

Scientific Discovery

AND MODERN INVENTION.

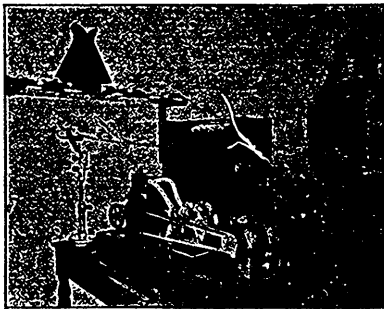
HOW ELECTRICITY IS BEING ADAPTED TO SURGICAL AND OTHER HOSPITAL USES.

DURING the year St. Luke's Hospital, of New York, has moved into new quarters on Morning-side Heights. The building is constructed with all the recognized improvements for the best and safest treatment of hospital patients. The electric plant is of interest because of the special nature of some of its departments.

The lighting plant itself is located in a separate power-station structure, and

six electric elevators in the buildings, of the Otis type, and twelve large electrically driven ventilating fans. Besides these there are motors for driving the pipe organ bellows, and for other minor uses throughout the hospital.

The switchboard provides for running the lights and motors in multiple or independently, as desired. There are two sets of bus bars, to either of which any machine can be connected by double-



X-RAY OUTFIT.

consists of four direct-connected units, the dynamos being 50-kw General Electric multipolar compound-wound machines. The engines are of horizontal high-speed type, three of them of the Ball-Wood make, and one of the Ames Iron Works. They all run at 280 revolutions per minute. The engines are set at the four corners of a square, with the dynamos all facing the inside of the square. Steam is supplied to the engines at 100 pounds' pressure by three return tubular boilers 20 ft. by 6 ft. in diameter. These units supply current for some 3500 lights and many motors located throughout the different buildings. There are

eleven machine switches at the bottom of the board. One large double-pole single-throw switch in the centre of the board throws these two sets of bus bars in multiple at will. In the daytime, when the load is small, it is customary to throw the whole load in multiple on one machine. At night, when the load is sufficient to tax several machines, this main switch is opened, and the motor load is separated from the lighting load. This gives closer regulation on the lighting circuits. The switchboard is provided with nine illuminated dial Weston instruments in a row at the top of the board. Three of these instruments are