

South Little, Montana, one of the substations of the Butte Electric Railway.

A typical substation, as designed and erected for 1,000-kw. plant on the Chicago, North Shore and Milwaukee Railway, is shown in Fig. 1,945. This substation embodies the leading features which have been found to be desirable in American practice, namely, ventilating inlet openings near the foundations, with exhaust ventilators, the top of one of which can just be seen, on the roof. The lighting during the day time should preferably be



Fig. 1,945. An Automatic Substation on the Great Lakes.

from the roof, but as this is occupied by the high-voltage leading-in apparatus as well as by the ventilators, the windows are placed high up in the vertical walls, giving internally much the same effect as top lights, and leaving the lower parts of the interior walls available for the purposes of the substation. The roof is, of course, practically flat for convenience in the erection and maintenance of the incoming high-voltage lines, some details of which can be made out in the figure, and will be understood from what has been said in the high-voltage section. The outgoing heavy feeders for the neighbouring trolley line can be seen leaving the substation at a convenient height on the left-hand side. The whole external design, whilst satisfying all the requirements for practical working, has quite a pleasing effect.

Inside, the substation building has to provide the necessary accom-