
REVIEW
OF THE
INDUSTRIAL POSITION AND PROSPECTS IN
BENGAL IN 1908

WITH
SPECIAL REFERENCE TO THE INDUSTRIAL SURVEY
OF 1890.

[PART II OF SPECIAL REPORT.]

X9.262.N1

D8

17453

Published at the **BENGAL SECRETARIAT BOOK DEPÔT,**
Writers' Buildings, Calcutta.

OFFICIAL AGENTS.

In India—

MESSRS. THACKER, SPINK & Co., Calcutta and Simla.
MESSRS. NEWMAN & Co., Calcutta.
MESSRS. HIGGINBOTHAM & Co., Madras.
MESSRS. THACKER & Co., LD., Bombay.
MESSRS. A. J. COMBRIDGE & Co., Bombay.
THE SUPERINTENDENT, AMERICAN BAPTIST MISSION PRESS, Rangoon.
MRS. KADHABAI ATMARAM SAGOON, Bombay.
MESSRS. H. CAMBRAY & Co., Calcutta.
RAI SAHIB M. GULAB SINGH & SONS, Proprietors of the Mufid-i-am Press,
Lahore, Punjab.
MESSRS. THOMPSON & Co., Madras.
MESSRS. S. MURTHY & Co., Madras.
MESSRS. GOPAL NARAYEN & Co., Bombay.
MESSRS. S. K. LAHIRI & Co., Printers and Booksellers, College Street,
Calcutta.
MESSRS. V. KALYANARAMA IYER & Co., Booksellers, &c., Madras.
MESSRS. D. B. TARAPORWALA, SONS & Co., Booksellers, Bombay.
MESSRS. G. A. NATHSON & Co., Madras.
MR. N. B. MATHUR, Superintendent, Nasir Kanum Hind Press, Allahabad.
THE CALCUTTA SCHOOL-BOOK SOCIETY.
MR. SUNDER PANDURANG, Bombay.
MESSRS. A. M. and J. FERGUSON, Ceylon.
MESSRS. TEMPLE & Co., Madras.
MESSRS. COMBRIDGE & Co., Madras.
MESSRS. A. B. PILLAI & Co., Trivandrum.
MESSRS. A. CHAND & Co., Punjab.

In England—

MR. E. A. ARNOLD, 41 & 43 Maddox Street, Bond Street, London, W.
MESSRS. CONSTABLE & Co., 10 Orange Street, Leicester Square, London, W. C.
MESSRS. GRINDLAY & Co., 64 Parliament Street, London, S. W.
MESSRS. KEGAN, PAUL, TRENCH, TRÜBNER & Co., 48 Gerrard Street,
Soho, London, W.
MR. B. QUARITCH, 11 Grafton Street, New Bond Street, London, W.
MESSRS. W. THACKER & Co., 2 Creed Lane, London, E. O.
MESSRS. P. S. KING & SON, 2 & 4 Great Smith Street, Westminster,
London, S. W.
MESSRS. H. S. KING & Co., 65 Cornhill, London, E. C.
MR. B. H. BLACKWELL, 50-51 Broad Street, Oxford.
MESSRS. DEIGHTON BELL & Co., Cambridge.
MR. T. FISHER UNWIN, 1 Adelphi Terrace, London, W. C.

On the Continent—

MESSRS. R. FRIDLÄNDER & SOHN, Berlin, N. W. Carlstrasse, 11.
MR. OTTO HARRASSOWITZ, Leipzig.
MR. RUDOLF HAUPT, 1 Dorrienstrasse, Leipzig (Germany).
MR. KARL HIERSEMANN, Leipzig.
MR. ERNEST LEROUX, 28 Rue Bonaparte, Paris.
MR. MARTINUS NIJHOFF, The Hague.

REVIEW
 OF THE
INDUSTRIAL POSITION AND PROSPECTS IN BENGAL IN 1908
 WITH
 SPECIAL REFERENCE TO THE INDUSTRIAL SURVEY OF 1890

[PART II OF REPORT OF OFFICER ON SPECIAL DUTY.]

	PAGE.
CHAPTER I.—Introductory	1
CHAPTER II.—Factory Industries and Handicrafts.	
Section (1)—General Review of Factory Industries	2
Section (2)—General Review of Handicrafts	5
CHAPTER III.—Manufacturing Industries.	
Textile Industries.	
Cotton spinning and weaving	6
Reeling and weaving of mulberry silk	10
Tussar silk weaving	12
Woollen goods and blanket making	13
Carpet weaving	13
Pottery and earthenware	14
Carpentry	16
Mat making and basket ware	17
Curing, tanning and leather work	17
Iron and steel work	21
Work in brass, bell-metal and other alloys	24
Glass making	27
Chemical industries	30
Dyeing and printing	31
Pencil and button making	33
Ink manufacture	33
Paper making	33
Match manufacture	34
Soap manufacture	34
Brush making	35
Perfumery	35
Other industries	35
CHAPTER IV.—Mining Industries	35
Coal	35
Mica	36
Other minerals	38
CHAPTER V.—Artistic Industries or Industrial Arts	36
Gold and silver work	37
Ivory carving	37
Metal inlaying	38
Clay modelling	38
Glass ware	39

CHAPTER V.—Artistic Industries or Industrial Arts—*concluded.*

	PAGE.
Stone carving	39
Wood carving	40
Shell ornaments	40
Embroidery	40
Soapstone carving	40
Horn carving	40
Lac work	40
Lace making	41
Toy making	41
Engraving and lithography	41
CHAPTER VI.—Industries dealing with Economic Products	41
Lac	41
Tobacco	43
Oil	43
Alkalis	44
CHAPTER VII.—Mr. Collin's proposals, and measures for the future development of Arts and Industries in Bengal	44
APPENDIX I.—Works of Reference.	

APPENDIX I.

WORKS OF REFERENCE FOR SPECIAL REPORT, PART II.

GENERAL.

- Financial and Commercial Statistics of British India; Calcutta, 1907.
- Census of India, Bengal: Part I.—Report, Chapter XII: E. A. Gait, I.C.S., F.S.S.
Part II, Tables: Part III, Provincial Tables.
- Annual Statement of the Sea-borne Trade and Navigation of the Bengal Presidency, 1906-07: Calcutta, 1907.
- Report on the Maritime Trade of Bengal, 1906-07: Calcutta, 1907.
- Report on the Maritime Trade of Bengal, 1907-08: Calcutta, 1908.
- Report on the Trade carried by Rail and River in Bengal, 1906-07: Calcutta, 1907.
- Report on the Land Revenue Administration of the Lower Provinces, 1906-07: Economic Developments, paras. 199 to 204: Calcutta, 1907.
- Memorandum on the Material Condition of the Lower Orders in Bengal, 1882-1891: F. H. B. Skrine, I.C.S., Calcutta, 1892.
- Memorandum on the Material Condition of the People of Bengal, 1892-1901: L. P. Shirres, I.C.S., Calcutta, 1902.
- Report on the Existing Arts and Industries of Bengal, 1890: E. W. Collin, I.C.S., Calcutta, 1892.
- Papers read at the Industrial Conference at Benares, December 1905: Nateson & Co., Madras.
- Papers read at the Industrial Conference at Calcutta, December 1906: Nateson & Co., Madras.
- Papers read at the Industrial Conference at Surat, December 1907: Nateson & Co., Madras.
- Report of the work of the Indian Industrial Conference, 1906: Caxton Printing Works, Bombay; also Mazumdar Press, Calcutta.
- Report of the work of the Indian Industrial Conference, 1907: Thompson & Co. Madras.
- Indian Industrial Guide: Dakshina Ranjan Ghose, B.A., Lahiri & Co., Calcutta, 1907.
- Industrial India: Glyn Barlow; Nateson & Co., Madras, 1907.
- Manufactures of India: Tozer, Journal of the Society of Arts, London, 2nd June 1905.
- Thacker's Directory of the Chief Industries of India: Thacker Spink & Co., Calcutta, 1908.
- Directory of Indian Goods and Industries: Thompson & Co., Madras, 1907.
- The People of India: Chapter III; Sir Herbert Risley: Thacker, Spink & Co., Calcutta, 1908.
- Report of the Committee of the Chamber of Commerce for 1906, Volumes I and II; Newman & Co., Calcutta, 1907.
- ✓ Essays and Lectures on the Industrial Development of India by Pramatha Nath Bose, B.Sc., F.G.S., Chapters I to IV of Section I; Newman & Co., 1906.
- Industrial Organization of an Indian Province, Chapter VIII on the village artisan: Theodore Morrison; John Murray, London, 1906.
- Art Manufactures of India: T. N. Mukharji; Calcutta, 1888.
- Industrial Arts of India: Sir George Birdwood; Chapman and Hall, London, 1880.
- Indian Art at Delhi: Sir George Watt; Calcutta, 1903.
- Report of the Calcutta Industrial Exhibition, 1906: Industrial India Office, Calcutta, 1907.
- Industries of the Patna Division: Khadga Bilas Press, Bankipore, 1908.

- Reports of District Officers and Commissioners in the Annual Miscellaneous Report for 1906-07.—Part relating to Manufactures and Mines.
- Reports of District Officers and Commissioners in the Annual Return of Important Industries for 1906-07, submitted to the Director-General of Commercial Intelligence.
- Proceedings of the Indian Industrial Association for 1894 and 1896.
- Industrial India, Volumes I to V, 1904-1908.
- Bengal District Gazetteers: Chapters on Occupations, Manufactures and Trade: L. S. S. O'Malley, I.C.S., 1906-1908.
- Administration of Bengal; Annual Provincial Reports on: Chapter IV under head Manufactures.
- Proceedings of the Industrial Conference at Naini Tal, United Provinces, in August 1907: Sir John Hewett's Address.
- Watt's Dictionary of the Economic Products of India.
- Report on Trade Conditions in India: Charles M. Pepper, Special Agent of the Department of Commerce and Labour: Washington, U. S. A., 1907.
- Inventions and Designs Act, 1888, with an explanatory memorandum for the guidance of parties applying for protection of inventions and designs: Patent Office, Calcutta, 1907.

COTTON.

- Government of India Memorandum on Hand-loom Weaving in India, circulated in October 1906.
- Monograph on the Cotton Fabrics of Bengal: by N. N. Banerjei, Calcutta, 1898.
- Hand-loom Weaving in India: E. B. Havell. Supplement to *Industrial India*, February 1905.
- Hand-loom Weaving in India: R. B. Patel, M.R.A.C., Benares Conference of 1903.
- Hand-loom Weaving in India: R. B. Patel, Calcutta Conference of 1906.
- Hand-loom in Ahmednagar: D. C. Churchill, Surat Conference of 1907.
- Salem Weaving Factory: Alfred Chatterton, B.Sc., Surat Conference of 1907.
- Report on Hand-loom Competition, Calcutta, 1906. Appendix III of Report of Indian Industrial Conference for 1907.
- Weaving Competition in Madras, 1908: A. Chatterton, B.Sc., *Indian Trade Journal* for 9th April, 1908.
- Weaving in India: Address to South Indian Association: A. Chatterton, B.Sc., Indian Press, Allahabad.

SILK.

- Monograph on the Silk Fabrics of Bengal: N. G. Mukerji, M.A., M.R.A.C., Calcutta, 1903.
- Report on an Enquiry into the state of the Tasar Silk Industry in Bengal and the Central Provinces of India: N. G. Mukerji, Calcutta, 1905.
- Report of a Committee appointed to Enquire into the Conditions of the Silk Industry in Bengal: Calcutta, 1906.

WOOL.

- Monograph on the Woollen Fabrics of Bengal: N. N. Banerjei, Calcutta, 1899.
- Monograph on Carpet Weaving in Bengal: N. G. Mukerji, Calcutta, 1907.

POTTERY.

- Monograph on Pottery and Glassware of Bengal: T. N. Mukharji, F.L.S., Calcutta, 1895.

LEATHER WORK.

- Report on Dyes and Tans of Bengal, Chapter VI: H. W. McCann, M.A., D.S.C., Calcutta, 1883.

- Tanning Materials: Agricultural Ledger, 1896, No. 9, Calcutta, 1896.
 Indian Tanning Materials; Agricultural Ledger, 1902, No. 1: D. Hooper, F.I.C., F.C.S., Calcutta, 1902.
 Tanning and Working in Leather in the Province of Bengal: Rowland Nagendra Lal Chandra, M.A., Calcutta, 1904.
 Monograph on the Tanning and Working of Leather in the Madras Presidency: Alfred Chatterton, B.Sc., Madras, 1904.
 Chrome-Tanning: Alfred Chatterton, Calcutta Conference of 1906.
 Enquiry as to the Possibility or Desirability of Improving the Cure of Hides and Skins exported from Bengal; E. R. Watson, M.A., F.C.S., Calcutta, 1907.
 Enquiry as to the Desirability of Developing the Tanning Industry in the Province of Bengal, and to the Possibility of Government assisting in the Development by means of Education or Instruction: E. R. Watson, Calcutta, 1907.

BRASS WORK.

- Monograph on the Brass and Copper Manufactures of Bengal: T. N. Mukharji, F.L.S., Calcutta, 1904.
 Statistical Reporter, page 282, for April 1876.
 Manufacture of Brass and Copper Wares in Assam: E. A. Gait, I.C.S., *Journal of Indian Art*, October, 1897.

GLASS MAKING.

- Report on the Suitability of the Presidency of Bengal for Glass Manufacture by N. B. Wagle, Calcutta, 1906.
 Glass Making: Alakh Dhari: Paper read at the Industrial Conference of 1906.
 Report on the suitability of the sands occurring in the Rajmahal Hills for glass manufacture: Murray Stuart, B.Sc., F.G.S., Geological Survey of India: Records of Geological Survey.

IRON AND STEEL WORK.

- Monograph on the Iron and Steel Work in the Province of Bengal: E. R. Watson, M.A., B.Sc., Indian Educational Service: Calcutta, 1908.
 Iron and Coal Trades Review, December 7, 1906. Manufacture of Iron and Steel in India (gives account of the Tata Iron and Steel Works).
 Lecture by Mr. Axel Sahlin at Bombay on 31st March 1908:—The Development of the Iron and Steel Industry in India (gives account of Tata Iron and Steel Works).
 Report on Conditions in India favouring a *Swadeshi* Iron Industry submitted to the Tata Iron and Steel Company, Limited, Bombay, by Mr. Axel Sahlin: 1908.
 Transactions of the Mining and Geological Institute of India, Volume I, part 3, for January 1907:—Barakar Iron Works, by Mr. W. McFarlane.
 Iron Industry as carried on in Bengal and the Central Provinces: Agricultural Ledger, 1900, No. 14, Calcutta, 1900.

DYEING AND PRINTING.

- Dyes and Tans of Bengal: Dr. H. W. McCann, M.A., D.Sc., Calcutta, 1883.
 Monograph on Dyes and Dyeing in Bengal: N. N. Banerjei, Calcutta, 1896.
 Fastness of the Indigenous Dyes of Bengal: E. R. Watson. *Memoirs of the Asiatic Society of Bengal*, Vol. II, No. 3, pages 25—41.
 The position of the Natural Dye Stuffs of India: G. C. Sen, M.A., F.C.S., Pamphlet read before the University of Leeds.

MINING INDUSTRIES.

Mineral Development of India: T. H. Holland, F.R.S., Benares Conference of 1905.

Coal Mining Industry of India: H. H. Macleod: Surat Conference of 1907.

Railway Board's Circular No. 29R. T., dated Simla, 26th August 1905.

Report on Coal Supply of India: Containing Bibliography on Indian Coal. Agricultural Ledger, No. 14, 1898. Calcutta, 1898.

GOLD AND SILVER WORK.

Monograph on the Gold and Silver Work in the Bengal Presidency: D. N. Mookerji, M.A., Calcutta, 1905.

IVORY CARVING.

Monograph on Ivory Carving in Bengal: G. C. Dutt, B.A., Calcutta, 1901.

METAL INLAYING.

Proceedings of the Asiatic Society of Bengal, Vol. III, No. 7, July 1907, page 539.

POTTERY AND MODELLING.

Monograph on the Pottery and Glassware of Bengal: T. N. Mukharji: Calcutta, 1895.

STONE CARVING.

Monograph on Stone Carving in Bengal: E. B. Havell, Calcutta, 1906.

WOOD CARVING.

Monograph on Wood Carving in Bengal: Chevalier G. Ghilardi; Calcutta, 1903.

LACE MAKING.

Lace as a Modern Industry: Miss Isemonger, *Journal of the Society of Arts*, May 29, 1908.

LAC INDUSTRY.

Lac and Lac Industries. Agricultural Ledger, No. IX of 1901. Sir George Watt, Calcutta, 1904.

Note on the Lac Insect: E. P. Stebbing, Calcutta, 1907.

Indian Trade Journal, Vol. I, pp. 102, 437; Vol. III, p. 294; Vol. IV, pp. 9, 380, 563; Vol. V, p. 19; Vol. VI, p. 733; Vol. VIII, page 556.

Note on Lac Cultivation in the Jangipur Subdivision of Murshidabad; Babu Ramesh Chandra Sirkar; Bengal Secretariat.

Report in the Maritime Trade of Bengal for 1907-08, paragraph 32.

ALKALIS.

Indian Alkalis. Agricultural Ledger No. 5 of 1902.

Saltpetre, Agricultural Ledger No. 3 of 1905.