

"If you know anybody you will meet him on Broadway in New York city." If he's a business man, you will probably meet him near the Astor House.

In the center of the picture is the New York Post Office, an unlovely piece of government architecture, standing on what was once the lower end of City Hall Park. The building is totally inadequate to the needs of the city, and is surpassed in every sense by post office buildings in many smaller cities—notably that in Cincinnati.

The right hand side of the picture shows the lower end of Park Row, the paradise of newspaper men. The offices of the ELECTRICAL REVIEW at Number 13 are shown. Our windows face the heart of this busy scene. The noisy hum of the street, the clanging cable car gong and the rumble of heavy trucks are always with us. The Third avenue cable cars come down Park Row and make a swift curve around the Square, returning up the Row. This curve is a nice piece of engineering, and is exactly the shape of an incandescent lamp.

We would not be surprised at any time to learn that these two cable lines were to be changed over to underground electric systems.

**That Welsbach Scare Waning.**

An esteemed friend who takes a lively interest in electric lighting, writes us from Boston as follows:

"You did a good thing in publishing in your issue of January 30 the full text of the paper by Mr. Goetz on the Welsbach burner, read before the North Western Electrical Association. This matter of the Welsbach burner has caused not a little

**THE POWER STATION OF THE COLUMBUS CENTRAL RAILWAY COMPANY.**

A TYPE OF NOVEL AND MODERN CONSTRUCTION.

In the ELECTRICAL REVIEW for August 1, 1894, was published an illustration showing the exterior of the Columbus Central Railway Com-

"Class A" Stirling boilers, each guaranteed to be 200 horse-power on the centennial rating of 30 pounds of water per horse-power. With compound engines and economizers three boilers are abundant for the load of the two 500 horse-power engines now installed, and space is left in the boiler room for four more boilers of

house multipolar generator. Each unit is mounted on a heavy cast-iron base, and an insulated universal spring coupling is used between the engine and generator.

The switchboard is probably a step in advance of anything yet made in this line. The instruments are all mounted on dark marbled slate, there being four generator panels, one main station panel and panels for 16 feeders. The slate is extra heavy, being one and one-half inches thick, marbled in front and heavily shellaced on the back. As shown in the illustration, the panels are set in a massive framing of solid carved and polished mahogany. The carving and ornamentation are very artistic. The board over all is 31 feet long by 10 feet six inches high, and is three feet six inches clear from the wall. All wires and cables from the generators are laid in conduits under the concrete floor and pass into a pit behind the switchboard, which is provided at floor line with removable hard wood gratings. This allows the ordinary use of a floor behind the board, while affording instant access to any part of the pit. All positive bars and wires behind the board are painted red and plainly stenciled "Positive—danger." Equalizer connections and bars are green and negatives are black, and all plainly stenciled in large white letters. A few incandescent lamps are properly located to give abundant working light behind the board and in the pit, in case such is necessary at night. Three windows make the space very light during the day.

Each feeder line on the board has its own special ammeter, automatic circuit-breaker and quick-break switch. In addition to the station voltmeter, there is a Bristol recording voltmeter, and later on there will be a general recording ammeter. Automatic operation has been the aim, in order to reduce the number of attendants as much as possible. With one engineer in the generator room, who might be called momentarily into the boiler room, it was deemed expedient to install an automatic alarm. So each of the automatic circuit-breakers is fitted with suitable contacts controlling the circuit of a large and substantial vibrating bell located in the boiler room. Should an automatic "blow," the circuit of the gong is instantly closed, and an alarm is sounded which is plainly audible at every part of the power house, and continues to sound until the automatic circuit-breaker is attended to. This novelty proves very effective.

The lighting, at night, of the switchboard, generator room, engines, boilers, pumps, etc., and car house, pits and washroom, is all done by a small direct-coupled 110-volt machine and standard engine. This is especially advantageous late at night, after the last car is in, as it allows a complete shutting down of the large engines and generators for inspection throughout, while affording plenty of light for this very purpose, as well as the necessary light in boiler room and

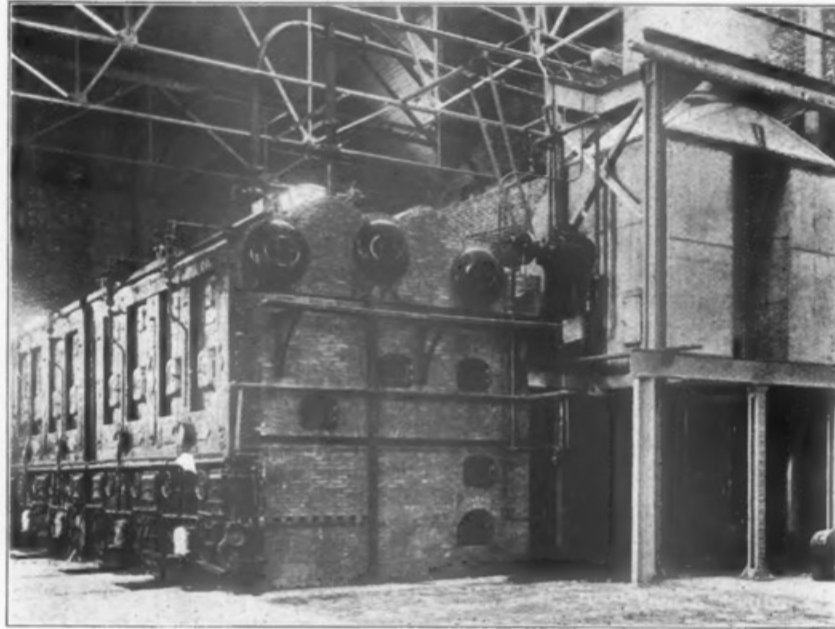


FIG. 1.—INTERIOR VIEW OF BOILER ROOM, COLUMBUS CENTRAL RAILWAY COMPANY.

pany's new power-house at Columbus, O., together with a brief description of the proposed plant. The installation has since been completed, and we are indebted to Barry & McTighe, of New York, who were the engineers

similar size to be installed before 1896. The boilers are arranged in batteries of two, each battery having its own independent stoker engine. Murphy smokeless furnaces are used, and the results are in full keeping

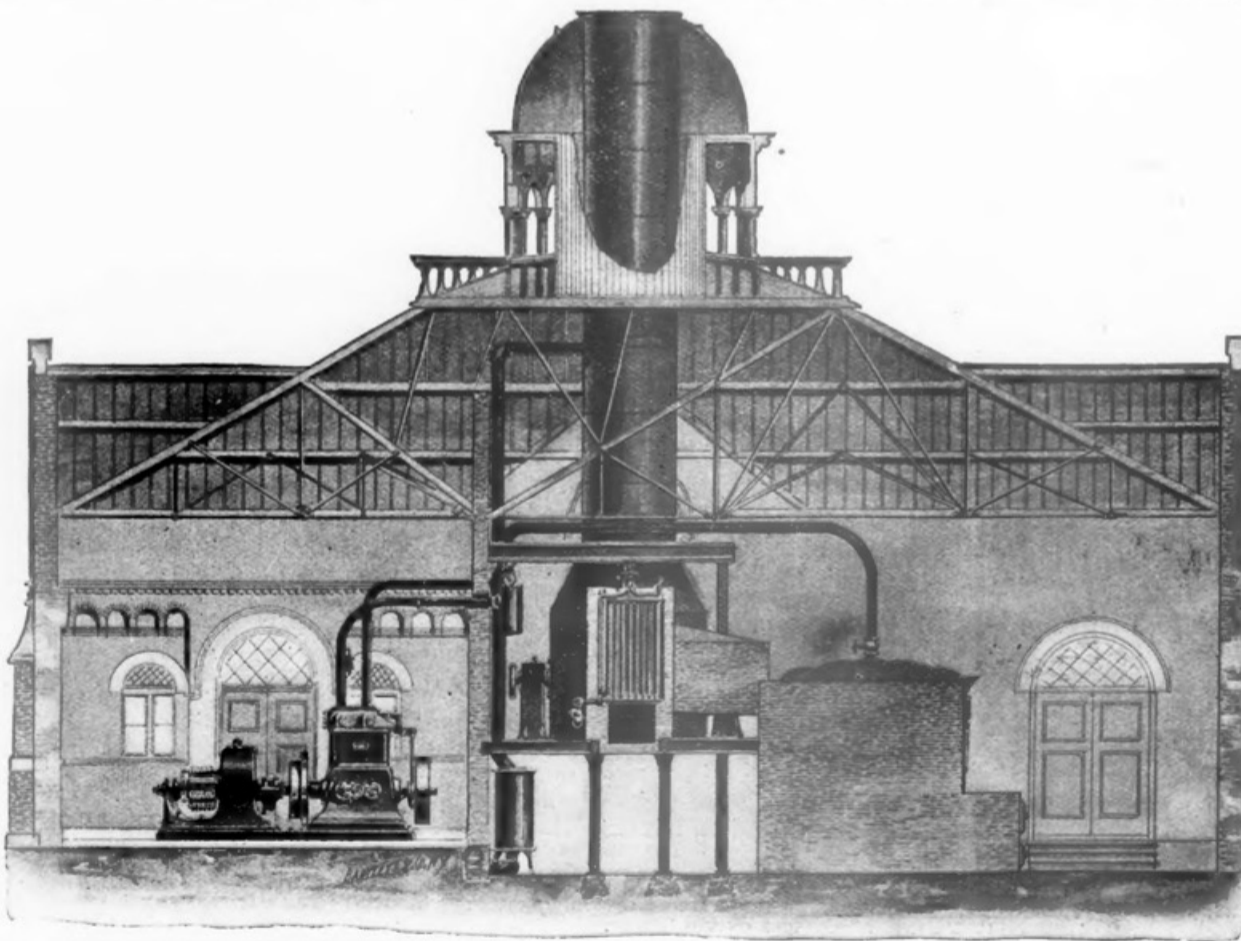


FIG. 2.—SECTIONAL VIEW OF POWER STATION, SHOWING CONCEALED SMOKE STACK, COLUMBUS CENTRAL RAILWAY COMPANY.

uneasiness among lighting companies, but I cannot yet believe that it is going to be much of an obstacle to the steadily increasing popularity of the incandescent lamp. I have mailed a copy of the number of the REVIEW containing Mr. Goetz's article to several customers who had expressed their uneasiness concerning the Welsbach burner, and I only wish that every central station manager who is so disturbed could read Mr. Goetz's paper."

in charge of construction, for the following additional details:

Referring to the illustrations, Fig. 1 is an interior view of the boiler room, Fig. 2 is a section through the station showing the ingeniously concealed smokestack, Fig. 3 is a view of the switchboard and Fig. 4 shows the interior of the engine and generator room.

The boiler plant consists of four

with the name, for the plant is really smokeless, notwithstanding the unfavorable condition of light load.

There will be ultimately four engines and generators, two of which are now installed. Each of these units is a Westinghouse compound, running non-condensing, with cylinder dimensions of 18 and 30 inches diameter by 16 inches stroke, direct connected to a 200-kilowatt Westing-

car house. At the same time this late night lighting costs but little, as by it steam is utilized which would otherwise be largely wasted. The idea seems to be good.

In the engine room, on a level above the brick corbling on the walls, is arranged an eight-ton traveling crane, carrying an operating platform from which all the crane's movements are controlled. The crane is capable of handling the heaviest piece in the engine room. It gives great satisfaction to the attendants.

The car house is a steel-trussed structure resting on steel columns built into and forming part of the side walls, which are of brick. The clear span includes eight tracks, being 88 feet, so that the entire space of the car house is unobstructed in any way. A departure has been made in the front. Though the trolley wires are 18 feet from the floor, the doors are but 13 feet high. The front is constructed with slots 6 feet high and one foot wide, near the top of which the trolley wires are supported. Each slot has double swinging doors of hard wood, but light weight. These yield in both directions to the passage of the trolley pole and work admirably, while excluding snow and rain to perfection. The main doors are novel, too. The two extreme side doors swing on heavy wrought-iron hinges, bolted to the front columns of the building. The intervening six tracks are covered by six doors arranged in two sets of three each. In each set the middle door is very heavy, rides on three large wheels which track on a flat-grooved girder rail firmly fixed across the front and anchored with angle-plates to the track rails, while above, each of the heavy doors is provided with guard-rollers moving in a guideway of channel iron held in position by the front truss and anchored back to the second truss. Each of these heavy doors has the two adjoining doors hinged to it, one at each edge, and the hinges are formed to permit both the swinging doors to be folded against its front. In this position two tracks are thrown open, and the middle track of the triple set is opened by rolling the whole to one side. The construction is massive and strong, but though a triple door set weighs over 1,000 pounds, one man can easily roll it clear across the building. The utility and convenience of this construction is so manifest that it speaks for itself. The building is splendidly lighted in the day time, having all the ventilator windows and a large number of side and end lights.

The cars are conceded to be among the finest in the country. They are of the "Accelerator" type, with 20-foot bodies and four-foot platforms.

Pintach gas lights, made by the Safety Car Heating and Lighting Company, of New York, are used in the cars. This is the first electric railway company in the country to adopt the gas system of car lighting, and the innovation is but one of many which Barry & McTighe have carried out in this highly instructive installation. Each car is equipped with Pintach lamps, with four flames enclosed in heavy clear glass globes. The light is steady and mellow, and the eight burners consume less than six cubic feet of gas per hour.

**ELECTRIC RAILWAY NOTES.**

*Officers of electric railway companies are requested to send promptly to the ELECTRICAL REVIEW notices of meetings, election of officers, declarations of dividends, financial reports and all items of interest in connection with the financial and practical operation of their roads.*

The Lansing, Mich., Electric Railway Company's car barn and nine

tronic roads to show cause why they should not be required to advance their fares, on the ground that they had entered into a conspiracy to ruin the electric railway company by forcing fares down. One rival line has been selling two tickets for one cent.

The special Aldermanic Committee appointed to investigate the trolley

**ELECTRIC LIGHT FLASHES.**

The Galveston, Texas, Street Railway Company has been granted a franchise to engage in electric lighting.

The recent report that the Catholic University of America, at Washington, D. C., was to install a \$50,000 electric light plant is erroneous. A small plant for which the contract has been let will be placed in a new building just erected by the university.

The New England Engineering Company, of Waterbury, Conn., of which Mr. A. M. Young is president, has just been awarded a contract to install a complete steam plant for the Stafford Springs Electric Light and Gas Company, of Stafford Springs, Conn.

In last week's issue of the ELECTRICAL REVIEW mention was made of the victory of Russell B. Harrison's Citizens' Electric Light and Power Company, of Terre Haute, Ind., over the Terre Haute Electric Light and Power Company. The latter company asked for an injunction of restraint against the former, which was denied by Judge Henry, who based his finding mainly upon the proposition that public rights are superior to private rights. Judge Henry has given considerable time to the study of electricity and consequently was unusually competent to decide the matter. The contest between the two companies was a hot one, and involved many new and interesting legal and electrical questions. In looking up decisions in



FIG. 3.—SWITCHBOARD IN COLUMBUS CENTRAL RAILWAY COMPANY'S POWER STATION.

cars were burned on February 20. Loss, \$20,000; probably covered by insurance.

The railroad committees of Wisconsin Legislature are hearing arguments on bills to compel street railways to adopt vestibule cars. Henry C. Payne

system in Brooklyn, N. Y., handed in its report at a meeting of the board on February 25. The committee recommended that all cars shall be licensed, and that a placard stating that fact be posted in each car. Every accident shall be reported before noon of the next day. Speed

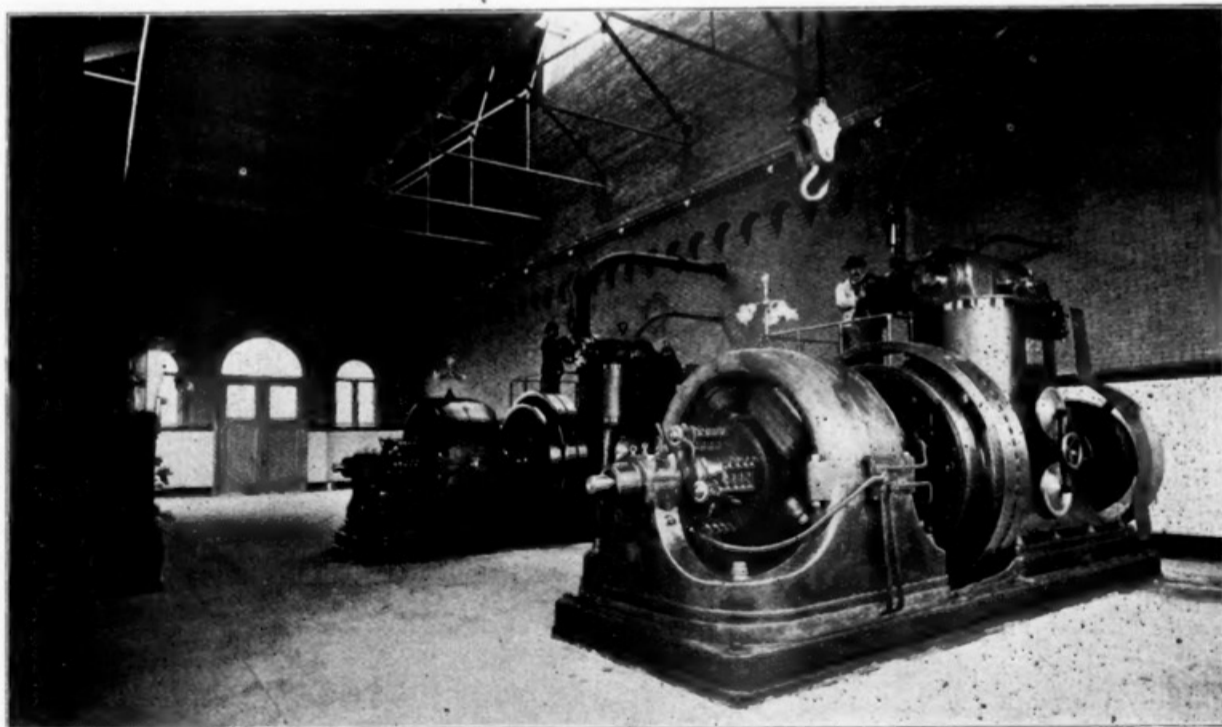


FIG. 4.—INTERIOR VIEW OF ENGINE AND GENERATOR ROOM, COLUMBUS CENTRAL RAILWAY COMPANY.

appeared for Milwaukee and Manager Shuman for Racine. President Matson of the Street Railway Union was there in its favor, together with several other men. It is not thought that the bill will become a law.

Judge Speer, of the United States Court at Savannah, Ga., on March 1 ordered the receivers of the Electric Railway Company to advance fares from one cent to five cents, and also ordered two rival elec-

tronic roads to show cause why they should not be required to advance their fares, on the ground that they had entered into a conspiracy to ruin the electric railway company by forcing fares down. One rival line has been selling two tickets for one cent.

Mr. W. G. Motley, F. R. G. S., a well-known mining engineer of Rat Portage, Canada, favored the ELECTRICAL REVIEW with a pleasant call recently.

other States the attorneys discovered many cases between railway companies and light companies, telephone companies and light companies, and railway companies and telephone companies, but very few cases between light companies, and none of them involving the questions in this case. President Harrison expects to have his plant running this week, although not complete in its details. It will be the largest and the only triple expansion direct connected arc light plant in the world.