

"ELECTRICITY IS LIFE."

A few days ago Mr. W. R. Kimball of Montreal, electrician of the Royal Electric Company, of that city, delivered a most interesting scientific lecture on "Electricity" in Sherbrooke Que. On the platform was exhibited a 1½ horse power Thomson-Houston electric motor working a printing press, on which programmes for the evening were printed before the audience.

The speaker gave a practical demonstration of the two methods of lighting by electricity illuminating the hall with incandescent light. The conversion of electricity into heat was shown by a cooking apparatus, upon which eggs were fried and bread toasted, to the great amusement of the audience. One of the experiments was the plunging of a lighted incandescent lamp into a jar of water, showing that it may be burned in explosive gases. A very interesting specimen of electric welding was passed among the audience, and the mechanism of the single and double arc lamp exhibited and explained.

The lecturer referred to the early experiments and discoveries of Franklin, Volta, Galvani, Oersted, Faraday and others and followed their development in the electric battery, storage battery, electrolytic bell telegraph, telephone, microphone, and apparatus for the conversion of mechanical into electrical energy by a series of progressive pictures, dissolving rapidly from one into the other. Faraday was spoken of as the founder of the science of electromagnetism by his discovery of the laws of induction. The systems of electric lighting were shown as in actual use by the Brush, Weston, Edison, Craig, Ball and Thomson-Houston system. The hand regulating devices necessary for each system were explained, showing the automatic regulation enabling arc and incandescent lamps to be run successfully from the same circuit.

The dangers from electric lighting were said to be less than any other mode of artificial lighting, and it was stated that in some places the rates for insurance had been reduced a small per cent. for buildings lighted by electricity. A representation was given of exploring the internal cavities of the human body by means of small incandescent lamps.

The greatest discovery of the 19th century was claimed to be that the dynamo machine is reversible. Views were shown of a motor operating a printing press, ventilating fan, blowing a large organ, and applied to street railways. A motor was represented attached to the truck of a car, enabling it to climb hills of ten per cent. grade and turn corners of less than fifty feet radius, and, by this system of propulsion, saving at least 40 per cent. over the use of horses.

The analogy was described existing between the lever and the induction coil, by which a tremendous volume of electricity at a low pressure may be produced, capable of heating metals, forming a part of an electric circuit and welding two pieces together; not only of wrought iron, copper, steel and others, but also metals which have been heretofore considered impossible to weld, such as zinc, brass and cast iron. By the same process of transformation a method was shown of distributing electricity at a high pressure and small current, and converting it by means of the induction coil, or converted into a mild and harmless current to be taken into the store or residence and used for lighting. It was explained that this system required a much smaller wire than other methods of incandescent lighting and could therefore be carried a distance of several miles, enabling lighting stations to be located in the outskirts of cities and also render it possible to use water power at some distance from where it was decided to have the light.

The United States Lighthouse Board has perfected arrangements for the illumination of Gedney's Channel, New York Harbor by means of electricity. Experiments conducted during the winter with the McKenzie-Mills system have demonstrated its utility as an aid to navigation to the satisfaction of the Board, and it will be employed in this instance. Six electric light buoys will be used, six on each side of the channel. They will be placed about 1,100 feet apart, and are expected to light the channel so that vessels can enter the harbor at night as safely as in the day time. The battery will be located at the Sandy Hook Light Station, and the lights will be controlled from that point. The establishment of these lights will cost \$26,000, and they can be maintained at a cost of \$3,000 a year.

By the amendment of the town charter, the corporation has a right to grant bonuses to the extent of \$250,000. We hope the members of the council will keep their eyes open and bring to the town some good manufacturing establishments—*St. Johns, Que., News.*

Manufacturing.

This department of the "Canadian Manufacturer" is considered of special value to our readers because of the information contained therein. With a view to sustaining its interesting features, friends are invited to contribute any items of information coming to their knowledge regarding any Canadian manufacturing enterprises. Be concise and explicit. State facts clearly, giving correct name and address of person or firm alluded to, and nature of business.

THE foundry of the Jenckes Machine Company, Sherbrooke, Que., was destroyed by fire July 30.

MR. S. T. TREBLE, Crystal city, Man., is building a new carriage works, 60 x 48 feet, two stories high.

MESSRS. A. E. DUNNING and W. D. FOX have started a new canning factory at Parkdale, near Toronto.

MR. GEORGE THOMPSON'S lumber mill near Wingham, Ont., was destroyed by fire July 24; loss, about \$3,000.

THE saw and grist mill of Mr. Wm. Carrier, at Brompton, Que., were destroyed by fire last week; loss, \$2,500.

THE roller mill of Messrs. Eildt & Schmidt, Mildmay, Ont., was destroyed by fire July 26; loss, about \$20,000.

MR. J. H. BRICKS' grist and lumber mills at Formosa, Ont., were destroyed by fire July 18; loss about \$10,000.

THE Canadian Pacific Railway Company will erect a large round-house, car wheel foundry and repair shops at Fort William, Ont.

THE Osborne-Killey Manufacturing Company, Hamilton, Ont., have been awarded the contract for building the water-works for the town of Paisley, Ont.

THE McClary Manufacturing Company of London, Ont., have purchased the plant and machinery of the Burn & Robinson tin stamping works, Hamilton.

THE grist, carding and saw mill, with all lumber, at Oak Point, N.B., owned by George T. Seely, was totally destroyed by fire July 10; loss, about \$3,000.

THE foundry and machine shop of Mr. William Smith, at Beaverton, Ont., were destroyed by fire July 25; loss, about \$30,000. The works will probably be rebuilt.

MR. DUNCAN BELL, Montreal, will hereafter represent Messrs. S. Lennard, Sons & Bickford, Dundas, Ont., in that city in the sale of "Elysian" seamless hosiery, etc.

MESSRS. GEORGE FLEMING & SON, St. John, N.B., have recently built two more steam boilers for the Dominion Government to be placed in the lighthouse at Cape Race.

MR. H. W. PETRIE, Brantford, Ont., recently shipped a large quantity of wood-working machinery to Liverpool N.S., to be used in a large ship-building establishment there.

THE grist and flouring mills and elevator of Messrs. Moir, Son & Co., Halifax, N.S., located at Bedford, near that city, were destroyed by fire, July 29; loss, about \$40,000.

A JOINT stock company is being organized at Renfrew, Ont., to build and conduct a machine shop and foundry in that place. Messrs. Imlach & Munro can give information.

THE John Doty Engine Company, Toronto, built the four-horse-power Otto silent gas engine recently placed in the new works of the Ever Ready Dress Stay Company, Windsor, Ont.

THE Dominion Safety Boiler Company, Montreal, are constructing a 250-horse power Field-Stirling patent high-pressure boiler for the Berthier Beet Root Sugar Company, Berthier, Que.

THE shoe last and shoe peg factory of Messrs. John Lewis & Son, at Truro, N.S., which was destroyed by fire July 2, is being rebuilt. It is said that this is the only industry of the kind in Canada.

THE Gale Sulky Harrow Manufacturing Company, Windsor, Ont., have over one hundred salaried salesmen on the road. Their sales in Western Ontario during the past season were very large.