

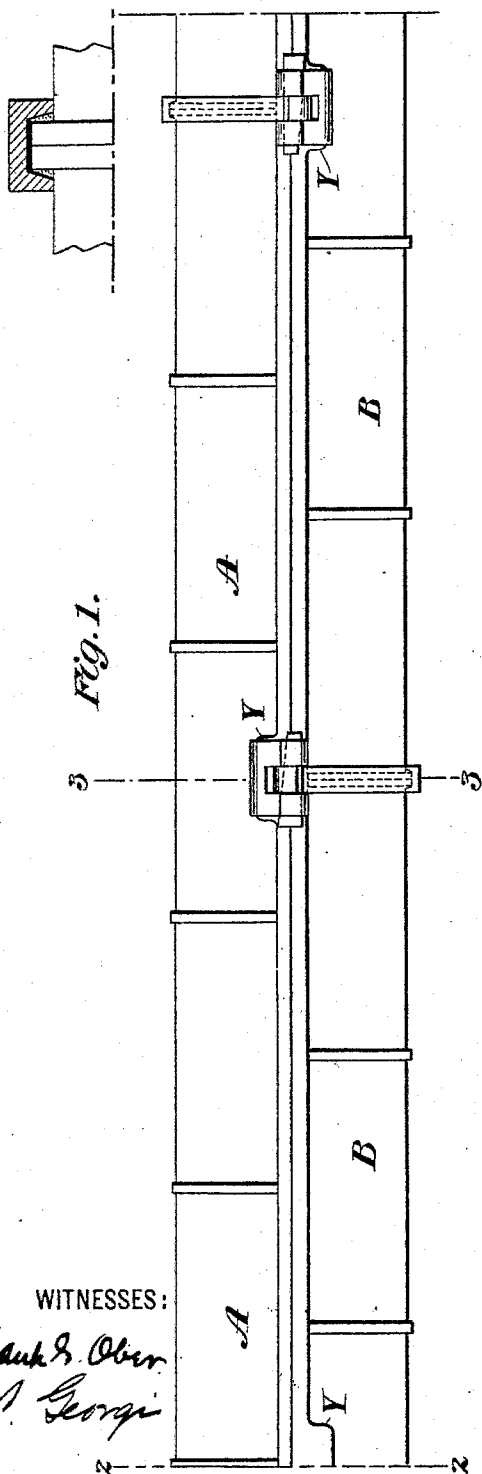
(No Model.)

2 Sheets—Sheet 1.

W. H. HART.
SUBWAY FOR ELECTRICAL CONDUCTORS.

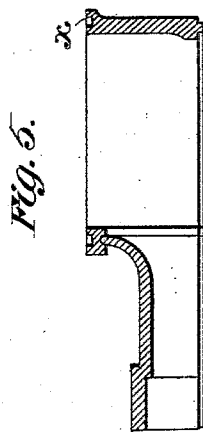
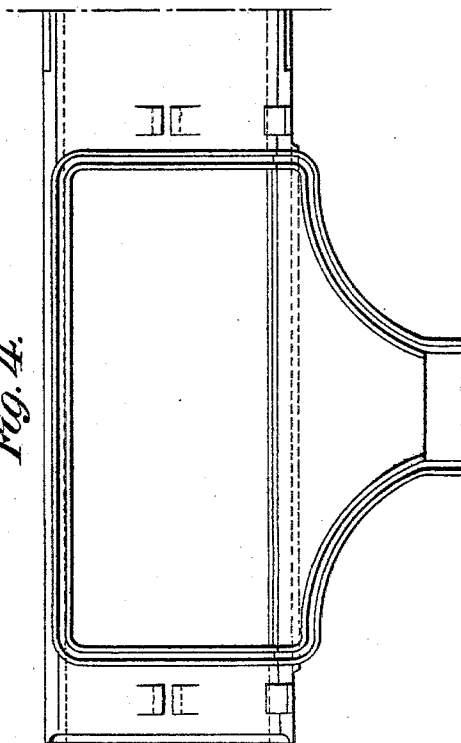
No. 564,994.

Patented Aug. 4, 1896.



WITNESSES:
Frank S. Olsen
C. Georgi

Fig. 4.



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William H. Hart
BY
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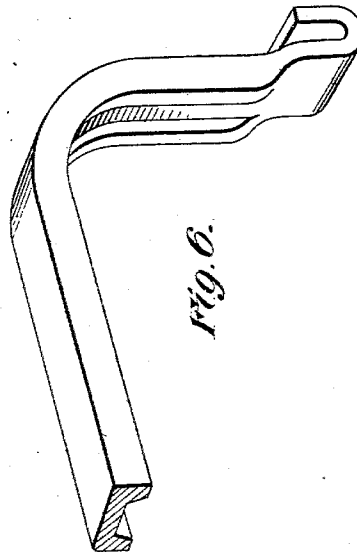
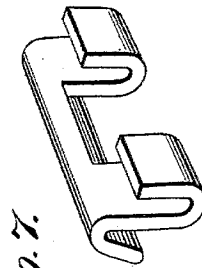
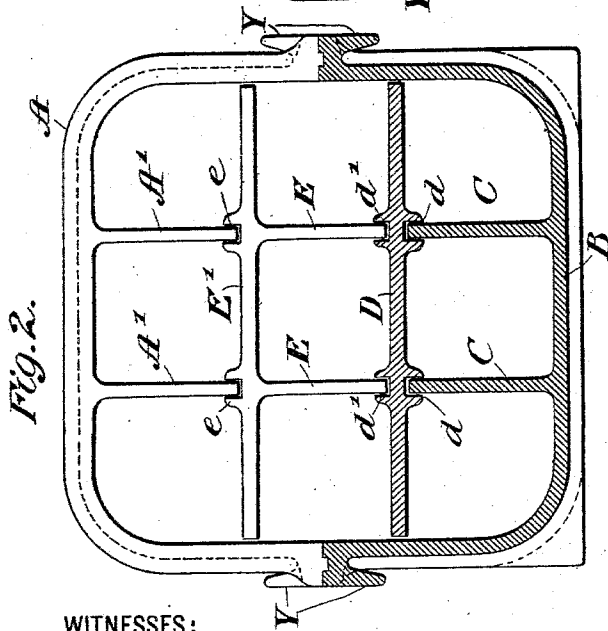
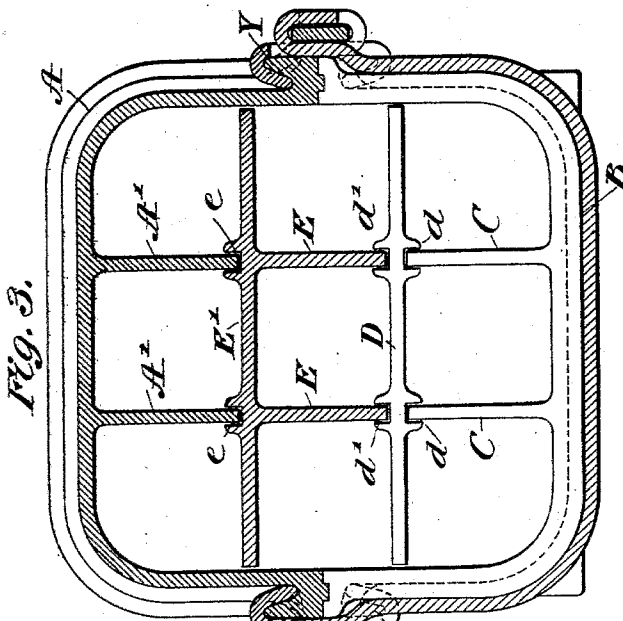
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2 Sheets—Sheet 2.

W. H. HART.
SUBWAY FOR ELECTRICAL CONDUCTORS.

No. 564,994.

Patented Aug. 4, 1896.



WITNESSES:

Frank S. Ober.
C. George

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UNITED STATES PATENT OFFICE.

WILLIAM H. HART, OF BROOKLYN, NEW YORK, ASSIGNOR TO LEWIS MAY,
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SUBWAY FOR ELECTRICAL CONDUCTORS.

SPECIFICATION forming part of Letters Patent No. 564,994, dated August 4, 1896.

Application filed May 20, 1896. Serial No. 592,271. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. HART, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Subways for Electrical Conductors, of which the following is a specification.

In Letters Patent of the United States No. 380,757, granted April 10, 1888, to myself and James T. Goodfellow, is shown a subway system in many respects analogous to that herein described, and upon which my present invention is an improvement. Except as herein specified, the organization herein is similar to that disclosed in said Letters Patent, and to the construction that has been adopted in practice in the laying of the system of the patent in the city of New York and elsewhere. One defect of the system disclosed in the patent above mentioned has been the displacement of the partitions forming the conduits to receive the conductors after the structure has been laid in the earth. An occurrence or accident of this character has been exceedingly annoying, as the fall of a partition in one of the sections sometimes resulted in the passage of the pilot used in threading a conductor into a duct from one duct into another, either above, below, or to one side, making it necessary to uncover the conduit, open it, and make the proper correction and repair of the partitions. In the system of the patent as heretofore put in use there has also been trouble from the breakage of the upper castings, due to the use of picks in excavating, or to the passage of very heavy trucks over the pavement when the conduit has been protected by an insufficient layer of earth.

The object of my present invention is to improve the construction of conduits of this class; and to this end the invention consists in certain improved features of construction hereinafter set forth and claimed.

In the accompanying drawings, Figure 1 is a longitudinal elevation of a section of a conduit; Fig. 2, a section therethrough on the line 2 2 of Fig. 1; Fig. 3, a similar section on the line 3 3 of Fig. 1; Fig. 4, a detached plan showing a section provided with a hand-

hole opening and lateral distribution extension; Fig. 5, a transverse section showing a cover-piece adapted to be placed over the opening indicated in Fig. 4, and Figs. 6 and 7 detail views illustrating the clamping devices applied at the joints between the sections of the conduit.

The conduit is constructed of two series of sections arranged end to end, an upper series and a lower series. The joint between two sections of the upper series is formed at the center of a section of the lower series, and vice versa.

A shows an upper section, and B B indicate lower sections. The manner of placing them together and locking them in position is the same as that indicated in the patent already referred to. At points where it is desirable to carry out wires for distribution the upper section is formed as indicated in Fig. 4. The opening there shown may be closed by a solid cover-piece or by a cover-piece as indicated in Fig. 5, which is open at the top and formed with a groove *x* for the reception of a solid cover or another open section where it is desired to build up to the surface, the solid cover then being applied inside. These matters are all well known, however, and form no part of my present invention.

In my present organization the vertical partitions C C, of which there may be one, two, or more, according to the size of the conduit, are formed in one piece with the lower section. A horizontal partition D, having channels or seats *d* to receive the upper ends of the partition C, is then placed in position, and the ends of the part D are in suitable proximity to the side walls of the conduit. On the upper face of the partition D are similar channels or seats *d'* to receive the partition E, extending downwardly from and formed in one piece with a horizontal partition E'. This partition E' has upon its upper face channels or seats *e* to receive vertical partitions A', formed in one piece with and extending down from the top wall of the upper conduit-section. It will be obvious that with such a construction a displacement of the partitions will be impossible, and the formation of the vertical partitions C C and A' A' upon and in one piece with the upper and lower sections, re-

spectively, adds to the stiffness and strength of these sections. The upper and lower sections A B may be cast, and when made as described the upper sections are better able to resist the strains and blows hereinbefore referred to. A greater degree of strength, toughness, and durability may however be obtained by making the sections of wrought metal, giving them their general form by rolling. The lugs or hooks Y Y may then be attached to the sections in any suitable manner.

I claim as my invention—

1. In a subway system of the character described, the combination of the upper and lower sections A B joined as described to form a closed conduit, and vertical and horizontal partitions dividing the closed conduit into ducts, the vertical partitions A' A' at the top of the conduit being formed in one piece with the upper section A, and the horizontal partitions being removable, all substantially as and for the purpose set forth.

2. In a subway system of the character described, the combination of the upper and lower sections A B joined as described to form a closed conduit, vertical and horizontal par-

titions dividing the interior of the conduit into ducts, the vertical partitions of the upper part of the conduit being formed in one piece with the upper section A, and the vertical partitions at the lower part of the conduit being formed in one piece with the lower section B, and the horizontal partitions being removable and respectively formed in one piece, all substantially as and for the purpose set forth.

3. In a subway system, substantially such as herein described, the combination of the upper and lower sections, each having vertical partitions formed in one piece therewith, a horizontal partition having in its upper and lower faces channels or seats for vertical partitions, and a second horizontal partition having vertical partitions in one piece therewith, and extending from one side thereof and having on its other side seats or channels.

In testimony whereof I have hereunto subscribed my name.

WILLIAM H. HART.

Witnesses:

FRANK S. OBER,

CATHARINE GEORGI.