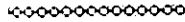
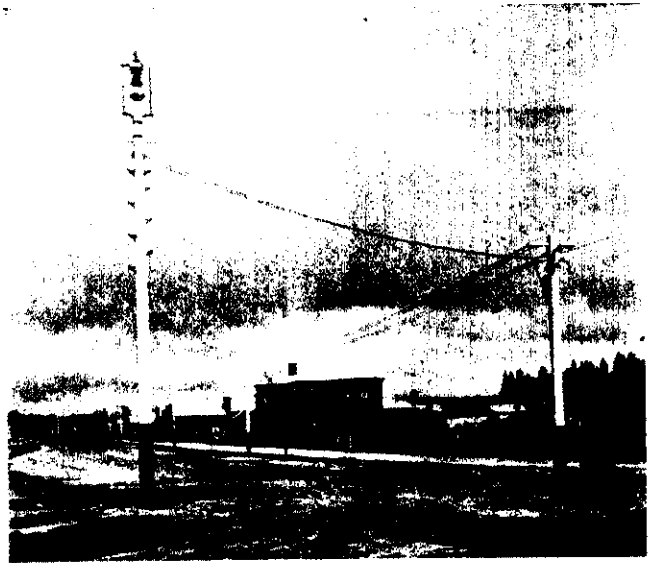


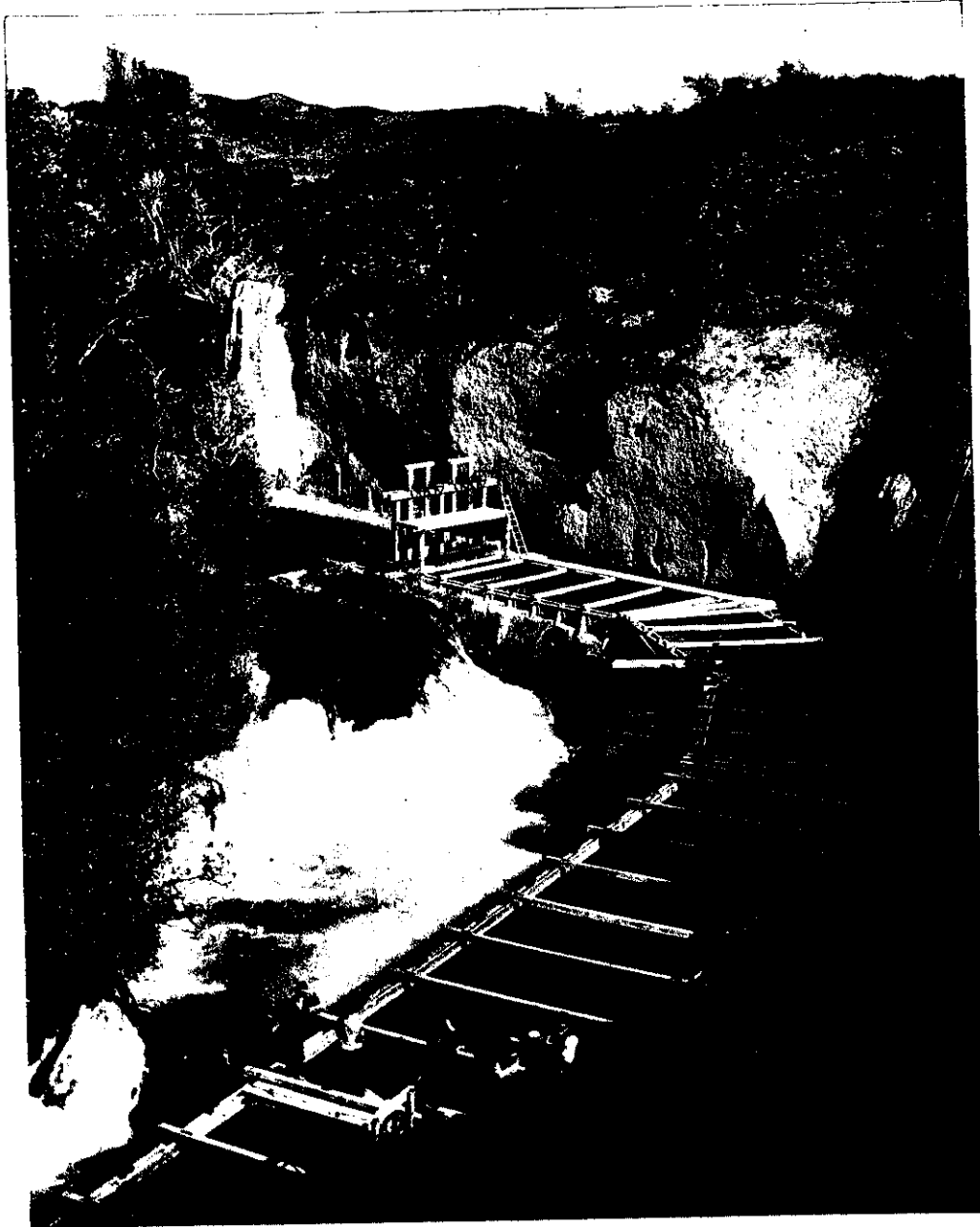
How our Great Sanatorium is Lighted.



POWER-HOUSE, ROTORUA.



ARC LAMP IN TUTANEKEI-STREET, ROTORUA.



OKERE FALLS, LOOKING UP THE RIVER.

The Rotorua Electricity Supply and Sewerage Installation.

Among the many improvements that have been and are being made by the Government to add to the convenience and comfort of visitors to the popular tourist and health resort of Rotorua, by no means the least important is the recently constructed drainage system and the lighting of the streets, sanatorium grounds, public baths, Government and private buildings, with electricity. The following brief description will, we have no doubt, be of interest to our readers, as we are able to illustrate it with copies of photos taken by Mr R. E. Fletcher, M.I.E.E., who has superintended the work on behalf of the contractors, the Brush Electrical Engineering Co., Ltd., London and Sydney.

The power required for driving the electric generators is obtained from the Kaituna River, the only outlet of Lakes Rotorua and Rotoiti. These lakes have a united area of between fifty and sixty square miles, and as they drain a large extent of country there is an enormous and never-failing supply of water available. The generating station or power house is situated at the Okere Falls, near the outlet of Lake Rotoiti, a favourite resort of visitors to Rotorua, as it is one of the beauty spots of the neighbourhood. The Kaituna River at this point and for several miles further down, with its numerous falls and rapids, runs through a deep winding gorge, with perpendicular cliffs, covered with luxuriant bush and tree ferns. Very heavy excavations were necessary to form a site for the generating station, and a bench for the large flume that conveys the water to the turbines. Among our pictures is an interior view of the generating station, or power house, showing the turbines, electric generators, switchboard, etc. The turbines, of which there are two, are each capable of generating 100 horse-power. They are of the horizontal type, and work under a fall of 14 feet. When developing their full power, each turbine requires about 5000 cubic feet of water per minute. Connected to the turbines by heavy leather chain belting, 20 inches in width, are the two electric generators, technically known as "single phase inductor alternators." Each generator has an electrical output of 50 kilowatts, which is equivalent to the electrical energy consumed by about 1600-8 candle-power incandescent lamps. A small continuous current dynamo is connected to the driving shaft of each of the generators, the current from which is used for exciting the field-magnets of the said generators, and for lighting the power-house and the attendants' cottages. The bearings of the turbine and al-