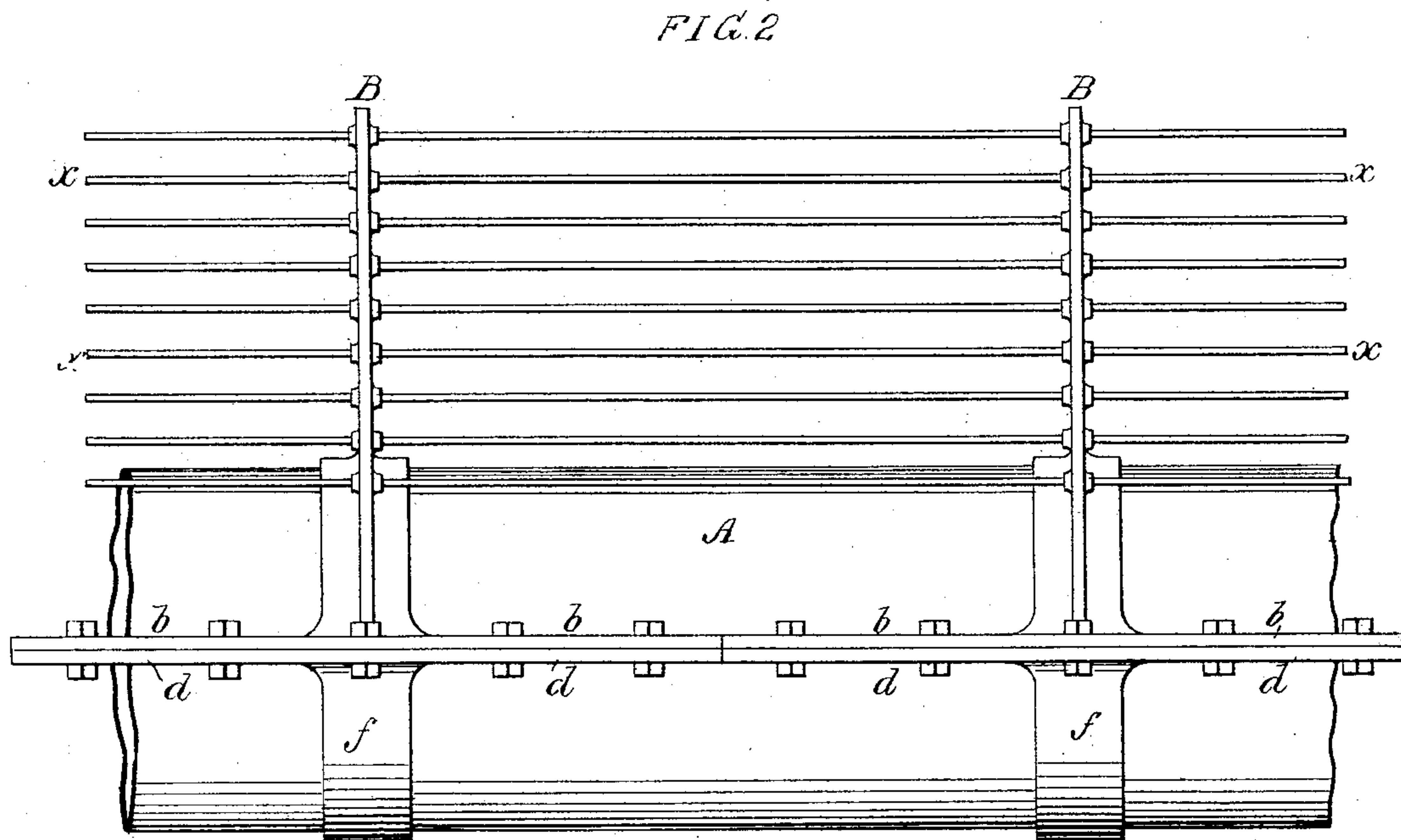
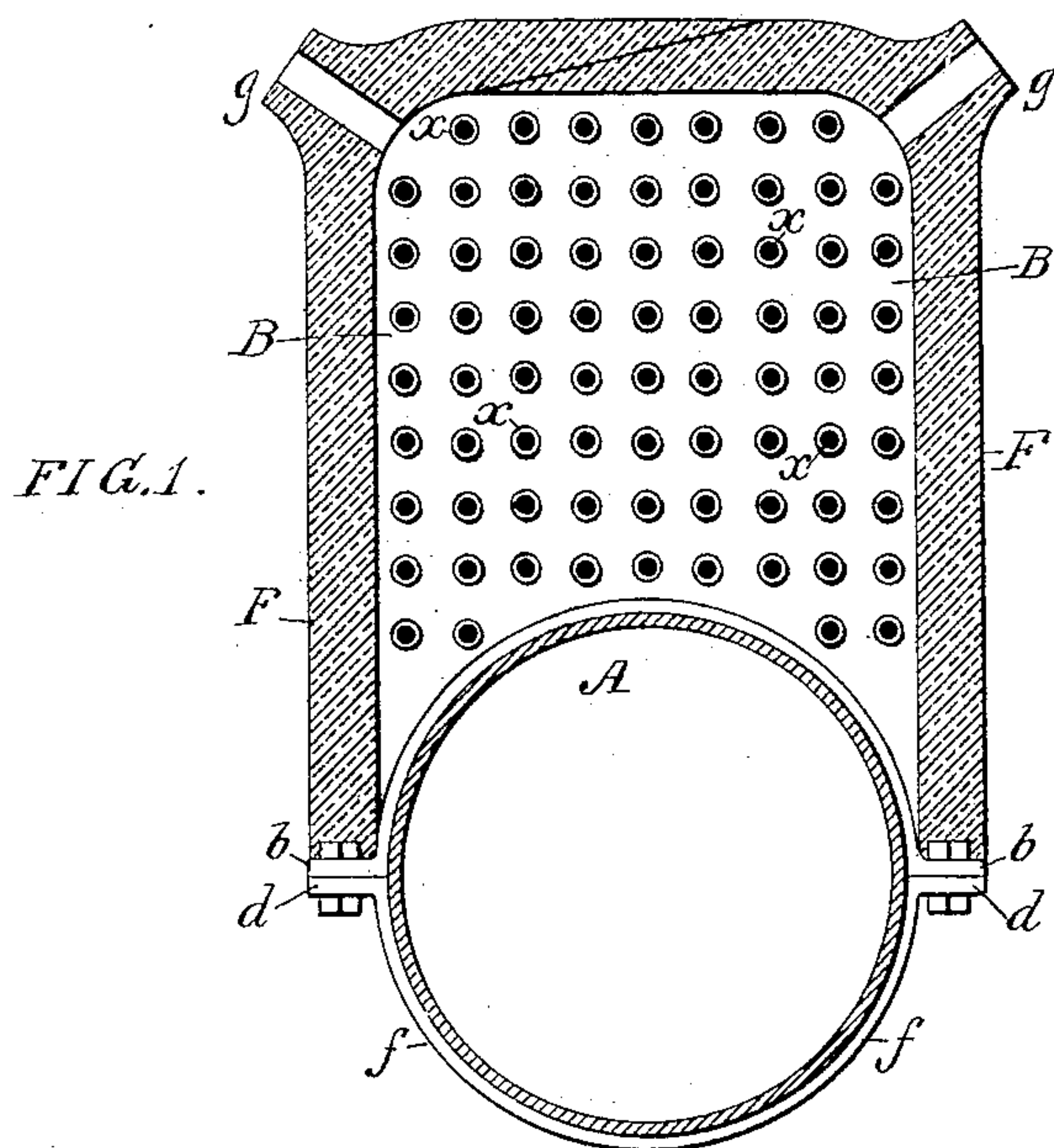


W. COHLMAN.

UNDERGROUND TELEGRAPH LINE.

No. 277,007.

Patented May 8, 1883.



WITNESSES:

Harry Drury
Harry L. Ashenfelter

INVENTOR:

William Cohlman
By his Attorneys
Howson & Sons

(No Model.)

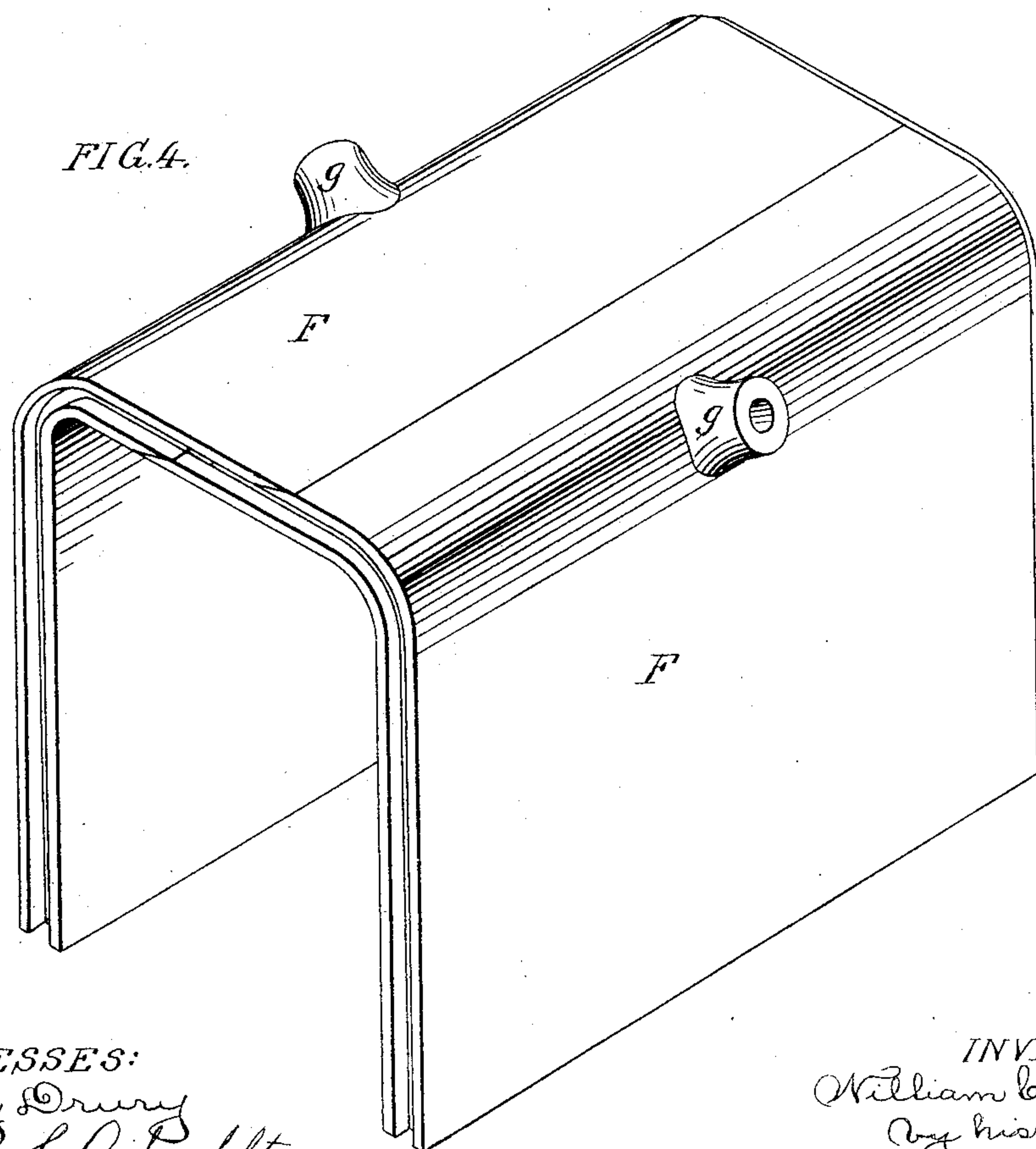
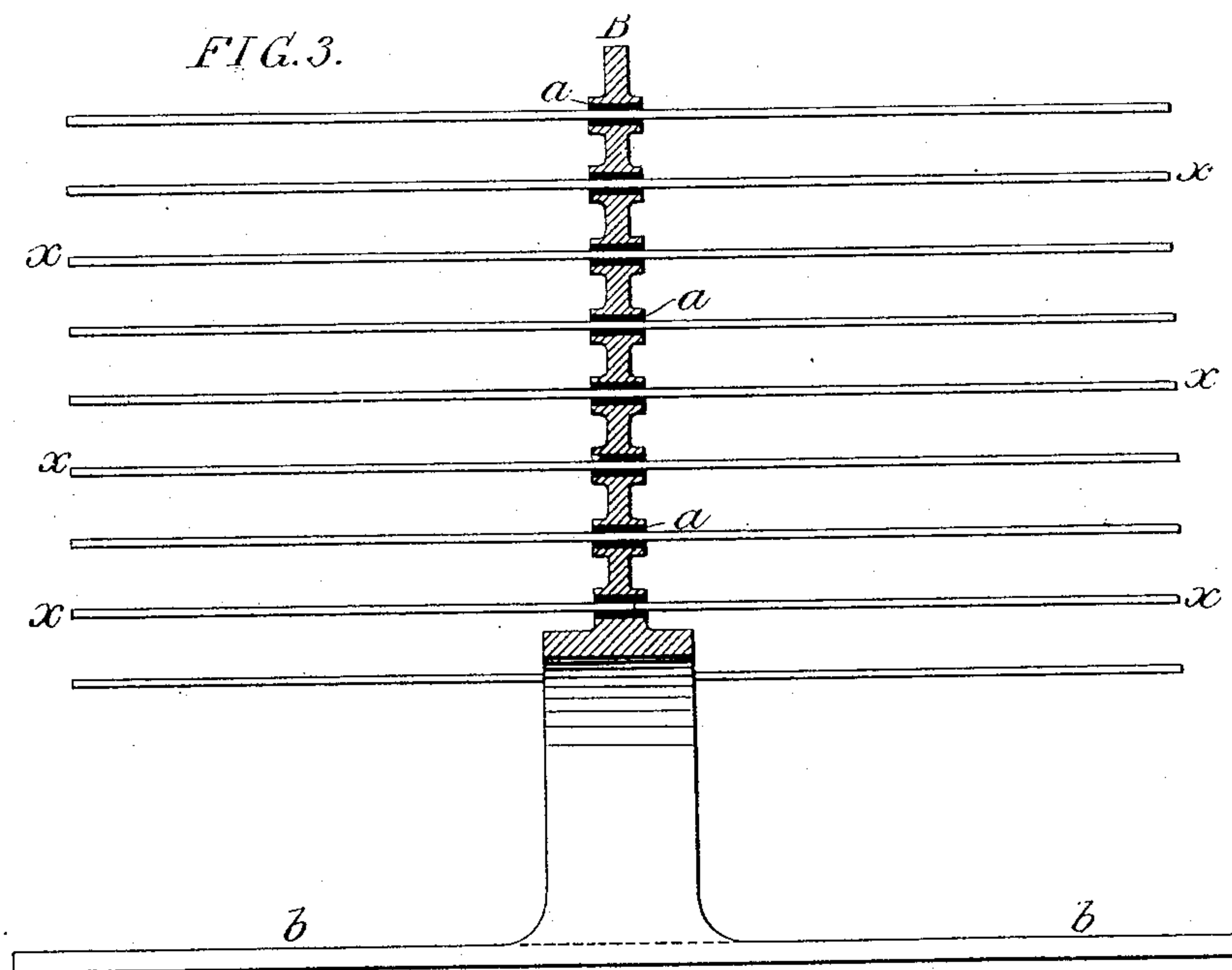
2 Sheets—Sheet 2.

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UNITED STATES PATENT OFFICE.

WILLIAM COHLMAN, OF PHILADELPHIA, PENNSYLVANIA.

UNDERGROUND-TELEGRAPH LINE.

SPECIFICATION forming part of Letters Patent No. 277,007, dated May 8, 1883.

Application filed March 23, 1883. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM COHLMAN, a citizen of the United States, and a resident of Philadelphia, Pennsylvania, have invented an Improvement in Underground-Telegraph Lines, of which the following is a specification.

The object of my invention is an underground-telegraph line which can be constructed rapidly and economically, and can be made to accommodate a great number of wires, to any one of which access can be had without removing the others; and this object I attain in the manner which I will now proceed to describe, reference being had to the accompanying drawings, in which—

Figure 1 is a transverse vertical section of an underground-telegraph line constructed in accordance with my invention; Fig. 2, a side view of part of the same with the covering removed; Fig. 3, an enlarged view of part of the structure, and Fig. 4 a perspective view of one of the sections of the cover.

A is a pipe or tube, which may represent any of the underground conduits with which cities are provided—such as a water, drain, or sewer pipe—it being one of the objects of my invention to use these pipes, which are already in position, as a means of supporting the structure which carries the wires; or where this is not permissible I propose to lay the pipe A, which can be used for any of the purposes specified or as a conduit for electric-light wires.

To the pipe A, at appropriate intervals, are secured frames B, in which are formed openings for the reception of the electrical conductors *x*, the openings being arranged as closely together as possible without risking the contact of the wires with each other or interfering with access to any of the wires without necessitating the removal of others. When the wires are provided with an insulating covering they may be passed directly through the openings in the frames B; but where uninsulated wires are employed the openings should be furnished with short sleeves *a*, of porcelain, glass, or other insulating material. The frames B rest upon the upper half of the pipe A, and are in the present instance provided with opposite flanges, *b b*, extending longitudinally along the sides of said pipe, and bolted to similar flanges, *d d*, on bands *f*,

which pass around the lower half of the pipe, so that vertical displacement of the frames is impossible.

The frames B and the wires carried thereby are inclosed by a casing, F, of clay or cement, this casing resting upon the flanges *b*, and being made in sections meeting with a lap-joint at the top, and with lap, beveled, or undercut joints at the ends, so that when the sections of the casing are fitted together and to the flanges *b* they will form a watertight covering, the joints being preferably luted or sealed to insure this result. Some of the sections of the casing may be furnished with tubular projections *g*, as shown, a section of this character being used whenever a branch from the main line becomes necessary.

By utilizing the pipe A as a means of supporting the frames B, which carry the wires, a saving in expense is effected; and as the operations of bolting the frames B to the pipe, drawing the wires through the openings in the frames, and fitting the sections of the casing into place are such as can be readily effected, the construction of the line is facilitated, and economy is insured.

The casing B may rest on a special foundation instead of on the flange *b*; but the latter plan is preferred as the most economical.

I claim as my invention—

1. The combination of the pipe A, the frames B, mounted on and supported by said pipe, and having openings for the wires, with the inclosing-frame F, as set forth.

2. The combination of the pipe A, the frames B, having flanges *b*, and the bands *f*, having flanges *d*, bolted to said flanges *b*, as set forth.

3. The combination of the pipe A, the frames B, carrying the wires, and the inclosing-casing F, made in sections, as set forth.

4. The combination of the pipe A, the frames B, carrying the wires and having flanges *b*, and the inclosing-casing F, resting on said flanges, as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WILLIAM COHLMAN.

Witnesses:

HARRY H. ASHENFELTER,
HARRY SMITH.