

(No Model.)

G. A. WHEELER.
UNDERGROUND CONDUIT FOR ELECTRIC WIRES.

No. 411,539.

Patented Sept. 24, 1889.

Fig. 1.

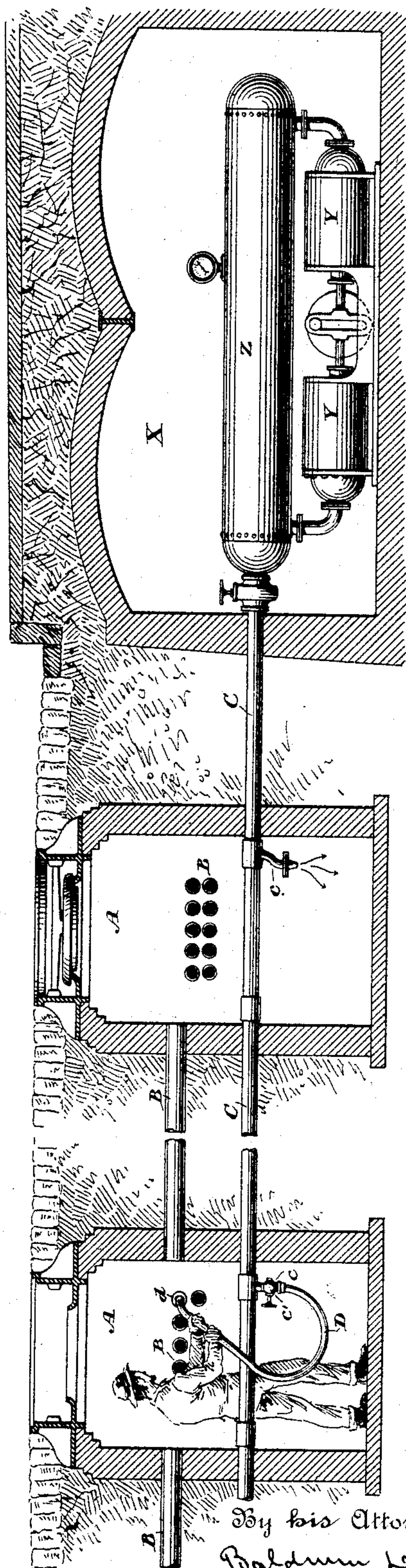
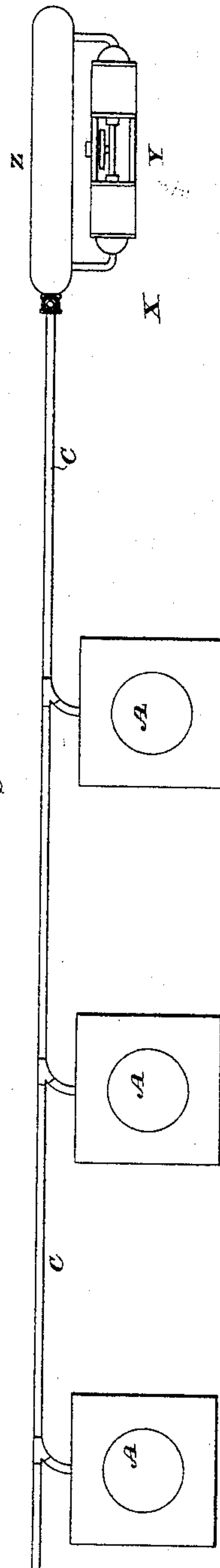


Fig. 2.



Witnesses
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UNITED STATES PATENT OFFICE.

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UNDERGROUND CONDUIT FOR ELECTRIC WIRES.

SPECIFICATION forming part of Letters Patent No. 411,539, dated September 24, 1889.

Application filed July 29, 1889. Serial No. 318,999. (No model.)

To all whom it may concern:

Be it known that I, GEORGE A. WHEELER, of New York, New York, have invented certain Improvements in Underground Conduits for Electrical Conductors, of which the following is a specification.

The purpose of the invention is to provide means for and insure the perfect ventilation of all parts of a conduit and to keep up a circulation of fresh air in the man-holes under such pressure as may be necessary to check the inflow of gas through the walls, &c. Heretofore it has been proposed to blow compressed air through the ducts from man-hole to man-hole; but this is insufficient to insure a circulation of air, for the reason that should the cover of any man-hole be removed the escape of air would be so great that no air could be forced through the conduit beyond that point. I overcome all difficulties and insure perfect ventilation by forcing compressed air along the entire length of the conduit through a main having an outlet in each man-hole, that permits the escape of a determined and sufficient quantity of air. By this organization compressed air is delivered at a determined pressure or volume at every man-hole, regardless of whether one or more man-holes are open at any points. I prefer to locate a power-station at the middle or one end of the conduit, and there employ a double-acting air-pump working into a receiver, from which the air is led to the conduit. At the various man-holes the air-outlets are preferably formed with projecting ends or nozzles to receive a flexible tube or hose, so that the jet of compressed air may also be utilized, if desired—for instance, to blow out the ducts to remove dust, &c.

In the accompanying drawings, Figure 1 is a longitudinal section through a conduit system organized according to my invention, and Fig. 2 is a plan view of a modification.

X indicates a power-station, where are located an air-compressor Y and a receiver or tank Z, of any suitable construction.

A A are the man-holes, and B the ducts connecting them. A compressed-air main C extends from the receiver Z through or alongside all the man-holes. At each man-hole the main has an air-outlet *c*, which may consist of a short lateral tube having a valve therein and also a cock *c'*. The valve permits the exit of a given quantity of air and the cock affords a further means of regulation. A flexible tube D may be connected with the outlets *c* and its opposite end may be provided with a nozzle or guard *d*, fitting the ducts. By this means the compressed air may be utilized to blow out the ducts preparatory to introducing the conductors.

Where the man-hole covers permit the escape of air, this system insures a thorough ventilation of the conduit. Where the man-holes are closed air-tight, a pressure is maintained in the conduit that prevents the infiltration of gas.

I claim as my invention—

1. In a conduit system, the combination, with the man-holes and ducts, of a compressed-air main having outlets at various points along the conduit that discharge a limited portion of the air, for the purposes described.

2. In a conduit system, the combination, with the man-holes, of a compressed-air main extending through or along the line of man-holes and having regulated air-outlets in the man-holes for discharging a limited volume of the compressed air.

3. In a conduit system, the combination, with the man-holes and ducts, of a compressed-air main extending through or along the line of man-holes and having in the man-holes air-outlets adapted to receive a hose, as set forth.

In testimony whereof I have hereunto subscribed my name.

GEO. A. WHEELER.

Witnesses:

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