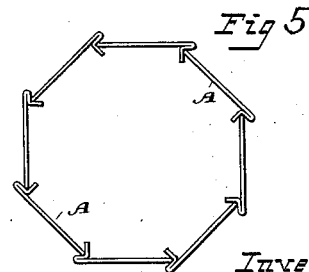
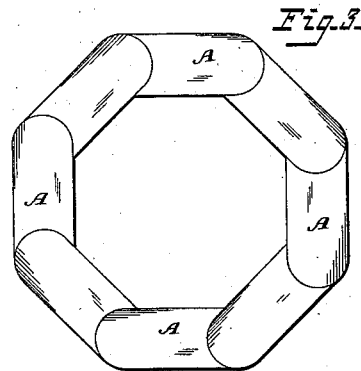
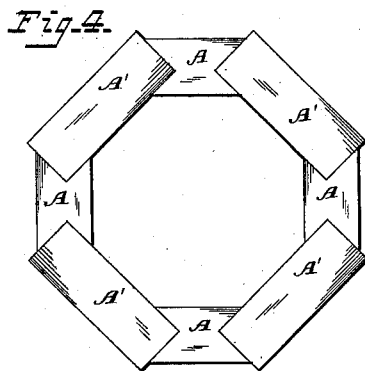
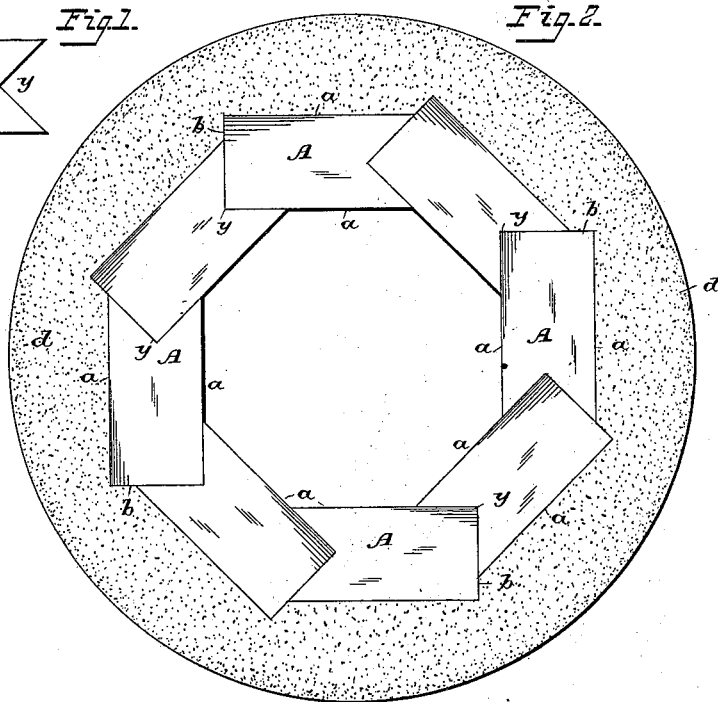
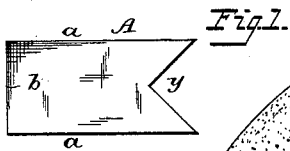


(No Model.)

A. WYCKOFF.  
UNDERGROUND CONDUIT.

No. 343,354.

Patented June 8, 1886.



Attest:  
Carst A. Cooper,  
J. J. McCarthy.

Inventor:  
A. Wyckoff,  
By Frank W. Freeman,  
Atty.

# UNITED STATES PATENT OFFICE.

ARCALOUS WYCKOFF, OF ELMIRA, NEW YORK.

## UNDERGROUND CONDUIT.

SPECIFICATION forming part of Letters Patent No. 343,354, dated June 8, 1886.

Application filed October 22, 1885. Serial No. 180,651. (No model.)

*To all whom it may concern:*

Be it known that I, ARCALOUS WYCKOFF, a citizen of the United States, and a resident of Elmira, in the county of Chemung and State of New York, have invented certain new and useful Improvements in Pipes and Conduits, of which the following is a specification.

My invention is a casing or conduit consisting of a series of strips each so formed that it may be arranged at an angle to adjacent strips in building up the body of the article, so as to form close joints when all the strips are bound together; and the invention further consists in binding such strips together by means of a surrounding body of cement or its equivalent, as fully set forth hereinafter, and as illustrated in the accompanying drawings, in which—

Figure 1 is an end view of a strip which may be used in building up a conduit in accordance with my invention. Fig. 2 is a cross-section of a pipe or conduit, full size, in which the strips are bound together by a surrounding body of cement. Figs. 3 and 4 are sections illustrating pipes or conduits made of strips of different forms. Fig. 5 illustrates the manner of forming the strips when they are of metal.

My improved conduit consists of a series of strips of suitable material, each strip being adapted for application to the edge of the adjacent strip in such manner as to secure a bearing thereon, so that a series of strips may be arranged at angles to each other to inclose a space and form a practically-tight casing around the said space when the strips are bound or held together in position.

In carrying out the manufacture of my improved conduit I first make the separate strips, by cutting, molding, or otherwise, in such manner that when arranged properly in position they will inclose a space of the dimensions desired. The strips may be differently formed to secure this result, the forms depending somewhat upon the material used and the facility with which the parts can be manufactured.

In Fig. 1 I have shown in transverse section a strip which may be used in building up a conduit of the form illustrated in Fig. 2, each strip A having parallel side faces, *a a*, with

one edge, *b*, at right angles to the side faces, and a V-shaped groove or notch, *y*, being formed at the opposite edge.

In building up a structure of the strips of the form illustrated in Fig. 1 the corner of one strip is inserted in the notch or groove *y* of the next strip, as shown in Fig. 2, so that each strip has an extended bearing upon the edges or faces of the adjacent strips, which extended bearings insure close joints when the strips are clamped or bound together. The binding means may be clamps or bands or a surrounding body, *d*, of cement of any suitable character, as illustrated in Fig. 2.

When the strips are provided with V-shaped edge grooves, it is necessary to make the angle of the sides of the groove according to the number of strips that are combined in the completed article; but by making a rounded groove at one edge of each strip and rounding the opposite edge to correspond a tight bearing may be secured whatever is the arrangement of one strip in respect to the adjacent strip, so that conduits of any desired dimensions may be built up from strips of the same form and size. In some instances strips grooved at opposite edges may be combined in building up the conduit with intermediate strips, *A'*, having flat edges, each groove *y* in the strips *A* receiving the corner of one of the strips *A'*, in the same manner as the corner of each strip fits in the groove of the adjacent strip in the construction shown in Figs. 1 and 2. The forms illustrated in Figs. 1 to 5 are those which will be found most available in connection with strips made from wood, clay, asbestos and straw-board, and other like materials and compositions; but when metal strips are used the edge portion of each strip is bent to form a V-shaped groove, as shown in Fig. 5.

When the conduit is to be used as an underground conduit, either for conveying fluids or as a casing for conductors of any description, the strips will be most effectually bound together and at the same time preserved from the action of moisture and strengthened by surrounding them with an inclosing body of cement, *d*, as before described, the said cement consisting of Portland or Rosedale cement, concrete, asphalt cement, or other suitable material.

It will be seen that the strips out of which my improved conduit is made are of such forms that they may be readily manufactured of wood and similar materials by simply running ordinary boards through a sawing or planing machine, which can be done with great rapidity and at little cost, and that each strip has extended bearings upon the adjacent strips at both sides, the increased bearing-surface of course securing a closer joint.

I am aware that barrels and tunnels are made of substantially parallel tongued-and-grooved strips or blocks arranged in a circle; but my conduit is distinguished from this structure by the fact that in my conduit the edge of each strip fits the groove in the other, while in the other case each strip has a contracted tongue which alone fits the groove.

I am aware that tunnels and the like are made of plates with flat parallel sides and connected at the edges by dovetail joints, or by beads and grooves, to form channels rectangular or circular in cross-section; but my conduit is distinguished from this structure by the fact that in my conduit the seats are so formed that the strips may be separated by

merely moving them laterally, thus avoiding the longitudinal movement necessary with dovetail or similar joints.

Without limiting myself to the precise construction and arrangement of parts shown, I claim—

1. A conduit consisting of a series of strips with parallel flat sides and arranged at an angle one to the other, and with the edge of one strip seated in the edge of the next succeeding strip, so as to form a channel polygonal in cross-section, substantially as described.

2. A conduit consisting of a series of strips with straight parallel sides, and having one edge at right angles to the sides and the other provided with a V-shaped groove, the said strips being bound together, so that the conduit is polygonal in cross-section, substantially as described.

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

A. WYCKOFF.

Witnesses:

W. C. DUVALL,  
CHARLES E. FOSTER.