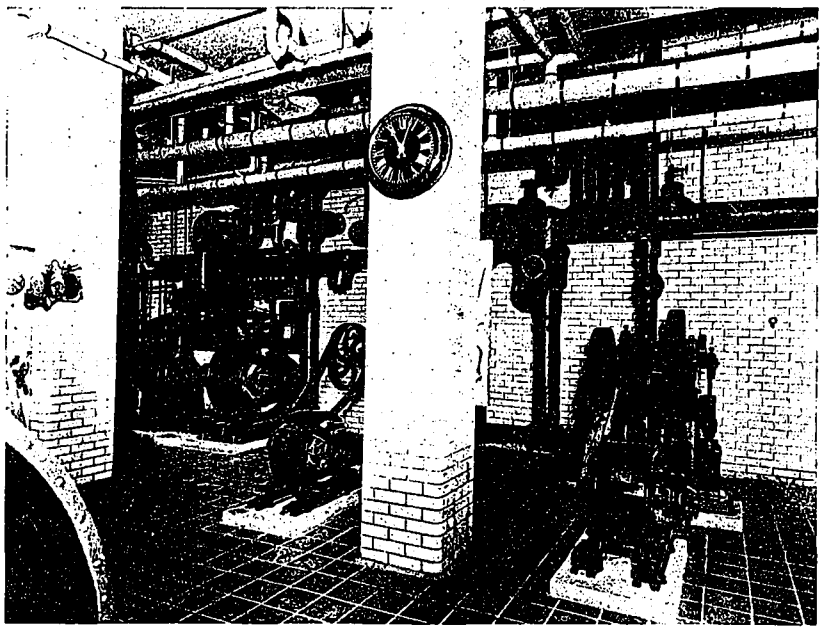

FIGURE VIII. FIRE PUMP AND HOUSE PUMPS.

located upon all floors. A fire pump consisting of a three-stage centrifugal turbine type pump direct connected to a 100 h.-p. motor is located in the engine room, as shown in Fig. VIII. This equipment has a capacity of 750 gallons per minute, and may be put into operation on a moment's notice.

Fig. X shows a part of the kitchen located on the eighth floor, near the three dining rooms where lunches are served to the officers and clerks of the bank. The equipment of the kitchen consists of a combination range and broiler, a steam table, tea and coffee urns and all necessary serving tables, sinks, etc. A large refrigerator opens into the kitchen.

The elevator equipment of the building consists of five high-speed passenger cars, which serve the office part of the building; one slow-speed car serving the main floor from the King street entrance, and three private push-button cars used by the bank in connection with the banking rooms and vault.

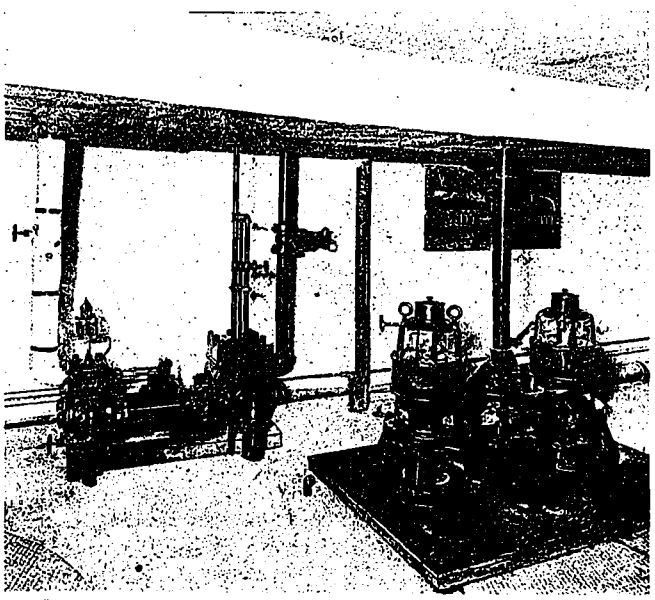

FIGURE IX. SUMP PUMPING EQUIPMENT.

The equipment is of the most modern type, the five main passenger elevators being of the gearless traction type, four of which operate from basement to the ninth mezzanine floor, a distance of 170 feet, and the fifth extending to the sub-basement landing, a total of 184 feet. These elevators have a normal capacity of 2,500 pounds, and travel at a speed of 500 to 550 feet per minute, while the number 2 car is arranged for a safe lifting load of 5,000 pounds at slow speed. These cars are arranged for 1:1 roping, which is the safest, simplest and most efficient method that has been devised for handling high-speed passenger elevators.

The electric traction elevator derives its name from the fact that motion is obtained by means of the traction existing between the driving sheave and the hoisting cables, from one end of which is suspended the car and at the other end the counterweight. Sufficient tractive effort is attained by introducing an idler sheave, which allows a complete loop around the driving sheave, and the resulting service is entirely satisfactory. The machine itself consists essentially of a motor, a traction driving sheave and a magnetically released spring applied brake, all compactly grouped and mounted on a continuous heavy iron bedplate. A slow speed, shunt-wound motor, designed especially for the service, is employed, which has a very high efficiency. The armature shaft, which is of high tensile steel, serves merely as a support for the load, and on it are mounted the brake pulley and driving sheave. The direct drive and consequent elimination of all intermediate gearing between the motor and driving member results in a machine of very high efficiency and absolutely prevents any possibility of vibration or noise which might perhaps occur from the imperfect wearing of a system of gears.

The controller used with these elevators is designed in connection with the motor, and embodies the latest improved application of electro magnet switches, and is actuated by a master switch in the car, giving starting, accelerating, retarding and stopping effects.

Fig. XI. shows the elevator pent house, where the machines operating the five passenger cars are located.

Cams are provided in the hatchway that open contacts one after the other as the car approaches the limits of travel. This feature is entirely independent of the operator in the car, and is effective to stop the car even though the operating devices be left in the full speed posi-