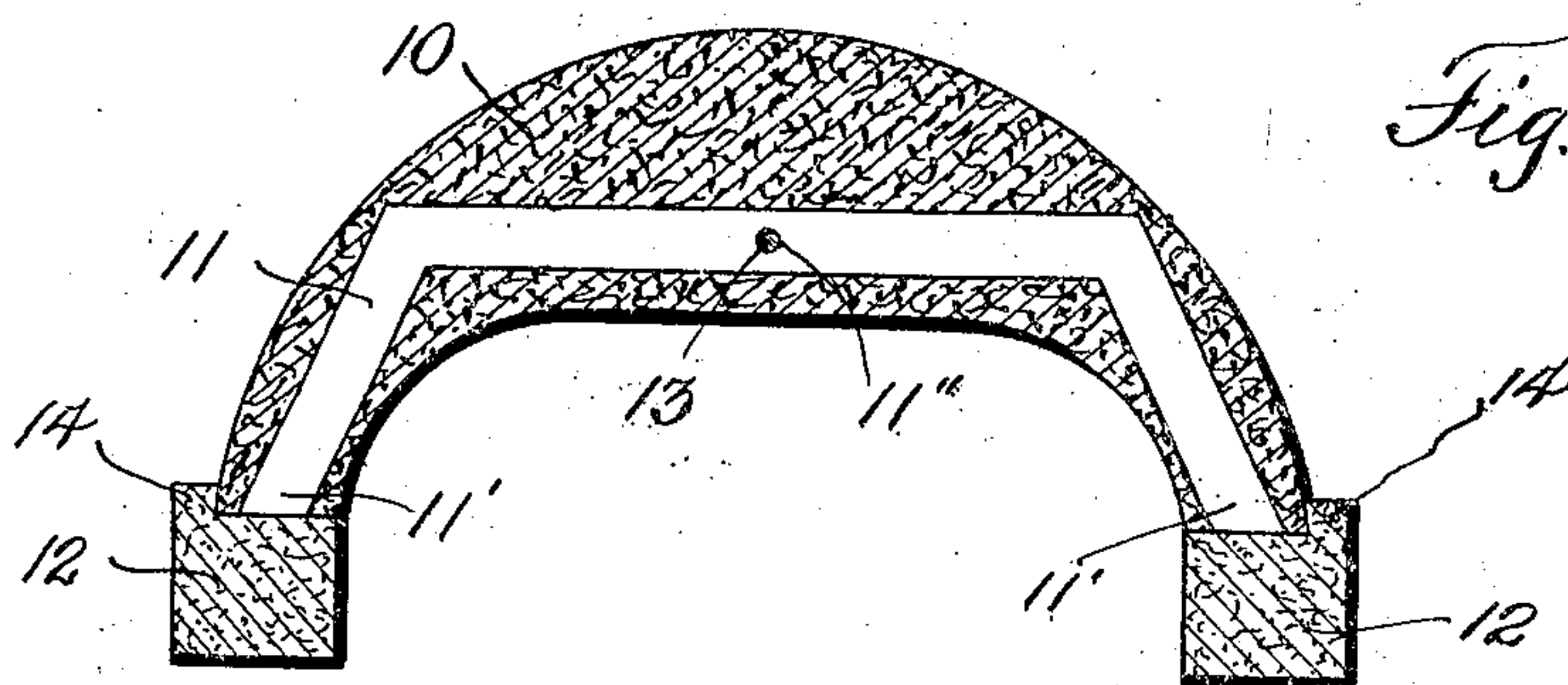
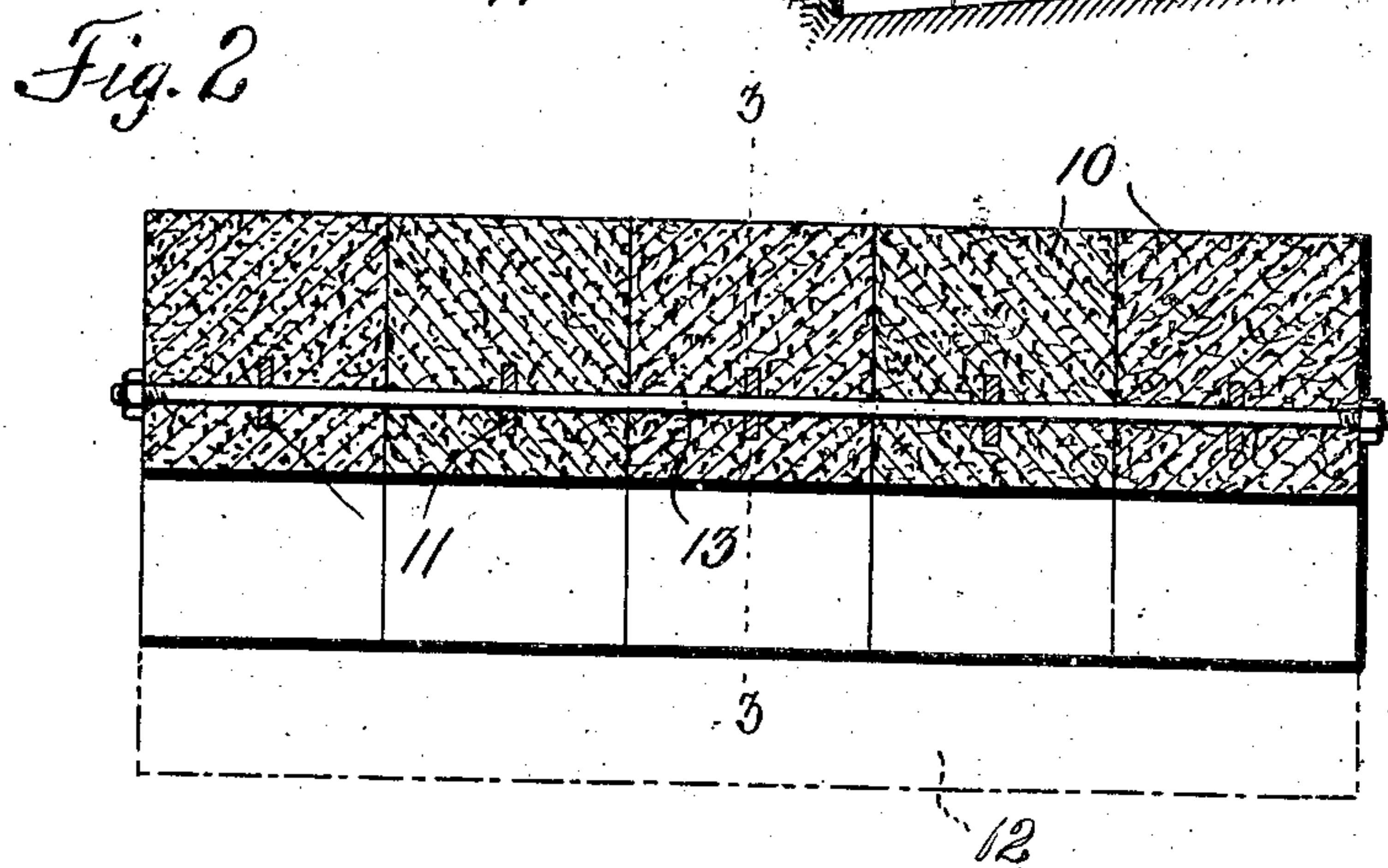
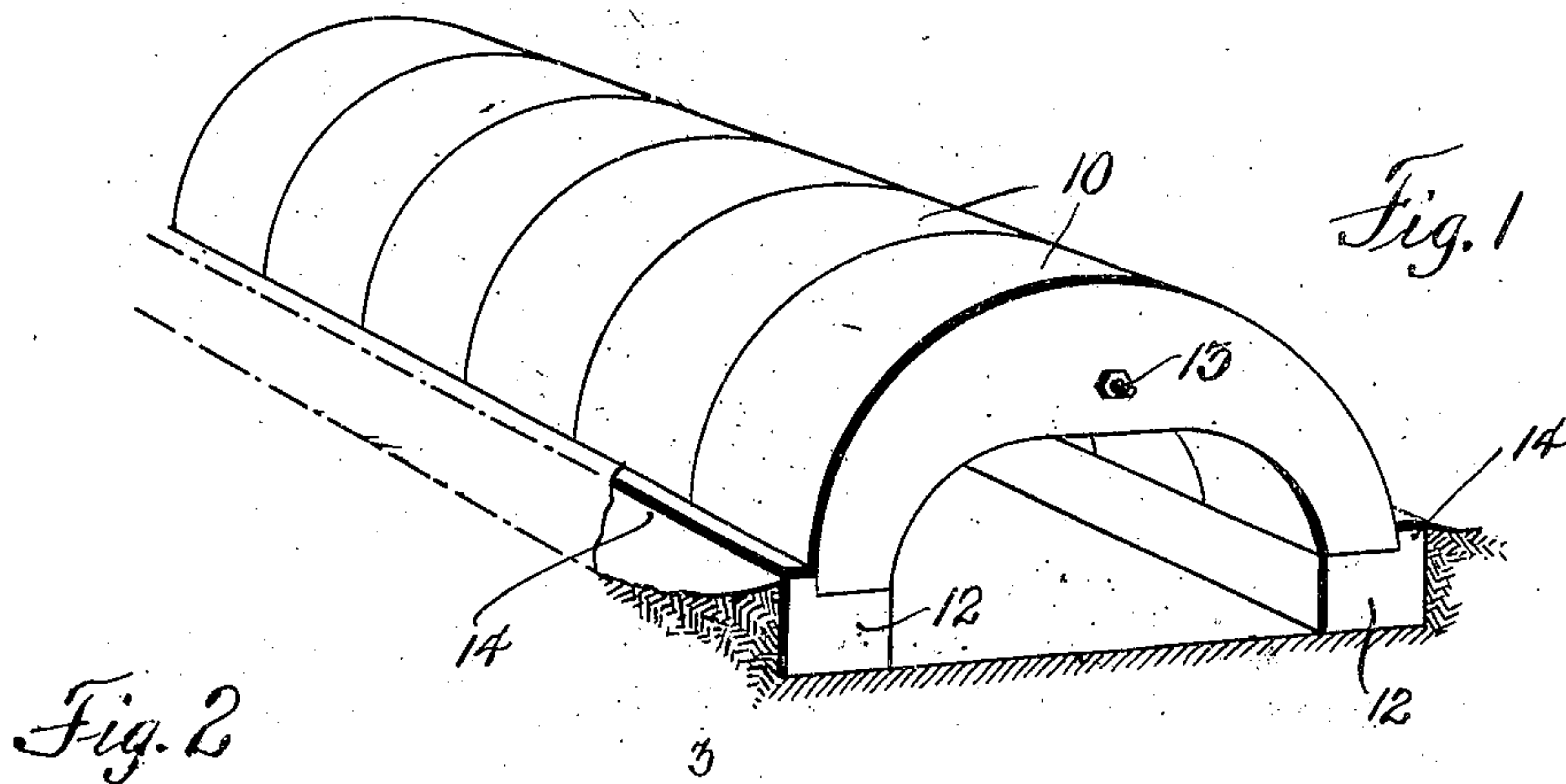


M. F. & O. PARKS.  
CULVERT.  
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925,019.

Patented June 15, 1909.



Witnesses  
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# UNITED STATES PATENT OFFICE.

MORDEN F. PARKS AND OSWALD PARKS, OF CAPAC, MICHIGAN.

## CULVERT.

No. 925,019.

Specification of Letters Patent.

Patented June 15, 1909.

Application filed February 20, 1909. Serial No. 479,093.

*To all whom it may concern:*

Be it known that we, MORDEN F. PARKS and OSWALD PARKS, citizens of the United States, residing at Capac, in the county of St. Clair and State of Michigan, have invented certain new and useful Improvements in Culverts, of which the following is a specification.

This invention relates to the art of making culverts, adapted for usual purposes, such as for bridges, water-ways, conduits, and the like.

The invention resides in the specific construction of a device, as will be hereafter fully set forth and illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of the device showing it in its preferred embodiment; Fig. 2 is a vertical central longitudinal section of the device constructed substantially the same as Fig. 1; Fig. 3 is a vertical transverse section on the plane at the line 3—3 of Fig. 2.

Throughout the following description and on the several figures of the drawings similar parts are referred to by like reference characters.

A culvert constructed in accordance with this invention comprises a plurality of similar arch-shaped sections or segments 10. The specific form of these sections may be varied to a very great extent within the scope of the invention, but as indicated herein they are drawn on the form of an arc of a circle, less than a semi-circle, and as indicated they are all of the same form and adapted thereby to enable the constructor of a culvert to make the same longer or shorter according to the desire or exigencies of any particular case. The members 10 are made of any suitable material commonly known as concrete and embedded therein in each one are one or more strengthening plates 11, made of any suitable dimensions or strength. As shown each of the plates 11 is substantially flat and is shaped to conform to the curvature of the section to which it is connected. The exact form of the plate 11 may be changed in accordance with the desire of the builder. The ends 11' of the plates rest upon abutments 12 and upon which ends of the section 10 also rest. The plates 11 are provided centrally with holes 11'' which register with holes through the sections 10, and

in and through which holes is passed a bar 13, constituting a binding and pivoting member for holding the several sections together on a common axis and also permitting a certain amount of distortion or radial movement thereof with respect to one another without rupture or breakage thereof.

The adjacent faces of the two adjoining sections 10 are smooth, thereby permitting the distortion or radial movement hereinbefore referred to. Such displacement or distortion may be caused by a great many different causes, such for instance as freezing and thawing and by the upheaval or settling of some portions of the foundation.

The foundation 12 may be constructed of any suitable dimensions or material, such as concrete, stone, wood, or the like. Associated therewith is a flange 14 which may be either on the abutment 12 or may be formed as a flange on the section 10. The culvert sections are not only smooth on their exterior surface, but also on the inner surface, whereby there is no likelihood whatever of any passing material such as drift-wood, rubbish, or the like, being carried by the water passing therethrough, to collect thereon and become lodged. The length of the rod 13 will be determined by the number of sections 10 that will be employed in constructing any particular culvert. Again, it will be noted that the arch sections 10 are thickest at their top or middle portions, whereby the maximum strength is obtained.

Having thus described the invention in its preferred embodiment, what we claim as new and desire to secure by Letters Patent of the United States, is:

1. The hereindescribed culvert comprising abutment members having upright flanges on their tops and at the edges thereof farthest remote from each other, a series of semi-circular sections supported at their ends upon said abutment members and between the aforesaid flanges, each section being provided with a metallic reinforcing plate having a central transverse hole, and a pivot bar passed through all of said sections and metallic plates, whereby the sections are prevented from lateral displacement but are permitted to partake of relative independent rotation.

2. In a culvert, the combination of a series of arch sections each constructed of con-



crete with a reinforcing plate embedded therein, the sections and plates having registering holes, and a binding bolt passed through said holes to secure the sections together, said bolt constituting a pivot member permitting independent rotation of said sections.

3. In a concrete culvert, the combination of a plurality of arch sections having  
10 smooth abutting faces and a binder rod con-

necting the sections pivotally together on a common axis.

In testimony whereof we affix our signatures in presence of two witnesses.

MORDEN F. PARKS.

OSWALD <sup>his</sup> × <sub>mark</sub> PARKS.

Witnesses:

SIDNEY GRANGER,  
ROY DOTY.