

AN IMPROVED SEWER VENTILATOR.

The illustration herewith represents a construction combining a tubular lamp post, pillar, or standard with a disinfecting chamber, the latter having connection with a sewer pipe, whereby the gases will be thoroughly disinfected and carried off, or passed through a lamp or gas flame and consumed. This invention has been patented by Mr. Thomas P. Worthington, of Southshore, Blackpool, Lancaster County, England. Beneath the level of the pavement is placed a box with detachable lid, the box being connected by a pipe from

**WORTHINGTON'S SEWER VENTILATOR.**

one end with the hollow lamp post, while a connection from a sewer pipe enters the bottom of the box at its other end. Within the box is a horizontal perforated partition, above which is held a series of perforated grates having inclined ledges, forming pans to hold either liquid or solid disinfectants in such position that the sewer air passing through the box will come in contact therewith. In the center of the lamp top or cap is a conductor, consisting of a downwardly projecting tube with mouth immediately over the flame orifice, adapted to burn the air and gas in passing, while over the top of the lamp is a series of deflecting plates, the center plates having a central aperture aligning with the conductor. The bottom of the lamp is preferably closed, except at a point immediately above the post and at one side of the center. For further information relative to this invention, address Mr. Thos. Poole, No. 210 Jennie Street, Trenton, N. J.

THE AMERICAN PATENT POP SAFETY VALVE.

This well known valve is manufactured by the American Steam Gauge Company, of Boston, Mass., and has for years been recognized as one of the best devices of its kind on the market. It possesses some peculiar features, which are shown in the accompanying illustrations, and is the *only* double-headed safety valve provided with a second or movable head on the top of the valve proper, as shown in Fig. 1, in which G represents an adjustable automatic head on top of valve; H, the valve; J, inclined holes in automatic head; S, spring to return head to its position after valve has stopped blowing; P, cavity for the accumulation of steam to feed holes through valve and head. There are two series of holes drilled around the outer edge of the heads for the purpose of reducing the amount of increased area; the first of the series being around the head of the valve proper, and drilled at an angle of ninety degrees with the seat of the same, and the second series being around the second or movable head, and drilled at an angle of fifty-five degrees with the holes in the head of the valve proper. When the valve lifts from the seat to blow, the steam passes through the holes in the head of the valve proper

into the corresponding holes in the second or movable head, which will be forced around in such a manner that the holes of the two heads will be directly in line with each other.

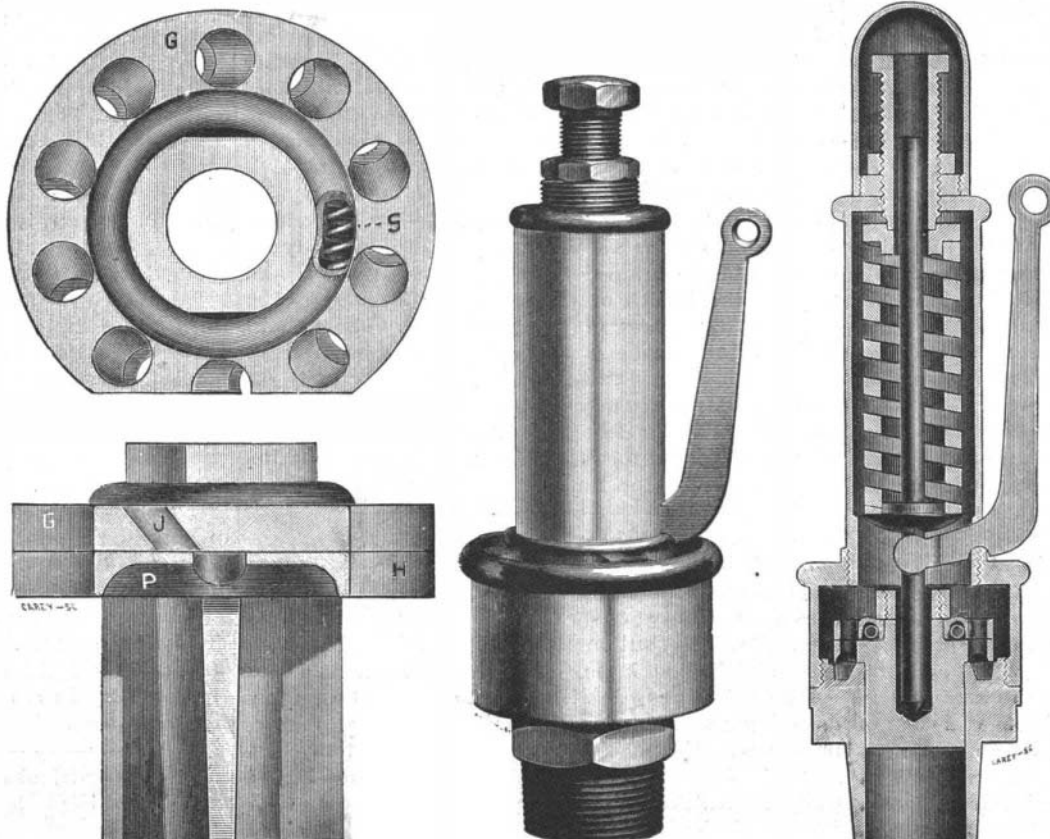
Among other advantages possessed by this valve, it may be claimed to be entirely automatic. It will always blow off at the point of pressure at which it is set, and close with very little reduction of pressure. Its construction and principle of action are such that it will not stick on its seat. The spiral action of the steam, after passing through the inclined holes, causes the valve to rotate in its casing, which keeps the casing always clean about the edges of the valve, and also, by the rotary motion, the valve never seats twice in the same place.

Rufus Cook's Good Advice.

Rufus Cook, a civil and sanitary engineer, has addressed an open letter to the city council of Minneapolis, in which he makes some pertinent and valuable suggestions on the subject of city sanitation. He states that with the growth of cities there is a constant tendency to the accumulation of unsanitary conditions. Sanitary work consists in the application of preventive measures rather than curative, the latter being the province of the physician. To insure this sanitary work being fully carried out, ample funds should be appropriated to the health department. People need to be taught that what they eat, drink, and breathe has an important relation to their health and happiness, and to maintain human existence in its highest state requires pure air, pure water, and pure food, and these supplemented by a pure soil. As purity of air is first in importance, the best system of heating and ventilation should be applied to all public and private buildings. A good plumbing law is one of the most effective steps in sanitary progress that the city can possibly have. Mr. Cook quotes from the New Jersey Board of Health: "Most of our cities are still far behind in the details of approved sanitary administration, and in those financial provisions, therefore, which are necessary for the health of the people. In the work of sanitary inspection and advice, and in the general oversight of the health of the people, we find a field of operation which might be largely extended to the great advantage of our citizens."—*The Sanitary News.*

A Horse Killed by Electricity.

By the wind and snow of January 20, many wires in this city were disturbed and torn from the poles. On the morning after the storm a milkman drove his horse up to a trough at West and Leroy Streets, to water the animal. He paid no attention to some dangling telegraph wires, which, as the animal approached the trough and lowered its head to drink, came in contact with it, and became entangled about its legs. The wires were in communication with an electric light lead. The horse was thrown to the ground and at once died from the electric shock. This occurrence emphasizes the danger to life from the overhead electric lines, and indicates the importance of placing them under the surface. A horse was used in the recent experiments at Edison's laboratory to show how the electric current could be applied to the infliction of the death penalty for capital offenses. In this latter instance the danger of overhead wires and their power to inflict accidental death were shown by the same illustration.

**THE AMERICAN PATENT POP SAFETY VALVE.****AN INDICATOR ATTACHMENT FOR PASSENGER ELEVATORS.**

A simply constructed device whereby the approach of an elevator from below or above will be shown, and whether the car is going up or down, is illustrated herewith, and has been patented by Mr. Oliver C. Hayward. The several indicators are pivoted within the elevator shaft, or a casing auxiliary thereto, at a suitable distance above the flooring of each story, and consist of a double series of angle indicating blocks, one series having a friction roller upon its inner end adapted to engage the car, and a lever connecting the two series, while the outer member of each series has produced thereon the words "down" and "up." The elevator car has a strip secured to its front or side adapted

**HAYWARD'S INDICATOR FOR PASSENGER ELEVATORS.**

to engage the levers and blocks, in such way that, as soon as the elevator leaves a floor, ascending, the indicator "up," on the floor above, shows that the elevator is going up, and remains in this position until the elevator starts for the floor next above. This enables one in the passage or hallway to see when an elevator is there, and which way it is to go, while on the downward trip the indicator "down" operates in like manner. This device has already been adopted and may be seen in operation at the New York Produce Exchange. For further information relative thereto address Mr. O. C. Hayward, P. O. Box No. 3699, New York City.

American Railways in Chili.

Speaking of the construction of railways in Chili out of revenue resources, the London *Statist* remarks that: "There appears to have been some misconception among English contractors for railway work, who have imagined that any work done would be paid for in Chilean bonds, which under the state of tension between the Stock Exchange committee and the Chilean government would preclude the probability of the bonds receiving an official quotation. Be this as it may, we regret to notice from Chilean advices that orders for railway material have been given to American firms, so that really the agitation in Stock Exchange quarters against Chili has been detrimental to English interests. The contracts for the building of Chilean railroads have been signed between the representative of the American company, Mr. Lord, and the Chilean government, and the contracts have received the official sanction of both houses of Congress. The amount to be expended is about four millions sterling. This extension of American enterprise may mean the virtual extinction of English railroad construction in Chili in the future. To the present the rolling stock and the rails for the Chilean railway system have been chiefly supplied from England. Once the Americans get themselves firmly planted, good-by to any more orders for this country."

The Kistna, in the Madras presidency, is crossed by a cable swung between supports 5,070 ft. apart, and one has just been put in China 4,648 ft. in span. The whole weight of the suspended portions is only 6½ tons, and the breaking resistance 70 tons.