Electricity at Work In the Operating Room

EI-52. *Model operating room with modern electrical illumination as well as electrically driven appliances on display in "Electricity at Work," the Exhibit of the Electric Light and Power Industry at the Chicago World's Fair.*

A model hospital operating room, designed to show the adaptation of electricity's newest ideas to this vital service of humanity, is one of the striking features of "Electricity at Work," the exhibit of the Electric Light and Power Industry in the Electrical Building at the Chicago World's Fair. Not only is it a demonstration of today's utilization of electricity, but it also captures the imagination with its convincing prophecy of a day believed to be not far distant, when a busy San Francisco surgeon may watch, actually see and hear, from

his own office, any unusual operation performed by a colleague in Baltimore; when the finest demonstration of surgical skill may be observed by students all over the country.

The exhibit consists of a one-quarter inch scale dome-shaped room, in which a tense moment in the progress of a difficult operation is being observed by 44 students and guests. Through the combined skill of electrical, architectural and instrument experts, the full sized room which this one projects would seat each spectator only twelve feet from the operating table and enable him to see each detail clearly and hear every word spoken.

Light is focussed upon the operating table from every direction so that any shadow that might be cast by surgeon or attendant is offset by light from the opposite side. The lamps are set in the walls at varying heights, both above and below the level of the table so that even when an operation requires a tilted table, adequate, properly focussed light is available. The room is ventilated mechanically, scientifically washed air being distributed through unobtrusive, disc shaped inlets near the floor. The operating table is wired for convenience in using electricity and anesthetic gas is piped through its base. A beam of light, sometimes called an "Electric Eye," operates the door of the room; by merely stepping across it, the door is opened without so much as a touch from a sterilized glove. The beautifully patterned floor serves an unusual utilitarian purpose, its design being outlined in grounding metal to prevent any possible spark.

The wall of the room, chiefly for sanitary reasons, adopts the streamline style with no projections, the glassed-in galleries and even the electric lamps being recessed flush with the surface. The room is sound proof and sterile, and while observers hear every word of the lecture by sound amplification, their presence cannot disturb or cause possible infection in the operating area.

To make this demonstration understandable to the lay observer as well as to the profession, the perfection of each detail of the model room, from the "Electric Eye" near the door, to that revolving disc high above the operating table which forecasts the use of television, is explained by a hidden voice.

The hospital was designed by Carl Erikson, of the firm of Schmidt, Gardner & Erikson, Architects, Chicago.

An actual operation is modeled in this exhibit. Doctors, nurses and internes are shown about the operating table, and the subject of the operation is that of a bone transplant from tibia to spine. One of the interesting features of this exhibit is the fact that even the miniature surgical instruments displayed have been made to scale and actually can be used. The surgical engine is modeled after the Mueller Surgical Engine and all instruments were made in the shop of V. Mueller & Co., Chicago.

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