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FRIDAY, DECEMBER 15, 1922.

All communications for the Society should be addressed to the Secretary, John Street, Adelphi, W.O. (2)

NOTICES.

FIFTH ORDINARY MEETING.

WEDNESDAY, DECEMBER 6th, 1922; Mr. LAURENCE CURRIE in the Chair.

The following candidate was proposed for election as a Fellow of the Society:—
Toplis, Henry. A.M.I.Mech.E., Burnage, near Manchester.

The following candidates were duly elected Fellows of the Society:—

Burns, Robert, Houghton, Co. Durham.

Horton, George Craigen, Liverpool.

Jana, Dr. Ashutosh, M.Sc., LL.B., Bengal, India.

McNish, Colonel George, C.B.E., Glasgow.

Maxwell, Marshall Andrews, B.Sc., Huntingdon, West Virginia, U.S.A.

Puech, Lieut-Colonel A. G., O.B.E., V.D., Delhi, India.

Traphagen, Frank W., Ph.D., Los Angeles, California, U.S.A.

Trollope, Clifford Cecil, London.

A paper on "Recent Developments in the Manufacture of Safes and Strong Rooms" was read by Mr. H. EMORY CHUBB.

The paper and discussion will be published in a subsequent number of the *Journal*.

CANTOR LECTURE.

On Monday evening, December 11th, PROFESSOR W. A. BONE, F.R.S., delivered the third and final lecture of his course on "Brown Coals and Lignites."

On the motion of the Chairman, PROFESSOR HENRY E. ARMSTRONG, F.R.S., a vote of thanks was accorded to PROFESSOR BONE for his interesting course.

The lectures will be published in a subsequent number of the *Journal*.

LIST OF FELLOWS.

The new edition of the List of Fellows of the Society is now ready, and copies can be obtained on application to the Secretary.

PROCEEDINGS OF THE SOCIETY.

INDIAN SECTION.

FRIDAY, NOVEMBER 17th, 1922.

SIR THOMAS H. HOLLAND, K.C.S.I., K.C.I.E., LL.D., D.Sc., F.R.S., F.G.S., Rector of the Imperial College of Science and Technology, in the chair.

The paper read was:—

THE DEVELOPMENT OF WATER POWER IN INDIA.

By J. W. MEARES, C.I.E., F.R.A.S., M.Inst.C.E., M.I.E.E., M.I.E. (Ind.)

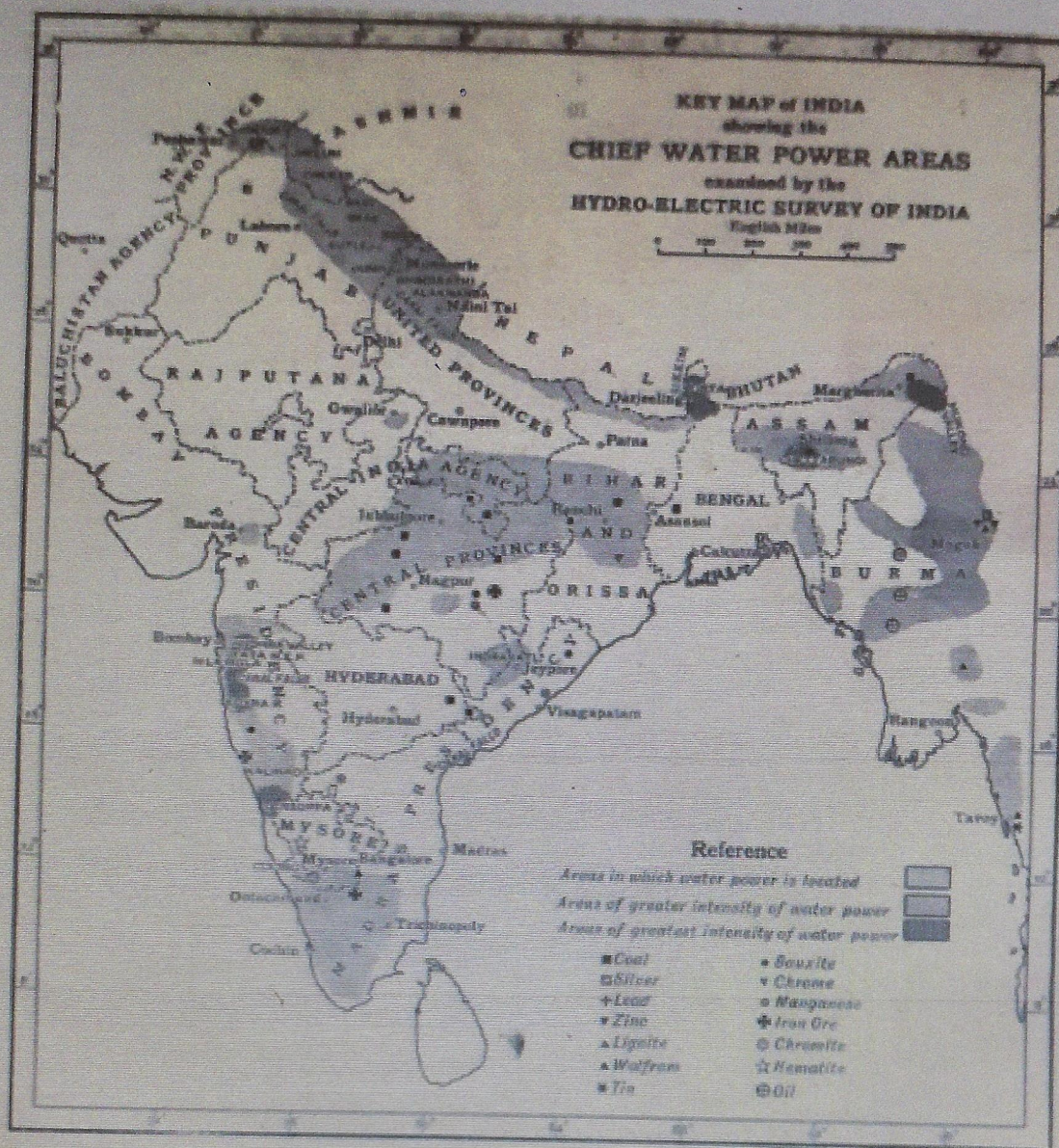
In responding to the invitation given to me to address the Indian Section of the Royal Society of Arts on the subject of the water power of India, I am practically in the position of delivering a funeral oration. For the Hydro-Electric Survey of India is moribund and I cannot see any likelihood of its resurrection. Nevertheless it has left some useful material behind it, and we must look rather to the development of the power already located than to further search for new sites.

During the past year, two papers have been read in London, dealing with certain aspects of the problem, so that I must endeavour to avoid overlapping. It was unfortunate that Mr. Arnall's lecture,* delivered before the East India Association, was printed before my third report reached him. I shall have occasion to refer to some points raised by him. Before dealing with recent results I think a little early history may with advantage be mentioned.

FIRST BEGINNINGS: DARJEELING: CAUVERY RIVER.

The first water-power developed in India was for use on certain tea gardens in the Darjeeling district, the turbines driving the factory machines either directly, or through

* "Hydro-Electric Power in India," a lecture delivered before the East India Association on February 20th, 1922, by Arthur T. Arnall, B.Sc., etc., with discussion.



wire rope transmission, and in one case electrically. At the last named the problem of firing or drying tea electrically was the subject of experiment about 1897, but nothing came of it owing to the fact that the amount of power required was greatly underestimated. I shall have a word to say on the subject presently.

In 1896 I was sent out to India by Messrs. Crompton and Co., with whom I had served my pupilage, to erect the first public hydro-electric scheme in India, for the Darjeeling Municipality. A contract for this work had been entered into by Messrs. Kilburn and Co., of Calcutta, who afterwards started the Calcutta Electric Supply Corporation on

its triumphant progress.

The Darjeeling single-phase installation was a very small affair, but it marked a beginning. The following year the Burma Ruby Mines put up a two-phase water-power installation at Mogok. Both these old plants are still at work, as also are old installations at two cotton mills, worked from canal power.

In 1898 I was appointed Electrical Engineer to the Bengal Government, and during my tenure of that post there were no further developments in British India, though the Cauvery plant in Mysore was started early in the 20th century to meet the demands of the Kolar Gold Fields.