

(No Model.)

E. SAMUEL.

CONDUIT FOR CABLE OR ELECTRICAL RAILWAYS.

No. 315,841.

Patented Apr. 14, 1885.

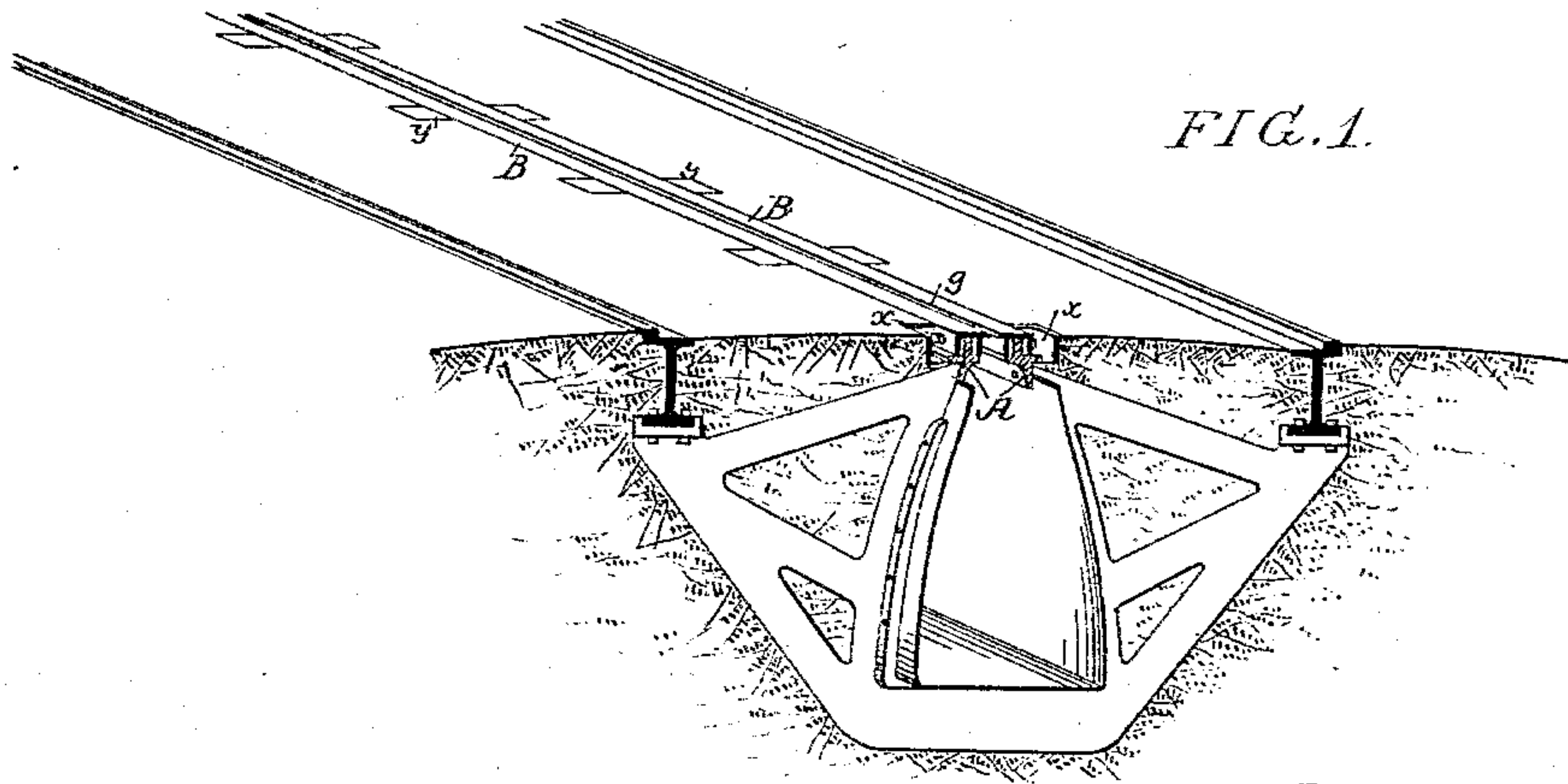


FIG. 1.

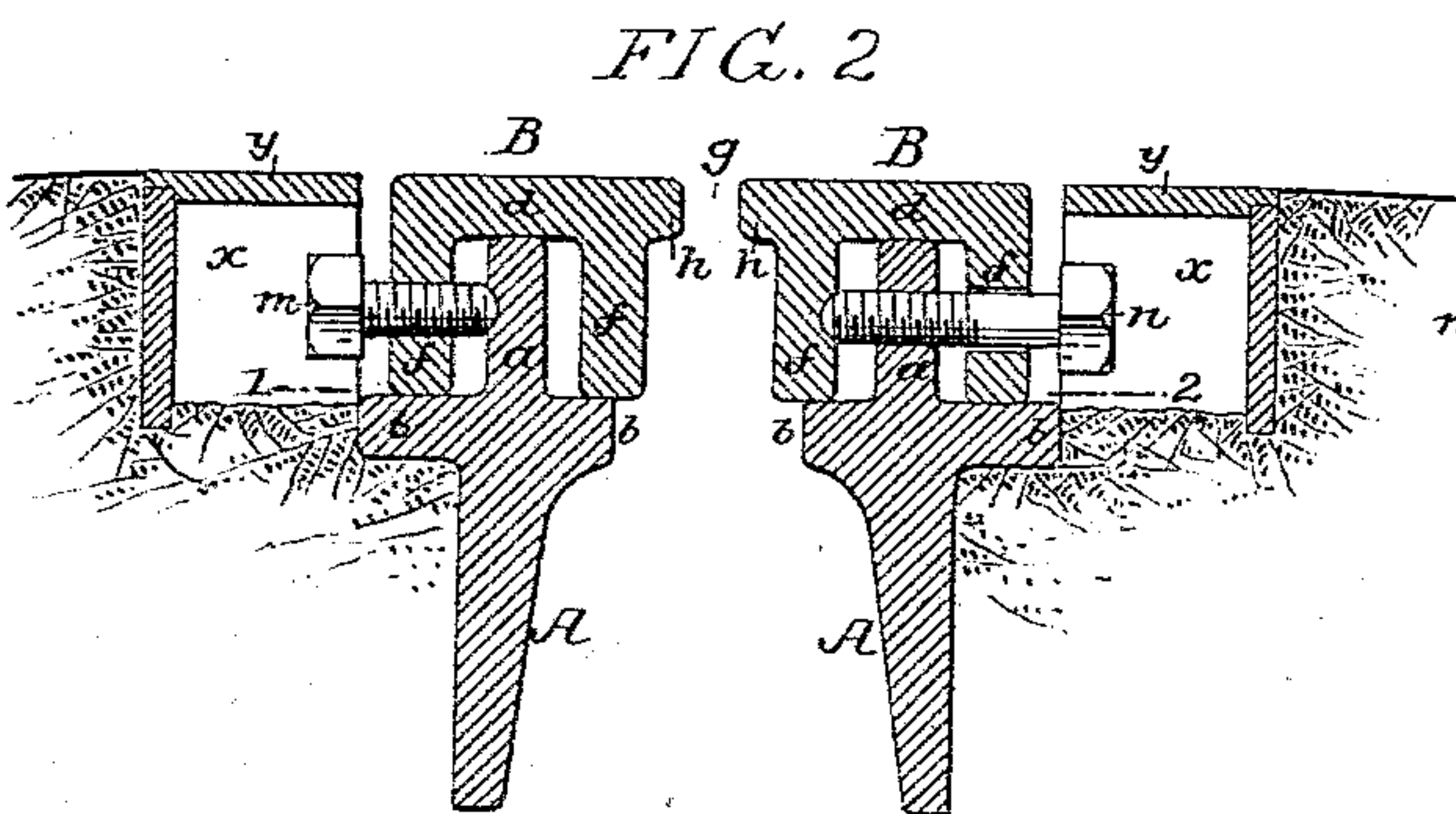


FIG. 2.

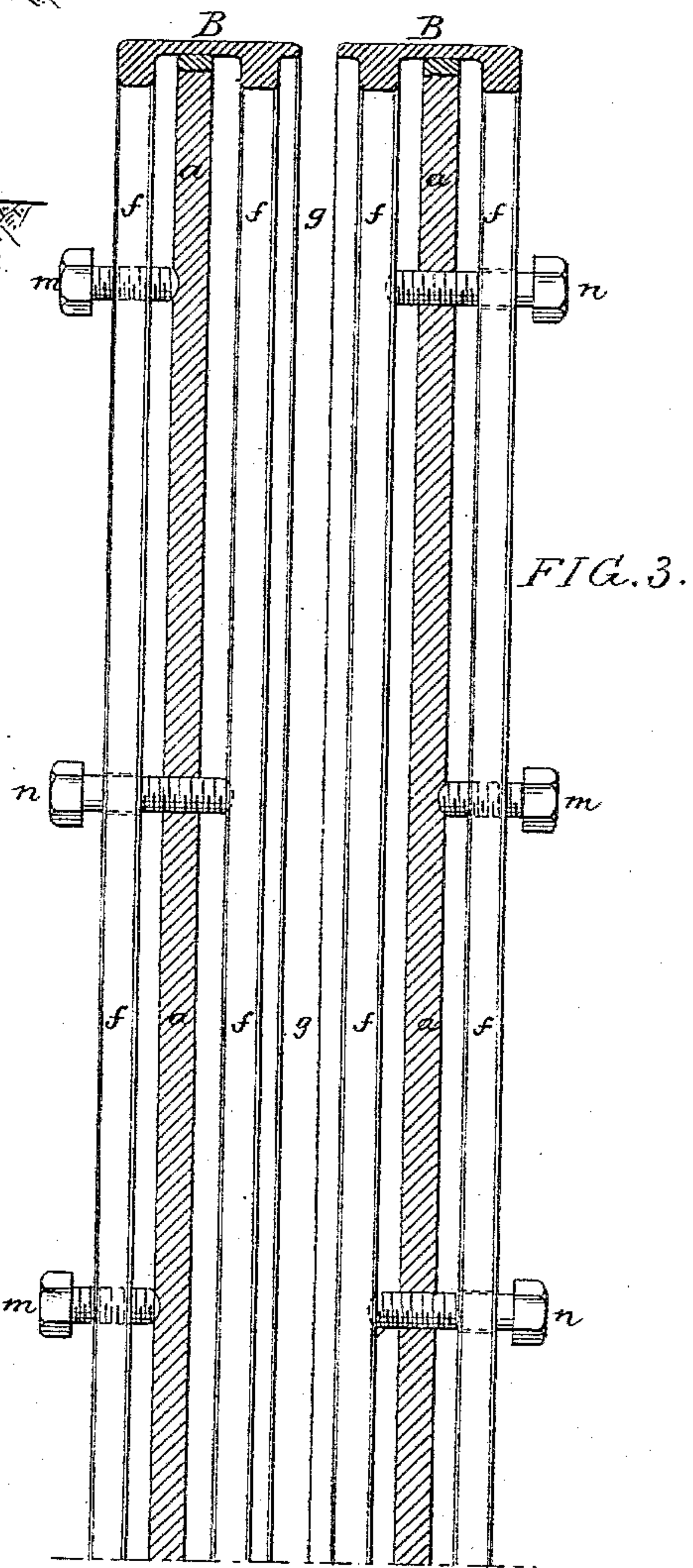


FIG. 3.

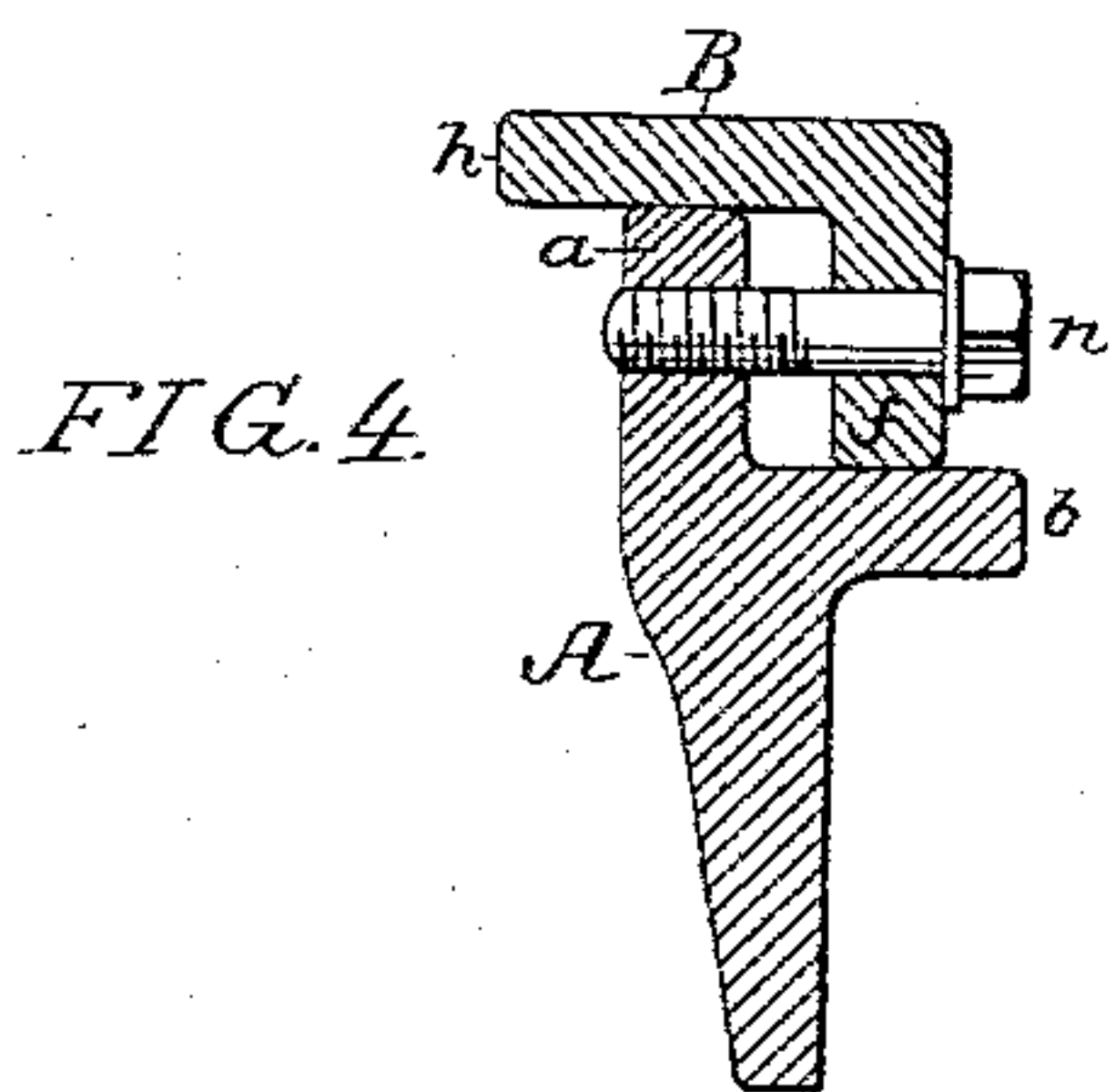


FIG. 4.

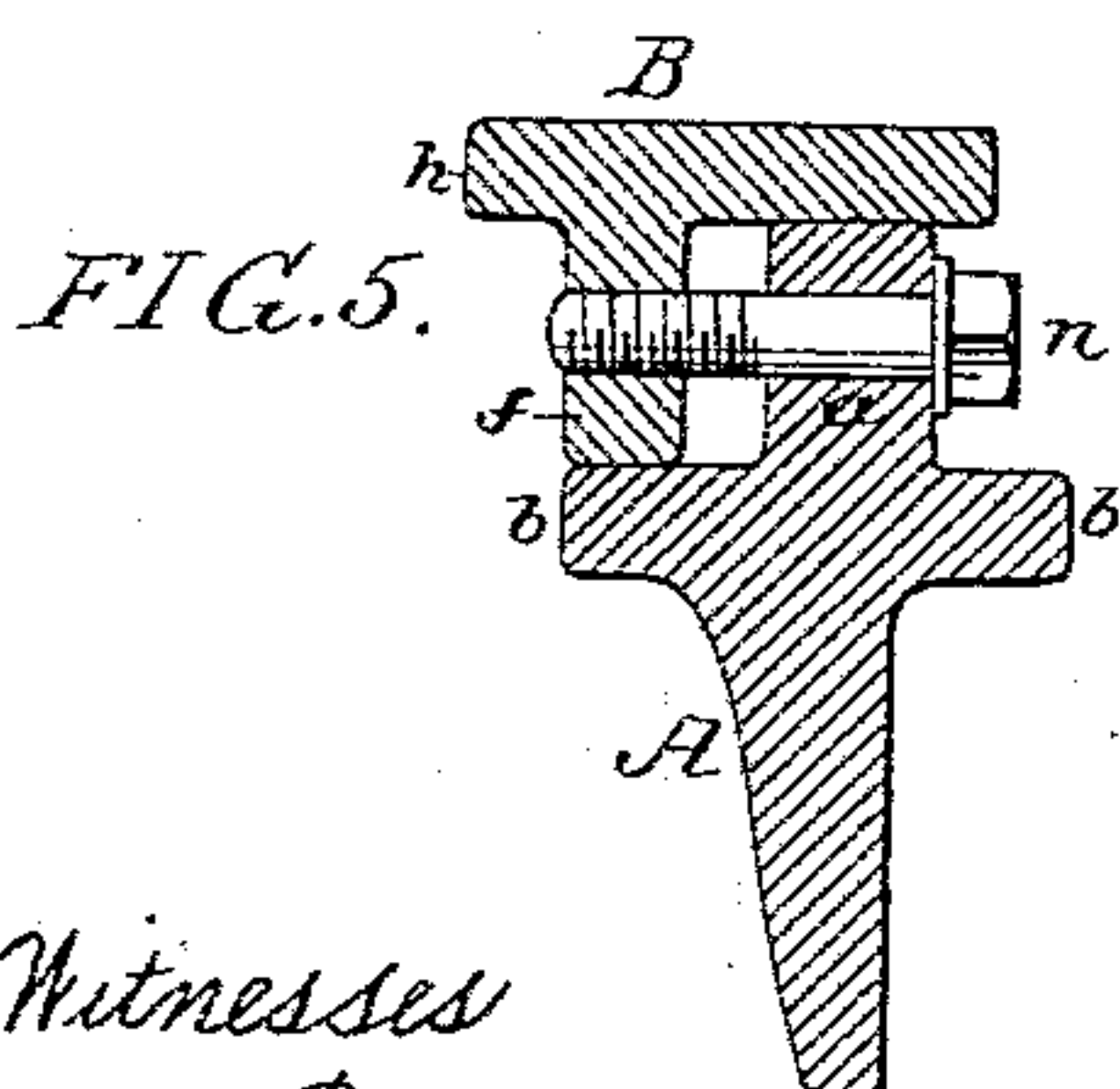


FIG. 5.

Witnesses
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UNITED STATES PATENT OFFICE.

EDWARD SAMUEL, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO
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CONDUIT FOR CABLE OR ELECTRICAL RAILWAYS.

SPECIFICATION forming part of Letters Patent No. 315,841, dated April 14, 1885.

Application filed March 6, 1885. (No model.)

To all whom it may concern:

Be it known that I, EDWARD SAMUEL, a citizen of the United States, and a resident of Philadelphia, Pennsylvania, have invented certain Improvements in Conduits for Cable or Electrical Railways, of which the following is a specification.

The object of my invention is to provide the conduit of a cable or electric railway with "slot-irons," which, while firmly supported upon the conduit, can be readily adjusted laterally thereon to increase or diminish the width of the slot, and can be readily removed and replaced without entering or disturbing the main structure of the conduit or tearing up the street-pavement, and without interfering with the running of the cars.

In the accompanying drawings, Figure 1 is a perspective view of a section of street with my improved conduit; Fig. 2, a transverse section of the upper portion of the conduit, showing my invention; Fig. 3, an inverted sectional plan on the line 1 2, Fig. 2; and Figs. 4 and 5, views illustrating modifications of the invention.

A A are bars forming the upper portions of the opposite sides of the conduit. These bars may be integral with said sides, or may be separate pieces attached thereto, as preferred.

As shown in Fig. 1, each bar A terminates at the top in a vertical flange, *a*, at the base of which are inner and outer horizontal shoulders, *b b*.

Embracing the flange *a* of each bar A is a channel-bar, B, or, as it is usually termed, a "slot-iron," the web *d* of which bears upon and is supported by the top of the flange *a*, the opposite wings or flanges *f f* of the slot-iron resting upon the shoulders *b b* of the bar A, which thus assist the flange *a* in supporting the said slot-iron.

The slot *g*, for the passage of the grip or conductor bar, is bounded by the inner edges of the ribs *h* on the slot-irons B, and in order that the width of the slot may be increased or diminished as desired, the distance between the flanges *f f* of each slot-iron is greater than the width of the flanges *a* of the supporting-bars A, so that lateral adjustment of the slot-irons on the bars is permitted. This adjust-

ment is effected by means of set-screws *m* and *n*, which, in the present instance, alternate with each other throughout the length of the conduit. The set-screws *m* are adapted to threaded openings in the outer flange, *f*, of each slot-iron B, and bear against the outer face of the flange *a* of the bar A, and the set-screws *n* pass through openings in the outer flange, *f*, of the slot-iron, and are adapted to threaded openings in the flange *a*, and bear upon the inner flange, *f*, of said slot-iron. The set-screws *m* thus serve to limit the inward movement of the slot-iron, and the screws *n* limit the outward movement of the same, so that by properly manipulating both sets of screws the lateral adjustment of the slot-irons on the bars A can be effected as desired, the said slot-irons being firmly locked in position after adjustment by tightening both sets of screws.

While I prefer the use of channel or U-shaped bars to form the slot-irons of the conduit, angle or T bars may be used, if desired, as shown in Figs. 4 and 5, some of the set-screws being adapted to threaded openings in the flange of the slot-iron and others to threaded openings in the flange of the supporting-bar A, so as to provide for adjustment and locking of the slot-irons on the supporting-bars, as above set forth.

The heads of the adjusting-screws *m* and *n* are preferably contained in boxes or casings *x* at the sides of the conduit, these boxes having removable covers *y* flush with the pavement, so as to permit ready access to the screws when it is desired to adjust or remove the slot-iron, for it will be observed that the lateral adjusting-screws also serve to keep the slot-iron vertically in position on the conduit, so that on withdrawing said screws the slot-iron can be readily removed, when necessary—as, for instance, when said slot-iron has become worn, or when it is desired to gain access to the inside of the conduit from the top.

Conduits with laterally-adjustable slot-irons have been heretofore devised, as shown, for instance, in my Patent No. 282,783, dated August 7, 1883, and therefore I do not claim, broadly, a laterally-adjustable and vertically-removable slot-iron.

The advantage of the present construction is, that the adjustment or removal of the slot-iron can be effected without any disturbance of the street-pavement, without stopping the running of the cars, and without the necessity of going inside the conduit, the slot-irons and their adjusting and securing devices being within the limits of the opening in the street-pavement, and said adjusting and securing devices being accessible from the surface of the street.

I prefer to so construct the parts that the lateral movement of the slot-irons will be sufficient to expand the slots to such an extent as to permit the lifting of the traction-cable or electrical conductor from the conduit through said slot, so that repairs can be made at any desired spot, the necessity of drawing the defective portion of the cable or conductor to a man-hole or station being obviated.

The conduit may have a removable and adjustable slot-iron on one side only, if desired; but it is preferable to adopt the construction shown in the drawings.

I claim as my invention—

1. A cable or electrical railway conduit having a detachable slot-iron contained within the limits of the opening in the street-pavement, and combined with securing devices accessible from the surface of the street, all substantially as specified.

2. The combination of a cable or electrical railway conduit with a laterally-adjustable slot-iron and adjusting devices therefor contained within the limits of the opening in the street-pavement, and accessible from the surface of the street, as set forth.

3. The combination of a cable or electrical railway conduit with a removable and later-

ally-adjustable slot-iron, and with transverse set-screws serving both to adjust said slot-iron and to confine the same vertically to the conduit, as set forth.

4. The combination of the bar A, secured to or forming part of a conduit, with the slot-iron B, adjustable laterally on the bar, and with two sets of adjusting devices, one controlling the movement of the slot-iron in one direction, and the other controlling its movement in the opposite direction, as specified.

5. The combination of the bar A, secured to or forming part of a conduit, and having a shoulder below the top, with a slot-iron having one support upon the top of the bar and another on the shoulder below the top, as set forth.

6. The combination of the bar A, secured to or forming part of a conduit, with the channel-bar B, occupying an inverted position over the top of the bar A, and forming the slot-iron of the conduit, and with devices for laterally adjusting said slot-iron, as set forth.

7. The combination of the bar A, secured to or forming part of a conduit, the laterally-adjustable slot-iron B, and the two sets of transverse adjusting screws *m* and *n*, one set of screws having a bearing on the bar and being adapted to threaded openings in the slot-iron, and the other set having a bearing on the slot-iron and being adapted to openings in the bar, as set forth.

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

EDWD. SAMUEL.

Witnesses:

JAS. QUINN, Jr.,
W. J. BURNS.