

Report on the work of
The Indian Industrial

Conference

1909-10.

1911



REPORT

ON THE WORK OF THE

Indian Industrial Conference

INCLUDING A

RECORD OF GENERAL INDUSTRIAL ACTIVITY
IN THE TWELVE MONTHS

December 1909 to November 1910

MADRAS: G. C. LOGANADHAM BROS.
THE GUARDIAN PRESS, MOUNT ROAD

1911

RESOLUTIONS PASSED AT THE FOURTH INDIAN INDUSTRIAL CONFERENCE

Held at Madras on the 26th and the 27th December 1908.

I. DEPARTMENTS OF INDUSTRY.

RESOLVED—(a) That this Conference is of opinion that these should be in every province of British India a Department of Industry under a Director of Industries to deal with industrial questions and to be in charge of technical and commercial education as well as industrial instruction; and that there should be an Advisory Board of qualified persons, not less than one-half of whom should be non-official Indians, who should be consulted on all matters of importance;

(b) that the functions of this Department should include (1) the supply of advice in regard to new Industries, (2) the introduction of new or improved methods and processes, (3) the carrying out of investigation and experiments, (4) the development of selected industries, and (5) the organization of industrial and commercial exhibitions;

(c) that there should be an industrial museum and a bureau of information under the Department of Industry for supply of information to the public on industrial and commercial matters.

[Proposed by D. E. WACHA, Esq. (BOMBAY), seconded by RAO RAHADOR G. SRINIVASA RAO (MADRAS), supported by R. V. MAHAJANI Esq. (AKOLA), and carried unanimously.]

II. TECHNICAL AND INDUSTRIAL EDUCATION.

RESOLVED—That this Conference re-affirms the Resolutions of the previous Conferences on Technical and Industrial Education, and urges (1) that the Victoria Jubilee Technical Institute, Bombay, and the College of Science, Poona, be enlarged so that they may between them supply for the Presidency of Bombay technological instruction in all the branches of mechanical and chemical industries; (2) that the Government of India may sanction the proposal of the Government of Bengal to add classes in Industrial Chemistry to the Sibpur Engineering College; (3) that the Government of Madras will be pleased to give effect to the recommendation of the Ootacamund Industrial Conference that the Madras College of Engineering be expanded into an Institute of Technology; (4) that the Government of State might accord early sanction to the proposal of the Government of the United Provinces that a College of Technology should be opened at Cawnpore; and (5) that similar institutions should be established in the Punjab, Burma and Eastern Bengal and Assam.

by the HON'BLE MR. MADAN MOHAN MALAVIYA
and by the HON'BLE MR. S. RANGACHARI, Esq. (MADRAS), and carried unanimously.

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III. COMMERCIAL EDUCATION.

RESOLVED—(a) That in the opinion of this Conference the time has come for the Indian Universities to create Faculties of Commerce and institute Degrees in Commerce, and to affiliate Commercial Colleges that will prepare candidates for University Degrees in Commerce ;

(b) That there should be established one College of Commerce at each Provincial capital and that it should include provision for the training of teachers for Commercial Schools in the mofussil.

[Proposed by K. Subramani Aiyer, Esq. (Bombay), seconded by D. G. Dalvi, Esq. (Bombay), and carried unanimously.]

IV. AGRICULTURAL BANKS.

RESOLVED—That this Conference again invites the attention of the Supreme and the Provincial Governments to the urgent need for Agricultural Banks both to assist Co-operative Credit Societies and, in cases where Co-operative Credit Societies cannot or will not serve, to advance loans directly to agriculturists on easy terms, and urges them to take early action in the desired direction in conjunction with Indian capitalists who, the Conference feels confident, would be ready to co-operate with Government in any such scheme.

[Proposed by Lalubhai Samaldas, Esq., (Bombay), seconded by Rao Bahadur Khandubhai G. Desai (Surat), supported by Rao Bahadur V. K. Ramanujachariar (Kumbakonam), and carried unanimously.]

V.—COTTON EXCISE DUTY.

RESOLVED—That this Conference records its emphatic protest against the continuance of the Excise duty on Indian mill-made cloth as an unjust and unnecessary impost and urges that it should be removed without delay.

[Proposed by Uttamlal K. Trivedi, Esq. (Bombay), seconded by Pandit Rambhuj Dutt Chowdhuri (Lahore), and carried unanimously.]

VI. RAILWAY RATES ON GOODS.

RESOLVED—That this Conference calls the attention of the Government to the prevailing complaints about existing railway rates, and suggests that an enquiry should be instituted into their effect on indigenous industries especially in their competition with imported goods, and further submits that the rates should be reduced where their effect may be proved to be injurious.

[Proposed by Dewan Bahadur Ambalal S. Desai (Ahmedabad), seconded by Rao Bahadur Doorao Vinayak (Akola), and carried unanimously.]

VII. MINING, WEAVING, AND SUGAR INDUSTRIES.

RESOLVED—That while expressing its satisfaction at the steady progress of the Swadeshi movement, this Conference, concurring with

the last Conference, calls the particular attention of capitalists and the general public to the necessity of developing the Mining, Weaving and Sugar industries, and urges the formation of Joint-Stock Companies for working mines and erecting mills and factories.

[Proposed by the Hon'ble Sir Vitthaladas D. Thackersey, Kt. (Bombay), seconded by G. Subramania Iyer, Esq. (Madras), supported by the Hon'ble Mr. H. S. Dikshit, (Bombay), and carried unanimously.]

VIII. OFFICE-BEARERS AND FUNDS FOR NEXT YEAR.

RESOLVED—That this Conference re-appoints Rao Bahadur R. N. Mudholkar as General Secretary and Mr. C. Y. Chintamani as Assistant Secretary for the year 1909, and appeals to the public for a sum of Rs. 5,000 to meet the expenses for the next twelve months.

[Proposed by N. Subbarao Pantulu, Esq. (Rajahmundry), seconded by Babu Gunga Brasad Varma (Lucknow), and carried unanimously.]

MADRAS, } R. N. MUDHOLKAR,
The 27th December, 1908. } President,
The Fourth Indian Industrial Conference.

RESOLUTIONS PASSED AT THE FIFTH INDIAN INDUSTRIAL CONFERENCE HELD AT LAHORE, ON THE 30TH DECEMBER, 1909.

I. DEATH OF MR. R. C. DUTT.

RESOLVED—That this Conference places on record its profound sorrow for the sad death of its first President, the late Mr. Romesh Chandra Dutt, C. I. E. The Industrial movement has lost in him one of its ablest and most zealous champions, and the country, one of her most accomplished, earnest and patriotic sons. That this Conference authorizes the General Secretary to convey the above Resolution to the widow and son of Mr. Dutt.

II. PURCHASE OF STORES BY GOVERNMENT DEPARTMENTS.

RESOLVED—That this Conference thanks the Secretary of State and the Government of India, for the orders, which have been recently issued in regard to the purchase by Government Departments of articles, made in India, in preference to those of foreign manufacture. The Conference while recognising the fact that these orders mark a distinct advance in the policy of Government towards the encouragement of indigenous industries and manufactures is of opinion that the report of the Committee be published for general information and guidance in the future.

III. TECHNICAL AND INDUSTRIAL EDUCATION.

RESOLVED—That this Conference regrets that the proposal of the United Provinces Government for the establishment of a Technological

College at Cawnpore, which was supported by the Government of India, has not been sanctioned by the Secretary of State. In view of this fact this Conference re-affirms the Resolutions of the previous Conference on Technical and Industrial Education and again urges :—

(1) that the Victoria Jubilee Technical Institute of Bombay, and the College of Science at Poona, be enlarged so that they may between them supply for the Presidency of Bombay technological instruction in all the branches of mechanical and chemical industries ;

(2) that the Government of India may sanction the proposal of the Government of Bengal to add classes in Industrial Chemistry to the Siphore Engineering College ;

(3) that the Government of Madras will be pleased to give effect to the recommendation of the Ootacamund Industrial Conference that the Madras College of Engineering should be expanded into an Institute of Technology ;

(4) that the Secretary of State might accord early sanction to the proposal of the Government of the United Provinces that a College of Technology should be opened at Cawnpore ; and

(5) that similar Institutions should be established in the Punjab, Burma, Eastern Bengal and Assam.

IV. COMMERCIAL EDUCATION.

RESOLVED—(a) That in the opinion of this Conference the time has come for the Indian Universities to create Faculties of Commerce and institute degrees in commerce and to affiliate Commercial Colleges that will prepare candidates for University degrees in commerce ;

(b) That there should be established one College of Commerce in each provincial capital and that it should include provision for the training of teachers for Commercial Schools in the mofussil.

V. AGRICULTURAL BANKS.

RESOLVED—That the Conference again invites the attention of the Supreme and Provincial Governments to the urgent need of establishing Agricultural Banks for assisting the existing Co-operative Credit Societies and for advancing loans direct to agriculturists on easy terms wherever such societies do not exist, with the view of ameliorating the economic condition of the Indian peasantry.

VI. COTTON EXCISE DUTY.

RESOLVED—That the Conference records again its emphatic protest against the continuance of the excise duty on Indian mill-made cloth as an unjust and unnecessary impost which presses heavily on the industry, and prays that it should be abolished at the earliest opportunity.

VII. WEIGHTS AND MEASURES.

RESOLVED—That this Conference invites the attention of the Government of India to the desirability of introducing uniform weights and measures to facilitate trade among the different towns and provinces of India, to prevent fraudulent practices of traders and remove the present inconveniences arising from a multiplicity of weights and measures and from a want of uniform system and standard.

VIII. OFFICE-BEARERS AND FUNDS FOR NEXT YEAR.

RESOLVED—That this Conference re-appoints Rao Bahadur R. N. Mudholkar as General Secretary and authorizes him to appoint an Assistant Secretary with suitable establishment and appeals to the public for a sum of Rs. 5,000 to meet the expenses of the next twelve months.

RAMESHWAR SINGH,
President,

The Fifth Indian Industrial Conference.

Dated
30th December 1909. }

R. N. MUDHOLKAR,
GENERAL SECRETARY,
The Indian Industrial Conference.

APPENDIX II.

LIST OF DELEGATES TO THE SIXTH INDIAN INDUSTRIAL CONFERENCE

HELD AT ALLAHABAD ON 30th DECEMBER 1910.

(1) Elected by the Indian Merchant's Chamber & Bureau, Bombay :—

1. Mr. D. E. Wacha, Bombay.
2. " J. K. Mehta, Secretary, Bombay.

(2) By Refah-i-Am Association, Lucknow :—

1. The Hon'ble Babu Ganga Prasad Varma.
2. Mr. A. P. Sen, Bar.-at-Law.
3. Babu Ram Chandra, M. A., Vakil.
4. Pandit Ikbal Narayan Malsaldam, Bar.-at-Law.
5. Pandit Gokuran Nath Misra, M. A., L. L. B.
6. Mr. P. C. Bhattacharjee, Bar.-at-Law.
7. " H. C. Dutt, Bar.-at-Law.
8. Pandit Jagat Narain, B. A.
9. Mr. Mirza S. Beg, B. A., L. L. B.
10. " Syed Zabur Ahmud, B. A., L. L. B.
11. Babu Bisheshwar Nath Srivastavi, B. A., L. L. B.
12. Mr. Nawab Sadik Ali Khan, Bar.-at-Law.
13. Munshi Mahomed Ehtisham Ali.

(3) By the National Fund and Industrial Association, Madras:—

1. Pundit D. Gopala Charlu, A. V. S.
2. Dr. U. Rama Raw.
3. Mr. P. R. Sundara Aiyar, B. A., B. L.
4. Rao Bahadur M. Adinarayaniah.
5. Mr. C. Gopala Menon.
6. " T. Ramachandra Raw, B. A., B. L.
7. " D. V. Hunumantha Rau Pantulu.
8. " A. C. Parthasaradhi Naidu.
9. Professor R. Lakshminarasu Naidu, B. A.
10. The Hon'ble Dewan Bahadur L. A. Govindaraghava Aiyar, B. A., B. L.
11. The Hon'ble N. Subba Raw Pantulu, B. A., B. L.
12. The Hon'ble Nawab Syed Mahomed Sahib Bahadur.
13. The Hon'ble T. V. Seshagiri Aiyar, B. A., B. L.
14. Mr. T. Ranga Chariar, B. A., B. L.
15. " G. A. Natesa Aiyar, B. A.
16. " V. Ryrn Nambiar, B. A., B. L.
17. " G. A. Vaidyarama Aiyar, B. A.
18. " S. Kasturi Ranga Aiyengar, B. A., B. L.
19. Dr. M. Kristnasawmi Aiyer, M. D.
20. Mr. C. Vijayaraghavachariar.
21. " P. Ayyanna Chetty.
22. " Adinarayana Chetty.

(4) By the District Congress Committee, Seharanpur:—

1. Mr. Synyal Munserim Judges Court.
2. " B. Raj Rajeshwar Sahai, Pleader.
3. " B. Alakh Murari, B. A., L. L. B., Pleader.

(5) By the Millowner's Association, Bombay:—

1. The Hon'ble Sir Vithaldas D. Thackersey, Kt.
2. Mr. D. E. Wacha.
3. " Jehangir Bomonji Petit.

(6) By the Nellore District Congress Committee:—

1. Mr. T. V. Venkatarama Aiyer.
2. " M. Narsimbachariar.
3. " M. Changayya.
4. " V. Krishnaswami Row.
5. " V. Narasinga Row.
6. " B. Annaswami Aiyer.
7. " K. Narasinga Row.
8. " A. Hanumantha Row.
9. " N. Ramachandra Row.
10. " A. S. Krishna Row.
11. " K. A. Veeraraghavachariar.
12. " Batchu Venkata S. Chetty.

13. Mr. K. Adinarayana Reddy.

14. " P. Raghava Reddy.

(7) By Davar's College of Commerce, Bombay:—

1. Mr. S. R. Davar, Principal, Davar's College of Commerce, Bombay.

(8) By the Bengal Technical Institute, Calcutta:—

1. Dr. Nilratan Sircar.
2. Mr. Prankrishna Acharyya
3. " Indumadhah Mallik.
4. " P. N. Bose.
5. " Babu Satyananda Bose.

(9) By the Provincial Committee of the Industrial Conference, Berar:—

1. The Hon'ble Rao Bahadur R. N. Mudholkar.
2. Rao Bahadur R. G. Mundle.
3. Rao Bahadur Deo Rao Vihayak Digambar.
4. Mr. V. M. Mahajani, M. A.
5. " R. V. Mahajani, B. A., B. L., L. B., Pleader.
6. " M. V. Joshi, B. A., L. L. B., Advocate.
7. " B. R. Landge.
8. " R. B. Sethe.

(10) By the S. S. Jain Conference Office, Ajmer:—

1. Mr. Kunwar Magan Mulji, Ajmer.
2. " Bhaidas Bechardas Doshi, Rajkot.
3. " Bechardas Virchand, Ajmer.

(11) By the People's Association, Bellary:—

1. Mr. J. P. Kotilingam, M. A., Principal of the Wardlaw Institution, Bellary.

(12) By the South Indian Association, Madras:—

1. The Honourable Mr. Justice V. Krishnaswamy Aiyar.
2. Mr. C. P. Ramaswami Aiyar, H. C. Vakil.
3. " S. Srinivasa Aiyangar, H. C. Vakil.
4. " T. V. Gopalaswami Mudaliar, H. C. Vakil.
5. " P. R. Narayanaswamy Aiyar, H. C. Vakil.
6. " T. R. Venkatarama Shastriar, H. C. Vakil.
7. " V. Ramesam Pantulu
8. " N. Chandrasekhara Aiyar
9. " P. Lakshminarasu Nayadu, Professor, Pachayappa's College.

(13) By the Shri Krishna Raja Krishi Shilpabhi Wardhak Samaja's Mysore:—

1. Mr. G. Subbaswamy Iyer, B. A., L. T. Superintendent of the Industrial School, Mysore.

(14) By the Punjab Chamber of Commerce, Delhi:—

1. Lala Panna Lal, Proprietor, Upper India Glass Works, Umballa.

2. Lala Harkishen Lal, Bar.-at-Law, Lahore.
3. Rai Bahadur Ramsaran Das, Melaram Cotton Mills, Lahore.
4. Lala Manohar Lal, Sub-agent, Allahabad Bank, Ltd., Amritsar.
5. Lala Harji Mal, Peshawar.

(15) By the Behar Landholder's Association, Bankipore :—

1. Babu Chandrashekhar Prasad Singh.
2. Babu Krishna Sahay.
3. Khan Bahadur Sarfaraz Hussain Khan.
4. Mr. Syed Hasan Imam.
5. Hon. Maulvi Syed Fakhruddin.
6. Hon. Maharaja Gopal Saran Narain Sing.
7. Babu Harihar Prasad Sing.
8. Hon. Mr. S. Sinha.
9. Hon. Mr. Mazharul Haque.
10. Babu Maheshwar Prasad.
11. Mr. Kumar Kalikananda Sinha.
12. Hon. Mr. Deep Narain Sing.
13. Hon. Rai Bahadur Siva Sankara Sahay.

(16) By Mining and Geological Institute of India, Calcutta :—

1. Mr. A. Mackay, Jamdoba, Jharia, E. I. R.
2. „ F. Scott, Bengal Coal Co.
3. „ H. Sheridan Sodepur, Sitarampur, E. I. R.
4. „ W. J. Rees, Bengal Coal Co., Barakar.

(17) By the Agra Trades' Association, Agra :—

1. Rai Bahadur Lala Baijnath, retired District and Sessions Judge.
2. Lala Prag Narain, B.A., LL.B., Vakil, High Court.
3. Lala Shyam Lal, Lohar Gate, Agra.
4. Lala Bankey Lal of Messrs. Jagannath Bhagwandas, Agra.
5. Lala Kokamal.
6. Lala Bhugwandas.
7. Pandit Goswami Brij Nath Sharma.
8. Lala Baij Nath.
9. Lala Saligram.
10. Lala Kashinath.

The following gentlemen also attended as Delegates :—

1. Pandit Ajodhiya Prasad, Pleader, Sitapur.
2. Mr. A. K. Bose.
3. Pandit Kalka Prasad.
4. Pandit Murlidhar.
5. Pandit Chotey Lal.
6. Pandit Ganga Prasad.
7. Pandit Gangadhar.
8. Pandit Sidh Prasad.

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| 9. Pandit C. Beharilal. | Sitapur |
| 10. Pandit Ram Adhin. | " |
| 11. Pandit Ram Adhin Agnihotri. | " |
| 12. Pandit Rudra Narayan. | " |
| 13. Babu Madho Prasad | " |
| 14. Mr. L. Ramji Das. | " |
| 15. Mr. G. L. Joshi, Nagpur. | |
| 16. Mr. Radha Kumud Mookerjee, Calcutta. | |
| 17. Professor Bhim Chandra Chatterjee, Calcutta. | |
| 18. Professor B. K. Sarkar, Calcutta. | |
| 19. Mr. Kali Prasanna Chakravarti, Benares. | |
| 20. Mr. S. N. Das-Gupta, Calcutta. | |
| 21. Pandit Vishnu Ditta Dwivedi, Allahabad. | |
| 22. Pandit Vijiyanand Triwari, Benares. | |
| 23. Pandit Dew Dayal Bajpai, Benares. | |
| 24. Mr. Gawri Shankar Tiwari | " |
| 25. „ J. N. Mehta, Bombay. | |
| 26. „ L. Banki Lal, Agra. | |
| 27. „ L. Sham Lal | " |
| 28. „ L. Kokal Mal | " |
| 29. „ B. Prag Narain, B. A., LL. B., Agra. | |
| 30. Rai Bahadur Baij Nath. | " |
| 31. Mr. Gooswami Baij Nath. | " |
| 32. Mr. L. Kashinath. | " |
| 33. „ Bhagwandas | " |
| 34. „ Panna Lal, Amballa | |
| 35. „ Hafiz Abdul Rahim Khan, Aligarh | |
| 36. „ C. Vijayaraghawa Chariyar, Salem. | |

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REPORT
OF
INDUSTRIAL CONFERENCE WORK
AND RECORD OF

**General industrial activity in the country in the
twelve months ending with November 1910.**

PART I.
INDUSTRIAL CONFERENCE WORK.
December 1909.

THE report submitted to the Fifth Indian Industrial Conference held at Lahore in December 1909, dealt with the period of twelve months from December 1908 to November 1909. The Conference Office was occupied during the months of November and December 1909, in compiling the Annual Report, going through the proofs of the 4th Edition of the Directory of Indian Goods and Industries and in making arrangements in connection with the last Session of the Conference. The Assistant Secretary, Mr. M. B. Sant, was sent to Lahore a few days before the meeting of the Conference to help the Local Reception Committee of the Industrial Conference in arranging matters relating to the holding of the Lahore Session.

The Conference was held under the Presidentship of Maharaja Sir Rameshwar Singh Bahadur of Darbhanga. The Resolutions passed and the papers read will be found in the Report. I was unable to attend the Conference owing to a domestic misfortune. It is a matter of great regret that owing to want of time, the resolutions were moved from the chair without any elucidation or explanation of their object and scope. It is to be hoped that such an

abandonment of one of the most important aims of the Conference will not be allowed hereafter.

The most valuable contribution to the cause of industrialism which the last Session rendered was through the highly informing and interesting papers, sent by persons, who are worthy of being called authorities on their respective subjects. These supply knowledge and food for reflection, not only to those who are new to these subjects, but even to men of experience and practice. The grateful thanks of the Conference are due to the able and gifted writers.

January to November 1910.

By Resolution No. VIII of this Conference, I was re-appointed as General Secretary and was given power to appoint an Assistant Secretary with suitable establishment and an appeal was made to the general public for the sum of Rs. 5,000 to meet the expenses of the current year. Out of this sum, Rs. 2,840 only have been realised till now. This amount would not have sufficed to meet the office expenses, had the salaries been on the same scale as before. It was only through the present Assistant Secretary's pay being only half of that of his predecessor and to the post of 2nd Assistant being vacant for some time and to his salary being reduced that it was possible to meet the expenses out of the realizations.

This is a rather disquieting sign and raises fears about a waning of interest in our organization.

It need hardly be stated that when the funds were barely sufficient for the ordinary expenses of the Conference office, it was out of question to think of giving effect to the resolution (now standing on paper as a mere pious recommendation of the Conference of 1906) about the issue of a Quarterly Bulletin of industrial information which would have involved a yearly expenditure of Rs. 5,000 at least and a further considerable sum for initial outlay. There were appeals made over and over again to the great leaders of the aristocracy of the country and to the men of light and leading. It has to be regretfully stated that even from quarters where, from declarations made on paper and at public meetings, one expected enthusiastic support, there was a chilling response.

The only inferences which can be drawn from this indifference and apathy are that either the idea is too far in advance of the real needs and requirements of the country or that despite all fervent protestations, our public spirit is yet too weak in strength and too confined and restricted in its reach to supply the necessary impetus for vigorous action. I cannot bring myself to believe that a quarterly bulletin giving correct and up-to-date information is beyond the needs of the present hour. For a more widespread and stronger realisation of the principle of "*Noblesse oblige*," one can only trust to time.

The prime essentials for securing industrial regeneration are ; 1st, sound scientific knowledge and practical skill and 2nd, sufficiency of responsive capital. The Conference has from the year of its foundation been striving to obtain the establishment of a Polytechnic College for giving instruction in such departments, as Railway and Marine Engineering, navigation and naval construction, the various branches of industrial chemistry and mining, metallurgy and metal manufacture and instruction in the higher departments of mechanical and electrical engineering and textile manufacture. During the last four years, some high personages were approached more than once and sounded as to their willingness to give the weight of their lead and support for placing a scheme before the princes and peoples of India. It was intimated that if the proposal was influentially backed up, I was prepared to go to different parts of the country at my own expense. The answers were not encouraging and the idea remained where it was. In March last, two Resolutions were moved in the Supreme Legislative Council, the first asking for a Polytechnic Institute, for the country and the second supporting the demand of the United Provinces Government and peoples for a College of Technology at Cawnpore. At one time, there seemed reasons for hoping that the main basis of the resolutions would be accepted by Government. But this was not to be. And though the position taken up on behalf of the Government was not unsympathetic, the delay it advocated is such as cannot be accepted as necessary or desirable by the advocates of higher technical education.

After the lamentable and tragic death of His late Majesty King-Emperor Edward VII, there was, in connection with the universal desire to perpetuate his memory, an attempt made that the All-India Memorial and the Provincial Memorials should take the form, the first of a Polytechnic Institute and the second of institutions promoting and developing the particular industrial and technical knowledge and skill which would suit the conditions of each Province. The suggestion that the All-India Memorial should take the form of a Polytechnic Institute was after consideration, deemed not feasible by the authority to which it was submitted. Among the provincial memorials the idea would be given effect to almost in its entirety in Berar and partially so in the Central Provinces.

It is necessary for the Conference to concentrate its energy first on this question more than on others. It must be remembered that in technical education as in most spheres of action the beginning has to be made at the top. It is from mountain tops that the light descends down into the valleys and it is the full recognition of this principle by the rulers of British India and the Indian States in regard to scientific knowledge and industrial instruction that the Conference must address itself to.

Another matter which must be made clear is that the Conference does not pin its faith on any particular scheme and method of securing this object and does not insist on the location in one building or in one city of the facilities for instruction in the different departments, which are demanded by it. What has to be aimed at is the supply in this country of means of acquisition of the technical knowledge, mentioned above. In regard to some, there is absolutely no provision. In regard to others the instruction does not go sufficiently high. Whether the means of giving such instruction in all the different departments are concentrated in one place or distributed between the three or four leading industrial and manufacturing centres of India is a matter of detail. It is necessary that the consideration of the principle should not be clouded by objections on points of detail.

The bogey of expenditure need not frighten us. In Bombay, for instance, with the Railway Workshops of the G. I. P. Railway and the B. B. and C. I. Railway at Parel, it needs only some few thousands a month to provide a complete course in railway engineering and construction. And the same can be done with regard to marine engineering, ship construction and navigation, by making arrangements with the Government dockyard authorities. The facilities which exist in Bombay exist also in Calcutta and partially in other Presidency towns. The trunk Railways belong now to the State and the Companies which manage them, can legitimately be required to give facilities to educational institutions maintained or supported by the Government.

There are other departments of industrial activity, where instruction in principles and initiation in practice, of the youth of this country can be accomplished without any sensible burden on the resources of the State. It only requires correlation and co-ordination of work, a little adjustment of departmental practice, a slight relaxation of red tape, all moved and inspired by sympathy and the desire for helpfulness.

It was with this object that the Secretary of the Conference took advantage of the opportunity afforded by a seat in the enlarged and improved Supreme Legislative Council to invite the attention of the Government to the great deficiencies under which India labours and to obtain their removal or at least partial remedy. Though the first attempt was not successful, there is no reason to feel discomfited or discouraged. Even those members of Government who felt it their duty to oppose the motion, are aware of the justness of the demand. With the creation of the educational portfolio and the appointment to the Viceregal Council of an enthusiastic friend of industrial and scientific education like the Honorable Mr. Butler, there is every reason to expect the accomplishment before very long of the improvements in education this Conference has been making these five years.

The reluctance and shyness of capital to flow to industries is due to natural causes and it is very necessary that the members of an organisation like the Industrial Conference

should have a clear conception of facts and should rid their mind of cant as well as of fallacies. It serves no useful purpose to hold forth in an official report a monograph or an essay on the iniquities of the Chetty, the Sahucar or the Mahajan. If these men can make a safe profit of 9 per cent. and 12 per cent. per annum from advances made on good, irreproachable securities involving no chances of loss, it is absurd to call them names because they look askance on enterprises, which even when successful do not yield more than 12 per cent. and which in numberless instances have proved abortive or have resulted in collapses productive of financial ruin and disaster to all concerned.

Leaving aside cases of bogus schemes launched by dishonest and fraudulent speculators there are numerous instances of failures due to ignorance, incapacity, miscalculation or carelessness on the part of the suppliers of capital or imperfect knowledge, inexperience, rashness, carelessness and incapacity on the part of the managers, foremen and supervisors of the technical and general departments. These deficiencies are capable of removal by giving suitable knowledge, special and general. The question of capital is thus to some extent dependent upon the spread of higher technical knowledge and commercial education.

But while one cannot find seriously fault with the professional money-lender, with his restricted mental horizon, for the preference shown by him to safer investments yielding surer and larger returns than risky industrial enterprises, one cannot do the same in regard to those who claim to be leaders, natural or real. Men of education, culture and position as they are, it is not possible to find justification for the cold shoulder they show to even legitimate and well-thought-out enterprises. The country expects men, who have been glibly talking of industrial regeneration, to translate into action at least a part of their precepts.

In connection with this subject, it might be mentioned that in February and March last, I made efforts to rouse the interest of some of the Indian leaders of Calcutta in the industries, which have been for years and are to-day carried on lucratively by European and Foreign merchants in and

near the city and in regard to which I had collected some figures by personal inquiries. At my solicitation a meeting of the provincial committee was called at the rooms of the Indian Association; it is painful to say that the attendance was poor and excepting two or three gentlemen the other well-known leaders were conspicuous by their absence. The efforts of the last Session will be renewed in the coming one.

I had to take the assistance of the Assistant Secretary Mr. Sant in no small measure in what was done at Calcutta.

I paid a visit in March last to the Sibpur Engineering College at the request of the Principal Mr. Heaton, and was shown by him over the whole college. The institution has been greatly enlarged and improved under Mr. Heaton and it is to be greatly desired that his suggestions about further additions and improvements are accepted by his superiors. It is proposed to remove the College to Ranchi. The contemplated step appears retrograde.

In the year under report, there has been very great increase in the demand on my time and energy for public work, imperial, financial and local, and I have found it impossible, even though I have withdrawn to no small extent from professional work to get as much time as I used to do, a year or two ago, for the work of the office of the Industrial Conference. The entire burden of ordinary office work has fallen on the Assistant Secretary, Mr. Sant. In connection with my other duties, however, I got opportunities to do some thing towards the furtherance of the industrial movement.

Immediately after the close of the last Calcutta Session of the Imperial Legislative Council, I had to attend a Conference directed to meet at Nagpur by the Local Administration to settle a scheme for the projected Engineering College at Nagpur. Later on in July, I had to attend another Conference summoned by the said Government to consider and deal with the report of Mr. C. E. Low, on the industrial survey of the Central Provinces and Berar. The deliberations of both these Conferences and the suggestions made by them, will promote materially the cause of technical education and industrial development in the combined territory.

A great portion of the second half of the year has been

taken up in the direction in my personal capacity, of the affairs of an industrial concern which, when fully developed as it soon will be, will possess interest to Indian industrialists generally. I fully confess that owing to the various demands abovementioned, I could not find time for giving lectures or writing papers. Whether the kind of industrial work I was doing was not at least as useful as lecturing or writing, I must leave it to the members of the Conference to say.

As usual letters making inquiries and asking for advice were received from various quarters and to them replies were sent to the best of my limited knowledge and experience.

In 12 months more, another opportunity will present itself for enlisting the enthusiasm, co-operation and help of the Princes and peoples of India towards the raising of one or more technological institutions of the kind mentioned above. The unprecedented and unique event of the visit to this country of Their Majesties the King-Emperor and Queen-Empress for the coronation must, it will be conceded on all hands, be commemorated, and the commemoration ought to be worthy of the grand and auspicious event and such as would remind all generations to come of the beneficent side of the British rule and typify the virtues of the august Sovereign and his sympathy for the people of India. All friends of England and India should heartily support a project which will associate the name of one of the kindest of British kings with the well-being and prosperity of the people.

The Assistant Secretary, Mr. M. B. Sant, could not much be spared for touring work during the year under review, owing to heavy pressure of office duties. He, however, sought the opportunity of visiting a few institutions and attending the Deccan Agricultural Conference, Poona and other meetings in the mofussil. An account of his tours is appended to this Report.

The resolutions passed at the Fifth Industrial Conference were, in consonance with past years' practice submitted to the Government of India, the Provincial Governments as well as to the rulers of the principal Indian States for information and necessary action.

It was deemed inadvisable to issue this year a fifth edition of the Directory of Indian Goods and Industries, until a few hundred copies of the Fourth Edition, which are on hand are sold out. The demand for this publication from the various departments of the Governments of different provinces and the Indian States, still continues; but it was not so brisk as last year which is probably due to the majority of offices having already been provided with the older editions of the book. Within about two or three months, it is expected that the copies now on hand will be disposed of and the fifth revised edition, which is under preparation, will then be issued.

A new compilation as useful as the Directories of Indian Goods and Technical Institutions is now on hand. It is designed to give information about the manufacturers and sellers of the machines, plants and appliances which are in general demand in India. A considerable portion is now ready and in type, but it appearing advisable to make greater additions and some alterations, the whole matter is being re-adjusted and re-set. Beyond laying down the general plan, and directing and supervising the work, my share is small. The main labour is contributed by Mr. Sant and his assistant.

There is a steady and encouraging demand for the Directory of Technical Institutions in India from the educational departments of the British Government and Indian States and the general public and a revised and enlarged edition of this book will be published as soon as the first edition is sold out.

During the year under review, Industrial Conferences, Industrial and Agricultural Exhibitions, Cattle Shows, &c., were held in many places in all parts of India, too numerous to be mentioned here. They will be found described in Part II under the respective provinces in which they were held. The grand events of the year have been the Lahore Exhibition opened in December 1909, and the United Provinces Exhibition opened on the 1st of this month.

The Conference notes with great pleasure that the proposals made by it in regard to general industrial surveys or investigations into any special branches of it, are receiving

an increased share of attention of the authorities in British India and the Indian States and since the meeting of the last Conference, exhaustive reports embodying the results of the surveys of some of the important industries have been compiled by capable officers specially deputed by their respective Governments. These compilations will be found noticed in Part II, Section A, appended to this Report.

For the purpose of giving practical effect to Resolution No. VI passed at the Benares Conference, copies of the printed set of questions to be answered were sent to the Governments of the several Indian States, who had not hitherto supplied any information in connection with industrial activity in their own territories. It is gratifying to note that in response to the requisition of the Conference office, the Indian States of Hyderabad, Bhopal and Gondal have kindly supplied information concerning their respective States and their replies are printed as appendices to this Report. The Conference office feels highly indebted to State authorities for the courtesy shown by them in readily responding to its request.

Part II, Sections A & B, are devoted to a detailed record of the general industrial activity in the country including an account of the steps taken by the Imperial and Provincial Governments in British India and the Indian States. This information has been compiled from official and non-official sources.

The lists of Indian Patentees and of new Companies registered during the twelve months ending with November 1910, are also printed as annexures.

I beg to repeat my sincere acknowledgments to the Supreme and Provincial Governments for the reports and other publications supplied by them to the Conference office. I also tender my thanks to the managers of those papers and periodicals who have been kindly giving their papers and periodicals gratis to this office, as also to those authors of new publications on Indian economic and industrial problems, who have shown similar kindness.

There is one important matter, which though it may not come strictly within the purview of an annual report of

the Conference, deserves to be mentioned here for want of a more appropriate authorised channel of communication. The Conference has till now been working without any constitution or settled rules. In 1906, a draft constitution was drawn up and circulated to some of the leaders of the Conference movement. An informal meeting of a few selected leaders was even called. But two such eminent men as the late Mr. R. C. Dutt and Mr. D. E. Watcha deprecated the formulation of a cut and dry constitution and on that occasion and again later on expressed their distrust of paper constitutions. Though I am myself as small a believer as either of them in paper constitutions, I think it my duty to bring forward the subject again, because I find that absence of rules affords an opportunity to a certain class of critics even in regard to acts, which have been done in strict accordance with the usage of the past five years. It is greatly to be desired that the adherents of the Industrial movement will always keep in view the fact that what is wanted for the cause we have all at heart is to bring about that activity which will revive our once flourishing industries, establish new ones, give more bread even to the poorest and competence to as large a number as possible. The real effective weapons are more capital, more knowledge. Formularies and Rules should be resorted to only if it is convincingly shown that they will promote the great cause. It is for the Conference to see whether any action is called for and if so to what extent.

I have in the foregoing paras made mention of the work, Mr. Sant has been doing. He is a willing and cheerful co-adjutor who does not grumble if the load on his back is increased and he is required to work extra hours. I feel that the remuneration which has been given to him is not adequate and greater justice ought to be done to him.

Statements showing the receipts and disbursements of the office of the General Secretary are appended.

R. N. MUDHOLKAR,

GENERAL SECRETARY,

Indian Industrial Conference.

AMRAOTI,

1st December, 1910.

Summary of Accounts of the Office of the Indian Industrial Conference

Receipts.	Amount.
	Rs. A. P.
From sale-proceeds of Directory of Indian Goods and Industries	764 9 0
Do Technical Institutions in India ...	439 6 0
From sale-proceeds of Surat Industrial Conference Reports	88 5 6
Do do Calcutta do do ...	61 14 6
Do do Madras do do ...	1,140 8 6
Do do Benares do do ...	35 15 0
Advertisements for the Lahore Industrial Conference Report	75 0 0
Do 5th Edition of Directory of Indian Goods and Industry	15 0 0
Received from the Reception Committee, Lahore Industrial Conference	500 0 0
Donations :—	
Maharaja Sir Rameshwar Singh Bahadur, Darbhanga ...	500 0 0
Lala Harkishen Lall, Bar-at-Law, Lahore ...	150 0 0
The Honourable Mr. Justice V. Krishnaswamy Iyer Madras	150 0 0
The Honourable Mr. Gokuldas K. Parekh, Bombay ...	150 0 0
The Honourable Rao Bahadur R. N. Mudholkar, Advocate, Amraoti	100 0 0
Raja Prithvi Pal Singh, Surajpur	100 0 0

Summary of Accounts of the Office of the Indian Industrial Conference for the 12 months from December 1909 to November 1910

Receipts.	Amount.
	Rs. A. P.
R. N. Mookerjee, Esq., C. I. E., Calcutta	100 0 0
The Honourable Sir Vithaldas D. Thackersey, Bombay ...	100 0 0
Dr. Rash Behari Ghosh, Calcutta	100 0 0
Dr. Harold H. Mann, Poona	100 0 0
Sir Dorab J. Tata, Bombay	100 0 0
Dewan Rai Sahib Amarnath, Chief Minister, Jammu and Kashmir State	100 0 0
The Honourable Raja Pratab Bahadur Singh, Partabgarh ...	100 0 0
M. V. Joshi, Esq., Advocate, Amraoti	100 0 0
Messrs. Dharamsey Morarji, Bombay	100 0 0
Rai Bahadur Melaram Saran, Lahore	100 0 0
The Honourable Pandit M. M. Malaviya for 1909 ...	50 0 0
The Honourable Mr. P. S. Sivaswami Iyer, Madras ...	50 0 0
Do Mr. S. Sinha, Bar-at-Law	50 0 0
The Honourable Pandit Madan Mohan Malaviya, Allahabad for 1910	50 0 0
C. P. Ramaswami Aiyar, Esq.	50 0 0
S. N. Pandit, Esq., Bar-at-Law, Rajkote	50 0 0
Dr. Satish Chandra Benerji, Allahabad	50 0 0
Sir. B. K. Bose, Kt., Advocate, Nagpur	50 0 0
Dewan Bahadur L. A. Govinda Raghava Iyer, Madras ...	50 0 0
H. S. Dikshit, Esq., B.A., Solicitor, Bombay	35 0 0
Hansraj Pragji Thackersey, Esq., Bombay	25 0 0
Rao Bahadur Khandubhai G. Desai, Surat	25 0 0
	25 0 0

Summary of Accounts of the Office of the Indian Industrial Con-

Receipts.	Amount.
	Rs. A. P.
Gulabchand Deochand Javeri, Esq., Bombay ...	25 0 0
D. E. Wacha, Esq., Bombay ...	25 0 0
K. Narayan Shastriar, Esq., Coimbatore ...	20 0 0
C. Vijiaraghavachari, Esq., Salem ...	20 0 0
G. A. Natesan, Esq., Madras ...	15 0 0
Rao Bahadur Deorao Vinayak, Akola ...	15 0 0
The Honourable Babu Ganga Prasad Varma, Lucknow ...	15 0 0
M. B. Sant, Esq., Assistant Secretary, I I. Conference, Amraoti ...	15 0 0
R. A. Despande, Esq., Amraoti ...	10 0 0
Babu Maheswari Prasad, Allahabad ...	10 0 0
A friend from Madras ...	10 0 0
Rai Bahadur M. Audinarayana Iyah, Madras ...	10 0 0
Rao Bahadur V. N. Pathak, Satara ...	10 0 0
Rao Bahadur R. G. Mundle, Yeotmal ...	10 0 0
Professor Jogindra Nath Samuddar, Hazaribagh ...	5 0 0
Dewan Bahadur Krishnaswamy Rao, Madras ...	5 0 0
R. P. Karandikar, Esq., Satara ...	5 0 0
G. R. Kshirsagar, Esq., Industrial Conference Office, Amraoti ...	5 0 0
Receipts from the Lahore Reception Committee for miscellaneous expenses in connection with Lahore Industrial Conference ...	50 0 0
Total ...	6,060 5 8

ference for 12 months (from December 1909 to November 1910.)

Disbursements.	Amount.
	Rs. A. P.
Pay of Assistant Secretary and other Establishment ...	1,450 8 0
On Directory of Indian Goods and Industries account ...	991 10 3
Do Technical Institutions in India ...	23 1 0
Do Report of the Calcutta Industrial Conference account ...	4 2 9
Do do Surat do ...	2 5 9
Do do Madras do ...	65 10 0
Refund of the sale-proceeds of the Benares Conference Report ...	35 15 0
Typing charges of the Report of the Indian Industrial Conference including a record of the General activity for year ending with November 1909 ...	16 3 0
Advance out of the printing charges of the Lahore Report ...	200 0 0
Travelling expenses of the Assistant Secretary and other Miscellaneous charges incurred on tour ...	233 7 0
Printing (Miscellaneous) ...	48 5 0
Books and periodicals ...	63 3 0
Book-binding ...	3 6 0
Railway freight ...	14 14 3
Furniture ...	81 11 6
Postage ...	121 12 9
Telegrams ...	17 11 0
Stationery ...	53 10 6
Sundries (including repairs to Typewriter, &c.) ...	22 3 6
Advertising charges ...	33 15 0
Expenditure ...	8,474 2 3
* Balance ...	2,596 3 3
Total ...	6,060 5 6

*Out of this balance the following charges have still to be paid.
 Balance of the printing charges of the Report of the 5th Industrial Conference, Lahore ... Rs. 775 0 0
 Cost of printing Annual Report of the work of the Indian Industrial Conference ... 125 0 0
 Total .. 900 0 0

AMRAOTI, }
 1st December 1910. }

R. N. Mudholkar,
 General Secretary,
 Indian Industrial Conference.

REPORT SUBMITTED BY THE ASSISTANT SECRETARY

Before submitting a report of the work done by me since I joined my appointment in October of last year as the successor of Mr. C.Y. Chintamani, it is my first duty to tender my sincere and grateful acknowledgments to the Honorable Rao Bahadur R. N. Mudholkar, the General Secretary of the Industrial Conference, for having conferred the vacancy on me in consideration of the humble services that I rendered off and on to the Conference Office, during leisure snatched away with great difficulty from the arduous and exacting duties of my former service. The work of the industrial regeneration of my mother-land has during the last eight or ten years been uppermost in my mind and what little I could achieve in furtherance of this object has been to me a labour of love. It will now be my earnest endeavour to discharge conscientiously the duties entrusted to me, to fulfil the expectations that the General Secretary has so kindly formed about me and to deserve the confidence that he has reposed in me.

Owing to the unusually large number of papers—nearly double the number usually received at the previous Conferences—there was a proportionate increase in the amount of matter, which had to be prepared for submission to the General Secretary in connection with the Lahore Report. This together with the office routine duties did not permit me to proceed to important centres of industrial activity, cities, presidency towns, or district places to stir up the Provincial or District Committees or to found new ones.

Immediately after the close of the Lahore Session of the Industrial Conference, I visited the Lahore Exhibition. Exhibits of Industrial products and works of arts, were so numerous and varied that it is not possible to notice them here in detail. I shall only refer to a few models of machinery and appliances, which struck me most.

(1) *Turpentine Factory*.—Under the auspices of the Agricultural Department of the Punjab, a temporary building was specially erected within the Exhibition grounds for the practical demonstration of the mode of manufacturing Turpentine from Chir wood. A factory on a small scale like

the one exhibited at Lahore can be started by any one with a capital not exceeding five to six thousand rupees.

(2) Foster-mother and incubator of Messrs. W. Tamlin & Co., for poultry industry, apparatus for artificial Beeculture, machinery for Sugar manufacture, a small and simple contrivance for extracting *san* fibre, chaff cutters, pumps, winnowers of corn and other agricultural machinery and implements, presses for Baling Hay by hand power looms of different kinds, &c., formed a very instructive feature of the Exhibition, apart from the thousand and one articles of Indian workmanship and art.

(3) A small machine of the Eureka type for making quinine tablets was also on view which turned out automatically tablets uniform in size and weight.

Early in February last, I accompanied the Honorable Rao Bahadur R. N. Mudholkar, the General Secretary to Calcutta, when a great effort was made to arouse the Provincial Committee of the Industrial Conference in Bengal and accordingly a meeting was arranged in the Rooms of the Indian Association, for which invitations were issued to the leading gentlemen of Calcutta and especially those who are known for their active interest in industrial matters. The General Secretary in a very lucid speech pointed out the vast possibilities of the expansion of the jute industry which is almost wholly in the hands of foreign companies.

While at Calcutta I specially visited the Section of the Museum where all the important commercial products of India are kept on view. This Section is admirably classified and arranged and is a store-house of very useful information and deserves to be carefully studied by all who are anxious to start any new industry. Mr. Burkill, the Superintendent in charge of this Section, had the courtesy to ask his personal assistant to show me over the whole Section, which is very instructive.

I visited also the well-known Bengal Chemical and Pharmaceutical Works and was agreeably surprised to find the factory equipped with the latest machinery and appliances for the manufacture of a variety of articles which were probably never tried in India before. Great credit is,

indeed, due to Professors Bose and Roy for this successful venture. I visited the Pencil and Match Factory of the Small Industries Development Co. of Calcutta and suggested some woods which were more suitable for these purposes, in lieu of the material used by the promoters of the Factory. I accompanied in March last the General Secretary to the Sibpur Engineering College when through the courtesy of Mr. B. Heaton, the worthy Principal of the College, I had the unique opportunity to have a view of the several well-equipped laboratories, specimens and models of mining and other appliances.

During my stay at Calcutta, I had received an invitation from the Reception Committee of the Benares Industrial Conference, but owing to some urgent demands on my time, I had to deny myself the pleasure of attending that Conference.

In the month of April last, I proceeded on tour to Poona for the purpose of creating interest in the work of the Conference office, when I visited many leading gentlemen and succeeded in enlisting their sympathies with the Conference movement. While at Poona, I visited the Umbrella Factories of Messrs. Rajmachikar Brothers, and R. Y. Kamble, the Maharastra Metal Factory and two Envelope Factories. I received much valuable information from the managers of these concerns.

In the month of September, I attended the meeting of the Sangamner Agricultural and Industrial Association, when I was unanimously elected a member of the Association and deputed to attend the Poona Agricultural Conference held on 21st and 22nd September. I took part in the discussions on both days and read a paper on agricultural improvements, which is reproduced elsewhere.

AMROATI.
1st December, 1910.

M. B. SANT.

PART II

A brief account of industrial activity in India in
the twelve months December 1909
to November 1910.

Section A

*The Governments of British India and Indian States,
and Industrial Development.*

BRITISH INDIA

Legislation.—Among the laws enacted by the Imperial Legislative Council the Electricity Act, the Indian Company's Act, Amendment Act and the Tariffs Amendment Act and the Paper Currency Act deal with matters affecting industry and commerce. The object of the first measure was to recast the law so as to afford greater encouragement to the flow of capital to enterprises using electricity and at the same time to duly protect the interest of the general public and the state. The second authorised under certain conditions the payment of interest out of capital. The third enhanced duties on imported liquors, tobacco, silver and petroleum. The enhancement on the first two articles was approved by an overwhelming majority in the country and in the Council. Non-official opinion was strongly against the enhancement in regard to the two latter.

Contemplated Legislation.—Bills have been introduced in the Imperial Legislative Council for regulating the working of factories and the labour employed there and for amending the law relating to patents and designs so as to bring it into line with the English Act of 1907. The first bill will, it appears, be strenuously opposed by the manufacturing interest in this country.

Legislation is also contemplated to bring up the law relating to Insurance Companies and that relating to Joint Stock Companies in a line with the English law.

Resolutions.—Among the resolutions moved in the Imperial Legislative Council two were connected directly with the Industrial movement.

They were :—

That this Council recommends to the Governor-General in Council that the Government of India do take early steps to establish a Polytechnic College for giving instruction in the higher branches of Mechanical Engineering, Electrical Engineering, Marine Engineering, Railway Engineering, textile manufacture, mining and metallurgy and different departments of industrial chemistry; and that a committee of qualified officials and non-officials, European and Indian, be appointed to frame and lay before the Government by the end of August next, a scheme suitable for the requirements of the country and capable of being carried out in the immediate future.

A resolution was also moved for making primary education free and universal. This resolution and the one in regard to the prohibition of indentured Indian labour to Natal were also indirectly connected with industrial matters.

2. A very useful book has been compiled by Mr. R. S. Troup, F. C. H., the Imperial Forest Economist, entitled "The Indian Forest Memoirs." The volume describes the uses of 554 different woods, excluding bamboos, canes and the varieties used for fuel and similar purposes. The woods are ranged under 84 heads according to the various uses to which they can be applied; viz., woods for agricultural implements, boat and ship-building, perfumery, matches, combs, pencils, Railway sleepers, building material, toys and for a variety of other industries, have been fully described, their natural order, vernacular names in different districts and other necessary information has been given.

3. The following important order has been issued by the Government of India in connection with the purchase of country made articles by the various departments of Government.

"The Governor-General in Council is pleased to direct that the following rule shall be substituted for rule 5 of the revised rules for the supply of articles for the public service

which were published with the Resolution dated the 14th July, 1909 :—When serious inconvenience to the public service would be caused by waiting to obtain an article from England through the Director-General of Stores, or when owing to the greater promptitude of supply, an economy can be effected by purchasing in India articles which, under the foregoing rules, should be obtained through the Stores Department, the purchase may be made in India, subject to rule 18 : provided that the articles are already in India at the time of order; but in such cases, if the value of the articles exceed Rs. 50, the sanctioning officer should place on record the reasons which make the local purchase desirable. This record shall be available for the inspection of the Examiner of Accounts or the supervising officer when required."

4. The Government of India continue to give effect to their declared policy of promoting the cause of higher technical knowledge and as in previous years directed the award of one technical Scholarship in each Province, tenable in a foreign country provided the Local Government, has a deserving candidate to nominate, and that the industry to be studied is either already developed or in the process of development. The candidate selected must also have shown a practical interest in the industry for which he is selected and should give an assurance that he will continue to devote himself to the industry on his return to India. How the Scholarships have been actually awarded will be shown further on, in reference to each province separately.

5. For the purpose of placing the paper-making industry on a firm basis the Imperial Forest Research Institute is about to take steps for demonstrating the possibility of manufacturing wood pulp in India.

6. The Government of India Prize for the best paper contributed to the Mining and Geological Institute of India has been won by Mr. Ghose of Sandur, who has described in detail the extensive Manganese ore deposits of the Sandur State.

7. The revised Bill for amending the rules relating to

the grant of Patents and Designs in India was introduced in the Viceroy's Council on the 23rd March last. By this Bill the stages of obtaining a Patent for an invention will be as follows :—

- (1) Submission of the application with specification and the prescribed fee.
- (2) Acceptance of the application after complete examination within nine or twelve months.
- (3) Publication of documents after such acceptance.
- (4) Interval of 3 months for submission of objections to grant.
- (5) Grant of patent after disposal of objections, if any, on payment of prescribed fee.

8. The new bill aims at facilitating the grant of patents by keeping the application secret until acceptance and in several other ways.

9. A Conference of the Registrars of Co-operative Credit Societies in India, is arranged to be held at Allahabad from 7th to 10th January next to discuss several matters in connection with this movement.

10. The Government of India have sanctioned the award of a State Technical Scholarship to Mr. T. Kumaran Nair to enable him to undergo a course of study in England in metallurgy, arrangements will be made for his admission to the Birmingham University.

11. The Government of India have issued instructions for the compilation of a special schedule at the forthcoming census, showing separately the number of persons engaged in direction, supervision, and clerical work; the number of skilled workmen, unskilled labourers of over 14 and under 14 years of age. In the first class Europeans and Eurasians on the one hand and Indians on the other will be shown separately. The Schedule will be filled in by the managers or owners of the factories, mills, or other concerns where at least 20 persons are employed. It will also be stated whether any mechanical power is employed, if so, whether it is water, steam, oil, or any other power.

12. That there is much scope for the improvement and expansion of the agricultural industry in India will be

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admitted by any one who has devoted the least attention to this subject. It is, therefore, gratifying to find that the results so far achieved in this direction are distinctly encouraging. From the proceedings of the Board of Agriculture at Pusa, it appears that a steady advance is being made in the following directions in almost all the Provinces in India :—

- (1) Gradual introduction of agricultural implements and machinery.
- (2) The issue of leaflets in different vernaculars on agricultural matters.
- (3) Adoption of new methods of agriculture.

13. The Council of Indian Institute of Science has framed bye-laws and rules for admission and regulation of students. The rules affecting the grant of diplomas of associates and fellows to successful students and the bye-laws have been submitted to the Viceroy for final sanction. Instruction is to commence in January 1911. The foundation stone of the Library which is to be the main feature of the building now in course of construction, will be opened by H. H. the Maharaja of Mysore.

14. The Government of India have issued a resolution on Provincial Agricultural Colleges and their diplomas.

These Colleges are to teach a three years' course which is to be as far as possible uniform in all the parts of India. A final examination is to be held at the end of the period with the assistance of Pusa Professors; successful candidates will be given the degree of the Licentiate of Agriculture which will be equivalent to B. A. Successful students may go through a two years' post-graduate course of study at Pusa.

15. The Provincial agricultural colleges except that of Poona, are not to be affiliated to provincial universities but are to remain under the control of the Director of Agriculture who should keep himself in touch with the Directors of Public Instruction.

16. We give below a complete list of the industries about which the Government of India have directed the collection of statistics throughout the Empire :—

- (1) Provision of food—Tea, Coffee, Biscuit factories, Flour, Oil and Rice mills ; Bakeries, Sugar factories, Dairy farms, Fish curing works.
- (2) Drinks, Condiments, and Stimulants—Salt, Ice, Opium and Tobacco factories, water Works, Crushing mills, Aerated water factories, Breweries, &c.
- (8) Light, fuel and forage—Gas and electric light works, Match factories, Oil mills, Collieries, Forage presses, Bulk Oil installations.
- (4) Building materials—Brick and tile factories, Stove, Marble and cement works. Lime works and kilns. Municipal work-shops.
- (5) Vehicles and vessels—Railway train and coach building factories and Shipyards, Dockyards, Port Commissioners and Port Trust workshops, Dredging and motor car works.
- (6) Supplementary requirements—Paper mills, Card board manufactories. Printing presses. Mica splitting factories, Telegraph and Postal work-shops. Games and Sport Works.
- (7) Furniture factories.
- (8) Arms and ammunition—(Factories for), Arsenals, Gunpowder and Gun carriage factories.
- (9) Textiles, fabrics and dress :
 - (a) Wool-carpets, blankets, woollen cloth and shawl factories, Felt and *pashm* factories.
 - (b) Silk filatures and mills.
 - (c) Cotton—Cotton ginning, cleaning and pressing mills. Thread glazing and polishing factories, Cotton spinning, weaving and other mills, Tent factories, Cotton carpet and rug-making.
 - (d) Jute, Hemp, &c. Jute presses, Jute mills. Rope works, Hemp mills, Fibre cleaning works, Fibre matting and bag making.
 - (e) Dress—Hosiery and Umbrella factories.
- (10) Metals and precious stones.
 - (a) Gold, silver and precious stones—Mints, Gold,

diamond and ruby mines—Jewellery work-shops.

- (b) Other metals, &c. Brass foundries, Iron foundries, Iron and Steel works, Machinery and Engineering workshops, Lock and cutlery works, Aluminium factories, Iron, mica and manganese mines.
- (11) Earthenware and Glass Pottery works, Glass factories.
- (12) Wood, cane, &c., Carpentry works, Saw mills, Timber yards.
- (13) Drugs, Gums, Dyes, Cinchona and indigo plantations. Cutch, lac, soap and chemical factories. Saltpetre refineries, Dye works, Paint works.
- (14) Leather, &c., Tanneries, brush and leather factories. Bone Mills.

17. A statement has been issued by the Geological Survey Department of India from which it appears that during the year 1909, the total number of licenses for working ~~mines~~ and minerals issued in the various provinces including ~~Baluchistan~~ was 698, showing a decrease by 123 as compared with the previous year's total. Of this number 395 were prospecting licenses, 143 exploring and 155 mining leases. The Central Provinces head the list with 389 of which 246 were prospecting licenses, 107 exploring and 36 mining leases, the major portion of the concessions being in connection with manganese ore.

BOMBAY.

18. The Government of Bombay has sanctioned two scholarships. One for a student to proceed to Europe to learn Sugar refining and the other for Electrical Engineering.

19. "History of Indian industries during the last century" is the subject of a Prize essay announced by the University of Bombay. The selection of the subject is eminently judicious just at a time, when there are signs of a genuine industrial awakening in all the parts of the country. The appearance of the successful essay is awaited with interest. The publication of this essay either by the

successful candidate or by the University for general information is highly desirable.

20. Under the auspices of the Deccan Agricultural Association, an Agricultural Conference was convened in the Agricultural College Buildings on 19th and 20th September, under the presidency of the Honourable Shrimant Baba Saheb, Chief of Ichalkaranji, one of the States in the Southern Mahratta country. The election of the Hon'ble Baba Saheb to the Chair was eminently happy as he has devoted his special attention to the study of agricultural and industrial problems of the country and appears to possess much practical knowledge of agricultural matters. The proceedings commenced on 19th September under very favourable auspices. About 200 delegates from the different districts of the Bombay Presidency were present. Much credit for organising the Conference is due to Mr. G. F. Keatinge, I. C. S., J. P., the Director of Land Records and Agriculture, Dr. H. H. Mann, Professor J. B. Knight, Rao Sahab G. K. Kelkar and others of the Agricultural College, Poona. The proceedings were conducted in Mahrathi and much useful and educative work was done, many cultivators took part in the discussions, placed boldly before the Conference their doubts and difficulties, and solicited the help of the Government Revenue and Agricultural Departments for solving them. The Conference was thus a successful affair and fulfilled its object. Rao Sahab V. A. Gupte read a carefully written essay dealing with the advantages of Agricultural Associations after the models of similar institutions in Europe and Japan and exhorted his educated brethren to help the ryot in the removal of his financial difficulties and stubborn opposition to the introduction of any new ideas. Messrs. Paregaonkar, Kamath and Kirtane read papers on various subjects. Mr. M. B. Sant, Assistant Secretary of the Indian Industrial Conference, Amraoti, read a paper making some extremely practical suggestions with regard to Agricultural improvements and took part in the deliberations of this Conference and brought to the notice of the audience the action taken by the Industrial Conference in the matter of the standardization of weights and measures and in various other ways.

21. The Hon'ble Messrs. W. M. Morrison, R. A. Lamb and M. B. Chaubal, Members of the Council of His Excellency the Governor of Bombay paid a visit to the Paisa Fund Glass Works at Talegaon near Poona, and are reported to have been pleased with the arrangements at the factory and the articles turned out by it. The Superintendent of the Works has been informed that the Government have called the attention of the officers of various departments to the glass-ware produced at Talegaon and have desired that these articles should be purchased as far as possible for Government purposes.

22. The Bombay Government had selected Mr. A. Guthrie of Messrs. Cooper Allen & Co. of Cawnpore to institute a survey of the leather industry of the Presidency. Mr. Guthrie has studied chemistry of tanning at Leeds and possesses about seven years' experience in all branches of leather industry in India. He had been deputed to visit all the important centres of tanning and leather industry in the Presidency including Sindh for the purpose of investigating and reporting on the existing condition of these industries. Mr. Guthrie has now completed his survey and submitted a very exhaustive and thoroughly informing report. The Bombay Government in their Resolution on this report have directed the attention of capitalists to the scope that exists for the establishment of tanning extract factories in suitable localities, and are prepared to give careful consideration to any practical suggestion that may be submitted to them. The state of the leather industry in the Presidency is not on the whole very hopeful owing to the ignorance of the workers, their addiction to liquor and foreign competition. A marked improvement is observed in localities where Co-operative Societies have been started for the benefit of these men.

23. His Excellency the Governor of Bombay desires to nominate a candidate for training at the Imperial Forest College, Dehra Dun, with a view to his qualifying for direct appointment to the Provincial Forest Service.

24. The Bombay Government have invited applications for one or two State Technical Scholarships from candidates.

in the Presidency, who are willingly to proceed to England to study Sugar refining or Electrical engineering. Each Scholarship is of the value of £150 per annum and is tenable for two years and may be continued for the third year, if necessary. The candidate will also receive his free passage to England if he proceeds there on certain prescribed conditions, and also travelling expenses for *bona fide* journeys in connection with his studies, while in Europe.

25. The Bombay Government have decided to transfer the control of the Bombay Veterinary College from the Director of Public Instruction to the Director of Agriculture.

26. The Bombay Provincial Co-operative Credit Conference was held in the Poona Town Hall in September last. His Excellency the Governor in opening the proceedings made some very valuable observations on the prospect and the expansion of the movement. According to His Excellency, the hand-loom industry of the country can still survive the foreign competition, if it is organised properly on the basis of co-operation.

MADRAS.

27. The second mill of the Coimbatore Spinning & Weaving Co. started work with 20,000 spindles from 1st March last, the first cotton being put in by the Collector of the District.

28. On the application of the Madras Glass Works, Ltd., supported by the Director of Industries, the Government of Madras have sanctioned a free grant to the Company of half the wood used in its furnaces during the first two years of its working.

29. To encourage technical education, the Government of Madras have sanctioned a grant of Rs. 6,000 to the Chennagalvaroya Naicker Institute for the purchase of tools and machinery and Rs. 7,500 as an annual grant for the maintenance of the staff including a Superintendent from England.

30. It appears from the Madras Administration Report for 1908-09 that chief industries carried on in the Presidency by concerns not classed as factories were coffee curing, tile and rope making, tanning of leather, lace making, tobacco

curing, cotton spinning and weaving, printing, fish curing, oil pressing, cotton ginning and pressing. Owing to the introduction of shawl weaving and the improvement of labour supply, the working of the Salem Weaving Factory shows much progress.

31. The last Annual Report of the Madras Department of Industries shows that the Department worked successfully on the whole, although the financial results were not so encouraging. Well-boring operations were attended with much success.

32. The Government of Madras have decided to award a State Technical Scholarship of £150 per annum tenable for two years for the study of Glass-making.

33. Very interesting experiments are being conducted by Mr. James Hornell, Marine Assistant and Superintendent of Pearl and Chank Fisheries since April 1909. In spite of unfavourable and adverse circumstances, there has been a distinct net profit this year, owing to the advance in the knowledge of Chank Culture, mechanical dredging for shells, more extensive advertising and other business methods.

34. In the last year's Report reference was made to the proposed factory on the Nilgiri Hills for the charcoal (wood distillation) under the auspices of the Madras Government, but it appears that Government have now decided to take no further action in the matter to avoid undue interference with private enterprise.

35. The Madras Technical Institute which was under the management of the District Board for about 20 years has been made over to Government from the 1st April last. It is proposed to enlarge the scope of the institute by making provision for instruction in weaving and dyeing.

36. The Report of the Madras Agricultural Department shows that the experiments made in certain parts of the Presidency to grow jute have not been attended with success and will have to be eventually given up, as with high prices fetched by paddy there are no promising prospects for jute cultivation. Trials are in progress for the plantation of agave fibre but the prospects are yet uncertain.

37. With the sanction of the Local Government, the Director of Industries, Madras, has announced the grant of 199 scholarships of the aggregate value of Rs. 566 to boys of the artisan classes attending industrial schools, in the Presidency, which are under the supervision of the Director.

38. An informal meeting was convened at Madras in the office of the Director of Industries on the 5th and 6th of October, where gentlemen interested in industrial education had assembled to discuss various questions, *viz.*, the classification of Industrial Schools, the subjects to be taught, the curriculum to be followed and the separation of literary from industrial education.

39. A lengthy report has been submitted by Mr. R. L. Proudlock, Curator to the Government Botanical Gardens and Parks in the Nilgiris on the experiments carried out by the Government at Gairsoppa, Kadra, Belgaum, Thanna, Pelbar, Bassein, Victoria Gardens (Bombay) and at Ganesh Khind near Poona. The origin of the plantations is attributed to the suggestion of the Bombay Chamber of Commerce. The seeds experimented with were *Castilla elastica* from Ceylon, *Ceara*, *Para* and a few other varieties. The results of Rubber cultivation are not very hopeful. According to Mr. Proudlock the principal drawback of the Bombay Presidency is the long annual drought that is usually experienced. The best district in the Presidency is Kanara, especially the evergreen forest region from Bhabkal to Kadra, where the climate is hot and moist for the greater part of the year. The District of Thanna which comes next is fairly suitable for rubber.

40. The Government of Madras has opened a Distillery class for the benefit of subordinates of the Abkari Department. Arrangements have been made to give them a training in organic chemistry, distillery processes, brewing, &c. Subordinates from other provinces are also attending the class. There are 8 from Beluchistan, 3 from Rajputana, 7 from Burma and Ceylon each, 4 from Berar and 9 from Bombay. Some Indian States have also deputed a few students to attend the class.

41. It is understood that the Madras Government will

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shortly undertake an industrial survey of the Presidency for the purpose of collecting reliable data with regard to the present position of the Madras industries.

42. A Resolution has been issued by the Madras Government sanctioning the proposal of the Director of Industries for the enlargement and development of the St. Aloysius's School at Vizagapatam, so as to provide for instruction in mechanical engineering, carpentry and blacksmith's work to students from the Vizagapatam and Ganjam districts. This action has been taken in response to the request of a deputation which was received by H. E. the Governor in February 1909.

43. The Secretary of State has abolished the Department of Industries and the post of the Director of Industries from 1st January 1911. Orders have accordingly been issued by the Madras Government placing the services of Mr. A. Chatterton at the disposal of the Educational Department as Superintendent of Industrial education. Industrial Schools at present under the control of the Revenue Department, will be transferred to the Educational Department.

BENGAL.

44. In an appendix to the Report of the Agricultural Department of Bengal for 1908-9, Mr. Bergthell, Director of the Sirsiah Research Station, has published the result of his experiments in regard to the relative merits of the artificial and natural indigo which appear to prove that the natural indigo makes a more lasting dye.

45. The Bengal Agricultural Department, and in the Muzaffarpur district, the Behar Agricultural Department and the Behar Planters' Association are continuously making experiments for growing flax and other fibre plants. An expert has been brought out from Belgium under whose supervision it has been shown that a net profit of over Rs. 100 per acre can be obtained by the cultivation of flax.

46. The Agricultural Ledger in one of its recent issues gives an interesting account of the cultivation and preparation of Sann hemp in the Pabna District, with commercial valuation of the fibre in the Calcutta and London markets.

In the Sirajganj Division about 27,000 acres are estimated to be under Sann hemp. The value of the outturn per bigha is about Rs. 24. The expenses are calculated at Rs. 18 per bigha.

47. The Co-operative Credit Conference held at Calcutta came to the conclusion that District Officers did not take sufficient interest in the working of this movement and has suggested that definite orders should be issued by the Local Government on this subject and that Societies recognised by the Registrar of Credit Co-operative Societies may be exempted from payment of fees levied under the Registration Act.

48. The Bengal Government have sanctioned the removal of the Sibpur Engineering College to Ranchi, and that the Port Commissioners are to acquire the possession of the Sibpur site in May 1913.

49. Experiments in fruit-growing are being successfully conducted at the Pusa Research Station, and bulletins have recently been issued dealing with the methods of growing fruit trees, preservation and packing of fruits by modern methods. The success achieved at Pusa will make the growing of European fruits possible in various localities in India by adopting the methods, which have proved successful at Pusa.

50. From the Government resolution on the working of the Co-operative Credit Societies in Bengal for 1909-10 it appears that the movement is making a steady and on the whole a satisfactory progress, many new Urban Societies having been started without much direct help from the Registrar.

51. Under the auspices of the Bengal Government, a monograph has been compiled by Babu Mallinath Ray which contains a very interesting review of the "Wire and Tinsel Industry" of the Province. Mr. Ray has furnished ample details describing the decadence of the industry and its present struggle for existence in the face of foreign competition. According to the traditions in Patna and Calcutta, the original founder and inventor of this art was Biblical Joseph, the son of Jacob. Even to this day the young

apprentice makes his offering to Joseph when he begins to learn his art. It appears that this industry was brought to India by Mahomedans, as it is chiefly confined even now to that community. The industry is now in a very precarious condition and efforts ought to be made to revive and at least save it from total extinction. The implements employed and processes of manufacture of wire, tinsel, gold and silver leaves are almost the same throughout the length and breadth of India. Hence, the monographs prepared in other provinces, do not differ much from this Report.

52. Some important experiments are being conducted by Mr. Bernard Coventry at the Pusa Research Institute for growing different varieties of tobacco, which are watched with interest by those interested in the manufacture of cigars, cigarettes and other tobacco preparations.

53. The experiments conducted under the auspices of Government in semi-artesian well-boring in Muzaffarpur during the scarcity in that district last year have proved successful and afforded much relief.

EASTERN BENGAL AND ASSAM.

54. The Government Agricultural Department at Shillong is making experiments in canning and preserving of fruit. The process of canning pineapples has been attended with complete success. The net expense per tin of preserved apple was found to be $4\frac{1}{2}$ annas in Shillong, the expenses will be less when the fruit and labour is cheaper, mangoes when preserved would also keep for a long time and fetch good prices.

The following is the process of canning the pineapple :—

Peel the fruit and carefully take away the eyes. Then cut it into pieces and put them in a tin can. Fill the can next with thin sugar syrup. Seal the tin carefully leaving a small aperture through which air in the tin will be driven out. The filled tin should next be put in a bath of hot water and boiled for a few minutes. This will drive out the least trace of air and kill any germ in the fruit and the sugar. The tins should then be sealed completely and allowed to cool.

PUNJAB.

55. A State Technical Scholarship of £150 has been awarded to Mr. Hashmat Rai, B. A., M. Sc., Demonstrator, Government College, Lahore, for the study of Technical Chemistry in England.

56. Colonel Davis, Commissioner of Jullundur Division laid the foundation stone at Faridkote of the Davis Model Agricultural Farm and Farmer's House, which aims at teaching the agriculturists the manifold advantages of modern improved methods of cultivation.

57. A new agricultural station at Gurdaspur has been opened to popularize the scientific methods of agriculture and for purposes of demonstration.

58. A lease of some 2,300 acres of land in Montgomery District has been granted to two Zamindars for opening a cattle-breeding farm with the object of improving the breed of Montgomery milch kine. The breeding operations will be conducted under the supervision of the Director of Agriculture.

59. Monographs on Punjab Industries are being revised and condensed into a popular form. Mr. Alma Latifi, I.C.S., has been specially deputed on that duty, under the supervision of the Director of Land Records, as Director of Industries.

60. For improving the date palm cultivation, the Jail ground at Multan famous for its date palms is to be utilized under the auspices of the Punjab Agricultural Department; 55 acres will be available for the present.

61. The experiment of planting eucalyptus trees having proved successful on the Simla Hills, the Conservator of Forests recommends its continuance. About Rs 4,000 have already been spent on the scheme. This industry is very paying and deserves to be tried in other provinces as well.

62. The Punjab Government have issued licenses in favor of Messrs. Bayram and Co. of Calcutta for mineral oils in the Mianwali District.

63. The Director of Industries in the Punjab is collecting information as to the openings of industrial development which promise success. He is ready to supply

information to capitalists and others interested in starting new industries. A library of industrial books will be placed shortly at the disposal of the public and Mr. Latifi's work embodying his results of an industrial survey and containing many valuable suggestions regarding probable openings in the Provinces is awaited with interest.

64. His Honor the Lieutenant-Governor has decided to offer the scholarship for training in Alkali manufacture and to invite applications for it from Punjab University graduates in chemistry. Applications should be made to the Director of Public Instruction, Punjab.

65. The local Government is devoting its attention to the improvement of fish industry, and has decided to depute Mr. A. Hawel, I. C. S., Assistant Commissioner, Kulu, to America to study fisheries in view to the introduction of new methods in the Province.

66. Two men from the Agricultural Station of Lyallpur were deputed to Gujarat in the Bombay Presidency to be trained in the method of straight-sowing and ploughing practised there.

67. An informing pamphlet has been compiled by Major G.K. Walker, C.V.D., Chief Superintendent, Civil Veterinary Department, Punjab, embodying the results of "A cattle survey of the Amritsar District." The statements appended to this Report, based on the cattle census of 1904 and 1909 clearly show that within the last five years there is a perceptible diminution in the number of cattle. Bullocks show a decrease by 12 and cows by 11 per cent. as compared with the figures of the last census. This is attributed to cattle pests, floods and starvation due to scarcity of fodder.

68. The Punjab Government have provided a sum of Rs. 20,000 for the purpose of fostering local industries, a portion of this sum will be devoted by Mr. W. S. Hamilton, Director of Industries to meet the expenses of a perambulating weaving loom exhibition. Mr. Hamilton has obtained Salvation Army looms and improved fly-shuttle looms, and arrangement will be made every cold season to exhibit these machines which will be in charge of experts specially appointed to explain their uses throughout the weaving districts.

THE CENTRAL PROVINCES AND BERAR.

69. It is proposed to construct laboratories for the Nagpur Agricultural College, on a site close to the Victoria Technical Institute of that place. A Botanical Garden also has been added which will be under the supervision of the botanist of the Agricultural Department.

70. A very exhaustive, informing and well-written Report on the industrial survey of the C.P. and Berar has been framed by Mr. C. E. Low, I.C.S., the distinguished officer of these Provinces assisted by a band of zealous and enthusiastic Indian officials. At the very outset of the Report, Mr. Low has admitted that the survey was undertaken as the result of the proposals made by the Indian Industrial Conference to the Government of India and on the lines suggested by its office. After referring to the four industrial tracts into which C.P. and Berar are naturally divided by their physical characteristics, Mr. Low proceeds to pass in review the following industries in the order of their importance :—

- (1) Weaving.
- (2) Pottery, Brick, and tile-making.
- (3) Tanning and Leather working.
- (4) Miscellaneous industries such as, Oil pressing, weaving of woollen fabrics and export of wool, Dyeing, Calico printing, Metalware manufacture &c.

According to Mr. Low, every part of the Province was self-sufficing in early times with regard to most articles and the only exporting centres were Burhanpur and Nagpur and its neighbourhood, where the patronage of an Indian State supported a large number of industries the most notable products being expensive articles of cloth. The coming of the Railway brought with it the influx of foreign and mill-made goods, which have seriously affected the indigenous manufactures and the recent attempts to revive on patriotic grounds the industries of the country come at an opportune moment.

We regret want of space prevents us from doing adequate justice to the contents of the Report. The conclusions and proposals of Mr. Low may be summarized thus :—

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- (1) *Textile*.—The appointment of an expert to select and introduce the best type of loom and establishment of a small workshop and experimental weaving shed at head-quarters and of working factories &c.
- (2) *Tanning and leather work*.—The appointment of an expert for enquiry into the possibilities of the industries and of an instructor to teach town mochis.
- (3) *Pottery and Brick making*.—Expert should be appointed to report on the best type of clay, grinding and pugging mills and for improvement in the construction of the kilns now in use.
- (4) *Oil Pressing*.—Agriculturists should after inquiry introduce an improved Bullock power oil mill.
- (5) *Wool industry*.—Necessity of improvement of the breed of sheep by the Agricultural department and improved looms, for weaving of the wool.
- (6) *Brass and Copper ware*.—The schools of handicrafts in Nagpur should be brought in touch with workers throughout the province.
- (7) *Silk weaving*.—Mulberry silkworm to be introduced by the Agricultural Department.
- (8) *Basket making*.—To collect fibre samples and instruction to be undertaken by Missionary Societies.
- (9) *Toys*.—To introduce the manufacture of glazed toys and open up fresh markets.
- (10) *General*.—To form Co-operative Credit Societies for the regeneration of these industries and appoint an industrial Assistant Registrar who should be made responsible for the work.

71. It appears from the Report on the working of the Co-operative Credit Societies in the Central Provinces that during the year 1908-9, eighteen new societies were founded and provision has been made to finance the rural societies in Akola by the establishment of a Central Bank.

72. The Secretary of State for India has sanctioned a revised estimate amounting to nearly 18 lakhs of rupees for the Asola-Mewha Irrigation Tank Scheme in the Central Pro-

vinces as a productive public work. The Scheme will prove a great boon to the ryot and a source of revenue to Government.

THE UNITED PROVINCES.

73. The Government of the United Provinces have selected the following five industries in connection with the State Scholarships, tenable in England and on the Continent. Extraction of alkalies, manufacture of sugar by machinery; manufacture of vegetable oils; wool-dyeing industry; and mechanical engineering.

74. In the Annual Report, Mr. W. H. Moreland, the Director of Agriculture in the United Provinces brings out prominently the fact that during the last year, there has been a growth in the demand for labour-saving machinery for Agricultural purposes. The demand is partly due to increase in wages and partly to the efforts of the staff of his department to prevail on the people to adopt improved methods. There is thus much scope for the agricultural machinery manufacture in these Provinces. The implements in demand are water lifts, tillage implements and other miscellaneous articles. During the year 863 improved ploughs were issued.

75. The following Government of India Technical scholarships have been awarded to students in the United Provinces. The scholarships are tenable for two years and are valued at Rs. 150 each. The candidates selected are:—

- (1) Mr. J. Newson, a B. Sc. student of the Manchester University who was born and educated in these Provinces.
- (2) Mr. Ajal Pal Singh Yadav of Agra district, a student of the Victoria J. Institute, Bombay.

These candidates will be sent to England to complete their course in Mechanical Engineering.

76. The Government has decided to open a cotton Section in the Thomason Engineering College, Roorkee. This is the result of the visit of His Honor Sir John Hewett to the College in October 1909 last, when he was satisfied that there was a real demand for instruction in the Cotton industry. The course will extend to about three and a half years and

will prepare students for the ordinary second year and Honor's Examination of the City and Guilds Technological Institute, London in cotton spinning and the ordinary examinations in cotton weaving. The course is designed to turn out assistant carding and spinning masters and foremen of departments.

77. In connection with the United Provinces Exhibition, a request has been made to the Japanese Government to send certain educational models and specimens of art and industry of Japan. The Allahabad Exhibition for the holding of which the Governments of the United and other provinces have given unstinted help and afforded all available facilities by lending the services of very capable officers, and have secured to some extent the co-operation of the non-official element, bids fair to be one of the best held within recent years and will be of very great educational value to its visitors. As it would be too premature to give any opinion on this industrial exposition, before it is actually witnessed, we would reserve a review of the same in the next year's report.

78. Mr. S. H. Freemantle, Registrar of Co-operative Credit Societies in the United Provinces, has published a pamphlet explaining the nature and benefits of co-operative institutions suited to the varying needs of the different parts of India. The pamphlet though a small one gives a full idea of the principles and practice of co-operative credit.

79. The local Government has entered into partnership in poultry farm at Haldwani, with Colonel Ward, a well-known specialist in Poultry. Quarters for the accommodation of apprentices have been built. The courses of instruction will be free.

80. The Government has allotted funds for holding Poultry Shows at Lucknow and Bareilly during the coming season.

81. The Allahabad District Exhibition was closed on the 16th February last, Sir John Stanley, the Chief Justice presiding. The Hon'ble Pandit Sundar Lal read a short report reviewing the work of the Exhibition and dwelt on the utility of these undertakings. Prizes and medals were distributed. Improved methods of agriculture were displayed.

BURMA.

82. The Government Rubber Plantations at Mergui have been secured by Messrs. Mower, Cotterell & Co. for 22½ lakhs of rupees.

MYSORE.

83. The Government of Mysore have sanctioned the award of seven scholarships of Rs. 25 each to the sons of respectable Mahomedans, whose ancestors had rendered meritorious services to the State, or who are highly esteemed in the community.

84. The ceremony of laying the foundation stone of the Library of the Indian Institute of Science will be performed by H. H. the Maharaja of Mysore in February next. The main building of the Institute is now in course of construction. Instruction will commence in January 1911, the draft bye-laws and rules regarding the grant of diplomas &c., to the students having been submitted to the Viceroy for final sanction.

85. Mr. Bava Saheb Miyan, Superintendent of the Industrial School, Channapatica, who was specially deputed by the Mysore Government, has recently submitted a report of his inquiries into the Lac industry. He had visited the Imperial Forest Laboratory at Dehra Dun, where Mr. Puran Singh, the Imperial Chemist, explained to him the process of purifying and manufacturing commercial shellac and of making sealing wax. He proceeded to Bareilly, and saw the Kala Bhavan of Baroda and a few more places noted for lacquerware industry. The report of Mr. Mian is receiving due consideration from the Mysore Government. It is proposed to test at the Government Laboratory the practical experience gained by Mr. Miyan in lac manufacture and to put up a distillery for wood spirit.

86. Mr. Ananda Rao, C.I.E., the Dewan of Mysore has directed an industrial survey of the State. A set of questions has been framed and printed in English and Kanarese and will be distributed to a few selected Taluks, to see whether information sufficiently reliable would be forthcoming by the adoption of this method. This method, if successful would be extended to all other Taluks of the State. The results of

the project will be watched with keen interest and may lead other States also to follow the example of Mysore.

87. The annual Dasara Industrial and Agricultural Exhibition of 1910, the fourth of its kind has been admitted to be an unqualified success. About 2,500 exhibits were received. Many hand and power loom factories, industrial schools and other institutions had co-operated in the holding of this exhibition. As usual prizes and medals were awarded to deserving exhibitors. Perhaps the most practical feature of this show was the opportunity that it afforded to the cultivators to study the results of improved methods of cultivation as also the selection and improvement of seeds. Several varieties of quick-growing paddy from the Hebbal farm, varieties of imported maizes, sugarcane and other exhibits served as object-lessons to the ryot.

88. In his address delivered to the Dasara representative Assembly, the Dewan of Mysore stated that the year opened with 21 Agricultural Banks, but the working of 7 being quite unsatisfactory, they had to be closed and loans advanced to them had to be withdrawn. The number of Joint Stock Companies at the beginning of the year was 87. Out of these 7 were wound up, leaving 80 as the number of working concerns. The co-operative credit movement is progressing steadily; the number of societies increased by 25, the total number at the end of last June being 70.

89. The Fourth Annual Session of the Conference of Civil Engineers of the Mysore State was held on 14th November under the Presidency of Mr. Vishvesvaraya, the Chief Engineer, who delivered an able address, advocating the enlargement of the scope and usefulness of the Association.

TRAVANCORE.

90. The Government of Travancore have sanctioned the opening of a Silk Farm at Trivandrum. The farm will be attached to the Cattle Farm and will have a manager and a suitable staff.

91. An Agricultural Exhibition was held at Trivandrum in January last, under the auspices of H. H. the Maharaja in connection with the session of the Shri Mulam Popular Assembly.

92. The Ochira Agricultural and Industrial Exhibition was held in June last in Travancore. The following are among the recipients of Gold and Silver medals at the Exhibition.

Gold medals.—Mr. P. Raghunatha Rao of Messrs. R. P. Pandit and Son, Biscuit Manufacturers, Mangalore, Mr. K.C. Govindani of the Weaving Factory at Paravoor, Quilon, for the best lace work.

Silver medals.—South Indian Candle Works, Madras, for candles; The Chengauner Tanning Co. for tanned leather, Mr. B. Anantaram Iyer for soap; St. Joseph's Convent, Quilon, for lace, &c., &c.

PATIALA

93. The Maharaja of Patiala has awarded a handsome scholarship to Narayan Das, son of Mr. Dyali Ram, Director of Public Instruction in the State, to enable him to proceed to England for the study of Engineering.

COOCH BEHAR.

94. Tobacco growing experiments are being continued at Cooch Behar, three American varieties *viz.*, Yellow Prior, Bright yellow and white Barley being cultivated. Turkish and Cuban tobaccos were also tried in small areas and air cured and the results obtained from them were encouraging. The experiments appear to be on the whole promising.

GWALIOR.

95. Through the courtesy of Rai Syam Sundar Lal Bahadur, Inspector-General of Commerce and Industry, Gwalior State, we have received a few copies of a small brochure on "Gwalior Industries" and other publications, from which it appears that Gwalior is determined not to lag behind other sister states, in the matter of industrial progress.

The pamphlet is issued with the specific object of calling the attention of the general public to the central position of the State and the excellent quality of the articles produced by the local manufacturers. The following is a list of principal factories in the State :—

(1) The Gwalior Leather Factory, Morar, manufac-

tures Saddlery, Harness of all kinds, portmantous, trunks, hand bags, &c., with the aid of steam driven machinery of the latest type.

- (2) The Morar Tannery prepares leather suited for various purposes.
- (3) Gwalior Metal Works turns out padlocks, locks of various sorts, crests, badges and scales.
- (4) The new Electric Alijah Darbar Press is represented to be the most-up-to date press in India possessing facilities for rapid and economical printing of various styles.
- (5) The Scindia Type Foundry is fitted up with machinery for producing English and Hindi types, metal furniture &c.
- (6) The Scindia Paper Mill manufactures foolscap, white, printing, cartridge, cardboard, colored paper, blotting, brown, packing paper &c.
- (7) The Cotton Weaving and Spinning Mills, Ujjain, manufacture dhoties, bed covers, towels &c.; the goods of this Company are equal to Ahmedabad in quality.
- (8) The Gwalior Glass Works prepare glass of various colors suitable for bangle manufacture. Medicine phials, tumblers, glasses, chimneys, bottles, lamps &c. are also made in this factory.
- (9) The Gwalior Nib Factory makes steel and brass nibs in all varieties, and hand machinery for matches, lead pencils, soaps, tobacco cutting and candles, prepares also vacuum pans for sugar.
- (10) Carpet Factory, Central Jail, Gwalior, makes fast vegetable dye woollen carpets of beautiful designs and excellent finish.
- (11) Weaving of Sarees and Chunderi muslins, is also an important industry of the State.

The Technical Institute although a teaching body undertakes orders for furniture, cabinet making in all its branches, picture framing, iron safe and strong room making; tin dispatch boxes, trunks etc. are also made here.

The Gwalior Workshop comprises various branches and

engages moulders, fitters, turners, carpenters, blacksmiths, coppersmiths &c., undertakes electroplating, die sinking engraving, and repair work of every description.

The Grass Farms at Sipri and Satanwara supply grass of superior qualities in bales.

BARODA.

96. The Annual Report of the Department of Commerce and Industry of the Baroda State for the year 1908-09 recently issued by Mr. A. N. Datar, Director of that department furnishes much useful information. Two important concerns were started during the period under review *viz.*, the Chemical Works, Limited, at Naosari and the Amreli Kathiawar Swadeshi Weaving Co.

97. The Geological Survey of the State from an economic point of view is being conducted by Mr. N. S. Samba Sheo Iyer whose report is awaited with much interest. China clay (Kaolin), sand suitable for glass making, salt deposits for the manufactures of several chemical products, soda earth and cement stone are abundant in parts of the State and only require to be worked on proper lines.

98. There are a few Agricultural Banks and Co-operative Credit Societies doing useful work for the ryots. The total number of factories worked by steam is 113, of which 65 are Ginning factories, a few cotton presses, 3 spinning and weaving mills, 5 Dyeing factories and 5 oil mills.

99. The Acting Minister of Baroda performed the ceremony of opening the Engineering Workshop of the J. N. Tata Industrial School at Naosari in January last.

100. The Eighth Agri-Horticultural Exhibition was held in the Public Park, Baroda, in February last. The Exhibition was in advance of previous years and evoked much public interest.

101. A scheme has recently been elaborated by Dr. Jackson of the Baroda College for founding a Science Institute in that State with the view of the ultimate creation of a Science University. The plans of the proposed Institute have been prepared by the State architect and sanctioned by the Maharaja. The estimated cost of the building amounts to about three lakhs.

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JAIPUR.

102. An Agricultural and Industrial Exhibition was held at Jaipur in January last; demonstrations of different varieties of fly-shuttle and other looms sent in by the Principal of the Serampore Weaving Schools and the working of the Cuttack Hosiery Machines were the principal features of the show.

COCHIN STATE.

103. The Cochin State has opened a Central Training School for technical and industrial education of boys and girls in the State. Provision has been made in this School for teaching the following subjects:—

Industrial Section—Lacquer work, carpentry and sloyd, electro-plating and gilding, bell metal work, mat making, rattan and bamboo work, blacksmith's work, weaving, pottery, tannery, engraving, needlework, lace-making, embroidery and fancy work.

Technical Section—Shorthand and type-writing precis writing and indexing, book-keeping and commercial arithmetic.

The course of study in the Industrial Section will be four years and that of the Technical Section three years.

104. The Darbar has thrown open 15,000 acres of virgin forest land in the Sholayar Valley for para rubber cultivation. The successful applicant will be entitled to the free use of the State forest tramway for a period of five years, at an annual rent of 8 annas per acre and for eight years thereafter at Rs. 2 per acre.

NIZAM.

105. H. H. The Nizam's Government have appointed a Factory Commission and the members of the Selected Committee of His Highness's Legislative Council are making a tour of inspection to Aurangabad, Jalna, and other places.

106. Seven students have proceeded from Hyderabad to England. Four of them are graduates and Government scholarship holders.

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PART II

Section B.

INDUSTRIAL ACTIVITY OF THE PEOPLE.

GENERAL

The Hon'ble Rao Bahadur R. N. Mudholkar moved a Resolution in the Supreme Legislative Council on the 23rd March last to press forward the subject of Technical Education in India. The resolution asked for the establishment in India of a Polytechnic College for imparting instruction in the higher branches of Mechanical engineering, Electrical engineering, Marine and Railway engineering and Textile manufacture, Mining and metallurgy and the different departments of industrial chemistry. Sir H. Adamson opposed the Resolution, on the ground that a Polytechnic College in India at this stage would be like a university without its feeders *viz.*, schools, and that there was adequate provision made by Government to meet the existing requirements of the Indian students.

The American Consul in Bombay has set apart a room in his office, in Merewether Road, Apollo Bunder, where a number of American Trade Journals, Magazines and Catalogues of manufacturing firms in America may be consulted by the public. All who are desirous of obtaining information about American machinery, hardware, drugs and other goods should avail themselves of this excellent opportunity.

Some enterprising Indians are proposing to open in London, an Indian Emporium or a sample room of Indian goods, artware, raw products, &c., for the expansion of trade in articles for which there is already a large and growing demand in European countries. In the prospectus issued by them, they have pointed out that in the last Franco-British Exhibition, a large variety of Indian goods attracted the attention of the European visitors, the total number of diplomas, metals and honorable mentions being 236. There is thus a vast field in this line.

The Indian Guild of Science and Technology is the title of a new movement inaugurated at the University of Leeds in December last. The Guild has been started by the Indian students studying in Great Britain with the object of assisting its members to gain all possible experience in different branches of science or technology. The Guild will also give technical assistance and any other help to a prospective industrial concern in India. Prof. Arthur Smithells, F. R. S., Dean of the Faculty of Science of the Leeds University has been nominated Honorary President for the current year. The institution owes its origin to the untiring efforts of Mr. Paniker, M. A., B. Sc. (Leeds) who is its Honorary Secretary.

The total number of applications for patents for inventions during 1909, was 695, out of which natives of India filed 74 and other residents of India 164.

In co-operation with American, Japanese and German businessmen, "The Indo European Intelligence, Bureau" has been opened at 1, London Wall Buildings, London, E. C. for the purpose of supplying accurate and up-to-date information to Indian businessmen in matters relating to Western commerce, and industries. The Bureau undertakes to put the American and German manufacturers in direct touch with the Hindu, Parsee or Mahomedan shopkeepers in the Indian Bazaar, and promises to find mining and financial experts for Rajas and Zemindars. It will also suggest to the Indian chiefs visiting England the mode of increasing their income by sending the raw products of their States to foreign countries which are now lying unused and undeveloped. The Bureau is prepared also to advertise Indian goods in foreign markets and to render other help.

BOMBAY.

The Ghaut scheme for the supply of hydro-electric power to Bombay is not forsaken, but it is likely to be taken in hand at no distant date by Sir Dorab Tata and others who are its promoters. The superiority of electric power over steam is quite obvious to any one, as it will free the city of the smoke nuisance, and also hasten the development of various industries which have at present to depend on steam power.

This scheme which is named "The Tata Hydro-Electric Company" will be registered within a short time after the legal preliminaries of the transfer of the License &c., have been completed. A capital of nearly a crore and a half has already been secured and this fact is sufficient to prove the soundness of the scheme and the confidence reposed by the public in its promoters. It is estimated that the initial plant will be able to deliver in Bombay 80,000 H. P.

Mr. G. K. Trilokekar, a passed student in Architecture of the Sir J. J. School of Art, Bombay, has succeeded in winning the first premium of Rs. 2,000 in the competition for reconstructing the Grand Hotel, Calcutta.

The Broach Industrial Cotton Spinning and Weaving Co.'s new mill has commenced work under the agency of Messrs. Lalgul Mulgi & Co. The mill will spin finer counts up to 80's warp and 100's weft from Egyptian cotton. The superior quality of the products of the mill bids fair to command a profitable market.

Mr. A. P. Patwardhan, an L. T. M. of the Bombay Victoria J. T. Institute, and a holder of the Government of India Technical Scholarship is reported to have achieved a remarkable distinction in the course of cotton spinning and weaving. He studied at the School of Technology, Manchester, taking a special course in textile chemistry and weaving during the sessions of 1907 to 1909. He not only passed all the school examinations in foreign countries but has succeeded in obtaining "honorary" distinction in spinning and cotton and linen bleaching, and in the first class in "calico printing" from the City and Guilds of London Institute.

The Credit Bank of India, Ltd., is the name of another bank registered at Bombay with a capital of one crore divided into 1 lakhs of shares of Rs. 100 each.

Mr. H. R. Rane a past pupil and gold medalist of the Bombay School of Art has established workshops and started a school at Juvem, a small island close to Bombay. Mr. Rane is training the boys of the agricultural labourers in the arts of making Chinese and Japanese fans, lanterns, fancy-baskets, carving, silk culture, and moulding in brass and iron and a host of other useful industries. Mr. Rane is reported

to have secured a market for his wares in Italy and intends to visit Japan, America and Europe in pursuit of business and further information.

The Meyer Sassoon Mills, Ltd., is the name of a new mill registered in Bombay with a capital of 10 lakhs for the purpose of acquiring the property of Naranji Mill, which was purchased by Messrs. E. D. Sassoon & Co. for 7 lakhs, a few months ago. There are at present 10,848 mule and 10,080 ring spindles in the mill and about 10,000 ring spindles and other machinery have been indented for.

It is very encouraging to learn that Messrs. D. Krishna & Co., of Bombay, have succeeded in manufacturing a purely Swadeshi Gramophone. This is probably the first attempt of its kind in the whole of India. This Gramophone is made by the company in their Brass Works at Dahanu, in the Bombay Presidency.

The opening ceremony of the Nawab of Cambay Mills was performed in February last. The building provided for the mills is fire proof and can accommodate 18,000 spindles, though only 18,000 have been set up to begin with. The capacity of the machinery installed is sufficient for working 20,000 spindles and 300 looms.

Mr. P. G. Dandawate, B. A., has returned to Poona after completing his two years' course of instruction at Tokio Technical School in glass-making.

The proposal of Sir Vithaldas Thakersey to establish a Central Agricultural Bank has reached the Secretary of State. The bank, it is reported, will have a capital of 20 lakhs and will confine its operations to the Bombay Presidency.

A district agricultural and industrial exhibition was held at Jalgaum in February last. The Exhibition was opened by His Excellency Sir George Clarke, practical demonstrations were given by members of the Agricultural Department and a number of exhibits of agricultural machinery and products was kept on view. The work of arranging, classifying and judging the cotton exhibits was undertaken by the Imperial Cotton Specialist with the assistance of local experts. Fine specimens of weaving, the agricultural implements, &c., were exhibited.

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G. I. P. Ry. Mechanics' Institute Technical classes were held in Bombay for instruction in applied mechanics or mechanical engineering, machine construction and electricity. In all 30 lectures were delivered, the number of students enrolled being about 27.

Agricultural and Industrial Exhibitions were held also at Ahmednagar, Sholapur, Alibag, and several other places in the Presidency of Bombay.

Ranchorlal Chotalal Technical Institute, Ahmedabad, the foundation stone of which was laid about three years ago by His Excellency Sir George Clarke, the Governor of Bombay was formally opened in March last by Mr. R. P. Barrow, the Commissioner, in the presence of a large gathering of the leading citizens of Ahmedabad. The Institute has been established by Sirdar Chinubhai, the grandson of the distinguished citizen whose memory it commemorates. Most of the machinery for the workshop has been supplied by the firm of Messrs. Platt Brothers of Oldham at half price, as a mark of their sympathy with the institution. Messrs. John Musgrave and Sons of Bolton presented a steam engine and Messrs. H. M. Mehta & Co. gave free of cost leather belting and other articles valued at about Rs. 1,000. About half the cost of the management, viz. Rs. 7,600 and additional help to the extent of about Rs. 63,000, has been given by the Bombay Government. About three quarters of the cost of the site—half the cost of the building and machinery as well as an endowment fund of one lakh was given by Sirdar Chinubhai Madhavlal.

Two navigation companies have recently been started by some enterprising merchants of Bombay. The first is the Indian Co-operative Navigation Company, Ltd., with a capital of 30 lakhs divided into 3 lakhs of shares of Rs. 10 each. The credit of this enterprise is mainly due to Dr. V. N. Bhajekar & Co. who has secured the co-operation of a few leading merchants of Bombay. The second venture is the Indian and Peninsular Steam Navigation Company, Ltd. The authorized capital of this company is 50 lakhs with power to increase. The Directorate is composed of very prominent, and experienced gentleman as well as the ruling princes and chiefs of some Native States. The Thakore Sahebs of Morvi

and Limdi, the chief of Palitana, the Maharajah Bahadur of Darbhanga are among the Directors. The majority of Hindus dislike and discourage foreign travel owing to caste prejudices. To obviate this difficulty, the company undertakes to make special provision by keeping Brahmin cooks on board and in general to cater to the wants and requirements of passengers of all races and communities. The company proposes also to open hotels at principal centres of commerce and study in Western countries. This concern bids fair to be one of the greatest assets of this country in its development and progress, social and industrial. Special concessions will be given to the purchasers of shares from Rs. 5,000 to 25,000.

The Khoja Mahomedan community of Bombay have subscribed Rs. 4,000 to form the nucleus of a fund for the encouragement of scientific education among Mahomedans.

A project is set on foot at Bombay to arrange for a sea voyage of a party of Hindus drawn from all the parts of India under conditions which would not in the least violate the scrupulous observance of Hindu customs and manners and religious practices. The project is already ripe for action and is being managed by Messrs. L. M. Tejpal and Co. of Bombay. It was Mr. Goverdhandas Gokuldas Tejpal who originally conceived the project and worked for its fruition. Several ladies have consulted to join the party. This voyage will furnish complete facilities to those who want to combine business with pleasure and mere sight seeing. The success of this tour will have far reaching effects from an economical and social point of view.

The Deccan Hosiery works have been started at Poona for the manufacture of socks and other articles of cotton and wollen yarn.

The Bank Silver Company of Bombay has been started by Mr. V. B. Paranjpe for the manufacture of artistic silverware of high grade patterns generally turned out by European firms.

A large extension of the cultivation of American cotton in Sind has been undertaken during this season, the results so far attained being considered most encouraging.

The Ranade Industrial and Economic Institute, which

is raised to perpetuate the memory of the late lamented Mr. Justice Ranade was formally opened in September last by His Excellency Sir George Clarke, the Governor of Bombay. A large gathering of important citizens was present. The Hon'ble Mr. G. K. Gokhale to whose untiring zeal and unremitting exertions, the institution owes its origin and present success made a lengthy and impressive speech to explain the aims and objects of the institution and to indicate its programme of work. The objects of the institute were declared to be as follows :—

(a) To promote the spread of industrial, technical and scientific knowledge in the country.

(b) To collect statistical, historical and other information about other countries, which is likely to be of use for the industrial progress of India.

(c) To publish from time to time reviews by competent persons of the economic position, needs and prospects of India.

(d) To send as funds permit scholars well qualified in science, engineering or technical arts to foreign countries to learn the manufacture of those articles for which there is an abundant supply of raw material in India.

(e) To provide facilities to such scholars on the completion of their courses of instruction to demonstrate by experimenting on a small scale the possibility of success in those industries.

(f) To advance in other ways the industrial development of the country.

The objects (a), (b), (c) of the Ranade Institute are almost identical with the programme of work kept in view by the Industrial Conference since its formation in 1905 and are being since carried out. In view of this fact the Ranade Institute was well advised in confining its attention for the present to the following items only :—

(1) To the construction and maintenance of a Techno-chemical laboratory at a cost of about Rs. 21,000 for the building and Rs. 10,000 for purchase of apparatus. The laboratory will be placed under an Honorary Director assisted by a full-time M. A. in chemistry

who will devote himself to experimental and Research work in connection with various suitable industries. The laboratory will admit students who have already obtained distinction in Science in their university course here. Each student will have to bear the cost of his training according to a certain scale to be fixed hereafter. The following industries will for the present be taken up for research work :—(a) Cement, (b) oils, soaps, candles, &c.; (c) matches, (d) sugar, (e) extract of myrobalans, (f) bone product.

(2) Bureau of information consisting of a library of literature on industrial and economic subjects and a small museum of specimens of raw materials and finished products will be also another special feature of the Institute. The information will be made available to the public on payment of a small fee.

(3) Scholarship fund for sending out students to well-known technical schools in India as well as in foreign countries.

His Excellency made a very impressive speech sympathising with the objects of the Institute, which was the most appropriate form of a memorial to Mr. Ranade. "That more than Rs. 80,000 has been contributed from the arid Deccan was in the opinion of H. E., a touching proof of the high regard which Mr. Ranade had won from its people.

Through the munificence of Sir Jacob Sassoon and Sir Kurrimbhoy Ibrahim, a science institute will shortly be established at Bombay, the land being provided free of charge by the Government. The progress of this scheme will be awaited with much interest by all who have realised the value of scientific and technical education and the want of adequate facilities for it at present in India.

A free school for the children of mill hands has been opened by Mr. Nare at Bombay. From the account of the biennial prize distribution of this school which has appeared in some papers it seems that the school is doing useful work.

Under the auspices of the Deccan Agricultural Association, Poona, an Agricultural Magazine in Marathi has been

started since June. It is ably conducted, well illustrated and ought to be welcomed by farmers and others interested in the progress of Agriculture.

In July last, the opening ceremony of the Vishnu Mill at Sholapur was performed by His Excellency the Governor of Bombay, who made a very important speech on the occasion dealing with the various problems connected with the cotton mill industry. The Vishnu mill, as it now stands, has 82,460 ring spindles and 770 looms manufactured by Messrs. Platt Brothers & Co. The plan of the building will admit of further extensions being made without inconvenience.

Mr. K. S. Sanghani, a Bombay Engineer has addressed a letter to the local Municipal Corporation stating that he has devised a kind of machine which can generate power by burning stable litter and refuse including straw and all such inflammable material at the rate of not less than 80,000 foot pounds per each pound of litter, etc., consumed.

The following are the classified results of City and Guilds of London Institute Examinations held in the Victoria Jubilee T. Institute, Bombay, which have recently been announced.

SUBJECT.	Total No. entered.	Total No. of Passes.	Ordinary grade 1st year.	Ordinary grade 2nd year.	Honor's grade.
Cotton Spinning ...	34	32	17	12	3
Cotton Weaving ...	24	18	13	4	1
Cotton Dyeing ...	3	2	2	...	...
Cotton and Linen bleaching ...	3	2	2	...	...
Mechanical Engineering ...	14	9	3	6	...
Electrical " ...	28	15	11	3	1
Motor " ...	6	3	3	...	...

The Ambajee Taranga Light Railway Company, Ltd. is the title of a new venture which is being started with the sanction of Government. His Highness the Maharaja of Gaikwad has subscribed shares to the value of one lakh. The authorised capital of the company is 16 lakhs in shares of Rs. 100 each. Sir Bhalchandra Krishna, Kt., Sir Jamsetjee Jejeebhoy, Bart. being among the promoters.

Another Light Railway is being projected from Talegaon to Mancher. The price of a share is Rs. 100 each. A dividend of 5 per cent. is guaranteed by the Company.

Reference has been made in our last report to the Tata Iron and Steel Works Co., Ltd. Those interested in the progress of this important concern will be glad to learn that a town intended for 20,000 European and Indian inhabitants is being constructed and about 100 bungalows are now stated to be under roof or above ground. There are two blast furnaces 19 ft. in diameter by 77 ft. high each equipped with the latest arrangements. Orders have been placed with various firms in Calcutta, London, Pittsburg, Brussels, Germany and other places for the necessary plants. A branch Railway from Kalimati station of the B. N. Ry. to the works is being pushed through, the foundation of the blast furnaces, steel mill and the principal buildings as well as mill buildings are now under construction. With an abundant supply of raw materials, and an expanding market for their production, the success of the Company appears to be assured.

MADRAS

Through the philanthropic exertions of Mr. Rungiah Gounden of the Nilgherry Brewery Co., and a few other leading gentlemen, a trades school has been started at Madras, where the children of the employees in various firms, will be taught free of charge some technical work in addition to ordinary education. Madras Trades Association and a few gentlemen have promised pecuniary aid to this institution.

The Pushpagiri Weaving Factory lately converted into Sitaram Weaving and Spinning Mills, Ltd., Trichur, starts business, with 50 hand looms and 75 power looms.

The annual meeting of the Tellicherry Agricultural

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Association was held when a variety of agricultural subjects were discussed and views on the processes of sugar-cane cultivation, sugar making and other matters were freely exchanged.

An educational exhibition was arranged in October last at Tanjore. There was a large gathering of School Masters, pupils of the town and the outside places in the district. The exhibition was a grand sight containing articles of industrial and commercial value and artistic tastes, all being the work of the School Masters and their pupils.

A resolution was passed in February last at a meeting of the Madras Glass Work, Ltd., authorising the increase of the Company's capital from two to 4 lakhs of Rupees. The glass as at present turned out is considered better than glass of the same class imported from foreign countries. The company proposes to bring from Europe a full time manager for the Factory and two skilled workmen, as foreman instructors and overseers as soon as the capital is raised.

To solve the problem of finding out a long stapled cotton which may be universally grown in place of inferior varieties which are now raised all over the country and to help the weaving industry of India, an experimental cotton farm has been started by the Zamindar of Munagala in Krishna District, where about eleven varieties of cotton have been tried, six of them being amongst the most important cottons known to commerce. Out of the several varieties tried on the estate, the Cambodian cotton has proved a great success and has been very favourably reported on by experts in the line like the Bombay Chamber of Commerce. The excellent results of the cultivation of this cotton, will probably revolutionise the cotton cultivation problem in India. Further particulars on this subject can be supplied by Mr. P. Venkatyya, Superintendent of Farms, Munagala Estate, Jalarpet.

A cattle show was held at Tirupur under the auspices of the local Agricultural Association, at which Mr. G. N. Dewal explained in detail the advantages of the fly-shuttle loom and pointed out the necessity of adding an industrial section to the annual cattle show and exhorted the wealthy people of the place to give a helping hand to the weaving community.

Agricultural and industrial Exhibitions or shows were held at the following places in the Presidency :—

Ganjam-Ellore, Pittapur, Madras (fine arts Exhibition), Kumbakonam, Salem.

From the latest report of the Bassel Mission it appears that various additions have recently been made to the industries which are being carried on so profitably under its auspices. Iron safes valued at Rs. 10,000 were manufactured and sold by the mission last year including Rs. 3,000 for erecting a strong room. Steam power has been introduced into the weaving establishment at Mangalore, and Cannanore cotton fabrics won a gold medal at the Lahore Exhibition. The out-turn of tiles at Calicut which is only one of several factories amounted to nearly 2 lakhs of pieces. Nearly 8,700 in the total number of employees working in the industrial works of the mission.

At the Fourth Provincial Industrial Conference held at Karnool, an important speech was made by the late Mr. Perrazu Pantulu of Cocanada, in the course of which he emphasised the importance of organising the weavers on modern lines, by inducing them to adopt modern methods and appliances in weaving. They are working now as disorganised units in the absence of any agency which will teach them the importance of "Combination" in the interest of their own trade and to free them from the clutches of the sowcar or the middleman.

Mr. K. T. B. Tressler, Director of Industries, in the course of his speech, observed that although a few factories may be in existence for many years, in India, what is called the industrial movement is of recent growth and must therefore pass through all the trials incident to a state of adolescence before it can reach full development, based on experience. He also deprecates the tendency to be satisfied with partial results and employing indifferently trained men,—features of the movement which cannot but react most unfavorably. Papers were read by Mr. Parthasarathi Aiyengar on "arrowroot," and Mr. Rajaram Naidu of Hyderabad on "Hyderabad industries."

A "thief catching steel safe" is the latest novelty in safe-

making introduced by the proprietor of the self-guarding safe-Factory of 44, Broadway, Madras, who has been exhibiting a special form of burglar proof safe. It is represented to be a pure Indian invention of Khan Bahadur Waljee Laljee. The safe contains a handle in one of its recesses which when turned by any unauthorized person, at once releases a handcuff which closes on the wrist of a person that attempts to open it by stealth.

The agents of the automatic Knitting Machine Co. of London, organised a demonstration of Machine Knitting in Madras. Mrs. Audinarayan and several other ladies took a prominent part in the demonstration and explained to the ladies assembled the advantages of introducing knitting and other cottage industry in their household. The second anniversary of Singh's Institute of Commerce was celebrated with great *clat* in September last when Mr. C. Gopal Menon delivered a very able address on "commerce as a vocation for young men" to emphasise the necessity of commercial education among the Youths of India.

Under the auspices of Messrs. Shaw Wallace & Co., Bezwada Portland Cement Co., Ltd., is proposed to be started with a capital of 4 lakhs of rupees divided into shares of Rs. 100 each.

The Government of Madras have approved certain proposals of the Director of Industries to extend the Chengalvaroya Naicker's Technical Institute, that it may be utilized for the training of Mechanical Foremen, Fitters, &c. The proposals are :—

(1) The Institute should be equipped with additional machinery and tools at a cost of Rs. 9,000 of which Government should contribute two-thirds.

(2) The Trustees of the School should construct a second workshop at a cost not exceeding Rs. 4,000.

(3) A qualified European Superintendent be appointed on Rs. 400 per month.

A new candle Factory has been established in Madras with the aid of Mr. H. Ananta Subramania Iyer, an expert who had his training in Japan after a course of study in Madras Engineering College. Japanese machinery has been imported.

At the second Nellore District Conference which was held in October, important speeches were made advocating the necessity of industrial development and spread of technical education.

BENGAL

A Bengalee student has been sent to England to qualify as a Chartered Accountant. Considering the rapidity with which limited liability companies have sprung into existence of late in India, and the necessity of having at hand the services of competent accountants as auditors, there appears to be ample scope for young men in this line. Bombay justly claims the credit of having the first chartered accountant and Bengal appears to be determined to follow in the footsteps of Bombay in this matter.

Bankura Agricultural and Industrial Exhibition was held in February last and was opened by the Hon'ble Mr. Justice Digambar Chatterjee. The exhibits in the agricultural section were larger than in previous years.

The Ganesh Cloth Mills Co., of Calcutta, has been started with a capital of five lakhs divided into 5,000 shares.

The Bengal Chamber of commerce has recommended to the Local Government that Scholarships for 1910 be awarded for the study of coal-mining which offers very lucrative openings to trained men in Bengal.

Under the superintendence of Mr. M. N. Ghose, M. C. E. (Japan), the Jessore Comb, Button, and Mat Mfg. Co., Ltd., is making good progress. The initial experiments of the company having proved highly successful, the promoters have been encouraged to erect a big commodious shed for the Workshop and have ordered 12 sets of comb-making machines and an Engine to start work on a large scale. The combs and mats turned out by the Company are highly appreciated by the public. A Mica Factory has been established near Calcutta, where mica is ground into fine dust and is used in the preparation of a paste for boiler and other covering. The annual export of mica to Europe and America based on the average of the last three years figured, has exceeded the sum of 80 lakhs at Rs. 75 per cent.

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The Committee of the Association for the advance of Scientific and Industrial education of Indians, Calcutta, has resolved to form an Association of all the manufacturers of Bengal for the following purposes :—

- (1) To secure co-operation among the various factories.
- (2) To push forward the sale of the products of those factories.
- (3) To secure mutual help.
- (4) To avoid the closing of concerns which have met with failures in the beginning.
- (5) To secure proper financing of *bona fide* manufacturing companies.
- (6) To prevent the starting of bogus companies.
- (7) To see that factories and other concerns are started on proper business lines.

The manufacture of steel trunks and boxes is coming into vogue and a series of agricultural and industrial exhibitions have been held in various centres in the Province during the year.

An association of manufacturers has been formed at Calcutta for promoting mutual help and co-operation among the manufacturers of Bengal. The Government of Bengal are said to have promised to pay to the association Rs. 5,000 annually.

Addition of 400 looms has been made to the Ganges Jute Manufacturing Co. of Calcutta at a cost about Rs. 9,000 per loom. Corresponding extension had to be made to the buildings, machinery, &c.

From the Report of the seventh annual meeting of the association for the advancement of Scientific and Technical education, it appears that the financial position of the association is secure and has been considerably strengthened by annual grant of Rs. 5,000 by the Government of Bengal. Twenty-two students returned from foreign countries last year after completing their courses. Within six years this institution sent more than 200 students to foreign countries for study, a fact which speaks volumes in favor of the munificence and public spirit of some of the Bengal

leaders ; at this meeting the following important resolutions were passed:

(1) That the Government should respectfully be asked to fulfil its promise to start graduate classes in Mechanical, Electrical Engineering, Mining and Industrial Chemistry in connection with the Sibpore Engineering College.

(2) That this council appeals to Indian capitalists to employ Indian in preference to foreign experts to start new industries.

(3) That the council urges upon the Government and universities to provide for the study of German, French and Japanese and for the manual training of youths.

(4) In the opinion of the council of this association, Indian capitalists may start with every prospect of success, the following industries with the help of students who have returned after duly completing their courses in foreign countries:—

Matches, pencils, porcelain, enamel, tobacco, sugar, hosiery, soap, perfumery, paper, glass, umbrella, biscuit, leather and printing ink industries.

(5) That a syndicate be formed to raise 25 lakhs of rupees from the people of Bengal for giving employment to these students by starting any of the above industries.

Sixty students were sent by the association this year. Of this number 26 are going to America, 24 to England, 5 to Japan, 3 to Germany and 2 to France. Five of these students will get a scholarship of Rs. 75 per month, eight of Rs. 60 and four of Rs. 25 a month. The remaining 43 have been granted passage only. Among the students there are three Mahomedans, 1 Assamese, 1 Behari, 1 Utkaliya, 1 Indian Christian, and the rest Bengali Hindus.

Seven students have been awarded scholarships by the National Council of Education, Calcutta, and left in August last for America for technical education. Of these 4 belong to Dacca; one to Faridpur, and one to Calcutta.

In March last, at a well attended meeting of Swadeshi dealers, manufacturers, and bankers, a Swadeshi Chamber of Commerce was established. Requisite funds were eagerly subscribed and a sum of money needed for current expenses

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was paid on the spot. It aims to be an all comprehensive organisation to embrace the entire industrial activities of the swadeshi movement.

The art and agricultural exhibitions were held at Serampore and Hoogley under very encouraging auspices.

The Maharaja Kumar Shashikanta of Mymensingh has made a further donation of Rs. 25,000 for a chemical laboratory for the Anandmohun College in addition to his former donation of Rs. 20,000 for the College building.

The record of the progress of mining instruction in Bengal in the Colliery District contains an appreciative remark regarding the accuracy and practical knowledge displayed by Indian candidates in answering their examination questions, as compared with the answers of European candidates.

Mr. A Brown, Mining Engineer has announced through the medium of the "commerce" of Calcutta, that he has discovered the largest deposit in India of galena (sulphide of lead) and is desirous of forming a syndicate to work the property.

Out of the youngmen sent abroad by the association for the advancement of Scientific and Industrial Education, the latest arrival is Dr. W. C. Chowdry, who proceeded to Germany about four years ago. This young man who had a brilliant college career in India has passed his Examination as Doctor of Philosophy and has made a thorough study of Ceramics both practical and theoretical.

BEHAR

The third Behar Industrial Conference met at Muzaffarpur in April last under the Presidentship of Mr. Syed Hasan Imam. Mr. Hasan Imam pointed out that although economics was related to politics, economical questions were capable of treatment without being dragged into the controversial ethics that regulated the contest of political parties. Individual efficiency being the keynote to national success, he strongly advocated free and compulsory education as well as technical and commercial training.

The sixth Behar Agricultural and Industrial Exhibition

was held at Bankipur in February last and the opening ceremony was performed by Mr. Maude, the Commissioner of the Patna Division. Babu Purnendra Narayan Sinha Senior Govt. Pleader and Honorary Secretary of the Exhibition, read a very interesting report describing the industrial activities of the Province. The Hon'ble Mr. Mazharul Huq has started a limited company at Dinapore with a capital of Rs. 50,000 for tanning leather, curing skins, and manufacturing leather goods. Babu Basanti Charan Singh of Muzaffarpur has started fruit canning industry. The button factory of Mehshi has made much progress during the last year. Bell-metal and German silver industries have been introduced in Patna City where articles of these metals are being made for the first time. Hurricane lanterns after the Dietz pattern, sola hats and tin stills are also made in some places. Experiments are under trial to rear endi silk worms. A water lifting machine has been devised by Sayad Yusuf Imam and manufactured at the iron factory of Mr. Hasan Imam. There appears to be much industrial awakening on the whole in Behar.

Much credit is due to Mr. Basanti Charan Sinha, M.A., High Court Vakil of Muzafferpore for the success that he has achieved in his experiments in Fruit preserving industry.

An Agricultural and Industrial show was held at Bihta (Patna District) in March last on the occasion of Shivratri Mela held there. The exhibition consisted of agricultural and industrial courts and prizes were awarded to successful exhibitors.

An Industrial and Agricultural Exhibition was held at Noakhali in March last. The elite of the town, officials, non-officials and gentlemen from the mofussil were present at the opening ceremony which was performed by the Commissioner, Mr. J. N. Gupta: the President explained the object of the Exhibition and advocated the necessity of holding a Divisional Exhibition every year in each District by turn, towards which Government should largely contribute. Dairy farming, poultry rearing and cocoanut industry being the principal industries are in need of encouragement.

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PUNJAB

Mr. Ram Ratan, District Surveyor, P. W. Department has obtained a patent for an automatic collision preventor, which is an ingenious contrivance to prevent Railway collision between any two adjacent Railway stations.

Mr. Shiv Narain, B.A. has completed his course of Textile Engineering at the Municipal School of Technology, Manchester, and has obtained much practical experience from the mills of England.

The Indian Tobacco Manufacturing Co. has been established at Lahore with a capital of one and a half lakhs of Rupees of 25 each share. The company proposes to manufacture, cigarettes, cheroots and snuff.

Mr. A. Roller of Berlin proposes to start a match factory in the Punjab that could turn out 700 gross of filled boxes per day with a capital of one lakh and seventy thousand.

It is announced that about 7,000 maunds of American cotton were produced in the Punjab last year.

An association has been formed at Lahore for promoting scientific and industrial education, Mr. Dhuni Chand, Barrister-at-Law being its Honorary Secretary. The object of the association is to send out qualified Hindu students of the Punjab and N. W. F. Provinces to foreign countries for acquiring technical education. The students will be paid a monthly scholarship of Rs. 120 in America or Europe and Rs. 60 in Japan, in addition to Railway fare and passage money.

An Indian Chamber of Commerce has been formed at Lahore with the object of promoting and protecting trade, commerce and manufactures in the Punjab, to arbitrate in the settlement of disputes in commercial matters.

The Lahore Municipality has allotted a sum of Rs. 2,400 for the encouragement of Indian art products and a sub-committee has been appointed to arrange the holding of a monthly fair for the purpose in the local Municipal Gardens. The opening ceremony of the Mahomedan Technical

Night School at Lahore, started under the auspices of the Anjuman Hamie Hunar Mandan was performed in June last. It is contemplated to convert this into a Day School if the well to do Mahomedans, would come forward and give it the needed pecuniary help. The school as at present conducted is established principally to suit the requirements of persons, who are engaged during the day and are desirous of gaining technical knowledge.

Colonel Rennick a well known planter of the Kulu Valley has recently developed a new industry in the hills beyond Simla. In the centre of a tract of extensive potato cultivation Colonel Rennick has started a factory for making potato meal, large quantities of which are being purchased by the Indian army as emergency ration. The process may be briefly described thus :—

The potatoes after being boiled and peeled by hand labour are then crushed by a machine driven by an Engine, preserved by a patent process and packed in hermetically sealed tins of a pound each. It is understood that the pound tin of potato meal can be obtained for about 8 or 9 annas. Two ounces suffice for one person for a day's use.

UNITED PROVINCES

In connection with the Mugh Mela an Allahabad District Industrial and Agricultural Exhibition was opened on 10th January and continued up to the 15th February last. Articles produced in the District were only accepted, arrangements being made to add a lady's and children's department thereto. The exhibition proved a source of great interest and enjoyment to many thousands of people who came to bathe in the Ganges during the month.

A large number of exhibits has been sent by the Hewett Weaving School of Bara Banki to the U. P. Exhibition which is now being held at Allahabad including Hosiery, lace work and embroidery. This school was formally opened by Sir John Hewett, the popular Lt.-Governor of U. P. in February last. A weaving competition is to be held from 9th to 11th January 1911 in connection with U. P. Exhibition, Allahabad; and with the object of

encouraging the weavers of the Province, a special set of prizes will be reserved for them. In addition to this, prizes in money and medals will be awarded to successful competitors and it is also hoped that the competition will attract makers of new types of inexpensive handlooms and induce them to exhibit their looms.

The Fourth U. P. Industrial Conference was held in March last at Benares under the presidentship of Khan Bahadur S. M. Hadi, at which papers on various important subjects were read and many topics of interest in connection with industrial matters were discussed.

A Sugar Factory was started at Pillibhit by Rai Sahidri Sahu Lalla Prasad and his brother Har Prasad. At the opening ceremony of the factory, Mr. Tweedy, the Commissioner presided.

The Hon'ble Mr. Sanders, the Commissioner laid the foundation stone in March last of the Ganga Glass Works, Ltd., at Hardoi.

A demonstration was given at the recent Shia conference convened at Lucknow of the new development in Mr. Hadi's process of sugar manufacture. This process will enable anyone to set up a small sugar concern with a capital of about Rs. 600 to start the business, and the output is about three maunds of sugar from one mechanic working for ten hours a day.

The opening ceremony of the Hewett Weaving School at Bara Banki was performed in February last by His Honor Sir John Hewett, the Lieut. Governor of the U. P. His Honor pointed out in the course of his reply to the address presented to him on the occasion, the need of raising the standard of elementary education among the weavers and to teach them the use of improved handlooms. As a result of the deliberations at the Industrial Conference of Naini Tal in 1907, it was announced by His Honor, that an experimental weaving station was to be established at Benares and several demonstration schools at suitable localities in the Province.

Dr. Coomaraswamy has offered a prize of Rs. 250 for the best essay upon "Trade Guilds (shreni) in India," on the following conditions :—

(1) The principal factor in determining the award will be the amount of exact and detailed information.

(2) The competitors are advised to select any guild or guilds in a manufacturing town; for instance the silk weavers' guild in Benares or one of weavers' or metal workers' guilds of Ahmedabad or Gujarat and make a detailed study of the same. The essay should contain, history of the guild, duties of members and officers, the object, the mode of work and settlement of differences of opinion, &c.

The Cawnpore Sugar Works, Ltd., one of the largest producers of sugar in India, have taken the initiative in moving towards the establishment of an Indian Sugar League, the object of which will be to enrol all the sugar producers in India for the introduction of reforms in the methods of cultivation and manufacture.

The District Industrial and Agricultural Exhibition was held at Debipatan, Gonda with the annual horse fair, in April last under the patronage of the Maharaja of Balrampur.

C. P. AND BERAR

The Bank of Berar, Ltd., is the name of a bank newly started at Amraoti, to meet the commercial needs of the Province of Berar. It is proposed to open branches of this concern at the principal towns in Berar under the superintendence of experienced Bankers, and also at Bombay. The total number of shares of this Bank is 10,000 of Rs. 100 each, to be paid by easy instalments. The Board of Directors is composed of some of the leading pleaders of Amraoti, including Messrs. Pandurang Govind, J. K. Asnare and others and a few bankers of Thugaon in the Amraoti District; Messrs. N. M. Bedarkar and S. B. Tambore High Court Pleaders are its legal advisers.

The ceremony of opening the Berhampur Tapti Mills, Ltd., was performed in January last by the Deputy Commissioner of Khandwa, in the presence of a very large and representative gathering composed of the prominent members of all the communities of that place. The mill owes its origin to the efforts of the late Rao Bahadur Balwant Rao Govind Rao Bhuskute, who had laid its foundation stone.

The Netra Manganese Company, Ltd., is the little of a new venture started at Chindwara by Rai Sahab Mathura Prasad, Motilal and Co., who have obtained after considerable labour and perseverance the prospecting licenses and mining leases from the Government.

The Central Provinces Railway Company has been formed with the object of constructing feeder lines from Murtizapur to Elichpur and from Murtizapur to Yeotmal, to be worked by the G. I. P. Railway Company.

BURMA

The Rangoon Oil Company's capital has been increased from ten to thirty lakhs of Rupees and a bonus of 25 per cent. declared.

The Annual Art Handicrafts Exhibition was held at Rangoon in February last and is reported to have been a great success.

The South Indian Industrial Association of Rangoon has sent Mr. D. Sadashivan, late Professor of Science, Pittapur College, Cocanada to Manchester to study textile industry (dyeing, calico printing, &c.)

MYSORE

The Tata Silk Farm at Bangalore has been taken over by the Salvation Army in India.

Dr. Coleman the Mycologist and Entomologist gave a demonstration on the subject of sugar making at the Government Agricultural Farm at Hebbal near Bangalore, to a large gathering of farmers and others interested in development of sugar industry in February last.

The foundation stone of the Vakkaligara Sangha, Bangalore, was laid by the Yuvaraj of Mysore. The object of the Sangha is to diffuse education among the agricultural population, and to induce them to adopt improved methods of Agriculture and new machinery and appliances.

TRAVANCORE

A Swadeshi Rubber Company has been formed by some leading enterprising men of Travancore for the purpose of

Rubber Plantation. The company is floated with a capital of 4½ lakhs of Rupees, divided into 15,000 shares of Rs. 80 each. It is likely that the shares of the Company will be purchased quickly.

Mr. C. W. Schornburg, the representative of the London Cosmopolitan Mining Company has secured valuable concessions from the Travancore Darbar to collect monozite sand from the whole sea coast of South Travancore for 17 miles north of Quilon. A factory for treating the sand is shortly to be erected.

Kerala Rubber & Produce Co., Ltd., is the title of a new Rubber Company registered at Kottayam. Mr. P. John of Messrs. S. John & Sons of Alleppey is the managing Director.

ICHAL KURANJI

The opening ceremony of the first Ginning Factory in the State was performed by the Chief of the State who highly appreciated the enterprise of the local traders.

NIZAM STATE

Cotton cultivation is making rapid progress in the Nizams' dominions above 2 million acres of land are already under cotton crop, the outturn for the current year has been estimated at 380,000 bales.

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APPENDIX A

Industrial Survey Questions and Answers.

Amraoli, August 1910.

DEAR SIR,

I beg to forward herewith a set of questions framed for the purpose of collecting the information, in connection with agriculture, education, and general industrial activity in your State. I trust that you will be so good as to give early attention to this matter, and send your reply at as early a date as possible, so that the information so collected might be classified and compiled before the beginning of October next. If the information sought for is received within the period mentioned, it is proposed to incorporate the same in the Report of the ensuing Industrial Conference to be held at Allahabad in December next.

If it is not possible to answer all the queries, an attempt should be made to answer only those about which information is available, other portions being left blank.

Yours faithfully,

(Sd). R. N. MUDHOLKAR,
General Secretary.

QUESTIONS TO BE ANSWERED.

A.—Agriculture.

1. What is the condition of the Agricultural industry in your district?
2. Has the whole or the greater portion of the cultivable area been brought under cultivation?
3. What is the general quality of the soil?
4. What is the general condition of the land-owning and cultivating classes?
5. To what extent are the lands held on a proprietary tenure by the cultivators themselves, to what extent by

privileged tenants, and to what extent by mere tenants at will?

6. What steps are being taken in your district for the improvement of agriculture by—

- (a) Supply of cheap capital ;
- (b) Extension of scientific and practical instruction ;
- (c) Employment of improved appliances ;
- (d) Resort to recuperative processes like manure, etc.

7. To what extent has advantage been taken of the village co-operative credit system, and what amelioration has it effected in the condition of the peasantry ?

B.—Manufacturing Industries.

8. Name the existing manufacturing industries in the different towns and villages of your district under the following heads :—

- (1) Textile fabrics—Cotton, Wool, Silk, and Jute.
- (2) Vegetable and animal products.
- (3) Leather, horn and paper.
- (4) Pottery, porcelain and glass.
- (5) Metals.
- (6) Chemical industries.
- (7) Furniture and decorations.
- (8) Materials used in construction.

9. What is their present condition ?

10. What was their condition in the *past* ?

11. What is the approximate number of people employed in and dependent on them severally ?

12. What is the approximate amount of capital employed in them severally ?

13. State how far they have been affected by competition with imported articles.

14. What are the markets for the products of these industries, i.e., do they supply only a local demand, or are they sent to other markets in noticeable quantities ?

15. What facilities exist to increase their supply if an increased demand arose ?

16. How far, in your opinion, are the existing industries capable of expansion,—

- (a) by making advances to the artisans at low rates of interest ;
- (b) by the improvement of the appliances in use ;
- (c) by the imparting of special instruction, and
- (d) by the employment of power machinery ?

17. What industries existed in your district formerly but have since decayed ?

18. What are the causes of their decay ?

19. Is it practicable to revive any of them profitably ?

20. If so, suggest measures to bring about their revival.

C.—Minerals and other Natural Products.

21. Name the mineral and other natural products of your district which are or can be manufactured into finished articles of consumption and use.

22. Which of these are manufactured in your district ?

23. Which, if any, of these are sent to other parts of the country for manufacture ?

24. Which of them are exported to foreign countries in their raw state, and re-imported as finished articles ?

D.—Capital.

25. What banking facilities are there for the support of the industries in your district ?

26. Have any urban industrial banks been started in any town of your district under the provisions of the Co-operative Credit Societies Act ?

27. If so, give particulars in regard to their organization, the capital employed, the conditions of lending and borrowing, etc.

E. Technical Education.

28. What facilities are there for training young men in the various industries that exist in your district ?

29. If there are any special schools for the purpose, give particulars in regard to their curricula.

30. Is instruction given both in the practice of and the principles which underlie an industry, or, is it theoretical merely or merely empirical ?

31. What success has attended these schools?
32. Are industrial and commercial classes attached to any of the schools in your district?
33. If so, give full particulars in regard to them.
34. Have any students been sent abroad from your district to acquire technical, industrial or commercial education?
35. What are their qualifications and were they tested?
36. Who, or what agency, has sent them, and under what conditions, if any?
37. In what countries are they being trained?
38. What arrangements are made to utilise their special technical knowledge by the supply of capital or otherwise, to start or develop the industries in which they receive special training?
39. Are there at present in your district any persons who have received special training in any industry? If so, what are the industries in which they have been trained?
40. How are they employed at present?
41. If their knowledge is not being utilised, what steps can be, or are proposed to be taken, to utilize it?

F.—Industrial Associations.

42. Is there any industrial association in your district? If so, give particulars in regard to its objects, rules, funds, past work and present activity?

I.—NIZAM STATE.

ANSWERS

A.—Agriculture.

1. The Agricultural Industry is carried on according to the old Native fashion. No modern improvements have been introduced.
2. His Highness' Dominions are divided into two great divisions,—the Mahratwara or dry country, and the Telingana in the Eastern part of the Dominions where there is a large extent of cultivation under rain-fed tanks. The soil in this latter part is mostly of a sandy nature and there are large tracts of country in which dry cultivation is not

possible. In the Mahratwara country it may generally be said that every available acre of culturable land is taken up for cultivation. It is quite the exception to find any fields unoccupied, although the ryots themselves periodically allow their fields to lie fallow for the sake either of grazing or giving the land a rest.

3. In the Mahratwara country, the soil in a large part is *regar* or black cotton soil; in other places it is brown loam. In the Telingana, in some parts there is *regar* soil not much valued by the people, and in other parts brown Mahasab soil mixed with sand and which is well suited for irrigation crops. This class of soil is also largely occupied by castor seed cultivation, which, in parts of the Telingana country, has been as valuable to the ryots as cotton crops in the Mahratwara districts.

4. The Land Settlement of His Highness' Dominions is on the ryotwari system. The ryots hold the proprietary and hereditary right of occupation subject to the punctual payment of the Government demand; and fields in this way descend from father to son without the interference of Government beyond the recognition of the heir. Government does not recognise any privileged tenants, if by 'privileged' is meant holding on exceptionally favourable terms. In cases of disputes, the tenant or Shikmidar who is holding the land for a period exceeding 12 years is generally recognised as a tenant. The extent to which land is held by privileged tenants, which would here mean by Shikmidar or sharers of the registered holder, and by mere tenants-at-will, cannot be given.

5. (a) No measures have been adopted for supplying cheap capital.

(b) An Agricultural School has been started at Aurangabad, but it is still in its infancy.

(c) Very little has been done under this head. In the case of sugar cane mills, the ryots themselves have imported mills of improved type and the old Native *Ghana* is now out of use in parts where sugar cane is cultivated to any extent. Beyond this no special measures have been adopted.

- (d) The ryots themselves thoroughly understand the use of manure and they place a great value upon it and use it as far as they possibly can. No special measures under this head have been introduced by Government.

B.—Manufacturing Industries.

8. (1) To give complete information under this head will require a reference to the districts, and it might take several months to obtain the information. It is perhaps sufficient to say that several towns, such as Aurangabad, Pattan, Nanded, Narayanpet, Warangal and other places are noted for their handloom industries in the manufacture of Art Textile Fabrics. Under the other heads, there is nothing very special to mention. None of the articles referred to are exported in a great extent, nor is there anything of special value manufactured under these heads.
9. Local industries, specially in Fine Art class, are languishing. Aurangabad, Pattan and such like places, which used largely to supply the wealthy classes in Hyderabad with their clothing, are now feeling competition with Benares and other places for a similar style of clothing, and the large trade which they used to carry on is now a thing of the past. Several weavers, have imported improved hand-looms; but these people do not attempt to make fine cloths for which Aurangabad and other places were famous in olden days.
10. In former days these industries were carried to a much larger extent than now.
11. Without reference to districts, which would take time, it is impossible to give the approximate number of people employed in these industries; to obtain returns, it will take time.
12. The approximate value of handloom weaving cannot be given. There are three mills established in the Dominions—Hyderabad, Aurangabad and Gulbargah—whose aggregate capital is Rs. 82,00,000.

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13. Outside competition has greatly affected the handloom weavers; to give figures under this head is not possible.

14. The products of these industries are, mostly disposed of locally and exports are trifling.

15. If an increased demand arose, there would be no difficulty in increasing supply.

16. (a) The system of giving advances has been tried at Nanded, but it has had no beneficial result and the weavers there are as poor as they were before.

(b) No doubt improved appliances which are being gradually introduced by local men with a little capital will help the weavers; but the appliances must be moderate in price.

(c) Special instructions are being given in the Industrial School at Aurangabad and in time the good effects of this will be more apparent than they are now.

(d) There is room in this country for the expansion of weaving by power machinery.

17. The only industry I know of which previously existed to a considerable extent and is now obsolete, is the manufacture of steel blades which used to be carried on at Elgandal. It is said that the finest blades were exported in the olden days to Damascus. I do not know of other industries which have died out, but a good many have decayed such as the manufacture of fine cloths at Aurangabad and other places, and carpets of Warangal, and a good many have decayed or are in a languishing state.

18. It is difficult in a short answer to give all the causes of decay. They may be attributed to apathy and want of enterprise of persons carrying on these trades, to persons taking to agriculture rather than to their own trade, to the importation of power-made goods, either imported from Europe or from Mills in Bombay and elsewhere, to the habit of the younger generations of Indians to wear English clothes and clothes made of English fashion rather than their own national style of dress.

19. Yes, no doubt, it is so in some cases.

20. The Weaving industry might certainly be revived to some extent if small capitalists would take an interest in it.

D.—Capital.

25. The banking facilities in this country, except in Hyderabad itself, consist of the Marwaris of Central India, or the Kouties, whose native place is either here or in the Madras districts.

26. No.

27. No.

In the above replies I have strictly limited myself to the questions put by the Indian Industrial Conference. I have referred to agricultural, manufacturing industries &c. The word 'manufacturing' seems to exclude other industries, such as ginning of cotton, pressing of cotton, cleaning of rice and such like. These latter industries are of much importance in this country. In recent years many factories have been erected, and there are at the present moment the following factories established and worked during the cotton season.

Ginning	...	...	...	84
Pressing	...	...	...	34
Rice Mills	...	...	...	13
Flour Mills	...	...	...	5
Oil Mills	...	...	...	10
Silk weaving Mills	...	...	...	2

These factories employ a large number of people and in the cotton districts, where previously after the harvest people were thrown out of employment and sometimes found it difficult to get sufficient to eat for themselves and their families, they are now earning large wages, and are very much better off than in previous years. It is not an unusual thing in the cotton districts to have to pay a cooly, who formerly was satisfied with 4 annas a day, a sum of 8 annas; and the hire of carts which formerly was from 12 annas to Re. 1 is now from Rs. 2 to Rs. 3 a day in those parts. In previous years, the ryots when they had good season used to invest their savings in silver ornaments, now they scarcely look at silver and it has been a noticeable feature of the past year when the ryots made a large profit

on their cotton crops that they invested largely in gold, and much of this gold was bought by them in the form of British Sovereigns. The local industries of the country are undoubtedly languishing but the prosperity of the ryots generally has materially increased. The standard of living is higher than it used to be, and although the price of the necessary commodities of life has greatly increased, at the same time there has been an increase in the wages of labour, and the people who really are suffering are those on fixed salaries who are not able to earn an income which labourers earn and whose salaries have not increased in proportion to the rise in the price of articles for consumption.

2.—BHOPAL STATE.

ANSWERS.

A.—Agriculture.

1 & 2. Improving.

About 54 % of the culturable area has been already brought under cultivation and more is very shortly expected.

3. Moran, Kabar and Siyar of which Moran (a rich soil) is greater.

4. Generally good.

5. There is no land owner holding proprietary rights in this State. The Moafidars, however, can be classed as such, and the area in their possession amounts to 14,221 Bhopal Bighas. There are two other classes of tenants viz. *Mauroosi* (occupancy) and *Mamuli* (ordinary) and the total area held by them measures 18,38,408 Bhopal Bighas. The privileged tenants possess 2,01,200 Bhopal Bighas, mere tenants-at-will do not exist in this State.

6. (a) No arrangement has yet been made. It has however been arranged that Takavi (cash and seed loan) without interest might be advanced to the tenants.

(b) Three villages have been set apart for an Agricultural Farm which has not as yet been opened.

(c) Deep-well lift and improved water pumps or improved charas have been introduced.

(d) Resort to recuperative processes not being found necessary, as the people arrange for it themselves.

7. No public co-operation society has been established. The agriculturists having now been given due powers and privileges at the last settlement it is hoped that the system will soon be utilised by those wanting it.

B.—Manufacturing Industries.

8. Except opium and Ginning and Pressing industries the State has no industries of any importance.

(1) The usual coarse cloth is made in all villages. Also fine cloth and Muslin is made.

(7) Good Daris and blankets are made by Jail industries.

11. In Ginning and Pressing Factory the average number of persons employed daily is above 60.

12. The above factory works on Contract.

14. The above industries supply for the most part the local demand.

C.—Minerals and other Natural Products.

21. The chief mineral products of the State are the magnificent sandstones met with in many places and which have been extensively used since the days of the Sanchi *Tope* (250 B. C.) up to the present time in the construction of buildings. Lime being obtained from *Lanker* is worked by the State P. W. D. Iron ore is also found in some parts and the metal smelted.

23. None.

24. None.

E.—Technical Education.

28. Industrial schools are being maintained for training young boys and girls in various industries, and every encouragement is given for the purpose by the State.

29. There are two special schools for the purpose. One the "Widows" Industrial School and the other the Bhopal Industrial Institute. They impart instruction in knitting, sewing, tailoring and also shoe-making.

30. The instruction is merely empirical,

31. Through the instruction given in the above schools, several of the widows who could not earn themselves and lived upon other's resources are now able to earn an independent living.

32. An industrial class is attached to the Bhopal Sulemani Anglo Vernacular School.

33. The above class gives instruction in knitting, sewing and shoe-making.

34. A few students have been sent abroad for this education.

35. Some of them are Matriculated in English and some possess a practical knowledge in English and Vernacular; they were tested here and by the Allahabad University.

36. No Agency, but the Bhopal State has sent them.

37. Cawnpore, Lahore, Bombay.

38. They will be employed in the State and their knowledge will be utilised by the State as may be necessary.

39. Yes. Agriculture and Arts.

40. They are serving the State.

41. Knowledge is being utilised.

3.—GONDAL STATE.

ANSWERS.

A.—Agriculture.

1. Fairly good.

2. Greater portion has been brought under cultivation; nearly 1/40th remains uncultivated.

3. Greater part of the soil is rich black, a small portion being mixed with sand.

4. Fairly good.

5. The general condition of the land owning classes is fair, and that of cultivating classes fairly good. Nearly three-fourths of the cultivators hold land under a proprietary tenure and the rest are tenants-at-will.

6. (a) Capital is generally employed by village Shahookars at the rate of interest ranging from 12 to 18 per cent. per annum.

- (b) Recently a specialist is employed for imparting these instructions.
 - (c) None, except sugar-cane presses manufactured in Northern India.
 - (d) Ordinary farm manure, and bones manure are used, the people being too poor to pay for dearer manures.
7. The village co-operative credit system is not being taken advantage of by the cultivators in this State.

B.—Manufacturing Industries

- 8. (1) There are hand-loom for cotton, wool and silk fabrics.
- (2) to (4) None.
- (5) There is an iron foundry at Gondal.
- (6) None.
- (7) Ornamental articles on the lathe and toys.
- (8) Limestone and harder black stone.
- 11. About three thousand people.
- 14. The products are not even sufficient for local demand
- 16. (a) to (d) If improvement is made in hand-loom for weaving, and properly introduced, the industry is capable of expansion under these heads.
- 17. The gold thread hand-loom industry was in existence formerly, but has since decayed.
- 18. Importation of cheap stuff.
- 19. No, on account of the variation in the tastes of the people.

C.—Minerals and other Natural Products.

- 21. Stone generally used for building purposes.
- 22. A hard stone found near Mojera is locally manufactured into mill-stones for grinding and into mortars for pounding.

D.—Capital

- 25. No other banking facilities than those afforded by Shahookars.
- 26. No.

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E.—Technical Education.

- 28. There was a workshop previously established at Gondal, but it failed for want of any support from people.
- 29 and 30. No.

F.—Industrial Associations.

- 42. There is an agricultural association in the chief town, which helps people by holding fairs and exhibitions and discussing agricultural topics.

APPENDIX B

INDIAN PATENTS.*

APPLICATIONS FILED

1. Jhammanlal and Bedram of Aligarh, for improvements in padlocks and the like.
2. Chandra Mohan Roy of Lucknow, for improved beater bars for disintegrators.
3. Hukam Chand of Bakhlaur, for a bullock engine.
4. M. S. Somasundara Mudaliar of Streeperambudur, and M. S. Shunmuga Mudaliar of Madura, for an improved gravity water lift.
5. Sham Sunder Lal and Radha Raman Lal of Allahabad, for a dentifrice.
6. Ramnath Mundal of Calcutta, for improved harmonium reeds and improved hand and portable harmoniums.
7. Maunga Ba Pe of Mandalay, for the new patent sandal.
8. Ram Ratan of Muzaffarnagar, U. P. for Dewans' automatic collisions preventer, *viz.*, a contrivance to prevent railway collisions automatically between any two adjacent railway stations.
9. Lala Kanhialal Nandkishore of Bombay, for improvements in locks and padlocks.
10. Charu Chandra Ghosh of Pusa, for an improved type of the hand spinning machine called the Pusa continuous spinning machine.
11. Tehentan Bamanshaw of Bombay, for an improved key for regulating sluices, hydrants and stopcocks affixed to water pipes.
12. Ramchandra Moreshwar Jog of Poona, for improvements in casks and barrels.
13. Jahar Lal Dhar, Pandit Gungadutt Misser and Rameshwar Singh, all of Calcutta, L.H. Row of London, for

improvements in and relating to the treatment of ramie, China grass and other fibrous substances.

14. Makhan Lal Dey of Howrah, for a combined die and tap for the manufacture of sheet steel or sheet iron pans by screw or hydraulic pressing.

15. Harchand Mancharam & Sons of Bombay, for improvements in fire and thief proof safes.

16. Vishnu K. Paranjape of Lonauli, G.I.P.R. for dust proof stoppers for glass bottles.

17. J. C. Dallas Engineers of Barrackpore, for improvements in automatic flushing apparatus for latrines.

18. Abdulla Sharafdin of Bombay, for an automatically working hot air motor fan.

19. Kanhaya Lal of Sitapur, (Oudh), for hand power grinding machine.

20. Khan Sahib Mohboobalum of Jallundhur, for improvements in water lifts.

21. Mohkam Singh & Sons of Gujranwala, for camp harmonium.

22. Anant S. Desai of Bombay, for improvements in wire drawing.

23. M. R. Rangachari of Karnool, Madras, for "nava supari" or the new substitute for arecanut.

24. T. V. Sundaram Aiyar of Madras, for a key board for typing tamil language.

25. Munshi Hoosain Buksh of Meerut, for a double acting hand power water lift.

26. Pirojshaw B. Godrej of Bombay, for improvements in safes, and in non-conductors of heat applicable to fire proof safes.

27. Syamala of Madura, for a water lift.

28. Rao Bahadur C. Nagojee Rau of Coimbatore, for a harmonium with twenty-two notes in each octave.

29. O. S. Surgia of Bombay, for improvements in gin rollers.

30. Rasik Chandra Mandal and Ram Chandra Nandi of Howrah, for handis or cooking utensils to be made of cast iron of different shapes and sizes.

* Compiled from Lists published in the Indian Textile Journal from November 1909 to October 1910.

31. Dr. Indoo Madhub Mallick of Calcutta, for improvement in receptacles whether portable or stationary in which food or the like may be cooked or kept warm, or cold.

32. Ishwar Das of Aligarh, for an improved padlock.

33. Abdul Rahim of Amroha, India, for an improved street watering cart with an automatic and adjustable spray distributor.

34. Kharak Singh of Lyallpur, Panjab, for lifting water from wells, etc.

35. Ambadas V. Haldipur of Bombay, for the simplex cradle.

36. Theettalam Vellaiyachariar Pachaiyappachariar of Madras, for goldsmith bar shaper.

37. Bawa Narain Singh of Raigarh, for improvements in rail joints.

38. Sundar Ahmad of Lahore, for a plough.

39. Hafeez Abdur Razak of Cawnpore, for double puttee or tabular lagging.

40. Pearce Lal Mistre of Muttra, for a lock.

41. Fateh Mohamed Deura & Co., of Sialkote, Punjab, for champion polo stick.

42. Thakorlal Nathlal Yajnik of Baroda, for formation of the characters of the different languages by the combination of the several parts of the holy Vedic syllable "Pranava".

43. Gulbux Khan Lalbaz Khan of Hyderabad, Sind, for disposal of nightsoil and rubbish called the "Gulbas Latrine Incinerator."

44. Mohendra Pratap of Muttra, for a new pattern of a fire place.

45. M. Yusuf of Naini Tal, for a punkha pulling machine.

46. A. Sharafdin of Bombay, for an automatically working hot air motor fan.

47. V. S. Gnanaprakasam of Vepery, Madras, for combined rain water trap and gully with air tight frame and cover.

48. M. Shurfuddin Ahmed of Selang, Assam, for automatic fan.

49. V. Krishnamachari of Madras, for typewriting, in Devanagari (which covers Sanskrit, Marathi, and Hindi) Gujarathi, Tamil, Telugu, Kanarese and Malayalam characters.

50. Rahimtoola of Bombay, for improvements on lever locks.

51. Mistri Kuber Moti of Ahmedabad, for a new design of loom fork.

52. Manuck Lal, of Bikaner, for A. K. carpet.

53. Kavasjee Karshedjee Bhappu of Karachi, for an improved oil mill.

54. N. D. Hari Ram and brother of Rawal Pindi, for the simplex patent latrine seat.

55. Lala Kanhialal Nandkishore of Bombay, for improvements in locks and padlocks.

SPECIFICATIONS FILED.

1. Karim Ilahi and Nabi Baksh of Aligarh, for a new or improved double bolt lock.

2. Mirza Aslam Beg of Lahore, for water lifting machine called Butler Charsa-lifter.

3. E.R. Subroyar of Mysore, a door and window catch.

4. Ramji Das & Co., of Sialkot, for a racket.

5. Gangadhar L. Karvan of Indore, for a slide rule.

6. V. Muhamed Ganni Ravuttar and V. Mahamed Sally Ravuttar, both of Tinnevely, Madras, for a reed grass-matting loom for weaving mats from reeds.

7. Tarak Nath Mukerjee of Belghoria, 24 Purgunnahs, for an improved gate for the manufacture of cooking pans.

8. Hara Dhan Mandal of Howrah, for pulley power jute press regulated by means of connecting rods linked to the crank shaped ends of its arms.

9. Chandra Mohan Roy of Lucknow, for improved beater bars for disintegrators.

10. Ramachandra Moreshwar Jog of Poona, for improvements in casks and barrels.

11. Bhola Nath Shantha of Howrah, for the pressing of jute.

12. Haradhan Mondal of Howrah, for pulley power jute press (regulated by sectional pinions).

14. Sorabji M. Rutnagar and Dossabhoj M. Wadia both of Bombay, for improvements in or relating to carding engines.
15. K. Tholasi Doss of Madras, for the Tholasi Doss water lift.
16. Lala Kanhlal Nandkishore of Bombay, for improvements in locks.
17. Harichand Mancharam & Sons of Bombay, for improvements in fire and thief proof safes.
18. Pirojshaw Godrej of Bombay, for improvements in the insulating materials of safe and in locks.
19. J. C. Dallas Engineers of Barrackpore, Bengal, for improved method of and apparatus for sterilizing the effluent of latrines, septic tanks and the like.
20. Hukam Chand of Bakhlaur, Punjab, for a bullock engine.
21. Jhammanlal and Bedram of Aligarah for improvements in padlocks and the like.
22. Krishnarao S. Pimperker of Coimbatore, for an improved automatic loom to be worked by pedal motion.
23. Ram Ratan of Muzaffernagar U. P. for Dewans automatic collisions preventer.
24. Khan Sahib Mahboobalam of Jullundhur, for improvement in water lift.
25. T. V. Sundaram Aiyar of Madras, for a key board for typing in Tamil language.
26. Wazir Khan Mistry of Jubbulpur, for a threshing machine to be called the Wazir Threshing Machine.
27. T. Rangaswami Aiyangar of Tanjore, Madras, for a water lift.
28. Charu Chandra Ghose of Pusa, for an improved type of hand spinning machine called the Pusa continuous spinning machine.
29. J. C. Dallas of Barrackpore, Bengal, for improvements in automatic flushing apparatus for latrines.
30. Dr. Indoo Madhub Mallick of Calcutta, for improvements in receptacles whether portable or stationary in which food or the like may be cooked or kept warm.
31. M. S. Somasundara Mudahar of Chingleput, and

- M. S. Shunmuga Mudaliar of Madras, for an improved gravity water lift.
32. Vishnu Kashinath Paranjape of Lonawli, for dust proof stop for glass bottles.
33. Nehal Chand Detaram Adwani of Hyderabad, Sind, for a safety train conductor.
34. Sayyad Munwar Khan of Delhi, for a plough.
35. Durga Dass Gupta of Calcutta, for a comb with two sets of teeth with sprinklers for sprinkling oil in using the comb.
36. Dinshah Pestanji Framji Ghadiali of Surat, for the utilization of the high tension electric spark of permanent and indelible writing without ink.

DESIGNS FILED.

1. Framjee Cowasjee of Bombay, for revolving advertisement.
2. Sumer Chand, Sham Lal Sadh of Farrukhabad, for jungle scenery, printed on cotton, wool or silk.
3. Sree Benoybhusan Raha Dass, of Calcutta, for a vehicle for running on water.
4. Hira Lal Mundal of Khooroot, India, for a cooking pan.
5. Sree Benoy Bhasan Rahu Dass of Calcutta, for an aeroplane

APPENDIX C

JOINT STOCK COMPANIES

Number and particulars of Joint Stock Companies registered in each Province in British India in twelve months with October 1910.

No.	Class and Name	Situation of Registered office	Object	Nominal Capital
A. BANKING, LOAN AND INSURANCE				
(a) BANKING AND LOAN				
1	United Provinces Co-operative Bank	Allahabad, U. P.	Banking Business	3,00,000
2	Credit Bank of India, Ltd.	Bombay	Banking Business	1,00,00,000
3	Jairamji Lakshmi Loan office	Jalapaiguri, E. B. & A.	Money lending	50,000
4	Satyamajalam Karaka Nidhi	Triplicane, Madras	Banking	19,980
5	Satyamajalam Karaka Nidhi	Coimbatore, Madras	Money lending	1,00,000
6	Idgauri Mitra Gouri Nidhi	Do	Do.	1,00,000
7	N. G. C. I. & Co.	Panore, Madras	Do.	1,75,000
8	Karen Co-operative Agricultural Bank	Rangoon, Burma	Banking and Insurance	20,00,000
9	Sri Kumbhapatna Government Security Permanent Credit Company	Tanjore, Madras	Banking	75,000
10	Oriental Trading Bank	Vizianagaram, Madras	Banking and Trading	2,00,000
11	Bank of Asia	Rangoon, Burma	Banking	80,00,000
12	Serajani Loan office Company	Serajani, E. B. & A.	Do.	50,000
13	People Banking Association	Jubbulpore, C. P. & Berar	Do.	1,00,000
14	Bombay Mortgage and Investment Co.	Bombay	Money lending	50,00,000
(b) INSURANCE				
15	Pappanaickanpalayampudur Sri Venkatesa Vilasa Nidhi	Coimbatore, Madras	Do.	1,00,000
16	Kuthambakam Sri Kaliyugaraya Perumal Jana Sahaya Dhana Sekara Sasvatha Nidhi	Chingleput	Do.	84,000
17	Eastern Banking Corporation	Calcutta, Bengal	Banking and Loan, etc.	5,00,000
18	Provincial Bank of India	Meerut, U. P.	Do.	2,00,000
19	Popular Bank	Rawal Pindi, Punjab	Banking and Trade, etc.	2,00,000
20	Govindanaickanpalayam Tirumal Paripalana Nidhi	Coimbatore, Madras	Money lending (mutual)	1,00,000
21	Ital Loan office	Mymansingh, E. B. & A.	Do.	20,000
22	Indian Co-operative Bank	Cawnpore, U. P.	Banking	2,00,000
23	Chennai Sri Andal Dhana Sekara Nidhi	Madras	Money lending (mutual)	76,875
24	Dharma Samavaya	Calcutta, Bengal	Banking and Loan business	30,00,000
25	Kavatha Public Beneficial Bank	Meerut, U. P.	Do.	20,000
26	Kathiawad and Ahmedabad Banking Co-operation	Ahmedabad, Bombay	Do.	1,00,00,000
27	Kattalum Rudresswara Swami Kattalai Company	Virdupatti, Madras	Money lending (mutual)	90,000
28	Commercial Association	Walajabad, Madras	Do.	99,800
29	Baluchistan Banking & Commercial Association	Quetta, Baluchistan	Banking, Trading and Commission Agents, etc.	5,00,000
30	Rangpur Bank	Rangpur, E. B. & A.	Banking	2,50,000
31	Muffasil Bank	Gorakhpur City, U. P.	Do.	20,000
32	Triplicane Hindu Permanent Fund	Triplicane, Madras	Money lending (mutual)	19,980
33	People's Marriage Fund	Peshwar, N. W. F. P.	Collecting subscriptions and distributing them at Marriage.	1,00,000
34	New Bombay Presidency Assurance Society	Bombay	Life Insurance	10,00,000

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No.	Class and Name	Situation of Registered office	Object	Nominal Capital
35	Bharat Luxmi Provident	Calcutta, Bengal	Life Insurance.	20,000
36	South Indian Marine Insurance Company	Cochin, Madras	Marine Insurance	2,00,000
37	Arya Insurance Company	Silchar, E. B. & A.	Insurance, Banking, etc.	20,000
38	Bengal Provident Company	Bengal	do.	10,000
39	Asiatic Insurance Company	Ahmedabad, Bombay	Life Assurance, etc.	20,000
40	Chandrasekhar Benefit Society	Chittagong, E. B. & A.	Life and Marriage Insurance	10,000
41	Poojandana Life Assurance and Marriage Provision Company	Kusselkonda, Ganjam, Madras	Life Assurance and Marriage Endowment	20,000
42	South Indian Life Investment Company	Madras	Life Assurance	2,50,000
43	Indian Mutual Benefit Fund	Chittagong, E. B. & A.	Life Assurance and Marriage Endowment	20,000
44	Atcharya Provident Corporation	Calcutta, Bengal	Life and other Insurance	20,000
H. TRADING.				
D. CO-OPERATIVE ASSOCIATIONS.				
45	Atcharya Co-operative Pioneers Company	Akela, C.P. and Betar	General Trade & Contractors, etc.	50,000
46	Deccan Co-operative Pottery Works	Dharwar, Bombay	Manufacturers of Pottery Works, etc.	20,000
47	Sun Drug Company	Kangoon, Burma	Manufacturing Chemicals, drugs and Medicines, etc.	1,50,000
48	Kalgani Byarsaya Samrad	Sylhet, E. B. & A.	Trading, etc.	20,000
49	Delepara Tea Company	Jalpaiguri, E. B. & A.	Currying on the business of Tea and Coffee	1,50,000
50	Purulia Swadeshi Bhandar	Bengal	General Merchants of Indian Arts.	50,000
51	Vashya Glass Works Company	Perozabad, V. P.	Manufacturing Glass & Glassware	20,000
52	K. R. Friend and Company	Balia, V. P.	General Traders	50,000

53	Alexander and Company	Lahore, Punjab	Bankers and Manufacturers of cigars and cigarettes	2,50,000
54	Wiechers Kaiser and Lévy	Karachi, Bombay	Merchants and Commission Agents	50,000
55	Gajanan Industrial and Trading Company	Satara, Bombay	Manufacturing Safety Matches	40,000
56	Sri Chakras Industries	Tanjore, Madras	Weaving and Trading in cloths	30,000
57	Swadeshi Stores Company	South Malabar, Madras	Trading in Indian Manufactures and Industries	30,000
58	Indian Motor Traction Company	Bengal	Importers and dealers in appliances for Motors, etc.	30,000
59	Calcutta Motor Company	Bengal	Engineers & Dealers in Motor-cars	10,000
60	Belgaon Weaving and Dyeing Company	Belgaon, Bombay	Weaving and Dyeing, etc.	1,00,000
61	Gujarat Vermicelle Company	Bombay	Confectioners	1,00,000
62	Nizam Betel Leaves Company	Nellore, Madras	Dealing in Betel Leaves	25,000
63	Mulligam and Company	Tuticorin, Madras	Trading in Cotton	20,000
64	South Indian Brick and Tile Works	Madras	Manufacturing Bricks & Tiles, etc.	1,00,000
65	Bapatla Co-operative Association	Guntur, Madras	Co-operative Stores	3,00,000
66	Jorhat Islamia Trading Company	Jorhat, E. B. & A.	General Merchants	50,000
67	Anandpur Timber and Trading Company	Calcutta, Bengal	Merchants & Dealers in Timber, Grass, etc.	20,000
68	Islamia Shawl Trading Company	Amritsar, Punjab	Manufacturing & dealing in Shawls, etc.	*1,50,000
69	William Drug Company	Bombay	Dealers in Drugs	50,000
70	Circars Commission Agency Company	Rajahmundry, Madras	Merchants & Agents	1,50,000
71	South Indian Steam Launch and Motor-car Company	Nagapatam, Madras	Carriers by Land and River	1,500
72	Indian Co-operative Stores Co.	Bombay	General Merchants	20,000
73	Nahura Boat Company	Nagapatam, Madras	Shipping & Landing	10,000
74	NAVIGATION			60,600
75	Bombay and Africa Steam Navigation Co. Indian & Peninsular Steam Navigation Co.	Bombay	Ship Owners and Hires of Ships, etc.	2,40,000
			Ship Owners, Charterers of ships, etc.	50,00,000

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No.	Class and Name	Situation of Registered office	Object	Nominal Capital
(b) PRINTING, PUBLISHING & STATIONERY.				
76	Fraser Printing and Publishing Company.	Bengal	Printers Publishers & Book-binders, etc.	20,000
77	Bangalore Daily Post.	Civil and Military station of Bangalore	Do.	50,000
78	Bartabaha.	Sylhet, E. B. & A.	Printing & Publishing Newspapers etc.	20,000
79	Min Wha Pao Press Co.	Rangoon, Burma	Printers, Publishers & Dealers in Printing Machines, etc.	20,000
80	University Printing & Publishing Company.	Bengal.	Printing, Publishing & Stationery	1,00,000
81	Calcutta Advertising	Calcutta, Bengal	Printing & Publishing Newspaper and Stationery	30,000
82	Decca Hrishikesh Company	Dacca, E. B. & Assam	Printing and Publishing Newspapers, etc.	10,000
(c) OTHERS.				
83	Oriental Bioscope Company	Rangoon, Burma	Carrying on business of Bioscope Exhibitors, etc.	20,000
84	Deccan Cutlery & Metal Works Company.	Sangola, Bombay	Founders and Dealers in Cutlery.	10,000
85	Krishna Company	Bombay	Commission Agents	2,50,000
86	Shri Sidheshwar Mandli	Soolapur, Bombay	General Merchants	5,000
87	Cotton Trading Company of India	Bombay	Dealers in Cotton	1,01,000
88	Kirala Weaving Company	Calcut, Madras	Trading in Cotton and other goods	50,000
89	Noakhali Swadeshi Store and Loan Co.	Noakhali, E. B. & A.	Trade in Indigenous goods	20,000
90	Misquith	Rangoon, Burma	Dealers in Musical Instruments	2,25,000
91	Agricultural Developments	Lahore, Punjab	Pianofortes, etc. To acquire the patents rights of "Butler's charas lifter"	1,00,000

92	Soap and Candle Manufacturing Company	Karhad, Bombay	Manufacture of Soap, candle, etc.	5,000
93	Chokshi Pearl Trading Co.	Bombay	Dealers in Pearls, etc.	25,00,000
94	Fisheries	Madras	Dealers in Fish and Fish Oils	20,000
95	Tothill Sharp and Co.	Bombay	General Merchants	2,25,000
96	Optical Society	Calcutta, Bengal	Manufacturing eye Glasses and Spectacles	1,00,000
97	Stork and Company	Rangoon, Burma	General Merchants, Mill Owners and Agents, etc.	11,00,000
98	McLaren and Company	Calcutta, Bengal	Wine and Spirit Merchants	1,00,000
99	Calcutta Clothing Company	Do.	Dealers in Country made cloths	20,000
100	Ross and Bebb	Do.	Manufacturers and Dealers in Spectacles, etc.	20,000
101	Dykes and Company	Do.	Manufacturers and Repairers of and Dealers in Carriages, etc.	4,80,000
102	Darjeeling Timber Trading Company	Darjeeling, Bengal	Timber Merchants and Owners of Saw Mills	20,000
103	Doaba Leather Works Company	Jullundar City, Punjab	Leather	15,000
104	Gujarat Automobile Transport Company	Bombay	Carrying on business of Traction Engines Proprietors, etc.	2,50,000
105	De Laitte Lighting Company	Do.	Electrical Engineers and General Merchants, etc.	10,00,000
106	Kendell & Co.	Do.	Manufacturers of Boilers, Varnishes, Compositions, etc.	50,000
107	Hyderabad Trading and Manufacturing Company	Do.	General Merchants	50,000
108	Cuddalore Lakshmi & Co.	South Arcot, Madras	General Trade	20,000
109	Pottachi Konganadu Industrial Company	Coimbatore, Madras	Weaving Cloth and Trading in Timber, etc.	50,000
110	Kin-toscope Exhibition Company	Rangoon, Burma	Purchasing Kinetoscope, etc., and performing public exhibitions	35,000
111	Misra and Company	Barcilly, U. P.	Dealing in Furniture, etc.	1,00,000

No.	Class and Name	Situation of Registered office	Object	Nominal Capital
112	Union Trading Company	Lahore, Punjab	Engineers and Contractors	1,00,000
113	Indian Commission Agency	Multan City, Punjab	Merchants and Agents	2,00,000
114	Charles Brown and Company	Bombay	Engineers and Iron and Brass Founders.	6,50,000
115	Rajam and Company	Kumbakonam, Madras	Manufacturing Soap, etc.	20,000
116	B. Andrianopolo	Calcutta, Bengal	Manufacturing and Dealing in Cigars, Cigarettes, etc.	1,00,000
117	Bengal Miscellany	Do	Manufacturing and Dealing in Chemicals and Essential goods, etc.	1,00,000
118	Indian Alkolidal Company	Bombay	Helping Medical Men	1,20,000
119	Bharata Bhandur	Madras	Selling Indian Goods	20,000
120	T. Stanes and Company	Coimbatore, Madras	General Merchants and Agents	4,50,000
121	Lakshmi Vilasa Trading Company	Civil and Military Station of Bangalore, Mysore	Trading	20,000
122	Kangpur Manufacturing Company	Rangpur, E. B. & A.	Manufacturing and Trading in Indigenous goods	20,000
123	International Commercial Agency	Bombay	Brokers, Commission Agents, etc.	5,00,000
124	Match and Pencil Works	Dharwar, Bombay	Manufacturing Matches and Pencils, etc.	20,000
125	Jaganmitra Association	Vizagapatnam, Madras	Merchants and Traders	20,000
126	Bombay Electric Supply and Tramways Company	Bombay	Constructing and working a Tramway by Electricity	1,80,00,000
127	National Khondal Brothel Company	Feni, E. B. & Assam	Trading in Miscellaneous goods...	20,000
128	Imperial Tobacco Company of India	Calcutta, Bengal	Cultivators, Manufacturers of, and Dealers in Tobacco, etc.	1,000
129	Calcutta Dairy Farm	Do.	Carrying on business of Dairy Farm	50,000
130	United India Trading Company	Ahmedabad, Bombay	Merchants and Commission Agents.	40,000

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131	Allahabad Ice Association	Allahabad, U. P.	Manufacturing, Importing and Dealing in goods of all description.	1,00,000
III. MILLS AND PRESSES.				
(a) COTTON MILLS.				
132	Coromandel Cotton Spinning and Weaving Mills Company	Kistna, Madras	Spinning, Weaving and Dyeing Cotton, etc.	4,50,000
133	Trinnevelly Weaving Factory	Tinnevelly, Madras	Manufacturing and Selling Cotton goods	20,000
134	Hindustan Cotton Mills	Bengal	Spinning, Weaving and Dyeing Cotton, etc.	3,00,000
135	Edward Sassoon Mills	Bombay	Spinning, Weaving, Manufacturing, Bleaching Cotton, Wools, etc.	17,00,000
136	Lakshmi Mills Company	Coimbatore, Madras	Spinning and Weaving Cotton, etc.	1,00,000
137	Swan Mills Company	Madras	Spinning and Weaving Cotton, etc.	15,00,000
138	Crown Mills	Calcutta, Bengal	Spinning, Weaving and Pressing Cotton and Manufacturing Oil	1,00,000
139	Bhaiwani Cotton Spinning and Weaving Mills Company	Bombay	Spinning, Ginning, Pressing, Bleaching and Dyeing Cotton, etc.	7,00,000
(b) COTTON AND JUTE SCREWS AND PRESSES				
140	Best's Pressing and Ginning Factory	Madras	Ginning and Pressing Cotton	1,20,000
141	Albion Jute Mills Company	Calcutta, Bengal	Spinning, Weaving, etc. of Jute, Hemp, etc.	15,00,000
142	Sri Karthikeya Ginning Factory	Coimbatore, Madras	Ginning Cotton, etc.	20,000
143	Kadi Ginning Pressing and Oil Mill Company	Bombay	Cleaning, Ginning, Pressing and Packing Cotton etc.	1,50,000
144	Central Hydraulic Press Company	Calcutta, Bengal	Balers and Pressers of Jute, etc.	2,50,000

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No.	Class and Name	Situation of Registered office	Object	Nominal Capital
145	Western cotton company	Madras	... Ginning Cotton	50,000
146	Sind Ginning and 'Oil' Manufacturing Company	Karachi, Bombay	... Manufacturing Vegetable Oils	3,00,000
147	Karculi Ginning and Press Company	Bombay	... Ginning, Cleaning and Pressing Cotton Jute, etc.	3,00,000
148	Nagar Ginning and Trading Company	Ammednagar, Bombay	... Ginning and Pressing Cotton, etc.	1,00,000
(c) MILLS FOR WOOL, SILK ETC.				
149	Ramdas Mills	Bombay	... Manufacture of Wool, Silk, etc.	12,00,000
150	Surat Silks and General Manufacturing Company	Do.	... Spinning, Weaving, Dyeing, Bleaching Yarn of Silk-Cotton, Hemp etc.	50,000
IV (d) TEA & OTHER PLANTING COMPANIES.				
151	Bengal Agricultural Company	Bengal	... Carrying on Agricultural Scientifically, etc.	75,000
152	National Tea Company	Calcutta, Bengal	... Cultivators and Manufacturers of Tea	60,000
153	Emerald Valley Estate Company	Ootacamund, Madras	... Cultivation of Tea, etc.	30,000
154	Kuluri Tea Company	Calcutta, Bengal	... Cultivation and Manufacture of Tea	1,00,000
155	Lohagar Company	Do. do.	... Cultivation and Manufacture of Tea	50,000
156	Dilaram Tea Company	Do. do.	... Cultivation and Manufacture of Tea	2,00,000
157	Nuxal Bari Tea Company	Jalpaiguri, E. B. & A	... Planting and Manufacturing Tea...	51,200

158	Rajabhat Tea Company	Calcutta, Bengal	... do	3,00,000
159	Moulmein Rubber Plantations	Moulmein, Burma	... District	5,00,000
160	Rahinia Lands and Tea Company	Jalpaiguri, E. B. & A	... Cultivation of Tea, Coffee, Paddy, etc.	1,92,000
161	Kanbay Pura Rubber Estates	Rangoon, Burma	... Planting, Manufacturing and Trading in Rubber	5,00,000
162	Chincoorie Tea Company	Calcutta, Bengal	... Cultivation and Manufacture of Tea, etc.	50,000
MINING AND QUARRYING				
(a) COAL				
163	Northern India Coal Company	Amritsar, Punjab	... Coal Miners and Workers, etc.	10,00,000
164	Kadanoor Ruby Mining Company	Bombay	... Extracting Rubies from Mines	10,00,000
165	Netra Manganese Company	Chandwara, C. P. & Berar.	... Prospecting and Mining, etc., Manganese and other Minerals...	5,00,000
166	Maibar Stone and Lime Company	Calcutta, Bengal	... Mining and Quarrying Stone, Lime, etc.	1,00,000
167	Sutall Manganese Company	Bombay	... Mining Manganese Ores	80,000
168	Burma Consolidated Mines	Rangoon, Burma	... Prospecting and exploring Mines for Mineral oils or precious stones	5,00,000
169	Sankara Mining Syndicate	Madras	... Mining Gold	2,00,000
170	Yaung Calaug Copper Mine	Mandalay, Burma	... Working and prospecting per Copper Oars and other minerals in Myit Kyina	2,00,000

No.	Class and Name	Situation of Registered office	Object	Nominal Capital
171	Economic Coal Company	Calcutta, Bengal	Coal business	50,000
172	Chanda Coal Prospecting Syndicate	Chindwara, C. P. & Berar	Prospecting for coal and minerals	1,00,000
173	Indian Petroleum Prospecting Company	Rangoon, Burma	Dealing in and refining petroleum and other mineral oils and prospecting, exploring, purchasing, taking on lease or license or acquiring any petroleum or oil-bearing lands in India, Burma, etc.	3,75,000
(b) OTHERS.				
174	India Prospecting Company	Bengal	Prospecting and Mining	25,000
175	Anherst Agricultural Company	Moulmein, Burma	Carrying on business of Agriculture, etc.	2,00,000
176	Chittagong Agricultural Company	Chittagong, E. B. & A.	Cultivating Crops, etc.	50,000
177	Realty and Trust Company	Shikurpur, Bombay	Cultivators, Bombay	2,00,000
178	Sunderi Purun (F. M. S.) Rubber Estates Syndicate	Bombay	Planters of Rubber	3,00,000
179	Indian Theatrical Company	Do.	Dramatic performances	45,000
180	Sethledmang (Shwegyin) Para Rubber Company	Rangoon, Burma	Cultivators and Dealers in Rubber, Timber and other Agricultural produce	4,00,500
181	Vadheswaram Lift Irrigation Company	Vadheswaram, Madras	Construction of Irrigating Channels for watering fields from the Kistna Channel	20,000

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(c) OTHER MILLS AND PRESSES.				
182	Lalljee Oil Mill Company	Calcutta, Bengal	Manufacture and sale of oils, oil cakes, etc.	2,00,000
183	Berar Cotton Seed Oil Co.	Bombay	Crushing Cotton and other oil seeds	2,00,000
184	Standard Mills Co.	Rawalpindi, Punjab	Manufacturing flour, oil flour, &c.	2,50,000
• V. ICE MANUFACTURING COMPANIES.				
185	Benares Industrial Association	Benares, U. P.	Manufacturing ice	1,00,000
OTHERS.				
186	Tripura Matshya Sambardhaim Company	Comilla, E. B. & A.	To preserve fish in tanks and to excavate tanks, etc.	20,000
187	Maharaj Bag Club	Nagpur, C. P. & Berar	Promoting the physical, intellectual and Social well being of respectable persons in India	10,000

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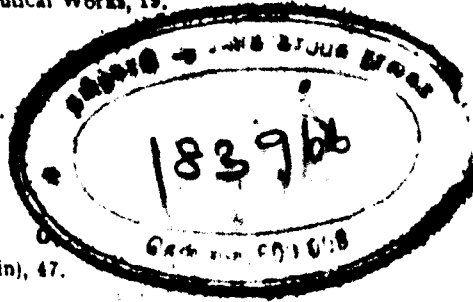
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