(No Model.)

E. CAMPBELL.

CONDUIT FOR ELECTRICAL CONDUCTORS.

No. 346,840. Patented Aug. 3, 1886.

Fig. 1

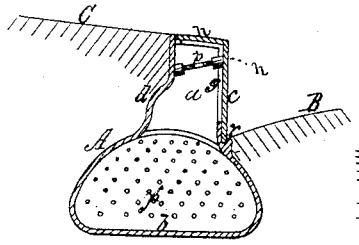


Fig. 2

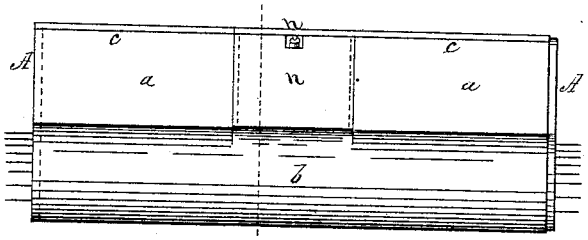


Fig. 3

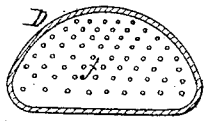


Fig. 4

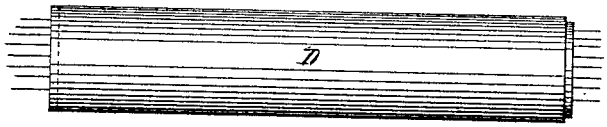


Fig. 5

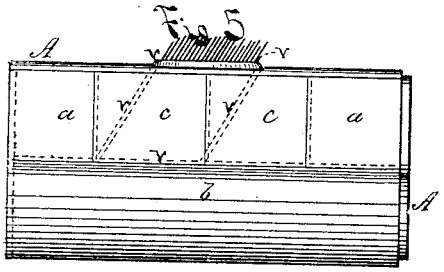


Fig 6

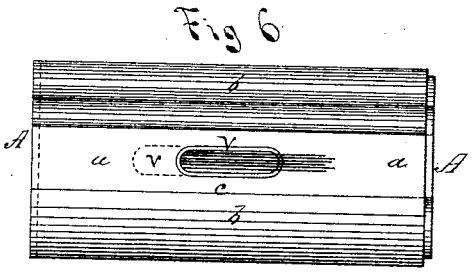
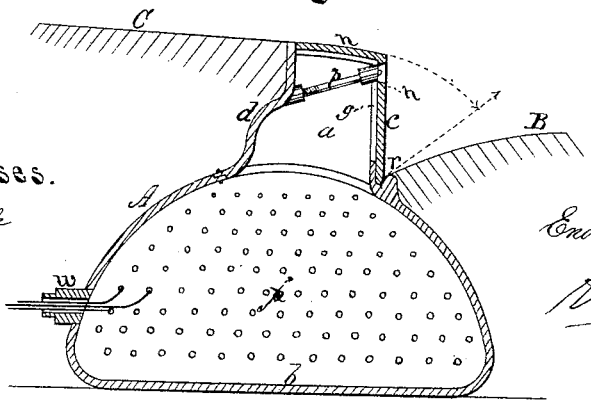


Fig. 7



Witnesses.
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UNITED STATES PATENT OFFICE.

ENOS CAMPBELL, OF MINNEAPOLIS, MINNESOTA.

CONDUIT FOR ELECTRICAL CONDUCTORS.

SPECIFICATION forming part of Letters Patent No. 346,840, dated August 3, 1886.

Application filed February 2, 1886. Serial No. 190,629. (No model.)

To all whom it may concern:

Be it known that I, ENOS CAMPBELL, a citizen of the United States of America, residing at Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements in Conduits for Electric Conductors, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention is a combined street-curb and conduit for electric conductors, and embraces in brief the following novel features: A metallic conduit made in connective sections, each consisting of a rectangular upper trunk portion and an ovate basal trunk portion; also, said upper portion having its outer or front side rising vertically from the top of said basal portion, and having upon its rear or inner side suitably-curved and arch-bearing shoulders or springers; also, said conduit having suitable rectangular openings at suitable intervals made through the vertical front and contiguously-angled top of any one of said trunk-sections, and each said opening provided with suitable counter rabbet edges; also, a corresponding angle-plate cover for each of said openings, having its bottom edge securely setting into a longitudinal foot-groove, and its ends and rear top edge closing upon said rabbet edges and against the top edge of the rear side of said upper trunk portion, and held tightly shut by a suitable key-turned bolt, fastening the said angle-plate to the rear side of said opening; also, such connective sections of said conduit as are intended to lie under street and alley crossings, having each only the said basal trunk portion; also, the basal portion of said conduit having at suitable intervals perforated insulative and jointly-fitting transversal partitions; and, finally, certain conveniently-chosen sections of said conduit having each suitably-made conductor exits or outlets, all of which and their purposes are hereinafter more fully described, and illustrated by the accompanying drawings, in which like letters designate identical parts of said invention in the different figures, respectively.

Figure 1 is a transverse section of said conduit, showing in its upper and basal portions the bolt-closed man-hole covers and the pavement-arch springers of the former and the diametrically-ovate form of the latter, including one of said perforated partitions. Fig. 2 is a longitudinal view of the front or outer side of one of said trunk-sections, showing the internally-fastened man-hole cover securely set into its foot-groove, and having the exposed end of its clamp-bolt turned tightly within its protective recess. Fig. 3 is a transverse section of one of said street-crossing connective trunks. Fig. 4 is a longitudinal front view of the same. Fig. 5 is a longitudinal front view of one of said trunk-sections, showing one of said conductor-outlets leading obliquely from its basal portion through its upper or box portion, and with the ends of several electric conductors projecting above the same. Fig. 6 is a plan view of the same; and Fig. 7 is an enlarged transverse section of said conduit, showing, additionally to Fig. 1, one of said tube-outlets for electric conductors connecting through the foot-walks with houses along the conduit-route.

The letter A represents one of the connective sections of said conduit, of which *a* represents said upper or box portion, and *b* said ovate basal portion. Said upper portion, being longitudinally in the shape of a rectangularly-hollow trunk, has its outer or front side rising vertically from the open arch-ribbed top of said oval base to serve as a street-curb, *c*, along the inside of the gutter of the street-pavement B and the outer edge of the foot-walk C, as shown. The rear side of said upper part, *a*, has a curved surface in the form of shoulders or springers, *d*, upon which to rest the outer edges of the foot-walk area or vault arches in front of houses along said conduit-line. Said upper portion, *a*, therefore rises to a level with the surface of the pavement of said foot-walk and sufficiently above the side edges of the street pavement or gutters thereof to be a trunk-curb for the same, while the said basal portion *b*, being below the surface, protects and preserves the inclosed electric conductors from harm or molestation. Furthermore, said basal portion, being cast in one piece with said upper portion of the conduit, and declining therefrom on each side by equally oblate counter curves into a flat base of suitable width, serves to support said upper portion of its trunk-section, the contiguous and covering earth, and also to prevent any oblique inclination to either side of said conduit by the

over-pressure of sidewalk or street-pavement. The electric conductors, in any form, size, or kind, are strung along within said conduit, above or below, and in sufficient number to be conveniently supported by a suitable number of said transversal partitions *f*, jointingly secured diametrically across the sections of said conduit, as shown, said partitions being also perforated with correspondingly-sized reeve-holes, made regulatively successive through the whole series of said partitions, and through which the running ends of said electric conductors are passed for the purpose of thus unobstructively hanging and holding the same. In order to conveniently reach said conductors for the purpose of either arrangement or repair, man-holes or other like openings, *g*, are made at suitable intervals through the top or into the angle included between the top and front side of said upper or box portion of the conduit, as shown, and these rectangular openings, both from side to side and from said curb front to rear, are each tightly and protectively closed and covered by the angle-plate shutters *n*, which are made to jointingly fit within the rabbeted or flanged edges of said openings and be clamped against the rear top edge of the same by the safety-keyed and inwardly-secured turn-bolt *p*, as shown. The bottom edge of each said angle-plate shutters is step-jointed within a suitably-made foot-groove, *r*, as shown, which forms the center line of motion as said shutters are turned down and then withdrawn from said openings. All of said conduit connective sections, which are intended to pass under street and alley crossings are cast without the said curb-facing upper portion, *a*, and the electric conductors are reeved and hung within said connective sections D in the same way as in the aforesaid regularly-made conduit-sections. At convenient and desired intervals along the aforesaid regular conduits there are made the suitable outlets, *v* and *w*, as shown in Figs. 5, 6, and 7, for the purpose of connecting the ends of electric conductors issuing from said outlets with electric instruments in the aforesaid houses, or with electric communicative air-lines at either end or crossing one of said conduit-routes. Therefore

What I claim as new, and desire to secure by Letters Patent, is—

In the shell-conduit herein described, the transversely rectangular front side and top of the upper portion thereof, having correspondingly-shaped and regularly-interspaced man-holes, in combination with the pivoting and key-bolted angle-plate shutters, and with the pivotal and securing foot-grooves made along the lower edge of said man-holes and in the top of said ovate and sustaining basal portion of the conduit-shell, substantially as and for the purposes herein specified.

In testimony whereof I affix my signature in presence of two witnesses.

ENOS CAMPBELL.

Witnesses:
A. T. AUKERRY,
B. S. TROMBLY.