

OFFICE OF THE REGISTRAR
10 JAN 1903



MAGAZINE





Sirdar V. Patel and the Union Society

The Presidency College Magazine

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PUBLISHED TERMINALLY

Annual subscription for all except present students of the College Rs. 2-8-0
Price of single copy One Rupee.

VOL. V

DECEMBER, 1929

No. 2

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Contributions to the Magazine from the Members of the Staff and the past and present students of the College will always be gladly received by the Editor.

All communications should be addressed to the Editor, "Presidency College Magazine," Madras.



Vol. V

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No. 2

Legislation Against Child Marriage

By Sir P. S. Sivaswami Aiyar, K. C. S. I., C. I. E.

THE enactment by the Indian Legislature of the child Marriage Restraint Act and the assent thereto of the Governor-General would seem to render it unnecessary to discuss the expediency of the legislation. The Act will come into effect on the 1st of April 1930, and its operation cannot be affected by the curses of its opponents. The only purpose which may be served by a discussion of the measure is the education of public opinion. The success of the enactment in achieving the aim of the legislature will depend upon the extent to which society ranges itself on the side of the law, and supports the observance and enforcement of it. I am one of those who consider the legislation beneficial to the country. I propose to state briefly the reasons which have weighed with me and many others in favour of the legislation, in the hope that some at least of those who have not made up their minds on the question may be induced to give their loyal adhesion to the new law.

The first question to be considered is whether Child Marriage is an evil, and if so, whether it prevails to a large extent. According to the definition adopted in the new Act, Child Marriage denotes a marriage between a boy under 18 years of age and a girl under 14. Where marriages take place between persons of such tender years, it goes without saying that their own wishes are seldom taken into account. That the age of marriage has been slowly rising even without any legislation may be conceded, and it may also be allowed that, in some cases, there is a disposition on the part of the parents to consult the wishes of their children. Even if we do not go the length of saying that the wishes of the parties themselves should be the predominant factor in the formation of a life-long union, it may certainly be urged that the wishes of the parties to be married should be fully taken into consideration. But, in the vast majority of cases of Child Marriage, the parties are either too young to express a choice or their inclinations are not considered at all. It may be said that the existing system has not been productive of any serious unhappiness in the married life of the parties and that it has not led to any breach of marital obligations. But the idea of being mated together like cattle by others must become more and more distasteful with the growth of education and the diffusion of modern ideas. This would be the result, even if parents were guided solely by a regard for the best interests of their children. The present is not an age in which a wife is dear to her husband, as Sita was to Rama, on the ground, among others, that she had been chosen as his bride by his father. But mercenary motives play a prominent part in the settlement of matches. With the political emancipation of women and the growing consciousness of their right to opportunities for development, the revolt

against the system of Child Marriage is bound to be very pronounced in the future. That the existing system leads to premature consummation and maternity, and seriously interferes with the education of girls in consequence of their withdrawal from school as soon as they enter upon their conjugal life are facts which cannot be disputed. The evils of too early consummation and maternity are patent to every observer and do not require to be proved by the testimony of medical witnesses. The fact that some communities like the Brahmins who have practised early marriage still survive in the struggle for existence without losing their intellectual endowment does not prove the absence of deterioration. It may well be urged that under a more national system of marriage, these communities would have developed far greater physical and mental vigour than they now possess. The deterioration in the physique of mothers, their lowered vitality and diminished power of resistance to diseases and the high rates of mortality from child-birth and among infants are some of the obvious results of the existing social custom. We do not deny for a moment that there are other contributory causes also. But the fact that there are a number of causes, combining to produce these evils, does not prove the harmlessness of our practice. One evil, at any rate, which it is impossible for the opponents of the measure to deny is the chances of widowhood among children. The raising of the age limit of marriage is, of course, no insurance against widowhood, but every increase in the age limit is bound to save children below the limit from the lifelong miseries of widowhood. No one whose mind is not hardened by familiarity with the existing conditions would refuse to seek a remedy for these evils.

The next matter for consideration is the extent to

which the practice of Child Marriage prevails. It is pointed out in the report of the Age of Consent Committee that the total number of girls married before the age of 15 is over 8 millions, and that the total number of girls married below the age of 10 is over 2 millions. It cannot, therefore, be argued that the practice has not attained any such proportions as to call for a remedy. It has also been pointed out in the report that notwithstanding a tendency to a rise in the lower limit of the age of marriage, the pace is far too slow for society to be content with it and to trust merely to the influence of a change in public opinion or in the conditions of life. The help of the legislature is required to bring about in the near future a general raising of the age of marriage. It has been urged by the opponents of the measure that legislation in social matters, and especially in regard to usages mixed up with religious beliefs, must be deprecated. But there is no absolute constitutional bar against such legislation, and there have been several occasions when legislation in social matters has been introduced in advance of the opinion entertained in orthodox circles. In every case, it depends upon the gravity of the injury caused by the particular custom or institution. There is no general principle that under no circumstances should any legislation be undertaken which is in advance of the sentiments and opinions of the community concerned. Under any system of representative Government, legislation must follow the opinions of the majority of the legislature, except in matters which are absolutely excluded from the purview of the legislature. The orthodox objection to the raising of the age limit is based upon the ground that, according to the Hindu law, the marriage of girls before the attainment of puberty is obligatory and that, as the large majority of

girls attain their puberty at the age of 13, the new legislation virtually prescribed post-puberty marriages. It is not possible to contend that marriage after puberty is illegal or invalid according to Hindu law. The opponents of the measure, therefore, take up the position that the performance of marriage after puberty derogates from the spiritual efficacy of the marriage ceremony. There are some texts of the Smritis which favour the view that the postponement of marriage till after the attainment of puberty is a sin on the part of the parents. But the texts of Hindu law are many and divided. They do not speak with a single or certain voice. Nor is there any consensus of opinion among Pundits as to their interpretation. It is not possible for me to discuss the Sastraic aspects of post-puberty marriage within the limits of this article. I would refer those who wish to study the question for themselves to the brochure on 'Marriage after Puberty' published by the Right Hon'ble V. S. Srinivasa Sastri under the authority of the Madras Hindu Association. All the relevant texts are quoted in an appendix, and, after a dispassionate and critical examination of the texts, the following conclusion is arrived at by the learned author. "The verdict of the Smriti-writers is at least as much in favour of, as against, the marriage of Brahman girls after puberty. The academical argument for early marriage has, therefore, not even half a leg to stand upon. It is directly opposed to the Vedas and to nearly all the Grihya Sutras, supported but partially by the earlier Smritis, and favoured wholly only by the later Smritis. It is, therefore, emphatically without Sastraic sanction, if by this expression is to be understood the collective verdict of the Sastras, and not the pronouncement of this or that individual Smriti-writer whom ignorance and custom have set up as the sole

authority." If the objection to post-puberty marriage on Sastraic grounds fails, there is really no argument against the legislation except the authority of blind custom.

The question then arises as to the form which the legislative remedy should take. It is urged by some that as the evils of Child Marriage result from too early consummation and maternity, rather than from the celebration of the marriage itself, the remedy should take the form of postponing consummation instead of raising the age of marriage. But a moment's reflection will show the inadequacy of any prohibition of consummation before a certain age. It is obviously impossible to bring to light and punish offences which are not committed in the light of day, but in the privacy of home-life. The celebration of marriage being usually attended with publicity, it is easy to deal with infractions of a law postponing the age of marriage. Such a measure will indirectly secure the postponement of consummation also. But it is not correct to say that the evils of Child Marriage are confined to those resulting from premature maternity. The prevention of the widowhood of girls below the age of 14 is itself an immense benefit to society, and this can be accomplished only by penalising marriage below the prescribed age.

The next question is whether the celebration of marriage below the age limit should be visited with punishment or the marriage itself should be declared null and void. As between the two remedies, there can be no doubt that the invalidation of pre-puberty marriages will be a far greater wrong in the eyes of all who attach a sacramental character to the ceremony of marriage. They will be far more shocked by the invalidation of the sacrament than by the slight diminution in the unseen *Adrishta* or spiritual efficacy of the ceremony.

Lastly, it is urged by the opponents of the measure that, in spite of the law, there will be many evasions of it in consequence of the want of an adequate public opinion behind the legislation. That there may be several instances of evasion of the law, as of many others, is not conclusive against the legislation. Even if it does nothing else, the fear of the Act and its comprehensive provisions for punishing all who take part in the marriage will have a considerable effect in moulding public opinion. But there is no reason to believe that the Act will be a dead letter. There are many instances already of post-puberty marriage; but they are now clandestinely performed for fear of social obloquy. A compulsory postponement by law of marriage till after puberty will prevent any social reproach, and hundreds of parents who are now compelled to bestow the hand of a daughter on some mercenary or unworthy bridegroom, owing to their inability to find a suitable match before the attainment of puberty, will welcome the new law as a beneficial measure which will relieve them from the agony and hardships now endured by them in their search for a bridegroom before the fatal hour of puberty arrives.

[We should like respectfully to congratulate Sir P. S. Sivaswami Aiyar on his just and courageous attitude at a critical time in the social history of our country. Ed.]

Gupta Art

(Continued from Page 6 of last Issue)

Section II: Cave Architecture

THE Gupta architectural works can be divided into two classes, namely, excavations and structures. The former were an adaptation and development of the style which had been in vogue in the pre-Gupta period and the examples of which we have in Karle, Kanheri, Nasik, Sanchi and elsewhere. It is in these cave temples that the Indian design, taste and skill are seen at their best and in their most original forms. For the co-ordination of the plastic and pictorial arts, and for the light they throw on the evolution of the Indian architecture from wood to stone, they are of priceless value.

Udayagiri. The earliest examples of the Gupta cave works are those at Udayagiri near Bhilsa in Central India, one of which bears an inscription dated in A.D. 401. The caves are more of sculptural than architectural interest and give the earliest illustrations of Pauranic scenes carved in stone under the Guptas.

Badami. The caves of Badami in Bijapur district, Bombay Presidency, form a collection of Saiva, Vaishnava and Jaina shrines excavated in the sixth and seventh centuries. There are four caves. One has a sculptured relief of Siva's Tandava, two are dedicated to Vishnu and the fourth to the Jinas. All the caves show by their similarity of style a contemporaneity in date; and an inscription in one of the caves gives the clear date of 550 (A.D. 579). These monuments were first discovered by Burgess and described by him (with

two plates) in his *Report on Belgam and Kuladgi Districts*, published in 1875. Fergusson¹ first pointed out in 1876 the close resemblance between the Badamic cave and the Indrasabha and Jāgannath Sabha at Ellora and consequently their belonging to the same age, putting an end thereby to the chronological speculations which had been till then in vogue. The Badamic caves are thus of singular interest from the architectural, sculptural, religious and chronological points of view. Fergusson thus describes one of the monuments of the place. "Though not one of the largest, it is still a fine cave, its verandah measuring 70 feet with a depth of 50 feet, beyond which is a simple plain cell, containing the *Lingam*. At one end of the verandah is the Narasingha Avatar; at the other end Vishnu seated on five-headed serpent, Ananta. The front pillars have each three brackets, of very wooden design, all of which are ornamented by two or three figures, generally a male and a female, with a child or dwarf—all of considerable beauty and delicacy of execution. The inner pillars are varied and more architectural in their forms, but in the best style of Hindu art." A comparison of Vishnu on Ananta with the Buddha on the Naga at Amaravati gives a clue to the iconographical evolution from the one to the other in a space of two centuries.

Saranath. A third and, in some respects,² the most remarkable example of monolithic architecture is that of the miniature Vishnu shrines, a large number of which have been dug up at Saranath. It is the earliest example

1. See his "History of Indian and Eastern Architecture" (1876 edn.), p. 261, 439-40 and 444 (for plans). The importance of the structural monuments at Badami is pointed out elsewhere.

2. E. B. Havell's "Ancient and Mediaeval Architecture of India" (1915), p. 96-98.

of Vishnu's *Sikhara*, which Mr. Havell contrasts with Siva's *Stupa*, the *Sikhara* symbolising life and the *Stupa* death. (Mr. Havell gives an illustration of it in his "Ancient and Mediaeval Architecture of India", p 97.) The *Sikhara* is crowned by an *Amalaka*. The water-pot, *Kailasa*, is missing. The sides of the *Sikhara* are adorned with sun-windows. Mr. Havell observes: "Vishnu watches for the approach of his lively bride Lakshmi or Sri, who is Ushas, the Vedic dawn-maiden." The monolithic *Sikhara* was afterwards reproduced, with elaborations, in the structural *Sikhara* at Buddha Gaya and elsewhere.

Ajanta. Of all the cave excavations of the Gupta period those of Ajanta are the most magnificent. It is the opinion of the world's best artists that these works not only indicate the height to which the Gupta art reached, but mark the acme of human achievements in some respects. The caves combine architecture with sculpture and painting. The paintings form a marvellously copious and imposing collection, and have extorted the encomium of artists, not only as the oldest available specimens of the Indian pictorial art, but as some of the best specimens of human skill in the world.

The Ajanta hill is situated at a distance of four miles to the south-west of a small village called Faridpur, in the extreme border of the Nizam's Dominions. It is about fifteen miles from Pahur, the last big station on the British frontier. A small river, the Bhagora, rises near the caves, and winds through the village of Faridpur from which the visitor to the caves has to go across a distance of four miles of jungle, tenanted by wild animals and watered by the Bhagora and its tributaries.

The caves are in the midst of a crescent-shaped valley, an ideal glen for the secluded life of the Buddhist monks for whose sake they were excavated. They are

now situated in a land of forests, wild beasts and silence; but at the time of which we are speaking they were busy with the pious throngs of Buddhist Bhikshus and Bhikkunis and their lay disciples, young and old, rich and poor, who resorted to them for listening to their discourses and sermons. The bustle of the pious, however, must have been sufficiently secluded from the bustle of the ordinary world—the bustle of the court, the market and the town. With its situation and scenery, Ajanta must indeed have seemed to be a regular paradise, an ideal spot for the practice of that solitary contemplation, that undisturbed communion with nature to which the Vanaprasthas and Sannyasins of old and the Buddhist Bhikshus of later times devoted their lives. In glowing sentences Sister Nivedita has sung the glories of the place and its ancient tenants, and shown how the murmurs of the running waters and the voices of the water-falls must have been in singular unison with the intonation of the ancient psalters and the chantings of the sacred texts. The beauty, the glory, the awe, and the majesty of Nature, always present before the pious onlooker, must have certainly impressed him and fostered that sense of human littleness and that feeling for self-discipline and aloofness from the temptations of the flesh, for which the Sangha was deservedly famous.

The Ajanta caves are excavated in this semi-circular valley from east to west. There are as many as 29 of them, which have been numbered by the Archaeological Department starting from the eastern end. They form, like the houses in a street, a row of monuments in a big amphitheatre of more than 600 yards, rising in different levels from 30 to 100 feet over the Bhagora stream. The caves do not belong to the same age. They represent centuries of hard and faithful labour, and have been in

fact chronologically divided into four groups. Experts have inferred from the situation and the style of the paintings that the central caves must have been the earliest, and the side ones excavated in the subsequent centuries. These central caves lie immediately in front of the stairs which lead to the general terrace on which the monuments are situated. They form the Nos. 7, 9, 10, 11, 12 and 13 of the archaeologists. Those next in date to the central caves lie to the west of them. They are on a slightly higher level and generally regarded, together with their sculptures and paintings, as the most exquisite works of the Gupta period. Human eye can never have a better feast than that afforded by the reflections of these paintings at the foot of the ravine. The caves of this group are generally numbered from 14 to 20. The caves belonging to the third group, which have been generally assigned to the post-Gupta period, are immediately to the east of the first group, forming in fact the easternmost group of the whole. Differing widely in size and dignity, they have been generally numbered 1 to 6. Those belonging to the fourth and latest group are the westernmost, and are usually numbered 21 to 27. They are separated from the second group, referred to above, by a ravine through which, in the rainy season, a water-fall leaps in magnificent cascades to form a deep pool below. From the incomplete character of many caves in this group we have to surmise that the whole process of the excavation work must have been stopped on account of the lack of royal patronage, in consequence of the almost universal triumph of Brahmanism over the creed of the Tathagata. One peculiarity in this last group is that sculptures play a larger part than paintings. As has been already said, the first two groups must be attributed to the Gupta period and the other groups to the

post-Gupta period, though, of course, the inspiration underlying the whole is Gupta.

The monuments of Ajanta can be divided, from the standpoint of their purpose, into two classes, namely, *Chaityas* and *Viharas*. In the *Chaityas* the length considerably exceeds the breadth; and the design, as in a Christian church (which must have been of Indian origin), consists of a central nave separated from the two side aisles by rows of pillars. The roof is vaulted. Facing the entrance is a semi-circular apse enclosing a dagoba or relic shrine. Of the 29 monuments at Ajanta, five are *Chaityas*, and the other twenty-four *Viharas*. It is natural that the latter form the majority, as the Buddhist monks sometimes numbered thousands. In the central group the caves 9 and 10 are *Chaityas*; in the next western group cave No. 19, which is one of the most wonderful architectural triumphs of the world, and No. 16, which contains an inscription of the *Vakatakas*, belong to the same category. In the last group (where six *Viharas* are incomplete) cave No. 26 is one of the most splendid *Chaityas* in the whole set.

The *Viharas* are naturally much broader than the *Chaityas*, and consist of a central hall with a verandah in front, and the remaining three sides pierced with small cells for the monks to live in. Being monastic colleges or residential quarters, they were provided with accommodation and facilities for recitation, study, teaching and contemplation. Very often, opposite the main doorway, there was a sanctuary containing a *Stupa*. A big *Vihara* would at times have three door-ways besides two windows. The roof would be decorated often with *Chaitya* medallions inset with ornamentations like the tiger mask or the lotus. Similarly the doorway would often be decorated with pilasters. Inside the *Vihara*

there would be pillars, if the material of the rock required them. Otherwise there might not be pillars at all to support the central hall. At Ajanta, there are no central pillars, while, on the contrary, at Bagh we find them to be a common feature. The roofs, the pillars, the doorways, the pilasters and the windows, afforded scope for the display of sculptural and mural ornamentations of great beauty, taste and variety. Big Viharas accommodating a comparatively large number of monks or students would consist of a number of connected halls instead of a single one. The Viharas intended for the superior monks would have a larger space and a more elaborate arrangement for the ornamentations. The *Stupa* at the back of the Vihara would be generally approached through a vestibule, the walls of which would be adorned with relief figures. It is generally of the ordinary type, carved in the rock from the floor to the ceiling. The significance of the design of the typical Vihara lies in the fact that it is an exact replica of the domestic architecture of the age, as in Europe. Sir John Marshall points out that the Vihara system of the caves secured privacy and protection from the sun and rain, besides affording sufficient light and air, but he believes that it was not quite suitable for rock-cut dwellings. Here, he points out, there is no court open to the sky, and there is therefore no real *raison d'être* for the surrounding verandah which would prevent sufficient light and air from finding its way into the cells and chapels. He attributes the plan to the influence of custom and convention. "Given a free hand, the architect would have easily produced a design which, if less conservative, would have better suited the requirements of the monks."

The Ajanta caves are so situated that the western ones can be lit by the sun only in the morning, and the

eastern ones only in the evening. It has been surmised from this that the monks were engaged in their morning devotions in the western blocks, and in their evening services in the eastern ones. The central caves were well lighted throughout the day. The latter are also provided with cisterns for the storage of water. The whole arrangement shows singular skill in design and taste, as well as regard for ventilation, comfort and beauty. It would be hard to select a spot of greater natural beauty capable of inspiring monastic contemplation. Indeed the inscription describing it is no exaggeration—"a splendid house to be inhabited by the best of ascetics on the best of mountains, the top of which is covered by water-bearing clouds, is inhabited by serpent lords and warmed by the rays of the summer sun affording comfort during all seasons."

V. RANGACHARYA.

(To be continued)

My Trip to Heligoland

LATE in the month, last June, I crossed from Harwich on the east coast of England to Hook of Holland, the nearest place on the continent. It is a distance of about 108 miles. It was six in the morning when the boat arrived and we landed. It was very cold. Except for the few railway officials on the platform and the few passengers who, like myself, were travelling to North Germany, the railway station presented an almost deserted appearance. I had taken ticket to Bremen, the biggest German port on the Weser, with the intention of crossing over to Heligoland. From Hook of Holland to Bremen it is a distance of nearly 250 miles, and the train passes through the entire length of Holland and a portion of West Germany. The Dutch territory is quite flat with nothing to characterise it except its huge wind mills, which constitute such a prominent feature of a Dutch landscape. The view changes rapidly when we enter West Germany, and the train passes through extensive pine forests, dark and forbidding in their appearance.

We reached Bremen at about 3 o'clock, which is a city of about 300,000 inhabitants. And I was immediately impressed by the beauty of the place, its numerous canals, its fine little houses and its many garden villas. Streets and buildings are kept scrupulously clean, and the German policeman in his dark greek uniform, as he stands at the street corner regulating the traffic, makes a picturesque figure. He may be small when compared to his London brother, but he makes up for his want of stature by the presence of a sword at his side, which he wears with a certain amount of obtrusiveness. He is as zealous a custodian of law as the English policeman, and

often gives you very useful information if you can make yourself understood. Bremen boasts of a number of hotels, some of which make a speciality of catering to their English customers. The usual charge for a day in an ordinary hotel for boarding and lodging is 10s. 6d. After a day's stay at Bremen, where Das Focke-Museum and Das Rathaus and Das Molke-Denkmal are places well worth a visit, I travelled by train to Bremerhaven, a distance of about 30 miles. Here the pier presented a regular holiday appearance. Crowds of people were going for a day-trip to Heligoland. The Norddeutscher Lloyd Company provides excellent facilities for all such passengers. The scene on board the ship was very lively. Everybody was going about with a camera. Good lunch was available on the deck where everyone stayed for the sake of the warmth of the sun. And we soon covered the distance of 70 miles to Heligoland.

Heligoland, as everyone knows, became famous during the war for its great naval fortifications. Even from a distance one gets a grim view of this island. It seems to stand out boldly out of the sea commanding the approaches of the Elbe and the Weser from the North Sea. As the boat approaches it, one gets a better and a more favourable impression. The island consists of two parts. The part lying near the beach is known as the Unterland, and the bigger part situated on a cliff is known as the Uberland. The Unterland consists mainly of naval fortifications now in ruins. It contains the Biological Station, the Kurhouse and a few other public buildings. Landing has to be effected here in small boats.

The Heligolanders are very businesslike. The proprietresses of the various hotels in the island await the arrival of each boat from the mainland. They arrange themselves in two rows on the landing stage

where the passengers disembark. And as the visitors pass between the rows, they present their cards bearing the name of the hotel, the charges, the special conveniences of the place and so on. Boarding and lodging can be obtained here for 7sh. 6d. a day, and the holiday visitor has to pay a tax for each day of his stay. Visitors, like myself, to the Biological Station are exempt from the tax.

The island can boast of a resident population of about 3,000. But it attracts yearly a holiday crowd of 30,000 visitors. The first thing that strikes a stranger who visits the place is the narrowness of the streets. Even Der Kaiser Strasse, which is, as it were, the 'Mount Road' of the island, is only about 12 feet broad, and the lanes are considerably less. Stories are still current here that the Allied military officers deputed to supervise the blowing up of the naval fortifications according to the treaty of Versailles came with fine cars and found it impossible to use them in the narrow streets of the island. There are no conveyances of any kind in the island, and this seems to attract a number of wealthy people to the place, who like being compelled to walk when they are out on a holiday trip. But want of conveyance is no great hardship, as the island is only one mile in length and about a third of a mile in breadth. Streets, though narrow and a few very steep, are kept exceptionally clean. It is very difficult to find any refuse or litter lying about even in the back streets.

To walk round the island one must pass to the Uberland. To do this the visitor must either use the electric lift provided for the purpose or walk up the masonry stairs of about 500 steps. Once you are in the Uberland, walking is a pleasure and walking round the island could be accomplished in about an hour. At one

end of the island, the visitor overlooks from above the great naval fortifications lying below in ruins. Even at the present day, they strike one with the magnitude of the task the Germans attempted and almost carried out. Within sight of the war-works stands the rock known as Der Monche Fels, decorated with a huge military Iron Cross. The story goes that this rock which stands prominently out from the sea was once a little taller and so obstructed the free play of guns from their emplacements in the naval fortifications against the expected attack from English ships and had therefore to be demolished partially to permit of easy firing; and for this service that the rock rendered to the State in allowing itself to be curtailed in a good cause it was awarded the German Iron Cross.

Passing the rock on the left, one is soon on the west coast of the island. Here the sea is more violent, and nature herself seems to have marked down the island for her victim. The coast is crumbling down in several places, but the islanders aided by the German State are straining every nerve to prevent this, or at least to delay the process by propping up the sides of the island with huge iron and cement supports. Very near this spot there is a powerful lighthouse which is incidentally of interest to students of bird migration. Birds from their northern homes, in the course of their southward migration during winter, are attracted by this light in large numbers, and like moths dash themselves against the lighthouse and fall down dead.

Almost in the centre of the island, very near the church, opposite to the Hindenburg Square there is a small house which attracts crowds of visitors. Here lived the great national German poet Hoffmann, the author of the German national song *Deutschland, Deutsch-*

land *Uber alles*, which by its note of aggressive patriotism contributed not a little to provoke the Great War.

The Royal Prussian Biological Station is situated very near the landing-stage. It is a noble pile of buildings and well financed by the German state. Here German professors of repute are engaged in research on various subjects, and provision is also made for a course in Marine Biology to students from Universities in Germany or other countries. There is a fine aquarium run on up-to-date lines where facilities for research are given to all research students.

The Dunes—a huge bank of exposed sand with shallow water all round—lie half a mile from the main island and afford excellent bathing facilities. The sea round Heligoland is frozen for two or three months in the year, but in summer from May to September the sea is warmer, though still unpleasantly cold, being 13°—14° C. And bathing in these waters is nothing like the comfortable bathing that one is accustomed to in the tropics. Every bather warms himself by taking violent exercise either by running round the Dunes or by exercising in other ways on the various gymnastic appliances provided for the purpose, before plunging into the cold waters. In a couple of minutes after the plunge he comes out of the water almost benumbed and must go through another process of “warming up”, before venturing another plunge.

The Heligolander like the Manxman of the Isle of Man in the Irish Sea is very proud of his island. Every corner of the island has been photographed and filmed. At the time of my visit, the Heligoland film was being shown for the 131st time, as was proudly stated in the hand-bills. My stay in the island was very pleasant, and I left the place with regret. At the time of their depar-

ture visitors to the place, who are called guests by the islanders, have to pass under a huge arch on the jetty, on which is written *Kum Veer*, which is Frisian for “Come Back.”

R. GOPALA AIYAR.

ON LOSING A FRIENDSHIP

Those happy days have gone for ever,
When matched in mind we stood together,
Unshaken and apart on common ground,
To snatch whate'er joy on earth was found.
Life's varied hues had oft to us displayed
Diversity, yet we were not dismayed,
Resolved to try and see conflicting views
Into one sweet harmony blend and fuse.
We thought, we hoped, we prayed together;
Unsullied dawns would break, no clouds appear;
Gay hopes serene betwixt us ever played,
Joy next to Joy before us stood arrayed.

'S.A.'



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The Sleeve Links

IF some men are born wealthy, certainly Kelu Nayar was not one of that class. By birth and upbringing he was a clerk, and the blood of five or six generations of "Clerkdom" ran in his veins. When the British landed at what is now called Fort St. George, we are told there was a Mr. Kelu Nayar on the beach offering his services as a clerk. And I am sure the family would continue in that hereditary occupation quite a long while yet. Our Kelu Nayar had but one coat, the sleeve of which was always shiny, because he slid it all day across the pages of a big book in a commercial firm, making figures. His chief asset at twenty-one was an apparently God-sent ability to make neat 'sixes and sevens,' and these he did for seven hours in the day.

He lived in some corner of Georgetown, possessed prominent teeth, not unlike those of a rabbit, had taken a course in tennis-playing by post, though he never handled a tennis racket, suffered from fits of insomnia and wanted to get married. But his most cherished wish was to wear fine clothes and cut a dashing figure. He had neither the personality nor the money for it; but then he was romantic.

When they unchained him from his office stool at noon, Kelu would hastily despatch his tiffin, wash it down with coffee and then go out to feast his covetous eyes on the windows of clothiers and dress-makers. Sartorial displays fascinated him. He lingered longingly over windows full of the newest models of serge, tweed and cheviot. He felt the lure of those symphonies in colour. Turning from them he sighed. Not for him

those fine things; his current suit must be worn, until the elemental laws of decency compelled him to purchase a new one.

Kelu regarded the buying of a new suit as a sacred rite. He looked forward to it most eagerly, and no prince selected his clothes with greater care. He planned for months, and when the day came, it was always a great day for him. He entered an outfitter's, and after prayer and meditation bought his suit, paying for it with money culled anna by anna. As he bore it away, pride and doubt struggled in his bosom. Throughout the length of the first street he was enchanted with his purchase. About the middle of the next, qualms beset him. Despair walked with him in the third street. In the fourth, he sought to re-assure himself. It would do, he thought. It would have to do.

A desire unfulfilled is as wearing as the constant drip of water. One morning Kelu, after a wild night, found himself regarding life with the eyes of a bilious and thwarted man. All night he had lain tossing in his narrow bed, taking stock of himself.

"I don't amount to anything. Life is a hard voyage, I don't know where I am drifting. What can a fellow like me get? 'Clerking'—that is all I am good for. I shall be making the same figures when I am sixty. Same old job, same old food—both tasteless. Money, that is all any one cares about in this world now-a-days. And how am I to get it? No chance. I might as well stop trying. I am a failure, a one-suit man!"

Morosely he went out of his house. Habit guided his footsteps to the office, to his desk and to his ledger. Gloomily he slid his arm across the pages, making figures. At noon, still despondent, he walked as far as the street corner. There a stream of traffic barred his progress. In

a Jeweller's at that corner, he saw in the window, a pair of cuff-links, magnificent ones, of small diamonds surrounded by glittering rubies. Kelu turned his head away, hesitated and turned again to the window. He stared at them in rapt admiration.

Now, he forgot his grudge against life, and surprised himself by daring to enter the establishment. To the salesman who was standing by in his splendid uniform Kelu said, trying to seem off hand, "I'd like to see those cuff-links, the ones in the window."

They were brought. Kelu saw them and held them in his hands. "Very nice," he muttered, "what is the price?"

The salesman, in the tone of one hating to bring himself to speak of anything sordid, said, "Five hundred rupees, sir. They are real diamonds."

"I know they are," said Kelu, "but you might put them back. I'll decide later whether I should go in for them or not."

That night in his room Kelu filled several pages of his note-book with figures and calculations with feverish quickness. Life was now exciting to him. He had an end in life.

"The day I wear those links, people will stare and say, there goes 'somebody'."

He moved into a smaller room resembling more a dog-kennel than a human habitation. He ate cheaper and unpalatable dinners. He took up jobs of book-keeping after working hours. He made his suit last longer than its natural term of life, though its condition caused him acute distress. Steadfastly and grimly he saved. At last, after years of painful thrift, he was able one memorable day to walk into the Jeweller's and buy the diamond cuff-links.

He could hardly sleep that night. Next morning he

dressed with careful haste and put on his best white shirt. Then for the crowning touch he took the diamond sleeve links from their box and was about to put them on, when he caught a glimpse of himself in the mirror. Chagrin hit him full in the face. It was painfully evident to him that those perfect cuff-links would look ridiculously incongruous with his very imperfect shirt. Reluctantly he put them back in their box.

After a deary time of hoarding and skimping, he obtained a new suit. "Well, tomorrow," he said, and cleared his throat.

Next morning, he expended time and care in putting on his new clothes. He took out the diamond cuff-links, when he paused. He had looked forward to this day so long that, now when it was at hand, he was almost afraid to enjoy it. "After all," he reflected "this is a common place day, an ordinary Tuesday. Why waste a beauty on a day like this?" He put the jewel back in its box.

Now that he attained a status—for was he not the proud possessor of a pair of diamond sleeve links?—Kelu Nayar proceeded to the next item in his catalogue of ambition. He felt a desire for 'home and homely duties meet' and resolved to plunge into matrimony. "If I did not marry," he argued, "would not the chain of my ancient lineage be broken? And am I to be the link at which the chain should be snapped? He swore at once that that should never happen. He would make his children's children look back to him with pride.

Employed in his office was a fellow townsman of his, an old gentleman, who was on the look-out for a bridegroom for his daughter. We need not dwell on the means by which Kelu had his name suggested as a 'prospect', how he got a mutual friend to just drop a hint in the right quarter etc. Suffice it to say, that after the preli-

minaries were over, the old gentleman, who was not averse to the match, invited Kelu to supper one night.

When he was changing his collar and shirt to make his call, Kelu took out the sleeve links. A fitting occasion for their initial wearing had arrived. He was about to make his first call on the girl, for whom he felt a strange exalted emotion, which our friend concluded must be love.

He fingered the diamond cuff-links. But there came a doubt into his mind. Would it be wise to wear them to-night after all? Reasons for not doing so at once presented themselves. She might not like him, and his romance might be dashed to the ground at the very outset. If such a thing happened, he knew he would hate the cuff-links ever after; for they would be associated with a tragic experience. Then too, it would look as if he were trying to dazzle her with his diamonds, and he fondly hoped that he was going to do that with his personality. No, that night was not the night for the diamonds. Another time, when he knew her better.

But even when he knew her better he, did not wear them. He debated for a long time whether he should wear his diamond cuff-links on his wedding-day. But ultimately he did not. It struck him that on wedding days people were not very much interested in the cuff-links of the bride-groom.

He did not wear them either, on the day his first son was born. Why should he advertise a purely domestic affair? He did not wear them the day he was promoted to be the chief clerk on a larger salary, lest his subordinates should call him a 'swank.' Moreover Kelu knew that once he had eaten his cake, he would not have it in prospect. For years he had looked forward to the day when he should wear the cuff-links. He was not prepared to toss that day lightly away.

One eventful day, Kelu came home from office drenched to the skin. Next morning, when he awoke, his throat felt raw, and there was a throbbing pain in his chest. He felt weak and giddy when he tried to stand up. The doctor was sent for. He came and said Kelu had pneumonia—a bad case.

Seven days passed. The crisis was approaching. So said the doctor. All day long Kelu lay in his bed with a fog in his mind. Late that night, when his wife was away from the room, he mustered all his strength, managed to get out of his bed, and with faltering steps crossed the room to his dressing table. He took out his best shirt and, unlocking a secret drawer, took out the velvet box. His breath was now coming thick and fast. He stumbled back to his bed, opened the box and took out the links. Struggling for breath he put them into the button holes. He lifted the shirt to put it over his head; but the effort was too much for him and he fell back on the bed—that was how they found him.

Then came his relations, who thought it a pity to waste good diamonds by burying them with the mortal remains of Kelu. So they sold the cuff-links and divided the spoils.

Poor Kelu Nayar!

C. R. RAGHAVACHARI.

On Cropping the Hair

NO, reader, you are mistaken. I do not propose to go into the relative merits of the South Indian and European ways of hair dressing, although I know fathers who have altered their wills and disinherited their sons because the latter have 'cropped' their hair; and old grandmothers (who, poor folk, have generally no wills—I mean, of course, the last will and testament), have been known to go on fasting for weeks together at the iniquity of the younger generation—the fasts being mingled sometimes with prayers, and sometimes with (what has the same effect, or no effect, on the scape-graces) very virulent abuse. The subject is important enough. To 'crop' your hair is to be damned eternally "to adamantine chains and penal fire," at least in the eyes of some of our Jagadgurus. All the same, I don't propose to deal with that subject.

'Cropping the hair'—I refer, of course, to that monthly martyrdom which every one of us, the initiated, has to undergo to satisfy that hydra-headed monster, Society. Individually, no one has any objection to let his hair grow as much as it would, as no one has any objection to walk into a Madras coffee-hotel and take his tiffin with his non-Brahmin or Mohammedan friend. But when it comes to a question of saying in so many words: 'Let us do away with this pernicious habit of cutting the hair every month, or sticking to communal prejudices,'—ay, there's the rub.

Mind you, I am not talking of shaving the face. Pity the man who has taken it into his eccentric head to grow a beard! What! Never caressed the just two-days' growth

of hair on the face; never heard the razor grating on the whetstone, and the dull splash on the leather; never felt the artist's 'thrill' of satisfaction, as the keen blade answers the test, and the left-hand first finger draws back 'blushing'; never lathered the face to an immaculate whiteness, sweeping through it all the next moment, and emerging a changed man? Oh! reader, if, being a man you have not done these things, you have not lived.

I can understand quite easily why ascetics are required to grow their beards. To permit them to shave their faces is to indulge them unduly—to allure them from their true goal by giving them glimpses of an earthly paradise.

As for me—give me a clear, clean mirror, a krops blade (the genuine English blade, not the German) and a Lion strop, a cupful of moderately warm water (I do not, like Mr. Phileas Fogg, insist on its being exactly 86° F.), a Yardley's shaving stick and a Clemark brush—and it will be strange if I do not turn lyrical. You think that I am a novice—that a few months' familiarity will breed the inevitable contempt—that the roseate dawn will fade into the light of common day? Ah, no. Shaving is an art, and age cannot wither it, nor custom stale its infinite variety.

But I have told you already, I am not thinking now of shaving the face—other thoughts are crowding my mind, dark dismal thoughts of the monthly martyrdom.

What is death or almost death to us is to Munisami, the Hostel barber, the most delightful sport. You should have seen him, as I saw him the other day, operating on poor Ramcharan's head. Now, if there was one thing on which Ramcharan prided himself, it was on his curls. Oh! the bottles and bottles of brilliantines of all sorts—the time, the labour and the energy—that he has spent on

them! His 'crop' is a peculiarly fine 'crop'—not your 'oxford crop,' or your close-cut 'summer crop,' or your bristling 'porcupine crop,' but the 'crop' which a certain cartoonist has cynically called 'the Shoda-Payyan's Singakutty crop'—and Ramcharan has not forgiven the cartoonist's cynicism, and has long ago ranked it with that other classic cynicism about sour grapes. Well, any how, Ramcharan's hair, in spite of all the brilliantine bottles, went the way of all brilliantine bottles, went the way of all flesh (I should strictly say hair). It grew and grew out of all so-called decent dimensions, and came at last under the scythe of the leveller, Munisami.

As I said, you should have seen Munisami at work. The way he mowed all those precious leonine curls! No instrument of torture has ever worked so much woe. I am sure the iron entered not only Ramcharan's hair, but also his soul.

I am not joking—if you think I am, it only means that you have never had a 'crop,' and have never come under Munisami. There is a cant about barbers being exceedingly talkative people. Munisami is not that sort. He has too high an opinion of himself and of the dignity of his labour. During Deepavali time he gives you a profound bow and a grimace—his apology for a smile. But the bow and the grimace are exhibitions that take place only once a year—no oftener than your Physics Association or your Chemical Society Exhibitions. And as for talking, he neither talks himself, nor wishes you to talk. To your praises and to your blames, to the inquiries you often wish to make of him and to the news you occasionally wish to communicate to him, to your instructions good, bad and indifferent—he turns a deaf ear, for in very sooth he is deaf.

So it is absolutely useless trying to tell Munisami how

exactly you wish to have your 'crop' cut, or to remonstrate with him in case it is cut all wrong. You have to take the risk with him. There is a proverb in Tamil which characterises, to a nicety, men of Munisami's temperament: "Kudumi or no Kudumi, as *you* permit it, not as *I* choose."

Thoughts such as these ought to have been coursing through Ramcharan's perturbed brains that day. The first stage in Munisami's work was just over. The weeds had been rooted out, and it only remained to do a little pruning and trimming.

Genius, it is often remarked, shows itself most in its attitude towards what the world considers trifles. We are told that Michael Angelo spent months and months chiselling his statues, apparently in no way improving them, but really bringing out the most delicate curves and shades. Now Munisami is a genius, and poor Ramcharan found it that day to his cost. The hair-mowing 'machine' (as it is called), the comb and the scissors, the comb and the razor, then the scissors separately were all used one after another, Ramcharan still continuing, so far as the hair went, to be no better than what he was just after the 'weeding.' Saints that are patient under the most trying circumstances—what are they compared to Ramcharan?

At last poor Ramcharan gets up, fairly crazy; and Munisami after a last look of scrutiny, turns with a quiet chuckle to the next victim.

Like Charon stripping the dead for their last voyage—of 'crowns and sceptres, shield, sword and truncheon, the judge's ermine and the coxcomb's wig'—has Munisami done his work by you, O, Ramacharan! Bless me, how little you look! Alas, my friend, how transformed art thou! How 'translated' like Bottom!

And yet all of us have to undergo such transformations every time we 'crop' our hair. Grow your hair uncut for a couple of months, and then cut it, and you will see. Your distant acquaintances suddenly get interested in you, and look at you curiously as they pass you by. Your friends give you a smile, and probably nod their heads knowingly. And your cronies pat you on the back, and say—as if they wanted your assurance on the matter—'Had a shearing, old boy?', and you do look quite sheepish, and feel that the really valuable part of you has disappeared.

A hair is a precious possession. Think you there is no lesson to be learnt from the story of Samson? And do not people in India often give their hair as offerings to God?

A friend of mine last year once actually shaved his head clean! And as he could not possibly hide it under a bushel, and as a cap in the dining hall might make one rather curious about the thing under it, well, the gentleman was seen by me in all his glory. 'It is a summer crop,' he said, apologetically as it were, 'summer has come, you see.' Of course, I could see it—summer had come, the season when dogs get mad and men go about having their 'summer-crops.'

We cannot, of course, grow our hair endlessly—not in these days when even ladies bob their hair! A 'crop' is a necessary evil. And however we might go on joking at one another, the poor persecuted Ramcharans take it philosophically, for they know that the wheel will turn, and Munisami, like Death, will level all.

P. S. SUNDARAM.

My Rejected Contributions

I AM vexed, thoroughly vexed, vexed with everything, vexed with life, vexed with myself, and—vexed with the Editor in particular. I have been searching the magazine for the last half an hour and have not succeeded in finding any trace of that splendid contribution of mine—'The Faded Hyacinth.' No, not even a small note by the Editor in some prominent corner that "the contribution of a fine short story with the charming title, 'The Faded Hyacinth,' came to us too late for this issue and will be duly published in our next." Instead, I find, done in glaring print for me, on the very first page the provoking advice that I should not be discouraged because my contributions are rejected this time, but should try again. Try again, indeed! Yes, Mr. Editor, it is ever so easy to ask us to try again; for so did a certain tiresome poem that we got by heart in the first Form and could not understand. But could you ever imagine the amount of time, thought (yes, thought) and energy—not to speak of the ink—that we spend on every one of those articles which you so promptly and heartlessly reject? If you could, sir, you would not have had the heart to reject for the seventh time an article written by me!

I clearly remember the first occasion when I entered the Editor's room after considerable hesitation even at the last moment. I was a shy young fellow in those days. But I had written what I then considered to be a very fine essay on my trip to the Nilgiris; and had an overwhelming desire to earn fame in the pages of our magazine even during my first term at college. Well, I slipped into the Editor's room; and as he was seemingly

absorbed in a book, I attracted his attention with a moderately polite cough and placed my long closed cover with its precious contents on the table before him. He looked sternly at me and then at the cover, which being a brown one was evidently mistaken by him, at first, for a letter on His Majesty's Service. He slowly turned the cover this side and that, saw it was something for the magazine, and then again cast that stern look at me in which I could read the very kind enquiry as to why the devil I should stay there still. Meanwhile, I just forced myself to say something about its being my contribution to the magazine, and I walked out thoroughly dissatisfied with myself for my awkwardness. And as I left the room I could not help saying to myself how very unsympathetic the Editor looked!

And unsympathetic he was—to me. I never told anybody of my having contributed to the magazine, partly from motives of prudence, and partly, if possible, to give my friends a neat surprise. My nerves, therefore, were tingling with a vague anxiety when one fine morning I found on the notice board that the magazine was to be issued the next day. For full twenty four hours hope and despair struggled in my breast with equal strength. For one whole night I could dream of nothing else but magazines and articles. At last the longed for moment came. Somehow, with the magazine just in my hands, I suddenly grew very hopeful and expected to see the next moment my essay in print. I was wondering whether, as with the great Victorian novelist on his first journalistic success, my eyes too would "grow dim with joy and pride, and not fit to be seen in the street." Dim, indeed, they grew; and no doubt unfit to be seen in the street—but, thanks to the Editor, certainly not with joy and pride. For my article was missing!

I was thoroughly disheartened. When I went home that night after an evening devoted entirely to philosophical musing on the beach I found myself growing strangely restless and peevish. My mother asked me why I looked so moody, which made me moodier still. My grandmother was sorely perplexed at my leaving a favourite curry of mine quite untouched at meal. My younger brother did not appreciate my dealing him a resounding slap on his cheek for his having said something really innocent about our neighbour, whom, he knew, I did not altogether like. And when he evinced such lack of appreciation by sobbing wildly, my elder brother did not hesitate to inform me that he could not sometimes understand my moods. But how could he when he was not himself the unlucky author of 'A trip to the Nilgiris'? It was my wounded vanity that was seeking expression in this uncouth way. I induced myself to read the other articles in the issue; and strangely enough not one of them appealed to me as worthier of a place in the magazine than mine. The short stories, I found, had no plot; the essays had no point; and the poems had no metre. And I was asking myself perpetually how any sensible creature—least of all, the most sensible Mr. Editor—could have judged my effort as inferior to these. I however learnt to nourish a sort of shrewd suspicion that somewhere in the archives of the college, my brown cover lay unopened and its contents unread. This idea brought back my self-esteem and sustained me for a long while. But I must confess that, when I read that very essay of mine again a few months ago after a considerable lapse of time, I frankly felt that, ten to one, it could have been otherwise too!

Other articles by me followed, seeking admission into the succeeding issues of the magazine. One was a short

poem which I had written, 'stung by the splendour of a sudden thought' one summer afternoon. I forgot the exact theme of it now, but it began somewhat like this:

Long did we spend our life in merry sport,
Long was our mutual love a guarded fort.....

I cannot really say at this length of time whether I addressed the poem to my lady love or my tennis racket. Yet another time I wrote a detective story soon after reading a Le Queux volume. When I showed it to my brother he said frankly he didn't appreciate it. But there was something in the tone of his saying it, which convinced me that he did appreciate it, and was simply envying me for it. For, thought I, how could anyone not go into raptures over a detective story, where a lady is the disguised detective, and her husband the unknown culprit. And so with fond hopes I gave it to the Editor; and he gracefully, in turn, gave it to his waste paper basket. It was always so with every contribution of mine—a magnificent journey, trimly dressed, to the Editor's table and thence to his waste paper basket. And I always remembered with brotherly sympathy the story of that unfortunate journalist, who, while contributing his usual six pence to the church collections, was heard muttering to himself that here at least was a place where his contributions would not be rejected!

But to return to 'The Faded Hyacinth'. I have been reading it again just now, and — would you believe me?— I almost feel thankful to the Editor for not having publicly put me to shame by publishing such sentimental nonsense. For I begin to feel that the whole story is idiotic in the extreme. Perhaps I am unconsciously influenced in my present critical attitude by the Editor's decision. But I think it would be truer to say that this is one of the rare moments in which I can see myself as others see me.

And, now that I come to think of it, it was that rotter, A-k-n, who induced me, partly against my will, to give this short story for the magazine, telling me with great gusto that Hardy at his best could not have written a better story! And, personally, I was eager to believe in his critical powers for the very weighty reason that he was praising my article. Hardy at his best indeed! Imagine my admiring critic giving me the most painful shock of my life the other day by vehemently asserting that *Jude the Obscure* was a short story written by Wells!

Here, then, almost without my observing its growth, a fresh article has taken concrete form. And, pray, what makes my friend over there smile so cynically? Does he say that this is just another contribution of mine to be rejected? But, oh, my cynical friend, that could be no real calamity to me now. 'For I am quite used to it,' as Mrs. Murphy said when she lost her thirteenth husband!

B. V. SUBRAHMANYAM.

Fifty Years of Electric Lighting

"Politicians are apt to think that their labours are essential to the prosperity of the community. They are in truth not nearly so valuable as the work of the electrical engineer. In fact, the legislative shackles which have been the politicians' work..... have frequently retarded seriously the work of the electrical engineer."

—J. A. Fleming : *Memoirs of an Electrical Engineer*.

FEW of us perhaps realise that the electric light is a comparatively old invention. Thomas Alva Edison constructed the first practical incandescent lamp as early as 1879; the golden jubilee of that event was celebrated last month in the United States when Mr. Hoover dedicated the Edison Institute of Technology, and Edison reconstructed his epoch-making filament lamp in the presence of a small party which included Mr. and Mrs. Hoover and Mr. Henry Ford. It falls to the lot of very few indeed, not only to make a great invention, but to live to see its possibilities worked out to the full; and among those known to the present generation, Edison assuredly has a claim to a niche in the temple of fame, alongside of such illustrious men as Marconi and Röntgen.

We are, indeed, a long way from the time when people had to be content with those ghastly little yellow light bulbs which caused such intense strain to the eyes, and consumed so much of electrical energy. Today bulbs are made by the million—a thousand million bulbs is the world's annual demand—and almost every operation involved in the manufacture is done by automatic machinery. A modern Mazda 100-watt lamp is at least seventy times as economical and efficient as its illustrious

predecessor of 1879. And, as one contemplates the argentine light spreading out from the cunningly inside-frosted, flame-tinted lamp, one can hardly withhold the meed of praise from those to whom it is due—the industrial Physicist and Chemist.

The manufacture of incandescent lamps is a highly developed art at the present day. The first and foremost thing in the process is, of course, the making and mounting of the filament; for it is the filament that gets heated up when a current is passed, and begins to emit light. The question of choosing a suitable material for the filament was indeed very knotty, and was solved only after a special technique had been perfected to get metallic tungsten in the form of a very fine wire. The lamp-maker has to deal further with nickel, molybdenum, copper, brass and other metals. Then there is that invaluable material—glass. Glass for lamps is a problem by itself. To convert all these raw materials from a jumble of incoherent things into the consummate beauty of a modern lamp—that is the task of the manufacturer.

Tungsten is obtained from wolframite ore mined in Australia, Burma and China in the form of concentrates containing 70% tungstic oxide. The metal is extracted from the oxide by reduction with hydrogen, and finally comes out as a fine grey-black powder. Simple as the operation of metal-making appears, it has its scientific secrets; for example, it is found that the addition of the tiniest quantities of certain substances increases enormously the strength and durability of the filament. The powder is squeezed into rods by hydraulic presses, rendered homogeneous by the passage of a heavy current, and finally drawn into very thin wire with the help of diamond dies.

After the filament has been mounted in the glass bulb,

the next step is to drive out all the air from it; otherwise the filament is apt to get burnt out when it is heated to incandescence. A whole world of scientific invention has gone to the devising and perfecting of the pumps required for the purpose. A vacuum of 20 microns can be obtained with pumps alone; the final vacuum is of the order of one micron, and to attain this minute quantities of special substances called 'getters' are used. The filament, before being mounted, is coated with red phosphorus, and when the current is switched on for the first time, the 'getter' reduces the pressure in a few seconds. The action seems to be more physical than chemical, for experiments indicate that the gases are driven to the walls of the bulb and held there so firmly that they are not released at the operating temperature of the lamp.

The modern tendency is to fill the bulbs with some inert gas rather than to leave them evacuated. The filament can under such conditions be raised to a higher temperature with consequent increase in luminosity. It might be supposed that gas-filling is an easy job, and that no previous evacuation is necessary. As a matter of fact it is a very tough business. A mixture of argon and nitrogen is employed for most gas-filled bulbs. A higher percentage of argon conduces to greater efficiency, so it is desirable to use as much of it as possible. The gases have to be of the highest possible purity—traces of water vapour, hydrogen, oxygen and organic matter greatly accelerate the rate at which the tungsten from the filament is deposited on the bulb. Both argon and nitrogen are obtained from liquid air, and purified very carefully with the aid of elaborately constructed filters. In order to be sure of the purity of the gases most lamp-manufacturers maintain their own purifying plant, though they get the gases from outside. When gas-filled bulbs

first came into existence they were made only in large sizes; they are now produced in sizes varying from 10,000 candle power lamps down to 40 candle power lamps suitable for ordinary domestic purposes. They are also made in many special forms required for cinematograph projectors, motor-car headlights and the like.

Inside-frosting of glass bulbs is a still later refinement. Although outside-frosting was employed for many years, inside-frosting was until recently impracticable owing to the extreme fragility imparted to the bulbs by the frosting process. In 1924 a method was successfully tried by which the original strength could be restored by a subsequent treatment. This consists essentially of dipping the bulbs in a diluted frosting solution made up of constituents like hydrofluoric acid and ammonium bifluoride.

Though, no doubt, very great progress has been made in the construction of artificial sources of light, we have to bear in mind the fact that all our lamps produce much more heat than light. Ninety-five per cent of the energy of a source of illumination is wasted away in mere heat. A great future certainly awaits the man who will invent a practicable luminescence lamp, giving light without heat—the man who will learn the secret of the glow-worm and the fire-fly, which, insects though they be, have found out the way of exciting the delicate vibrations of the electrons in the atoms, without having recourse to the coarser process of setting all the molecules *en masse* dancing with heat.

The electric light has a great future before it—a future that is bound to be much greater than the past. Even in the West its use has not yet become universal. England is, in this respect, a back number when compared to the United States, Japan and the Continental countries. Conservative England has to seek explanation

for this fact in its own unwise Electric Lighting Act of 1882, which hindered progress in that country for many years. What about India? India too requires progress in this direction, but the thought that every bulb has to be imported into this country from abroad only makes any thinking Indian become the more poignantly conscious of the immediate necessity for the establishment and fostering of national industries. When the account of the centenary of the electric light comes to be written, let us hope that India too would have done enough to be proud of her contribution in this field.

C. A. RAMAKRISHNAN

The Mysore Iron Works, Bhadravati

THE Iron Works are situated on the banks of the river Bhadra in the Mysore State, about 160 miles from Bangalore, near the west coast. The Works occupy a very extensive area adjoining the old village of Benkipur (now called Bhadravati). A large colony has been laid out for the use of those employed in the works on a ridge adjoining the plant. And the whole area is supplied with electricity from Sivasamudram. The plant is designed to produce sixty tons of pig iron per day. The fuel used in the process is charcoal obtained by the destructive distillation of wood brought from the neighbouring forests. The 'pig' is of fine grain, and so is used only for special purposes requiring great strength, such as chilled castings.

During the initial stages of the working of the plant, the ore was obtained from Kumsi—a place forty miles west of the works, where it was found to occur along with manganese ores. It was mostly limonitic, and was being worked by the Workington Iron and Steel Company. So it could be brought to the works without any heavy expenditure. The flux also was obtained near by, being a dolomite.

The most important deposit of the ore occurs about twenty-five miles away from the works, in the Bababudan ranges, capping a ring of hills around Kammangundi. The ore is a rich hæmatite, often associated with limonite and occasionally with ochre, and is found only at the higher elevations—about 2000 ft. above the level of the plains. It is of good quality and almost inexhaustible.

But the difficulty, however, lay in the means of bringing the ore down to the plains on account of the dense growth of vegetation on the hill slopes. This has been very ingeniously and successfully met. The transportation is now effected at practically no working expense. Advantage is taken of the fact that the ore occurs at a high elevation. An aerial rope-way is laid along a straight steep track, supported on a series of steel masts erected for the purpose. The rope (made of tested steel wires well twisted together) is six miles long, while the distance to be covered is only three miles. The ore is loaded in buckets which are put on to the rope at the upper terminal, and then the force of gravity is sufficient to keep the rope moving, in spite of the empty buckets that are successively sent up from below on the other side of the rope. In fact an air brake has to be provided at the top to prevent the rope from developing an uncontrollable rate of movement and to keep it within the velocity of four miles an hour: for, otherwise, the buckets might swerve on the way resulting in the tilting of the ore. At the lower end a special mechanical contrivance is provided to prevent the sagging of the rope. A special 'clutch' attached to one of the masts close by the lower terminal releases a 'catch' on the side of the loaded bucket, when it topples over, dropping the ore on the stacks. The rope is repaired by 'splicing' whenever necessary.

The ore at different localities on the top of the hills is initially analysed and estimated by an expert and so suitably mixed before it is sent down, that the percentage content of iron and alumina is almost constant. A high alumina content will result in a refractory slag; and in the interests of the steady working of the furnace the iron content must be kept as constant as possible. The ore quarried at higher levels than the upper terminal is 'shot'

down 'schutes' specially constructed for the purpose and then brought along in trolleys running on rails.

On reaching the lower terminal the ore is loaded in trucks and conveyed to the works by a specially laid out tramway. Though the plants work without a stop, the ore is quarried only during eight months in the year, the monsoon being too heavy during the season to permit of profitable working. The flux is obtained at present from Joldol, a place about thirty miles from the Works and approached by another tramway. It is a good grade limestone, partly pure and partly dolomitic.

The ore properly crushed and graded and suitably mixed with the required amount of flux and fuel is taken up an inclined set of rails in trolleys to the top of the furnace and dropped into it at regulated intervals. The furnace is about sixty feet high and six feet six inches broad at the blast region. It is kept working right round the year, since allowing it to cool will lead to serious trouble in the proper continuance of the work. The quantity of ore put in is so adjusted that 'the melt' will be ready for being drawn out once every four hours. The open space in front of the furnace is covered with sand, which is ready laid out in moulds. The molten iron flows out of the furnace with a huge fiery red blaze from a suitable opening at the bottom along a main channel laid out in the sand. A skilled workman at the head of the channel separates the slag floating on top of the heavy iron with a large bladed ladle and diverts it into a side channel. The liquid iron flows straight down into the troughs laid out in the sands at the sides, where it is quickly covered all over with sand. In a short time, the molten material solidifies to a fine grained 'pig', ready for exportation and for use after further refinement. This casting of the 'pig iron' is the most important process

carried out at the Works; and about ten to twelve tons of iron are cast once every four hours. It is a sight to see the bright red blaze slowly die out, as the iron cools in the sand-beds—especially on a dark night.

Most of the 'pig' is exported to foreign countries through the nearest ports—Mormugoa and Madras. There is very little demand for iron in India in the condition in which it is supplied by the works. To make the concern more paying a small foundry and workshop have been located in continuation of the casting yard, and served by the same overhead crane. The crane is a highly serviceable one, capable of moving to and fro, and from side to side, picking up and transporting heavy things in any way with characteristic ease. A series of furnaces set up in the foundry help to purify the 'pig' and make it yield wrought iron useful for casting. The molten iron is drawn in huge cupolas, where it remains a liquid for a fairly long time, covered by layers of coal dust. Small moulds in clay are filled up with the help of an iron crucible fixed to the middle of a long rod. But the chief castings made are iron pipes and lamp posts. For this purpose, a mould is made in a suitable tube by ramming in sand inside with the help of a four-forked mechanical founder worked by electricity. A central cylinder, also similarly covered with sand, is rammed on to it and made further secure by ropes of hay wound round the iron core. A solution of graphite powder is used as a lubricant. After shaping one end of the mould to form a suitable 'mouth' the molten iron is poured in; and on cooling a cast iron pipe is obtained which is smoothened on the outside by hand and finished off with a black coating of tar at a suitable temperature. It is interesting to note the 'charring' of the sand used for these moulds. Lamp posts are made on similar lines, but given a final white finishing. Other casts made are orna-

mental iron railings, fanciful figures to serve as paper-weights and many more useful articles of minor ware. Wooden models for these moulds are first made in a small, but well equipped, workshop attached to the foundry.

To make the working of the plant more practicable and economical, an important by-product industry has been set up at the Works. The wood obtained from the neighbouring forests is brought to the Works in specially laid out forest tramways. It is then properly seasoned, cut to convenient lengths and loaded in suitably constructed iron 'cars'. The cars are then pushed on, two at a time, into a series of retorts fixed in position, and heated there out of contact of air to a high temperature. This destructive distillation goes on for over twenty four hours, by which time all the gaseous products and water vapour separate from the wood and condense, on cooling, in suitable reservoirs by the side of the retorts to a dark grey liquid—Pyroleginous acid. The cars with the charcoal left behind are pushed on to a set of cooling chambers, laid out in continuation of the retorts, and allowed to cool out of contact of air for about a couple of days. This is to prevent the charcoal absorbing any gases from the atmosphere and becoming troublesome in the furnace. The pyroleginous acid, on subjection to successive fractional distillation and evaporation at a 'primary house and distillery', yields alcohol, tar and acetic acid, the last of which is obtained mostly in the form of acetate of lime. It is then exported to Malaya, where acetic acid is used for the coagulation of the latex from the rubber plantations. A little of the tar is used in the works itself, but most of it and the alcohol (after refinement) are exported to Japan and the Far East.

In short, the Iron Works is a place where all is bustle day and night. And orderly work results in the

regular output of the calculated amounts of 'pig' and other products every day. The finished castings are however made only from time to time to meet demands as they come in. The 'pig' has a phosphorous content, rather high for any kind of acid steel process, and somewhat low for general foundry purposes. But its fine grain and high grade of strength, in addition to a satisfactory manganese content, make it most useful for making refined and chilled castings which are expected to stand a great strain, such as rollers for sugar and paper mills, and cylinders for steam and oil engines.

The Works from all points of view is a place well worth a visit.

C. A. RAMABHADHAN.

"She"

Years, years ago, when I was yet

A merry little child,

I met her by the rivulet—

A maiden, sweet and mild :

And, when she raised her eyes to mine,
I felt a light within them shine !

'Twas fifty years ago, and still

Those eyes before me rise

As in a dream ; I feel a thrill,

And all my spirit cries

To see the soft and lovely gaze
That set my little heart ablaze !

And, as I grew, I found my heart

A-running after girls ;

I played a while a lover's part,

And sported with their curls ;

But in their eyes I failed to see

The light that SHE had beamed on me !

The woman yonder—that's my wife—

Is somehow very sure

That I have been in all my life

Her own, faithful and pure :

She little knows, poor, ignorant dame,
Of this—my first and purest "flame."

There is the woman I did woo and wed—

The mother of my sons ;

And there is SHE who peeped and fled,

And caught my eye but once ;

But that one moment dearer is

Than all these years of married lease,

B.V.S.

The Rikshawallah

IF you miss the right turning to the Marina as you come east from Barber's Bridge, and take the next turning, you will come upon 'Dulip Singh', for that is the nickname by which he is known in the neighbourhood. You will find him of an evening, comfortably curled up on his riksha turned east to exclude the sun.

Anybody will tell you that it is Dulip's corner. The proprietorship of Dulip Singh has now been indubitably established. Once, in the past, there was an intruder. After a *savari*, Dulip returned to find a rival comfortably ensconced in his corner. But when Dulip entered on the second chapter of a slight character-sketch of the intruder's great grand-father on the mother's side, the visitor apparently thought better of it, for he beat a hasty retreat with philosophic stoicism.

For Dulip is nothing, if not an orator. He is not merely fluent, he is a poet by nature. His loud voice and inexhaustible vocabulary have vanquished many a rival who tried conclusions with Dulip.

Moreover Dulip's physique does not encourage liberties. He is rather a giant, with huge straggling limbs that one can admire only in repose. He reminds you vaguely of Garibaldi with his red moustache and beard streaked with silver. Great twinkling humorous eyes belie the grim set of the lips and jaw. On the whole, the face leaves an impression that one would like to know him, but would not care to offend him.

But really Dulip is not so formidable as he looks, though he does have a will of his own. He is rather what one would call masterful. He seems to have arrived at the

conclusion that I am a babe specially designed by Providence to be made a dupe of by dishonest rikshawallahs, and so he has taken it upon himself to protect me from them. It is slightly annoying—the way he makes a protege of me. But that is his way.

I had once some scruples in riding in a riksha. It somehow gives me an impression of heartless cruelty to let a fellow-being drag me along. But Dulip laughed all my scruples to scorn. "Cruelty, Sah!" he said, "A'int it cruel to ride behind them horses—dumb brutes they be too? It a'int no cruelty to give a poor riskhawallah 'is bread". He nodded sagely as if he had settled an intricate problem. Dulip, you see, is a practical philosopher.

A practical philosopher is a rare animal. Many men have realised the truth of the dictum—"Do unto others as you would be done by"; but few have realised that greater and more practicable truth—"Do not unto others as you would not be done by." Dulip is one of the few that have realised that truth. He is a man with a strong sense of justice. I doubt not he would be magnanimous in more affluent circumstances. Though the life of a rikshawallah is not adapted to sentimentalism, Dulip is as chary of stealing his rivals' custom as he is resentful of those who intrude into his territory. "I don't hold with them ways!" he once confided to me, *a propos* of a rival who had attempted to outbid him. "I a'int no call to steal others' custom, and nobody a'int no call to steal mine". Dulip is strongly in favour of monopoly of trade.

It is a fascinating sight to watch him as he threads his expert way through the traffic, his red head of hair bobbing up and down, a great square patch in the centre of his back waving with undulating motion, his right palm held lightly over the riksha, and a pleasant drizzle of monologue over his shoulder if he is in a chatty mood.

Men are of three orders : the great, the rich and the poor. The poor have faults, the rich have whims and the great have foibles. Dulip's fault is he is hard on women.

This is but natural when one remembers that Dulip's opinion of the fair sex is mainly derived from Mrs. Dulip Singh. Mrs. Dulip is a spare woman, with a pinched acid face and thin resolute lips. One might compare her to Mrs. Bindle, only she is not quite so punctilious about her language. When I once met her, she was delivering an impromptu to her husband on the baseness of man and the vileness of drink. She comes in the evening to Dulip's corner and collects all the available money. No rate-collector could be more exacting and pitiless.

I once ventured to speak to Dulip about Mrs. Dulip, and found I had touched a sore point, to judge from his obstinate taciturnity. Dulip has other sore points too, drink, for instance. I remonstrate with him occasionally on his wasteful drinking, but he turns it off with a joke. On the other hand he seems to think matrimony is too serious a thing to joke about.

I remember only one occasion on which Dulip haggled over his fare. I silently added a tip. "The missus is laid up, Sah", Dulip pleaded apologetically, as if ashamed of his haggling over the fare. "She is in the hospital and I a'int got no money to buy her food. If I had only five Rupees—" he added wistfully as he trotted lugubriously to his corner. I walked off wondering at this new development in Dulip. I never suspected that he cared so much for his wife. His tirades on women had not really come out of a hardened heart.

Mr. Pickwick Leaves for Madras

ONE morning Mr. Pickwick sat musing and occasionally gazing through the window at the broad world around him. He seemed to himself a mere shadow of his past self. None realised more than he 'how dull it is to pause, to make an end, to rust unburnish'd, not to shine in use.' Sam had more than once seen his master in such reveries and had often predicted that he would change his mind and go roaming over the world once again. Nevertheless, he was taken by surprise, when he saw Mr. Pickwick on this particular morning rush out of his room, thrust himself into a cab in spite of his remonstrances and drive in the direction of Mr. Winkle's residence.

Mr. Winkle was sitting in his room awaiting the arrival of his Arabella and breakfast. Whether the continued absence of breakfast or of Arabella grieved him more, we cannot say. The said gentleman was, however, observed after some time to apply his lips air-tight to the mouth of a bottle and experiment whether the partial vacuum in his stomach could not be removed by creating a complete vacuum in the bottle. The gentleman was so much interested in this agreeable experiment, and had, like the feline species when they drink milk by stealth, so far closed his eyes, that he was not aware for a time of the presence of Mr. Pickwick whose figure loomed large in the door way with a condescending smile and beaming eyes. Gradually Mr. Winkle's lips relaxed, a smile of satisfaction played upon them, his eyes opened, and beholding his revered chief, he jumped up, shook hands with him vigorously, offered a chair and inquired the cause of this great and unexpected favour shown to him.

Mr. Pickwick meanwhile was eyeing the bottle rather curiously. His follower, understanding the significance of it, at once offered the bottle to his chief and requested him to give his opinion regarding the contents. This request the generous Pickwick granted, not in so many words, as ordinary mortals do, but in a remarkably mute eloquence which gave his friend an anxious quarter of an hour. Then the gentleman suddenly became loquacious. He informed Mr. Winkle how he had become tired of his settled life, how his soul again panted for adventure, how he thought like Alexander that his own native country afforded too little scope for further adventures, and how he therefore accepted the invitation of the Archæological Society of India to visit India and help the Society by his philanthropic efforts in bringing to light the relics of the past and thus contributing to the knowledge of the human race. He hoped that his former companions, especially Mr. Winkle, would once again accompany him. Mr. Winkle, of course, had no objection. But Mrs. Winkle coming in at this juncture and finding them adamant in their intention, burst into tears, showed symptoms of fainting, and would certainly have fainted, had either of the gentlemen showed the slightest inclination to support her. Her fears and anxieties were, however, set at rest when Mr. Pickwick solemnly promised not only to abstain from helping her husband to have any private interview with any lady, but also to prevent any such project on the part of that gentleman.

Meanwhile the English dailies and periodicals hummed with the news of Mr. Pickwick's intended departure. Different accounts were given regarding the true reasons that induced Mr. Pickwick to leave England.

The "London Times" learned from authentic sources that, of late, the honourable gentleman had showed a

marked tendency to grow prodigiously in a breadthwise direction, and that the said gentleman was mortally afraid of rising up one morning and finding himself—not famous like Byron—but too corpulent to get out of the room through the doorway. The grateful Bob Sawyer had offered to bleed him and thus effectively cure this strange disease. But Mr. Pickwick had sincerely thanked that gentleman for his kind suggestion and preferred travel and a hot climate—a remedy suggested by another medical friend.

The "Punch", on the other hand, gave out that the daily increasing admiration of certain widows and blooming ladies of seventy in the neighbourhood was Mr. Pickwick's principal reason for quitting the shores of England. The foremost place in this admiring circle of beauties belonged, by right, to Mrs. Bunsby, the former Mrs. MacStinger, on account of her daring in having forced at least one bachelor (the late Captain Bunsby) into the blessed state of matrimony. Her husband having died recently, it was but natural that she should seek solace in Mr. Pickwick who always extended a helping hand to those who were in distress. But it was observed that the sight of this remarkable beauty, instead of charming his eyes, cheering his heart, and making him oblivious of everybody else—strange to say—reminded him of Mrs. Bardell and threw him into cold fits. The 'Punch' accordingly published a cartoon representing the gigantic form of Mr. Pickwick as making a hasty and ignominious retreat before the indefatigable Mrs. Bunsby, while her devoted children tried to stop him, one by holding his right leg, another his left leg, and a third pulling at his coat-tails.

This report was strengthened by the rumour that a continuous torrent of letters from interested ladies had

threatened to submerge Mr. Pickwick's Arcadian retreat and that it was only saved from irrevocable ruin by the resourcefulness of his servant Sam, who promptly brought in the aid of fire to combat the flood. The authors of these letters assured Mr. Pickwick that they knew more about his constitution than himself. They were quite sure that, were he to go to India, he would either fall a victim to malaria or be sacrificed by the natives to one of their idols. They did not think with him that there was no scope for adventure in England itself. Let him but open his eyes, and look around him, and they were quite sure he would find enough scope for adventure and, what was more to the point, romance.

At the special meeting convened in honour of Mr. Pickwick, an address was presented to him by his admiring friends. When the unanimous cry of "Mr. Pickwick" burst from his devoted followers, the illustrious gentleman rose from the chair to address the club. With one hand gracefully concealed behind his coat-tails, and the other waving in the air to assist his glowing declamation, he spoke as follows. He thanked his friends for their expressions of love and regard. He was greatly obliged to them for the deep interest they took in him; and it was with a heavy heart that he was leaving so many of his devoted friends. But the fire of adventure still burned in his breast, and the desire to benefit the human race animated every fibre of his being (hear, hear.) He once thought that this passion, possibly this weakness (cries of "no, no") had vanished altogether from him. But he was mistaken. It may be that he was an obscure individual (cries of "no, no"), it may be that his fame had not spread to the farthest confines of the world (cries of "it has"). Even if it had not, his intense desire to contribute something to the sum total of human knowledge,

and his humble though indefatigable efforts would, he hoped, bring some credit to the Pickwickian club, the membership of which was the proudest privilege which a Briton could ever boast of (loud cries of 'hear, 'hear'). A cry of 'the devil' was heard at this juncture which combined with 'hear' sounded like 'hear the devil.' (Great excitement.) Mr. Pickwick raised his voice and asked, who was the vile and audacious wretch who dared to attribute the abominable appellation of 'devil' to the founder, however unworthy, of this great club? (Cheers.) Let him, if he be a gentleman, show his face (applause.) The gentleman referred to cried once again "the devil." (Great confusion and cries of "shut up.") The Chairman felt it his bounden duty to ask the honourable gentleman to apologise for his unpickwickian epithet. The honourable gentleman in question was now observed to have turned his face abruptly towards his back. And suddenly a scream, as of one in great pain, rent the air. The honourable members crowded round the gentleman in consternation. They found him with a bleeding mouth and a fierce face, giving vent to an unceasing torrent of oaths, imprecations and curses. One member opined that the honourable gentleman by invoking the devil had been taken possession of by that ubiquitous being, upon which the honourable members, not excluding the valiant Mr. Pickwick, unanimously resolved to take to their heels and close the door behind them. They were going to put their resolution into practice when the bleeding gentleman pointed to a fat apparition standing very near. It was that of a boy, wonderfully fat, who stood upright with closed eye-lids, in blissful ignorance of all that had happened. Questions, threats, and curses fell flat on him. His features remained severely calm. At the instance of Mr. Pickwick, who recognised in him Mr. Wardle's servant,

a gentleman shook the boy vigorously twice and boxed him thrice, when the boy suddenly opened his eyes, rubbed them once, shook his head twice, and recognising Mr. Pickwick handed him a letter from Mr. Wardle. The whole thing now became clear. Mr. Wardle was ill and desired to see Mr. Pickwick before his departure from England. Hence the letter. Discovering how successfully the fat boy had carried out his instructions regarding knocking at Mr. Perker's office, Mr. Wardle once again instructed him to knock repeatedly till the door was opened, lest he should inadvertently go to sleep. The fat boy passed unawares through the open doorway, and came to a halt only when he came in contact with the back of a fat Pickwickian. His first two knocks caused the exclamations of "the devil." The gentleman having acquired some courage and resolution, turned upon the fat apparition with a fierce grin, when the third periodical knock alighted upon his exposed teeth, with the consequences we have seen. Harmony was, however, soon restored and the proceedings were resumed. We are indebted to the Transactions of the Club for a knowledge of the resolutions passed on the occasion. They were:—

(1) "That the Association places on record its high sense of appreciation of the meritorious services rendered by Mr. Pickwick to humanity and to civilisation."

(2) "That the extreme regret they feel at his departure from their midst is palliated only by the brilliant prospect of greater glory to Mr. Pickwick, greater benefit to the world and greater credit to the Pickwick Club."

(3) "That the Association extends to the Pickwickian party the same old concessions, viz., permission to travel anywhere and for any length of time at their

own expense, and perfect liberty to send accounts of their adventures using their own stamps and envelopes."

We understand that the party has already left England. Mr. Pickwick is expected to arrive in Madras next Thursday. It has been decided at an emergent meeting of the Working Committee of the Inter-Collegiate Students' Association to garland him and present him an address at the harbour. Students of all institutions are requested to take part in the function and make it a complete success. They are requested to apply for passes to

M.

c/o Editor,
Presidency College Magazine.

Our Cricket Tour in Ceylon

THE night of the 17th of September saw a merry party of sixteen cricketers bustling into the Ceylon Boat Mail at Egmore. Till the train steamed out we were scarcely able to believe that our long-planned tour was an accomplished fact.

Our journey was unevenful except for the theft of a pair of shoes taken from us, we suspect, by an extremely garrulous stranger who made our acquaintance *en route*.

At Pamban the mighty bridge attracted our attention. We went aboard the ferry boat, which also carried some coolies across to Ceylon, and we were very kindly provided with a meal on board by Mr. Srinivasulu Naidu. To many of us the voyage of twenty two miles was the first we had ever made, and it was not surprising that the only individual who had brought pills for the cure of sea-sickness, should have been in great demand. Many a hand was eagerly outstretched to him.

We landed in Colombo on the 19th morning and explored parts of the city after we were sufficiently rested. The Pettah—much like our own China Bazaar—the harbour with its huge jetty and its forest of masts, the “Galle-face” lying south towards the fort—all came in for their share of inspection.

Our trip to Mt. Lavinia was perhaps the most delightful of our ramblings. Nearly all the way up, the sea flanks the railroad, showering the train with spray. St. Thomas' College here is an impressive building with its eight storeyed hostel—the best in the East—its swimming bath and ample play-grounds. The climate is ideal.



A Portion of the Interesting Cricket Match



A Group of our Boys at Galle Face

We next went on to Kandy being pushed up the hills by a sturdy little locomotive. The scenery is much like that to be seen on our own Nilgiri hills. The lake in Kandy was a splendid glitter of reflected electric lights, for houses border this beautiful sheet of water. Here we saw the historic "Temple of the Tooth," sacred to Buddhists and visited yearly by throngs of pilgrims. In it are enshrined some of the oldest relics in the world. Near Kandy are the famous Peradaniya Gardens, which some of our eager botanists thoroughly explored.

What impressed us most in Ceylon was the wonderful condition of the playing-fields. They were as green and smooth as velvet, and no amount of rain could prevent play. Our opponents' style of play impressed us chiefly by their excellent fielding, their strict adherence to the instructions of their cricket coach—there is one attached to every important school—and their sporting behaviour towards visitors. At Hockey they do not shine, merely because they are not as keen on this game as on cricket.

We cannot sufficiently thank Dr. John Rockwood and Mr. Shums Cassim for all the trouble they took to make our tour as pleasant and successful as possible. Without them we could have done nothing, and we are under a deep debt of gratitude to them.

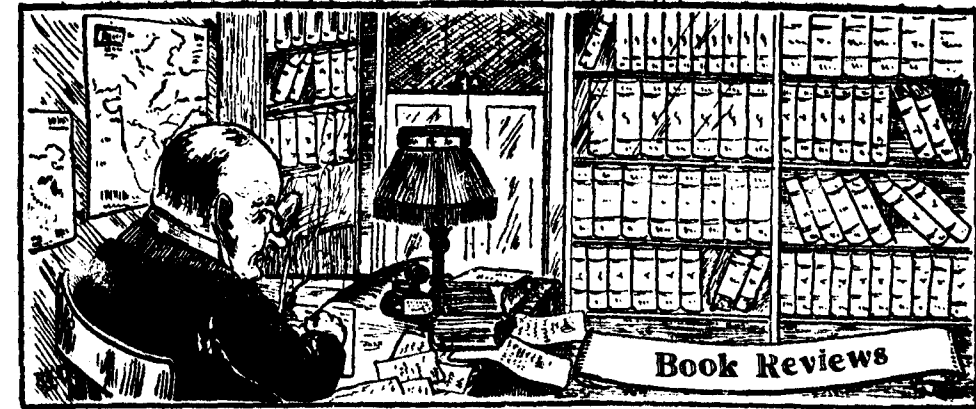
At last when the day of departure arrived, we felt we had spent so pleasant a fortnight that we could have gone on playing two day matches for a couple of months longer! But the call of duty was inexorable. Our friends gathered on the platform to wish us good-bye and we felt as though we were taking leave of tried and trusty companions.

There is one thing I shall always recall in connection with this tour. It is a lesson that I learnt from the

notice board of one of the colleges, and I shall never forget it.

"For when that last great scorer comes
To write against your name,
He writes not whether you won or lost,
But how you played the game."

C. S. V.



A LITERARY HISTORY OF ENGLAND: By Bernard
Groom (Longmans, Green & Co.) 6 Sh.

THE need for a new book on the history of English Literature is perhaps not very keenly felt today, and though the author states in the Preface that it is "a new introductory treatment" of the subject, the element of 'newness' is not very striking to the general reader not unacquainted with other histories of English Literature. "It is an attempt to give a short critical account of the greater English writers with the background—intellectual, political or social—which best helps to explain their work." Since there is a clear literary tradition from the age of Chaucer down to the present day, the book is called a Literary History of England.

The author deals with the earlier period up to the 16th century in the briefest way in about thirty pages, and then goes on to describe the effects of the Reformation and the Renaissance. One chapter is then given to Spenser and one to Shakespeare, following which is a whole chapter devoted to prosody, which within its limits is a simple but excellent treatment of the subject. The literature of the 17th century is dealt with in three chapters, the 18th in four and the 19th in six. The concluding

chapter attempts a survey of contemporary literature in the works of some of the more prominent living writers.

The relative importance of the various centuries and authors to the general student of literature—barring, of course, the 20th century—is well suggested in the proportion of space devoted to each. There is no attempt at exhaustive treatment of any single 'age,' and the minor authors are omitted altogether. In the treatment of the major authors, definite impressions are sought to be conveyed of their work and style. The character of the age and the social and other backgrounds are also sufficiently indicated. One pleasing feature of the book is the absence of generalizations and large abstract statements which with their learned pedantry only succeed in confusing the general reader for whom such books are intended. The author is throughout lucidly critical; even when he deals with 20th century Literature, he does not shirk the task of assessing comparatively the work of each author, though necessarily in an imperfect way. On the whole, we have in this publication one of the most readable handbooks on the history of English Literature giving brief yet sufficient criticism of authors and works with interesting narrative of literary history. V.

NEW EXERCISES IN ESSAY WRITING. By Guy Boas, M.A. (Longmans, Green & Co.) 2/6 d.

This little book aims at helping the student in the study of English Literature and in the practice of English composition. After dealing with the structure and length of sentences and paragraphs, simplicity and appropriateness of style, and the beginning and ending of essays, Mr. Boas gives a series of lessons and exercises in narration, description, exposition and argumentation. The illustrative passages, some of which are accompanied

by suggestive commentaries, strike us as being very happily chosen. The author has included lessons on the Humorous Essay, the Leading article, the Book Review, and the Dramatic and Film critique. The book is quite up-to-date in treatment and we have no doubt it will be useful to lecturers and students alike in colleges.

N. R.

DRAMA: A GUIDE TO BEGINNERS By T. R. Williams. (Longmans, Green & Co.,) Sh. 1.

This handbook on the drama, its art and craft, is issued by the Workers' Educational Association for the benefit of working class students in England. Necessarily, therefore, it provides an easy and persuasive discourse. There is a total absence of formalism and pedantry. Mr. Williams has in a thoroughly enjoyable manner dealt with the general dramatic principles. His rendering of the substance of the drama, Tragedy and Comedy, and his illustrations of technical expressions as tragic conflict, tragic flaw, dramatic crisis, poetic justice, high comedy, low comedy, etc., are easily understandable by a beginner. In all questions of aesthetic judgment, as Ruskin pointed out, we can only rely on the opinion of the majority of those who are most likely to know, and Mr. Williams' talks are a contribution to that opinion. The booklet is a very useful aid to the appreciation of the drama. By means of a bird's eye view of this important literary form as practised from the days of the Ancient Greeks right down to our own—the days of Wilde and Shaw, Synge and Galsworthy—the lay reader is enabled to perceive the basic principles of the art and to form and record his judgment. Mr. Williams' book is well informed and clearly written—indeed, it is a *causerie* in the true sense of the word—and its eight chapters form a

safe guide for the beginner to the beauties of the English Drama.
N. R.

HOW TO READ LITERATURE: By G. E. Wilkinson.
(Longmans, Green & Co.,) sh. 1.

This book is one of a series issued by the Workers' Educational Association to provide working class students with inexpensive introductory books on subjects studied in elementary classes. The Foreword tells us that the object of the writers is "to appeal to independent students who want not to be told what to think, but to be helped to think for themselves." The writer of the present volume has kept this principle steadily before him. He points out certain useful lines of inquiry in the study of a book, and supplements this piece of critical advice with a select list of useful books for further study. The approach to the subject is made in a homely, familiar manner. The writer pleads for a critical analysis of the impression produced by a book.

The course of study he recommends is certainly the best for an independent student who wants to think out for himself. The lines of inquiry are illustrated with reference to the study of a novel, a drama and a poem. Towards the end two chapters are added on the function and material of poetry. The subject here is tempting, yet the writer does not lose himself in any pedantic or philosophical discussion, though a few definitions from great masters are quoted here and there. Bearing in mind his readers, the working class students, he discusses the question in a homely way and defines that the function of poetry is to tear the veil and discover the hidden beauty of things. Similarly, with concrete examples, he points out the differences between poetry and prose and emphasizes the importance of

rythm and suggestive images in the former, as contrasted with the bare, matter-of-fact narration in the latter. Though written ostensibly for W.E.A., we think the book will serve as a very useful introduction for all interested in the study of literature.
N.S.

SOME CHAPTERS ON WRITING ENGLISH:—By
J. Gettims. (Longmans, Green & Co.)

This book consists of three parts. In the first, the writer wants to impress on the reader that writing is an art, and, like all other arts, it has also certain principles to be followed. He begins with words and emphasizes the choice of apt words for the context. A short sketch is given of the growth of the English tongue, which we think from its meagreness may well be left out. Then the writer discusses the nature and meaning of slang, and also the changes in the meanings of words. But the most useful and interesting chapter is that on habit in writing, where the writer points out, with the aid of concrete examples, the ridiculous affectations and meaningless absurdities in writings "for business, sport and the Press," and rightly stresses directness and simplicity as the prime features of all good writing. In the chapters on sentences, he discusses briefly the three principles, of accuracy, unity of thought and simplicity. Of greater importance to a teacher is the chapter on grammar where the writer has well analysed the common errors and pitfalls of school children. Useful hints are then added on the different types of composition, viz., letter-writing, precis-writing and essay. The second part contains a few exercises for detecting grammatical errors. But it is very short and from a teacher's point of view could have well been longer. This defect is, however, more than compensated by the third part where the reader is entertained

with select extracts from great masters like Lamb, Lucas, Belloc, etc. These extracts will serve as good models for the ambitious young student who can read and re-read them with profit.

N. S.

'EXPERIMENTAL HYDROSTATICS AND MECHANICS': By E. Nightingale, M. Sc. (G. Bell and Sons Ltd., London, 1929.)

This book treats experimentally the principles of Hydrostatics, Statics and Dynamics. The author has followed here the same treatment as in his popular book on 'Sound'. Each principle is introduced by a brief historical sketch and is fully explained and illustrated; and examples of modern applications are given. To mention only a few cases, the author finds occasions to refer to weather charts and weather forecasting, submarines and seismograph. At the end of each chapter is given a collection of numerical examples. One interesting feature of the book is that it contains illustrations of famous men of science from Archimedes to Sir Isaac Newton 'whose names are landmarks in the growth of the subject' in the words of the author, and gives an account of their lives and works—a method calculated to rouse the enthusiasm of the student. Though the book is intended for School Certificate students in England, it may with considerable benefit be used by students appearing for the Intermediate Examination of the Madras University.

G. P. K.

ENGLAND IN MODERN TIMES 1714-1902, By Robert M. Rayner (Longmans, Green & Co.)

This book deals with one of the most interesting periods in the history of England—a period of great social, political and economic development which led her to her present position as a world power. Such varied

aspects of historical development, specially in the period covered by the book, do not usually lend themselves to easy treatment, and books dealing with them have, in consequence, been either mere biographies of some of the great men and women of the period or a rather dull chronological catalogue of the events of the period without any perspective or sense of proportion. Mr. Rayner has tried with commendable success to steer clear of these difficulties and produced a book of great value. His treatment of the long period of Queen Victoria's reign deserves special notice in this respect. He has, in contrast to other writers on the period, rightly emphasized the dominant ideas which were working to transform the social and political order of the time. Great care has on the whole been taken in the selection of topics for treatment, and the author has managed to sustain the interest of the reader by copious illustrations of maps and time-charts. The value of the book has been further enhanced by the suggestive headings and useful summaries at the beginning of each chapter. Thoughtful questions and interesting problems for discussion at the end of each chapter form a special feature of the book. On the whole Mr. Rayner's book is bound to be of much interest and value to teachers and students and help to make the teaching of history in Schools and Colleges more realistic and 'human'.

V. V.

SHAKESPEARE'S TRAGEDIES: By William Miller (G. A. Natesan & Co.) Re. 1/8.

SIX TRAGEDIES OF SHAKESPEARE: By Dover Wilson. (Longmans, Green & Co.) 1 Shilling.

The Publishers' note at the beginning of the first book says that the monographs on King Lear, Macbeth, Hamlet and Othello by the late Dr. Miller of the Christian

College appeared some time ago in different volumes, and that they are now brought under one cover in the hope "that not only College students who study the tragedies for purposes of their University examinations, but all lovers of Shakespeare would welcome it in this form." We are not now concerned with all lovers of Shakespeare, but only with the College students who have to study Shakespeare's tragedies for the purpose of University Examinations. Could this book be recommended to them? We are afraid that, if the present irreverent generation were to read it, it would look upon the author as another Polonius. Take, for instance, what he says on the vexed question of Hamlet's procrastination. Dr. Bradley in his famous book on Shakespearean tragedy has summarised all the theories on the subject and pointed out their inadequacy. His own view, which is now accepted by almost all scholars, is that it was largely due to the moral shock that the Prince of Denmark received when his beloved mother married in indecent haste his disreputable uncle. According to Dr. Bradley the tragedy is not merely one of reflection, it is one of moral idealism. But these lectures of the late Dr. Miller belonged to the pre-Bradleyan days. And the literary critic is all but lost in the schoolmaster. After twenty pages of tedious moralising the author comes to the key to Hamlet's character; and he finds it—in what? In Hamlet's lack of sense of duty! And why did Hamlet lack the sense of duty? The answer again is ready. Around Hamlet there had been little or nothing to develop that sense in his impressionable years.

"That feeling may have been active in his father; but if so, that father stood in this respect practically alone in Denmark. It is needless to say that in his mother and in his uncle, there is no such principle at work."

Nor was this precious sense found in Polonius; nor in Rosencrantz and Guildenstern; nor in Laertes; nor in Ophelia; nor even in Horatio. No, neither in Denmark nor at Wittenberg. (There was evidently no Christian College at either of these places in those days).

After this we are not surprised at the astounding statement that "Hamlet's character is developed entirely from within. External events have no share in forming it."

Look at this picture and that. The small booklet on six tragedies of Shakespeare by Mr. Dover Wilson, the Editor of the New Cambridge Shakespeare, is one which we heartily recommend to 'all students and lovers of Shakespeare.' Mr. Wilson writes for the plain man, the worker. And it is marvellous how he brings down complex psychological questions of character to the level of the worker's understanding. Let us, for the sake of comparison, take the following paragraph from his chapters on Hamlet. "A man dies, a man noble in character and highly respected among his neighbours, leaving a widow and a son who has not yet quite finished his education. He leaves also property of some kind, property which his son expects to inherit, though it is bequeathed in trust for him to the wife. And then a horrible thing happens. Six weeks after the father's death, the widow marries again, marries the brother of her late husband, a clever man of business, but a shifty disagreeable kind of person, whose first act is to secure the property for himself. The son does not like this last, of course; but he had idolized his father and he loves his mother passionately, so that her action troubles him much more than his own wrongs. How could she have done it? How could she have married again so soon? have forgotten his father and turned to that detestable uncle of his? It makes him sick to see the two together. The thought of them as man and wife

defiles his imagination ; for what could they—his darling beautiful mother and this goatish uncle—have in common but lust? The boy had been full of high and generous ideals of youth ; his mother's re-marriage comes as an awful, an overwhelming disillusionment. If his mother is like this, then what kind of place is the world? and what is the meaning of life itself? has it any meaning but Lust? He is haunted, too, by a suspicion that even now he does not know the worst. And one day he discovers that his mother had been his uncle's mistress during his father's lifetime, and—most horrible of all—that his father had been made away with in order that the two might enjoy his property, and each other, undisturbed. These facts reach him in the form of evidence vouched for by his dead father, reach him together with a solemn command, as it were, from beyond the grave, that the wicked marriage shall be stopped at once and that the murderer shall receive the punishment he deserves. At the same time, he is warned that nothing must be done to bring shame or injury upon his mother ; in other words, a family scandal must be avoided at all costs."

Such, according to Mr. Wilson, in general terms, is the problem which confronts the young student who is the hero of the play. Hamlet is called "the Prince of students," and we hope all students will read for themselves this charming little book on Hamlet and five other tragic heroes of Shakespeare.

'S.'



College Notes

THERE were no changes in the Staff in the second term except that Prof. W. E. Smith returned from leave and relieved Mr. Damodara Kini, and that the Principal was obliged to go on short leave for about a week, during which time Prof. Douglas acted in his place.

The Union Society

During the first term the Union Society conducted a debate on Tuesday, 27th August, in the Big English Lecture Hall, when Mr. K. Rajagopalaswami moved the resolution "That, in the opinion of this House, Indian Marriages are failures." It was opposed eloquently by Mr. B. V. Subramaniam. Many spoke enthusiastically in favour of the opposer. Finally the resolution was put to vote and declared lost.

On Tuesday, the 3rd September, Sardar Vallabhbhai Patel of Bardoli fame, who was on a visit to Madras, was invited to address the students of our college. The subject of his address was "The task before the students of India." Mr. D. Venkatarama Reddi presided. The hall was packed to the full, for students from other colleges also attended. The lecturer rose amidst loud cheers and said that he had no message of his own to give, but that he would convey that of his guru, Mahatma Gandhi. He wanted that young men should rid themselves of communalism. If they wanted to take part in politics there was no other way than to make themselves useful to society, and to poor

people in particular, by doing some social service. He warned them against taking part in election campaigns. He said that every student should look after the village from which he came. As the future of India and of the world lay in the hands of young men, they must follow in the footsteps of the great men of the world. He entreated them to abandon the notion of entering Government service and to struggle hard in the world to get an independent living. He brought it home to the audience that they should have the patriotic spirit in them throughout their life. Mr. D. Venkatarama Reddi in his concluding remarks said that the advice given by such a great leader as the lecturer should be deeply cherished and followed by students. The meeting came to a close, when the hall resounded with the cries of "Sardar Vallabhbhai Patel-ki-jai" and "Mahatma Gandhi-ki-jai."

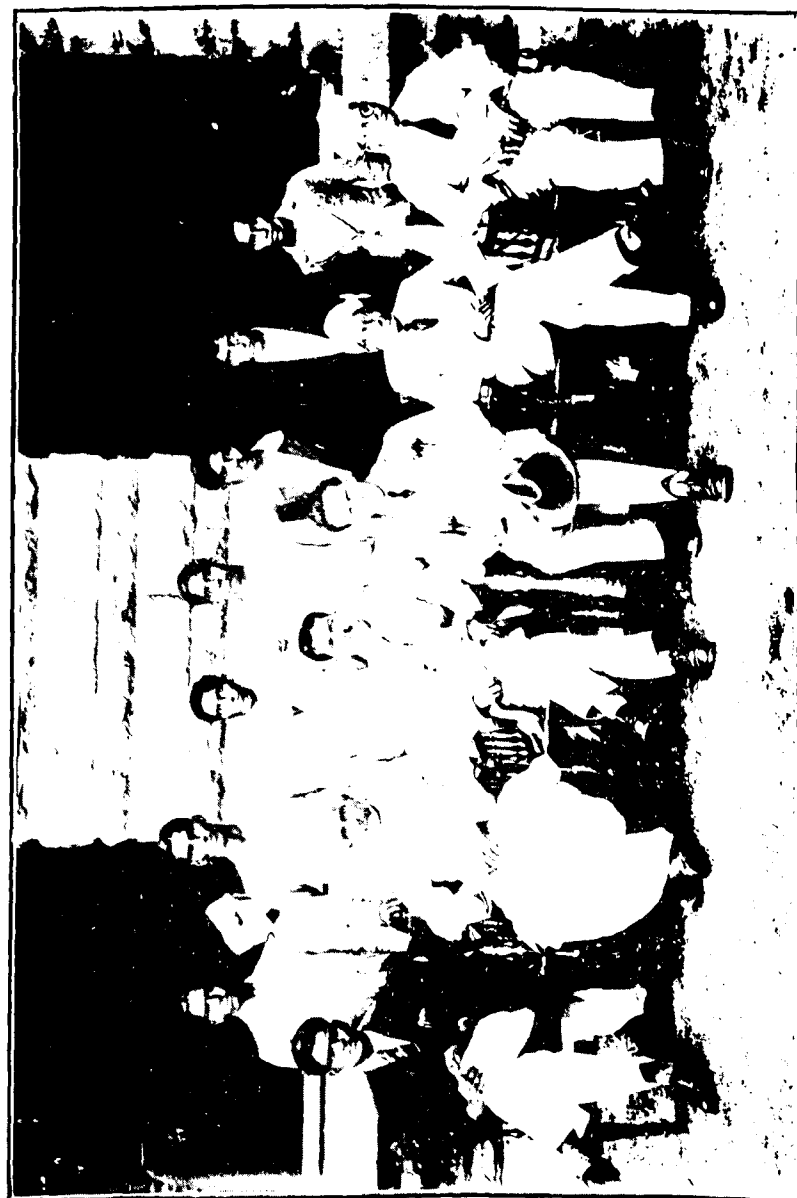
At the beginning of the second term unusual enthusiasm prevailed during the elections of the President and the Secretary. Mr. M. Venkata-Varadiah and Mr. V. Vasudeva Menon were elected President and Secretary, respectively. A fresh Committee was also elected.

The first debate of the term was opened by Mr. B. K. Sarvothama Rao who moved that "In the opinion of this House all philosophy is a clog to life." Mr. Nagesa Malliah led the opposition and carried the day.

The second debate was more exciting, as it was a debate between the past and present students of the college. Mr. K. S. Radhakrishnan (old boy) moved that "In the opinion of this House students should take part in politics." Mr. C. A. Ramakrishnan opposed the resolution, which was, however, carried by a large majority.

The normal tenor of the ordinary debates was agreeably broken when Mr. K. T. Paul O.B.E., of Y.M.C.A. fame delivered an instructive lecture on "Students' Self-help movement," under the auspices of the Union Society.

The most interesting function of the term was the Inter-collegiate Debate which was held on the 3rd December in the Big Hall which was packed to the full. On the eve of the debate, the Union Society Committee was at home to the speakers and secretaries of the other four Colleges—Christian, Pachaiyappa's, Loyolla and Muhammadan. Mr. B. V. Subramaniam in a speech, unrivalled for its even flow and spicy humour, moved the resolution "That in the opinion of this House 'The Sarda Act' is unwise, unjust, and



Prof. Werner Heisenberg and the Physics Association.

inexpedient." Mr. P. R. Narayanan (Christian) led the opposition and spoke eloquently. The speeches of Mr. Krishnaswami (Christian) and Mr. E. K. Warriar (Presidency) were also on a high level. The resolution was lost by a narrow majority of the roaring House. The function was as successful as it was unprecedented.

The Mathematical Association

At an ordinary meeting on the 2nd September, Mr. S. Rajan delivered an interesting lecture on "The Evolution of Mathematics" with Mr. G. A. Srinivasan in the chair. He traced in detail the development of Mathematics in India, Greece, Rome, Arabia, France and Germany. He clearly indicated how once it was monopolised by clergymen and monks and how it gradually spread to common people. After paying a glowing tribute to Indian mathematicians, he said that among the European nations, France and Germany were famous for original research in Mathematics. The meeting terminated with a vote of thanks proposed by the Secretary.

The activities of the second term commenced with a lecture by Mr. G. A. Srinivasan on 'The Indian Calendar.' In the course of his highly instructive lecture, the lecturer clearly explained the various notations in the Indian Calendar and its astronomical importance.

A brilliant lecture on the 'Use of the Divergent Series' was delivered by Father Louis Vion of Loyolla College on Thursday the 14th of November, with Mr. T. Suryanarayana in the chair. The lecture was heard with rapt attention and was of immense benefit to students. With a few interesting remarks from the chair, and a vote of thanks proposed by the Secretary, the meeting terminated.

The Physics Association

Among the last term's activities we have to include the 'At Home' to new graduates, which was a very enjoyable and successful function. Two weeks later Mr. C. Ramaswamy, M.A. (Hons.), Research Student, gave an illuminating lecture on "The Cosmic Radiation." His masterly exposition of the subject was much appreciated by the audience.

This term opened with greater prospects. We had the unique opportunity of hearing Prof. WERNER HEISENBERG of Leipzig

University, the illustrious originator of the Matrix Quantum Mechanics. He delivered a lecture on "The Uncertainty Principle" on Monday the 14th October. He explained the inner physical meaning of the mathematical scheme of Matrix Quantum Dynamics. We take pride in pointing out that this was the only lecture delivered by the Professor in India. His presence was an inspiration to all of us.

A week later Prof. K.S. KRISHNAN of the Dacca University delivered a lecture on "The Scattering of Light." He dealt with the classical, Quantum, and wave mechanical aspect of scattering and explained in a masterly way the Photo electric, Raman, Compton, and Raman-Compton Effects.

An interesting discussion on 'The Zeeman Effect' took place on Tuesday the 12th November, with Dr. H. Parameswaran in the chair. This is the first of its kind in the annals of our Association, Mr. C. A. Ramakrishnan took the initiative and gave a general survey of the different aspects of the Effect with special reference to its explanation of the classical theory by Lorentz and Larmor. The astrophysical aspect was taken up by Mr. M.A. Quadeer. He was followed by Mr. R. Madhava Rau B.A., an old student, who showed us some interesting slides of the spectroheliograph at the Kodaikanal observatory. Next Mr. S. Chandrasekhar discussed the Quantum Theory explanation of the Effect, and explained Laude's theory of Zeeman states. Mr. C. Ramaswamy, M.A. (Hons.) followed with the famous Stern-Gerlach experiment on the magnetic deviation of silver rays, which strikingly confirmed the truth of Laude's Theory of Zeeman states. The discussion lasted for three full hours.

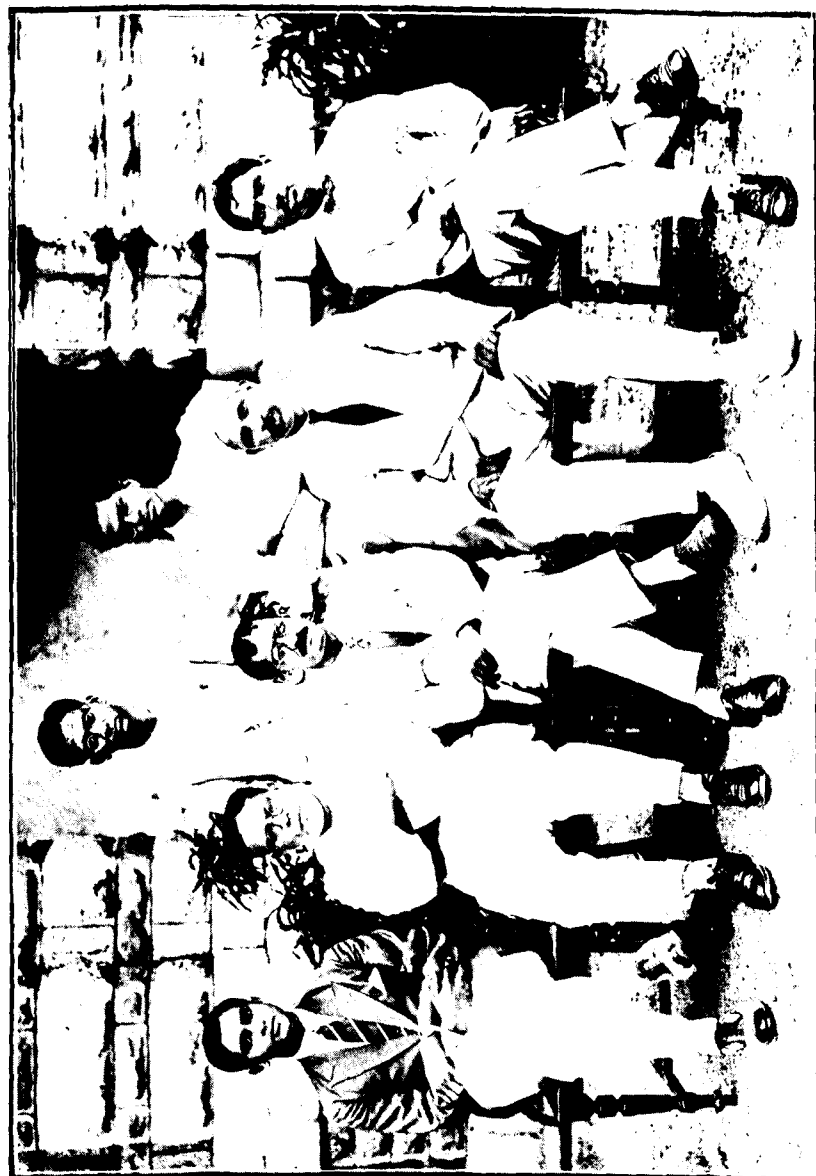
The same week Mr. P. A. Gopalakrishnan read an interesting paper on "the Brownian movement in liquids and gases."

Among the other activities during the term may be mentioned two excursions to H. M. S. 'Enterprise' and to the M. & S. M. Ry. Workshops at Perambur.

We hope to have our exhibition in January as some of the new experiments we are arranging will be ready only by that time.

The Chemical Society

Among our activities of the last term, mention may be made of the annual At Home to the graduates of the year. This was held on the afternoon of the 17th August with great success. We had two



Dr. P. R. Ray and the Chemical Society.

Interesting lectures also from our members, one being on "Interfaces" by Mr. G. S. Siddappa and another on "Colour and Constitution" by Mr. K. N. Subramaniam.

Our activities this term were inaugurated by Dr. P. R. Ray of the Calcutta University who spoke to us about the "absorption spectra of the rare earths". The hall was packed to the full. The learned lecturer made his lecture very instructive and we were all much benefited by it. Another interesting lecture this term was by Captain I. W. Barnard of the Government X-ray Institute, who spoke to us on the "Practical Applications of the X-rays." Dr. H. Parameswaran presided on the occasion.

The Annual Exhibition, which came off rather early this year, was held on Monday the 4th November, the special feature this time being its opening by the Hon'ble Dr. P. Subbaroyan, Chief Minister to the Government of Madras. The Minister arrived at 10-30 a.m. and was received at the lecture theatre where the meeting was held. Dr. B. B. Dey in a short speech welcomed the Hon'ble Minister and requested him to open the Exhibition. Dr. Subbaroyan in his speech referred to the high standard maintained by the Presidency College and hoped that the standard would never go down. He emphasised the fact that Prof. W. E. Smith and Dr. B. B. Dey were responsible for bringing the Chemistry Department to its present high level. After these remarks, he declared the Exhibition open. The minister was garlanded and a hearty vote of thanks was proposed by Mr. O. G. Eapen. He was then taken round and shown the various Exhibits. The Exhibition was open till 6 p.m. ; In spite of the heavy rain, it was a splendid success. We take this opportunity to thank the Principal, Mr. Fyson, Dr. Dey, our President and Mr. Kini, the Vice-president, and the exhibitors and volunteers in helping us to make this annual function a success.

The Philosophical Association

Since Dr. Charlotte Krause of the Leipzig University addressed our Association, we have had only two meetings, of which one was a debate. The latter was held under the joint auspices of the Philosophical and Historical Associations—an event which occurred for the first time in the annals of our Association. Mr. A. Subrahmanyam (History Honours) moved that "in the opinion of this House, history repeats

itself." He was supported by Prof. J. Franco, M.A. Mr. S. Parthasarathy (Philosophy Honours) vehemently opposed him and pointed out that history repeating itself was a contradiction in terms. History was a stream of flowing events and a minute lost was lost for ever. History could not repeat itself for the simple reason that no two moments were identical. He was ably supported by Prof. T. Narayana Menon M.A. and Dr. T. V. Seshagiri Rao Naidu M.A. The motion was, however, carried, since the 'philosophers' were in a minority.

On the 20th November, Mr. S. Parthasarathy read a paper on the "Message of the Bhagavad Gita." Prof. I. N. Menon, M.A., the President of the Association, occupied the chair.

The Historical Association

A novel debate was arranged under the joint auspices of the Historical and Philosophical Associations on 4th of September in which professors from both departments participated. The subject of the debate was "That in the opinion of this House, history repeats itself."

Another novel debate was got up on the 23rd October. Mr. E. D. Visvanathan moved "that in the opinion of this House, it is better to break heads than to count them". He was ably supported by Mr. A. Subramaniam and Miss Varkey. Mr. C. R. Ragavachari opposed the motion. Prof. Franco and Prof. T. K. Duraiswami Iyer steered a middle course. However the motion was lost.

On Monday the 11th November, Mr. E. W. Green B.A., (Oxon) Principal, Muhammadan College, addressed the members of the association on "The Revolution in China," with Mr. P. F. Fyson M.A. in the chair. The lecturer pointed out how the exclusiveness of China, the establishment of the Manchuris dynasty, the decentralised system of Government and the inefficient officials at the helm of affairs necessitated an intellectual and political reformation, if not a revolution in China, if she was to move with the modern world. The defeat of China by Japan during the years 1892-95 and the defeat of Russia by Japan in 1904-05 revealed to China the fact that she must come into a line with the other nations of the world, if she was to resist Japan. The Reform Party sounded the note of revolution and Sun Yet Sen was ultimately declared the first president of China. With a few concluding remarks from the President and the vote of thanks the meeting terminated.

On the 13th of November, under the distinguished presidency of Mr. M. A. Candeth, Mr. Viramani moved "That in the opinion of this House, the best thing to do with advice is to pass it on." He was ably supported by Miss. Chakko. Mr. A. N. Srinivasa Iyer opposed the motion. Among others who took part in the debate were Messrs. Patro, Warriar, Subramaniam, Parthasarathi, and Atchyya. The motion was lost. The president was garlanded and with the usual vote of thanks the meeting came to an end.

On Tuesday, the 19th November, the Hon. Sir C. P. Ramaswami Iyer, C.I.E. was invited by the association to speak on "The future of the League of Nations." Mr. V. V. Srinivasa Iyengar presided. The distinguished lecturer said that the League had made it necessary for the bigger nations of the world to justify their position before smaller nations. Even more than this he regarded the League mainly as an instrument for the formation of world opinion. What about India? He regarded the League as a powerful means by which she could assert herself in the eyes of the world. She might do it imperfectly now, but even such efforts had some value. She would do it more and more perfectly as she evolved her own government, and she would be helped in her efforts by the world opinion. Concluding he said that it was because he felt that the League would be benefited by India and that India would be benefited by the League, that he became a supporter of it. With the President's concluding remarks and the vote of thanks the pleasant function came to an end.

On Friday, the 22nd November, Rao Bahadur K. V. Rangaswami Iyengar Avl.' Director of Public Instruction, Travancore, addressed the members of the Association on "Education and Democracy," with Mr. Franco in the chair. He defined education as the "unfolding of personality," and for the sake of democracy he pleaded for free adult education. The meeting terminated after the usual vote of thanks.

The English Honours Association

The Association commenced its career with the delivery of the inaugural address on 21st August, 1929 by Mr. V. V. Srinivasa Iyengar B.A., B.L., ex-Judge of the Madras High Court. The subject of the address was "The Drama as a Literary Art," Many points of interest were dealt with by the lecturer. The President of the Association, Prof. Douglas, occupied the chair.

Meetings of the Association for literary purposes were held fort-

nightly according to the rules, and attendance has always been good. Three essays were read and two debates held during the period under report. The essays were, on the whole, of distinct literary merit, and the debates always lively.

The following were the subjects of the essays :—

1. "A Study of Adversity in Literature"
2. "Some tendencies of Twentieth Century Literature"
3. "Shakespeare's Stage-craft."

And the following were the subjects of the debates :

1. "That, in the opinion of this House, Pope is not a Poet"
2. "That, in the opinion of this House, Poetry will die in the immediate future."

An Extraordinary meeting of the Association was held to elect a representative of the Association to the Committee of the Union Society in the place of Mr. M. Venkatavaradiah, who was elected President of the Society for the term. Mr. K. Ramaswami (IV Hons) was elected unanimously.

In order to encourage the cultivation of the oratorical talents of the members, the Association instituted two prizes named after Prof. Douglas, the President of the Association. The competition was held on 27th November 1929, in the presence of a large number of members and visitors. Messrs. Douglas, V. K. Aiyappan Pillai and D. S. Sarma were the judges. Ten members competed, including a lady. The competitors were asked to speak either on "Should woman receive the same type of higher education as man?" or "Has Western Civilisation benefited India?" The judges announced the following award :—

First Prize—Mr. B. K. Sarvothama Rao (V Hons)

Second Prize—Mr. T. S. Kunchitapadam (V Hons)

The programme of literary work has not interfered with the furthering of the other object of the Association, namely, the promotion of social intercourse among the members. Before the Association was ushered into existence, members of the three Honours classes had no opportunity of meeting one another, and the parties given in honour of the outgoing students were mostly formal. But with the inauguration of the Association, personal contact with each other has brought one and all together, and a feeling of brotherliness and friendliness pervades every activity of the Association. The Association has among its members a substantial number of lady students, who by

their hearty and enthusiastic co-operation in the work of the Association have contributed, not a little, to the success of every task which the executive have undertaken. One of the most delightful evenings was spent when the members met at a social gathering just before the Michaelmas holidays.

Finally, it is our pleasant duty to record that our President, Prof. Douglas, has, by a liberal donation, enabled the Association to stand on a firm footing, and that all those who are entitled to the membership of the Association have enrolled themselves and have by their active co-operation considerably lightened the work of the Executive.

The Sanskrit Association

Dr. Charlotte Krawze of Leipzig University, who was touring India last August, addressed us on "An Interpretation of the Jaina Ethics," on the 29th August, 1929. At the end of the lecture, Professor S. Kuppuswami Sastriar, who presided on the occasion, announced the decision of the managing committee of the Association to elect the distinguished lecturer of that evening as an honorary member of the Association, according to rule III C. of our new constitution. Next printed copies of the address delivered by Dr. Miss Charlotte Krawze were distributed to all those present. With the usual vote of thanks, the meeting then terminated.

Our next meeting was held on the 14th of October, when Mr. Venkata Krishna Rao M.A., Professor of Sanskrit, Christian College, addressed on "The four theories of Rasa." Dr. A. Sankara Iyer (one of our vice-presidents) presided on the occasion. Both the lecturer and the president surveyed the development of Rasa theories from their earliest beginnings to the modern times. With the usual vote of thanks, the meeting terminated late in the evening.

A correction : Dr. C. Sankaran is not the Secretary of the Sanskrit Association as notified in our last issue. It is C. Sankaran of III Hons.

The Association put on boards Kalidasa's Sakuntala on Saturday, the 7th December, under the presidency of M.R.Ry. V. V. Srinivasa Iyengar Avl., B.A., B.L., and it may well congratulate itself on the successful performance of this famous play. Of the actors who distinguished themselves, special mention may be made of D. Subramanian (Dushyanta) for his clear pronunciation, T. Panchanatham (Sakuntala) for his pathetic acting in

the tragic scenes, V. Sundararajan (Priyamvada) for his superb display of emotion in the parting scene, M. Ramachandra Rao (Vidhusaka) for his ease in the comic interludes, Mr. T. N. Ramachandran (Kanva) for his good singing and C. R. Sankaran (Fisherman) for his wonderful realism in costume and gestures. The thanks of the Association are due to these and other actors, and also to Pandit M. D. Alasingaracharya, Mr. O. P. Rangasami Iyengar, Dr. Sankara Iyer and others who were responsible for the training of the actors and the staging of the play.

The College Hostel

As usual the term began with the election of office-bearers for the Advisory Committee. Mr. T.R. Parthasarathy was elected General Secretary.

There was a change in the scope of the religious classes this term. Instead of lectures on the Gita, our Superintendent delivered a course of lectures on his "Primer of Hinduism," with a view to help those who were appearing for the Sri Gargi Memorial Competition Examination. The classes were well attended. Many students from outside the hostel also came to listen to the lectures. The examination came off on 16th November. The results are published elsewhere in this issue.

On October 27th, Sjt. Ramachandra of the Kengeri Gurukulam addressed the members of the Hostel on "Physical Culture." He explained to the students the value of a moral life and the importance of physical culture. The lecture was accompanied by a demonstration of yogic exercises.

The Hindi classes are going on as usual, though the general enthusiasm seems to have a little abated. The progress has been, however, considerable, and many will be appearing for the forthcoming examinations in February.

The Gita day was celebrated in the Hostel on the 12th December. After the Puja and the readings from the Gita, our Superintendent gave a short but very impressive lecture on "The Gita and Dharma".



It is a very pleasing feature in the athletic life of the College that we were able to tour in Ceylon during the last Michaelmas vacation. It was a holiday fraught with beneficent results from more points of view than merely that of the number of matches won. The whole trip was an education in itself and a splendid means of character training. We are more grateful than we can say to our excellent hosts, the Zahira College, and owe our thanks chiefly to Mr. Cassim to whose energy and enthusiasm the success of the tour was largely due.

An interesting resume of the tour was given by the Ceylon Morning Leader in one of its issues. To be frank, however, we are surprised at their encomiums as regards our Hockey. It was mainly a Cricket team we sent, and with four or five extra Hockey players we thought we could venture a few matches in this direction. Our success more than fulfilled our expectations.

Cricket

We opened the Inter-Collegiate tournament auspiciously by beating the Loyolla College on our grounds. Entering first, we made 174 runs in all, thanks mainly to Krishnamurthi, C. D. Parthasarathy, M. D. Rangaswami, G. Parthasarathy and Venkatasubban who made 40, 33, 28, 13, and 12 runs. Our opponents replied with but 61 runs, N.V. Rangaswami bagging 6 wickets for 24 runs, while "G.P." and Balachandran got 3 and 1 wicket for 26 and 2 runs.

In the next match against the Pachaiappa's College we won comfortably by 105 runs. We totalled 180 runs, to which G. Parthasarathy K. Krishnamoorthy, and Venkatasubban contributed 43, 38, 24, and 23 runs. The Pachaiappites could reply with 25 runs only, "G. P." doing most of the damage by capturing 6 wickets at a low cost.

The next two matches against the Veterinary College and the Christian College proved to be rather one-sided. The former scored 40 runs in all, and we beat them easily at the expense of 3 wickets, Saravanam, and Krishnamoorthy scoring 19 and 17 runs. G. Parthasarathi was deadly with the ball, for he captured 6 wickets at 3 runs a piece, while Jaganathan who is in our midst again, and Venkatasubban, took 3 and 1 wicket. The latter College, who scored 33 runs in all, allowed us to score 145 runs in less than two hours. "G.P." who is now in great form hit up 35 runs in his usual style, while our captain Nayak scored 28 runs and Loganath 18. Jaganathan with his slow deliveries easily deceived the Xian batsmen, and captured 6 of the wickets at 2 runs apiece, while 'C.D.' accounted for 3 wickets at the same cost.

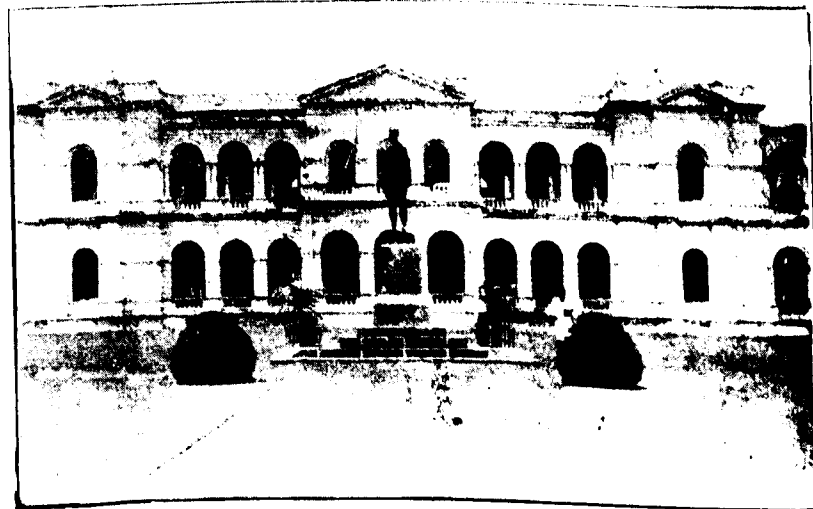
Now to come to our activities in Ceylon. An optimistic band of 16 cricketeers, we set foot on the island on the 19th of September. We met with phenomenal success, for we played 6 matches on the whole there, including 3 two-days fixtures, out of which we won 2, lost 2, and drew 2.

The initial match of the tour with the Ananda College was a great triumph. The ground was quite fit for play, despite the heavy overnight's rain. Jaganathan who led the team in the absence of Naick won the toss and elected to bat. We had brought our score to 247 runs with one wicket yet to spare, when our innings was declared closed. Our able Captain Jaganathan made an unfinished brilliant 105 runs, while our mighty G. Parthasarathy hit 92 runs daily in less than half the time. To this our opponents replied with 100 runs, thanks to their skipper Amaryasurya, who made a good 43. It should be remembered that he is also their opening fast bowler. Jaganathan, "G.P.," and Flory bagged 4, 4, and 1 wicket for 48, 59, & 30 runs, respectively.

Our second match, a two days' encounter with our good hosts the 'Zahirians', did not come to a definite decision. Having had the first knock at the wicket they registered a total of 160 runs—Raheem and Samath scoring 38, and 33 in neat style. Our collegians put up but 139 runs in all—G. Parthasarathi our batsman collecting 83 runs by excellent cricket, and Naick and Jaganathan making 19 & 13 runs. The Zahira boys in their second innings cried halt with 142 runs to their credit for the loss of 6 wickets. (I.A. Carrim 46, Rasheed 24). Jaganathan, Flory and "G.P.", claimed 3, 3, and 4 wickets in the 1st



The Mayorial Hall, Colombo



The Museum, Colombo

innings and 2, 1, and 2 wickets in the 2nd innings, while C. D. Parthasarathy accounted for the remaining one. We had a little batting in 2nd innings in failing light and sharp showers, and scored 24 runs for the loss of three of our batsmen, Jaganathan and Venkatasubban scoring 10, and 6 (not out). We felt flattered on reading their report—"Visitors' excellent fielding"—because to earn their praises for smart fielding, a department of the game in which Ceylon has a very high standard, is some thing that makes us proud indeed.

The third match with the Royal College, the holders of the Inter-Collegiate Honours of Colombo, was converted more or less into a single day fixture, as we had incessant rain on that day. Batting first, we piled up 106 runs, and again our outstanding batsman "G. P." came to the rescue by scoring a valuable 54 in the first innings and 26 in the second, when we made 79. The others to score were Jaganathan and Naick, who put up 16, and 21 runs in the first innings. As usual, Jaganathan and "G.P." monopolised the bowling honours by bagging 11 and 9 wickets on the whole. They could score only 81 and 89 runs, and so were yet behind us by 15 runs.

The beautiful valley surrounded by a natural gallery of hills on all sides, and with the ground in the centre, saw us fare badly against the Trinity College at Kandy. It was raining heavily in the morning and we thought play would be impossible. Entering first again, we made 82 runs—Jaganathan 21 and Raghavan 15. In response to this they hit up 159 runs, Bultjeus scoring a clean 58. He drove with ease and grace, and seemed to be the best batsman we met. We entered again and succumbed to a paltry 58 runs, though 'G. P.' made as usual his score—27 runs. We were thus beaten by an innings and 19 runs.

Our last but one match against the St. Thomas' College at the beautiful shore of Mt. Lavinia ended in a draw. Our lucky Captain Nayak won the toss, and we batted first. Our score of 158 runs for the loss of 8 wickets, was chiefly due to the efforts of Jaganathan's well played 48, Naick's 26, Venkatasubban's unfinished 24, G. P's 13 and Doraiswami's 11. Our opponents had just made 89 runs for the loss of 4 wickets, when time intervened—Gunarathnam played a spectacular game for his 33 runs, while "G. P." and Jaganathan shared the bowling honours once again.

Our last fixture, with St. Joseph's, ended in a victory for them by 6

Presidency College Magazine, Madras

wickets and 47 runs. This is partly due to the fact that our only two good bowlers were overworked, and our boys felt the string of matches a great strain—but this is not in any way an excuse. Our Captain, Naick had left us by reason of domestic trouble, and Jaganathan who took his place as a skipper won the toss. Our side piled up 137 runs in all—Jaganathan 33, Vijiarangam 16, C. D. Parthasarathi 13 and M. D. Rangasami 11. Venturing next in turn they hit out 184 runs for the loss of only 4 wickets in a short time. Viswanathan Devanayakam, and Rodrigo, all hit out in sprightly style, scoring 54, 48, and 45 runs. "G. P." strained every nerve and maintained his reputation by bagging all the 4 wickets, though at a considerable cost.

Though most of us who tried to do our best failed to come out successfully, yet our team as a whole did remarkably well and kept the colours of the Presidency College flying as gallantly as ever. In conclusion, we wish our two outstanding players, Jaganathan and G. Parthasarathi, all success in their bigger encounters in the future. The latter, who was described by the Ceylon dailies as "The tall stalwart youth who has the makings of a big cricketer," was rightly and generously appreciated as a fine sportsman. Hear! Hear! "G. P." While going to the press, we are glad to record that the annual Duncan Memorial Tournament conducted by our college is as popular as ever, for it has attracted eight entries—two from our college, two from the Law College, and one each from the Pachaiappa's, Christian, Engineering and the P. S. High School. We hope to hold our own against all the colleges this year too, as we did during the past four years.

Hockey

Our start in the Inter-collegiate Hockey tournament, run on the knock-out system this year was quite encouraging, though our first opponents were by no means a crack eleven. The Royapuram Medical School however proved a tough nut to crack, and in the first half, despite the continuous efforts of our forwards, no goal was scored by either side. The second half of the game saw us wake up, however, and our forwards led by Biddappa notched six goals, five of which were scored by the above named player and one by Raghavan. Our goalie was a "fresher" at the game; and, as a result, our opponents made several determined spurts and got through once.

The tussle with the Engineers a few evenings later proved in-



PRESIDENCY COLLEGE (vs.) DR. ROCKWOOD'S ALL CEYLON XI
Hockey Match Played at the Tamil Union Grounds, Colombo.
28th September 1929.
PRESIDENCY COLLEGE WON BY
2 Goals to 1.

Sports Notes

conclusive. The Hockey could have been better, had the refereeing been more exacting. After nearly 20 minutes stiff play, in which G. Parthasarathi, C. D. Parthasarathi, Venkatasubban and Biddappa were the outstanding performers, no goal was scored. Venkatasubban, however, managed to net one just before half-time, and to our surprise, a smart burst by their runner had our goalie beaten as well. The second half resolved itself into a grim struggle for the old goal, but the game ended in a draw—score, 1 all.

The replay was disappointing. Our players just back from Ceylon were expected to render a splendid account of themselves. The play of our forwards, however, can only be described as bungling. There was little understanding among them and less desire to create any. Ours was the first goal of the match scored by G. Parthasarathi. Then our opponents returned the compliment, scoring through Veerasinghe off a weak free hit by Stracey from the ring. They scored again in a few minutes, and though we pressed doggedly on to the end, we had hard luck in not equalising on several occasions. The game ended with three hearty cheers for our victorious opponents, (score : 2—1)

Our Ceylon tour was more encouraging. The daily papers were surprisingly flattering, for our main objective in Ceylon was cricket, not Hockey. Our first opponents, the Ananda College, were decidedly weak and though they played pluckily to the end, were defeated by 5 goals to 1, Biddappa scoring 3, Flory 1 and Ramachandriah 1. The All Ceylon XI were formidable indeed. We played them on the Tamil Union Grounds, Colombo, and had a stiff fight for victory. After twenty minutes fast play their Captain, Martevstyn, scored the first goal off a bad miss hit by the redoubtable Veerasinghe—we managed to enlist the support of our good old "Veera" after all. Just before the half, Venkatasubban equalised matters, and in the second half Ramachandriah gave us another point after a fast individual run. The play of their goal keeper was a continual wonder to us, while for them Chapman and Kellart were a statwart pair of backs. Martustyu in the forward line was their best man, but had little or no support from the others. Veerasinge's hard and accurate hitting, we were glad to note, was as deadly as ever, and reminded us of the old days when we "admired the spires of Chepauk palace."

In the Panagal tournament our B team was badly defeated by the Mohammedan College. They were easily the better side and though our plucky 'B' gave some trouble in the initial phases of the game, there

was little doubt as to the ultimate issue. We were defeated by 5-nil.

Our recent friendly match with the Loyolla College resulted in a win for us, the score being 3-2. G. Parthasarathi scored 2, while Biddappa notched the third point for our side.

Tennis

This year it is satisfactory to note that, in spite of the reduction in the number of courts, players have not been lacking in their enthusiasm. Admission had to be restricted to last year's members only. But the immense keenness on the part of players, who seemed to be coming forward in increasing numbers, compelled us to take in a few among the new players. However, with the last year's college champion, V. Madhava Rao, as the captain, and a player of long-standing experience in our college courts, G. Raghavendra Rao, as the secretary, we have been developing a good foundation in the game for our future world champions.

It is unfortunate that rain at frequent intervals has been preventing regular play. Games had to be suspended for more than a week and the courts had to be laid once more. In spite of all this, we have been able to conduct the challenge matches and manage affairs admirably well. We were able to arrange friendly matches with the Law College and the Agricultural College players who paid us a visit.

We have begun the tournaments early enough, but heavy rains have been impeding their progress. We are extremely pleased to welcome among the entries some of the professors of our college. The Inter-collegiate challenge-cup tournaments are also in progress. We hope that the representatives from our college will acquit themselves creditably in the coming matches. We wish them the best of lucks.

Results of Competitions

The following are the results of competitions held according to the announcements made in the last issue :—

I The Magazine Competition.

1. The prize [Rs. 15] for the best short story is won by C. R. Raghavachari.
 2. The prize [Rs. 15] for the best essay is divided between P. S. Sundaram and B. V. Subrahmanyam.
- N. B. The story and the two essays are published in this issue.

II Sri Cargi Memorial Competition.

1. Senior Examination.

(a) The following students have won the prizes :—

- (i) P. S. Sundaram—First Prize [Rs. 25]
- (ii) M. R. Sampatkumaran—Second Prize [Rs. 20]
- (iii) P. N. Vasudevan—Third Prize [Rs. 15]
- (iv) B. N. Krishnamurti—Fourth Prize [Rs. 10]

(b) The following students have passed. The names are arranged alphabetically :—

1. Amritaghateswaran L. R.
2. Gopalakrishnan P. A.
3. Gopinathan V.
4. Govindan K.
5. Kamalaswamy T. V.
6. Krishnaswamy M. A.
7. Kunchitapadam T. S.
8. Lakshminarayanan P. S.
9. Mathew Tharakan K. J.
10. Meenakshi Kutty Ammal P.
11. Minakshisundaram C. D.
12. Nageswaran K.
13. Natarajan S. V.
14. Natesan V. C.
15. Parthasarathy S.

16. Parthasarathy T. R.
17. Peraiya Sastri J.
18. Raghavan V. R.
19. Rajendra Rao G.
20. Ramachandra Rao P. R.
21. Ramaswamy R.
22. Subramanian D.
23. Sundararajan V.
24. Vasudevan K. N.

N. B.—The number of students that sat for the Examination is 35.

2. Junior Examination.

(a) The following students have won the prizes :—

(i) K. Narayanan—First Prize [Rs. 15]

(ii) P. K. Raman Nair—Second Prize [Rs. 10]

(b) The following students have passed. The names are arranged alphabetically :—

1. Alagesan O. V.
2. Ambigaipagan S.
3. Rajagopalan R.
4. Ramakrishna Mudalyar P.
5. Sivagnanam P.
6. Subbaraman G. S.
7. Subramanian M.
8. Sundaram A. Y.
9. Vencobappa M.
10. Venkatakrisnan S. V.

N. B.—The number of students who sat for the examination is 17.

D. S. SARMA,
Editor.



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September, December, March, and June

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Book Lists, (V. Child Psychology), compiled by Miss A.B.H.
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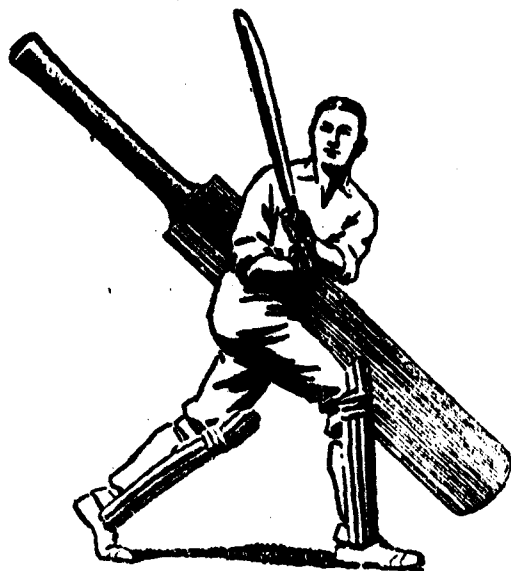
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