

(No Model.)

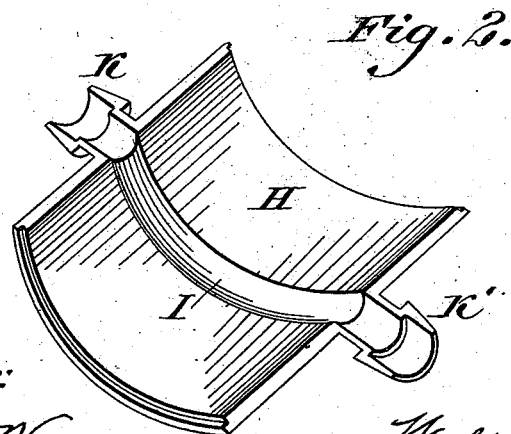
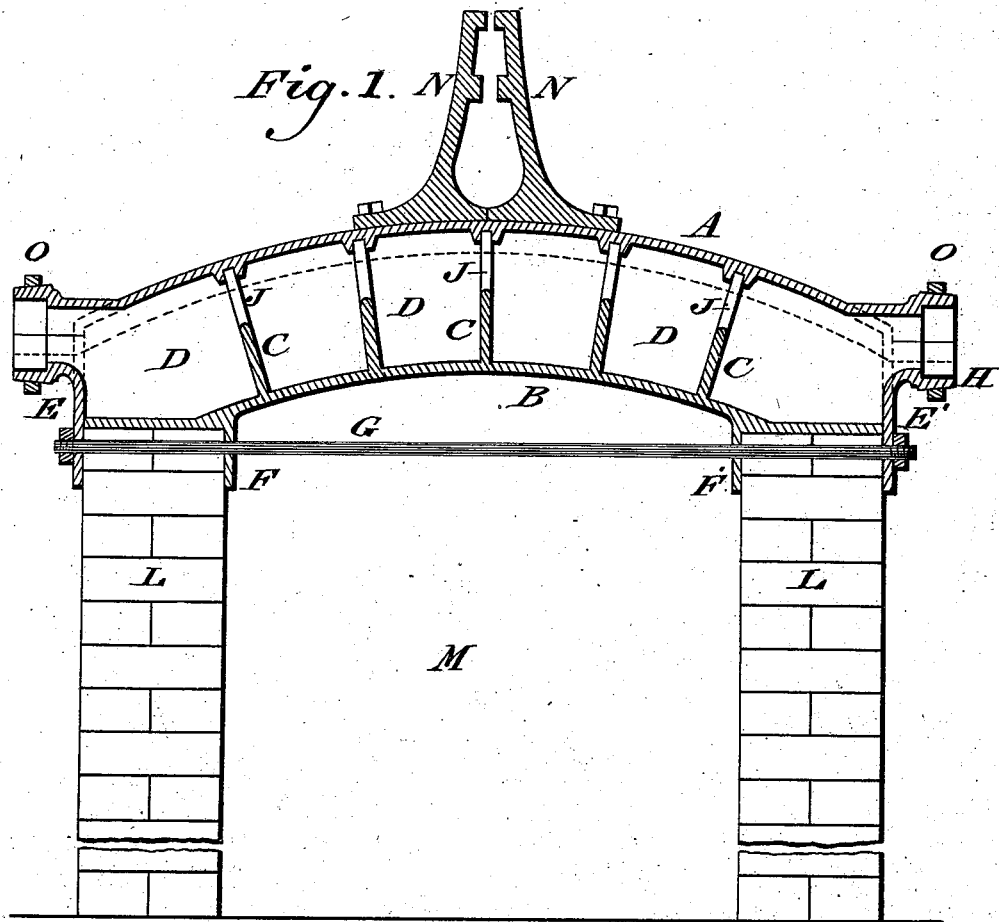
2 Sheets—Sheet 1.

W. F. SMITH.

UNDERGROUND CONDUIT FOR ELECTRIC WIRES.

No. 382,778.

Patented May 15, 1888.



*Witnesses:*  
*Thos. W. Carson.*  
*N. Buckley.*

*Inventor.*  
*Walter F. Smith.*  
*by George S. Buckley*  
*Att'y.*

(No Model.)

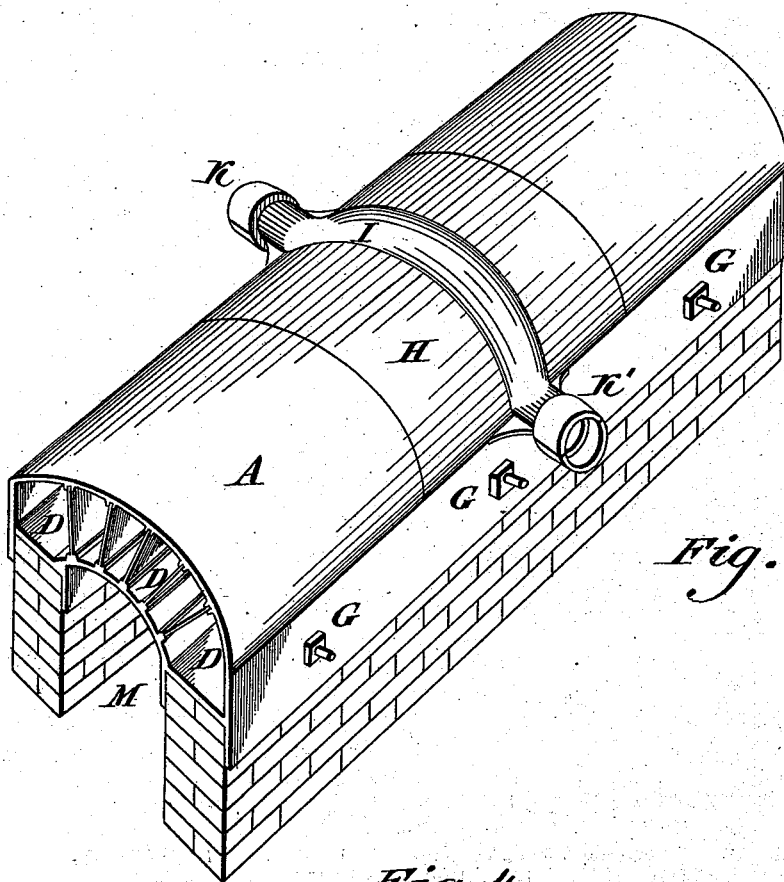
2 Sheets—Sheet 2.

W. F. SMITH.

UNDERGROUND CONDUIT FOR ELECTRIC WIRES.

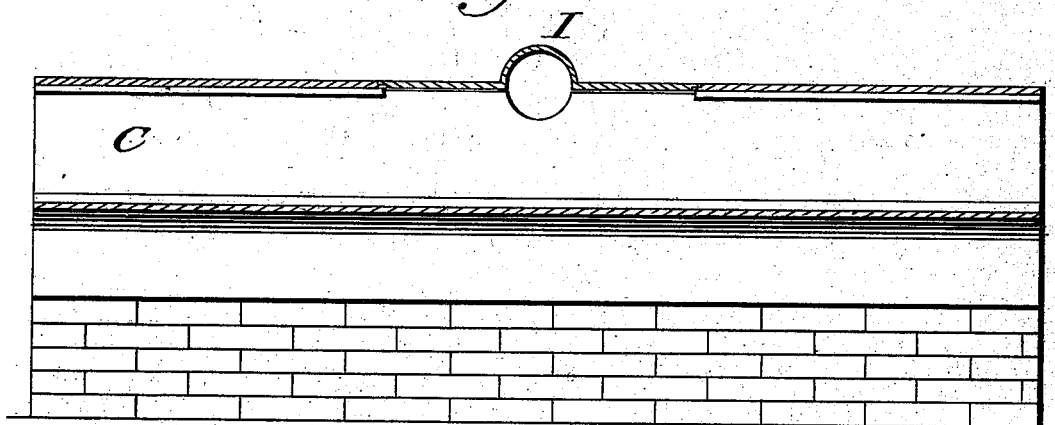
No. 382,778.

Patented May 15, 1888.



*Fig. 3.*

*Fig. 4.*



*Witnesses:*  
*Thos. C. Carson.*  
*Wm. Buckley.*

*Inventor:*  
*Walter F. Smith.*  
*by George I. Duckley.*  
*his Atty.*

# UNITED STATES PATENT OFFICE.

WALTER F. SMITH, OF PHILADELPHIA, PENNSYLVANIA.

## UNDERGROUND CONDUIT FOR ELECTRIC WIRES.

SPECIFICATION forming part of Letters Patent No. 382,778, dated May 15, 1888.

Application filed January 24, 1888. Serial No. 261,754. (No model.)

*To all whom it may concern:*

Be it known that I, WALTER F. SMITH, a citizen of the United States, and a resident of Philadelphia, Pennsylvania, have invented certain new and useful Improvements in Underground Conduits for Electric Wires, of which the following is a full, clear, and exact description, reference being had to the annexed drawings, making part hereof.

The nature of my invention will fully appear from the following specification and claims.

In the drawings, Figure 1 is a vertical cross-sectional view of my device with electric-railway slot; Fig. 2, a detached view of one of the hand-hole covers; Fig. 3, a perspective view of my device; Fig. 4, a longitudinal, vertical sectional view of the same.

My conduit is formed of an elongated double-shelled arch composed of curved upper plates, A, and concentrically-curved lower plates, B.

C C are longitudinal fins or partitions separating the chambers D D of the conduit. They are cast upon or secured to the lower series of arch-plates, B B.

E E' F F' are downwardly-projecting longitudinal plates from the upper and lower series of arch-plates, A and B.

G is a brace rod or stringer provided with a head or thread and nut at one end and a thread and nut at the other. These rods G are placed at short intervals beneath the conduit, extending from side plates, E, to plates E', also passing through intermediate plates, F F'. The rods G bind and strengthen the structure of the conduit, and with the upper and lower shells, A and B, form a trussed arch.

H is a detachable plate arched so as to conform to the curve of shell A, of which it forms a part; I, a transverse ridge formed in plate H, terminating at the two opposite edges thereof.

J are lateral openings cut in the upper edges of fins C C immediately beneath the ridge I in plate H.

K K' are lateral nozzles formed by projecting parts of detachable plates H and side plates, E. Excepting the detachable sections H, the upper shell is cast in one piece with side plates, E E', and the lower shell, B, is cast in one piece with inner plates, F F'.

L L are foundation walls, of stone, brick,

concrete, or any suitable material, which form a foundation for the arch.

M is an inner space beneath the arch or conduit, which may be utilized for any desired purpose.

The conduit is designed to communicate with man-holes or working-holes at various points, and the longitudinal chambers D D are provided with insulated electric wires or cables by methods well known to those skilled in the art. The detachable plates H are set at intervals in the line of conduit and are designed to facilitate the passing out of wires or making connections with those in the conduit for side branches, or for carrying them into buildings, or for street-lighting. When a plate, H, is removed, the openings J J in partitions C C permit the handling of any wire or cable in any of the passages or chambers D D, and the space formed by these openings and ridge I, which is concave below, (see Figs. 2,) permits the operative to carry the wire or cable out laterally from any space D through either side nozzle, K or K'. If desired, the ridge I may be dispensed with and the openings J may be made large enough to furnish space to carry the wire to the side nozzle, or the openings J in the partitions may be dispensed with and the necessary space may be furnished by the hollow ridge I in plate H.

N N' (in cross-section, Fig. 1) are two longitudinal plates with an open space or groove between. These plates are secured to the top of the arch and may be used for an electric railway.

The side nozzles, K and K', are each formed in two halves, or of two semicircles in cross-section, and are each tapered toward the mouth. A wrought-iron or steel ring, O, is forced over each of these tapered nozzles and binds the two halves together.

What I claim as new is—

1. A sectional conduit for electric wires, composed of double arch A B, fins C, attached to one of the arches and forming long chambers D D to receive the wires, substantially as described.

2. A sectional conduit for electric wires, composed of double arch A B, fins C, attached to one of the arches and forming long chambers D D to receive the wires, said conduit being provided with spaces J J at intervals

between the upper edges of the fins and the roofing or arch A, and side openings, K, whereby a wire from any one chamber in the conduit may be carried or led out of the side  
5 opening, substantially as described.

3. A subway for electric wires, composed of double arch A B, fins C, attached to one of the arches to strengthen the same, brace-rod G, with its screw and nut to truss and  
10 strengthen the double arch, substantially as described.

4. A sectional conduit for electric wires, composed of double arch A B, detachable plate-sections H, with side-tapered nozzles

K, and rings O, adapted to be driven onto 15 the tapered nozzle and tighten the joint, substantially as described.

5. A sectional conduit for electric wires, provided with removable plates H, side-tapering nozzles K, and rings O, to secure the 20 parts together, substantially as described.

In witness that the above is my invention I have hereunto set my hand.

WALTER F. SMITH.

Witnesses:

WM. H. CARSON,  
H. V. BUCKLEY.