

(No Model.)

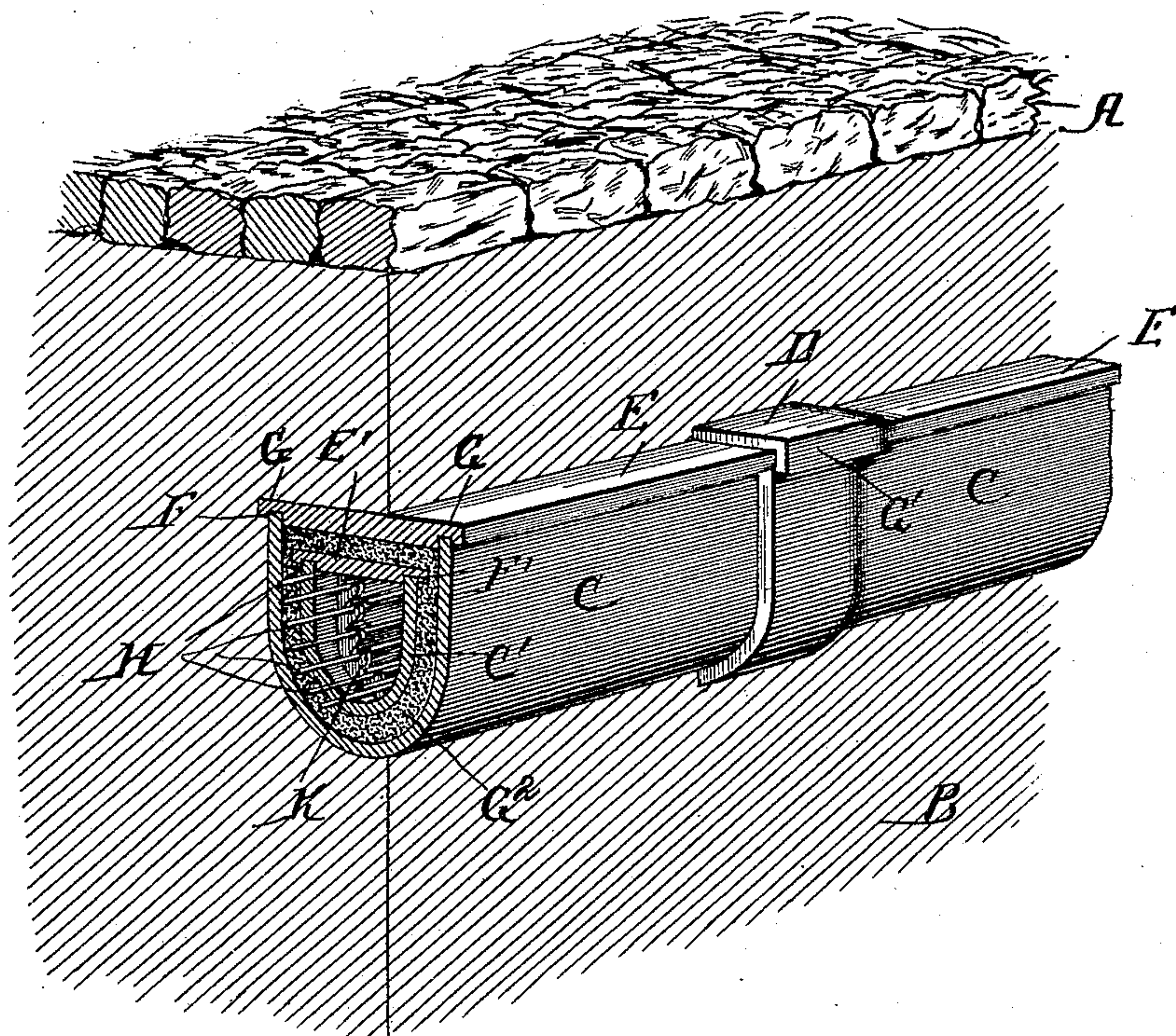
2 Sheets—Sheet 1.

H. H. YOUNG.  
UNDERGROUND ELECTRIC CONDUIT.

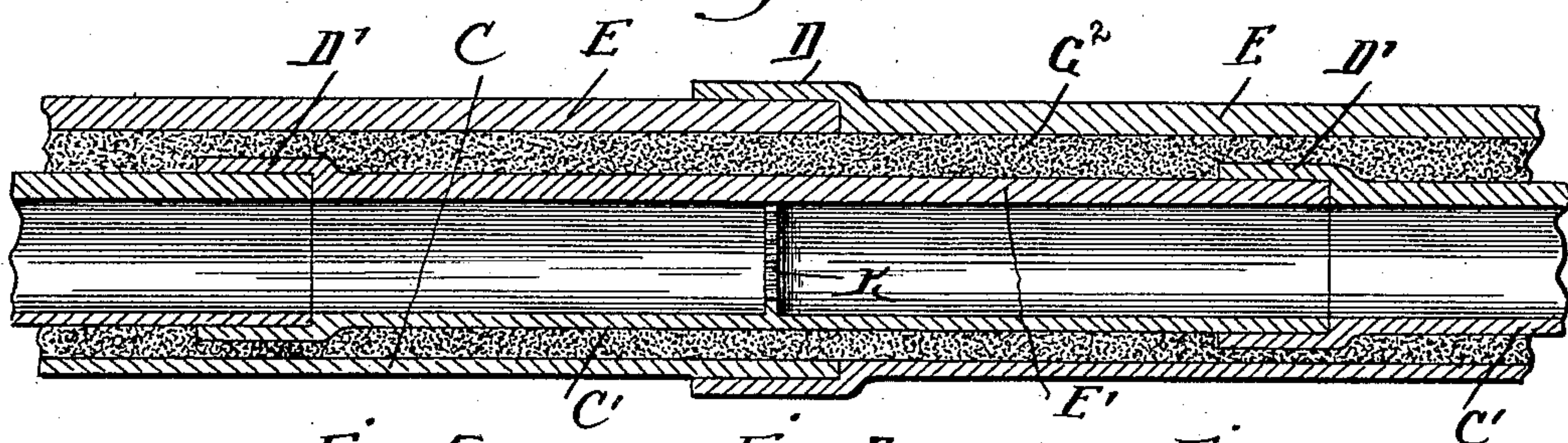
No. 442,162.

Patented Dec. 9, 1890.

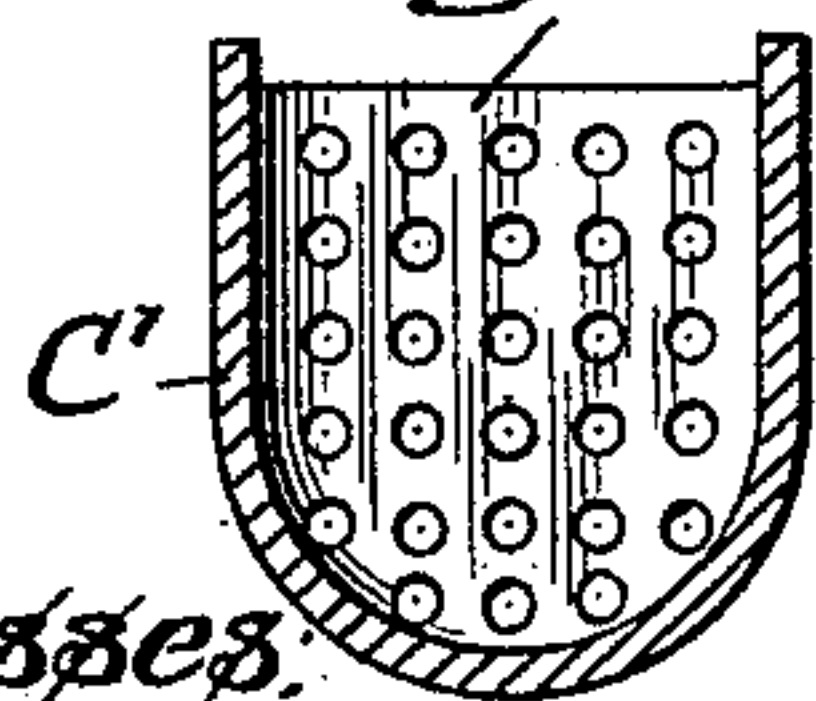
*Fig. 1.*



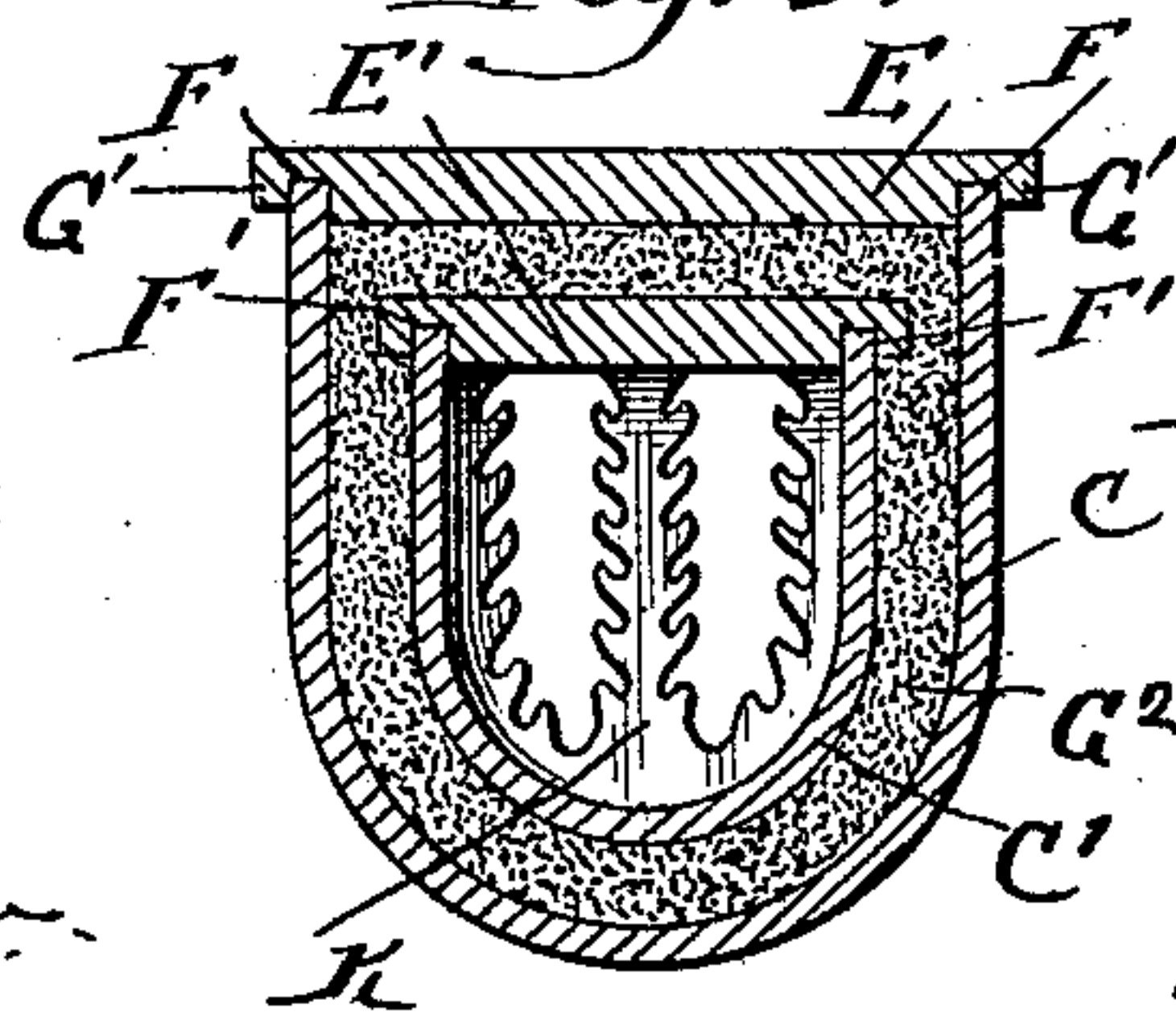
*Fig. 2.*



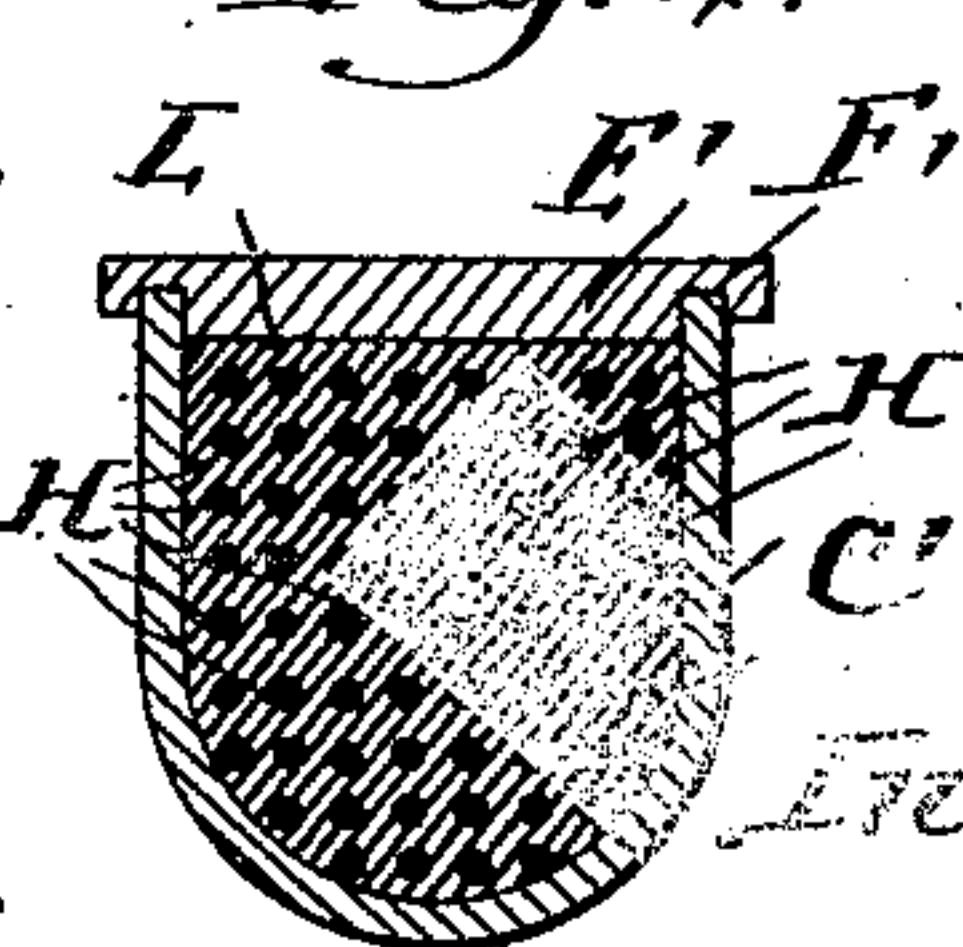
*Fig. 5.*



*Fig. 3.*



*Fig. 4.*



Witnesses:

Celeste P. Chapman.

Jean Elliott.

Inventor

Horner H. Young

Francis W. Parker,  
Attorney.



(No Model.)

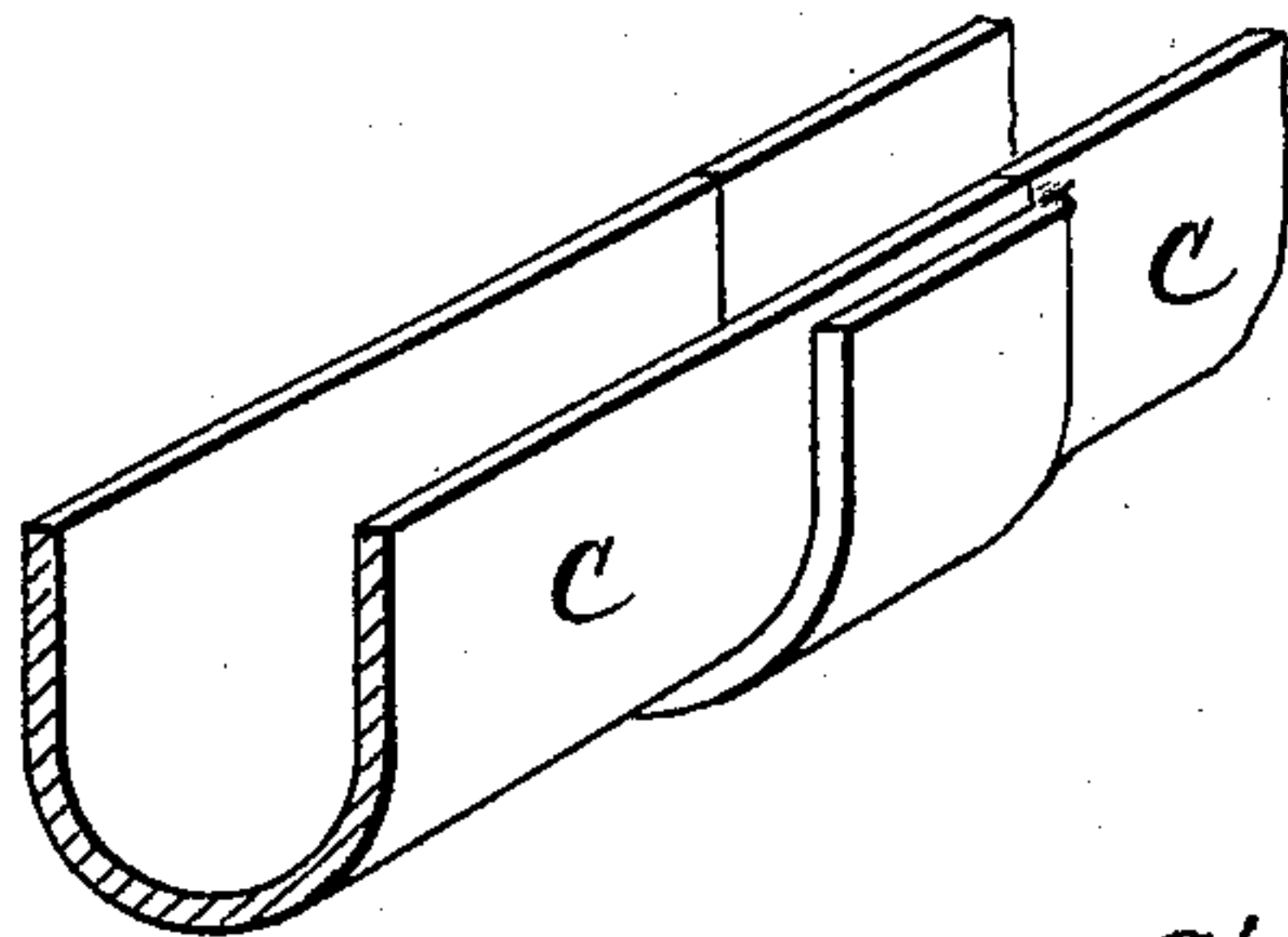
2 Sheets—Sheet 2.

H. H. YOUNG.  
UNDERGROUND ELECTRIC CONDUIT.

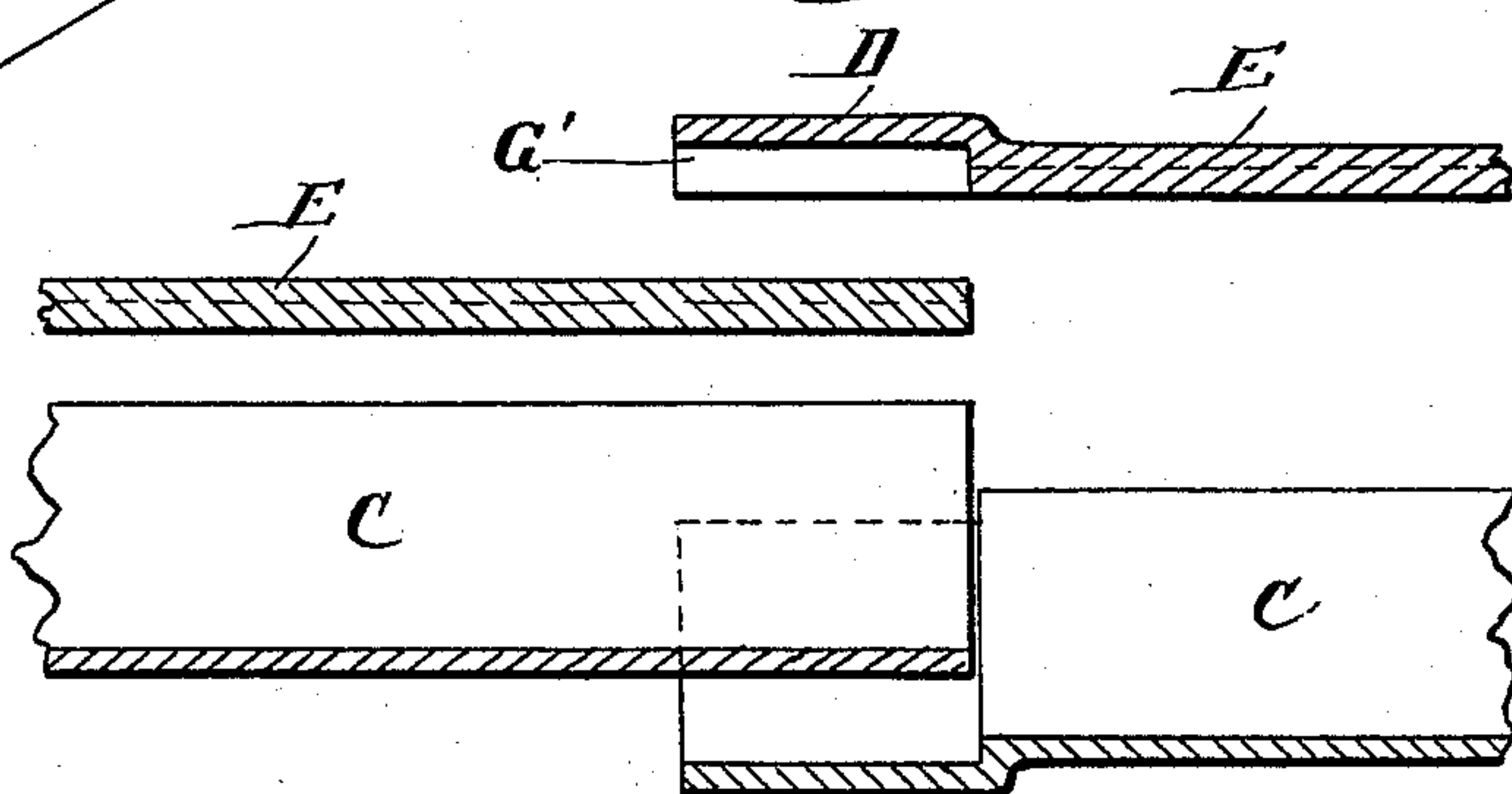
No. 442,162.

Patented Dec. 9, 1890.

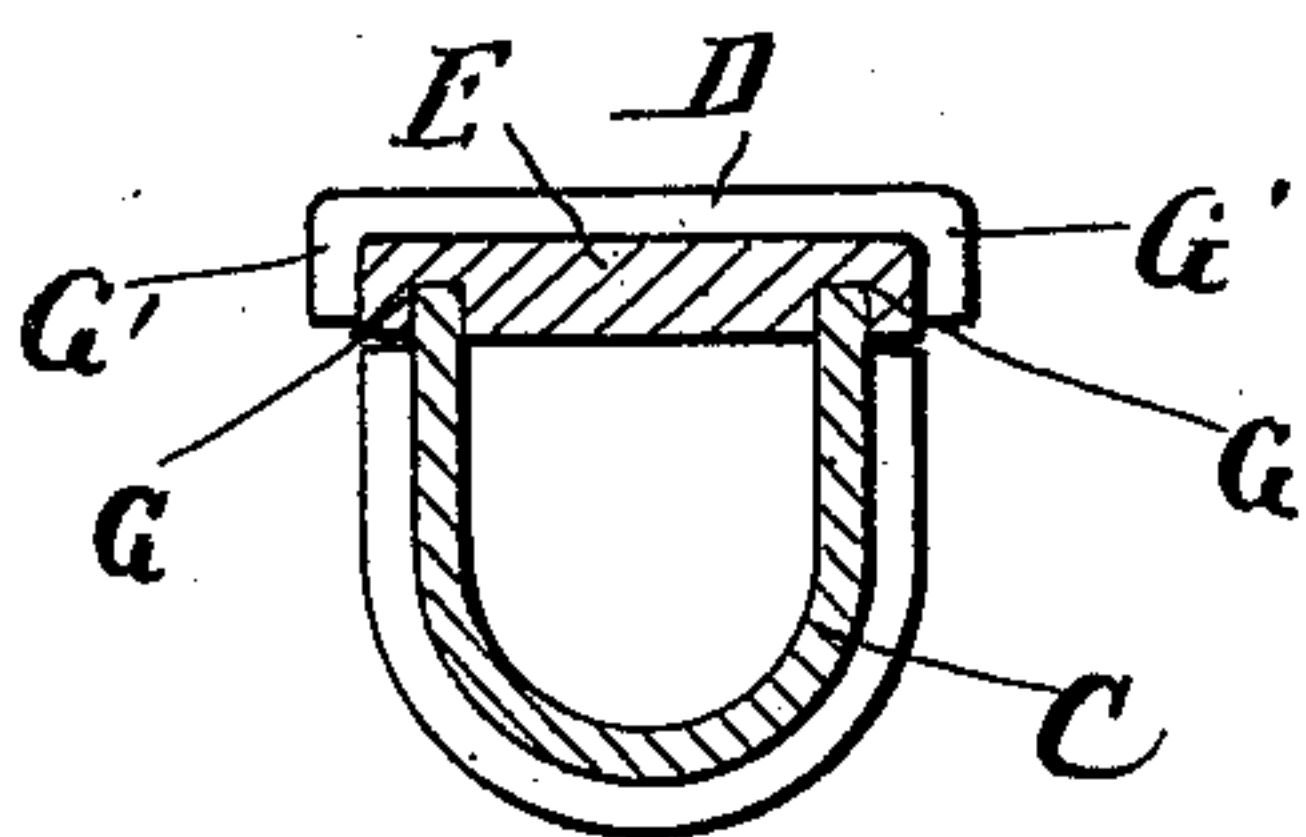
*Fig. 6.*



*Fig. 7.*



*Fig. 8.*



*Witnesses:*

*Celeste P. Chapman.*  
*Jean Elliott.*

*Inventor*

*Harmon H. Young.*

*James W. Parker*  
*Attorney.*

# UNITED STATES PATENT OFFICE.

HOMER H. YOUNG, OF KANSAS CITY, MISSOURI.

## UNDERGROUND ELECTRIC CONDUIT.

SPECIFICATION forming part of Letters Patent No. 442,162, dated December 9, 1890.

Application filed June 23, 1890. Serial No. 356,334. (No model.)

*To all whom it may concern:*

Be it known that I, HOMER H. YOUNG, a citizen of the United States, and a resident of Kansas City, in the county of Jackson and State of Missouri, have invented a new and useful Improvement in Conduits, of which the following is a clear, full, and exact specification.

My invention relates to underground conduits, particularly such as are designed for electric conductors, and has for its object to provide a cheap and simple conduit. It is illustrated in the accompanying drawings, wherein—

Figure 1 is a perspective view of a portion of the conduit; Fig. 2, a longitudinal section with the conductors removed; Fig. 3, a cross-section of the same; Fig. 4, a cross-section showing the wires embedded in a compound. Fig. 5 is a detail of an additional supporting device for the wires. Fig. 6 is a perspective view of two abutting portions of the conduit. Fig. 7 is a longitudinal section of the same, with the covers also shown; and Fig. 8 is a cross-section through the latter when in position.

Like parts are indicated by the same letter in all the figures.

A is the pavement or street, and B the soil beneath, in which lies the conduit. This is composed of the outer sections C C, having each at one end the shoulder D to receive the other in the usual manner to make a joint. These parts D and C are U-shaped in cross-section, as shown, and covered by the lids E E, which are grooved at F to receive the upper portion of the conduit proper, and are provided each at one end with the shoulder G'. Within this conduit is a similar smaller conduit, similar parts lettered in like manner as follows: The inner conduit is composed of the outer sections C' C', having each at one end the shoulder D' to receive the other in the usual manner to make a joint. These parts D' and C' are U-shaped in cross-section, as shown, and covered by the lids E' E', which are grooved at F' to receive the upper portion of the conduit proper, and are provided each at one end with the shoulder G'. The inner and outer conduits are so laid as to break the joints, as indicated in Fig. 2, and there may be disposed between them a water-proof pack-

ing material G<sup>2</sup>—for example, asphalt. Within the inner conduit are placed the conductors H H, and they may be supported upon the perforated plate J or the serrated plates K. This compound may be made in part or wholly of any good non-conducting substance, or if the wires be coated with insulation the compound L may be composed of some moisture-proof substance.

The use and operation of my invention are as follows: The ditch having been dug, the outer conduit is laid and the inner conduit placed therein on a suitable packing or support. The conductors are now laid within the inner conduit, being suitably supported therein by the plates J or K, or, if desired, the inner conduit may be filled with the insulating compound L. The lid E' is now placed in position upon the inner conduit C'. It is of course understood that all overlapping joints will be properly cemented and set together and covered so as to make close joints. The packing is now placed over the lid E', and the lid E is placed in position and the ditch is then filled. Of course this work would proceed in sections, the conductors being suitably supported as they are laid in position. The plates J and K may be of insulating material, if desired, or the wires themselves may be thoroughly coated with insulation. The conduits are made of suitable material—as, for instance, of vitrified tiling or the like. The joints at the sections of the inner and outer conduit-pipes should be securely made water-tight by asphalt or the like, so that the whole will present two conduits, one within the other without, and both water-tight or water-proof throughout.

The conductors in Fig. 4 are shown as embedded in a compound—for example, asphalt. They should be insulated individually.

The shoulder G' receives the plain end of the contiguous section of the conduit and the side shoulder is slightly depressed below the top of the two sections, which come together on the same plane. The corresponding shoulder G' on one end of each lid portion incloses the plain end, as indicated in Figs. 7 and 8.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is as follows:



1. A conduit for underground conductors, consisting of an outer conduit composed of jointed sections, an inner conduit of similar structure, but whose joints do not lie in the same transverse plane as the joints of the outer conduit, packing interposed between the two suspending-plates within the inner conduit for the conductors, insulating material surrounding each, and a compound surrounding all such conductors, and lids upon the sections of such conduits grooved to receive the upper edges of the lower portion of the conduit, substantially as shown and described.

2. A conduit for underground conductors, consisting of U-shaped sections having covers grooved on their lower sides to receive the upper edges of the U-shaped portions, and shoulders upon the ends of the sections and covers, whereby overlapping joints are made.

3. A conduit for underground conductors, consisting of U-shaped sections having covers grooved on their lower sides to receive the

upper edges of the U-shaped portions, and shoulders upon the ends of the sections and covers, whereby overlapping joints are made and a similar inner conduit.

4. A conduit for underground conductors, consisting of U-shaped sections having covers grooved on their lower sides to receive the upper edges of the U-shaped portions, and shoulders upon the ends of the sections and covers, whereby overlapping joints are made and a similar inner conduit, and packing interposed between the inner and outer conduits.

5. As a conduit for underground conductors, a vitrified tiling conduit consisting of U-shaped sections, with shouldered and grooved lids therefor, substantially as shown.

HOMER H. YOUNG.

Witnesses:

CELESTE P. CHAPMAN,  
DAVIDA J. JOHNSON.