

amateur photographer. In the rear of the dynamo room is a well equipped repair shop. In this shop are piled, ready for shipment, boxes of Mr. McGill's patent wire connector, which was described in the columns of this journal some months ago.

The proprietors of the plant are Messrs. John McGill, sr., and John Battle, the latter being also the proprietor of the Thorold Cement Works. Their business has been quite successful, and larger machines may shortly be put in.

Prominent among the other electrical concerns of St. Catharines may be mentioned the Packard Electric Co., Patterson & Corbin, and T. L. Wilson's acetylene gas works, descriptions of which will probably be given in a future issue.

THE ALLISTON MILLING COMPANY.

The above company some time ago secured control of the Alliston flour mills, in which was located the electric lighting plant. Finding that the dust arising from the manufacture of the flour had a bad effect on the successful working of the electrical machines, they decided to build a separate building for the electric plant. This building is a red brick cottage structure, 32 x 40 feet. It is divided into three parts, one for the boiler, one for the engine, and one for the dynamos. Through the wall next the mill runs a shaft, which, when water is high, can run both the mill and the dynamos, or when the water is low the engine can run both the mill and the dynamo.

In the mill are two Little Giant water wheels, one of 25 h.p. and the other of 40 h.p. These wheels can be connected to the 12 foot shaft entering into the dynamo room when required.

In the boiler room is an 80 h.p. Osborne-Killey boiler, supplying steam to a 75 h.p. Osborne-Killey engine. The engine and a hot water heater occupy one room. The water goes to the boiler at 205° Fahrenheit. A plug pump is connected to the fly wheel.

The machines in the dynamo room are, first, a 500 light C. G. E. alternator with exciter, 700 lamps being installed throughout the town; second, a Reliance arc machine of thirty-five lights capacity, twenty-two of which are in use—eleven commercial and eleven on the streets. On the C. G. E. skeleton switch-board are the instruments of both machines.

The dynamo room is lighted by an arc light, and the other two rooms and the mill by incandescent lights.

It is probable that waterworks machinery will be placed under the building, which, if installed, will necessitate an addition to the building.



THE ALLISTON MILLING COMPANY'S BUILDING.

RECENT CANADIAN PATENTS.

MR. Ferdinand de Camp, of Berlin, Germany, has been granted a patent, No. 53,449, for a furnace and apparatus for burning coal dust, which consists of the combination with a coal dust feeding device of a fan so arranged as to propel the coal dust together with air into the furnace, and a rotary shifting cylinder to uniformly distribute the same, also of an arrangement which closes the issue of the coal dust hopper in such a manner that the coal dust taken up by the conical portion of the worm from the hopper is conveyed to the cylindrical enlarged portion in a loose condition for further conveyance.

A patent has been granted to Joseph Hardill, Benson French, and R. T. Harding, all of Stratford, Ont., for a steam engine, with cylinder provided with two pistons and rods, and a suitably operated valve whereby steam is directed against the outer ends of faces of the pistons to force them inwardly, and at the end of the inward stroke is admitted into the cylinder between the pistons to force them outwardly. It is claimed to

consist of a combination of the cylinder, the piston and piston heads having movement therein, the steam chest, elongated parts connecting the central portion of the chest to the cylinder, the valve provided with double ports designed to co-act with a central port and elongated ports, the exhaust port in the valve designed to connect with the central port, etc.

The Bell Telephone Company, of Montreal, have been granted a patent, No. 53,605, for a telephone key-board, also for a keyboard apparatus for telephone switchboards.

A patent for converting simple into polyphase alternating circuits has been granted to Charles S. Bradley, of Avon, N. Y. It consists in the combination with a simple alternating current circuit, of a plurality of transformers supplied thereby, means for creating a difference of phase in the several transformers, and interconnections for combining the displaced phases to produce a resultant phase, and a plurality of coils in inductive relation to the several phases, said coils being connected in series relation.

The longest commercial distance at which the long-distance telephone is now operated is from Boston to St. Louis, a distance of 1,400 miles. The line is almost twice as long as any European telephone line.

It is reported that the construction of the Huron and Ontario Electric Railway is to be commenced at once. The road will extend from Kincardine and Goderich via Walkerton to Eugenia, the junction town, thence north to Meaford and south to Port Perry. A meeting of the provisional directors will be held in a few days to ratify the agreement with the contractor.