbonate (excluding marble recently quarried) in the Dominions is derived from the decay of basalt rocks rich in calcium and iron etc. with traces of manganese, all combined with silica. By the action of water and carbon-di-oxide these rocks disintegrate; calcium in the form of carbonate is dissolved away and is deposited round silicious nuclei or nodules (like chert, etc.) by the slow process of repeated soaking and evaporation—resembling oolites and pisolites. The iron in the decayed rock eventually gets oxidised, and this in its colloidal form plays an important part as a cementing material for clay-iron stone nodules and conglomerates. Miles of strata of laterite and red earth round about the city of Hyderabad, Bidar, etc. owe their origin to this geological process. In some quarries of quartz boarding on decayed basalt ridges are found often amethystine varieties, some fine and almost transparent colour. Their colour was generally believed to be due to the presence of traces of $Mn\,O_2$—not that derived from decayed basalt (being of later origin), but coeval with the quartz. Sir C. V. Raman had a talk with me once (at a much later date) and considers the colour of the amethyst to be a purely optical effect, not due to $Mn\,O_2$. A careful spectroscopic examination may settle the question satisfactorily.

Science in Hyderabad during this early period of scientific awakening meant mostly chemistry and chemical analysis. My versatile training enabled me to cope with this work without much difficulty. As examples I may mention that once Dr. Alma Latifi sent me a round pebble for analysis and I at once suspected it to be clay-ironstone, formed in the manner already sugge sted. I put the pebble in strong hydrochloric acid over night and next morning found all the iron dissolved as chloride and the soft clayey matter at the bottom of the vessel. On another occasion, Mr. John Kenny, Director of Agriculture sent me a quantity of white powder, said to be found as an efflorescent deposit in the paddy fields of Bhongir in winter. In a few minutes it was identified as sodium carbonate. It is this stuff that village launderers collect and use for washing clothes. Good specimens of calcite especially from Aurangabad and Gulbargah were brought to me for examination. They showed double refraction distinctly and the larger and more transparent pieces collected would have been of much value in optical industry had they not been burnt up for the white-washing of buildings! As the fine marble monuments of old are said to have been similarly utilized by the later residents of Rome. Some places not yet explored still contain thick crystalline plates and fairly large rhombs of this substance, but good specimens have to be searched for carefully. 'Solution in water charged with carbon-di-oxide under great pressure and slow evaporation probably accounts for the presence of these crystals in veins and pockets.

Another interesting object for study is iron pyrites

found sometimes in the form of isolated crystals between laminae of Shahabad stones. The quantity thus obtained is trivial, but their formation by water action under pressure in presence of certain substances—as also deposition of dendritic or arborescent crystals of manganese-di-oxide on some of these laminae-requires careful investigation and promises to yield interesting results.

All there investigations, as well as the determination of specific gravity (to the fourth place of decimals) of certain samples of cement sent by Mr. Bhawnani, late Divisional Engineer, City Improvement Board, were undertaken by me as labour of love. For the degree of accuracy aimed at it was, of course, necessary to make use of corrections for the buoyancy of air and temperature of water. After Kohlrauseh's standard work, Dr. W. Watson's text book of Practical Physics (our text at the Royal College of Science) was most handy and reliable for such determinations. I noticed that the method of treatment in this work on this particular subject is unnecessarily lengthy and cumbersome. I did not know at the time that Dr. Watson was a Colonel in charge of the British Expeditionary Force Laboratory in France, to design masks for use against poison gas employed by Germany in her chemical warfare. My letter to him dated 14th September 1917 suggesting a much simpler treatment was addressed to the Royal College of Science. On 10th December I was surprised to receive a letter from him, (passed by Censor No. 3116). It is transcribed below :

B. E. F. France,
Oct. 29, 1917.

Dear Mr. Khan,

I was pleased to hear you are getting on well.

Thank you for your proof of the buoyancy correction formula. It is quite simple and I must consider whether to replace the present proof when I get back to Physical work. I have been out here for nearly three years and engaged in quite different work, but hope to get back on the termination of the war.

Yours very truly,
W. WATSON.

Unfortunately Dr. Watson did not survive long on his return from the war, and the lengthy treatment persists in the latest edition revised by Dr. Moss. All the same, one cannot help admiring the Physicist's enthusiasm for his work in spite of active participation in war.

Early in January 1916, I met Mr. Pocock, Director, the Nizamiah Observatory, and Mrs. Pocock. It was Mrs. Pocock who first spoke to me of Mr. Saadat Khan (later Nawab Saadat Jung), Joint Secretary to Government, Revenue Department, and his youngest daughter, whom I married later. The family while living at their villa at Begumpet had called at the Observatory some months ago and thereby came to know Mrs. Pocock.

On 12th February the opening ceremony of the new buildings of the Islamiah High School, Secunderabad took place and I was present at the function. It is an aided school and has made steady progress, being at present one of the most successful schools in the Dominions.

The second public meeting of the Hyderabad Educational Conference was held at Aurangabad, Mr. Habibuddin, Accountant-General presiding. I was at Aurangabad on 1st March in connection with the inspection of its High School and could thus take part in the deliberations of the Conference also. After finishing my work I left by tonga for Khuldabad, Ellora and Daulatabad on the 4th. I visited the tombs of Aurangzeb, Nawab Nizam-ul-Mulk, Asaf Jah I. and other illustrious persons buried in that famous locality. In the afternoon I saw the Ellora caves and retired to the travellers bungalow for the night. Next morning on return journey I could spare very little time to see Daulatabad founded by Muhammad-bin-Tughlaq and described by Ibn-e-Battutah in his famous Travels, so I ran up its flight of steps and after a brief visual survey of the panorama from the top, came down spending altogether only 22 minutes—in order to catch the 11 a. m. train from Daulatabad station to Hyderabad !

Dr. Latifi's term of office as D. P. I. was now over and he returned to his post in British India. Mr. Ross Masood's services were now borrowed for the Educational department. He arrived on 1st August and I saw Dr. Latifi off on the following day.

Most of my summer vacation that year was occupied with examination work (valuing answer books, writing inspection reports, etc.) and I could get only a short holiday at Lanovla—from 7th to 10th June. The monsoon had started and it was impossible to get out of the hotel owing to incessant rain. So I went over to Bombay for a change and put up at the Great Western Hotel (now closed). My old pupil, Brij Mohan Lal

was reading for M.B., B.S., at the Grant Medical College ; and he and Dr. Jiv Raj Mehta, M.D. (London), newly returned from England dined as my guests at the hotel on the 13th after a short pleasure drive by the seaside. I left for home the next evening.

Two Hyderabad students (Syed Moinuddin 'Haqqani' and Abdur Razzaq) reading at Aligarh for the Allahabad B. Sc. Exam. in Physics requested me to allow them to attend my lectures on Sound and Physical Optics to our Nizam College students. It was vacation time at Aligarh and they wanted to utilise the time in this way. I spoke to Mr. Sturge on 11th July and admitted them to my lectures.

CHAPTER XII

THE NIZAM COLLEGE LABORATORIES

ON 10th July 1916, I suggested to the Principal Nizam College (Mr. P. H. Sturge) to draw the attention of Government to the scholarship scheme advocated by the Hyderabad Educational Conference and get a number of bursaries and freeships for the College. Some hard cases that could not be helped in this way may be recommended to the Conference Scholarship Committee for relief. He gave me a list of such students for the Conference Scholarship Committee meeting held at Mr. Hydari's house on the 13th and my suggestions were all carried out. In this manner the number of bright students in the College increased and time was now ripe for moving Government for expediting the building of laboratories. While the matter was in progress Mr. Burnett left the station for active war work on August 15, and I got the Principal (on 21st September) to consent to move Government to sanction Rs. 80 a month for College laboratory contingencies as against Rs. 40 for the College and School combined—a state of affairs which once induced a facetious barrister who had come to see me at the College on 24th October 1916, to quote Oliver Goldsmith's famous lines :

'And passing rich with forty pounds a year'

I obtained promise also for the grant of Rs. 1000 a year

(out of fees savings, I think) for purchase of new apparatus. At last the laboratory plans that were so long talked about were delivered into my hands on 11th November for examination and criticism ! Finding them far inadequate I prepared my own in rough sketch (for both Physics and Chemistry). When the architect Mr. Esch came to discuss the laboratory buildings with Messrs. Hydari and Ross Masood at the Home Secretariate Mr. Sturge asked me to go as his substitute, and I found myself alone in favour of the 'big-lab' scheme—though I was unable to understanding why ; No decision could thus be arrived at. It was brought to my knowledge that the Mint Department had proposed a technological scheme with which they wanted our Science Department to co-operate. Mr. Sturge showed me the letter he had received and I sent him my comments thereon. He concurred with them completely and replied accordingly.

In the meanwhile plague broke out in the City with great fury. My people went to live at my uncle's country house at Dundgal and I moved into the Nizam Club. When the plague subsided I came to know indirectly that the Government in the Educational Department wished to transfer the Nizam College to Adikmet in the near future and to build the laboratories on that site. A second meeting for discussing the laboratories was convened at the Home Office on 28th February 1917. This time Mr. Sturge was also present. There was again the same sharp difference of opinion about the big and small schemes. On 2nd March the architect, Mr. Esch himself called for me at the College laboratory and I showed him the site inside the

compound to the north of the school building (the same where the new laboratories now actually stand), where we could have a plain looking but efficient and adequate building instead of fine looking but deficient at the old roadside site.

I was at Bidar inspecting its High School Science Classes, when on 19th March, Mr. Husain Abdul Munim of the P. W. D. Audit Department brought the startling news of the Revolution in Russia and her separate peace with Germany. But America was expected to join the Entente Powers shortly and very little anxiety was caused by the Russian catastrophe.

On 21st March both Mr. Glancy and Mr. Hydari asked for the minimum requirements of the College laboratories. My proposals ever since I took up this work were precise and definite and I clung to them with the ardour of conviction. I was asked by Mr. Glancy on 10th August, a Friday to meet him, Mr Gwyther, the Chief Engineer and Mr. Mehir Ali Fazil Divisional Engineer, Hyderabad, at 2 p. m. I did so and it was decided to bring the scale down to one lakh and twenty thousand rupees. The last meeting took place on 13th August at the Finance Office. Mr. Glancy presided. There being present Messrs. Hydari Ross Masood, P. H. Sturge and myself. I found no difficulty in convincing the meeting of the reasonableness of the laboratory demands and they were adopted in toto, the plans to be first sent over to Madras (to Lloyd Jones, Professor of Physics, Presidency College) for expression of opinion. In preparing these plans I had made a thorough study of the Royal College of Science laboratories and had duly allowed for our

limited requirements in comparison with the resources and aspirations of that renowned institution. Mr. Gwyther saw the new site I had proposed on 5th September and approved of it. The plans were returned by the 24th with slight alterations and Mr. Mehir Ali Fazil was put in charge of the work at once.

It would appear that all this delay in building the laboratories was due to a number of causes. At first a number of departments other than educational wanted to have a hand in it. Later the Osmania University was under contemplation, but exactly on what lines, few people were in a position to know definitely. The Maulvis wanted it to be entirely on mediæval lines —a sort of glorified Dar-ul-Ulum College, it would appear. I believe that was definitely the desire of Maulvi Hamiduddin, the newly appointed Principal of that Oriental institution, with a smattering of English. Others like Mr. Hydari and Dr. Latifi, and after him Mr. Syed Ross Masood naturally wanted it to be on Western lines but with Urdu as the medium of instruction. It must be definitely stated that none of these gentlemen (and as for that matter hardly any man on the professional staff of the University when it came into existence) had any experience of teaching modern Science and Mathematics of University standard through the vernacular. Hence the preparatory step to create the Translation Bureau as a nursery house, but for various reasons its rate of output was very slow. It seems also that Government had not decided what to do with the Nizam College. They could not wait for the Bureau to have all the text books translated or compiled before opening the University. Nor could

the Nizam College manage to hold its position among the Colleges affiliated to the University of Madras without adequate laboratories, I was destined to be in charge of the foremost College of the new University. As subsequent events have shown the building of the Nizam College laboratories was a powerful incentive to the repaid development of the Science branches of the Osmania University.

Madras University Commission

The University of Madras sent another Commission to inspect and report on the teaching staff and equipment of the Nizam College in all its departments. The work lasted from 29th September to 3rd October, 1917. Mr. Mark Hunter was the Chairman, Messrs. Kandeth, Joe Stevenson, Kershaw and Dr. Raju served on the Commission. Mr. Joe Stevenson was an old associate of the Royal College of Science and knew what a comprehensive and sound training one can acquire at that institution if one were in the mood for it. The existing equipment and accommodation were decidedly poor, but the science buildings under construction would make the College one of the finest in Southern India. The actual building was started on 21st November 1917.

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On 7th and 8th December the third general meeting of the Hyderabad Educational Conference was held at the Town Hall with Nawab Imadul Mulk as President. I lectured on the need for better teaching of Hyderabad History and Geography.

I had an opportunity of lecturing at the British Army Y. M. C. A. Trimulgerry, on 22nd June, on the Chemistry and Physics of the air with demonstration experiments. The lecture was well attended by Army men. It was in the month of Ramadan and I was fasting. Mr. Shorts, the Secretary from Australia very kindly stopped me to dinner. I found him very sociable and obliging. It was past midnight by the time my horse carriage brought me back home.

I get married

It was high time that I got married; and now that I had settled down in my profession I took the hint given my Mrs. Pocock about proposing to Mr. Saadat Khan's daughter. My would be father-in-law's remote ancestors had hailed from Ghur in Afghanistan. He and his father were mulkis. He himself had a brilliant career in his student days in Hyderabad, topping the list of successful candidates in the Civil Service Examination (H. C. S.). His maternal uncle Maulvi Abdur Rahim Beg Saheb had a flourishing career in the Sarfe Khas Department holding from time to time such responsible posts as of Assistant Nazim, Mahallat-i-Mubarak of Nizam, and for a time even of Secretary Sarfe-Khas-i Mubarak. My mother-in-law's father was a Civil Surgeon and our families were distantly connected in olden days. I took only one day's casual leave(on 13th October, 1917, corresponding to 26th Dhu-al-Hajjah, 1335 A. H., 8th Azur 1327 F. a Saturday, the day of actual marriage). The afternoon At Home on the 11th October and walimah dinner on the 15th being looked after by my people while I was busy with my

lecture work at the College during the day time. Had I wished I could easily have availed myself of several days casual leave (or even privilege leave to which I was entitled, having worked during the vacations also) but my well-regulated city life did not require any such unnecessary indulgence. This was certainly not done in swanky imitation of G. Kirchhoff of Heidelberg who never missed a lecture and is reported to have told his pupils a day before his marriage, "Gentlemen, owing to circumstances over which I have no control I shall not be able to lecture to you tomorrow." And that day was the day of his marriage!

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The year 1918 brought the Great War to a close. It gave birth to a number of important events at Hyderabad also—some affecting the destinies of my people and myself adversely and some favourably. It began with a great calamity. My uncle's youngest son, a most brilliant and promising boy died suddenly of diphtheria at the age of 9 or 10. I suspected the disease and urged my uncle to hurry up with radical treatment but there was considerable difficulty in getting the proper serum for injection. The poor boy succumbed on 7th January after only a couple of days' illness.

The Calcutta University Commission visited Hyderabad and Mr. Hydari was At Home to meet its members at his house on 24th January. The older system of education had its day. Need for reform was felt everywhere; more useful subjects, practical and technical science being in demand more and more. India also responded to the general tendency all over the

world. In meeting the members of the Commission, I had an opportunity of exchanging views with a number of distinguished Educationists from abroad. I remember particularly the conversation I had with Mr. Ramsay Muir and Prof. Richard A. Gregory. Our Hyderabad Government in the Educational Department was contemplating a radical change of system of education and so the activities of the Calcutta Commission were followed with keen interest. I shall describe in the next chapter my share in the formulation of this new scheme.

I shall proceed now with the general course of events. I heard a delightful lecture in Urdu on Baghdad by that gifted Orientalist and successful medical man, Colonel Bholanath, at Mrs. Sarojini Naidu's on 17th June. He referred to his personal experiences in 'Iraq with the British Army. His knowledge of Arabic giving him great facility in getting into contact with the inhabitants of that country.

At this time I was keeping good health, taking plenty of exercise, as a result of which I won the first prize in shot-put at the Sports meeting of the Nizam College Old Boys, open to past and present students alike, on 21st February. The second prize went to Nawab Nadhir Jung, the champion sportsman of our College in my school days but now grown somewhat old. Such is the way of life !

An important step was taken by the Nizam College Board of Governors at this stage. All the English members of the College staff except Principal Sturge being away on special duties or leave, they decided at their

meeting held on 24th June 1918, that I should act as Vice-Principal.

Sir Faridoon-ul-Mulk was the leading minister in those days. He was At Home generally every first and third Monday of the English calendar month. On such occasions his house was a popular meeting place for notable people visiting Hyderabad. I went there sometimes and got to know several important persons in this way—like Prof. D. S. Margoliouth of Oxford, Sir Ali Imam, Mr. Hasan Imam etc. This casual meeting with the great Arabic professor led to some interesting results. While discussing with him modern sectarian trends in Islam I asked him incidentally if he remembered a youth from Hyderabad, named Abdul Haq who was at Oxford for a short while before the Great War. He was a past student of the Madrasa-i-Nizamiah, founded by Khan Bahadur Maulvi Anwarullah Sahib (later Nawab Fadilat Jung) and had boldly travelled to Egypt, Constantinople and the Near East, eventually reaching England. His knowledge of Arabic was excellent; but for lack of financial aid he had to return without taking a degree. I was glad to bring him to the notice of Mr. Sturge when he was on the look out for a competent man to carry on the Arabic work at the College in the absence of Mr. Prendergast, then on special duty at the Palace. Mr. Sturge was favourably impressed by the young man and he was at once enrolled on the College staff in a junior grade of service. He used to come to me often and I remembered him in my conversation with Prof. Margoliouth. The outcome of this was that I advised Abdul Haq to call on the Professor and get a recommendatory note

from him to the Principal on the advisability of sending him to Oxford for a research degree with Government aid. The support of men of real learning for deserving candidates is proverbial. Prof. Margoliouth's recommendation got Abdul Haq a Government scholarship and I saw him off to Europe on 10th December 1919. Prof. Margoliouth was very helpful to me also in preparing in due course a number of papers on Islamic history and Arab science which I was able to publish during my retirement.

Mr. Sturge's retirement

The extension granted to Mr. Sturge in his period of service after he had completed his 55th year, (the scheduled time for retirement in India) coming to an end, preparations were being made to give him a good send off. Mr. Durand too was going on leave, so Government were desirous of appointing an Indian of European qualifications and ripe experience to act as Principal till the return of Mr. Burnett from the War. Mr. Sturge himself informed me that the Board of Governors resolved at their meeting on 14th September that I should succeed him in the office. But soon afterwards, at a subsequent meeting the Board cancelled Mr. Durand's leave and recommended him to officiate. Mr. Sturge left Hyderabad on October 3rd 1918.

The influenza epidemic

Suddenly a wave of influenza epidemic surged over the length and breadth of Hyderabad. It had already wrought havoc in a number of provinces in British India. People began to die by the hundred every day. Scores

of my relations and friends perished. I myself contracted the infection on 5th October (during the Moharram holidays) and developed pneumonia on the 10th of October. On the 16th my fever began to subside. The Moharram holidays lasted till the 18th of October and the epidemic being still fierce all offices and schools were closed—the Nizam College also from 19th October to 9th November. Though weak and convalescent I took up my duties at the College as soon as it re-opened.

* * *

In the meanwhile Sultan Mohammad Rishad of Turkey had died (on 25th Ramadan, 4th July) and we heard of the surrender of Turkey on 2nd November. Germany also succumbed and the Armistice was signed on 16th November 1918. The very next day (corresponding to 12th Safar 1337 A. H., 12th Dai 1328 A. F.,) my first child Mohd. Abdul Majeed Khan was born.

Short holiday to the East Coast

In the Christmas vacation I went out for a short holiday to the East Coast with my youngest brother (now the only one) and a distant uncle whose brother was married to a prosperous merchant and landlord at Rajahmandry (Mr. Syed Husain). We left Hyderabad on the evening of the 26th December 1918 and reached Rajahmandry at noon on the 27th. The Godavari bridge standing on 55 arches is a fine feat of modern engineering. We put up at Mr. Syed Husain's house as guests, meeting Mr. Syed Fazlullah, the District Collector at dinner the next day. We saw Cocanada and its harbour on the 29th, changing at Samalkote,

well-known for its sugar refinery. Rajahmandary is a great centre of Telugu culture. The Andhra University founded some years later has added much to the importance of this part of India. We left the town at 3 p. m. on the 30th and after a little unpleasantness while changing into the N. G. S. Railway at Bezwada, reached Warangal on the morning of January 1st. Here we stopped for a couple of days at the house of my cousin, Mr. Daood Khan, Assistant Commissioner, Settlement Department. I was still very weak. My digestion was poor. I should really have taken a long rest, but I wanted to see the electric fitting and gas and water installations of the laboratories completed under my eye. So I did not avail myself of any leave. Gradually, I regained my health and strength (especially under the treatment of Hakim Wahiduddin Saheb). I had already purchased from Pye and Co., Cambridge some good physical apparatus for our present requirements and prepared a complete list of what was necessary for the B. Sc. course we were expecting to be affiliated in shortly.

On February 4th, 1919 I attended a very thrilling lecture by Sir Aurel Stein on Takla Makan Desert Routes at the Town Hall, under the auspices of the Hyderabad Archæological Society of which I was then a member. Sir Aurel lectured at the Residency At Home also on the 26th at 9-30 p. m. at the invitation of the Hon'ble the Resident, Sir Stewart Fraser. On 20th February in response to a personal letter from Mr. Hydari I went over to his office and selected from amongst the applicants a number of candidates for appointment as Professors of Mathematics, Physics and

Chemistry.

H. E. the Viceroy, Lord Chelmsford visited Hyderabad and I went to the Reception at the Residency on March 28. On May 28 I purchased a small house near Shanker Bagh belonging to Abdur Rahim Saheb, Vakil of Palvancha and attended to its alterations and additions.

Early in June I was deputed by the Board of Governors of the College to see the Science laboratories at Bangalore. The trip lasted from 4th to 12th June 1919. One of our relations in that city, Mr. Syed Rasool, arranged for my comfortable lodging and boarding. I called on Dr. Mohammad Osman (Director, Medical Dept.), at the Victoria Hospital and later on other relations in the city on the 7th. Mr. Metcalfe was away at the hills when I visited the Central College laboratories on the 10th, but Mr. Venkateschar, the Assistant Professor of Physics showed me round the various sections. Mysore was making every effort to specialise in Spectroscopy. Mr. Metcalfe had designed handy mercury vapour lamps and was expecting to add excellent apparatus from Adam Hilger to open a school of research. It was in consequence of this good equipment and steady work that Metcalfe, Venkateschar and others at this laboratory subsequently turned out a good record of work on fine structure of spectral lines etc.

I went to the Tata Institute of Science on June 11 and consulted Drs. Alfred Hay, Sudborough and Watson on such topics as accumulators and gas plants about to be installed at our own laboratories. I saw the Minto Eye Hospital also and its Director Dr. Acharya. By a strange coincidence his father-in-law turned out to be a friend of the Arab brothers, Ahmad, Ali and Hasan

bin Abdulla who originally came from Mysore and settled down later in Hyderabad.

By the time I returned from Bangalore, Mr. Burnett was relieved of his voluntary war work and he resumed his duties as Principal. It was he who at the Board meeting on 28th July got Abdul Haq's scholarship recommended and started me in my professorial grade from the beginning of the Fasli year 1325 (about 4th October 1915) instead of the middle, some six months later.

On July 19 we all went to the Hyderabad Residency in response to an invitation to hear the Peace Terms offered after the Great War.

Mr. Qader Husain Khan M. A. another young member of the staff newly entertained was sent to England at Government expense to specialise in history or economics and was given a farewell At Home on 21st July.

On 1st August I showed Mr. Hydari the amethystine quartz quarry near Moosapet Railway crossing and expatiated on the advisability of starting a cottage industry for cutting and polishing semi-precious stones of the silica family like agate, amethyst, chalcedony and carnelian etc., found in quantity in several parts of the Deccan, but the public seems to pay no attention to such matters.

On July 1st 1919, Mr. Nurul Hasan of the Osmania University brought me a specimen of rock crystal found in a local well. I was on the look out for one to cut at right angles to its optic axis and demonstrate rings and brushes between crossed Nicol's prisms (or Tourmaline pincets) — a beautiful optical phenomenon. A local lapidary, Abdur Razzaq by name, was luckily

discovered and he turned out to be an excellent gem-cutter and polisher with extemporised apparatus. After cutting two small pieces from the crystal I returned the rest to the owner with many thanks. I mention this incident to show that there is no lack of material and men in Hyderabad to carry on this industry succesfully, if encouraged.

* * *

Meanwhile important events were taking place in the country. His Exalted Highness the Nizam had sanctioned the new constitution of Government. An Executive Council was inaugurated. Sir Ali Imam was appointed President and his colleagues in the various departments were Nawabs Sir Amin Jung, Waliud Dawlah, Lutfud Dawlah, Tilawat Jung, Nizamat Jung, Aqil Jung, Rajah Murli Dhar and Mr Akbar Nazar Ali Hydari (later Nawab Sir Hydai Nawaz Jung). The Council was opened by H. E. H on 21st November.

I called on Sir Ali Imam on 7th December. The Educational Department with my old school-fellow Mahdi Husain Bilgrami as Director was At Home in connection with the Peace Celebrations on 15th December 1919 in the Public Gardens.

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On 31st December I borrowed money from a local money-lender and purchased the rented house I was living in for a reasonable price.

On 6th January 1920 I handed over to Mr. Burnett my list of physical apparatus. The Board deputed Mr. McEwen to go to England and place orders with

various makers of scientific instruments and chemists like the Cambridge and Paul Scientific Instruments Co., Pye and Co., Becaker & Co., Charles Griffin & Co. etc.

The Revenue Department appointed me examiner in Persian in connection with the examination of Revenue officers, on April 1st 1920. The offer was repeated in a subsequent year.

On 2nd April 1920 (12th Rajab 1338 A. H., 29th Ardibehist 1329 F.) my second child Mohd. Abdul Waheed Khan was born.

On July 1st 1920 the same year I sent my first remittance of £ 2 sterling to H. K. Lewis and Co. Ltd., Booksellers, London for purchase of books. Since then I have been having a regular transaction with them personally in the matter of supply of books and periodicals from practically all parts of the World, for my private use.

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At my suggestion Mr. Burnett agreed to starting a Co-operative Credit Society at the College. At the general meeting of members of the teaching staff and other employees (on 8th September, I think) I was elected Vice-President of the Society and continued to work in that capacity till my termination of service at the Nizam College. The Society was a great success. Mr. Gundu Rao M. A., who succeeded my old pupil Bhasker Iyer, on his joining the Government of India Finance Department, as assistant professor of Physics, was elected Secretary.

For the first time in the history of my service I availed myself of a month's privilege leave from 19th October 1920, and went for about a week to Madras,

meeting Mr. Moffat, Prof. of Physics at the Christian College and Miss Mranalini Chattopadhya, a younger sister of Mrs. Sarojini Naidu at her house in San Thome. Mr. Abdul Hamid Khan who was destined to play an important part later in the Khilafat and Muslim League movements was then a student of Economics and was introduced to me by Miss Mranalini as a promising young man. This trip to Madras is specially interesting to me from a scientific point of view as on the evening of 25th October 1920 at about 6-30 p.m. local time, after repeated showers of rain (continued for a number of days), I saw from Ripon Bridge *a flash of beaded lightning*—an uncommon phenomenon still awaiting satisfactory explanation.

On 27th February 1921 I arranged with the State Life Insurance Dept. to pay Rs. 40 a month towards my Family Pension Fund, after successful medical examination.

As soon as the laboratories were fully equipped and ready for starting B. Sc. work, the University of Madras sent a Commission consisting of Messrs. Erlam Smith and Anantapadmanabha Rao to inspect the Chemistry and Physics departments. Their reports were satisfactory and affiliation being granted, B. Sc. classes were started at once.

* * *

One morning early in October 1921, Mr. Akbar Ali, proprietor of the Sahifah, brought to me in my office at the College laboratory a young man dressed from head to foot in homespun khadi, for advice concerning his Journey to Java to learn sugar technology with his aid.

Mr. Akbar Ali was then a great advocate of extracting cane sugar or sucrose from the juice of toddy palms of Hyderabad, as a radical preventive for toddy drinking. The young man's name was Maqboul Ali. He was the youngest son of Nawab Safdar Yar Jung (late Assistant Commissioner of City Police) and had given up his studies at Aligarh after joining the Senior B. A. class, in the turmoil and upheaval of the so-called Nationalist movement started by Messrs. Mohammad Ali and Shaukat Ali. He had read some elementary science for his Matriculation, but was keen on practical chemistry. I was favourably impressed by his determination and after some drilling, got him admitted to the Osmania University B. A. Final class, through the good offices of the acting Professor of Chemistry Mr. Chaudhari Barkat Ali. Maqboul Ali turned out to be a remarkably persevering student, under sincerely sympathetic guidance and control. As a result of these qualities I was able to build up his career in a no less remarkable manner, not in sugar technology but in medicine, as will be seen later.

PART III

CHAPTER XIII

PIONEER WORK FOR THE OSMANIA UNIVERSITY

IT was long felt in India that the system of education at the beginning of the 20th century was, at the most, bookish and theoretical. It aimed primarily or even entirely at turning out good clerks, men (and women, when it came to that stage) able to write fairly correct English or make tolerably pleasing speeches. The genius of man, however, transcends his surroundings and breaks through all obstructions. In spite of this limited scope, the old system turned out many good writers on history, philosophy, mathematics and literature—not to speak of linguists and lawyers. But in Practical Science, pure or applied and creative medicine, India was far behind Japan and the British colonies. One of the reasons alleged to account for this deficiency was the waste of time and energy in mastering a difficult foreign language whose grammar was peculiar, orthography far from phonetic, teachers indifferently qualified, while critics of Indian scholarship were singularly ungenerous, if not absolutely hostile. Under such circumstances, it was argued how was it possible for the average student to learn science practically? This opinion was considered so convincing that more potent factors militating against the acquisition of sound scientific knowledge—like absence of industries, lack of adequate employment of machinery and intelli-

gent farming etc., which, by the way, many people accounted for as the effect rather than the cause of the trouble--certainly a vicious circle of illogical arguments-were ignored altogether. One or two wouldbe friends of the English even tried to condemn the existing system as conducive to growing discontent and sedition. As a substitute for English in Hyderabad, Urdu appeared to be the most suitable medium of instruction, in virtue of its being the official language of the country, its universal intelligibility and rapidly growing literature.

After the first public meeting of the Hyderabad Educational Conference, the Home Secretary to Government (Mr. Hydari) submitted a memorandum to H.E.H. for the creation of a University in Hyderabad on modern lines, making Urdu the medium of instruction and English, a compulsory second language, and H.E.H. was pleased to accord sanction to the scheme in 1918 in a Firmani-Mubarak that constituted its Charter.

On 4th November I attended a meeting of the special committee of local educationists at the office of the D. P. I. (Mr. Syed Ross Masood) to frame a syllabus of studies for the University under contemplation; and on March 24, 1918 took part in the deliberations of the Technical Terms Committee (mainly scientific) at the Translation Bureau, with Maulvi Abdul Haq as Curator. On 3rd July I was invited with other members of the education service to consider the opinions expressed about the proposed University by leading authorities on education in other parts of India. It was gratifying to find a consensus of opinion in favour of the scheme.

In the meanwhile the Translation Bureau had begun

its work, mostly of translating books on history. Mr. Chaudhari Barkat Ali, a lecturer in Chemistry at the Muslim University, Aligarh was appointed to translate books on Elementary Science (Physics and Chemistry). Messrs. Masood Ali, Qazi Mohammad Husain, Haroon Khan Shirwani, Elias Burny and Qazi Talammuz Husain were among the more prominent translaters in charge of various subjects at the Bureau. Mr. Chaudhari had already prepared a system of nomenclature attempting to translate even the names of the chemical elements and their compounds! Maulvi Wahiduddin Salim, a well-known Urdu writer, who was at one time a literary assistant to Sir Syed Ahmad Khan and knew Khaja Altaf Husain Hali and other famous men at Aligarh, served on the Technical Terms Committee, with Maulvis Ali Hyder Taba-Tabai (Nawab Hyder Yar Jung) and Hamiduddin for their knowledge of Arabic. Mirza Mahdi Khan Kawkab, an old associate of the Royal School of Mines and myself were invited to take part in the discussions for coining Urdu terms in science and mathematics. Mr. Chaudhari's system, known as Kitab-al-Tasmiah, was submitted for wholesale adoption, Maulvi Salim had prepared a plan purporting to embrace practically all scientific words! No doubt the authors had bestowed much thought and time on their respective schemes, but no man of science in his senses could adopt either of them in toto. A meeting was held at Nawab Imad-ul-Mulk's house on 11th February 1919 to discuss Mr. Chaudhari's system. I was also present and supported the proposal to translate only the words denoting processes and substances of every day use, but to transliterate

the names of elements and compounds. There were enthusiasts on both sides, but the champions of wholesale translation were mostly men of superficial scientific knowledge. The matter was left undecided. The sub-committee for Technical Terms in Science met at the Translation Bureau on 9th March and my suggestion was adopted.

As hardly any man could be found in British India to undertake the translation of Physics books of the B. A. standard, I was offered the bulk of this work on 22nd March 1919 through a letter from the D. P. I's. office.

In the meanwhile arrangements were made to hold the first matriculation examination of the University. I was appointed examiner in arithematic. My paper came off on 26th May 1919. There were about 270 candidates, some of whom were under the erroneous impression that the examination would be exceedingly easy, and I am afraid, the Chief Invigilator (Mr. Syed Mohiuddin) had some uneasy moments in trying to bring the real fact home to them—as he told me afterwards.

On 28th August 1919 (1st Dhu-al-Hajjah), I was present at the inauguration ceremony concerning the opening of the Osmania University at the rented building below the slope of the Gun Foundry—which housed the University College from that day till its transfer to the new buildings at Adikmet in 1934. All the important officials in State service, especially those in the Educational Department were invited. Nevertheless it was a very modest gathering compared to the important part the University was destined to play within a few

years of its inauguration. It transpired that Mr. Syed Mahdi Husain Bilgrami (then acting D. P. I.) was to be the first Principal of the College.

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Later in the year (on 24th September) I received from the Educational Department a packet of 3 or 4 volumes of miscellaneous tracts on popular astronomy with copy of an application to H. E. H. by Mr. Chaudhari Barkat Ali for a special allowance of Rs. 300 a month for life to compile a work in Urdu on Astronomy that would commemorate the patronage extended by H. E. H. to this rapidly expanding science, as Abu Raihan-al-Biruni's Qanun-i-Mas'udi has kept alive for all ages the glorious reign of Sultan Mas'ud of Ghaznah. Though an ardent student of Astronomy from College days and well-versed in mathematics, physics and chemistry bearing on the subject, I was staggered at the attempt made by an individual writer to undertake such a stupendous task with limited preliminary equipment, and hesitated to pronounce any opinion at all. But judging from the contents of the volumes submitted to serve as samples I saw that only an elementary, non-mathematical or even non-technical series of essays was to be attempted. There was no work in Urdu at the time even of this standard and the author's style was lucid and in some places charming, so I pronounced my opinion in favour of publishing the popular work. Later I came to know that some important persons were in support of the idea and the application was generously granted. Unfortunately Mr. Chaudhari did not long enjoy this allowance and died without adding

anything substantial to the volumes already submitted.

Mr. Pocock, Director of the Nizamiah Observatory having died in the influenza epidemic of 1918, the post was lying vacant. Mr. Bhaskaran Shastri, a mathematics M. A. of the University of Madras and recently appointed as an assistant was put in charge of the establishment. I knew that Mr. Lloyd Jones, Prof. of Physics at Presidency College, Madras was entrusted with the work of the local observatory also, as a part time affair. I applied to our Government through the College Principal to let me carry on the Nizamiah Observatory work also as a part time affair. My training in spectroscopy under Prof. Alfred Fowler and his kind appreciation of my work in that subject at the Royal College of Science, London fully qualified me to render efficient service to stellar spectroscopy in addition to carrying on the Observatory routine and preparation of carte du ciel for some of the southern regions of the Celestial Sphere. Though some confidential correspondence took place between me and the officiating Home Secretary nothing came out of it and eventually Mr. Bhaskaran Shastri was appointed Mr. Pocock's successor at first under an Advisory Board of which I was chairman with the professors of mathematics and physics at the Osmania as my colleagues, but later the Board ceased to function.

The question of translation of scientific terms was taken up again on May 12, 1920 at a meeting presided over by Sir Ali Imam in which Sir R. Glancy, Nawab Hydar Nawaz Jung, some professors of the Osmania University and myself, among others, participated. It was decided finally to leave nomenclature alone and

translate only the ordinary technical terms.

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About the middle of the year 1920 Dr. Abdus Sattar Siddiqi, a graduate of the University of Allahabad who had later taken a Ph. D. degree from a German University with research in an Oriental subject was appointed Principal of the Osmania University College on probation for two years. He called on me on 8th October to leave his card. I left mine for him at Mr. Ross Masood's house where he was temporarily residing, on the 15th.

On November 29, I was informed of my being appointed a member of the Syndicate Osmania University.

It gives me much pleasure to say that I was able to persuade Mr. Syed Mohd. Azam (an old pupil of mine), then Principal, City High School to take up the translation of Cohen's Organic Chemistry for the Bureau, which he was at first somewhat reluctant to do for lack of ready access to correct Urdu equivalents of technical terms. I gave him whatever help he stood in need of on September 2nd 1921 and a few more days.

While framing the curriculum of studies for the University we took advantage of the existence of the Observatory and included a fair amount of astrophysics and practical demonstration with astronomical instruments; in the syllabus of Astronomy for B. A. Mathematics—a feature unique to this institution in India. Mr. Qazi Mohd. Husain taught the classical portion at the Osmania and I lectured on the astrophysical portion, taking the class (with Mr. Qazi as co-worker) to the Observatory for practical demonstration. Each of us

was paid an allowance as remuneration for this extra duty.

The Nizam College Science laboratories were opened to the educated public for inspection on 23rd December 1921. My daughter Roqia Begum was born on December 27.

H. R. H. the Prince of Wales' visit to India, (1922)

The Prince of Wales' visit to India evoked much activity and preparations at Hyderabad also. As a constituent College of the University of Madras representative students from our College under a senior member of the staff were invited to participate in welcoming the Prince to that city and presenting him an Address at the Senate House on behalf of the University. The Principal (Mr. Burnett) entrusted me with the work and I left for Madras by the passenger train at 6. 9 a. m. on the 11th of January 1922, with the following students in my charge: Mohd. Mir Khan, Sridhara Naidu, Mohd. Moinuddin, Mohd. Arshad, Syed Ahmad Ali, Ganpath Rao, Shiv Raj and Parthasarathy. There was a great rush at the Bezwada Junction owing to abnormal number of passengers for Madras. We were received next morning at the Central Station by a number of students studying in the City. Muslim students put up at the Mohammadan College hostel, at Umda Bagh, Mount Road—Mr. Jafar Husain, Superintendent and Mr. E. W. Green Principal. Non-cooperation with Government was raging at this time all over the country and I was anxious that no harm should come to our boys. Ganpath Rao and Shiv Raj went to live with their friends at Sowcarpet and the remain-

ing two stopped with their relations in the Town—all ready to be at my beck and call at any time.

The Prince was welcomed by our students and others from the College compound when he arrived at 8-30 a. m. on the 13th. Mr. Green very kindly lent us his motor car to go to the Senate House at 11. The other four boys came punctually at the place at the appointed hour. The Address of welcome was read and replied to, and all went well with my party of students. There were illuminations at night with some disturbances here and there unfortunately, but our boys kept aloof and were safe in my charge. On the morning of the 14th I called at the General Traffic Manager's office and succeeded in getting concession tickets for such of my students as wished to accompany me on the return journey. Some took permission and stayed away for a few more days. We left Madras by the 7 a. m. train on the 15th and had a good send-off by our hosts of the Muslim Hostel and State scholars that were in station at the time.

The Prince of Wales visited Hyderabad on the 25th and I superintended the seating of our College students to welcome him on his way to the city, at the small Municipal garden in front of the Nampalli station.

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In my programme of inspection of High School Science that year I persuaded Mr. Burnett to let me include the Madrasa-i-Aliya also (hitherto always keeping aloof). The Science teacher, Mr. Iyengar, I am sure, was much benefited by my sympathetic criticisms and advice regarding equipment and scheme of practical work.

On 9th March I saw Mr. Ross Masood off to Japan to study at Government expense the Japanese system of education. Mr. Fazl Mohd. Khan acted as D. P. I. in his absence. Mr. Masood was much assisted in Japan by an English gentleman (Mr. E. E. Speight) whom he later fixed up partly at the Nizam College and partly at the Osmania University on a good salary. On 14th March 1922 a committee meeting was held at the Home Secretariat consisting of N. Hydar Nawaz Jung (as President), Mr. K. Burnett, Dr. Abdus Sattar Siddiqi and the Science professors of the Nizam College and the Osmania University, to discuss the feasibility of throwing open the resources of the Nizam College laboratories to the students of the Osmania University for their lecture demonstrations and practical work. But owing to various difficulties no satisfactory solution could be arrived at and the matter was dropped.

But the Nizam College consented to let the Osmania University hold its first examination in practical physics for the B. A. degree examination at its laboratory and I was the external examiner in that subject.

On 22nd March 1922 H. E. H. the Nizam was pleased during his Birthday celebrations that year to confer on my father-in-law the title of Nawab Saadat Jung.

Award of scholarships for technical subjects

We heard that several expensive Development Schemes were under consideration by Sir Ali Imam at this period, like land reclamation for cultivation, starting of textile and other industries etc. A friend of his Sant Nihal Singh, well-known to the Indian journalistic world and his wife came to see me at the laboratory on

19th April and asked me if I as a man of science had any suggestions to make in connection with the Development schemes. I told him at once that before starting any industry it would be well to send a number of our promising students to Europe and America to get trained in technical sciences, like metallurgy, glass technology, textile, paper manufacture, dyeing etc. He advised Sir Ali accordingly and within a few months my suggestions were carried into effect. Two days later, I made a return call on Mr. and Mrs. Nihal Singh at the Government Guest House where they were staying and had a prolonged talk on Hyderabad and its potentialities for material progress through technical science.

* * *

The very next night (22nd April 1922) I witnessed a splendid shower of the Lyrid meteors in the small hours of the morning, which turned out to be the richest of its kind since the beginning of the present century. It is a pity I did not cable to Nature about it. W. F. Denning had, of course, received ample news regarding it from English observers.

A curious phenomenon

On the night of the 2nd of May, while returning from Dundgal at 12-15 a. m., I saw the entire tract of land (believed to be an old village burial ground) in front of the low hills bordering Shapoornagar, lit up with a peculiar, shifting luminescence (not due to large colonies of fireflies certainly) closely resembling the light of "Will-o'-the-Wisp" or Ignis fatu'us one reads of in fairy tales. Weird moaning sounds were also heard accompanying

the flickers, without a breath of wind to account for them. My brother and cousin were accompanying me in the same conveyance and they also observed the phenomenon. We were wide awake and by no means inclined to be superstitious! The light and sound persisted until we reached a part of the road from where the spot ceased to be visible. It is a mystery which I have not as yet been able to unravel. It had rained heavily the previous night and the day was hot as is usually the case in the month of May.

Well attested reports of the apparition of "Will-o-the-Wisp" are common in India. They all agree in locating the scene in or about *old neglected grave-yards.* A book entitled "The Nature of Animal Light" by E. Newton Harvey (Lippincott, London, 1919, pp. 15 and 16) describes the phenomenon cursorily. The author dismisses the Phosphine ($PH_3+P_2H_4$) theory for phosphine, he says is not known as a product of decomposition of organized matter., He discards the marsh, gas theory also because the gas is not inflamable and finally remarks "it is possible that the light is of electrical origin or that in some cases large clusters of luminous fungi have been observed," from its close association with old grave yards and the inflammable nature of phosphine it would be more appropriate to trace it to that substance. Interaction of alkaline matter from the soil with phosphorus liberated from bones and other putrifying animal tissues under the action of moist heat in an atmosphere devoid of oxygen, *may* slowly generate phosphine which, coming into contact with the air, may burn fitfully and produce the apparition of "Will-o-the-Wisp."

Like so many other unfortunate men in India, I also was duped (to the extent of Rs. 400 O. S.), in buying German marks, offered at fabulously favourable rates, on 22nd May.

McEwen being still away in England purchasing Science apparatus the appointment of a temporary demonstrator in chemistry (on Rs. 150 to 200) was also in my hand. I chose Abdullah Hasan, a chemistry graduate of Nagpur University, and for the Physics post I appointed Syed Amjad B. Sc. (Alig.) a son of Maulvi Ali Hyder Saheb (my former professor of Arabic at the Nizam College), on 21st June.

* * *

On 8th July, 1922 I was invited along with other senior professors of the Nizam College and the Osmania University to witness the first successful demonstration of radio-telephony at Hyderabad by Major Benning from Bidar. Sir Ali Imam, his colleagues in the Executive Council and other State officials were also present. The conversation was distinctly audible.

The Osman Shahi Mills Co., was about to start with Sir Fazalbhai Karimbhai (whose Bombay Mills were in a precarious condition) as Chief Director and Mr. Rahmatullah as share broker. Government purchased a number of shares and the Hyderabad public was also invited to do so. Mr. Ahmed Alladin was At Home at the Nizam Club on 19th July to meet Sir Fazalbhai and I was introduced to him along with others in Hyderabad State service.

On 25th July, McEwen (then acting Principal) wrote to me at Dr. Siddiqi's request to train Maulvi

Nasir Ahmad M.A. (Mathematics, Allahabad) in M.Sc. Practical Physics, so that he may qualify for efficient work as Assistant Professor of Physics at the Osmania. I acceded to this request and set a number of advanced experiments of the requisite standard for him with hints and suggestions. He worked in this way, for sometime.

* * *

On 2nd August Messrs. Khalijah Abdul Hakim, Syed Abdul Latif and Wahidur Rahman assistant professors at the Osmania in Philosophy, English and Physics respectively were entertained at an At Home by the staff and students of that institution preparatory to proceeding on study leave to Europe to acquire higher degrees in their respective subjects, with liberal loans. I was also present at the function and heard the speeches and valedictory remarks. It may be mentioned here that the first two guests of the evening returned in due course with Ph. D. degrees, but the third, Mr. Wahidur Rahman was very unfortunate. He failed, after repeated trials to secure the B. Sc. Honours degree of the London University (as an external student) and came back with a certificate declaring that he had come up to the Pass standard in Physics, but without actually being granted that degree owing to rules in vogue. He might have fared better had he appeared as an internal student after putting in three years work. During his study leave I was requested to take charge of the Osmania Junior and Senior B.A. classes in Physics—both in lecture work and Practical—on a substantial allowance. I discharged these duties without prejudice to my own at the Nizam College, though it is obvious

what a tremendous strain it must have been on my nervous system !

Sir Ali Imam resigned on 5th September, but the students whom he had selected for technical education in Europe (among whom was Mr. Abdullah Hasan whom I had appointed demonstrator in Chemistry at the Nizam College), proceeded on their Western journey, along with other State scholars and the above-mentioned Osmania lecturers, on 7th September.

* * *

The first meeting of the Osmania University Senate took place at the Town Hall on 4th October (29th Aban 1331 F.) and I attended it as a Fellow.

On 6th October 1922 (1st Azur 1332 F.) I was presented unofficially to His Exalted Highness by my old friends Nawabs Qudrat Nawaz Jung and Sadiq Jung.

As Dr. Siddiqi's term of office was about to terminate and it had transpired that he was not keen on staying longer on the terms offered I was advised by my friends to apply to Government officially through Mr. Burnett, as a candidate for the expected vacancy. I was passed over two years ago inspite of my valuable services to the Educational department, the Nizam College and the University ! and wished to be remembered at the proper time. Mr. Burnett supported my candidature and forwarded my application to the President, Executive Council, Nawab Sir Faridun-ul-Mulk on 26th October, with strong recommendation.

* * *

I purchased lease of $3\frac{1}{2}$ acres of land at Begumpet and got it registered in my name on 29th October.

On 14th November my mother's eldest brother died at a ripe old age leaving a widow and a widowed daughter, all other issues anticipating him in their childhood or prime of life. He was a man of sterling qualities, pious, God-fearing and generous.

A meeting of the Syndicate of the Osmania University occurred on the 16th and I was astonished at the extravagant schemes that came up for discussion.

On the 29th we heard of the death of Principal Sturge in his retirement in England, as a result of an unfortunate accident. He was a scholarly man of great learning. Routine work seems to have handicapped him in attempting any original research. Had he lived longer he could have done better justice to his attainments, but it was not to be.

From 8th to 13th February 1923, Mr. Buck an American Scholar of the University of Nebraska lectured under the auspices of the Osmania University on various topics, such as the American Universities, Technical and liberal arts education in America, Abraham Lincoln etc. The lectures were well advertised and well-attended.

The Osmania boys doing Physics with me asked me to open their Science Union with an inaugural lecture. I found them very keen and painstaking—though at the time they came to me their stock of knowledge was decidedly poor, for lack of proper lecture demonstration in the earlier classes, it would appear. On the day fixed 23rd March I lectured on the life of Lord Kelvin as a suitable incentive. After the Union was declared open election took place of office-bearers. Several of these boys have now come to the forefront in their

academic career. I may mention particularly Ziauddin Ansari, Syed Mahmood Alam and Haji Ghulam Mohammad.

On returning home I saw an occullation of Aldebaran with the naked eye very clearly.

On 10th June I received intelligence of the death of Mr. Chaudhari Barkat Ali, while on his way home, through cholera. He was a most active translator with perfect command over the Urdu language. His sympathy towards his students made him a very popular teacher among them. Had he lived longer he would have rendered great service to Urdu through his translation of works on popular science.

* * *

The results of the first B. A. Examination of the Osmania University (in 1922) were declared on 16th June 1923. Syed Hussain, Mr. Chaudhari's pupil in Chemistry topped the list, next came Mir Valiuddin (philosophy) and third Salahuddin (also from the philosophy candidates). All the three were given scholarships by the University to read for M. Sc. and M.A. Examinations, the first two at Aligarh the last one at Dacca. I am pleased to say that Maqbul Ali also passed the examination (in the second division) with chemistry as optional. He wanted to take up medicine. The Osmania had not as yet formed its medical faculty, I advised him to join the Grant Medical College, Bombay. But Osmania examinations were not as yet recognised by Bombay, so he had to pass first the Intermediate examination of that University in physics, chemistry and biology. He was an earnest student and

unhesitatingly joined St. Xavier's College for a year on 22nd July.

As a result of the Syndicate meeting Mr. Fazl Mohd. Khan and myself were asked to report on the City High School as to whether it could be conveniently raised to the status of an Intermediate College, University evidently intended to extend its jurisdiction over other institutions than the main College, as soon as possible. We inspected the school on the 15th of July and reported in its favour. It could not have been otherwise for the school had a building of its own which was expressly designed for a teaching institution, rather than a residential house—as in most cases.

On 25th June my sons Majeed and Waheed were admitted to the Primary department at the Madrasa-i-Aliya. The society at the school was good and that was the main reason why I sent them there.

Exactly a month later (on 25th July) the Turkish Peace was signed at Lausanne.

* * *

A former pupil of mine, Mr. Ghulam Mahmood called on me on 9th August. He had started as tutor to the young Nawab of Banganapalli when the latter was a boy and rose to be his Chief Minister. Afterwards I heard that he had to resign that office owing to State intrigues so common in India !

A case of Bhanamati

A curious calamity befell a close relation of mine on 12th Moharram (25th August 1923) when a grown up child of his who was lying in his bed after breakfast, all

of a sudden got up shrieking that some one was about to hurl him into fire. People rushed to see what the matter was; he was writhing with pain all over his body and the palms of his hands and soles of his feet bore marks of yellow circles with a black spot at the centre. The boy was not shamming and had no paints with him. He became insensible the next evening uttering uncanny remarks; the floor of his room which was closed and unoccupied was found covered with weird figures—caricatures of men and birds and his own name written in Urdu—all drawn in wood ash. His father also began to behave funnily, with one or two others in a state of nervous tension. The prevailing opinion of those who claimed to know anything about such matters was that one of the enemies of the boy's father had performed 'bhanamati' on him, a kind of hypnotism or 'magic,' at one time common in Bidar district. Dozens of similar and well-attested cases were on police records and all sorts of disgusting tricks were played on poor victims, poor or well-to-do, men or women, so much so that Mr. Hankin, a former Inspector General of District Police, found it necessary to appoint a 'bhanamati' Inspector, initiated in the mystery of the secret 'cult,' whose duty it was to investigate such cases, relieve the poor sufferers and punish the perpetrators of the crime. Sarmast Ali was the name of the official in charge of the department at that time and he confirmed the general opinion about the case. The trouble lasted for about a week, and after trying all sorts of 'charms' and 'hypnotic antidotes', prayers etc., the patients recovered. I have merely stated facts as they were brought to my notice and have no opinion

of my own to offer in explanation of the queer conditions described.

But such incidents are not rare. Charms and 'Magic' are still potent in the old and the new world. One reads of a live Indian 'flea-doctor' in Chapter IV of Stratford D. Jollys' South American Adventures (a recent publication, Pitman's) who walked thrice round the camp of a party of treasure hunters with a lighted bamboo in hand, muttering incantations, and rid the poor camp-dwellers of tormenting fleas, as by a miracle! Whatever their explanation these affects are not imaginary. Psychologists will find the study of such cases very instructive.

* * *

The Senate of the Osmania University resolved to offer the degree of Sultan-ul-Ulum to H. E. H. the Nizam for his patronage of learning. I served on the sub-committee appointed by that body to prepare an appropriate address for the occasion. The draft was written out on 14th September and was passed by the Senate on the 19th with slight verbal alterations. The Address and Degree were submitted to H. E. H. by the Fellows of the University at the Address Hall, Public Gardens, on 28th October, who generously accepted them with an eloquent reply.

In the meanwhile it transpired that Mr. Ross Masood was confirmed as D.P.I. with a salary of B. G. rupees two thousand and a pension of half the amount if Government wished to dispense with his services within ten years.

Mr. Wahidur Rahman being unable to get through his examination applied for extension of study leave and

at Dr. Siddiqi's request (conveyed in letter dated 22nd October) I consented to continue the Physics B. A. classes for another nine months.

About this time I was busy designing the Vertical Optical Bench for which I soon obtained a patent from H.E.H.'s Government. I was working also on a new type of handy apparatus for Hope's experiment to demonstrate the maximum density of water and an extremely sensitive hygrometer with local material. The V.O.B. in various forms and of different prices has been placed on the market after obtaining a British patent (as will be seen), but the other two have not as yet been patented.

From 21st to 29th December I had a short holiday in Bombay, and saw, to the publication of a monograph on the V.O.B. for students' use. The day after my return I met Prof. MacPhail of Christian College, Madras, then newly appointed Vice-Chancellor of the University (on a short trip to Hyderabad, putting up as a Government guest), and with Mr. Burnett showed him round our laboratories.

* * *

Maqboul Ali was back home for the Christmas holidays and I helped him in his physics (both theory and practice) for his approaching examination.

Mr. Turab Ali (an old pupil) brought to me an Associate of the Royal College of Science, Mr. Anderson, who passed out later than I and was touring round the world. I had very interesting conversation with him about Egypt and the Levant, and the old college staff, Professors Callendar and Fowler, Doctors Moss and

Dingle etc.

In the re-organisation of the University of Madras each constituent College elected from among its staff one member to serve on the Academic Council of the University and another to serve on its Council of Affiliated Colleges. The latter membership fell to my lot and on 4th January 1924, I received intimation of my election to membership of the Senate of the University as a representative of the latter Council. The first meeting of the Senate took place on 4th April and while attending its meeting I got acquainted with some new men like Messrs. Mohammad Osman and Satyamurti (destined later to play conspicuous parts in Indian politics). The next day after the final sitting of the Senate Mr. Mohd. Osman took me as his guest to an At Home given to the Governor at S. I. A. A. gardens. There was a sprinking of Muslims at the function like Mr. Abdullah Pasha and Mr. Abdul Hamid of the Indian Educational Service, who evinced much interest in our work at Hyderabad.

Nawab Tilawat Jung, one of the members of the Hyderabad Executive Council, was an old school friend of mine. He was a graduate of the University of the Punjab—the first one, in fact, from the collateral relations of the ruling family. Though our walks of life were quite different, the old school friendship endured and we met pretty frequently, with one or two other college associates. He was well read and our chief topic of conversation at such meetings was generally history of literature.

On 17th April came the good news of Maqboul Ali's success at the Inter. Science Exam. of the Bombay

University and he soon started to join the Grant Medical College for M. B., B. S.

Fears of annual visitation of the plague had compelled me to think of leaving the congested locality of Gosha Mahal and build a house at Begumpet, about 6 or 7 miles distant from the city. My horse carriage was unequal to the task of doing the daily journeys so I had to indulge in the purchase of a Dodge motor car—practically brand new from a Parsi friend of mine in Secunderabad for B. G. Rupees 4,900, on the 27th of Ramazan, (2nd May). The plague of 1924 was exceptionally devastating. My people moved therefore to Begumpet to live at my father-in-law's house. A dear old aunt of mine was bed-ridden at this time from chronic illness and was too weak to leave our house at Gosha Mahal. She breathed her last on 20th June at 11.25 p. m. with angelic resignation and peace of mind. I had the good fortune to be present at her death-bed and attend her funeral obsequies the next day.

In the meanwhile the second B. A. examination results of the Osmania University were ready to be announced. I presided at the meeting of examiners on the 16th of the month, a physics candidate, Syed Mahmood Alam stood first in first class in the University.

At a meeting of the Syndicate on 10th July it was decided to raise the City High School to the status of an Intermediate College. At another meeting held on the 23rd it was resolved to call Wahidur Rahman back as he was again unlucky in his examination ; and to take early steps to fill the post of Urdu Professor, lying vacant ever since its inception, by a man of ripe scholarship, commanding the respect of the Urdu

world. Such a man in my view at the time was Maulvi Wahiduddin Salim, already working as assistant professor at the College—though I cannot understand how some people could think of patronising others who were next to nothing compared with him.

On the 24th I took my sons Majeed and Waheed to Mrs. Sarojini Naidu who had returned lately from her African tour. We heard a most interesting account of her travels in that Continent; and my sons were delighted to see the five presents people had vied with one another to give her in appreciation of her services to India. She lectured on the Poetry of Life at the Osmania University College on the 30th, and the South Indian Club gave an At Home to welcome her return.

Five days later I was the guest of Mr. Samiullah Beg (later Nawab Mirza Yar Jung,) Chief Justice, High Court, Hyderabad; our conversation centring mostly round the University problems about to come up before the Senate and the Syndicate.

I attended with Mr. Burnett a meeting of the Council of Affiliated Colleges at Madras on August 9th. Nothing very particular came up for discussion, except that examinerships were more evenly and more appropriately distributed, new men with up-to-date knowledge (out of the old ruts) being invited to accept the work.

* * *

Communal concord in the dominions of Hyderabad was proverbial from time immemorial. Local Muslims

and Hindus vied with one another in their loyalty to the person of the Nizam and their devotion to the traditions of the country, and thus learnt to trust and respect one another. Certain mischievous movements in British India started by self-styled leaders avowedly for national or religious advancement, but in reality out of purely selfish motives, filtered through the frontiers and eventually manifested themselves in the form of a communal riot at Gulbargah on 15th August, during the Moharram demonstrations. A number of people were killed including an energetic Inspector of Police named Azizullah. Luckily the situation was soon brought under control and for a number of years to come there was no such communal trouble in the dominions.

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The syllabuses of the Madras University examinations in Science were far from satisfactory from modern standpoint. I gave Mr. Burnett my criticisms of the same for discussion with the Principals of other constituent Colleges at a meeting of the Academic Council. He told me on 27th August that the criticisms were fully admitted and that steps were being taken to improve the syllabuses accordingly.

The plague was now raging ferociously in the City. Whole families were swept away in some localities, after only a few days illness—some of my own relations among them at Gosha Mahal and elsewhere. Begumpet was well isolated and safe. I insured my life with the National Indian Life Insurance Company of Calcutta in three different policies for my own subsequent

use, my eldest son's education and my daughter's marriage, on 27th September, paying a total monthly premium of Rs. 99-5-0. My life was accepted for insurance after a medical examination and I was most prompt and regular in the payment of the premiums.

Being appointed a question paper setter in B. A. Honours Physics (with Prof. Metcalfe of Mysore and Father Steichen of Bombay) for the University of Madras in 1925, I despatched my papers (three in number) on 27th September. We scrutinised one another's papers and after mutual agreement passed them on to the Registrar.

CHAPTER XIV

I AM APPOINTED PRINCIPAL OSMANIA UNIVERSITY COLLEGE

ON 29th September 1924, I met Mr. Ross Masood by appointment at his office. He advised me to apply for the principalship of the Osmania University College as Dr. Abdul Sattar Siddiqi had submitted his resignation. Later in the day Mr. Hydari also give me the same advice when I saw him at the Finance office. On October 1st Nawab Tilawat Jung P. W. D. Member informed me that H. E. H. was pleased to consider favourably recommendations concerning my appointment as principal, and definitely sanctioned the appointment in a Firman issued on 4th October.

On October 6 (corresponding to 1st Azur 1334 F.) I took charge of the post at University College and gratefully presented myself at the Palace to submit my Nazar for the honour bestowed. A number of formidable difficulties stood in my way at the start. Apart from inner troubles, the plague was spreading far and wide in the city. When the College re-opened on the 13th of October after the winter vacation, I took every precaution to fight the plague and, working from early in the morning till very late at night was able to dispose of all the arrears that had accumulated during the period of uncertainty prior to my appointment.

On the 21st the College staff were At Home to welcome me and some fine speeches were made befitting the occasion, especially by the senior members of the Theology Department, Maulvis Abdul Qadir Siddiqi and Syed Manazir-e-Ahsan.

On 3rd November I sold my newly purchased house in Shanker Bagh to its former owners as they were bent on having it back, being no longer hard pressed for cash as they were at the time of selling it. I got back exactly what I had spent on its purchase and reconstruction, viz. Rs. 8,750 O. S.

The Osmania University at this time occupied a number of scattered rented buildings. The Agha Manzil housed the Physics and Chemistry laboratories; my office and the B. A. English classes were held at the Liaqat Manzil, communicating with the former building from the South. The Registrar's office was located in another building in the neighbourhood—eventually it was shifted to near the Fath Maidan. The Library was housed at first in a building just across the road and was later transferred to Musahib Jung's bungalow, some 2 or 3 furlongs towards the city. History, philosophy and law classes were held at first in Rustam Manzil, contiguous with the Old Library building. With the opening of new departments like zoology, botany and sociology and sub-division of English classes into different sections, introduction of fresh M. A. and M. Sc. courses in various subjects and the starting of research work, etc., additional buildings were taken on rent—luckily in the same neighbourhood.

There were already three students' hostels for the main College: the Masarrat Manzil, Farhat Manzil,

Curton House and Nizamat Manzil. Our University Colony was spread over an area of about a square mile or so, intermingled with private houses, shops and other schools etc., which made supervision work exceedingly difficult.

It was at first thought that the Syndicate was empowered to decide all financial matters of the University, hence its great importance in the earlier stages of its history. On 20th November I got my scheme for opening the Biology (i.e. zoology and botany) classes passed in toto: two lecturers in the grade of Rs. 250 to 400 salary, two laboratory assistants, peons, adequate grants for purchase of microscopes and other apparatus, furniture etc. Mr. Baber Mirza a B. Sc. of Bombay was appointed lecturer in Zoology.

* * *

At the invitation of Dr. Krishnaswamy Iyengar, research professor of Indian History, University of Madras, I attended the All-India Oriental Conference, held there on 22nd December 1924, on behalf of the University. Viscount Goschen, the Governor of Madras opened the Conference with an interesting speech. The Presidential Address was delivered by Dr. Ganganath Jha of Allahabad. I met at the Conference Mr. Littlehails, later Director of Public Instruction and a number of new delegates from different Universities. Later in the evening I was invited to an At Home given in honour of Sir Mohd. Habibullah about to proceed to Delhi for the Viceroy's Council, by the Muslim Community of Madras, at the Anjuman Lally Hall.

The next day I called on Mr. Littlehails and later, on the Reverend Mr. MacPhail, Vice-Chancellor, to discuss informally the recognition of our Osmania examinations by Madras. At that stage, he said, he was fully prepared to consider individual cases on their own merits: Dr. Tritton of Aligarh was present at the conversation.

On the 26th I heard of the transfer of the Revenue portfolio to Nawab Tilawat Jung Bahadur, in place of the P. W. D. and I congratulated him upon it. Among other interesting events that occurred at the time, I may mention the purchase of a very valuable book for the University Library from Nawab Imad-ul-Mulk Br., through Mr. Masood, which dealt with the development of horticulture in Islamic Spain, Ibn-al-'Awwam Ishbili's, Kitab-ul-Filahat. This gave me an impetus to start some genuine Oriental research at our University.

My father-in-law was appointed an Inspector General of Revenue (Sadr Nazim-e-Mal) by H. E. H.'s order, on 27th January 1925.

* * *

On 8th February Mr. Masood and myself met Nawab Sir Afsar-ul-Mulk Br., at his house to frame rules and regulations for the University Corps with the help of the military department and broached the subject of a military school under the auspices of the University to train officers for the Hyderabad Forces.

Before my advent to the Osmania there were several misunderstandings among the members of the staff. There was one between Maulvi Wahiduddin Salim,

professor of Urdu and Mr. Syed Sajjad, senior assistant prof. in the department. I investigated the matter and on January 25th got Mr. Syed Sajjad to work in full co-operation with his senior. Mr. N. G. Welinkar had complained of Mr. Mahboob Ali, the law professor acting independently of him, while he was acting principal. At my arrival on the scene the case had gone up for decision to the University Council. I got the matter postponed and made Mr. Mahboob Ali realise his error and settle the case on 17th February in my office.

The same evening there was a meeting of the State Scholarship Committee and I attended it as an ex-officio member. It is a pleasure to note that I was able to secure European scholarships to three of our Osmania candidates! Syed Mahmood Alam for Engineering at Manchester, Mir Siadat Ali Khan for research in Islamic Law at Oxford and Maqboul Ali for medicine at the Middlesex Hospital in London. Two other successful candidates were Dilsukh Ram and Mahboob Ali Tahir. This was regarded as a record meeting as only the most highly qualified candidates were selected. All the members acted in unison and I found in Mr. K. Burnett (Principal Nizam College) a most judicious and enthusiastic supporter of deserving applicants irrespective of the institution from which they came. The awards were confirmed on the following day.

On 5th March at a meeting of the Council of the Osmania University, Messrs. Syed Abdur Rahman and Syed Abdul Aziz, physics and chemistry demonstrators were confirmed in their appointments, at my recommendation. An uneasy situation in the Law depart-

ment was tactfully set right by personal exhortation, on the 8th of March.

The Council allowed me to retain membership of the Senate and Council of Affiliated Colleges of the University of Madras, and I attended a meeting of both these bodies at Madras on 16th March, thereby removing many an erroneous notion then prevailing through lack of correct knowledge among the educationists of Southern India, about the status of English in the curricula of the Osmania University.

Three days later, the Nizam College Union Society gave me a formal farewell and I was entertained by the staff and students of that institution in a manner that signified sincere affection and appreciation, and which I shall always remember with intense pleasure and satisfaction.

* * *

I struggled on at the Osmania, in spite of plague worries, poor attendance of students, discord and jealousies, bound to exist everywhere, but particularly detrimental to an institution still in its infancy and handicapped with want of proper text-books and authorised technical terms. But hard work, vigilance and tact helped me to overcome all difficulties and every department began to co-operate with me open-heartedly in the work of the University.

When the College closed for the summer vacation of 1925 I went on a weeks' holiday to Bombay with my brother-in-law. On 6th April we went on an excursion to the Elephanta Caves—a poor show compared to Ellora. Happening to be on the look out for a suitable

candidate for the Botany post, Maqboul Ali (then a student at the Grant Medical College) pointed out to me a young Hyderabad student (M. Sayeeduddin), about to appear for his B. Sc. examination from St. Xavier's College, as he was coming out of the Excelsior Cinema. I sent word to him to report to me soon after passing the examination, so that I may consider his eligibility for appointment.

An appreciative account of my educational career appeared in an issue (of 23rd May 1925) of the Princely India, Delhi, an illustrated weekly journal for all interested in literature and philosophy.

At a meeting of the State Scholarship Committee on 24th June, I was able to secure Arabic scholarships for Qutbuddin Qari, a graduate in Theology and Abdus Sattar a graduate of the Arts faculty—the former to proceed to Egypt for higher training in Arabic, the latter to get trained for absorption in the Translation Bureau.

The first three students of the first batch, Syed Husain, Mir Waliuddin and M. Salahuddin had done well at Aligarh and Dacca respectively in their M. Sc. and M. A. examinations and having been awarded special University scholarships to proceed to England for higher studies and research, it was time to arrange for their passage and admission to English Universities. On 30th July I saw Syed Husain, Mir Waliuddin, Mir Siadat Ali and Maqboul Ali off to England at the Hyderabad station and they sailed by the P. and O. China on August 1.

In the meanwhile Baha-ud-Din, one of our hostel students coming from the districts developed acute appen-

dicitis, and fearing complications I took him at once to the Osmania Hospital, Afzal Gunj and got him successfully operated upon on 27th July. The boy was soon relieved of pain and recovered in due course.

On 3rd August Mr. Wahidur Rahman returned from England without actually taking the B. Sc. degree from the University of London ; but, as was announced later, he was declared to have come up to the Pass Standard and would have been awarded the Pass degree had not the rules then in vogue (but later on cancelled) prevented such a concession.

After attending a meeting of the Council of Affiliated Colleges at Madras on August 15, I made preparations on return to arrange for the first Prize distribution at the Osmania University College. Through the kind offices of Nawab Nizamat Jung Br. (then Political Member), Nawab Waliuddawlah, the President of the Executive Council and Chancellor of the University, consented to give away the prizes to successful candidates of the last annual examination. The decision was enthusiastically met by the staff and students alike and it was planned to combine the function with College Day Celebrations. I am happy to say that this annual fixture retained its popularity and success for a number of years to come, and contributed much to create *Esprit de corps* among the present students and link them up with their predecessors in loyal co-operation for the welfare of the University. It came off on the 27th of August (21st Mehr (1334 F.) and, in spite of inconveniences due to limited financial resources and poor accommodation afforded by rented buildings, was a decided success.

In the meanwhile, the professor of law, Mr. Mahboob Ali died of galloping consumption and I had to make temporary arrangements for carrying on the work. Mr. Mohd. Asghar, Bar-at-Law, Rai Bisheswar Nath and Mr. R. S. Naik very kindly delivered lectures gratis for a few days.

At a joint meeting of the University Council and Syndicate on 11th September, I got Maulvi Abdul Qader Siddiqi promoted to the professorship of Theology in the grade of Rs. 500 to Rs. 1000. He was an experienced teacher from the old Dar-ul-'Ulum College with much research work to his credit. Mr. Ziauddin Ansari, one of our highly promising students who had recently passed the M. A. examination in mathematics with credit, was appointed lecturer in the mathematics department in the grade of Rs. 250 to 400 through my strong recommendation and with the support of the department.

At a subsequent meeting on 17th September I got Mr. Akbar Ali Moosavi appointed assistant professor of law in the grade of Rs. 350 to 600. A remuneration of Rs. 7,000 was sanctioned for Maulvi Enayatullah Saheb (Curator Translation Bureau) for compiling a historical geography of Arab Spain—a work of uncommon merit; and a number of outstanding questions concerning the promotions of several incumbents in the Theology department were satisfactorily settled.

A difficult situation arose owing to the collapse of a part of the Farhat Manzil boarding house on 19th September. Luckily there was no loss of life. The House Master's report called for an immediate transfer of the boarders to a new building. After interviewing a

number of landlords and inspecting several buildings, I fixed upon a house in the neighbourhood of the main College belonging to an old pupil of mine who consented to the temporary arrangement. In giving up the old house I ran the risk of annoying a number of influential persons. The owner an important man, was naturally displeased to lose such a good tenant as the University but the safety of the students was my first and foremost duty, so I ignored all opposition, open or veiled.

The same day I had a letter from Mr. M. Pickthall the well-known Orientalist, recently absorbed in state service saying he had nothing to do with an irresponsible report published in a local daily paper (the Mushir-e-Dakan) ventilating a rumour that he was going to supersede me at the Osmania. It was very good of him to say so and I placed implicit confidence in the veracity of his statement. It was a well-known fact that I had a number of enemies conspiring secretly against me, but the best remedy to such evils was uprightness and unperturbed application to work, and I adhered to this policy all through life.

In the meanwhile a recommendation from Sir Ali Imam concerning the dangers of the present system of University education in swelling the ranks of the unemployed and breeding whole-sale discontent among citizens, called for the appointment of a special committee by Government to examine the true situation and make suitable proposals to remedy the alleged evil. I was appointed a member of this committee on 23rd September.

Soon afterwards some mischievous persons brought

about a misunderstanding between Messrs. Speight and N. G. Welinkar of the English department, about the teaching of a B. A. class. I received complaints from both, but was able to show them soon that there was after all nothing in the matter except the mischief of some subtle enemies of the University, and the complaints were withdrawn on 31st October, with restoration of cordiality and expression of thanks to me for solving the difficulty.

All allowances were stopped by Government owing to a sweeping order causing great dislocation of work and general confusion in the University. I saw Nawab Tilawat Jung Br., about the matter on 2nd November and convinced him of the need for paying allowances in return for certain extra duties, both from point of view of efficiency and economy.

No sooner was this difficulty solved than a fresh one appeared in the curtailment of University vacations to only a month in the year. I urged Government to rescind the order. The question went up to the Executive Council and Nawab Nizamat Jung supported my recommendations whole-heartedly in response to a letter I wrote to him on 15th November. Formal orders were issued some time later.

* * *

There were several vacancies to be filled in various departments and I was bent on having the best available candidates *in sympathy with the fundamental policy of the University to impart instruction through Urdu*, for three appointments: young men with good Honours and research degrees from European and Indian

Universities, preferably local scholars.

Soon after I became principal, Dr. Muzaffaruddin Quraishi M. Sc., Ph. D. (Berlin) was appointed for a period of three years as Professor of Chemistry on a starting salary of Rs. 800 a month, in the grade of Rs. 500 to 1000 and he took over his charge on 14th February 1925. For the vacant professorship in Law a number of barristers and graduates in law had applied. Mr. Husain Ali Mirza, one of our state scholars was an assistant at the Jagirdar College. I knew him as a student of the Madrasa-i-Aliya, and for want of time allowed him to apply direct. Mr. Burnett gave a very favourable account of his character and capabilities while he was a student at the Nizam College. The University council decided to entrust the selection to a committee including the Chief Justice and Nawab Nizamat Jung Br. The competing candidates were called upon to deliver test lectures on specified subjects to LL.B. students. Mr. Mirza produced an excellent impression on the Judges and was pronounced to be the most suitable applicant for the vacancy on 17th November.

Dr. Abdul Haq had returned from Oxford with a Ph. D. degree in Arabic on 18th September, and taken up his duties at the Nizam College. I marked him down as a suitable candidate for our Arabic professorship in due course. Dr. M. Nizamuddin was about to return from Cambridge where he had worked satisfactorily under Prof. Browne and Dr. Nicholson. The appointments so far made in the Oriental departments of our State institutions, like the Osmania University, the Nizam College or the Jagirdar College were from

among the Maulvi class perfect scholars of the old school, but unacquainted mostly with modern methods of Western research and criticism. In the interests of the University I made up my mind to recruit as far as possible from men who had supplemented their Maulvi type of education with research degrees from Western Universities. So when there was a joint meeting of the Syndicate and Council on 19th November, I secured for Nizamuddin a lectureship in Persian on a starting salary of Rs. 350 per mensem (in accordance with the rules of the State Scholarship Committee).

On 24th November I accompanied Mr. Masood to Sir Afsar-ul-Mulk's for the establishment of a University Territorial Corps, with a loaned officer on Rs. 200 allowance to train University students in their military work.

Next day I convened a meeting of the College Staff Council to nominate heads of departments. Later in the day the University Council appointed me to represent the Vice-Chancellor at the Jubilee Celebrations of the Muslim University, Aligarh, during the last week of December.

On December 10, at the Residency At Home I was introduced to Sir William Barton, the new Resident. He evinced a keen interest in the activities of the Osmania University and its system of imparting education through Urdu as medium of instruction. I had several opportunities of meeting Sir William during his stay at Hyderabad and found him a most sympathetic observer and well-wisher of earnest workers.

To promote friendly intercourse among the members of the University staff—so widely separated from one

another owing to lack of a central building, I invited them on 11th December in my office and some 22 men came forward to join the Staff Club, with my office building to serve for the time being as a Club-house. The scheme proved to be a great success, until the Club was absorbed in the University Association opened some years later with Government patronage, provided with a special grant and other amenities.

On 18th December Mr. Samiullah Beg (Chief Justice, High Court) delivered his presidential address at a meeting of the Hyderabad Educational Conference at the Town Hall. I attended it as an old member. He made some useful suggestions to improve female education in the Dominions.

At the Residency Garden Party on 22nd December, I had an opportunity of speaking to some personal friends and facilitating Qutbuddin's Passage to Egypt. The same night I left for Aligarh with a party of its distinguished Old Boys like Nawab Nazir Jung, Mr. Fakhruddin Ahmad Khan etc. On the 24th there was a meeting of the Urdu Conference there. Two days later, I took part in the Jubilee Celebrations, congratulating in a brief speech the Muslim University on its attaining the age of 50 years. Dr. D. N. Malik was Professor of Physics there and two of our Osmania boys (Murtianjay Rao and Mohd. Ahmad Osmani) were reading with him in the M. Sc. Final class and Mohd. Ibrahim in the M. Sc. Previous. Syed Fazle Haq was a student of the M.A. class in English. One or two other scholars were sent there by the Osmania University with special scholarships as till then no arrangements were made at Hyderabad for post-graduate studies in

various subjects.

Among the prominent speakers were the Maharajah of Alwar, who dwelt on his dynastic connection with Aligarh and his policy of Hindu-Muslim fraternity, Mr. Justice Abdur Rahim of Calcutta, Sir Ali Imam and Amar Nath Jha of Allahabad. There was a meeting of the All-India Muslim Educational Conference also in which Atiah Begum made a public speech on female education. The functions were brought to a close with a rather unwieldy musha'erah presided over by Sir Ali Imam.

I reached Delhi on 30th December, and on the following day went to see the Qutb Minar, the Asoka Pillar, the tombs of 'Ala'uddin Khilji and Altamash, the Fort of Pandavas and Kuravas and finally said prayers at the tombs of Amir-e-Khusrav and Hazrat Nizamuddin.

On 1st January 1926 I reached Agra at 2.28 a. m. and hiring a motor car for Rs. 15 visited the Fort and other interesting historical sights with Mohd. Ibrahim. We saw the famous Sikandarah of Akbar, the tomb of E'temad-al-Daulah and finally the world-famous Taj Mahal. Ascending one of its four beautiful towers I surveyed the flat country studded here and there with historic monuments of past Moghal glory, the pellucid Jamnah placidly meandering about them, unmindful of the petty effects of human change!

Returning to Hyderabad, I started again for Bombay on 4th January to attend the Science Congress meeting there. I put up at the Taj Mahal hotel; the next day I went to the Victoria Technical Institute and the Cotton Institute, attending a lecture on famine. Prof. M. N.

Saha's Presidential address to the Physics section came off on the 7th. He spoke about his well-known theory of ionization in stellar atmospheres, pointing out the relationship between the effective temperature of a star and its spectral type. I returned to Hyderabad on the morning of the 9th. My wife's health at this time was far from satisfactory and had to be carefully looked after.

Mr. C. N. Joshi, the senior Mahrathi lecturer was a loaned member of the Educational service from Bombay. His period of service at the Osmania was about to expire and the question of finding his substitute was somewhat difficult. His friends among the leading Mahratta politicians at Hyderabad found his services indispensable ; they had a rather poor opinion of local Mahratta scholarship and had convinced Messrs. S. R. Masood and Akbar Hydari that either Mr. Joshi should be employed as a permanent incumbent or the services of a new Mahrathi scholar from Bombay should be applied for. The latter alternative was not easy owing to local conditions at the time.

At a joint meeting of the Syndicate and Council on 4th February, it was decided to let Mr. Joshi revert to his post in the Bombay Educational service and with the support of the Home Secretary I was authorised to make a temporary arrangement. At this meeting Mr. Abdul Majid Siddiqi, M.A., LL. B. (Osmania) was appointed to a lecturer's post in the History department.

The next day I attended a condolence meeting of the Managing Committee of the Hyderabad Educational Conference, at the premature death of Mr. Mohd. Murtaza, the indefatigable secretary who was the

originator of the Conference.

On 7th February I had to work at the office till 9 p. m. to prepare and forward to the Executive Council a detailed sheet of staff allowances with held, but now recommended for sanction. The next day I heard of the sanction of the entire list. In the evening I presided over Dr. Stanley Jones' public lecture on Christianity at St. Georges Gymnasium Hall. It was a most eloquent and thrilling speech, but there were a few inaccuracies about alleged modern trends in Islam and I had to point them out by way of correction.

On the 14th occurred a meeting of the State Scholarship Committee. Five scholarships were awarded for higher studies in Europe. Two of our most deserving Osmania candidates, Messrs. Ziauddin Ansari and Raziuddin Siddiqi were selected for Engineering and Mathematics respectively. The latter student had an ideal academic career, having stood first in first class in every subject at the University examinations from matriculation to B. A. He had attended my lectures in astrophysics and I could see at a glance that he was a most promising young man. As, however, he was reading at the time for his M.A. examination in Mathematics, his lecturers wanted me at first to postpone his selection ; but time and tide wait for no one—what guarantee was there that he would be adequately supported at a subsequent meeting? As it was, in spite of such a brilliant academic record, superior to almost every other competitor's, he would have failed to secure a scholarship had I not insisted that I wanted him trained to fill a vacancy in the University and the Home Secretary to Government (Nawab Akbar Yar

Jung) supported me in the voting. The University is now well recompensed through the attainments of this scholar in the domain of advanced mathematical research. Mr. Ziauddin also contributed to the credit of the University by securing a first class Honours degree in Engineering from Manchester. The other successful candidates to obtain scholarships were Mahboob Ali Taher for General Education, Pulla Reddy for Medicine and Syed Ali Raza for Engineering. These awards were confirmed on March 7.

In spite of the fact that the medium of instruction at the Osmania was Urdu, the University College turned out some very good speakers and writers in English also. The first and foremost example was of Salahuddin of the very first batch of graduates. Another Osmania student, Abdul Jalil was declared first by a body of competent Judges at the Inter-College debate held at the Nizam College on March 2nd. He was awarded the first prize, the second going to Sydney Potham of the Nizam College. Urdu debates, essays and speeches were, of course the order of the day, and a number of promising young men came forward at about this time. As I carefully 'nurtured' and kept them under watch, they rose to All-India fame and reputation as exponents of Urdu, even during my tenure of office as Principal. I shall have to refer to them and their work later.

On March 11 the question of filling the post of prof. of Persian was discussed at the Osmania Syndicate meeting. I laid great stress on recruitment from men whose research work had already been accepted by

competent Western Scholars as satisfactory. Dr. Nizamuddin's Introduction to the Jawami'-al-Hikayat of Muhammad-al-'Awfi was published in the Gibb Memorial Series; and young as he was I supported his candidature very strongly and succeeded in getting him selected. At the Council meeting on March 14, there was some opposition to this appointment but I convinced the members of its advantages in the interests of modern research and the opposition was withdrawn.

In pursuance of an excellent policy the State Scholarship Committee was authorised to give educational loan also to capable students whose parents or guardians could afford to guarantee the liquidation of such loans. It is true that at one time there was a tendency (especially among the more well-to-do and influential people) to solicit for the cancellation of these loans after the students' successful return and even appointment to good posts in Government service. But such a tendency was strongly condemned and it died a natural death. Some able scholars and successful men in the learned and practical professions in Hyderabad and elsewhere owe their overseas education to this policy of the Scholarship Committee. On March 16, I got Mr. Babar Mirza of our Biology department an educational loan to prosecute higher studies in Germany and Humayoon Ali Beg, a student of the Nizam College also for a course in Engineering at Manchester. Two other young men succeeded in getting similar loans.

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The head of a new institution based on a sytem off the beaten track has to be always on the *qui vive* concerning the actions, utterances and even opinions of his

junior colleagues, especially if he has a will of his own and does not wish to seek protection behind prevailing powers. One of our members of the Urdu staff complained to me on March 26 that some influencial people had expressed their displeasure with him on suspicion that he was lacking in respect towards them. I went carefully into the matter and finding both parties more or less to be in error and the impracticability of identifying the real originator of the trouble, told both the parties to act more wisely and settle their differances themselves before official action would be taken. As a result of this wholesome advice the situation improved and I heard no more complaints from either side.

An Appointment or Selection Board consisting of the Vice-Chancellor, the Principal of the College, the Dean of the faculty, the Head of the Department concerned and (if necessary) a well-known authority on the subject was henceforth authorised by the University Council to recommend candidates to fill vacant posts in the University. Maulvi Syed Ashraf Shamsi, a great Persian scholar of the old school had retired on pension. The Selection Board recommended Qari Kalimullah M.A., LL.B., one of our promising Osmania scholars to fill the vacancy, on April 3rd.

I was so much overworked at this time that I could hardly attend to my household affairs and my wife's health was steadily deteriorating. One of our maid-servants stole some six or seven hundred Rupees' worth of Jewellery and managed to escape conviction! In the meanwhile the first meeting of the committee appointed to recommend a change of system of Education

occurred on May 2nd and I proposed the establishment of an Institute of Agriculture with practical facilities, to do away with unemployment.

A trip to Aurangabad

The University closed for the Summer vacation and I left with my family for Aurangabad (on May 19th) where my father-in-law had his head-quarters as an Inspector General of Revenue. We all went to Khuldabad on the 22nd, but I was busy most of the time valuing examination answer books. The next day we went by motor to the Ellora Caves and spent the time sight-seeing. On return to Aurangabad a number of Osmania students who originally belonged to this district and had returned to their homes for the vacation, called on me and I asked them to dinner with other gentlemen from Hyderabad, on June 2nd. Pressure of work called us back to town on 7th June. A meeting of the University Council held on the 19th again discussed the question of filling the Arabic and Persian Professorships; and with the support of the Home Secretary and the Financial Secretary (Mr. Hydari, the Finance Member presiding) it was decided definitely to appoint Dr. Abdul Haq prof. of Arabic and Dr. Nizamuddin prof. of Persian.

On June 24th Mr. Ross Masood delivered a most entertaining lecture at the City Intermediate College on Japan and her educational system—a subject which he had studied during his tour of six months in that country on special Government duty, some time ago. The lecture was illustrated with beautiful lantern slides.

The revised scheme of the Hyderabad Civil Service had come into force by this time. Amongst others, the Principals of the Osmania University College and the Nizam College served on its Board as ex-officio members. The first viva voce examination conducted by the two principals and the D. P. I (acting as Chairman) took place on 6th and 7th July 1926 and 45 candidates were examined.

Four days later I purchased from Qader Ali Khan and Mahboob Ali Khan Jagirdars, the remaining plot of ground lying between my house and my father-in-law's, excluding what was already in possession of Nawab Tilawat Jung, for Rs. 1,200 O. S. on July 11.

At a meeting of the State Scholarship Committee held on 27th July, I was able to secure for Mohd. Ibrahim B. A. (Osmania), M. Sc. (Alig.) and Mahmood Ali B. A. (Madras) Asiatic Scholarships for studying Engineering at Madras. Saadat Ali, a grandson of the former Commissioner of Police was awarded one for Police training, Mohd. Forooq for medicine and a relation of N. Musahib Jung for Forestry.

About this time Dr. Zakir Husain Khan, a relation of N. Akbar Yar Jung's, was touring in the country to get active financial support for the Jami'ah Milliyah—a practical educational and vocational institution established at Delhi. He came to Hyderabad and I invited him at the College Staff Club on June 30th. We collected a fairly good subscription, my own contribution amounting to Rs. 100.

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On August 14, I attended a meeting of the Council

of Affiliated Colleges at Madras and had a lengthy conversation with Sir Venkat Ratnam Naidu, the vice-chancellor, whom I had known well since the time he was Principal, Mahboob College, Secunderabad. He was a friend of the Indian States and deprecated the agitation that was set up in some Madras papers at this time againt Hyderabad.

On 24th August Raziuddin Siddiqi left for England and I saw him off at the Begumpet station. My advice to him was to get a good Honours degree at first in mathematics from either Cambridge or London and then do research in some modern branch of higher mathematics, like Relativity or Quantum Mechanics.

11th September was a general holiday owing to Ganesh Chawth and the members of the College staff got up a picnic party at Himayat Sagar. I was glad to see all departments, including Theology, well represented at the gathering. Complete harmony prevailed at this time both among the teaching staff and the students. Such brief excursions planned occasionally contributed largely to promote friendship and good-will among the members.

Ten days later Nawab Sir Amin Jung, then Law Member to Government (as well as Peshi member), came to see the College at work and was profoundly impressed by the volume and quality of our activities in spite of makeshift arrangements and extemporised equipment in all the departments.

On 22nd September I was invited to preside at the Foundation Day function of the Methodist Boys' School and I was glad to do so and give away prizes. Mr. Gabriel Sundaram, an old pupil of mine from the

Nizam College was then headmaster and an enthusiastic worker.

Mr. Langly, Vice-Chancellor, Dacca University was always a genuine friend of the Osmania University. It was he, I believe, who admitted our students to the M.A. and M. Sc. classes at Dacca, after they had taken their B. A. degrees from the Osmania. He came to Hyderabad on 16th October and expressed great delight on seeing our output of translation and compilation work at the Translation Bureau.

On 24th October there was a meeting of the Council at which among other matters the appointments of Mr. Qari Kalimullah, to the assistant professorship of Persian and of Mr. Zahiruddin (a State scholar with an Egyptian degree) to the lectureship in 'Morals' were confirmed.

I consider the night of 25th October 1926 memorable for its first demonstration of stellar spectra in the country. By the use of a handy spectroscope made in England for our 3 inch portable refractor I was able to show our astrophysics students the spectra of some bright stars with notable characteristic differences.

Mr. Khaja Mohiuddin, a mathematics M. A. honours of the University of Madras who was employed as a teacher at Karimnagar High School was brought to my notice and I found him to be a promising young man. At my suggestion he was recommended (on 31st October) by the Appointment Board, to fill the mathematics lecturership that had fallen vacant by the award of an engineering scholarship to Mr. Ziauddin Ansari. He took over his charge on 13th November and proved

ever since to be a conscientious worker and enthusiastic teacher.

In the meanwhile, Major Farhat Ali M.B., Ch. B. (Edinburgh), Principal State Medical School, was appointed Principal of the newly opened University Medical College, at the Council Meeting held on 8th November. The Medical faculty soon began to function, and the first M. B., B. S. Class consisted largely of our Intermediate Science students whom the University College had given a special course of training in Biology and Organic Chemistry to feed the Medical College. Bahadur Khan, who was reading in the Junior B. A. Class with Physics as his optional subject, availed himself of this facility and got admitted to the Medical College, winning great distinction later on during his training in Europe, as will be described in due course.

Maharajah Sir Kishan Pershad was appointed President of the Executive Council on 26th November and I waited on him on the 29th. A day earlier the Syndicate and Council of the University sanctioned Rs. 80,000 for purchase of furniture and scientific apparatus to meet our increasing requirements.

The arrival of the Baroda Commission

The Baroda government had heard of the success of our system of teaching University classes in Urdu and a Commission was visiting various centres of learning in India to gather useful information for home use. A commission consisting of Mr. Widgery and Dr. Naik came to Hyderabad on 15th December. Mr. Ross Masood and I went to receive them at Begumpet and

conveyed them to Mr. Hydari and thence to Government Guest House. On the following day they had a talk with our professorial staff in my office and thence went to see the Translation Bureau. They were naturally much impressed by the output of our work in this direction; but it transpired that for lack of adequate funds (and other reasons possibly) they did not contemplate immediate adoption of a vernacular as a means of higher education.

On 24th December I took our members of the staff to the Maharajah Bahadur and introduced them to him.

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The year 1927 was of great moment in the history of my service to the University. It was of some marked achievements but of several painful trials also. The opposition to modernising our Oriental side came up again before the University Council on 9th January, the Chancellor himself presiding. The notion that our time-honoured system of training was ideally perfect and required no attempt to incorporate modern criticism and research had taken a deep root in the minds of many people for various reasons. I had to repeat the same arguments again and again and point out further that the policy aimed at the Osmania was to appoint men with sound knowledge of Classics (acquired on old lines) supplemented with methods of Western research. Our new professors of Arabic and Persian were men brought up exactly on these lines and were bound to render valuable service to the University if they kept up their research here also with the same zeal

as they did under their Western masters. After some discussion the policy advocated was definitely adopted and I had the satisfaction of rendering a great service to genuine Oriental research at Hyderabad.

The next day Messrs. Bisheshernath, R. S. Naik and Khaliluzzaman called on me to arrange for their lectures to the LL.B. classes in the interim scheme for the Law department.

By the time I took charge, the University College had spent a considerable amount of the sum (of two lakhs) sanctioned to develop its library. A number of useful books on Oriental classics had come from the old Dar-ul-'Ulum College. Out of the above mentioned grant, a good sum was spent on purchase of rare books. In any case when I took charge the amount was too small to build up a modern University Library. As it was, it lacked even the more important modern published works (especially in Science and Literature), let alone back numbers of standard periodicals and rare manuscripts. At my earnest representation at the Syndicate meeting held on the 16th of January the modest sum of Rs. 30,000 was sanctioned and I was asked to bring the library up to date regarding published works of modern authors !

Two days later I had to take Mr. H. B. Atre a local authority in Mahrathi to convince an important gentleman that the agitation in the local vernacular papers against the provisional appointment of Mr. Shendharkar B. A. (Osmania) as lecturer in that language was based on personal grounds and by no means in the interests of the language.

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Our foot-ball teams had gained a good reputation in the country for their continuous successes and the sporting spirit of the players, in spite of the drawback that we had no playing field of our own. Having been once a fairly good athlete myself I aimed at training our students in sports and other outdoor games also by appointing suitable game presidents from among the members of the staff. Mr. Elias Burney was already the foot-ball president. A plot of ground was hired on rent and as a result of our efforts the college secured the highest number of points in the Inter-College sports held at the Fath Maidan on 27th January.

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The College was in need of a man for teaching European history. No satisfactory applicant was found on advertising. Mr. Ahmad Mohiuddin, a State scholar with a Cambridge Tripos degree (Economics main, history subsidiary) was working at the time as an assistant master at the Jagirdar College. At a meeting of the University Council held on 10th February my recommendation to appoint him in the second grade to the history post was adopted, but a number of formalities had to be gone through before his actual transfer to the University could be effected. At the next meeting of the Council (on 27th February) Dr. Khalifah Abdul Hakim, professor of philosophy was reckoned to have started on a salary equal to that of Dr. Syed Abdul Lateef of the English department, and an appropriate allowance was sanctioned for Major Farhat Ali, Principal Medical College for supervising the translation of medical books at the Translation Bureau.

An old College friend of mine, Mr. Faizar Rahman, who was originally recruited in the Revenue department and was later appointed an Assistant Financial Secretary, was an exceptionally good fellow, intelligent, painstaking and, above all, thoroughly straightforward and conscientious. He called on me on 28th February and conveyed the good news that H. E. H. had been pleased to issue a Firman extending my father-in-law's term of office as Inspector General of Revenue, Aurangabad and appointing him (my friend) to the Warangal post.

I had recommended two of my Osmania boys for advanced studies in Europe: Syed Yasin Ali Khan, B. Sc. (Physics), then reading for M. Sc. at Dacca and Syed Ghulam Mohiuddin Qadri Zoar, reading for M. A. in Urdu-Persian. At a meeting of the State Scholarship Committee on 1st March I got both these candidates European scholarships — Yasin Ali to go to University College, London for B. Sc. in Engineering and G. Mohiuddin to School of Oriental Studies, London for Ph. D. by research. A son of Nawab Siraj Yar Jung also (Syed Sarwar Hasan) was awarded a scholarship for Engineering at Manchester.

On 4th March, Mr. Syed Ahmad-al-Edroos of the Osman Shahi Mills Ltd., asked me to dinner at his house to meet Abdullah Bhai, eldest son of Fazil Bhai Karim Bhai of Bombay. As I had to be present at the social gathering at the Graduates' Hostel I could only rush through the dinner, though it was most sumptuous and delightful.

On 14th March occurred the death of Mirza Ahmad

Ali Beg, Mansabdar, husband of my paternal uncle's daughter, about whose co-education at home with me I have already referred to. Their only son, Mirza Mahmood Ali Beg, a graduate of the Osmania University was living all the time with the mother and was educated under *her* supervision only. He succeeded, of course, in due course to his father's Mansab and ancestral property and is now holding a responsible post in the Educational department.

On 23rd March Dr. Wali Mohammad, professor of Physics and Dean of the faculty of Science at Lucknow came to see me with Mr. Syed Mahdi Hasan, a research student at the Tata Science Institute, Bangalore. We had very interesting conversation about the courses of studies in Science at Osmania, Lucknow and Aligarh.

As yet there was no literary or scientific journal published by the staff or students of our University. A number of boys were known to be keen on writing, but I was aware of the need for strong supervision to prevent students from abusing their freedom to write. I therefore called a meeting of the office-bearers of the College Union Society and appointed the vice-president of the Union, Syed Moinuddin Quraishi and Syed Ghulam Mohiuddin Qadri Zoar (students of the M.A. class in Urdu-Persian), editors of the Urdu section of the College magazine under the supervision of Dr. Mohd. Nizamuddin, prof. of Persian, and Syed Fazle Haq B. A., editor of the English section, under Prof. E. E. Speight, professor of English, with myself as president of the entire Board. The magazine (or Majallah) was placed on a sound financial basis by

subscriptions from students received with tuition and games fees etc., at the time of their admission to College, along with voluntary grants from members of the teaching staff—an arrangement which has guaranteed the continuance of the magazine. In the foreword for the first issue (February 1927) I briefly described the genesis of the University, its novel feature of teaching through the medium of Urdu, the court and popular language of Hyderabad, and its immense capacity for disseminating knowledge (even scientific and technical) throughout the length and breath of India where, on the whole, Urdu was spoken and uderstood even better than English.

I took Prof. Speight and Dr. Nizamuddin to Nawab Sir Amin Jung, Peshi Minister on 31st March and requested him to submit the first copy on our behalf to H.E.H. He did so and we received a very encouraging acknowledgment.

Sweeping changes were taking place in various departments of Government service. Lieut. Col. (later Sir R. Chenevix) Trench was appointed member for Revenue and Police with Mr. T. J. Tasker as Revenue Secretary; Mr. J. E. Armstrong was appointed Director General, District Police, with Mr. Benton as Deputy. All these gentlemen took up residence in Government buildings in Begumpet, near my house. I called on Col. Trench on 3rd April and was delighted to find him a very energetic, and sympathetic person.

The Educational department, in response to an invitation, decided to depute Messrs. Syed Mohammad Husain Ja'fari and Syed Ali Akbar to represent the

Osmania University at the Conference of the Universities of the Empire and I was recommended by the University Council at its meeting held on 24th April to be sent to London to represent the University at the Centenary Celebrations of University College, London! Time was short for formalities to be gone through, sanction was obtained through the good offices of a former pupil attached to the personal staff of the president of the Executive Council, Maharajah Sir Kishan Pershad and I prepared hastily for my voyage to Europe.

In the meanwhile (on 4th May) one of the members of the University College staff was dismissed from service by the University Council on a charge of reporting against a member of another institution affiliated to the University, which he could not substantiate to the satisfaction of the authorities concerned. I recorded my vote of dissent as member of the Council for I considered the resolution of dismissal very harsh. The incumbent concerned was competent, hard-working and popular among his students ; only a few months ago he was recommended with promise of support from high quarters to the side grade of Rs. 600 to 800 salary, for his good work !

The University examinations were in progress, an outside examiner, Dr. A. L. Narayen of Andhra had come to conduct practical examination in Physics. A thoughtless scholar in England was contemplating about this time, a novel scheme for construction of our University buildings. I cabled to him to mind his own business.

On 15th May the University Council confirmed Dr. Quraishi as Chemistry professor and an elaborate scheme was passed for developing the physics and chemistry departments, with an additional professor and assistant professor, demonstrator etc., for each department to conduct M. Sc. and research classes. Mr. Ali Yar Khan B. A. (Oxon) was appointed assistant professor of European History and Mr. Qazi Mohammad Husain was to officiate as Principal during my deputation to London.

CHAPTER XV

MY SECOND TRIP TO EUROPE

I LEFT Hyderabad for Bombay on 19th May 1927, having booked my berth on the P. and O. Ranpura. The ship sailed on the 21st. The Hon'ble the Resident, Sir William Barton and Nawab Salar Jung happened to be travelling by the same boat. Among other passengers I met Sir Coomara Sastri, Judge High Court, Madras, Mr. Mathan, D. P. I. Mysore, Mr. Misra, Engineer, Baroda State. I was astounded to hear a gentleman ask me (in spite of a free press, or perhaps on account of an unbridled section of it at the time) whether it was true no non-Muslim in Hyderabad was allowed to ride a horse or draw more than Rs. 100 salary. My only answer was whether *he* could believe such nonsense !

Most of my time on board the ship was utilised in revising an Urdu translation of Walker's Physical Chemistry for the Translation Bureau. The boat passed Perome and the straits of Bab-al-Mandib in the early morning of the 26th. In the evening I met Prince Mohammad Rafiq of Bhopal in company with Nawab Salar Jung. On the 29th we passed the Suez Canal and a small party consisting of Mr. Sinha, Col. Haskar and others got down at the Port of Suez for a land trip to Cairo and the Pyramids. The next day Sir William Barton had a long conversation with me about

the Osmania University and the Translation Bureau. It was a pleasure to note that he had up-to-date knowledge of both the institutions.

On the 31st we were pointed out some snow-covered mountain peaks (said to be of Crete, about 7,000 feet high) on the distant horizon; a dense fog at night forced the ship to reduce its speed perceptibly. The next day it cleared and every passenger came up on board to see the ship pass through the Straits of Messina, and, later, among the Lipari Islands with fuming Stromboli. We got down at Marseilles on the 3rd June and I went out for a motor drive in the city with Messrs. Mathan and Misra, lunching at Restaurant Rodonnet near the seaside; then travelling by the Paris-Calais train, had breakfast at La Roche on the 4th, and crossed the Channel on the Maid of Trent in about an hour and a quarter and arrived at Victoria the same evening.

I took up residence at the Red Triangle Hotel—26, Bedford Place, Russell Square, as a central and convenient place in the neighbourhood of University College, London. Several Hyderabad State scholars, Messrs. Valiuddin, Dilsukh Ram, Pulla Reddy and Maqbool Ali met me in London.

Sunday and Monday, the 5th and 6th of June were Whitsun holidays, so a number of other Osmania scholars who happened to be in London at that time called on me. Professor Qader Husain of the Nizam College also called.

On the morning of June 7th I went to the Royal College of Science, London, and was glad to meet some

of my old professors and colleagues. In the afternoon, at Mr. Syed Husain's request—one of our Osmania University scholars doing research in Chemistry for Ph. D.,—I met, by appointment, professor Partington, professor of Chemistry at East London College where the scholar was working. It was a pleasure to hear Prof. Partington speak appreciatingly of Mr. Syed Husain, who had already submitted his thesis for the doctorate and hoped to get the degree shortly.

On June 8th—in the morning, I met professors Alfred Fowler and A.O. Rankine, at the Royal College of Science, and having been invited as a Fellow of the Physical Society of London to take part in the Total Solar Eclipse Excursion of the 28th and 29th of June, which that learned Society was arranging with the Optical Society, fixed up with Prof. Rankine, the Honorary Secretary of the former Society, to join the excursion along with two of our Hyderabad scientific scholars as my guests.

The same evening I proceeded to Cambridge and put up at Ye Olde Castle Hotel as Mr. Raziuddin Siddiqi's guest, who was reading for the Mathematical Tripos as a State Scholar. He called on me next morning and I met, by appointment, Dr. Nicholson, the professor of Arabic at Cambridge, who was already informed of my intending visit through Dr. Nizamuddin. We had a very long conversation chiefly concerning the Osmania University. Dr. Nicholson was highly impressed by our system of notation and adoption of equivalents for technical terms. The day was brought to a close in visiting the different Colleges, the Union Society and various University buildings, etc.

On the 10th, Dr. Nicholson very kindly showed me the University Library. The section in which he himself was most interested being, of course, the Oriental section, Gibb's Memorial and the late Prof. Browne's collection at present at the disposal of the University. There I met Mr. Levy, now acting as Reader in Persian. After some conversation about the State and the Osmania University libraries we bade good-bye to one another and parted.

I spent the afternoon in the Cavendish Laboratory. Prof. Rutherford was unfortunately away from Cambridge. I met Dr. Chadwick (who discovered later, the neutron) and other members of the staff. The former gentleman very kindly spent over an hour with me showing some of the more recent developments on the Physics side, both as regards accommodation and manipulation. It is a well-known fact that the old design of the Cavendish Laboratory is inadequate to suit modern scientific requirements. But building, brick, girder and plaster alone do not make up a science laboratory. It is the guiding spirit of the Professorial genius directing the Laboratory that determines the real nature of the work done. There are hundreds of imposing new Laboratory buildings in the world, well furnished and even over-staffed, but how many of these can approach even the junior sections of the Cavendish Laboratory in creative work?

Later in the evening I met Mr. William S. Thatcher of Fitzwilliam House. We had a lengthy conversation about the question of admission of Indian students to the University of Cambridge, about Hyderabad scholars

present at the time at Cambridge, and in particular, about the Osmania University and its scholars, Hyderabad boys, as regards their character and general ability. Mr. Raziuddin of the Osmania University, now reading for the Mathematical Tripos was a student of Fitz House, and as such was well-known to Mr. Thatcher. It was a pleasure to find that Mr. Thatcher had formed an excellent opinion of him. As regards the question of general recognition, he said that there could be no difficulty if Cambridge knew more Osmania students. He requested me to ask Mr. Seaton to see Mr. R. B. Whitehead of St. John's College who had taken his place on the Advisory Board for Indian students.

I left Cambridge on the morning of June 11th, and after seeing a number of our Hyderabad scholars at my hotel, met, by appointment, Prof. Krenkow, a well-known Orientalist, at the British Museum. We discussed several Arabic MSS.—I being chiefly interested in Abdur Rahman-al-Sufi's Suwar-al-Kawakib. After further conversation, at tea, on the Dairat'al-Ma'arif we parted with a promise to see as much of each other as possible during my brief stay in England.

Sunday, the 12th of June, was spent mostly at Woking for the 'Id-ul-Duha prayers. Here I met a large number of our scholars, several old Indian friends and English Musalmans.

On the 13th I went to the India Office and met Mr. Dumbell, Service and General Secretary and Sir William Foster, Historiographer to the India Office. They asked me a number of questions for over half an

hour about the Osmania University and its work. They knew of the University, through official reports and other sources, more recently through the writings of Prof. E. E. Speight. From the keenness of their conversation it was evident that they could have gone on talking on this interesting topic for hours together if they could have but spared the time. As it was, neither they nor I could give a minute longer.

Professor Speight had written to Sir Malcolm Seton about my deputation. He wrote to me he was going on medical leave and would be glad to see me about the end of July, by which time he would be back in London. As the Centenary Celebrations were to close on the 2nd of July and there was nothing further for me to do in London I wrote to say I could not stop longer. He again replied to me from Tring, expressing his regret at our not being able to meet and wishing for a meeting on my future visit to London. I hope I may get such an opportunity.

With an introductory letter from Nawab Hydar Nawaz Jung Bahadur I saw Sir Mohammad Rafiq the Muslim Indian Councillor. Another long talk followed. Sir Mohammad Rafiq is a very hospitable gentleman. He greatly admired the Osmania University and had implicit faith in its success.

On the 14th I left London for Oxford and met with an enthusiastic welcome from the Osmania and other Hyderabad scholars there.

I wrote to Sir M. Sadler and Prof. Margoliouth about my arrival; the former was unwell and the latter whom I had met some years ago in Hyderabad and who was

already informed of my deputation to London through Dr. Nizamuddin, had a hearty conversation with me at his house for over an hour. The Osmania University was the principal topic and he was glad to know that his former pupil Dr. Abdul Haq was professor of Arabic here. Prof. Margoliouth has great affection for his students. He spoke very appreciatively of Dr. Abdul Haq and Zahid Ali and of his present pupil Mr. Mir Siadat Ali, now doing research under his guidance on Muslim Laws. He was very pleased with Mr. Siadat Ali's knowledge of Arabic and Law and expects him to get his Ph. D. next October. We then drove in Prof. Margoliouth's car to the Randolph Hotel where I was putting up and where Mr. Siadat Ali had asked both of us to tea. General topics were discussed including mediæval Arab astronomy, but the Qadiani movement —in which Prof. Margoliouth takes a keen interest nowadays—formed the main theme.

Next morning I went with Messrs. Salahuddin and Siadat Ali to the Bodleian Library, the Sheldonian Theatre, the Union Society and the Indian Institute. At the Institute I met Mr. Williamson, who is the secretary to the Advisory Board for Indian students. He was glad to have information at first hand regarding the Osmania University and its students. If at any time he had any doubt about the proficiency of students in our so-called 'Urdu University', he confessed to me that doubt was dispelled by what he saw of Messrs. Salahuddin and Siadat Ali. A whole hour passed by in this pleasant conversation, in the course of which he told me that he was always glad to try for the admission

of our Hyderabad scholars who as a rule are well fitted for admission to Oxford.

On the 16th I bade good-bye to Oxford and dined with Prof. F. Krenkow, the well-known Orientalist at his house in Beckenham. We talked of the work that was being done at the Da'erat-al-Ma'arif at Hyderabad. A number of books published by that institution have been carefully scrutinized by Prof. Krenkow.

On the 17th I inquired after Mr. Maqbool Ali (one of our State Scholars) at the Middlesex Hospital Medical School, where he was working for his L.R.C.P. and M.R.C.S. Examinations. His work there seemed quite satisfactory. He was engaged at that time on ward duty. I found him a most popular Indian student at the Hospital. In the evening some more Hyderabad students came to see me at the hotel.

On the evening of the 18th I took three of our Osmania scholars Messrs. Syed Husain, Maqbool Ali and Raziuddin as my guests to the annual dinner of the Indian Social Club at Hotel Cecil. Here I met Dr. Pranjpye of the India Council and some old acquaintances like Sir Coomara Swami Shastri (Judge, Madras High Court) and Mr. Sinha, etc.

On Sunday Mr. Seaton came to tea at 3.30 and had a long talk about our Hyderabad scholars. He also has a good opinion of our Osmania boys both as regards character, qualifications and work.

On the 20th I saw Miss Beck at 21, Cromwell Road, and later in the day again visited the Royal College of Science to say good-bye to professors A. Fowler and

H. Dingle and Dr. Moss. Prof. Callendar was unfortunately not present.

On the 21st and 22nd I met some old friends from India and England who were kind enough to call on me, and got ready for the Centenary Celebrations, which commenced on the 23rd at University College, London. The celebrations were inaugurated by the visit of their Majesties the King and Queen. I was met by Professor J. B. Jeffery and introduced to other delegates. We assembled in the Great Hall at 2-30 p.m. I was seated next to Sir E. Denison Ross, C.I.E., Ph. D., Director, School of Oriental Studies, London. He at once got into conversation with me about the Osmania University, about which he wanted to know a great deal. It was decided that I should see his great institution before my departure. I am glad to say I was able to do so in spite of shortage of time and multiplicity of engagements. Needless to say that the Inauguration Ceremony was a very imposing one. All the newspapers have described it in detail so there is no need for me to dilate on it here. After the departure of their Majesties all the delegates were invited to tea and to inspect Sir Flinders Petrie's Palestinean Exhibits and the Slade Exhibition. I had an opportunity of meeting a number of delegates from abroad and exchanging compliments. There were 56 delegates from Universities and Colleges, 30 from the Learned Societies and Institutions and about 47 Student delegates.

On Friday the 24th I was invited to an informal lunch at University College by the Centenary

Celebrations Staff. Lord Balfour and a large number of delegates were present. Thence we all proceeded to witness the dedication of the Great Hall by H.R.H. Prince Arthur of Connaught. Her Royal Highness was also present. Lord Balfour spoke on the system of Education adopted at the London University and compared it with that obtaining at Oxford and Cambridge. He paid tribute to the merits of both. Next Prof. Saurat of the University of Paris spoke with fervour on the International character of the University of London and dwelt on the advantages of an urban University of which the Paris University was a famous example. I had a further opportunity of exchanging views with Sir Denison Ross and met Sir T. H. Holland, K.C.S.I., D.SC., F.R.S. He was glad to see in me an old graduate of the Royal College of Science of which institution he was then the Rector. All the delegates were then presented to their Royal Highnesses. A group photo of the delegates was taken after tea, and by a strange coincidence I happened to be standing by the side of the delegates from Madras, Calcutta and Rangoon—Mr. P. F. Fyson, Rev. W. S. Urquhart and Mr. D.H. Peacock respectively; so that Mr. Fyson could not help remarking that the Indian representatives had gathered together through geographical affinity.

On going to my hotel I found Messrs. Mahmood Alam and Syed Ali Raza, two of our scholars reading for Engineering at Manchester waiting for me. The former is an old Osmania boy and had the good news to give that he had recently got through his B.Sc. Honours examination, and that Mr. Ziauddin Ansari,

M.A., another Osmania State scholar, was doing good work, as an Engineering student at Owen's College, Manchester.

On the 25th I took Mr. Raziuddin as guest to attend Prof. Filon's lecture on the forthcoming Solar eclipse. The treatment of the subject was of course only popular but was very interesting all the same.

In the evening I was the guest of the Vice-Chancellor of the University of London, the Provost (Sir Gregory Foster) and other members of the Celebrations Committee, at the Athenæum Club, Pall Mall. It was a distinguished gathering. I cultivated the acquaintance of Professor De Sitter, Professor of Astronomy in the University of Leiden, Professor J. C. Eerde of the University of Amsterdam, and several others. At the head of my section of the table was the veteran Professor of Organic Chemistry, Prof. Norman Collie; to his right was Prof. Mc. Cormack (Professor of Electrical Engineering), next to him myself and next to me Mr. R.F. Jones, professor of English, Washington University, St. Louis. In front of us were prof. E.C.C. Baly of Liverpool (a well-known author of text book on Spectroscopy) and Prof. J. M. Bell (professor of Chemistry in the University of North Carolina). After discussing the interesting pastime of catching fish we began to talk shop. I asked Professor Baly when he would bring out his next two volumes of the revised book on Spectroscopy. With a rueful countenance he told me that the 2nd volume was just out and was already out of date! The 3rd volume was expected shortly and it was hoped would be more uptodate. This is how Spectroscopy

and Science in general are advancing nowadays ! Professor Bell regretted the encroachment of advanced mathematics on Physical Chemistry and Professor Jones said he was engaged on writing a history of Modern Science. After the Provost's and the Vice-Chancellor's speeches—cheerful, sympathetic and somewhat humorous also, as to how University College, London, missed its chance of being the University of London, we bade good-bye to one another and dispersed.

On Sunday the 26th Mr. Seaton again called and interviewed at my place a number of State scholars, by appointment—both old and new and also loan-holders.

The Hyderabad scholars very kindly asked me to a tea-party at the Ritz Restaurant. It was exceedingly kind and loyal of them to do so. Over 90 per cent. of them were my old pupils either at the Osmania University College or at the Nizam College. Mr. Syed Mohamed Husain Jafery and Mr. Qadir Husain were also guests.

On the 27th I attended the Coversazione at University College, at 8-30 p. m. Popular demonstrations of Brownian movements, Complementary colours and discharge of Electricity through gases attracted a large number of audience. Professor Fleming lectured on the Beam system of Broadcasting. One of our Osmania scholars accompanied me as guest and profited very much by the entertainment. Mr. Mathan of Mysore and Mr. Ali Akbar of Hyderabad were also present among the guests.

On the 28th I was invited to the Ladies Tea Club 'At Home' at 4 and met Lady Foster, Lady Baylis and

Lady Ramsay. The last named lady—widow of the famous Professor Sir William Ramsay, spoke to me about her trip to India with her husband who selected Bangalore as the best place for the Tata Institute of Science.

After dinner at the hotel I proceeded to King's Cross taking with me Messrs. Maqbool Ali and Razi-uddin as guests to accompany in the Solar Eclipse Excursion organised by the Physical and Optical Societies of London. We passed a sleepless night in the train and the early morning found us on the downs of Richmond (Yorkshire). A more miserable day I never saw in any summer. The sky was everywhere hidden by clouds. The computed (G. M. T.) times of contact were 4 h. 30 m. 37 s.; 5 h. 24 m. 39·9 s.; 5 h. 25 m. 3·7 s. ; 6 h. 22m. 28s.; the duration of totality being 23·8 seconds. As the time of contact approached the clouds near the sun luckily got thinner and thinner and to our great good fortune, just about the contact instant the clouds disappeared and the sun shone forth. We all saw the eclipse come on ; more and more of the sun's disc disappeared behind the dark outline of the moon and we were praying for our good fortune to hold on till totality. But just while a thin crescent of the sun was still visible the clouds began to gather and obscured the sight. There was no hope of seeing the corona. In despair we turned our attention to the other phenomena associated with totality, approach of shadow, general illumination, etc. As was expected, I was able to see definitely that during totality the view to the south appeared distinctly darker than to the north. Distant objects had become indistinct and the

atmosphere decidedly more chilly. This lasted for about 23 seconds and then the normal conditions were gradually but very quickly restored. Although we had not the good luck which the Astronomer Royal and his party had at Giggleswick, the Physical Society party could at least congratulate itself on having seen the general light effects of totality. I certainly reckon my troubles duly rewarded, and of the thousands of spectators, there were certainly hundreds that left the downs quite satisfied.

After a brief halt the party left for York. We saw York Minster and after spending some time in the city left York at 3-50 p. m. and arrived at Kings Cross at about 9 p. m. On reaching the hotel I found a number of scholars and loan-holders waiting for me—some wishing to hear about the eclipse (for it appears the clouds were so thick in London that the total eclipse made no difference in the general illumination!), and others to consult about their studies, etc. When they left me at 11, I was glad to lie down to rest.

The next afternoon I went to Finsbury Circus and saw Sir Denison Ross at the School of Oriental Studies. He said he was glad to meet me and very kindly showed me the Library, explaining the general system of work. He told me he had fixed up matters for the research work of our new scholar—Mr. Syed Ghulam Mohiuddin Qadri. It was decided that he should proceed straight for his Ph. D., if he has taken his M.A., from Osmania. Sir Denison Ross had his urgent office and other duties to attend to, and I was invited by the Centenary Celebrations Committee to attend the Thanksgiving Service at Westminster Abbey. I thanked Sir Denison

Ross for his general courtesy and sympathy with our University and we bade good-bye to each other.

The Thanksgiving Service at the Abbey was very solemn and imposing—the Preacher was the Right Rev. the Lord Bishop of Manchester.

We then dispersed to meet again in the Great Hall of University College London, to hear the Centenary Oration. "Our Universities" by the Right Hon. H.A.L. Fisher,—the President of the Union Society 1926—1927 being in the chair. It was a most instructive oration and needs no comment. We left the University buildings at 11 p. m., and took leave of fellow-delegates and other acquaintances whom I had come to know during the Celebrations. Although there were two more functions in which I could have joined if I had expressed my desire—Dinner on July 1st by invitation of the Master and Wardens of the Worshipful Company of Drapers, and a dance in the Great Hall on the night of the 2nd July, I decided to leave for the Continent so as to take the P. & O. S. S. Maloja from Marseilles on the 8th. By no means could I have caught the steamer leaving on the 1st of July. The intervening days I spent in Switzerland and France; seeing the Universities of Lausanne, Geneva and Lyons, stopping for a few days at Interlaken and seeing the Jungfrau, Rhone Glacier and the junction of the Rhone and the Saone on the way.

On July 1st I settled the hotel bills and prepared to leave for the Continent. Mr. Amrullah Siddiqi, Razi-uddin Siddiqi and Humayun Ali Beg came to say good-

bye. At the Victoria Station Mr. E. A. Seaton, Prof. F. Krenkow, Mir Siadat Ali Khan, Mir Valiuddin, Maqbool Ali and Afzaluddin gave me a good send-off. The State scholars arranged everything for my comfortable journey, brief though it was.

I passed through Dover, Calais and Paris in due course in the through train. In Paris however I had to lose much time in getting the buffet and found great difficulty in regaining my compartment. The two English ladies that were sharing the compartment with me had locked up the door while I was away.

Everything was all right after a time and we passed the night sitting as comfortably as was possible. Next morning (July 2) I got down at Hotel Cecil, Lausanne and after a good wash and brush up went out for a short walk. The mountain scenery was grand. I enjoyed a fine view of Lake Leman (Lake of Geneva) from the hotel, wrote letters and after dinner read papers from London. There was some rain in the evening and the lake was arched by an uncommonly broad and beautifully coloured rainbow. The rain stopping I went out for a walk and in my musings thought of Gibbon's contemplation of the scenery after he had finished the last chapter of his monumental work—Decline and Fall of the Roman Empire. I went past the telegraph office the local church, Restaurant Bel-air, Kursaal, Grand Pont etc. and on return went to bed early.

On the morning of the 3rd I got up refreshed from a good sleep, packed up my things for the next journey

and after breakfast hired a taxi and went round the gardens, the Cathedral and to the University--a by no means imposing building. Then went on to the top-most point—Signal Restaurant and past the Swiss village nearby—past woods and lac de Sauvabetin and Port of Ouchy, the taxi fare amounting to only 16½ Swiss franks.

I left Lausanne at 3-08 o'clock; changed at Berne; to Thun and finally reached Interlaken, putting up at the Hotel Carlton.

Early next morning (July 4) I joined the motor party to go to the Rhone Valley glacier. We went past the Handeck Falls, the Grimsel Pass, seeing "Alps on Alps arise". After a hearty lunch at the Glacier Hotel we motored up the glacier and walked into the ice-cave. I could not help thinking of the Ice-Maiden story I had read in my child-hood in Andersen's Fairy Tales! On coming out, wrote letters and postcards to friends, had tea with the party at Casino Meiringen. After dinner at the hotel went to the Kursaal and watched the fireworks displayed in commemoration of the Declaration of American Independence (4th July 1776).

Leaving Interlaken next morning (5th July) at Int-Ost station, met in the train an Indian gentleman named Chetty and two Hindu ladies. They asked me the usual questions about Hyderabad and I changed at Zweisceiun cam(?). Proceeded thence to Montreaux (in Canton Vaud) on the North shore of Lake Geneva—seeing the Castle of Chillon on a rock in the

lake (rendered famous by Byron's poem "The Prisoner of Chillon"). Then travelled by steamboat Via Ouchy—Evian past Thunon, and Nyon to Geneva, enjoying the grand view of Mont-Blanc (15,780 feet high). French territory on frontier of Italy and Switzerland. In Geneva I put up at Hotel Angleterre—a quiet looking place. After dinner went out for a walk, feeling lonely and home-sick.

July 6. Early morning went out for a walk to see Jean Jacque Rousseau's statue near by; brought some views; walked up to the League of Nations building—a fine edifice, built on June 1929—hope the institution will prove a real success! In the afternoon accompanied Thomas Cook and Son's party to see the city. The row of cedar trees (originally from Mount Lebanon) presented a fine view. Got down for a few minutes to see the junction of the Rhone and the Arve (the resulting current, perfectly clear on one side and very muddy on the other.) Passing by the International Labour office (an imposing product of the World War of 1914-18) returned to the hotel for rest.

Next day (July 7) left Geneva at about 10 a.m. for Lyons. The Rhone presented a splendid view. I got down at Pierach station and put up at the Grand hotel —possibly one of the best in the city, but I found the catering in it far from grand. The first thing I did was to walk up to the University, had a chat with some of its students; but found nothing particularly worth seeing there, observed an Egyptian funeral on the road, with Muslim rites. After dinner went to the 'Olympia' located at a considerable distance from the hotel. There was

a good show of varieties—some comic, some serious—but somehow I felt sad and depressed. It was past midnight when I walked back to my hotel. On July 8, I left Lyons at (0.25 a. m.) by train for Marseilles. In the first class saloon I got acquainted with a nice young French student from Paris. We soon got into conversation and exchanged cards. His name was Victor Basan and he displayed a great liking for the East and in fact was to go to Constantinople in the near future. He got down at Hotel Noalite in Marseille (at the Canabier) and I went on board the P. & O. Maloja. I phoned later to M. Basan at his hotel and he came and had dinner with me as my guest on the ship. We talked about current politics and the problems of the near and Far East until past midnight. I saw him off for some distance and he promised to write from Constantinople—which he later did and I responded. Having been lonely all these days I felt as if I had parted with an old friend. He also displayed the same feeling.

The ship left Marseilles at 5 a.m. on July 9. I changed into another cabin which I had all to myself. I whiled away the time reading Ben-Hur. On the deck chatted with a Madras lawyer Mr. Trenarayana Chari and a Mudaliar gentleman engaged in business. I was surprised to find these Indians also absolutely ignorant of the real state of affairs at Hyderabad! The steamer passed Stromboli (in the Lipari Islands) next day. The volcano is said to be some 3,000 ft. high. I bought a fine photographic view of it from one of the ship officials. Most of my fellow-passengers were

Americans ; a few were Frenchmen, Italians and Egyptians. As it was getting hotter and hotter during the day I occupied an hour or so of my time with swimming in the improvised sea-water bath on board the ship.

As the ship approached Port Said on the 13th, two Hyderabad students (State scholars reading in Egypt)—Qutbuddin Qari and Abdul Karim-al-Husaini called on me on board the ship. They had came to know of my return journey to India through Mir Siadat Ali of Oxford. After a good talk and refreshments they bade good-bye.

The boat passed through the Red Sea on the 14th, but the weather was quite pleasant. My old friend Mr. Faizur Rahman's son, Shamsur Rahman (on his way home during the summer vacation) came up to me now and then for a chat. The Ship Commander Mr. Manley was a nice gentleman and took part in our conversation several times—speaking among other topics of mysterious disappearance of people from the ship, when ruined financially. The ship arrived at Aden at 1 p.m. on the 17th. I got down in a motor boat with a party of Indian passengers to see the rock and crater etc. Everything looked scorched and inhospitable.

By 19th the Arabian Sea became more and more rough. Every article on the tables tumbled down and had to be held tied by strings.' I think I was the only passenger who could make his appearance on the deck! The sea calmed down on the 20th. Mr. Shanmoogan Chetty and Mr. Chari managed to come up from their

cabins and indulged in conversation. On the 31st I kept awake the whole night owing to the excitement of reaching home.

I got down at Bombay at 8 a. m. called at the Taj Mahal Hotel and met Mrs. Sarojini Naidu and her daughter Miss Padmaja. They stopped me to lunch and we had a long talk about my recent trip and the Osmania University etc. Later I went to see Miss Mrinalini Chattopadhyaya at her New Parsi Girls' High School and met her younger sister also there.

I left Bombay the same night, Messrs. Nizamuddin, Sayeeduddin and Zahiruddin met me at Wadi and I reached Hyderabad on the evening of the 23rd of July and took up my charge as Principal from Prof. Qazi Mohammad Husain on the morning of the 24th.

I am glad to say I was able to do the maximum possible in the brief time at my disposal. By personal contact the Osmania University was introduced to a number of sister institutions in the West. Many people had their doubts dispelled about its aims and achievements. Authorities at Oxford, Cambridge and London were enabled to know a good deal about our activities here; and the general impression produced was very good, indeed.

Happening to visit Mr. Burnett at the Nizam College to tell him how Mr. Qader Husain was handicapped by failing health in England, I was surprised to learn that Mr. Prendergast, formerly of the said College and latterly tutor to the Princes, was being recommended to supersede me at the Osmania! The Council while admitting the services I had rendered to the University was more favourably inclined towards Mr. Prendergast,

in spite of his advanced age, perhaps on account of his Arabic degree or Europian pedigree. I faced the situation calmly, putting up with all manner of hardships and confident that justice will be meted out sooner or later. A Firman was issued by H.E.H. at last, on 28th August appreciating the benefit that the University had derived during my three years' service as Principal and ordering me to continue my work there in the same capacity. Hitherto Mr. E. E. Speight was attached to both the Osmania University and the Nizam College as professor of English. This dual control was found to be inconvenient to all the parties concerned. So at a meeting of the Syndicate held on 21st August I got his services transferred wholly to the University. Mr. Wahidur Rahman had applied for promotion to the first grade as he had incurred heavy expenses during his long stay in Europe on study leave on half-pay and a heavy loan from Government. The Syndicate supported his application to relieve his hardship. On 25th August Yasin Ali Khan, Mohd. Ali Khan and Ghulam Mohiuddin Qadri (Zoar) started for Europe as State scholars.

On the 29th and 30th August was held the viva voce examination of the Hyderabad Civil Service class, Mr. Syed Ross Masood, Mr. Burnett and myself acting as examiners. Two Osmania candidates Zahiruddin and Ghaziuddin, were declared successful in the competition. Another Osmania candidate named Ghausuddin was bracketed with Ghaziuddin.

On September 3rd I moved that he should be treated exactly like Ghaziuddin, and thus he also got in.

On 11th October Sir Raza Ali came with Mr. Hydari to see the University College Library and Laboratories and the Translation Bureau. I had to take them round and explain to the guest how we were working. On the 16th, Mr. Sheshadri of the Hindu University, Benaras called on me and I introduced him to the Professorial staff.

A month later on 16th November, I attended the meeting of a Special committee appointed by Government at the Finance office (with Mr. Fakhruddin Ahmed Khan, the Financial Secretary as president) to consider the advisability of starting an Agricultural College at the University, with teaching arrangement up to the degree standard and pointed out the advantages of giving lands on favourable terms to successful candidates. Later in the day, I discussed with the owners of the Agha Manzil (our main science building) the arrangements for adding new blocks (on loan system) to carry on our M. Sc. classes in Physics and Chemistry. One of the joint owners Mr. Syed Mohd. Ishaq an old pupil and graduate of Cambridge, was selected by me recently to fill the post of assistant professor of English at our College.

On 18th November occurred the Jubilee of the Madrasa-i-Aliya. Prince Azam Jah Bahadur gave away prizes to successful candidates at the school and I was delighted to see my son, Majeed get one.

At the University Convocation held on December 1st Mr. Hydari was awarded an Honorary degree of Doctor of Laws in recognition of the many services he had rendered to the University ever since its inception.

During the ensuing winter vacation plague again broke out in Hyderabad. On 19th December I took my wife and family to Aurangabad and put up with my father-in-law at Farhat Manzil. He arranged for me and his son, Rashidullah Khan to visit the Ajanta caves on the 22nd. We put up at the Guest House and spent the whole of the next day seeing the great master-pieces of old excavation and painting with the Curator as guide. I returned to Aurangabad the same evening and left alone for Hyderabad on the 25th.

Two days later Mr. Syed Aziz, Assistant Accountant General brought me a cheque from Government (for O.S. Rs. 2,985-9-4) in return for the Silahdari property owned by my father and myself in H. E. H's. Regular Forces, and now taken over by Government. I distributed among my relations their share of the money and utilised the balance towards liquidation of some of the debts I had incurred in building my new house. The same day occurred the sad death of poor Siddiq Hasan of the City Intermediate College at the K.E.M. Hospital Secunderabad, from a stroke of paralysis in the prime of his youth, and I attended his funeral obsequies along with a few members of the University staff near the Golconda Fort. On the 31st I left for Calcutta to attend the Science Congress Association there.

The Calcutta meeting of the Indian Science Congress 1928

I arrived at Calcutta on 2nd January and put up at the Continental Hotel, Chawringhi. Owing to late arrival I could not attend Dr. J. L. Simonsen's presidential address. Mr. J. N. Sen, son-in-law of Dr.

D. N. Malik was attached to the Imperial Bank of India Hyderabad. He wrote to his brother Mr. Sukumar Sen to meet me and he called at the Hotel very kindly and left his card. Next day I heard the presidential address of the Agriculture and Physics sections (Rao Bahadur T. S. Venkataraman and Dr. J. deGraff Hunter respective presidents). Later went with the excursion party to the Islamiah College, St. Xavier College, office of the Asiatic Society of Bengal, The Indian Museum and finally to Sir R. N. Mookerjee's garden party at his residence, where H. E. the Governor was also present. It was here that I first met Prof. C. V. Raman. In the evening we attended a popular lecture on Radiations and their uses by Mr. G. R. Paranjape, profusely illustrated with appropriate lantern slides.

On 4th January I attended Dr. S. S. Bhatnagar's presidential address to the Chemistry section reviewing the work of present batch of Indian Chemists and others; later saw the Presidency College laboratories where I met Dr. Mahalanobis and other professors of Physics and Chemistry. Our party thence proceeded to the Bose Institute and heard Sir J. C. Bose's dissertation on the work of the Institute; later in the evening saw the University College of Science, and at the University At Home met the Vice-Chanceller Sir Jadu Nath Sarkar. The events of the day were brought to a close by attending Dr. J. C. Ghosh's lecture on Chemical Warfare (based on a study of the published accounts of Germany's hectic attempts to produce havoc in the Great War), and the Science Congress dinner where I had a nice talk with our old friends.

Mr. Langley (V.C. Dacca University) and Dr. Wali Mohammed (dean of the Faculty of Science, Lucknow), and among new acquaintances, the Hon'ble Sir P. C. Mitter and others.

The next day, at the Physics sectional meeting I took part in the discussions on spectroscopy and general optics. Afterwards I went with the delegates to see the Zoo and Alipore (meteorological) Observatory. In the evening I was invited to a private dinner by Mr. Sukumar Sen at his house in New Park Road and there met Mr. Sen, her mother, Mr. Mukerji of the Calcutta Corporation and Mr. Gupta of Balliol College, Oxford. The host and hostesses were very hospitable and our conversation centred mostly on life in Calcutta and Hyderabad.

On 6th January a particularly chilly day, I accompnied the excursion party to see the famous Bengal Chemical and Pharmaceutical works and had an interesting talk with Dr. J. C. Ghosh and Sir P. C. Ray—the father of chemical research in India. The latter gentleman was glad to hear me refer to his old friend, Dr. Aghornath Chattopadhyaya and his career at Hyderabad. In the evening I went to the Reception at Government House; Lady Jackson evinced much interest in our work at the Osmania. The next evening I started on my return journey and reached Secunderabad on the morning of the 9th.

The plague was still spreading and our College had to be closed for two more weeks. I availed myself of the opportunity to go and fetch my wife and family from Aurangabad. I started the same evening and

put up at my father-in-law's. Happening to visit the Maqbarah of Rabe'ah Dawrani's I met there Sir Amin Jung (now holding the Law portfolio also) and Ali Nawaz Jung. Sir Amin's son, Mr. Khateeb Mahmud Husain was at the time in charge of the Electricity department in that district. After a brief stay in the city I returned with my wife and family to Hyderabad, but the plague continuing unabated the College had to be closed for a further period of two weeks!

In the meanwhile office work went on as usual and I recommended Dr. Abdul Haq to be the House master of the graduates' hostel and on 19th January among other arrangements for translation of Engineering books for the Translation Bureau entrusted Mr. Syed Mahmood Alam (a former pupil) now absorbed in P. W. D. service with the translation of a text-book for the B.E. course.

On the 27th I met Lord Headley, the Muslim English Peer, who had come to India to collect funds for building an appropriate mosque in London. The same day I recommended Dr. Abdul Haq and Dr. Nizamuddin to represent the University at the Imperial Oriental Conference at Oxford; the Council, however, decided (at their meeting on 10th February) to depute Mr. G. Yazdani of the Archaeological department in place of Dr. Nizamuddin. Four days later I received an invitation from Dr. U.N. Brahmachary, whom I had met in Calcutta, to be a member of the Asiatic Society of Bengal and I accepted it. On the 20th February at the Bolarum Residency At Home I met again Sir William Barton, recently returned from England. He

very kindly inquired about the result of my delegation to London in the summer of last year and I sent him a copy of my published report which he read and appreciated in his letter dated the 11th March 1928.

In the meanwhile at Prof. Alfred Fowler's nomination I was elected a fellow of the Royal Astronomical Society. On 28th March I wrote to Prof. Partington, prof. of Chemistry, East London, College for Mr. Syed Mahdi Ali's admission to the University but he decided to go to Germany; I wrote also to Sir E. Denison Ross for Mr. Qari Kalimullah's admission to the School of Oriental Studies, London for Ph. D., by research and he was admitted in due course.

At a meeting of the Osmania University Syndicate and Council on 1st April, Dr. Mir Valiuddin Ph. D. (London) and Bar-at-Law, one of our first batch of Osmania scholars, recently returned from Europe, was appointed to a newly sanctioned post of Assistant Professorship in Philosophy.

Lord Headly visited the University Association on 7th April and we spent a pleasant evening hearing him talk of the success of the Muslim Mission in England. Three days later occurred the death of my old College friend, Mir Faizur Rahman, after a brief illness from paralysis. He was a true Muslim, a sincere friend and a most loyal subject of H. E. H. the Nizam—may God rest his soul in peace.

The President of the Executive Council asking for my personal opinion on 14th March concerning the re-employment elsewhere in State service of a former member of our staff in the English department, I was glad

to reply very favourably.

The Committee appointed by Government to recommend the change of system of education in Hyderabad met again on 21st April. My suggestion for opening a College of Agriculture at the University was dropped owing to opposition by two important members. The next day at Dr. Inayat Ali Khan's recommendation I agreed to Dr. Syed Abdur Rahim's acting in his place while on pilgrimage to the Hijaz as our hostels physician (on allowance).

The scheme for starting M. Sc. classes was fully sanctioned; at the meeting of the Syndicate and Council held on 26th April I had the pleasure of getting Dr. Syed Husain, Ph. D. (London), our University scholar, appointed to the post of additional professor of Chemistry in the grade of Rs. 500-50-1000. He received further, at my recommendation, a lump sum of £100 sterling as a reward for his research work on a new inorganic compound likely to be of some commercial value. Dr. Brij Mohan Lal of the Medical College was given study leave to acquire higher qualifications in anatomy from an English University.

In our latest reorganisation scheme a new post of assistant professor of Sociology was sanctioned on a salary of Rs. 350 and Dr. Ja'far Hasan, one of our old boys, who had recently returned from Germany with a good degree was appointed to it.

My father-in-law, Nawab Sa'adat Jung's extension of period of Government service was now over and he retired on pension on 15th May.

At Mr. Syed R. Masood's (Nawab Masood Jung's)

request I subscribed Rs. 150 B. G. to the Anjuman-i-Taraqqi Urdu, started by Maulvi Abdul Haq as Secretary, with strong Government patronage. The Anjuman was designed to be an All-India affair for promoting the cause of Urdu, practically all the financing to be obtained in one form or another from the munificent Government of Hyderabad.

At this time appeared a good appreciation of the Osmania Students' Magazine by Prof. F. Krenkow in Luzac's Oriental Review.

A meeting of the State Scholarship Committee for the award of Asiatic scholarships was held on 19th June 1928, and I was glad to secure one for Aliuddin B. A., to get trained in Veterinary Science in the Panjab and another for Syed Mohammad Ali Khan, a promising young graduate of the Osmania, for B. Sc. Honours in Physics at London. This was the only way in which I could get a fully qualified man for M. Sc. Physics Classes from Hyderabad graduates. I did a lot of teaching work myself (on allowance), Mr. Wahidur Rahiman's contribution also was fairly considerable. The Osmania Council, decided the same day to acquire Messrs. Musahib Ali's and E'Jaz Husain's houses on rent for the University College; the former to house the Library and the latter to serve as a separate hostel for Hindu students.

A letter was received from Raziuddin Siddiqi announcing his success in the Mathematical Tripos examination in the second class. He was unfortunate in missing a first owing to putting in only two years work instead of three after Osmania B. A., and asked for

extension of period of scholarship to qualify for a higher degree by further training and research. I welcomed this application and in due course got him 3 years extension on the same scholarship (£400 per annum) at Leipzic or any other seat of learning on the Continent, to suit the general trend of his work.

On 4th July and later on the 14th I conducted with Messrs. Ross Masood and B. C. McEven a viva voce examination of the H.C.S. candidates. Amongst others a Hindu student from the Osmania got in.

At the Syndicate and Council meeting on 8th July it was decided to start successful State scholars from Egypt on Rs. 300 salary (as against Rs. 350 for scholars from Europe) when absorbed in University service. Maulvi Syed Ibrahim of the Arabic department was given Rs. 400 salary and Mr. Enayatullah, Curator, Translation Bureau two years extension of service.

Another meeting of the Scholarship Committee was held on 18th July and Mirza Khalid Beg was awarded a scholarship for Archaeology and Dr. Siadat Ali having completed his Ph. D. on Islamic studies under Prof. D. S. Margoliouth of Oxford, was (at the Prof.'s strong recommendation) given an extension of two years to read for the B. C. L. degree.

In the meanwhile Masood Jung had completed his period of service as D. P. I. at Hyderabad and was retiring on a special pension of Rs. 1,000 B. G. per mensem according to the terms of contract sanctioned beforehand. In appreciation of his services he was awarded an honorary degree of LL. D. by the University. On 21st July, and at Nawab Hydar Nawaz

Jung's request I spoke on the occasion. The Education department was At Home on the 26th to bid him farewell. Negotiations (it transpired) were going on already to bring back Mr. Fazl Mohammad Khan (now a colonization officer in the Panjab) to fill the vacancy.

Maulvi Wahiduddin Salim, professor of Urdu, was suffering from cancer and the University heard on 2nd August the sad news of his death on the 29th July. Condolence meetings were held at the College in his honour and it was a problem to find a man fit to be his successor. Old type scholars of experience, well-versed in Arabic and Persian and with a good deal of first class literary work in Urdu to their credit could be counted by the dozen; but for such men to be useful at the University it was absolutely necessary that they should have a good command of English and be thorough in methods of modern research. Mainly with this object in view I had sent Syed G. Mohiuddin Qadri to Europe for systematic training; but he would take several years to come back fully qualified and get 'mature'. Mr. Syed Sajjad was the next senior man in the department so I appointed him provisionally in place of Maulvi Salim and Abdul Qader Sarwari, one of our promising old boys to act for Mr. Sajjad. Formal recommendations were made on August 19.

Four days later I had a 'personal' letter from Mr. B. C. Ewen, prof. of Chemistry and vice-principal Nizam College asking if there would be any objection to his teaching advanced organic chemistry to a M. Sc. student of the University (Qazi Moinuddin)

who intended specialising in that subject. We had not as yet on our own staff any lecturer to whom that work could be entrusted. The only serious question was the medium of instruction. For a temporary arrangement, to teach a solitary M. Sc. student a subject of special study the language objection could easily be waived. Besides, Moinuddin himself was being prepared for a possible future lecturership in organic chemistry. I therefore heartily supported Mr. McEwen's appointment as a part-time lecturer.

Dr. Syed Husain the Osmania scholar had returned from Europe after a successful career and I took him and Mr. Abdul Qader Sarwari on September 2, to Mr. A. Hydari and thence to the Maharajah, by way of introduction. It gives me much pleasure to state that I was able to appoint Dr. Syed Husain, resident house master Graduates' Hostel on an allowance of Rs. 100 p. m. in addition to his salary in the first grade and bonus of £100 already referred to. (He actually took charge of this hostel appointment on 2nd February 1929.) This appreciation of success at a British University proved a great incentive to future alumni of the Osmania University to maintain the reputation of Hyderabad abroad.

At the Council meeting held on 8th September 1928, a sub-committee was appointed to arrange facilities for the visit of the Hartog Commission to Hyderabad and my scheme of officiating appointments in the Urdu department was passed. On September 23, the Syndicate sanctioned appropriate allowances to Messrs. McEwen and Gundu Rao, professors of Chemistry and Physics

at the Nizam College for their part-time work with our M. Sc. students.

This year we had a copious rainfall in the dominions and the Osman Sagar sluices being opened, the river Musi presented fine view of flood height flow.

On 2nd October Mr. Gundu Rao brought Mr. K. C. Subramanyam Aiyer, appointed with me a member of the Board of Question Paper Setters in Physics by the University of Madras for its forthcoming examinations. I presided at the meeting on 3rd October and we got through about half the total number of papers. The whole night I worked writing up the report of the Arts and Science Faculties of the Osmania University for the information of the Hartog Commission. The second and final meeting of the Board of Question Paper Setters came off on the 4th, and on finishing its work had to preside at the annual dinner and installation ceremony of the Graduates' Hostel Union Society. It was a befitting occasion to exhort the students to follow in the footsteps of their best representatives and keep up the traditions already formed. The speech made a good and salutary impression on the students.

Arrival of the Hartog Commission, 1928

The members of the Hartog Commission, Sir Philip Hartog (President), Rajah Narendra Nath, Sir Sultan Ahmad and Mr. Stratham (Secretary), arrived on the 7th and I went (along with others) to receive them at the Begumpet station on behalf of the University. The same night there was a dinner at the Maharajah's and Sir Philip made a very interesting speech on the aims

and objects of the Commission. The next day I showed the members our College and Translation Bureau, which impressed the party very favourably. After the vice-chancellor's (Nawab Waliud-Dawlah's) at home the functions came to a close.

At a meeting of the Appointment Board in English (on the 9th October) I got the services of Mr. Veera Badrudu M. A. L. T. (Madras), lecturer in English at the Nizam College, transferred with increased salary to the Osmania University, through the kind acquiescence of Mr. Burnett and appointed Mr. Younus Walfaqani M. Sc. (Dacca) one of our old boys as an additional demonstrator in the Physics department.

At a meeting of the Board of Appointment Chemistry held on 25th October. Elundal Sita Ram Rao M. Sc., one of our University old boys was appointed additional demonstrator in the Chemistry department. The next day, Nawab Mirza Yar Jung (Chief Justice) invited me to dinner at his house to meet Pandit Hardayanath Kunzru M. L. A. and I had the pleasure of having a lengthy conversation with him about our State Educational matters. The Panditji had been invited by Rajah Dhanrajgirji Narsingirji, Chairman Reception Committee of the so-called People's Conference (as distinct from the old established Hyderabad Educational Conference), with Mr. Vaman R. Naik as secretary, to preside at the Sessions of the said Conference on the 27th and 28th October, at the Vivek Vardhini Theatre. It is no use discussing at this stage the history of this Conference and its results. Enough to say I found the Panditji very willing to widen his stock of knowledge about the real state of education in these dominion—so

different from what our neighbours were pleased to imagine—when I met him again at Rajah Dhanrajgirji's and showed him round the University.

On 16th November Pandit Keshev Rao, a leading Mahratta Pleader in Hyderabad brought with him Mr. Potdar of New College, Poona to see the University and Translation Bureau. I found such interviews very useful to outside educationists in dispelling their doubts about the capacity of an Indian language of the status of Urdu to serve as medium of University education.

H. E. H. The Nizam returned to Hyderabad on 23rd November after visiting a number of important cities in British India and all the people of Hyderabad gave expression to their feelings of affection and loyalty towards him by illuminations all over the city. The next day H. E. H. was pleased to make a fine speech in the Address Hall, Public Gardens. The same evening I met the members of the Madras University Commission at the Nizam College. Three of them (Messrs. Ranganatham, Abdul Haq and Nila Kanta Shastri) went with me the next day to see the Osmania University classes at work and later the Translation Bureau with its array of translations completed and nearing completion.

My uncle, Major Mahmood Khan had been ailing for a number of weeks. On 9th November at his grand-daughter's marriage he looked weak but cheerful. On the 25th however he died and I attended his funeral obsequies the next day. He was a most kind-hearted and God-fearing man whose affection towards

his relations and my father in particular had endeared him to all of us. From the funeral I had to rush off to attend a meeting of the Persian Appointment Board to support the candidature of Latif Ahmad Faruqi M. A. (Osmania) against men without University education.

On the 3rd day of my uncle's death (27th November) Sir Faridoon-ul-Mulk died at a ripe old age. For years he had acted as President Executive Council and later (after retirement on pension) as a member without a portfolio.

On 1st December 1928 an old pupil of mine Mohd. Siddiq, brought to me a published account of an apparatus I had newly designed (called a Vertical Optical Bench), in the Times of India Engineering supplement. I had applied for a British Patent at the Patent Office, London and was awaiting its award. On 7th December I attended the Hyderabad Residency At Home. Sir William Barton was as kind and sympathetic as ever. Three days later the first meeting of the Faculty of Science was convened and I was elected its Dean (proposed by Mr. Bhaskaran Shastri and seconded by Mr. Qazi Mohd. Husain).

On 8th January 1929 I met at Mr. Burnett's dinner Mr. Harris (of the League of Nations office) and a Czechoslovakian member of Students' Federation. We talked of Geneva and its world-wide importance, the republican spirit of Switzerland and its natural sceneries till late at night.

On the 11th and 12th of January I attended the public sessions of the Hyderabad Educational Conference at the Town Hall, Maulvi Habibur Rahman Khan Shirwani (Nawab Sadr Yar Jung) presiding.

On the 13th at a meeting of the committee for change of system of education at Mr. Collins' (Director of Commerce and Industries) there was sharp difference of opinion, about control of new schools and the meeting was adjourned. Two days later Sir Mohd. Iqbal delivered his first extension lecture on philosophy at the invitation of the University. His second lecture came on the 16th. The Committee appointed to discuss change of system of education met again at Mr. Collins' and I suggested a simple solution of the difficulty about control by opening a Faculty of Agriculture at the University with full representation of the Commerce and Industries and the Agriculture departments, in the Faculties, Syndicate and Council. In the evening the Maharajah invited us to dinner at his residence to meet Sir Mohd. Iqbal. There were some recitations, local poets of repute in Urdu co-operating. Iqbal's third and last lecture was delivered on the 7th.

The next day I presided over a lecture delivered by Sait Ya'qub Hasan of Madras on the Holy Qur'an, at the invitation of the Osmania University Old Boys.

A new committee was appointed by Government to evolve a scheme of Technological Training. It met at the Finance office on the 20th of January 1929 and I also attended the meeting. The same evening the University Council decided in favour of appointing Mr. Latif Ahmad Faruqi M. A. (Osmania) as Persian lecturer in accordance with my recommendation.

On 23rd January at the final meeting of the committee for change of system of education at Mr. Collins', my proposal about the College of Agriculture and its

connection with the University was agreed to, at least for the time being; but I heard nothing about it or any thing else in that connection afterwards.

On 9th February the Nizam College Science Union Society invited me to deliver a lecture at their anniversary meeting. I spoke on Astrophysics, Mr. Burnett the principal of the College presiding.

A week later occurred the death (probably from plague), of an old friend of mine, Maulvi Ruknuddin, head master Madrasa-i-Nizamiah and a brilliant scholar in Theology. I attended his funeral obsequies.

On the 19th the Scholarship Committee sanctioned a loan of £400 to be paid to Mr. Abdul Wahid LL. B. (Osmania) to finish his law studies in England and the same day the Syndicate settled the question of Dr. Mir Waliuddin's appointment in the Philosophy department.

In March and April a Press campaign was started against me in a local paper by malcontents, misinterpreting my policy at the University but the Government and the public knew better and the mischievous campaign ended in utter failure.

On 13th June Mr. P. I. Subramanya Aiyer of Rajamandry Arts College called and we passed together 11 question papers set for the Madras University B.A. and B. Sc. examinations in Physics for 1930.

Most of the financial matters concerning the expansion and development of the University were referred to a sub-committee of the Syndicate appointed by the Council and presided over by the financial Secretary to Government. At a meeting held on 23rd June 1929, the Registrar was given an allowance of Rs. 200 per

mensem in addition to his salary of Rs. 1,000.

On 25th June a cablegram was received announcing the success of Ziauddin Ansari M. A. (Osmania) in the 1st class at the Manchester University B. Sc. Hons. examination in Engineering and about the same time came the news of the success of Bhim Sin Rao (another Osmania scholar), in the M. A. examination in Kanarese at Mysore (held to be a great centre of learning in that language). In pursuance of my general policy I was training this student for future service at the Osmania.

I was told at this time to ask for the post of an office assistant in the grade of Rs. 250 to 400 to relieve me of a part of official routine and I did so, though I found no difficulty in carrying on the work with my clerical staff. The Syndicate sub-committee, however, put up an alternative proposal and recommended (at its meeting held on 11th July) an allowance of Rs. 150-50-2-200 designated as the vice-principal's to be given to the next senior-most incumbent at the College.

On 19th July I had asked Mr. K. Burnett to dinner at my house. We had hardly finished it when Messrs. G. Mohiuddin Qadri and Abdur Qadir Sarwari were announced asking for an interview with me. The former had just returned from London having taken his Ph. D. degree with research in Urdu and the latter was now an officiating lecturer.

Three days later I had the pleasure of meeting Diwan Bahadur Vijaya Raghava Chari, vice-president Board of Agriculture, British India, who wished to see the University and its Translation Bureau.

On the 28th and the 29th I conducted with the D.P.I. and the Principal, Nizam College the viva voce examination of H. C. S. Candidates: 15 on the first day and 11 on the second. On the 28th was also settled finally the question of appointment of Dr. Mir Waliuddin and Mr. Salahuddin in the Philosophy department in the assistant professors' and lecturers' grade respectively, at a meeting of the University Council.

At a subsequent meeting of the Council (on 4th August) was discussed the Maharajah's endorsement for the appointment of Maulvi Abdul Haq (retired Principal, Aurangabad Intermediate College and Secretary Anjuman-i-Taraqqi Urdu) as professor of Urdu. Two days later at the Scholarship Committee meeting Asiatic scholarships were awarded to Hamiduzzafar for Library work, to Ghouse Dad Khan for Engineering and to Raja Rao (son of Mr. Krishnaswami, Kanarese Lecturer, Nizam College) for English literature. The first two were Osmania students. The last two were permitted to proceed to Europe for their respective course of study.

On 14th August 1929 I dined at Mr. K. Burnett's and there saw for the first time Mr. Turner M. A. (Edinburgh), newly appointed professor of English at the Nizam College. The next day I attended a meeting at the D.P.I.'s office for the appointment of Mr. W. Weber of the Y.M.C.A., Secunderabad as Physical Instructor, Government Colleges on a salary of Rs. 1,500 B.G. with special facilities—the University contributing two-thirds of the amount and the Educational department the remaining one-third.

On 18th August Government appointed Maulvi Abdul Haq professor of Urdu at the Osmania University on Rs. 1,000 salary (in addition to his pension of Rs. 600 and other emoluments for special literary works in progress).

On the 19th I received intimation from Mr. D. H. Ogley of the Wardle Engineering Company, Elsinore Road, Old Trafford, Manchester (to whom I had entrusted my specification for a British Patent, concering my Vertical Optical Bench) that the said Patent had been granted to me and bore the office No. 313,261 under the Title 'Improvements in or relating to Optical Benches.'

On 25th August Maulvi Fazle Ahmad (son-in-law of Mufti Abdul Lateef of the Theology Faculty) was selected by the Appointment Board to fill a Lecturer's post in the said department; and three days later the U. T. C. Committee met at the Osmania College and decided to choose 100 students of the College to join the Corps. On the 31st of August and 5th September there was a medical examination of the applicants and out of these the number of 100 was selected.

In the meanwhile, (on 1st September 1929) from the savings of the Scholarship budget Syed Abdul Qader, a science and mathematics graduate of the Nizam College, was awarded a scholarship to study Engineering at Manchester; another was given to Syed Mohd. Naqi a son of Nawab 'Aqil Jung for the same subject and a third to Intesaruddin, a mathematics graduate of the Osmania University. Sardar Jung (a son of the late Nawab Muzaffar Jung, late member Ecclesiastical

department) was also awarded a special scholarship for the study of law at Leeds.

On 12th September, Col. Trench (member for Revenue and Police) complied with my request to accompany me to see the Osmania College during the noon recess, especially the laboratories, and the library. By this time the scheme for translation of Engineering text-books was sanctioned, and as president of the technical terms committees for engineering, physics, mathematics, chemistry, biology, geology and psychology, I entrusted the translation of a book on Applied Mechanics to Mr. Ziauddin Ansari (with the unanimous consent of the Committee). He did the work with commendable promptness and efficiency, so in due course a number of other translations were entrusted to him in rapid succession—and to others also. In this way Engineering students had little or no difficulty from the point of view of Urdu texts, (unlike other students).

I was still officiating as Principal O. U. College and did not at all mind the inconvenience arising from lack of confirmation, my sole object being to render as much disinterested service to the University as I possibly could. It was brought to my knowledge on 30th September that the Board of Governors Nizam College, at their meeting in connection with Mr. Burnett's retirement on pension, resolved that Mr. B. C. McEwen should succeed him as principal at the said College and I should succeed the latter as vice-principal, while still continuing to work at Osmania as Principal; Mr. Turner acting in my place.

An excursion party of our College students wanted to go to Mysore for a few days in charge of two of our professors and I wrote to the Vice-Chancellor and the Registrar of that University for the usual facilities of boarding (at students' own expense) and lodging at Mysore and Bangalore. On receipt of a satisfactory reply I saw the party off at the railway station on the night of 10th October, returning home after midnight.

In the meanwhile (on 4th October) I was called upon to preside over Dr. Stanley Jones' lecture at St. George's Grammar School entitled, "Why I follow Christ". Dr. Jones' great eloquence and enthusiasm for his creed attracted a very large gathering. I extolled the teachings of Christianity for piety and kind deeds and drew attention to the well-known fact that all great religions have these features in common.

130 boys of the excursion party returned on 19th October and the same day the first year B. Sc. classes in Biology were started.

The Inter-Universities Board Meeting at Delhi, 1929

My wife's health was again deteriorating at this time owing to kidney trouble; but I had to attend the Inter-Universities Board meeting at Delhi and left from Secunderabad station in the afternoon of the 27th of October. As Mr. Qazi Mohd. Husain was also attending the meeting I gave over charge to Mr. Hosain Ali Khan. We reached Delhi in the morning of the 29th and put up at Hotel Cecil and saw the Vice-Chancellor Mr. Moti Sagar and the Registrar. Sir Akbar Hydari turned up the same day. Mr. Enayatullah, Curator

Translation Bureau, had also come with his collection of translated works for display and was busy arranging their exhibition in the camp.

The next day we were presented to H. E. the Viceroy, Lord Irwin, as delegates from the different Universities, before he delivered his opening speech. Mr. Littlehails, Educational Commissioner to the Government of India asked me to show him our Urdu text-books and translations exhibited by the Bureau and I did so in company with the Curator, to the satisfaction of all concerned. We unched at the vice-chancellor's and later joined the committees. Had tea at Sir Fazle Husain's tea party and dined at Sir Philip Hartog's. On the 31st I met Mr. Horne, Pro-Vice-Chancellor Muslim University, Aligarh. The question of medical research at the Universities was taken up and Dr. Mehta made a number of proposals. Later Messrs. Subba Rao and Sri Kantiah of Mysore University went round our Translation Bureau books and were highly impressed. We lunched at Mr. Littlehail's. I had a talk later with Drs. Wali Mohammad and Mehta; thence tea at the vice-chancellor's and a private dinner at Sir Abdul Qadir's (a Judge of the High Court at the time), where we met among other old and new acquaintances, Masood Jung (now Vice-Chancellor at Aligarh), Sir Sultan Ahmad etc.

On 1st November we took part in several conference meetings, after lunch at Sir A. Hydari's we heard a lecture by Principal Dhruva of Benares; had tea at Mr. Ram Kishore's where we had talk with Prof. Ganesh Pershad and Dr. Brahma Chari on topics of

academic interest. I proceeded thence to a private dinner given by Maulvi Enayatullah Saheb, our Curator, where we met my old College friend Khajah Abdul Majeed of Matya Mahal (at one time professor of Persian at Delhi College), Maulvi Razaullah (brother of our host) and a young Delhi graduate from Oxford, just employed as a lecturer in English literature at Aligarh.

On the morning of 2nd November I looked in at Darya Ganj for Mr. Krishnaswamy Iyengar, Editor of "Indian States" and proceeded thence to lunch given by Mr. Sheshadri, Secretary, Inter-University Board, at Davicas, getting into conversation with a number of delegates, and left the same afternoon for Hyderabad. Mr. C. R. Reddy and Dr. Sayeeduzzafar happened to be fellow-passengers. Next morning we saw from the train the famous Buddhist topes of Sanchi in Bhopal State. On arriving home in the morning of the 4th I heard the happy news that H.E.H. was pleased to appoint my father-in-law Sadrul Maham Sarfikhas department.

On the 7th November Nawab Qudrat Nawaz Jung invited me to dinner and the next day at Karamat Jung's at home I met Sir Visvesvaraya of Mysore fame.

At the Scholarship Committee meeting held on the 9th I had a good long conversation with Col. Norman Walker, Director Medical department about the training of our Osmania graduates in medicine at the British Universities, and Bahadur Khan and Brij Raj were awarded European scholarships. The former returned in due course with M. S. and F.R.C.S. degree and diploma.

I received the next day a complimentary copy of the Journal of Scientific Instruments, London, containing my article on the Vertical Optical Bench, with 50 re-print copies of the same. At a second meeting of the Scholarship Committee held on the same day a Muslim lady was selected for training in education.

Nawab Tilawat Jung, member the Hon'ble Committee, Sarfekhas called on Nawab Saadat Jung on the 11th and on his way home saw me also, though it was rather late at night.

The College students of Masarrat Manzil hostel were at home on the 13th to Shafi' Ahmad one of their old colleagues, to celebrate his breaking the record of endurance swimming in India and I was asked to preside which I gladly did. Two days later I was at home to a number of guests at my house to meet Nawab Sa'adat Jung. Sir Amin Jung, Sir Hydar Nawaz Jung Mahdi Yar Jung and a large number of personal friends responded to the invitation.

The Syndicate and Council recommended Shafi' Ahmad for help from Government to enable him to attempt swimming the English Channel—an ambitious idea but worth encouraging under proper guidance. Mr. Weber was in favour of it. At the Council meeting on 1st December Mr. Bhaskaran Shastri, Director Nizamiah Observatory was given a special grade of Rs. 600 to Rs. 1000 salary.

From 7th December we had to make special preparations for H. E. the Viceroy's visit; on the 16th I was also commanded to be present at the broad-gauge station Hyderabad for the Viceroy's reception. He arrived that morning at 8 o'clock. H.E.H. was there

at the appropriate time, University students were stationed in the compound of the old State Library building, a most central and convenient place. They cheered the procession as it passed on the way to the Palace. I was present also at the dinner at Chaw Mahalla Palace at 8 p. m. Next day at 4 p. m. we were at the Fath Maidan Pavilion to witness the military sports. H.E.H. was at home to the Viceroy. My wife went to the Hyderabad Ladies Association with our old friend Mrs. Engler to meet Lady Irwin. On the 18th we were invited to lunch at the Maharajah's, thence to the Residency Garden Party at 4 p. m.

Two days later in response to Sir Akbar Hydari's wish I called on Mr. Peterson of the London Times at the Government Guest House and took him to the University College. Messrs. E. E. Speight and Qazi Mohd. Husain met him in my office where we had some brief conversation about the University.

On the 21st I had to provide facilities for the Allahabad students' temporary sojourn in Hyderabad at the Graduates hostel. A couple of days later—a Friday—Dr. Coleman of Reid College called and went round the various departments in my company.

At this time I published the first detailed calendar of the College with the help of Messrs. Speight, Syed Husain and Abdul Qadir Sarwari; and prepared a modified scheme for the selection of H. C. S. candidates and their competitive examination: the minimum educational qualifications to be a B. A. degree instead of success in the Intermediate examination, and question papers in the competitive examination to test more

substantial knowledge than mere essay writing.

* * *

In response to the usual annual invitation I went to see the New Year (1930) Parade at Secunderabad. There Nawab Mahdi Yar Jung told me that Nawab Sir Nizamat Jung had retired on pension and he succeeded to the vacant political membership. I had a brief conversation with the Maharajah Sir Kishan Pershad (President, Executive Council), Nawab Waliud-Daulah and Sir Akbar Hydari also.

Two days later occurred the death of Azhar Jung (Maulvi Ghiasuddin) attached to H. E. H's Palace staff, and he was buried in the grave-yard near the tomb of the saintly brothers Yoosuf Saheb and Sharif Saheb of Aurangzeb's army. My father-in-law and I attended the funeral ceremonies after the Friday prayers.

At the Scholarship Committee meeting on 8th January I succeeded in getting Maqboul Ali's loan question settled (to enable him to pass in his remaining subject, surgery) and Syed Mohammad Ali Khan's Indian scholarship converted into the so-called Egyptian (enhanced to £16 per mensem) and made available at the Royal College of Science, London, where he was reading for B.Sc. Hons. in Physics. According to the rules in vogue, this was the only way in which I could help him (his brother, Yasin Ali Khan having been already awarded a European scholarship.) It was absolutely necessary to train a really competent young man for physics, Mr. Wahidur Rahman's academic career having been spoilt unfortunately.

Mr. Baber Mirza B. Sc. (Bombay) who was given a loan from the Educational department to get a degree from a European University in Biology and render himself more useful to the Osmania, took his Ph. D. from Frankfurt and was, at my recommendation promoted to the assistant professor's grade of Rs. 350 to 600. He would certainly have been appointed professor in due course (after the opening of the B. Sc. classes in Biology) but, having been offered slightly better prospects for the time being at the Aligarh University by Sir R. Masood, resigned his appointment at the Osmania on the 20th.

The same evening Dr. Ivanov lectured on Persian Philology under the scheme of paid extension lectures. Two days later, Dr. Kramers, a Dutch missionary from Java called and saw the University. On the 24th I attended the farewell dinner given by the Maharajah to Sir William and Lady Barton and from personal feelings assured them of continued remembrance.

I obtain a British Patent for my Vertical Optical Bench

Mr. Morris, agent of the Wardle Engineering Co., brought to me Mr. D. H. Ogley's Assignment Deed of Patent for my Vertical Optical Bench with a printed copy of the specification on 28th January 1930.

At the University Council meeting held on 9th February I was glad to obtain a resolution in favour of Qazi Moinuddin's appointment as assistant professor (Organic Chemistry section), if he secures a good degree in that subject, like Ph. D. from London, by research.

On the 13th an important meeting of the State

Scholarship Committee took place and my recommendations were adopted. On the 17th the University Law Union Society invited Sir Tej Bahadur Sapru (who had come to Hyderabad as an advocate in a law case) to speak at their meeting. He acceded to the request and I presided at his lecture and thanked him. On the 27th February occurred the death (through plague) of Maulvi Abdul Hayy of the Theology department—a great scholar and a most conscientious and sympathetic teacher.

On 7th March 1930 I was enrolled member of Registered Graduates of the University of Madras for life.

On 9th March I asked Nawab Sir Amin Jung and Nawab Saadat Jung to dinner at my house. They had a hearty conversation about current local topics to which I was a silent listener.

On 12th March a cheque was issued by Government for Rs. 5,000 in favour of Shafi' Ahmad to help him proceed to England and get trained for the Channel swim. Next day Mr. Weber and I, with a large number of students, saw him off at the railway station.

On the 22nd and 23rd Dr. Stella Kramrisch's extension lectures came off; the first on Gupta Paintings and the second on Indian Art, both well-prepared and well-delivered. On the 24th Aligarh Old Boys were at home to Masood Jung, who was Government guest at Hyderabad in connection with his scheme to collect 10 lakhs by subscription for developing the science laboratories of the Muslim University—a matter of urgent necessity. The same evening we had Dr.

Kramrisch's extension lecture on Moghal Art, but it lacked her usual enthusiasm.

About this time Maulvi Habibur Rahman Khan Shirwani was retiring from Government service and the University Association was at home to him on 26th March to bid him farewell.

On 1st April 1930 H. E. H. the Nizam's Government came into possession of the Railway, the State had guaranteed in the past, on payment of the stipulated amount to the company. Sahibzada Nawab Basalat Jah (brother to H. E. H. the Nizam) visited the University College on the 10th and I showed him our science laboratories, library and the Translation Bureau.

On the 13th, a scheme suggested by some members to introduce English as a compulsory Examination subject in M. A., M. Sc. and LL. B. was dropped after discussion at the Council meeting in favour of the more commendable proposal to raise the standard of English in the B. A. degree classes and get into alignment with the other Universities by introducing an adequate element of research in the examinations for higher degrees.

Dr. S. S. Bhatnagar of the Punjab University having come to examine our Chemistry candidates in practical work, had an interesting conversation with me on April 21st about Urdu-knowing examiners in science and the question of translation of technical terms. He accompanied our party to Himayat Sagar in the evening.

At a meeting of the State Scholarship Committee

held on April 27 it was resolved to appoint Mr. B. C. McEwen of the Nizam College guardian of State scholars in Europe in place of Mr. E. A. Seaton retiring from Government service.

Prof. M. N. Saha of Allahabad University came to examine our physics candidates this year (1930.) He accompanied our party to Himayat Sagar via Mir Alam on the 28th after the day's work. The same evening at Fakhr Yar Jung's dinner I had the pleasure of meeting our old friend Dr. Ziauddin Ahmad, former vice-chancellor Muslim University, Aligarh.

On 10th May I had a letter from Mrs. (later Lady) Tasker concerning her scheme for women's education at home in India by English women-teachers who could come from England on reasonable salaries arising from collection of tuition fees. It could (and did) work all right for the families of wealthy people in Hyderabad, like the Jagirdars of the Paigah; but required careful adjustment and co-operation to succeed among middle class families.

Two days later (on 12th May 1930) I read my presidential address before the Hyderabad Educational Conference at the Town Hall. It was a very successful function. A number of lectures were delivered by local educationists on topics of public education, and one lecture on the Holy Qur'an by Sait Ya'qub Hasan of Madras was attended largely by Muslim students and scholars. On the following day I summed up the proceedings and answered criticisms on general topics.

A trip to Mysore, 1930

In the summer vacation I went with my wife and

family and Messrs. Saifullah and Amrullah to Bangalore, leaving by the 9.30 p. m. train on 1st June. We put up at the Cubbon Hotel, at that time under Eurasian management, but well-appointed and fairly comfortable. Dr. Mohd. Usman, (Director, Medical department) was away at Mysore City with all his relations except his son-in-law, Mr. Abdul Qadir, putting up at his house in Infantry Road. I usually went out for a morning walk with Messrs. Saifullah and Amrullah. My wife and family drove in a hired carriage in the evenings to the Park or the Nursery gardens etc. On the 7th we engaged two motor-cars and drove to Mysore, went up Chamundy Hill and stopped for the night at a local hotel after seeing the Daserah procession and city illuminations.

Thanks to the Cauvery Falls, electric power being a cheap local supply, the Maharajah's palace presented the appearance of a continuous galaxy of light.

Next morning we left for Srirangapatam and saw Darya Dawlat Bagh, its historical wall-paintings, Tippu Sultan's tomb, fort etc., and the spot surrounded by an enclosure where he is believed to have fallen in the thickest of the final desperate fight. From there we went to the Cauvery dam and water-falls at 12.30. I met the Chief Engineer in charge of the Power House—an Indian gentleman, and later with wife and children got down the lift and saw the turbines etc., at work. After hurried lunch at the travellers' bungalow we returned to Bangalore at 6.30 p. m. and the same evening left for Hyderabad at 8.30, arriving home the next morning.

On the 26th Nawab Nazir Jung (Military Secretary to Government) called in connection with the award of a European scholarship to one of his relations. On July 4 Mr. Ghulam Mustafa (Assistant Secretary to the Executive Council) brought a relation of his, named Habibuddin for admission to M. Sc. class in Physics at the Osmania. Two days later Mr. E. E. Speight very kindly gave me 100 seedlings of the Eucalyptus plant which he had transported from Kodaikanal. In spite of every precaution they all died except one, which grew into a fairly tall tree, but eventually perished from drought.

On 8th July Sir Ross Barker, President Public Services Commision came to Hyderabad and I took him round the University library, laboratories, Art-class rooms, hostels, Translation Bureau etc., and he went away evidently well-impressed.

At the last M. Sc. examination in physics, Prof. M. N. Saha found the practical work of one of the candidates, Haji Ghulam Mohammad exceptionally good. His skill in manipulation was well-known to me ever since he began to attend my classes. Prof. Saha asked me to send Haji (after his passing the examination) to Allahabad for D. Sc. by research, promising him a scholarship in due course. I knew how difficult it was for an outsider to secure monetary help in other Universities in spite of the professor's powerful support, so on 9th July I recommended Haji to the Osmania University Council for a scholarship of Rs. 75 B. G. to enable him to work for his D. Sc. degree under Prof. Saha at Allahabad.

On July 15 I heard the good news of Syed Yasin Ali Khan's securing 1st class Honours at the London B. Sc. examination in Engineering and winning a gold medal, as described in a detailed letter received from him the next day. Three days later at the Nazr breakfast in the Public gardens Nawab Waliud Dawlah (impressed evidently by the success of our Osmania scholars) asked me to advise his sons about the courses of study they may take up on proceeding to England. They called at my house in the afternoon and I drew up a general programme.

A fire-ball brighter than Venus was observed near about 8.30 p. m., Indian S. T. on 21st July from near alpha Cygni proceeding towards alpha Acquilae, followed by two more meteors in the neighbourhood.

On 24th July my two daughters joined the Mahbubia Girls' School and the same day I had a letter from Mr. E. A. Seaton, guardian of State scholars in England announcing Dr. Siadat Ali's success in the B. C. L. examination at Oxford.

Five days later came a letter from Mr. Story describing Shafi 'Ahmad's record swimming in England. By the same mail I heard of Syed Mohammad Ali Khan's success at the London B. Sc. Honours in Physics in the second class as an Internal student of the University, with the diploma of Associateship of the Royal College of Science in the same subject. Sir Akbar Hydari was overjoyed to hear all this happy news about the success of our Osmania students in England and told me that Lady Hydari would be glad to meet my wife at tea at her house on 2nd August. My wife

cheerfully accepted the invitation and had a very pleasant meeting with her hostess on the evening appointed.

It was about the middle of the rainy season and the roof of one complete section of my house was leaking so badly on the night of 1st August that we had to vacate this part of the building altogether, and yet the contractor was suing for enhanced payment!

On 7th August I invited Mr. Syed Kazim Husain (later N. Kazim Yar Jung), Secretary Paishi department to dinner at my house, to meet Nawab Saadat Jung and Messrs. Iradat Khan, Saifullah and Amrullah Siddiqi (his son and brothers-in-law respectively). We had a very sociable meeting.

At the Syndicate meeting on August 10 I was glad to secure Maulvi Syed Ibrahim's promotion to the second grade in the Arabic department, and the appointment of one of our own students (an Arab youth of the Sultan of Mukallah family, Saif bin Husain) as Arabic lecturer. A further grant of £50 was sanctioned for Safi' Ahmad. On 19th Mr. Sayeeduddin, lecturer in Botany returned from his study leave with an M. A. degree from Edinburgh.

At the Council meeting on the 24th Dr. Yusuf Husain Khan, D. Litt. (Paris) was appointed an additional reader in History (in the grade of Rs. 350 to 600) and Saif-bin-Husain's appointment as lecturer was ratified.

Next day Messrs. Syed Ali Raza and Syed Zainuddin, P. W. D. Engineers came to consult with me about our new University buildings at Adigmet. At a meeting of the

Scholarship working Committee, later in the day some difficult cases were settled.

On the 26th Sir A. Hydari opened the exhibition of the College Historical Association at the University Library and the next day I presided over a lecture on Abu Raihan-al-Biruni, delivered under the auspices of the said association. The objects collected and borrowed for the exhibition by Mr. Haroon Khan Shirwani (professor of history and president of the association) were pronounced to be very interesting.

On 7th September I wrote down my honest and sympathetic opinion about the application for cancelling the educational loan obtained from Government for a local student. The same day my recommendation to appoint Syed Mohammad Ali Khan A. R. C. S., B. Sc. (Hons.) as a reader in physics was passed by the University Council.

On 13th September a sum of £100 was cabled to Shafi' Ahmad for breaking the swimming record from Dover to Ramsgate. On September 15th and 17th the Hyderabad representatives of the Round Table Conference meeting in England, left the station and huge crowds saw them off. On 30th September Mr. Syed Zainuddin, one of my old pupils at the Madrasa-i-Aliya, (now Nawab Zain Yar Jung) came to say good-bye, as he was about to proceed on a world tour with Mr. Syed Ali Raza, on Government duty, to see various Universities preparatory to start construction of our own Osmania University buildings.

On 14th October Mr. Qari Kalimullah returned from Europe, via Persia, with a Ph. D. degree, from the

London Universirty in Persian and took charge of his old reader's post in the department. On 22nd October at the State Scholarship Committee meeting I advocated strongly the recommendation for the award of a European scholarship to Sahibzadah Mir Akbar Ali Khan (a son of Nawab Tilawat Jung) for being the first member of that class to obtain a B. A. degree from the Madras University, and the next day I presided at Mr. Turner's lecture at the Osmania University College Union Society on 'Life in English Public Schools'.

On the 25th Mr. Morris, Agent the Wardle Engineering Company, showed me Messrs. Flatters and Garnett's letter from Manchester agreeing to construct two types of Vertical Optical Bench (costing £9 and £7 respectively) for me and putting them on the market. On 4th November I received communication from London News Agents announcing Shafi 'Ahmad's feat of breaking World record for endurance swimming and the next day was published the news of Prof. C. V. Raman's being awarded the Nobel Prize for Physics.

The Maharajah gave away prizes at the University College to successful students on November 15.

On 5th December I went with Nawab Saadat Jung to see the sports at the Fath Maidan and attend the At Home given by H. E. H. to Lord Harding (Ex-Viceroy). On December 11 I wrote to the Registrar for appointing Dr. Mir Siadat Ali as an additional professor of law in the grade of Rs. 500-1,000.

The All-Asia Conference at Benares, December 1930

On 23rd December I left for Benares to attend the

All-Asia Conference and reached Allahabad at 10 a. m. on the 25th. At the Muslim Hostel, saw our old student Haji Ghulam Mohammad. The train passed the fortress of Chunar in due time and I lunched at Ghazipur, seven miles from the battlefield of Buxar. On reaching Benares I put up at the Jai Narayan High School hostel along with a number of other delegates.

I met Mr. Sheshadri, Secretary, Inter-University Board at the Asia Conference Office (an active promoter of the Conference) on the 26th. The Maharajah of Banares opened the Conference after a short address, and singing of appropriate hymns by a band of musicians, at 2.30 p. m.

The All-Asia idea was decidedly splended but the number of delegates from outside India was very inadequate—a few Chinese and Japanese gentlemen and perhaps some from Burmah and the Malay Archipelago.

The All-India Muslim Educational Conference also held its sittings at Banares at about the same time. Sir Syed R. Masood's presidential address came off on the 27th. Some local Muslims chiefly of the artisan class contributed much to the general popularity of the Conference by their picturesque processions under the leadership of a local religious teacher. I went to see the famous bathing ghats on the river Ganges with Mr. Wahidur Rahman (who came up from Bihar to read Mr. Hamid Ahmad Ansari's paper on the Osmania University). A guide showed us the sacred and secular characteristies of the celebrated buildings, some of great historical interest. We could not stop long when taken to see the Nepalese temple. Aurangzeb's celebrated

mosque presented a fine view from one of the ghats.

Next morning we went by a taxi car to the University to see its fine rows of buildings—very imposing and costly, looking rather empty at the time, but rapidly getting equipped with men and material. At 11.30 we attended the sectional meeting on University education presided over by Justice Sir Shah Mohammad Sulayman. Mr. Ansari's paper read by Mr. Wahidur Rahman described the work done at the Osmania University, liberally praising the part played by Sir Akbar Hydari, Nawab Sadr Yar Jung and Sir Syed R. Masood in its early stages. Unfortunately, it was misunderstood by some of the audience and a local lecturer of history criticised the aims and objects of the University in adopting Urdu as the medium of instruction. I had to get up and answer the criticisms categorically, refuting the charges made. My arguments easily convinced the majority of the audience, that the language chosen was natural, appropriate and most beneficial. In fact, one or two non-Muslims from Northern and Western India actually spoke in favour of the scheme.

On the 29th I saw the Engineering hostel and met Principal King of the Engineering College and conversed with him on the need for technological education in India on lines similar to those adopted at Banares.

There was a huge downpour of rain on the night of the 30th and though I felt feverish I joined the party proceeding by motor cars to Saranath early in the morning. The place, full of fine reminiscences of Gautama Buddha, reminded us of the good old days when India was leading the entire world in piety and

spiritualism. We saw the stope and observed the valuable relics collected in the Museum.

I left Banares at 11.40 a. m., changed at Ghazipur and reached Allahabad at 5.30 p. m., only to find the train connections upset. After dinner at the station restaurant I succeeded in getting a good berth in the Itarsi train and had undisturbed sleep. On the morning of December 31, I broke journey at Itarsi, stopping for the night at the P. W. D. dak bungalow.

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The train for Nagpur was late and full of delegates going to attend the meeting of the Indian Science Congress in that city. After an uneventful journey I reached home on the 2nd of January 1931, before noon.

At the meeting of the Re-organisation Committee on the 11th I had to overcome much opposition to get Dr. Siadat Ali Khan's grade and Mr. Hosain Ali Khan's seniority questions settled. In the meanwhile my eldest son Abdul Majid Khan had an attack of typhoid and with Col. Franklin's advice I had to send him to the K.E.M. Hospital for treatment. On the 12th I also felt feverish but continued to go to office. On the 14th when I went from office to see my son at the hospital the nurse in charge took my temperature and finding it 102° advised me to get admitted as an in-patient at once. My temperature rose to 104° in the evening, but all the same, I looked into the resolution of the Committee meeting sent for confirmation and returned it with some necessary corrections.

My son and I had a room to ourselves at the hospital

and my wife got permission to stay with us. After a week she too suffered from cold and catarrh and it looked almost as if she would also join us as hospital patient but go into the women's ward. Luckily she recovered the next day. My fever was also diagnosed to be due to typhoid. A number of relations and officials very kindly came to inquire after our health. We gradually got better. Our temperatures came down to normal on the 25th. The next day I was informed of the return from Europe of Osmania scholars Yasin Ali Khan, Mohd. Ali Khan and G. Mohiuddin Qadri. They came to see me at the hospital. I told Mohd. Ali Khan to join duty at once (as assistant professor of Physics) to avoid complications in case I happened to get a relapse. I was drawing at the time a substantial allowance for doing M. Sc. work from the salary of his post, really to reserve the post for him. One evening Dr. Kameswar Rao, professor of physics Nizam College called while I was still convalescent and discussed his scheme of Hyderabad Science Association asking me to become its president. A constant visitor was Prof. Qazi Mohd. Husain who was officiating for me at the University and kept me informed of its important affairs.

At last we left the hospital on Februrry 19, very weak, but cured. Hyderabad delegates of the Round Table Conference returned from their voyage and my father-in-law and I went to receive and garland them at Begumpet on the 28th.

On 5th March Major Abdul Jabbar drew up a more modest and workable scheme for the University

Territorial Corps applicable to all Colleges and we discussed it at a committee meeting in the Educational office.

On the 16th I went with all the State officials to see the Princes Azam Jah and Mu'azzam Jah off to Europe on their first overseas tour. It was a magnificent spectacle and H. E. H's farewell words were touching. Two days later Nawab Basalat Jah again visited the University College and I showed him our English and other classes. The same afternoon at 3.30 p. m., I went from office to examine an alternative site in the Mir Jumla Tank area near Sultan Shahi (the S. E. suburb of the City) proposed for the University buildings by Col. Norman Walker, Director Medical Department, and a number of other officials. Mr. T. J. Tasker, Ali Nawaz Jung, Col. Walker and Messrs. Mehr Ali Fazil and Arifuddin were also present.

Next day a special committee of the University Council was convened at the home office presided over by the Vice-Chancellor himself and it was resolved that Messrs. Hosain Ali Khan and Mirza Ali Yar Khan of the University College be deputed to accompany the Sahibzadas Nawab Salabat Jah and Nawab Basalat Jah in their forthcoming European tour. I had a letter from Mr. Ali Yar Khan later asking for permission to carry on research in French history in continuation of the deputation.

On 22nd March at the meeting of the Working Committee of the State Scholarship Committee I put in Maqboul Ali's application for a loan of £250 as an emergency affair and got it passed, to save him getting

stranded in London.

On 1st April Mr. Morris of the Wardle Engineering Co., arranged with the Director of Public Instruction to receive 36 cases of the Vertical Optical Bench for State Intermediate Colleges and High Schools. On 9th April the University Association invited the Hyderabad Delegates of the R. T. C. to dinner at its premises and a number of speeches were made befitting the occasion.

Two days later there was a meeting of the State Scholarship committee. Syed Fiazuddin was awarded a European scholarship for the study of Architecture. Abu Tahir Abdul Qader and Saliha Begum for Medicine and R. Satya Narayen for Physics. I was glad also to get a study loan sanctioned for Mr. N. Ram Lal, our Physics assistant for research in X-Ray work.

On the 23rd the Civil Service Board appointed Dr. Mr. Siadat Ali lecturer in Jurisprudence to the Civil Service class.

Early in May the Physics department of the Osmania University College purchased six V. O. B's of the more accurate type for its laboratory use from Wardle.

At the Scholarship Committee meeting on the 9th I advised Mr. Qader Husain, at the time officiating as Principal Nizam College, to apply for scholarships in Mathematics and Chemistry to prepare against future vacancies at that institution. He did so and I supported the proposal and got it passed then and there. Three Osmania boys got loan for higher studies in Europe.

The next day Prof. M. N. Saha who had come to examine our Physics candidates in their practical

examination and saw our V. O. Benches in use at the laboratory ordered one from Wardle at once and took the same with him for his laboratory at Allahabad.

On 22nd May I had a minor operation performed at the K. E. M. Hospital by Col. Franklin and returned home the same day.

On June 3 the State Scholarship Committee wrote off £600 sterling from the loan granted to Mr. Qader Husain during his study in England. The next day (June 4, 1931) at Mrs. Sarojini Naidu's at home I met Mr. Jawaharlal Nehru, now coming into the forefront of Congress politicians, but could not get opportunity for talking beyond mere formalities. On the following day at the house of the same friendly hostess there was a Purdah Party to meet Mrs. Nehru and my wife also went to it.

On 7th June the University Council met and resolved to depute Mr. Qazi Mohd. Husain as the Osmania delegate to the Empire Universities Conference in England. Sir Akbar Hydari (N. Hydar Nawaz Jung) and N. Mahdi Yar Jung were to represent the Osmania at the meetings of the British Association for Advancement of Science while serving on the R.T. Conference at the time.

On 22nd June after my complete recovery from the operation I had the pleasure of having Col. Franklin to dinner at my house and we discussed Indian politics in an amateurish way, neither of us being adept in the subject. Next day a special educational committee was convened to open Intermediate classes at the Gulbarga High School and raise it to the status of a college. I was present by special invitation and not

as principal of the most important institution of the University or as a member of the University Council. A number of new appointments were created. On 28th June there was a meeting of the Syndicate and Council to provide a new post in the History department (in the grade of Rs. 350 to 600) for Dr. Ishwar Nath Topa recommended by Sir R. Masood from Muslim University, Aligarh. The matter was considered so urgent that Dr. Topa was telegraphed to join duty on 1st July.

The following day a joint meeting of the Intermediate College Appointment Boards was held at the Home Secretariat; to which I was also invited. Messrs. Syed Fazle Haq, Akbar Ali Sajan Lal, Zakiuddin, Nazir Ahmad Tahir and Inayat Khan were appointed lecturers at various Intermediate Colleges. They were all Osmania graduates, but Syed Fazle Haq had taken his M. A. degree in English literature from the Muslim University. Akbar Ali was an Osmania M. A., in mathematics and the last three were M. Sc's from the same University. At this phase of the University the main College ceased to be looked upon with favour by some people, so much so that I had great difficulty in obtaining the loan I had recommended passed by the Budget Committee to enable Mr. Ram Lal M. Sc., to carry out research work in X-Ray physics at the London University.

On 7th July I delivered an inaugural lecture at the Nizam College Science Union on the Theory of Quanta and the Raman Effect. Two days later at the State Scholarship Committee meeting I succeeded in getting an Osmania past-students, Mohd. Ibrahim's scholarship extended to enable him to finish his B. E. course at the

Engineering College, Guindy.

My wife went to the Residency Fancy Sale with Mrs. Engler on 11th July and made a number of interesting purchases. Six days later I received a cable from Maqboul Ali announcing his final success in all the subjects of the L. R. C. P. and M. R. C. S. examination in London.

On 31st July Col. Sir R. Chenevix Trench and Mr. B. A. Collins invited a number of Hyderabad and Secunderabad officials to dinner at the Colonel's house. I was one of the guests and had a pleasant time answering questions about the progress of the University.

Maqboul Ali's professors at the Middlesex Hospital, London while officially intimating his success at the Medical examination recommended two years extension in his scholarship to enable him to work for the M. R. C. P. examination. This I was glad to get sanctioned at the meeting of the State Scholarship Committee on August 22.

Ever since Dr. G. Mohiuddin Qadri's appointment in the Urdu department considerable activity was displayed by both the staff and the students through lectures and essays etc., published in the leading journals of India. An Urdu Society of the University was formally declared open by me on September 16, and it was a pleasure to see Nawab Zahiruddin Khan (son of Nawab Moinud Dawlah, Amir Paigah) elected its first president.

A week later Dr. Andre Weyl of Aligarh called on me at the office with Prof. Qazi Mohd. Husain and we had a talk about his proposed scheme of new methods of teaching higher mathematics. With my training at

the Royal College of Science, London under Prof. John Perry, I naturally welcomed such proposals.

The 1932 Sessions of the Indian Science Congress were to be held at Bangalore and as the Osmania University was now started fully on research work in various departments (especially science and mathematics) Dr. M. Raziuddin Siddiqi Ph. D. (Leipzig) now assistant professor of mathematics at the Main College, Zulfiqar Hasain Faruqi, preparing for his M. Sc. in physics and myself sent our papers to Dr. Ganesh Prasad, president of the mathematics and physics section. In 1931 also we had ample rainfall. All tanks were full. We went to see Osman Sagar on 2nd October and heard of sudden rise of the level of its water by 8 feet two days ago which necessitated the opening of its flood gates, an imposing sight for Hyderabad public.

At the Council meeting held two days later, Col. Farhat Ali, principal Medical College got two years extension of service and Pandit Datatray Kaifi was recommended by some gentlemen for appointment as professor of Urdu. The University having rented yet another house for conducting our growing classes in English we occupied the building (on the S. W. corner of the Fath Maidan) on 7th October.

The inaugural meeting of the Hyderabad Science Association took place at the Osmania Science building on 12th October 1931, I read my presidential address on Lunar and Lamp Coronae and their dependence on the *meteorological* condition of the atmosphere, pointing out the need for further open air observations.

On 27th October Hon'ble Anwarul Haq of Bhopal

came to see the University and I showed him round the various departments. The same day we heard the happy news of the Princes Walashan, Azam Jah and Mu'azzam Jah marrying respectively the Turkish Princesses Duru Shahwar and Nilufar in Europe.

The next day my wife and I went to tea at Mrs. Tasker's and passed a very sociable evening. Mrs. Tasker called on my wife on 2nd November and five days later both Mr. and Mrs. Tasker came to dinner with us and we showed them our collection of minerals (local and foreign) with the scintiliations of radio-active matter under alpha-Ray bombardment. The same evening I had a letter from Dr. Maqboul Ali posted from Port of Spain (Trinidad) where he had gone to spend his vacation.

The proposal to appoint Pandit Datatry Kaifi as Urdu professor by some of our University men was dropped and he was invited to deliver an Extension lecture, which he did at the College on 8th November.

On November 16th I sat up the second half of the night watching the Leonid meteors. There was no spectacular show, but a fair number did appear from the well-known radiant near gamma Leonis. The result of my observations was posted to the Editor of Nature, London for publication.

The next day I invited to my house for tea all the office-bearers of the various Union societies of the College (over a hundred persons in number) and had pleasant conversation with them about their present activities and future plans. Later, I took the members of the Science Societies to the Nizamiah Observatory

close-by and with Mr. Bhaskaran Shastri's assistance showed them the Moon, Saturn and Epsilon Lyrae in the great Equatorial.

A novel request was made by the Educational department asking me to inspect its High Schools with the principals of Intermediate Colleges and the Nizam College. Whatever the advantages resulting from this procedure to the department, it threw an extra heavy burden on me—already over-worked with the affairs of the University itself. I inspected the Chaderghat High School on the 18th and the Madrasa-i-Aliya on the 19th.

While the numbers of admissions of our local matriculates to the University and Intermediate Colleges were definitely fixed by regulations I received instructions from the Vice-Chancellor's office to admit a Behari matriculate to the Intermediate class of the main College. I could not conscientiously do so and as written replies produced no effect I went in person to the Vice-Chancellor by appointment on 23rd November and explained the matter to him. He agreed with me entirely that preference should be given to lacal matriculates.

On 2nd December occurred the death of my old College fellow-student, Syed Zuhur Ali of the senior-most grade of service in the educational department. He was a very successful headmaster, popular among his colleagues and pupils, but latterly passed through severe trials and disappointment.

On 5th December I went by motor car to Warangal to inspect its high school. Mr. Syed Mohd. Azam came a little later and we divided the work among us.

Two days later I presided over an Extension lecture on Modern Turkey at the Town Hall. The lecturer was from Shantiniketan and had first hand knowledge of the subject.

On the 12th the Maharajah presided at our College Day functions and gave away prizes to our successful students. A similar function presided over by the Home Secretary N. Akbar Yar Jung took place at the Warangal Intermediate College on the 15th and I went by rail to take part in it.

CHAPTER XVI

I GO BACK TO THE OSMANIA UNIVERSITY COLLEGE

THE year 1932 is painfully noteworthy in my short official life. After having done my best for the progress of the University and trained and guided its scholars to gain not only recognition but distinction in the eyes of the outside educational world (apart from my own contributions to learning), my enemies misrepresenting matters to Government made me revert to my old post at the Nizam College for seven months. But thanks to the integrity of my English (and some Hyderabad) friends, truth could not be suppressed long and H. E. H. was pleased to put me again in charge of the Principalship of the Osmania University College.

On 1st January 1932 I started for Bangalore to attend the sessions of the Indian Science Congress. Mr. Wahidur Rahman and Dr. M. Raziuddin Siddiqi also went from the College. We put up at the Central Hotel. The Congress was opened by the Dewan (Sir Mirza Mohd. Ismail) on the 2nd. R. B. Lala Shiva Ram Kashyap, prof. of Botany, Lahore read out his presidential address dealing with 'Some Aspects of the Alpine Vegetation of the Himalaya and Tibet'. Next day I called on Dr. Mohammad Osman, now living in retirement. After Ganesh Prasad's presidential address to the mathematics and physics section

on the 4th Dr. Raziuddin Siddiqi read his paper on an Infinite System of Non-linear Integral Equations, which was much appreciated. Later Mr. T.P. Bhaskaran Shastri read his paper on the Observations on Eros made at the Nizamiah Observatory. The University of Mysore was turning out good work in Spectroscopy. Its physics laboratory at Bangalore (Mr. B. Venkateschar professor, in succession to Dr. E.P. Metcalfe) was perhaps the best equipped in Southern India, for that line of research. Afterwards we went to the 'at home' given to delegates at the Minerva Mills and heard there of the arrest of Mr. Gandhi by Government.

Dr. Osman called in the evening and invited me and my Osmania and other Hyderabad colleagues to dinner at his house on the 6th.

On 5th January I briefly described the design and construction of my V.O.B. and explained its use in a variety of experiments. The apparatus was set up for inspection in the Exhibition hall. In the afternoon we went to the Diwan's 'at home' where our Hyderabad delegates had a warm reception. Sir Mirza Mohd. Ismail, Mr. B.A. Khan (Agent of the Mysore Railways) and Mr. Mathan (whom I had first met in 1927 on our voyage to England) evinced a keen interest in the work of the Osmania University (much affected evidently by Dr. Ganesh Prasad's unstinted admiration for its rapid rise to distinction.) From there we went to Dr. S. K. Mitra's popular lecture entitled 'New Wonders of Radio'.

Next day Mr. B. Venkateschar congratulated me on the efficient design of my apparatus after having seen

it in the Exhibition hall. I saw his spectroscopic laboratory and complimented him and his colleagues on their excellent output of work there, we went thence to Dr. M. O. Forsters 'at home' at the Institute of Science, Hebbal. On referring to the issue of Nature dated December 12, 1931 in the well-equipped Library of the Institute I was pleased to find my report on the recent Leonid meteors published in it. We enjoyed later a hearty dinner at Dr. Osman's he and his son-in-law receiving the Hyderabad delegates with utmost cordiality.

I came to know later that Mr. Ghulam Ahmad Khan had a paper on the Chenchus in the Anthrepology section. The Nizam College and the Hyderabad Mining department were also represented at the Congress.

On the 7th we all met again at the Vice-Chancellor's (Dr. E. P. Metcalfe's) 'at home'.

Early next morning we left for the Bangalore City Station and reached the Kolar Gold fields at breakfast time. We were taken by car in batches to different mine shafts. Messrs. G. Ahmad Khan, Raziuddin Siddiqi and myself went down the Edgar Shaft, to a depth of 3,700 feet below the surface. I received as memento a specimen of the unworked ore. We were shown a lump of pure gold weighing 80 lbs., valued at £5,000 sterling, said to have been the result of four days' work. After dinner at the station restaurant we left by train for Mysore.

On the 9th Mr. A. A. Khan, the Agent of Mysore Railways very kindly sent for us his motor car at the station. After breakfast at his house we went in his

car to the Kannambadi Dam; thence to Srirangapatam and returning for lunch to his house, got into the train and reached Bangalore at 7.30 p. m.

The next day was the first of Ramazan. We fasted in the train and arrived at Hyderabad at 8 p. m. on the 10th.

* * *

On 22nd January there was a meeting of the Poetry Society (Hyderabad Centre) at Mrs. Tasker's house. My wife was invited with other ladies as a member of the Society, I was asked to recite a poem from Southey. I chose 'Immortality of Love'.

Two days later at the meeting of the State Scholarship Working Committee I was glad to recommend Aybara B.A. (Madras) from the Nizam College, to obtain a European scholarship for Engineering. He was the first Parsi in Hyderabad to get this chance as far as I can remember. On the 25th the Registrar Osmania University asked me (evidently at Sir Akbar Hydari's suggestion) if I would approve of Mr. Qazi Mohd. Husain's nomination to the Secretaryship of the Inter-University Board. He was appointed Vice-Principal only a short while ago, but it would make no difference so far as my plan of work at the University was concerned and I answered in the affirmative. Next day I had a long talk with Mr. K. Burnett, now on the retired list but acting as Controller of Accounts for H.H. the Prince of Berar, at Bella Vista.

The Maharajah Sir Kishan Pershad had invited to dinner the members of the States Enquiry Commission

on 2nd February. As one of the local guests I had an opportunity of meeting a number of gentlemen from British India.

The next day I attended the dinner at the Hyderabad Residency, given by the Hon'ble the Resident, Col. (later Sir Terence) Keyes and Lady Keyes. Sir Reginald Glaney was also present. It was a great pleasure to meet him again and talk about the good old days when he was in H. E. H. the Nizam's service with us. I found the A.D.C. and the Secretary to the Resident in an exceptionally happy mood for conversation.

6th February brought the mournful news of the death of our old friend Mrs. Pocock in England. When her husband (Director, Nizamiah Observatory) died she went with her daughters to live there. My wife and I corresponded with her regularly. The sad news was communicated to us by her eldest daughter. We condoled with the bereaved family and asked if we could render any service. On 9th February, 'Id' day we had Miss Pope, Principal, Zenana College, for dinner with us. The same evening there was a Purdah Party at Mrs. Tasker's in connection with the English Ladies' 'at home,' to which my wife also went.

A series of Extension lectures were delivered from the 17th to the 21st by Dr. Suhrawardi of Calcutta on various topics of English literature. I presided over the first two lectures on 'Modern English Poetry'. Owing to other engagements, I could not attend the remaining lectures entitled 'English Poetry after the War,' 'European Literature after the War' and 'the Modern European stage'.

On the 19th I dined at Mrs. W. Turner's (wife of the officiating Principal Nizam College). Among other guests were Nawabs Aqil Jung and Siraj Yar Jung and two British Army Officers.

There was a violent thunderstorm with copious fall of rain and hailstones on 22nd February 1932 at 2 p.m. Some hailstones weighed as much as 5 grams and were very irregular in shape with horn-like projections. The next day Mr. Hosain Ali Khan (professor of English) was 'at home' to meet Dr. Suhrawardi.

On the 25th I presided over the Sub-Committee meeting appointed by Government to ascertain as to which was the more instructive course preparatory to University education, Osmania matric or the local H. S. L. C. After careful comparison it was decided in favour of the former.

On the 28th my wife and I went to Col. and Mrs. Norman Walker's 'at home' and passed a very sociable evening. Next day after the H.C.S. Viva Voce Examination Mr. Khaja Moinuddin Ansari (Secretary H.C.S. Board) showed me the file concerning my proposal to raise the standard of the entrance examination by introducing papers in special subjects as in the I.C.S. Fear of increased expenditure it would appear, led several members to vote against the proposal.

On 1st March the University Council appointed Mr. Fazl Mohd. Khan (D.P.I.) to represent the University at the Inter-Universities Board meeting to be held at Lahore. In the evening Mr. Ilyas Burni spoke for two hours to Osmania University students by way of advice how to live a wholesome happy life. I presided at the lecture and endorsed what he said.

Next day Dr. K. de B. Codrington (keeper of the Indian section of the Victoria and Albert Museum) lectured on Moghal Art and I presided. Of late years I could not fail to notice a vague tendency among foreign (especially female) critics to regard the masterpieces of Moghal Art as 'effeminate'; I referred to this incidentally and compared the aesthetic tastes of the Moghals and Greeks as displayed in their architecture.

On the 6th the Appointment Board meeting selected Nazir Ahmad Taher M. Sc. (Osmania) for the post of additional demonstrator in Chemistry.

Dr. Baber Mirza invited me about this time from Aligarh to become a member of the Muslim Association for Advancement of Science. The idea was a very happy one, as owing to a late start, silly prejudices and above all, terrible economic disadvantages, Muslim students were not only very backward in Science, they were even discouraged from study of Science. I accepted the invitation and offered my services in support of the Association.

On 8th March we had Col. and Mrs. Norman Walker to tea with us. Later I attended Dr. Krishnaswamy (University professor of Indian history at Madras) lecture on Pre-Islamic Southern Indian history. The lecture disclosed much painstaking research, though still a collection of isolated facts.

Hearing of Mrs. Yaqub Hasan's arrival from Madras with her son I called on her at Viccaji's hotel in the evening of the 11th and we talked of our present occupations and pre-war Kensington days. The next day my wife invited her to our house. She and her nieces received the guest most cordially and promised

to return the call on their visit to Madras.

On 16th March my mother-in-law and wife went to the Pardah Party held at the Hyderabad Residency and for the first time saw the two Turkish Princesses newly arrived from Europe.

* * *

The meetings of the Osmania University Senate held on 20th and 24th March this year were memorable for their unpleasant results. It appears that a number of members had decided to give votes at elections in such a way as to oust the most important Government officials not directly connected with the teaching side of the University, from the Syndicate, the faculties and the Boards of Studies. It was thus that Sir Akbar Hydari, the Finance Member (generally supposed to be the founder of the University), Col. Norman Walker (Director, Medical Department) and several others failed to get elected to the Syndicate, the faculty of Arts and the faculty of Medicine. The result was general disappointment. No friend or well-wisher of the University could have participated in such a movement. Unfortunately there was no safeguard provided against such tendencies, in the rules and regulations passed at the beginning.

On 4th April my wife went to Begum Waliud Dawlah's 'at home'.

At the Scholarship Committee meeting held on the 14th, European scholarships were awarded to 'Arifullah Qadri and Syed Nizamuddin (both Osmania M.B., B.S's) for medicine, and to Aybara and Wahhabuddin for Engineering. Ram Chander, a grandson of the late

Rai Bal Mukhand was also given a scholarship for medicine. A number of study loans were also sanctioned.

Mr. K. Burnett's period of office at Bella Vista was over and he was going back to England. I invited him to dinner on the 15th and we talked of the Madrasa-i-Aliya and the Nizam College of a generation before, their old staff and old pupils. Mr. W. Turner officiating Principal, Nizam College came to dinner with me on the 19th and we saw Mr. Burnett off to England on the following day.

On the 23rd Nawab Siraj Yar Jung brought to my house Dr. B. K. Das, D. Sc. (London) in Zoology from Allahabad, with a recommendation for appointment at the Osmania.

All of a sudden, next day came peremptory orders from Government for my immediate reversion to the Nizam College as Vice-Principal, to work under Mr. Turner, my junior in service by a number of years, who until lately was officiating in my place as Vice-Principal. The procedure seems to have given immense satisfaction to my enemies—Indians all of them, while the whole of Hyderabad was astounded at the suddenness of the entire transaction. I handed over charge to Mr. Qazi Mohd. Hussain at the Osmania on the 25th and went to the Nizam College on the 26th to take over my new duties. All sorts of silly interpretations were suggested by irresponsible persons to explain what had happened, some even spread the rumour that I had incurred the displeasure of the British Government.

The first gentleman to promise sincere support and rectify the harm done was Col. Sir Richard Chenevix Trench (the Revenue member). Col. Franklin and Col. N. Walker also heartily sympathised with me. In my report to the Home Secretary (N. Akbar Yar Jung) about my reversion to the Nizam College I pointed out the harm done to me after all the valuable services I had rendered to the education of the country, both, at the Nizam College and the Osmania, and asked for Government's redress of my wrong. He put up my case promptly and the Maharajah also expressed his sympathy.

At this time I utilised my sleepless nights in watching for meteors. On 3rd May, for example I observed 14Eta Aquarids. The summer vacation continued and I engrossed myself in the compilation of additional or supplementary matter for the Osmania B. Sc. course in Electricity and Magnetism and in the preparation of a text-book in Pure Mathematics for B. Sc. Physics—which it was not possible for me to finish while at the Osmania. By way of recreation, we went by cars with a number of relations to our friend Mr. Shapurji Okerji's house at Vicarabad and spent a day there.

On the 11th and 12th of August I observed fine showers of the Perseid meteors (31 in an hour and a half on the second day). The results were posted to the Editor of Nature, who published them in its issue of September 10, and passed it on to Mr. A. S. King Sectional President of the British Astronomical Association. He published them in the October issue of the Observatory.

Slowly the mystery about the intrigue against me was unravelled and from the highest to the lowest in Hyderabad (except, of course, my personal enemies) began to sympathise with me. The Maharajah true to his word, supported Sir Richard Trench's vigorous endorsement in my favour, and the case going up to the Executive Council, the majority moved for my return to the Osmania.

In the meanwhile I presided over Mr. B.A. Collins' lecture on Science in Agriculture at a meeting of the Nizam College Science Union on 27th August. The same evening Sir Richard Trench came to dine with me at my house and heard with delight my account of the marvels of meteoric astronomy.

The next day I went to dine at N. Kazim Yar Jung's, the Kotwal (Commissioner of Police), Rajah Venkat Rama Reddy, had a prolonged conversation with me about the appreciation of my services by the English officials in State service. Many of my friends later assured me of the sympathy of the British Resident, Col. Sir Terence Keyes also.

On the 28th September my wife went to Mrs. Gough's 'at home' in connection with the work of the Child Welfare Society. On the 30th Mrs. Engler and Miss Linnell (Principal, Mahbubiah Girls' School) dined with us.

At N. Osman Yarud Dawlah's invitation I attended the Paper Chase at Golconda on October 6. The scenery put me in mind of the good and happy old days when as a very young man I used to explore those parts with my friends soon after graduation.

Next day my wife went to tea at Mrs. Collins and two days later she acted as judge or expert examiner in the competion for preparing Indian sweets at the Mahbubiah Girls' School.

On October 14, Prof. Charles P. Olivier, Director Flower Observatory, Upper Darby Pennsylvania, U.S.A. and President the American Meteor Society invited me to become a member of the society and I did so with the utmost pleasure.

Venus was seen very close to Jupiter—a little to S.W., at 4-30 a. m. Indian Standard Time on 20th October 1932.

A bogus representative of the self-styled 'Times Research Bureau' introduced himself to me with references from some well-known people in Hyderabad and I gave him a cheque for Rs. 180 B. G. to obtain the expected publications of the 'Bureau'! Some days later I had a letter from him saying he was about to change his address from Bombay to Calcutta and would write to me soon. Not one of us whom he thus duped has even heard from him since!

My case was discussed at the Executive Council meeting on the 25th of October and decided by a majority in my favours. Sir R. Trench and Sir A. Hydari both left the same evening to attend the R. T. Conference in London.

On October 30 I finished the revision of Mr. F. D. Murad's translation of Walker's Physical Chemistry for the Osmania University. In most places it meant almost re-translation from the latest revised edition of the English text. On 1st November I was offered examinership in M. Sc. II from the University of Lucknow.

As Vice-Principal Nizam College I was discharging the duties of Head-master MadrasaiAliya and, as such, received intimation that the school would be inspected on the 21st and 22nd November.

About this time Nawab Kazim Yar Jung was very friendly with me; he did much to remove the misunderstanding and misrepresentation of facts by my enemies in responsible circles. On 9th November Mrs. Collins, Mrs. Norman Walker, and Mrs. Shapurji Okarji came to tea with my wife. Mrs. Binny called on my wife on the 12th. She had a good knowledge of Urdu and spoke and read the language with perfect ease.

On November 16 I saw 20 Leonid meteors from, 2 h. 25 m. to 3 h. 30 m. I. S. T. My wife went to Mrs. Keyes' fete on the 18th.

On the 25th R. B. the Kotwal called on me (with R. Giri Rao) and disclosed the welcome news of H. E. H.'s commanding my return to Osmania as Principal. I took over charge on the 27th, and the same day at the council meeting got a number of long pending cases satisfactorily settled. Dr. Siadat Ali's grade was definitely decided as commencing on Rs. 500 and with annual increments of Rs. 50 going up to Rs. 1000 as in case of former additional professors. He, Mr. Sayeeduddin, Dr. G. Mohiuddin Qadri, Messrs. Latif Ahmed Faruqi and Abdul Qader Sarwari who had been appointed during my time were confirmed, and Abdus Salam M. Sc. (Osmania) was appointed assistant in the Botany laboratory. The next day I paid 'Nazr' to H. E. H. and the Maharajah.

At the Poetry Society meeting at the Hyderabad

Residency on 2nd December I thanked Col. Keyes for his kind sympathy with me in my recent anxieties and misfortune.

At the College Research Board meeting on the 6th. I settled the question of continuing the scholarship of our Thelogy Research student M. Hamidullah in B. G. currency, to enable him to carry on his work for Ph. D. at Bonn under Prof. Krenkow's guidance.

On 8th December, my father-in-law and I, with other officials, in obedience to H. E. H.'s commands went to the Hyderabad Station to receive the Princes on their happy return from Europe. The same evening (a Thursday) H. E. H. was graciously pleased to honour me with 'khasa' dishes from his table and I submitted Nazar for the honour early next morning. He was pleased to refer to the work at the University and I submitted a brief account of the progress it had already made in various departments.

In the small hours of the morning of 12th December I kept watch for the Geminid meteors and recorded 11 in a quarter of an hour. Early in the day I waited on H. H. the Walashan Prince Azam Jah Bahadur. He graciously consented to honour the Osmania Students Dramatic Society with his presence at the College the same evening and see Goethe's Faust acted in connection with the College Day Celebrations.

On 15th December Mrs. Tasker and Mrs. Armstrong invited a number of Pardah Ladies to tea at Mrs. Tasker's house. My wife also went. The next day my wife and children went to Mrs. Keyes' Christmas Party.

My father-in-law, Nawab Saadat Jung, invited to dinner the same evening a number of our personal friends who had expressed their delight in my re-instatement at the Osmania.

CHAPTER XVII

INTER-UNIVERSITY BOARD MEETING AT HYDERABAD, 1933

ON 4th January 1933 Mrs Tasker called on my wife and gave her a fine local flowering plant for our garden, and selected from our nursery garden a number of 'Gawli nim' seedlings for transplantation in her compound and elsewhere. The 'gawli nim, is said to have been imported from Persia. In the Deccan rocky soil it grows rapidly, attaining a height of 20 feet in a few years. It has pretty leaves and delicately scented flowers. It may be noted here that many people took these seedlings from our garden and changed the scenery of Jubilee Hill roads and the University grounds at Adigmet.

By this time the Round Table Conference was over and Sir A. Hydari and Sir R. Trench had returned. I called on Sir Richard on the 27th and thanked him for his strong support in getting the wrong done to me redressed.

Prof. C. V. Raman was now invited to deliver Extension lectures. He arrived on 9th February and put up at his friend, Mr. Bhaskar Shastri's near my house. After dinner I called on him with Dr. Raziuddin Siddiqi and gave him an idea of the latter's researches in Quantum mechanics.

Next day Prof. Raman called at my house with Mr.

Bhaskar Shastri and we went to leave cards at Prince Azam Jah's, Sir Amin Jung's and at the Residency. I took Dr. Raziuddin also with me. The same evening Prof. Raman's first lecture came off at the Town Hall on his well-known work. I introduced him to the audience in befitting terms. The lecture was a great success.

Prof. Raman's second lecture on Wave mechanics was delivered on the 11th. Next day Mr. Bhaskar Shastri and I showed him the fortress of Golconda and its neighbouring lakes: Osman Sagar and Himayat Sagar. On the 13th Prof. Raman, myself, Mr. Bhaskar Shastri and Dr. Raziuddin were invited to lunch at Prince Azam Jah's. Our conversation dwelt mostly on modern Science and its achievements. In the afternoon Rajah Giri Rao (Judge, High Court) was 'at home' to Prof. Raman. There I met the hero of the Turco-Italian and Turco-Balkan Wars, Raouf Bey. The same evening we heard Prof. Raman's third lecture.

We had lunch at Sir Amin Jung's on the 14th to meet Prof. Raman. He lectured at the Osmania University College the same afternoon at which I presided. The next day we met Raouf Bey at Mr. Subhani's 'at home' and talked of modern Turkey.

* * *

While the work of levelling my compound was in progress, I had noticed the slow disintegration of granite rocks by the action of roots of certain plants, resulting eventually in soil formation and rounding off of boulders. I had described this phenomen in an issue

(vol. 1, No. 3 September 1932) of Current Science, Bangalore and was preparing a more detailed paper incorporating the result of later observations. Dr. B. K. Das (Prof. of Zoology) and Mr. Sayeeduddin (Prof. of Botany) showed much interest in this research and came to my house on 22nd February to take photographs of the typical rocks in various stages of decay.

* * *

Our preparations for holding the Inter-University Board meeting at Hyderabad were now complete. Mr. A. R. Wadia arrived on 24th February. [The same evening at the Poetry Society meeting I met the son of the late Nasiruddin Shah Qachar of Persia and his grand-daughter.] I received a number of delegates at the various railway stations: Mr. Langley, Dr. and Mrs. Woolner, Mr. P. A. Wadia, Sir Ramunni Menon, Dr. Hasan Suhrawardi, Messrs. Clark, and Sen Gupta, Prof. Radha Krishnan, Mr. Duke Dr. Amarnath Jha, Principal Dhruwa and several others between the 24th and the 26th. The Board had its official business meeting on the 27th. We had lunch at the Town Hall, 'at home' at the River Gardens and dinner again at the Town Hall the same evening.

The Maharajah invited us to lunch on the 28th at the Town Hall. The delegates visited the University College and had a prolonged conversation with me and the professorial staff in my office on matters pertaining to the courses of study, standards of efficiency, results of examination etc. with a view to decide the question of mutual recognitions. Later they were shown the University site and plans of buildings in

progress, by the engineers in charge of the work. Nawab Waliud Dawlah, the Vice-Chancellor gave dinner at his house the same evening. The University Council invited the delegates to lunch at the Public Gardens on the 1st of March and I showed Dr. Metcalfe (V. C. Mysore University) our work at the Translation Bureau, the Science and Engineering Colleges. He and all the others were much impressed by the speed and extent of our progress.

On 3rd March my wife attended the Hyderabad Women's Association meeting at Begum Waliud Dawlah's.

Sir P. C. Ray had kindly consented to deliver a couple of Extension lectures gratis and I received him at the station on the 7th. His lecture came off the next day, on which unfortunately occurred the death of Maulvi Abdul Wase 'of the Theology department.' I appointed Qutbuddin Qari, an old scholar of the Osmania, for whose education at the new Egyptian University I was responsible and who had recently returned, to carry on the work.

Sir P. C. lectured at the College Science Union also on the 9th and I presided at it, referring to the work he had done in training so many chemists in Bengal, and also to the difficulties of his predecessor, Dr. Aghornath Chatthopadyaya at Hyderabad. On the 10th the College was 'at home' to Sir P. C. Ray and he delivered his second lecture at the Town Hall the same evening.

Osmania Research Journal, 1933

Soon after post-M.A. and post-M.Sc. work was started at the University College by our scholars I

formed a Research Board consisting of heads of departments and such other members of the teaching staff as had research degrees to their credit or were actually engaged in original work of recognised value, to guide these scholars. As early as 1932 I had prepared a scheme for publishing the results of research conducted by the professorial staff and, on 13th and 15th February 1932 written for the Council's sanction of Rs. 2500 provided annually out of the savings of the scholarships. The scheme lay dormant until my return to the Osmania University when I had to move again for it and obtain sanction by circulation in March 1933.

A letter from the Registrar, Muslim University, Aligarh, dated 24th March, announced that I was elected a member of the Court of the University for 5 years from the constituency of the Central Standing Committee of the All-India Muslim Education Conference.

On 3rd April an emergency meeting of the State Scholarship Committee was convened to extend Mahdi Hasan's period of scholarship in Europe by two more years.

Being appointed examiner in practical physics at the B. Sc. examination of the University of Madras I started from Hyderabad on the 7th and put up at the Connemara hotel on the 8th. Mr. Appa Rao was Joint-examiner. The first batch of 20 candidates was examined on the 8th and the remaining batch of 18 on the 10th. On the 9th I went to tea at Mrs. Ya'qub Hasan's. The examination work was over by the evening of the 10th and I left Madras by the 8.30 p. m. train. A number of friends and students of the Nizam College came to see me off at the station.

On 15th April there was a meeting of the Hyderabad Civil Service Board and after that a meeting of the State Scholarship Committee at which it was decided to award a European scholarship to Munawwar Ali of the Osmania Medical College for medicine. He returned in due course with F. R. C. S. diploma.

Two days later I had Drs. J. C. Ghosh and S. N. Bose (who had come to Hyderabad for conducting practical examinations in chemistry and physics to tea at the College and took them later to see the Nizamiah Observatory.

On 24th April occurred the death of the only son of Mr. Rahmatullah Sharif, step-brother to N. Saadat Jung. After prayers at the new Kachiguda mosque for the deceased I saw a bright fire-ball of at least—5 magnitude at 14 h. 2 m. Universal Time, starting from a little south of Eta virginis and proceeding towards alpha Sextantis. About half-way through Sextans it split up into 3 darkish pieces and disappeared immediately, leaving no streak. No sound was heard either, even after a considerable time, signifying its great distance up in the air.

On 12th May occurred the death of Mr. Mohd. Younus, Deputy Director of District Police, a distant relation of mine, of exceptional perseverance and good all-round knowledge. Next day I left with my wife and family to Bombay for a week's holiday. It rained heavily and nearly all of us suffered from cold and fever for a while. We were glad to return home on the 20th. The trip, in spite of our temporary illness, was a welcome change to my family, having seen

something of the great sea-port and its growing wealth and industries.

Some of our Osmania students had gone to Kashmir forming an excursion party in the summer vacation and they returned hale and hearty on 30th May, calling on Sir Mohd. Iqbal the favourite national poet, on the way.

* * *

On 16th June, Mr. Mehr Ali Fazil very kindly came to inspect the leaking of my house roof and to give his evidence later in the law suit proceeding against me in the High Court.

Two days later I heard of Mohd. Ibrahim's appointment in the usual grade of service in the P. W. D. He was an Osmania science graduate who had taken his B. E. degree from Madras with a State Scholarship. All the same I had to speak to N. Ali Nawaz Jung for his timely help.

At the Maharajah's farewell dinner to Sir Terence and Lady Keyes on the 21st. I again thanked Sir Terence for his past sympathy with me.

On 26th June Mr. Ahmed Mohiuddin conveyed to me the good news of Syed Ahmad Qadri's success in B. Sc. Hons. (Physics) at the University of Manchester. He was given a loan by the State Scholarship Committee for this purpose and I was pleased to see it well utilised.

On 1st July 1933 at Dr. Raziuddin Siddiqi's request I arranged for his personal interview with N. Kazim Yar Jung at my house. The meeting was very agree-

able. The party thence proceeded to Banjara Hill to meet Mr. Jamaluddin also.

On 8th July, in response to Mrs. Sarojini Naidu's invitation I went to her 'at home' to meet Dr. Zakir Husain of the Jami'a-i-Milliah, Delhi, an institution now reported to be in a flourishing condition under his guidance. Our conversation dwelt mostly on Indian home industries.

On 12th July I rambled in the hills bordering the lake of Himayat Sagar to see the disintegration of granite rocks. Three days later, Mr. Wahidur Rahman brought five leechee plants for me from Bihar. I planted them carefully in my garden. They grew fairly well for a few years but died one by one, unable to cope with the drought of recent years.

On the 16th we had meetings of the Physics and Chemistry Appointment Boards and selected Syed Ahmed Qadri B. Sc. (Manchester) for a demonstrator's post in physics and Khalilur Rahman M. Sc. (Osmania) for one in chemistry. The same afternoon I took Mr. W. Rahman and Dr. B. K. Das with me to the Mawla Ali Hill some 12 miles to the N. East. It is one of the two largest laccoliths we have in the Deccan; huge granite domes consisting almost entirely of one solid rock rising from the ground. My watch aneroid registered its height as 200 feet. The other and larger one is at Bhongir some 25 miles further east. We examined the wild flora growing around the rock and the hardy lichen thriving in extensive patches upon its bare surface.

* * *

The Palestine deputation consisting of the Grand

Mufti, Syed Aminul Hasan, Mohammed Ali Pasha, (a former minister of Egypt) and other prominent representative muslims of Palestine, Egypt and Syria visited the University College on the 23rd and 24th April. I showed them the Translation Bureau and briefly described our scheme of vernacularisation. I met them again at dinner on the 25th at Fakhr Yar Jung's and at tea on the 26th at Bahadur Yar Jung's.

At the Council meeting on 6th August I got Dr. Raziuddin Siddiqi three grade increments in the Reader's post to compensate him for his delay in appointment owing to three years Ph. D. work at Leipzig.

Mr. Zahiruddin, lecturer in compulsory morals was promoted to the Reader's grade in the Theology department by the University Council at its meeting on 13th August. The next day at the improvised special convocation I presided on behalf of the Vice-Chancellor and granted the B. A. degree to an Osmania candidate, Mirza Mahmood Ali Beg to enable him to get admission in time at the University of London for advanced studies.

On 17th August I convened and presided at a meeting of the senior professors to discuss the Engineers' recommendations for temporary Science buildings at the University site at Adigmet. The plan was to transfer the Science and other classes to a temporary set of buildings at the very earliest, and proceed leisurely with the permanent buildings of the Arts and Science Colleges etc.

On 20th August I took with me a local photographer and secured good photographs of typical scenery of the granite boulders round Himayat Sagar, in illustration

of rock disintegration by the action of plant roots. These were published in due course in the Research Journal of the Osmania University College.

On September 28 and 29 an interesting cricket match was played between the Osmania University College and the Nizam College. The former scored 305 runs against 128 of the latter on the first day and won finally by 9 wickets, Bharat Chand (Osmania) scoring 95 runs.

On 30th September I was again offered examinership in M. Sc. Part II Paper I, Physics by the University of Lucknow, which I accepted. The next day the University Council appointed Maulvi Fazil Abdul Muqtadir of the Jagirdar College in the lecturer's grade, in place of Maulvi Manazir-i-Ahsan recently promoted to Reader's grade.

* * *

I was busy at this time making arrangements for the arrival of English University boys to engage in friendly debate with our Osmania boys. The idea was a happy one calculated to bring together the educated youth of both countries and give rise to mutual appreciation of merit.

After several days of training and rehearsal I selected Syed Mohd. Abbas, Mungikar and Manik Rao from our Union Society speakers. The British Debating Team arrived on the 18th. I went to receive them with Mr. Speight and several members of the Union Society. Messrs. Greenwood, McGilway and Jones were accommodated at the Rocklands Guest House After lunch I arranged for an excursion to Osman Sagar

with some of our leading staff and students. There was a chance of showing them the Divali illuminations that night in the mercantile quarters of Hyderabad and Secunderabad, but incessant pouring rain cut the trip short. Next morning they saw the new University site and buildings under construction. The debate took place the same evening at the Town Hall; the Home Secretary N. Zulqader Jung volunteering to preside. Mr. Greneenwood of Oxford proved to be by far the best debater. Mr. McGilway from Scotland and Mr. Jones from Wales displayed much humour and wit. Mr. S. M. Abbas of our team was a fluent speaker. He and Messrs. Mungiker and Manik Rao gave a good account of their training and ability in the contest.

From the debate we went to Mr. and Mrs. Speight's dinner and spent some time with them. There was again heavy rain that night. Our boys went to the Guest House again on the 20th and fraternised with the members of the British team intimately, taking several group photographs. In one group the British boys appeared in picturesque Hyderabad costumes borrowed from the Hostel and other students. The whole affair was a mighty success—full of cheer and happy recollections for all the students.

On 13th November Dr. Raziuddin Siddiqi married N. Kazim Yar Jung's daughter. The same day poor Osman Yarud Dawlah died at a comparatively early age.

My watch for the Leonids on the 17th (from 2 h. 45 m. to 4 h. 15 m. I. S. T.) resulted in observing a fairly good number—19, inspite of obtrusive haze. Dr. Mir Waliuddin's Extension lecture came off at the

Town Hall on the 23rd, on the subject of Science and Philosophy, and I presided.

Soon I had to get things ready for our student's accommodation in the old State Library compound to see the Viceregal procession. My detailed report on the progress made by the University since the last Viceregal visit was already despatched to Government. On 29th November I was present at the Hyderabad Station, with other officials for the reception of their Excellencies the Viceroy and Lady Willingdon, present also at the tea party at the Maharajah's and at the banquet at the Chawmahalla Palace. There were fine speeches at the banquet, with some references to Berar also.

On the morning of the 30th we saw the military parade at Secunderabad and my wife and daughters went to the Ladies Club at Bashir Bagh for Lady Willingdon's visit. My daughters saw Lady Willingdon again the next day (1st. December) at the Mahbubia Girls School. In the evening I attended the Garden Party at the Hyderabad Residency given in honour of their Excellencies.

Dr. Maqbul Ali (Osmania medical scholar) returned to Hyderabad and came to dine with us on December 5. He was our guest later for a few days. I introduced him to Col. Norman Walker for his employment in the medical service as a State scholar. Before the week was out he was fixed up as a civil surgeon in the anaesthetics department of the Osmania hospital, Afzal Ganj.

About this time a fresh trouble beset the University

College—the unfortunate 'Khatta' affair—arising from a quarrel between some History M. A. students and their senior professor. Undue prominence was given to it by interested parties in the local papers out of unfriendly motives obviously towards the University. It was a deep laid plot; but honesty is the best policy. It failed ignominiously without doing any serious harm either to me or to the University in general, as will be seen shortly.

I observed the Geminid meteors in fairly good numbers on the 12th.

Next day, Zain Yar Jung, the State Architect called at my office and displayed plans of the Arts College building. In the afternoon we had Sir Rabindra Nath Tagore's lecture at the Town Hall. At the Poetry Society meeting on the 14th at the Maharajah's Sir R. Tagore gave us a most delightful recitation of some of his Bengali and English poems.

At a function of our College Day celebrations on the 16th the Students' Dramatic Society performed an entertaining drama at which the Maharajah, Sir R. Tagore and Sir A. Hydari were present with a number of other guests. It was generally conceded to be a great success. Later Sir R. Tagore very kindly recited some of his newer poems. Two days afterwards at Sir Amin Jung's 'at home' we met Sir R. Tagore again.

I was glad to see the first volume of our newly launched Osmania University College Research Journal meeting with warm welcome and unstinted appreciation by leading critics and scholars in India and abroad.

It was bilingual and covered such diverse fields as mathematies, oriental history, English grammar and Urdu literature.

CHAPTER XVIII

MY LAST YEAR OF SERVICE AT THE OSMANIA UNIVERSITY

ON 2nd January 1934, I received a confidential letter from the Political Member's office inquiring about the 'Khatta' agitation. I informed him at once of the facts of the case and how I had dealt with it.

In the meanwhile our College cricket team returned from its North Indian tour, Bharat Chand winning a Cup at Nagpur.

On the 20th we read in the papers about the terrible earthquake that devastated Bihar, killing thousands of people and ruining hundreds of families.

At the M. C. C. Cricket Tournament at Secunderabad, Sir A. Hydari asked me on the 25th to arrange for some of our Osmania boys to meet the English Public Schools boys who had come over here on their Indian tour. I selected five and the meeting was cordial. At the Maharajah's lunch to the English boys I was present with Mr. Qazi Mohd. Husain and Alam Khan of the Intermediate Class. Other educational institutions were also represented.

On the 30th I received an invitation from Mr. H. H. Nininger, Secretary of the Society for Research on Meteorites, Denver, Colorado, U. S. A. to become a member of the Society, which I gladly accepted. About

this time I was writing a paper for our Research Journal on the Naoki shower of meteorites of 1928, describing an aerolite lent by Mr. Hosain Ali Khan. Mr. Armstrong, Director General, District Police very kindly placed at my disposal his office file on the subject and I gathered much useful information from it about this important shower.

On 2nd February I received a letter from the Secretary Royal Society of Arts saying I was invited by the Council of the Society to become a fellow, and I was glad to accept the invitation. During these days I was preparing the 'Khatta' case for the information of the University Council and was busy counteracting internal and external interference.

Dr. Stella Kramrisch delivered her Extevsion lecture, on Indian Art this year also at the Town Hall on 2nd, 3rd and 4th February. They were on the some lines as last year.

On February 11th at the State Scholarship Committee meeting I was glad to get Messrs. Abdul Mu'id Khan and Rahatullah Khan, both M. A's of the Osmania University, scholarships for research in Arabic, primarily at the Egyptian University, Cairo.

The same day the University Council took up the 'Khatta' case and after hearing my confidential report referred the matter to a Sub-committee with the Chief Justice as president. It held its meeting on 1st March at 10 a.m. and again at 3-30 p.m. The professor and the M. A. student concerned were questioned and their statements recorded.

I was to have represented the University at the forthcoming meeting of the Inter-University Board at Delhi. The Home Secretary asked me to let him do so. As I had already attended a former meeting and was now busy with the "Khatta" affair, I acceded to his request.

Next day I had Col. and Mr. N. Walker and Major and Mrs. Scott to dinner with us. Before dinner we all went to the Nizamiah Observatory next door and the Director kindly showed the guests the 15 inch telescope (equatorial) and its accessories at work. After dinner I entertained the guests with an exhibition of my collection of meteorites recently purchased from Ward of Rochaster, U. S. A.

On 5th March my wife was asked to serve on the Committee of visiting ladies for Keyes Girls' School, Secunderabad and she gladly agreed to do so.

N. Kazim Yar Jung called on 8th March and consulted with me about Dr. Raziuddin Siddiqi's promotion to the first grade. I told him I had already decided to move the Council in the matter, having marked out the provision for the necessary expenditure in the budget.

On 18th March Prof. S. N. Bose called on me and talked about X-Ray spectroscopic work he was doing at Dacca.

On the 20th the University Council met and finally disposed of the "Khatta" affair in accordance with the findings of the Sub-Committee and my recommendations. Much credit goes to Col. Sir R. Trench, his sound judgment and conciliatory policy. It was a great relief to all concerned.

Next day the Syndicate condoned the shortage in the College attendance of N. Zahiruddin Khan, a promising young Paigah nobleman, (son of Nawab Moinud Dawlah), which enabled him to appear at the forthcoming B. A. degree examination of the Osmania University.

In the evening I showed Prof. S. N. Bose my collection of meteorites and gave him some fine large-sized single crystals (perfectly regular) of selenite and pyrites, which I had purchased from Ward's, for X-Ray analysis at his laboratory at Dacca.

My paper on the Naoki shower of meteorites published in Vol. II of the Osmania University College Research Journal was now ready and I gave a reprint copy of it to Mr. Armstrong on the 29th at his house where I met Mrs. Armstrong and their young son. N. Zulqadr Jung was also there and later called on me for 'Id greetings. I told him how I was linking up India with the rest of the world in the international scheme of meteoric research by my continuous observations at Begumpet.

On 4th April Sir A. Hydari asked me to attend a meeting of the University Buildings Committee at the Finance Office. Sir George Anderson's scheme fell tremendously short of our legitimate requirements. I had already sent in my comments on it officially and now explained to the Committee categorically our immediate requirements and how to provide for expansion in the near future. At Col. Sir R. Trench's suggestion the matter was postponed till he would discuss it over with me in detail. I met him at his

house two days later and throughly scrutinized all the schemes that had been prepared : Sir G. Anderson's, our State Engineer's and my own. It was a great pity Sir George Anderson's visit to Hyderabad before the preparation of his scheme was very brief. He could meet few directly responsible officers of the University and thus form an adequate idea of the scale aimed at. This was exactly what Sir R. Trench wrote in his report, expressing his agreement with practically all I had said in mine.

At the University Council on 8th April the question of Curatorship of the Translation Bureau was again taken up. No candidate was proposed that was really more competent than the present incumbent (Maulvi Inayatullah B. A.), and at my suggestion the matter was again dropped.

I had to examine the Madras B. Sc. candidates in Practical Physics on 9th and 10th April, so I started on the 8th and returned on the 12th. There were a number of Nizam College students among the examinees. The work of the subsidiary physics candidates was on the whole more satisfactory.

Research papers were now coming in steadily and I asked Dr. Syed Abdul Latif to act as honorary secretary of the Research Board.

At the Council meeting on the 29th I moved for splitting up the Biology department into two: Botany and Zoology. Dr. B. K. Das was proposed for Zoology professorship. I supported it, but wanted Mr. Sayeeduddin to be appointed professor of Botany at the same time, as he was senior in service and was also actively

engaged on the classification of Deccan flora. Both the appointments were sanctioned, along with a number of accessory arrangements.

The Editor, Current Science, Bangalore, having asked the University to nominate some person from its staff to serve on the extensive Board of auxiliary editors of the Journal, my name was sent up.

On 9th May my watch for Eta Aquarids recorded 16 of these meteors in about an hour.

Two days later when Mr. Mahadev Gadgil, Secretary Osmania Engineering College, called on me, I told him to co-operate with me in moving for Dr. Raziuddin's promotion as he was attached equally to both the University College and the Engineering College; and he promised to do so.

The temporary buildings of the University were now ready at Adigmet and we were to move shortly into them. At the meeting of the Council on 13th May Rs. 35,000 were sanctioned for breaking up our old laboratories and transferring their equipment to the new buildings.

In the meanwhile with great difficulty and strenuous effort I succeeded in getting our Osmania scholar from Egypt (Qari Qutbuddin) fixed up to a lecturer's post in the Rs. 250 to 400 grade for teaching Morals.

On 21st May I took with me a competent amateur photographer to take snapshots of plants disintegrating rocks, *in situ,* which I had observed in my rambles in the hills near Fath Maidan.

Two days later I attended a meeting of the committee instituted to draft revised bye-laws of the University in

the light of past experience. I was well aware of their defects and ambiguities, but insisted on a cautious policy.

On 6th June I had to see the District Superintendent of Roads to arrange for buses to convey our students from their homes in the city to the new University buildings.

Three days later Messrs. Ibne Hasan and Habibur Rahman (assistant professors of History and Economics respectively) who had returned from study leave in Europe, with London University degrees called at my house for higher grades and I promised them help at the right moment.

I knew that a proposal was being put up to abolish the post of Principal Osmania University College simultaneously with the appointment of an official (borrowed or retired) from British India as Pro-Vice-Chancellor and had made up my mind not to go back again to the Nizam College vice-principalship under a junior after all the valuable services I had rendered to the Osmania University, the Nizam College and the Educational department in general.

On 20th June I received a confidential letter from the Home Secretariat asking if I had any objection to Mr. Ilyas Barny's appointment as Curator Translation Bureau in place of Maulvi Inayatullah retired; and Mr. Ali Yar Khan's as personal secretary to Sir A. Hydari. I replied I had none whatsoever.

[Five days later I purchased a new Vauxhall car (14 h. p. 6 cylinders) for Rs. 4,050 B. G. at Hormasji's]

On 5th July at a meeting of the University Council I had to oppose some suggestions for curtailing the number of admissions to University College. I argued

that after having built such extensive buildings capable of accommodating ever so many more students, it would be very difficult to convince the public of the logic of the ruling, if adopted. Eventually I succeeded in passing fairly satisfactory regulations.

On July 13, we had asked Dr. Weir to tea at the University Association and on the following day I read out my presidential address to the Hyderabad Science Association on 'Meteors and meteoric iron in India, in which I discussed among other matters the long-forgotten meteorite fall in the reign of the Emperor Jehangir so admirably described in his autobiography.

On 21st July there was a meeting of the State Scholarship Committee. Mr. Dilsukh Ram's study loan of £210 was cancelled.

On 25th July the University Council decided to refer all cases of promotion to the new P. V. C. about to be appointed to the University (Mr. A. H. Mackenzie, retired D. P. I. United Provinces, a graduate of a Scottish University and an Associate of the Royal College of Science London in Physics); but there was an exception also.

[Two days later I remitted 24 dollars to Mr. H. H. Nininger, Director the Meteorite Laboratory, Denver, Colorado, U. S. A. for some fine and rare meteorites I had purchased from him.]

On 1st August Maulvis Abdul Qadir and Ghulam Nabi of the Theology and Arabic departments respectively, were given further extensions in service by the University Council, at my recommendation. They were highly experienced and still very active teachers and their possible successors were still in training.

The next day after Mr. Satya Murti's lecture at the Nizam College I came to know definitely of Sir A. Hydari's proposal to send me back to the Nizam College as Vice-Principal and of H. E. H.'s sanction of Mr. A. H. MacKenzie's appointment as Pro-Vice-Chancellor, Osmania University.

On 4th August Dr. and Mrs. Maqboul Ali (the latter a highly qualified lady-doctor from Trinidad) called on us with their friend Dr. M. R. Siddiqi, after dinner. We were glad to hear her talk of the great historical island of the antipodes reminiscent of the days of the Spanish Main, (as depicted in the stories of Robinson Crusoe etc.) and British Colonial expansion.

Next day at the Maharajah's dinner I had to satisfy the curiosity of my 'friends' as to what I had decided about my future career after leaving the Osmania.

On 6th August, the new British Resident Col. Tate, came to see the University College library and laboratories with Nawab Waliud Daulah, the Vice-Chancellor. I had gathered a fine collection of the latest publications on scientific and historical geography—the most uptodate probably in India. Both the visitors expressed their delight and appreciation at seeing this literature. N. Waliud Daulah in fact borrowed on the spot several books dealing with world travel, to read at home. Some of the demonstration experiments I had arranged for in the physics laboratory were both instructive and entertaining and attracted much attention. The same evening at Miss Pope's request I inspected her science laboratories recently put up for B. Sc. girl candidates, and made useful suggestions and recommendations.

On 10th August, R. Satya Narayan returned from London with a B. Sc. Honours degree in physics.

In conformity with my scheme for research in Mathematics, I put up Dr. Raziuddin Siddiqi's case for promotion to the first grade before the University Council on 22nd August and got it through as a special case for appreciation of real merit.

On 24th August Mr. Virabadrudu asked me and some others to tea at his house to meet Sir S. Radhakrishnan of Madras. Sir C. V. Raman was also present.

About this time my wife had again a severe attack of kidney inflammation, and a number of ladies came to see her: among them Mrs. Toorky, Mrs. Maqboul Ali and Mrs. S. A. Qadri.

On 17th September Mr. A. H. MacKenzie, the new P. V. C. arrived and I received him at the station with a few other members of the University staff. I was informed the same day of Mr. Ali Yar Khan's appointment as Director, Information Bureau. About this time we were busy transferring the University College and its accessories to the new temporary Science buildings.

Nawab Fakhrul-Mulk a former Minister of Education died on the 19th and on the following day I opened the first anniversary meeting of the College Telugu Union.

On the 21st I was glad to see Dr. Abdul Haq, professor of Arabic get married to Mr. Ghulam Ahmad Khan's daughter. Next day the University Association was 'at home' to meet Mr. MacKenzie. We exchanged a few words. I could see clearly his attitude towards me, and I stood up on my dignity. He asked me to

tea on the 25th and when I went to the Government Guest House where he was then putting up he said, that in spite of strong advice from a number of important local English officials he had decided to ask Government to abolish the Principal's post as he wished to take up that work himself. I welcomed him to do so, having made up my mind to retire from service before time.

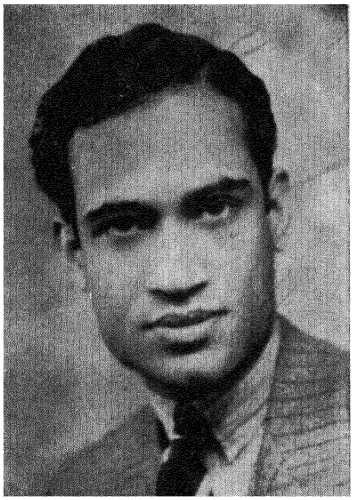
On 7th October, Sir A. Hydari called at my office at the new University site and told me (what I knew already) that H.E.H. was pleased to give me the option either to go back for the remaining two years of my service on present salary to the Nizam College as Vice-Principal, or retire on pension. He advised me confidentially not to retire as there was still the possibility of my being compensated—Heaven only knows how and when. I knew only too well all that he had done to oppose me and refused to listen to his vague utterances.

I handed over charge with the keys of the College treasury to Mr. MacKenzie on 19th October and wrote officially to the Home Secretary that I had definitely decided to retire on pension—two years before attaining my 55 years of age. As I had not availed myself of any privilege leave during my ten years of service at the Osmania University, inspite of working during the vacations, I was entitled to six months leave on full pay in any case. Sir R. Trench advised me to ask Government to grant me full pay for two years as a special concession owing to the abolition of the post of Principal Osmania University College. I did so and through his powerful support the Executive Council

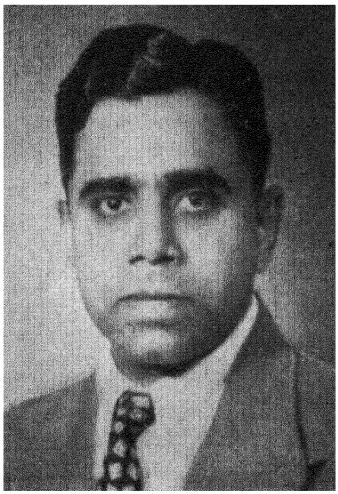
sanctioned my application by majority, but Sir A. Hydari's determined opposition deprived me eventually of this concession and I was granted only six months leave on full pay.

On 11th November the College staff, present and some past students were 'at home' to bid me farewell at the University. Mr. Ilyas Burny spoke on behalf of the teaching staff and office, recounting my services to the University. Mr. G. M. Khan, Vice-President of the College Union Society, representing the present students read out a most affectionate address and assured me of their undying love and gratitude. N. Fakhr Nawaz Jung also read an address and thanked me on behalf of the past students for all that I had done for them.

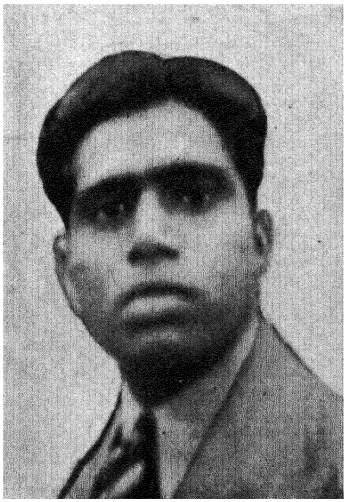
Family Members



Mirza Mahmood Ali Beg
B. A. Hons. London



Mohd. Abdul Majid Khan
B. A. Madras

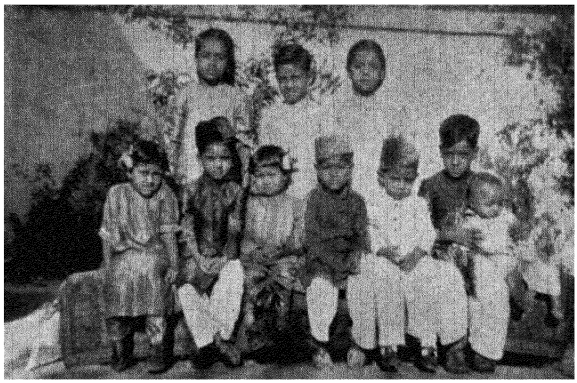


Mohd. Abdul Waheed Khan
B. Sc., Madras



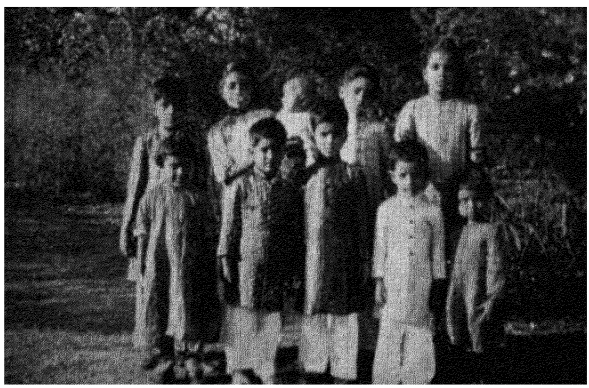
Dr. Mirza Hamid Ali Beg
M. B., B. S.

Family Children



1st Row : **Farida Mahmood, Azam Mahmood, Rais Mahmood**

2nd Row : **Shakira Hamid, Moid Wahid, Asma Hamid, Ikram Mahmood, Malik Majid, Saadat Mahmood, Hasan Hamid**



ALL THE CHILDREN STANDING

CHAPTER XIX

LIFE OF RETIREMENT

AFTER a few days' rest I resumed my old studies —with greater relish and application than was possible during the days of Government service. I had not done much compilation of text-book of Physical Optics and Course of Pure Mathematics for B. Sc. students of the Osmania University owing to pressure of official duties. Now I was free to work as I liked, and in due course finished both the compilations.

I was also able to give much more attention to meteoric astronomy. My observation of meteors increased and my collection of literature on the subject grew rapidly. At Prof. M. N. Saha's request I subscribed to Science and Culture, Calcutta, started in 1935 and contributed to it several papers and notes etc., e.g. a paper on Novae in the February issue of Vol. I, 1936 and on meteors in Vol. II, Nos. 2 and 3.

My observation of meteors and of the Zodiacal Light led to some interesting discoveries like the meteoric shower of November 21, 1935, radiant in Monoceros, also scores of new radiants in both the northern and southern latitudes. The novel feature of moon-lit meteors, and the inner and outer cones of the Zodiacal Light. Most of these matters were published in Popular Astronomy U.S.A. and Nature London ; some in the Observatory, Greenwich. The Editor of Nature passing on my reports sent to him to the Director Meteors' Section

of the British Astronomical Association (at the time Mr. A. King) ; he wrote to me to send my reports direct. I did so and he continued to publish them in the Observatory till his death.

I contributed several papers to the Society for Research on Meteorites, Denver, Colo., U.S.A., and they were published in Popular Astronomy. Some I sent to Current Science, Bangalore. My presidential address to the Hyderabad Science Association at its meeting held on 14th July 1934 was published in a brochure entitled 'Meteors and Meteoric iron in India', which attracted much attention in Europe, America and the Far-East. My reference to the Jalandhar fall of meteorite during the reign of Jehangir gave rise to several comments in various scientific papers. In this way I got into touch with other workers in the field, Drs. Orlov and Astapowisch of the Sternberg Astronomical Institute Moscow, U.S.S.R., Dr. P.M. Millman of Toronto, Canada and several in Japan. Prof Charles P. Olivier later introduced my work to Prof. Harlow Shapley at Harvard and he very kindly sent me gratis all the valuable literature on meteors published in the past from that great centre of astronomical research.

One important effect of publishing the brochure was to obtain from Prof. F. Krenkow, formerly Prof. of Islamic Studies at Bonn, now settled in Cambridge, England, a number of references in Ibn-al-Jauzi's Muntazam to past meteoric showers and exceptionally bright fire-balls. This encouraged me to study Arabic literature and Islamic history also. Prof. D. S. Margoliouth of Oxford, with his masterly Knowledge of Arabic classics and histories very kindly helped me to

have access to the original sources. In course of these studies I prepared my paper entitled 'Meteoric Showers Past and Present' (published in the Osmania University Research Journal, Vol. III 1935) and another entitled the Black Stone of the Ka'bah (published in Pop. Astr. Vol. XLVI, 7, 1938).

I had some interesting correspondence with Sir Reginald Glancy also when he was at the India Office as a member of the Council of the Secretary of State for India, on the subject of the swords made for Jehangir from the Jalandhar meteorite.

From Dr. George Sarton's History of Science and a score of other authoritative works in English : Draper's Intellectual Development of Europe and Hitti's History of the Arabs and above all, the Cyclopaedic treatises of Al-Tabari, Ibn-al-Athir etc. I learnt much about Arabic contribution to Science and Culture, and have from time to time published a number of papers on the subject ; e.g. in Islamic Culture, Hyderabad Vol. XVI Nos. 1 and 2, 1942 and Hyderabad Academy Studies No. 4 (in Urdu). A comprehensive work on the subject, on a greatly enhanced scale is in preparation and I hope to finish it in my life-time. [I am glad to say the work has been published in 2 Vols. by Nadwat-ul-Musannifin Delhi in 1950.]

On 10th April, 1936 I attended a meeting of the Court of Muslim University, Aligarh. H. E. H. the Nizam's Government paid travelling allowance to all the members from Hyderabad (who were either in gazetted service or had retired from that service). N. Fakhr Yar Jung and Mr. Fazl Mohammad Khan

also attended this meeting. We all put up at N. Sadr Yar Jung's as his guest.

On July 29th, while watching for delta Aquarids I accidentally saw Comet Peltier (1936 a) at about 20 h. U.T. roughly at alpha=335° and delta=+31½°. It had a faintly perceptible tail.

An exceptionally bright fire-ball passed over Hyderabad on 13th October 1936, at about 7 h. 33 m. I.S. time. It burst with a loud report and must have dropped several meteorites but as the end point of the meteor could not be accurately noticed (and few people in our country are 'meteor-minded') all my efforts to trace them ended in failure. The phenomenon is, however, described in Science and Culture, Vol. II No. 5 and Prof. Olivier has mentioned it in his Meteor Notes in Pop. Astr. Vol. XLV. January 1937.

At about this time I published my drama on modern life, entitled Zamir; both in Urdu and English based on my experiences.

1937

My activities in the year 1937 were very varied and pleasurably worth recording. At Prof. Saha's request I wrote for Science and Culture a brief article on Hyderabad for the information of delegates attending the 24th meeting of the Indian Science Congress here. It was published in Vol. II, No. 7, 1937. I could attend only the first day's meeting of the Congress on 2nd January and hear Rao Bahadur T.S. Venkatraman's presidential address on the Indian Village, its Past, Present and Future as I had to see my wife's parents

and other relations off at Bombay on their Voyage to Jiddah for Haj. They left Hyderabad on 1st January. My sons, reading at the time in the Intermediate Class, Nizam College had gone to Northern India for a short holiday. I decided to go in our small Vauxhall Car to Bombay with my wife, daughters and a niece. We started on 3rd January at 9.45 a.m.; reached Humnabad three hours later—a distance of 96 miles; had lunch there and resumed journey at 2.15 p.m. The scenery at Naldrug near the frontier of the Dominions was picturesque, though wild with plenty of ups and downs; the old fortifications, bastions, battlements and moats recalling the troublesome times of Mahratta and Pindari raids. We reached Sholapur at 5.15 p.m. and put up for the night at the Travellers Bungalow, having travelled since morning a total distance of 185 miles.

Next morning, we started at 9 a.m. after a hearty breakfast. The broad road was deeply rutted—in some places over a foot deep, all along its length and breadth, owing to excessive traffic and perhaps insufficient supervision. We had to proceed very carefully, but despite all precautions had a breakdown at 7 miles to Poona, when one of the tyres burst from a hidden horseshoe cutting through it in the ankle-deep dust of one of the ruts. With difficulty we pulled the car out of the rut and substituting a spare wheel from the stepney reached Poona in the evening, having travelled 155 miles since morning. We found suitable accommodation for the night for the entire party at the Cosmopolitan Irani restaurant in the main street.

We left Poona at 9-45 next morning (5th January) after a savoury Indian breakfast and resumed our

journey. Our road across the Western Ghats was by no means kept in a commendable condition. There were of course, natural difficulties enough that could not be eliminated or softened; a long uphill rise sometimes ending abruptly in a precipitous descent, or a sudden sharp turn. Distorted frames of several wrecked cars rusting in the valleys served as warning to careless drivers. Nevertheless the scenery all round was exquisitely beautiful—grand, at the Bhore Ghat station and its environments. We met a number of heavily laden lorries struggling up the steep inclines or sliding down them inspite of application of brakes; and were glad to reach Bombay safe and sound at 2-15 p. m.

We put up with our relations going for Haj at their hotel for a day. On the 7th, after lunch we saw them get on board their ship S. S. Akbar in the Prince's dock. A large gathering of local Muslims had collected on the spot. The ship weighed anchor at 6.30 p. m. and we bade the party good-bye.

Next morning after a thorough cleaning and oiling of our car we left Bombay on the return journey at 1 p. m. We had gone barely a few miles when the battery stand got loose and had to be fastened as best we could from material sold by travelling bullock carts, with the assistance of friendly bus-drivers; the petrol tank lost its covering cap and a padding of cloth was extemporised to serve as substitute. In this condition we reached Poona at 8 p. m. after a run of 110 miles and put up at the old Irani restaurant.

On the 9th we got the damages to the car repaired at the Deccan Motor Works in the city. It was past noon before we could resume our journey. By the time

we covered about 75 miles it was sunset. The night was dark and the road lonely. Our recent experience forced us to drive slowly and we reached Sholapur at 10-15 p. m., putting up for the night at the same Travellers Bungalow as on the outgoing Journey. Next morning we started at 10.45 after a good rest and returned home without any accident at 5-30 p. m.

Among the letters awaiting my return was one from Dr. Astapowitsch of Moscow, inviting me to take part in a two-years' programme of observing telescopic meteors between 11 p.m. and 1 a.m. every night, under the general scheme of the International Astronomical Union. A comet-seeker of wide range was needed for this work. None could be had anywhere in India. I tried to extemporise a handy telescope but it would not do.

Prof. Nil Ratan Dhar who had come here in connection with practical examinations in Chemistry at the Osmania called on me on 28th March and we went out for a long walk in the evening. Next day after dinner Mrs. Dhar and her mother came to see my wife and daughters and had a nice conversation with them.

My father-in-law and party from Haj landed at Bombay on 18th April and wished to take a little rest before returning by train. Nawab Zahiruddin Khan B. A. (Osmania) sent me a copy of his account of trip to U. S. A. and the great Exhibition, on 21st April.

We went to receive N. Saadat Jung and other relations at the Hyderabad station on the 27th and were

overjoyed to see them in good health, after their uncomfortable voyage and Arabian travels.

There was a violent thunderstorm in Hyderabad at 2-30 p. m. on 17th June '37. A house in the crowded quarter of "Mu'azzam Jahi" was struck with lightning, the electric current thus produced playing strange freaks with the ceiling and door-hinges etc. At about the same time a number of trees in Nawab Salar Jung's City garden were also struck. I have collected these details with such information about the meteorological condition of the air at the time as could be obtained. They are rather interesting and are published in Hyderabad Academy Studies No. IV, 1944.

British Association Meeting at Hyderabad-Deccan

The British Association for Advancement of Science was visiting India to take part in the activities of the Indian Science Congress Jubilee meeting at Calcutta next year (1938), H. E. H. the Nizam's Government invited the members of the Association to spend a few days at Hyderabad and Aurangabad on their way, and they consented to do so. Among the members were several professors whom I wished to meet, one of them was Prof. G. W. O. Howe whose lectures in electrical engineering I had attended in 1911 at the City and Guilds College, London.

On December 19, I went to receive the party (with the official hosts) at the railway station. Prof. Howe had changed little. He found no difficulty in recognising me; I had been writing to him off and on (as to Prof. Alfred Fowler also) all these years on scientific topics. Through him I was introduced to the Presi-

dent, Sir James Jeans, Sir Arthur Eddington, Sir Henry Tizard, Prof. F. J. M. Stratton and Prof. F. G. Baly of Edinburgh. The members of the British Association proceeded thence to the Osmania University and after a brief inspection of the various buildings and laboratories gathered to listen to Sir James Jeans' highly interesting discourse on Astronomy. I accompanied Prof. Howe and inquired after some of his old colleagues at the Imperial College during my student days. Prof. Mather had died recently and I had read his obituary notice in Nature. Prof. Howe said he wrote one for the Institute of Electrical Engineers.

After Sir James Jeans' lecture I told him we had all travelled with him 'Through Time and Space' and the vogage was very pleasant indeed. He humourously remarked that he wished his long railway journey in India would be equally pleasant. A short trip to Golconda in the afternoon gave us further opportunities of speaking to Sir Arthur Eddington on current topics. We thence rushed back to the Town Hall to hear his lecture on recent astronomical discoveries. At 7-45 we assembled again to dinner at the University and I happened to sit opposite to Dr. Tutton, an old A. R. C. S. (and later, an Oxford graduate). I complimented him on his work on Crystallography before the advent of X—Ray technique. He said he knew I was working on meteoric astronomy through accounts of my observations etc. published in Nature. Among other matters I told him I was in touch with Dr. L. J. Spenser (Keeper of the Meteorites section of the British Museum of Natural History South Kens.) and had

received a large number of his reprinted papers on meteorites (published mostly in the Mineralogical Magazine). We talked of the dear old Royal College of Science, London and its past professors. After dinner he introduced me to Dr. and Mrs. Abbot, in rather flattering terms. Dr. Abbot was here preparing a scheme for technical education in the State; as I had retired from government service it never occurred to any one to arrange for my meeting him and exchanging views.

The party left the same night for Ellora etc. and I bade a hasty good bye to Prof. Howe and Dr. Tutton. It is regretting to note that the latter gentleman did not long survive the rigour of tropical voyage in his ripe old age.

Indian Economical Conference of Hyderabad

The Indian Economical Conference or Congress held its 21st sessions in Hyderabad. Mr. Habibur Rahman and Dr. Anwar Iqbal Quraishi were local secretaries. Mr. Thomas read his presidential address at the Town Hall on 28th December. In the afternoon Dr. D. G. Karve's lecture on Population Problems in India was also interesting. Next evening, at the River Gardens 'at home' to the delegates of the Conference, I had a talk with Prof. V. G. Kale and a number of other guests. We proceed thence to the Town Hall again to hear Prof. Kale's lecture entitled 'Life in Action.'

1938

I had assured my life with the Government Insurance Office, the All-India Oriental Life Insurance Company

and Gresham's for myself and my family. Although I retired two years before my expected time and my sons were still at school, I managed to continue payment of premia; and the policies now began to mature. These were a great help to me in making adequate provisions for the education of my sons and the marriage of my daughters.

In the first week of April, it is painful to relate, there were several communal riots in Hyderabad instigated mostly by wirepullers outside the dominions. A number of lives were lost and much damage was done to property. Such a thing was unheard of in the whole history of the State.

On 27th April an earthquake shock was felt in the City and suburbs at 1 h. 5 m. p. m., followed by a harsh rumbling noise. No damage resulted luckily to life or property. It is believed to have been caused by a landship not far off.

On 2nd May I received intimation of the success of my elder daughter in the Cambridge Senior Local examination with enough credits to get admission to college. Her optionals included Higher mathematics. She was betrothed to Mr. Mahmood Ali Beg, an Osmania scholar with a B. A. Honours degree from London. He was vice-principal, Intermediate College, Gulbargah at the time.

On 8th May, at 7 p. m., Venus and Mars were seen very close together. Venus being a little to East of Mars.

I had some money put by (about Rs. 7,000 in all) in the Travancore Quilon Bank and the Deccan Commercial Bank, to oblige some friends and was about to

withdraw the same, when on 23rd June I heard the painful news of the utter collapse of these banks. There was nothing to do except bear the losses with philosophical calmness. All the same, I passed a sleepless night and, by way of relief, sat out in the open watching for meteors, when, to my great astonishment I observed at 4 a.m. next morning a beautiful lunar halo with partial Parhelic Circle and Horizontal Arcs, a phenomenon peculiar only to Arctic latitudes. It had rained heavily the previous day and the sky was coated with a thin layer of what must have been fine snow crystals, the moon only a few degrees above the horizon in the East. I have described it in detail in Sc. and Cult. Vol. IV. No. 2, August, '38.

It gives me some satisfaction to say that in due course I was appointed by the High Court one of the liquidators of the Deccan Commercial Bank in liquidation and with the co-operation of my colleagues was able to pay the depositors two annas in the rupee with the money immediately available. As there were many law suits to be conducted we resigned and the High Court at our recommendation entrusted the business to a local pleader. The Travancore Quilon Bank paid eight annas in the rupee three or four years later and may pay a few annas more, which it did.

Hyderabad Educational Conference Meeting

On 18th and 19th August I presided over the deliberations of the eleventh meeting of the Hyderabad Educational Conference at the Town Hall. After the tenth meeting the finances of the institution began to

get involved (it would appear) and no general meeting was held in the long interval. Patient reconstruction set the affairs of the Conference in order and it is a pleasure to note that the scholarships loaned to deserving students now amount to Rs. 525 a month. Up till now, over Rs. 1,00,000 have been paid out as scholarships.

* * *

1939

Roqia Begum, my elder daughter's marriage with Mr. Mirza Mahmood Ali Beg was celebrated on 17th February (Friday) and was attended by a large number of relations and friends.

In the meanwhile the communal riots continued off and on; a bomb burst in a busy quarter hardly a furlong from Mu'azzam Jahi Market, doing much harm to wayfarers, on the 13th of March.

I was occupied throughout the year with the study of Islamic history by day and observation of meteors and the Zodiacal Light at night. The number of meteors recorded (with the right ascension and declination of their starting and end points, magnitude, colour and persistence of streaks) ran up to 1275 for the whole year. On 17th December at 5-30 a.m., I.S. time I saw the usual cone of the Z.L. to consist really of two distinct co-axial cones, the outer one fainter than the inner. The same fact was noticed (but not so clearly) on the 12th also. The phenomenon has been described in Nature, Vol. 145, 9th March, 1940, page 393, and in Hyderabad Academy Studies No. II. 1940.

December was a busy month. I attended the opening address of the Indian Philosophical Conference at the University on 19th December. Two days later the Indian Mathematical Conference also held its sessions at the Arts College Osmania University, Dr. N. R. Sen, Ghosh Professor of Applied Mathematics, Calcutta, delivered his inaugural address. The same evening I delivered a semi-popular lecture on Meteoric Astronomy with special reference to meteor craters. Some typical specimens from my collection of meteorites, (with one from the meteor crater, Arizona, U.S.A. now called the Barringer Crater were exhibited).

1940

My father-in-law, Nawab Saadat Jung's health now began to deteriorate. He decided to go to Bangalore for a change during the hot weather. On 5th May we had a telegram saying he had developed acute heart trouble. My wife and I rushed off the same evening via Wadi and on reaching Bangalore on the 6th found him in a precarious condition at the Victoria Hospital. He insisted at all cost to return to Hyderabad. Through the kind offices of Mr. Younus Sait, a leading personality in that city, we reserved a railway compartment and brought N. Saadat Jung with the utmost care (in spite of pouring rain) to the station in charge of a physician and started for Hyderabad; but he expired on the way on the 7th. Our relations and friends who had come to receive him mourned his loss. He was known all over the State as a pious and highly virtuous man, conscientious and able, loyal even to the extent of self-sacrifice. His services to Government in

the Revenue department and later to his sovreign-master in the Sarfe-khas are well-known and will be long remembered.

On 28th May I attended a meeting of the Kamal Yar Jung Committee (constitued by the A.I. Muslim Educational Conference) with Mr. Fazlul Haq of Bengal as president, at Hyderabad and made a few recommendations to relieve the hardships of Muslim students in British India to get adequate training in Science and thus qualify for admission to medical and engineering institutions. I laid stress on the system of awarding scholarships to deserving candidates that is adopted by the Hyderabad Educational Conference. Hope these recommendations will receive proper attention.

Lady Hydari died on 15th June and I attended the third day prayers for her at the Afzal Ganj mosque.

Prof. F. Krenkow has been supervising from Cambridge the work of the Da'rat-al-Ma'arif, Hyderabad, an institution for editing and publishing rare and important Arabic MSS. In 1927 he had advised the Da'rat officials to show me the proofs of Qutbuddin Shirazi's Tanqih-al-Manazir, an invaluable work on Optics, to ensure correction of figures etc. before finally printing them off. When I was asked whether I would undertake this duty as a labour of love, I gladly gave my consent. Thereupon I was told that the work had to be temporarily stopped; but after a year or so a complimentary copy was sent to the University library of the complete printed book without any proof being forwarded to me! I heard later Prof. Krenkow complaining of several mistakes in the book

The Da'erat had later acquired a fine MS copy of Al-Khazini's Mizan-al-Hikmat from Cairo—a remarkable treatise on mechanics and hydro-statics etc. with masterly discussions on the theory and practice of many types of balances. At Prof. Krenkow's suggestion I was asked to edit this work and write a short note on its scientific value and other important characteristics. Maulvi Sayyid Hashim Nadwi, the Secretary of the Da'erat co-operated with me for over a month and I gave him the required note after looking into the proofs on 20th June. An Arabic translation of the note has been published with the book as an appendix. Khazini was undoubtedly a great scholar of the time of Sultan Sanjar and anticipated a number of later scientists in the discovery and correct interpretation of many important physical phenomena.

7th August, 20th October 1940 (and 15th February 1941) were remarkable dates for their Triple Conjunction of Jupiter and Saturn. I observed this very rare phenomenon and brought it to the notice of the students of Astronomy in Hyderabad.

Maulvi 'Abdul Qadir Siddiqi, Dr. Syed 'Abdul Latif and some professors of the University (retired from or still in service) started an institution entitled the Hyderabad Academy and elected Dr. Mir Valiuddin of the Philosophy department as Honorary Secretary and Dr. Hamidullah as Joint-Secretary. Ever since his appointment at the University Dr. Valiuddin was engaged on research and was the most frequent visitor at my house after my retirement. He consulted me as to how to make the Academy a real success. I advised him to publish regularly some of the research work

conducted by its members in the form of a Journal or Studies. He agreed to do so and by good fortune I was able to persuade Nawabs Akbar Yar Jung and Dost Mohd. Khan to give substantial pecuniary help to the Academy as sympathizers. As a life-member Dr. Raziuddin Siddiqi had also paid Rs. 100 to the funds of the institution. At Dr. Valiuddin's request their Highnesses the Prince and Princess of Berar graciously consented to be Patrons of the Academy.

I was elected president of the Working Committee, at the second elections on 28th August. The institution has published valuable studies containing articles from scholars (most of them members of the Academy) like Maulvi Abdul Qadir, Dr. S. Abdul Latif, Dr. M. Raziuddin Siddiqi, Drs. Valiuddin, Hamidullah, Qari Kalimullah, S. Wahiduddin and Profs. Ganesh Dhareshwar, Mir Ahmed Ali Khan and Abdul Majid Siddiqi. I have also contributed several articles.

[Later on, Nawab Salar Jung Br. kindly consented to be Vice-Patron and donated Rs. 300 *per annum* for 7 years towards publication of the Academy Studies. N. Yasin Jung has also paid Rs. 100. Through N. Samad Yar Jung's support and Dr. Mir Valiuddin's efforts, the president of the Executive Council paid the Academy a donation of Rs. 1,000 O. S. on 21st June 1943.]

1941

On 13th, 14th and 17th February at about 8 p.m. S. I. time, I saw a new comet in position about (alpha=$23\frac{1}{2}°$, delta=$-3\frac{1}{2}°$), (25°—2°) and (25°/0',0°) respectively of magnitude 3. 5 m.

On 28th August Sir Akbar Hydari left Hyderabad service to take up new duties under the Government of India at Delhi.

During the Academy week, on the first day, 6th November, through the kind offices of N. Samad Yar Jung, H. H. the Prince of Berar formally inaugurated the Academy in the Exhibition Hall, Public Gardens, with a speech in Urdu. Her Highness the Princess also very kindly sent a message in Urdu. Papers were read by several of the above-mentioned members on interesting subjects before a large gathering of the educated public of Hyderabad, and have been published in H. A. Studies No. 4.

My daughter having invited us to Shadnagar (where Mr. Mahmood Ali Beg was holding meetings of the District Teachers' Conference) I stopped there from the 4th to 9th December. Being in a poetical mood, the first day I composed in Persian 'a Hymn to God Almighty, which was published subsequently in the Nida'-e-Haram, Delhi. On the 8th some visitors from the city brought the news of Japan's participation in the War against the Allies. It affected me so much that on way home I composed another Persian poem on the horrors of the war—which was later broadcast from the Hyderabad station and published in the Daily local papers. [This was not the first time I had indulged in poetry.] Apart from several poems composed in younger days, I published one in the August 1940 issue of Ma'arif. A 'zamgarh,' in imitation of Iqbal, exhorting the Musalmans of the whole world to wake up from their sleep. A poem on Sultan Mahmud of Ghaznah was published in Burhan, Delhi, in its issue

of April 1942. I intend printing a collection of all my poems in a book form in due course.

On 20th December during the All-India Oriental Conference meeting at Hyderabad I read a paper entitled 'Need for better co-operation between Oriental Scientists and Arabic Scholars---published in H. A. Studies No. 3, 1941.

* * *

1942

On 8th January we heard of the death of Sir A. Hydari at Delhi. The dead body was brought to Hyderabad on the 11th and I attended the funeral prayers at the Khairatabad mosque.

At the request of the members of the Hyderabad Economic Committee (affiliated to the Osmania graduates Association) I presided at their meeting on 12th January and in my inaugural address suggested several schemes to utilise the natural resources of the dominions–among others planting sandal wood among acacias (so common in the districts) which, from experience in my own compound I have found to serve as good root-hosts for sandal.

Dr. Abdul Mu'id Khan, now Secretary to the Editorial Board of Islamic Culture wrote to me on 6th September '42 that the Managing Board of the institution had elected me a member of the Editorial Board and asked me to accept the membership. I did so.

Through Mr. Syed Mohd. Azam's courtesy we were able to deliver this year's Academy lectures in Urdu at the City College Lecture hall, from November 7 to 13.

Owing to my grand-daughter's dangerous illness I could not attend the lectures everyday. I was present on the first and last day and read my paper on the Possibility of Life on other Planets, on the 8th of November. The lectures, I am glad to say, were reported to be as well attended as in the previous year. I am grateful to God for the recovery of my grand-daughter, in course of time.

* * *

1943

On 23rd February at 10 p. m. I observed a comet in Ursa Major at (alpha=179,°8 delta=55°)—1942 (Whipple).

On 10th May I heard the good news of the appointment of my elder son, Mohd. A. Majid Khan (B. A. Madras University) with a good start with the Hyderabad Construction Company through the help of its Managing Director. My second son, M. A. Waheed Khan (B. Sc. Madras University) has been working as a staff officer in the A.R.P. scheme since its inauguration. On 21st June was announced the happy news of my second daughter, Bashirunnisa Begum's success in the Cambridge Senior Local Examination.

Errata

PAGE	LINE	FOR	READ
4	24	Steward's	Stewart's
11	2	Persian	pension
18	30	Reggis	Reggio
19	2	Coats	Coast
19	11	Coulds	Clouds
67	12	James	James's
67	18	aducation	education
68	25	boul-	boule-
68	26	-wards	-vards
95	last	lived. There	lived there,
114	19	Noble	Nobel
151	last	1950	1915
169	17	Mr. Burnett	Mr. McEwen
196	26	expensive	extensive
198	19	organized	organic
214	last but one	three	four
368	26	Proceed	proceeded
368	27	Life in Action	Life is Action

12. The Phulmari Hyderabad, India Aerolite (Contributions from the Society for Research on Meteorites, P. A. Vol. XLIV, December 1936.
13. The Meteorite Falls in or about the City of Hyderabad Dn., as reported by Eye-witnesses (Ibid).
14. Comparison of Meteorite Falls during a.m. and p.m. Hours (Ibid, P.A. Vol. XLVI, January 1938) Referred to in Prof. F. A. Paneth's Halley Lecture 1940 on the Origin of Meteorites (Oxford University Press).
15. The Physics of Meteoric Phenomena (Current Science, Bangalore, Vol. VI, June 1938.
16. On the Meteoritic Origin of the Black Stone of the Ka'bah, (C.S.R.M., Pop. Astr. Vol. XLVI, August-September 1938).
17. Public Lecture on Meteoric Astronomy delivered at the 11th Conference of the Indian Mathematical Society—published in the Mathematical Student, Vol. VII No. 4, December 1959.
18. The Zodiacal Light (Hyderabad Academy Studies No. 1, 1939).
19. Synopsis of Meteor Observations at Begumpet, Dn. in 1939 with a Record of some interesting Meteorite Falls and Finds over the Earth (H.A.S. No. II, 1940).
20. The Zodiacal Light, Second Paper (Ibid).
21. Synopsis of Meteor Observations at Begumpet, Dn., in 1940 (H. A. S. No. III, 1941).
22. Observational Clue to the Size of Meteors (Letter to the Editor of Nature, Vol. 148, No. 3752, 1941).
23. Need for Better Co-operation between Oriental Scientists and Arabic Scholars"—Read at the 11th All-India Oriental Conference held at Hyderabad in December 1941 (H. A. S. No. III, 1941).
24. Scientific Researches of Arabs and Other Muslim Scholars in the Mediaeval Ages—Paper read in Urdu at the Inaugural Meeting of the Hyderabad Academy, presided over by H. H. The Prince of Berar (H. A. S. No. IV, 1942).
25. Possibility of Life on other Planets—Urdu Paper read

before a meeting of the Hyderabad Academy (H. A. S. No. V, 1943).

26. Synopses of the Meteor Observations at Begumpet in 1941 and 1942 (H. A. S. Vol. VI 1944).
27. The Realities of Human Life—Urdu Paper read before a meeting of the Hyderabad Academy (H.A.S. No. VII, 1945).
28. The Thunderstorms and Lightning Strokes of June 17, 1937 at Hyderabad-Deccan (Ibid).
29. A Siderite of the Fourteenth Century—Letter to the Editor of Nature, Vol. 154, No. 3910, October 7, 1944.
30. Hissing Sounds During the Flight of Fireballs--Letter to the Editor of Nature (vol. 155, No. 3924, January 13, 1945).
31. On the Hissing Sounds heard during the Flight of Certain Meteorites (C. S. R. M. Pop. Astr. Vol. LIII January 1945).
32. 'The Old Moon in the Arms of the New' (C. S. R. M. Pop. Astr. Vol. LIII No. 7, August, 1945)—Mentioned in Nature Vol. 158, No. 4014, October 5, 1946).
33. Synopsis of Meteor Observations at Begumpet, in 1943 and 1944 (H. A. S. No. VIII, 1946)—Mentioned in Nature, Vol. 158, No. 4016, October 19, 1946.
34. A Decisive Test for the Presence of Even a Highly Rarefied Lunar Atmosphere (C. S. R. M. Pop. Astr. Vol. LIV No. 6, June 1946)—Comments by J. Kaplan in the same issue. G. Herzberg's discussion in the October Issue of P.A.
35. Atomic Energy—An Urdu Paper (H. A. S. No. IX 1947).
36. Zodiacal Light, Third Paper (Ibid 1947).
37. "Atomic Bombs, the Tektite Problem and 'Contraterrene' Meteorites" (Contributions of the Meteoritical Society, P. A. Vol. LV, No. 4, April 1947).
38. The Most Brilliant Epoch of Muslim Scientific Research-First Half of the Tenth Century A. C.—Paper Read before a meeting of the Academy (H. A. S. No. 10 1948).
39. Streak Meteors without Perceptible Nuclei Read at the 11th Meeting of the Meteoritical Society at Albuquerque

U. S. A. (C. M. S. Pop. Astr. Vol. LVI) No. 9 November, 1948).

40. Synopsis of Meteor Observations at Begumpet in 1945, 1946 and 1947 [Research Journal, Osmania University (Science) Vol. XII, 1948].

41. Probable Meteoritic Origin of Certain Specimens of Nickel Coins Struck in Bactria before 200 B. C. (H. A. S. No. XI 1949—Read at the 13th Meeting of the Meteoritical Society at the Museum of North Arizona, Flagstaff, Arizona, U.S.A. on September 5, 1950).

42. Synopsis of Meteor Observations at Begumpet in 1948 and 1949 (Research Journal, Osmania University—In the Press).

43. Synopsis of Meteor Observations in 1950 (H.A.S. No. 12 195[illegible]—In the Press).

44. Disintegration of Igneous Rocks by the Action of Roots of Plants, IIIrd Paper (Research Journal, Osmania University—In the Press).

Note: Reprint No. 79 Flower Observatory, University of Pennsylvania, U.S.A. "Some Results From Data Secured By the American Philosophical Society"—Reprinted From Proceedings of the American Philosophical Society, Vol. 94 No. 4, August, 1950, gives a good summary of Mohd. A.R. Khan's life-work on Meteors).

II. Literary Papers, mainly on Islamic Subjects.

(a) A Brief Survey of Muslim Contribution to Science and Culture. (Islamic Culture Magazine, Vol. XVI Nos. 2 and 3 1942)—Published in book form by Shaikh Mohammad Ashraf of Lahore.

(b) Some Useful Suggestions for Muslim Students, (The Crescent, Surat, Id-ul-Fitr No. 1943).

(c) Indian Musalmans and their Neglect of Science (Ibid, 1944).

(d) Muslim Contribution to Meteoric Astronomy (Islamic Culture Magazine, Vol. XX. No. 4, 1946—Mentioned in Nature, Vol. 162, No. 4112, Ph. 289-91, August 21, 1948.

(e) Muslim Patronage of Jews in the Middle Ages (The Star, Bombay, February 16, 1947).

(f) Muslim Share in the Advancement of Science (The Star, Bombay, May 5, 1947)—Reprinted with Illustrations in Islamic Review, August, 1949, pp. 16-19.

(g) Re-building Truly Muslim Life in the Modern World, (Makki Publications, Ramadan Annual, July, August 1947, Durban S. Africa).

(h) Further References to Cosmic Phenomena in the Kitab-al-Muntazam of Ibn-al-Jauzi and a few in Tarikh-e-Rahat Abza, India (Islamic Culture, Vol. XXII, April 1948)—Mentioned in Nature, August 21, 1948.

(i) Muslims Should Regain Their Past Supremacy in Science. (Makki Publications, Ramadan Annual, July, August, 1948, pp. 51-55).

(j) How Did Scientific Research Get Out of Muslim Hands? (Islamic Literature, Lahore, September, 1949, pp. 22-24).

(k) Do Muslims Realise Their Present Position in the World? (Islamic Review, Woking, May, 1949, pp. 26-28).

(l) Ibn-Sina (Islamic Literature, Lahore, Novomber 1949, pp. 41-42).

(m) Fear of God Alone Can Solve the Difficulties of the Modern World (The Crescent, Surat, 1949 Makki publications, etc.)

(n) Suhrab and Rustam—A Prose Version of the Shah Namah Story and of Matthew Arnold's Poem with Life Sketch of Firdausi and a Bird's-eye-view of his Shah Namah (H.A.S. No. XI. 1949).

(o) Shaik-at-Ra'is Ibn-Sina (Islamic Culture, Vol. XXIV No. 2, April 1950, pp 117-22).

(p) Ibn-al-'Awwam-al-Ishbili's Kitab-al-Filahah, Part I (Ibid Vol. XXIV, No. 3, July 1950, pp. 200-17).

(q) Ditto Part II (Ibid, No. 4, October, 1950, pp 285—99).

(r) Muslim Scientific Discoveries (written for the Jubilee Issue of Islamic Culture—in the Press).

The following Urdu books written in addition to a number of compilations and translations of works on Science and Mathematics for the Osmania University :—

1. Zamir or Conscience Personified (Published in Hyderabad —English Version printed in Madras 1936) & Mentioned in School and Society (Vol. 70. No 1821 Nov. 12, 1949, A. A. A. E., New York, U. S. A.)
2. Musalman Shahi Khandan aur Unke Silsilay (Translation of Stanley Lane—Poole's Muhammadan Dynasties, with slight modification and additional matter—brought up to 1940—Idara-e-Adabiyat-e-Urdu, Hyderabad-Dn. 1943).
3. Khulasa-e-Tuhfat-al-Nuzzar or Safar Namah-e-Shaikh Ibn-Battutah (Maktaba-e-Burhan, Urdu Bazar, Jami' Masjid, Delhi, January, 1948).
4. Qurun-e-Wusta Ke Musalmanon Ki 'Ilmi Khid-mat, 2 Vols. (Nadwat-al-Musannifin, Jami 'Masjid Delhi, 1950).
5. A Bird's-eye-view of Islamic History, complete in one Volume (Ibid—in the Press).
6. Mas'ala-e-Ta'lim—A Monograph on Modern Methods of Education, for Hyderabad Educational Conference.
7. Muraqqa-e-Khayal—A collection of M. A. R. Khan's Poems, mostly in Persian, Some in Urdu (Hydera-bad-Deccan)—English versions by the author published in various Journals, from time to time :—e. g.

(a) Hymn to God Almighty (Makki Publications, Ramadan Annual July 1949 P. 4, Durban).

(b) Khitab ba Musalmanan, with original Persian (Islamic Literature, Lahore, August 1950, pp. 48-49). English Version "Rouse Thyself from Sleep, from Deep, Deep Sleep"-published in Islamic Review, Woking and other journals.

The Persian Poem has been composed to music by Mr. Stanislaw-Galas of Krakow, Poland, Professor of Music).

(c) Adhan, or the Muslim Call to Prayer (Islamic Review, Working, August, 1950, P 12; With original Persian in