

(No Model.)

J. S. DU BOIS.

UNDERGROUND CONDUIT FOR ELECTRIC CONDUCTORS.

No. 442,868.

Patented Dec. 16, 1890.

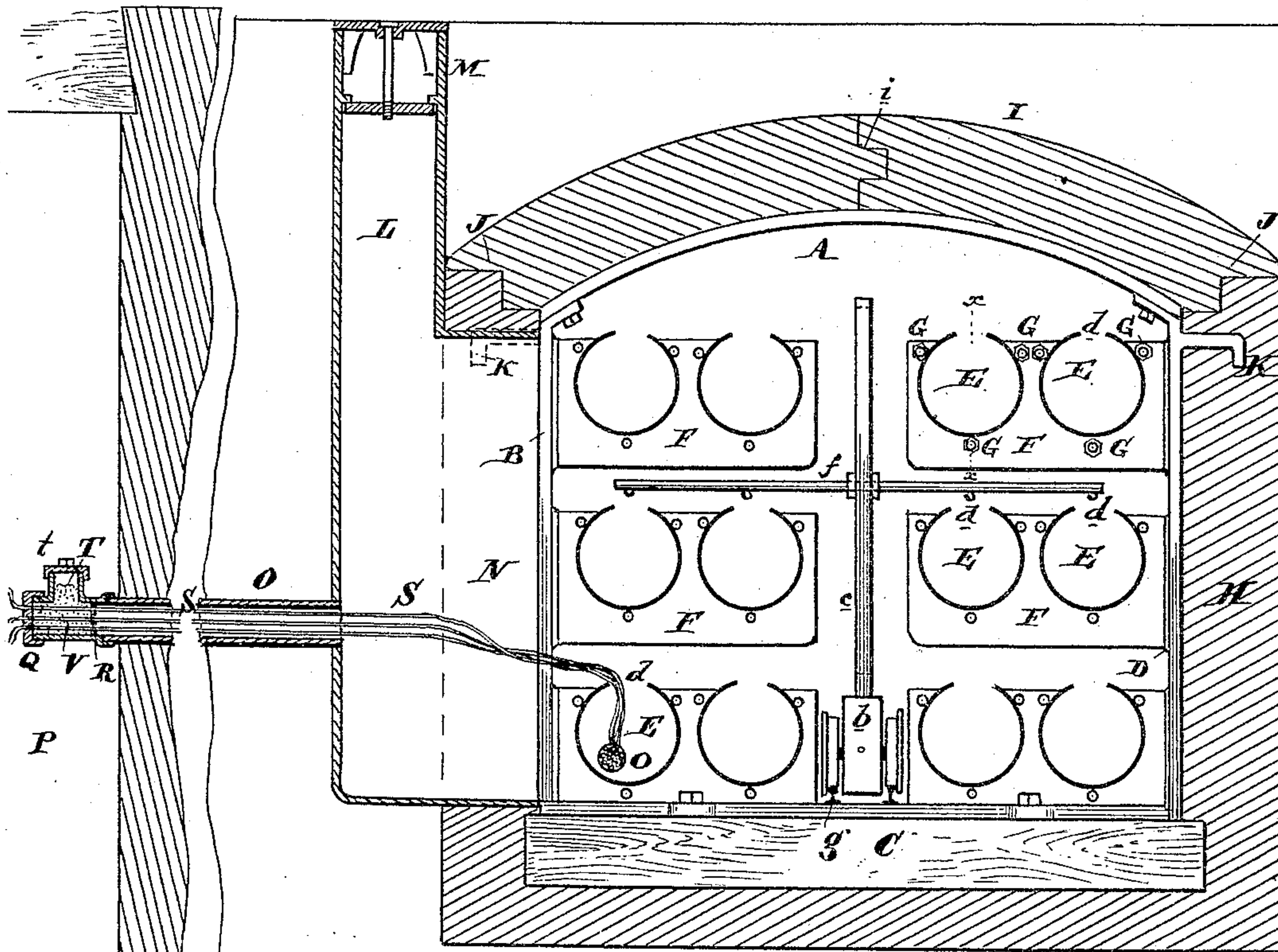


FIG. 1

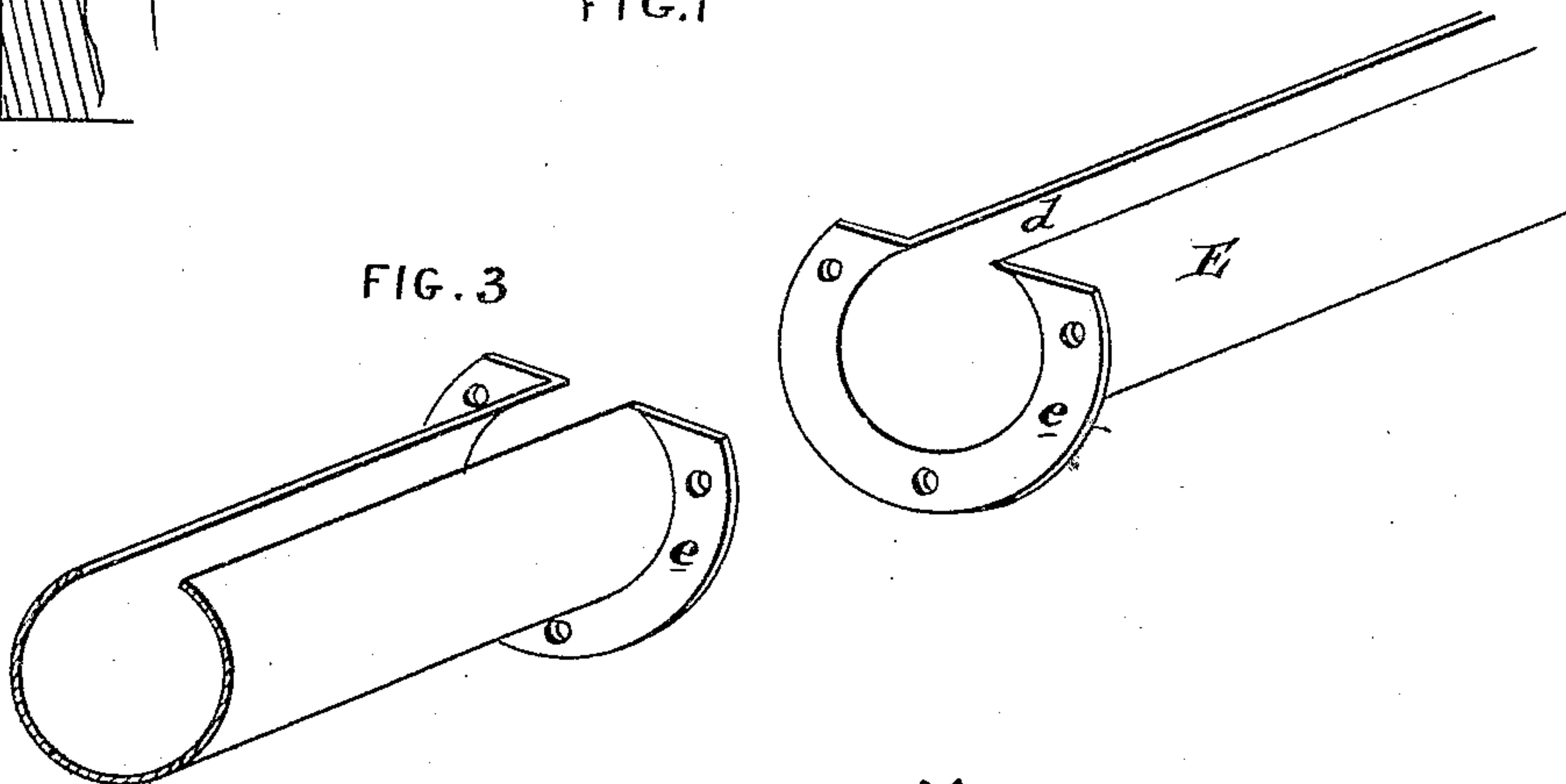
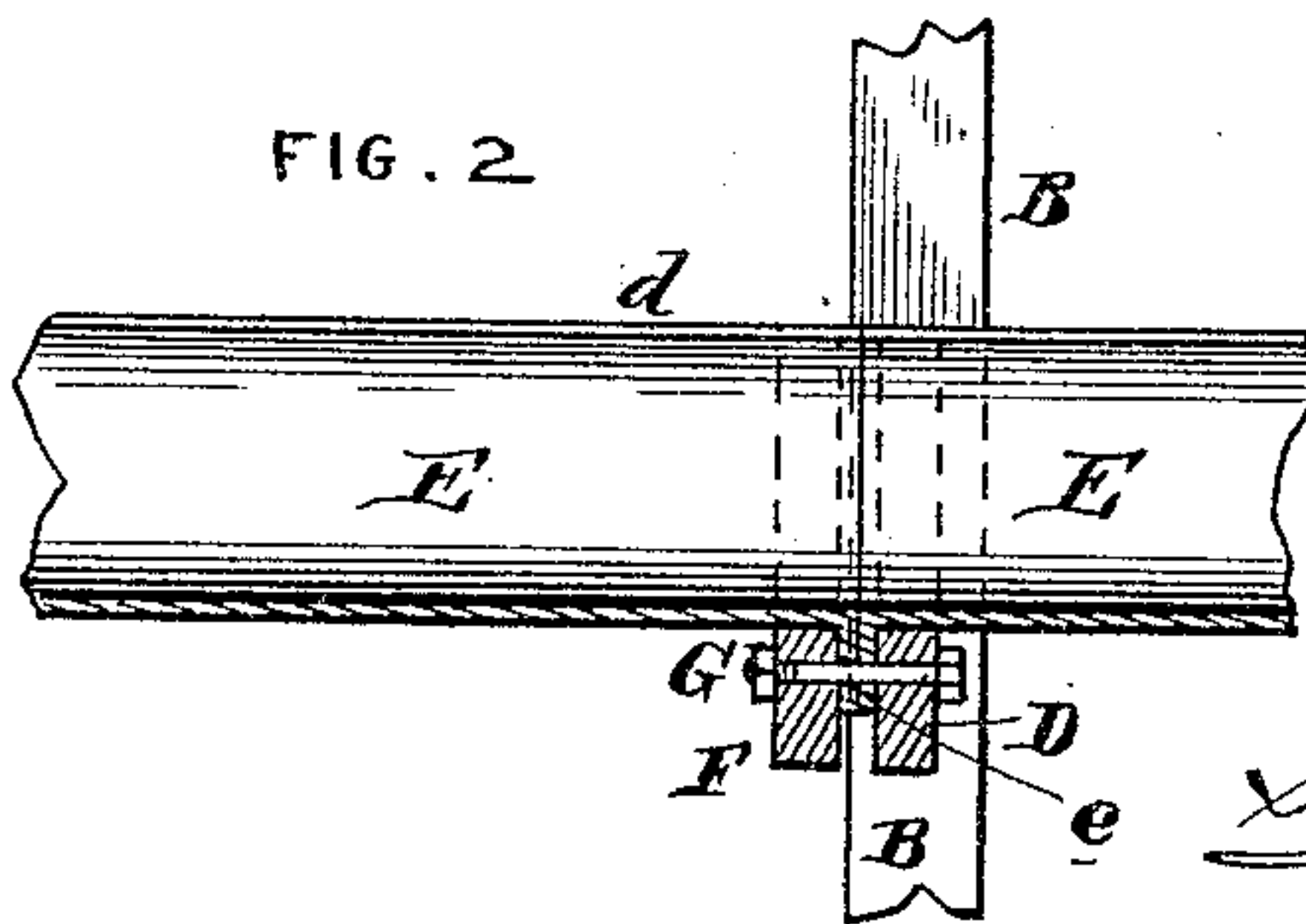


FIG. 3

FIG. 2

Attest
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By *[Signature]*

UNITED STATES PATENT OFFICE.

JOSIAH S. DU BOIS, OF CAMDEN, NEW JERSEY.

UNDERGROUND CONDUIT FOR ELECTRIC CONDUCTORS.

SPECIFICATION forming part of Letters Patent No. 442,868, dated December 16, 1890.

Application filed March 15, 1886. Serial No. 195,249. (No model.)

To all whom it may concern:

Be it known that I, JOSIAH S. DU BOIS, of the city and county of Camden, State of New Jersey, have invented an Improvement in Underground Conduits, of which the following is a specification.

My invention has reference to underground conduits for electric wires; and it consists in certain improvements, all of which are fully set forth in the following specification, and shown in the accompanying drawings, which form part thereof.

This invention particularly relates to that class of underground conduits set out in Letters Patent No. 314,568, granted to me on March 31, 1885, and is an improvement upon the construction therein described and shown.

In the drawings, Figure 1 is a sectional elevation of my improved conduit, and shows its connection with the street and also the cellar of a house. Fig. 2 is a cross-section of part of the conduit on line *x x*, and Fig. 3 is a perspective view of the adjacent ends of two of the wire-supporting troughs.

A is the conduit, and is formed of a series of metal frames B, secured to wooden base-pieces C, which are embedded in the asphalt or brick which forms the continuous tubular body H of the conduit.

I is the cover or top of the conduit, and is formed of asphalt molded in the form of an arch and connecting with the side walls of the body H by a joint J, forming suitable abutments for strengthening the arch-covers. These covers may be divided longitudinally by a lapped or tongue-and-groove joint *i*.

The top or upper part of the iron frame B may be provided with projections or bolts K extending out into the asphalt or brick walls, and will have the effect of anchoring in the walls and at the same time prevent any possibility of the frame B being displaced in the direction of the length of the conduit. Projecting from the vertical arms of the frame B are brackets D, having circular apertures open at the top and into which the sectional troughs E are placed and supported. These troughs have their ends *e* flanged, as shown in Fig. 3, and have the longitudinal slot *d* in their upper parts. The flanged ends of these troughs are placed together and a clamping-plate F placed back of the flanges on one side, and

said flanges *e* are clamped between the bracket D and clamping-plate F by bolts G, which pass through the said bracket and plate, and preferably through the flanges *e* also, as shown in Fig. 3.

The wires or cables are drawn through the conduit by a motor or car *b*, running upon the rails *g*, arranged longitudinally through the conduit and provided with a vertical arm *c*, to which a horizontal arm *f* is adjustably secured, so as to be supported over either set of troughs. The wire or cable is attached to said horizontal arm or piece *f*, and by propelling or drawing the motor or car *b* through the conduit the wire or cable will be drawn into the slotted trough.

L is a man-hole opening into the side of the conduit, and is provided at the top with an air-pipe cover M. The cellar of the house P is connected by one or more pipes O with the conduit or man-hole L where it enters the conduit. The wires S are brought from the troughs E in said conduit and pass through the pipes O and enter the house through a perforated cap Q, secured to the end of the pipe.

T is an inlet at the side or top of the pipe O just back of the cap Q, and is provided with a removable cover *t*.

R is a perforated plate adapted to fit the tube O, and supports the wires separated one from another, substantially as in the case of the cap Q. The space within the pipe or tube O and between the cap Q and plate R is filled with any suitable packing V, such as cotton, or, if desired, a plastic material, the object of which is to seal the end of the pipe O against escape of compressed air or gas which is forced into the conduit, as set out in Letters Patent granted to R. M. Hunter on April 10, 1883, No. 275,387.

If desired, the perforated plate R might be dispensed with, as it is not absolutely necessary. The construction of the bracket and clamping-plates for the troughs of this application is much more simple than that shown in Patent No. 314,568, hereinbefore referred to, and economy in construction of a conduit of this class is necessary to success.

While I prefer the construction shown, I do not limit myself to the details thereof, as they may be modified in various ways without departing from my invention.

Having now described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In an underground conduit, the combination of an asphalt or brick conduit II, the frame B, secured therein, having supporting-brackets D and anchor-pieces K, tubes or troughs E, supported upon said brackets, provided with longitudinal slots *d* and flanges *e*, clamping-plate F, corresponding to the brackets, and bolts G, adapted to clamp said flanges *e* and clamping-plates F together, substantially as and for the purpose specified.

2. In an underground conduit, the combination of an asphalt or brick conduit II, containing tubes or troughs E for the wires supported therein, a pipe O, extending from the conduit, wires brought through said pipe O into the troughs or tubes E in the conduit, and packing about said wires in the pipe to make it substantially air-tight, substantially as and for the purpose specified.

3. In an underground conduit, the combination of an asphalt or brick conduit II, containing tubes or troughs E for the wires supported therein, a pipe O, extending from the conduit, wires brought through said pipe O into the troughs or tubes E in the conduit, a perforated cap Q, through which the wires pass

and are separated one from another, and a packing about said wires in the pipe to make it substantially air-tight, substantially as and for the purpose specified.

4. In an underground conduit, the combination of an asphalt or brick conduit II, containing tubes or troughs E for the wires supported therein, a pipe O, extending from the conduit, wires brought through said pipe O into the troughs or tubes E in the conduit, a perforated cap Q and a perforated plate R, through which the wires pass and are separated one from another, and a packing about said wires in the pipe to make it substantially air-tight, substantially as and for the purpose specified.

5. The combination of the conduit A, the pipe O, the cap J, having perforations, wires S, passing through the pipe O and cap, an entrance or hand-hole T to the end of the pipe and next to the cap, and packing V around the wires, substantially as and for the purpose specified.

In testimony of which invention I hereunto set my hand.

JOSIAH S. DU BOIS.

Witnesses:

R. M. HUNTER,
ANDREW ZANE, Jr.