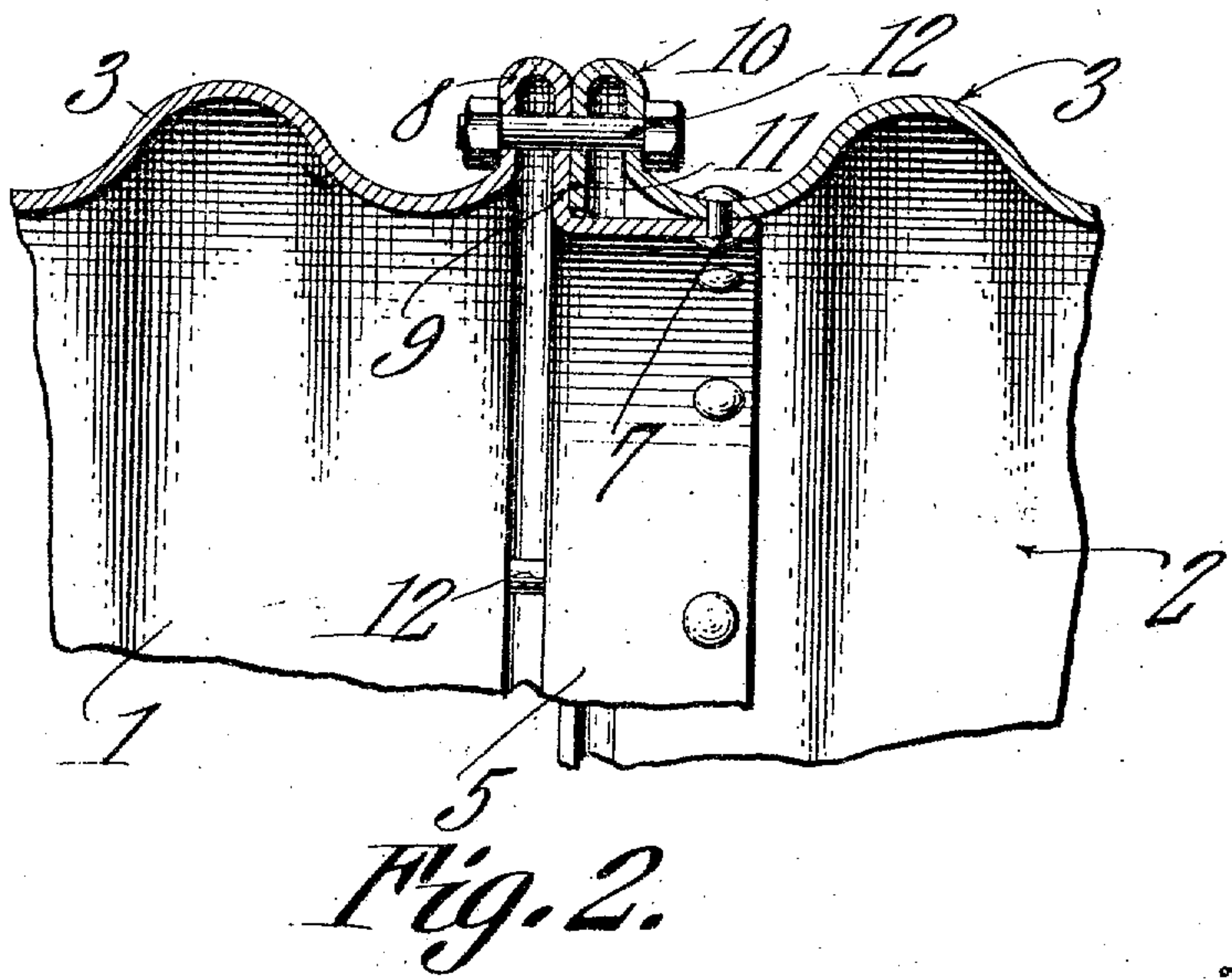
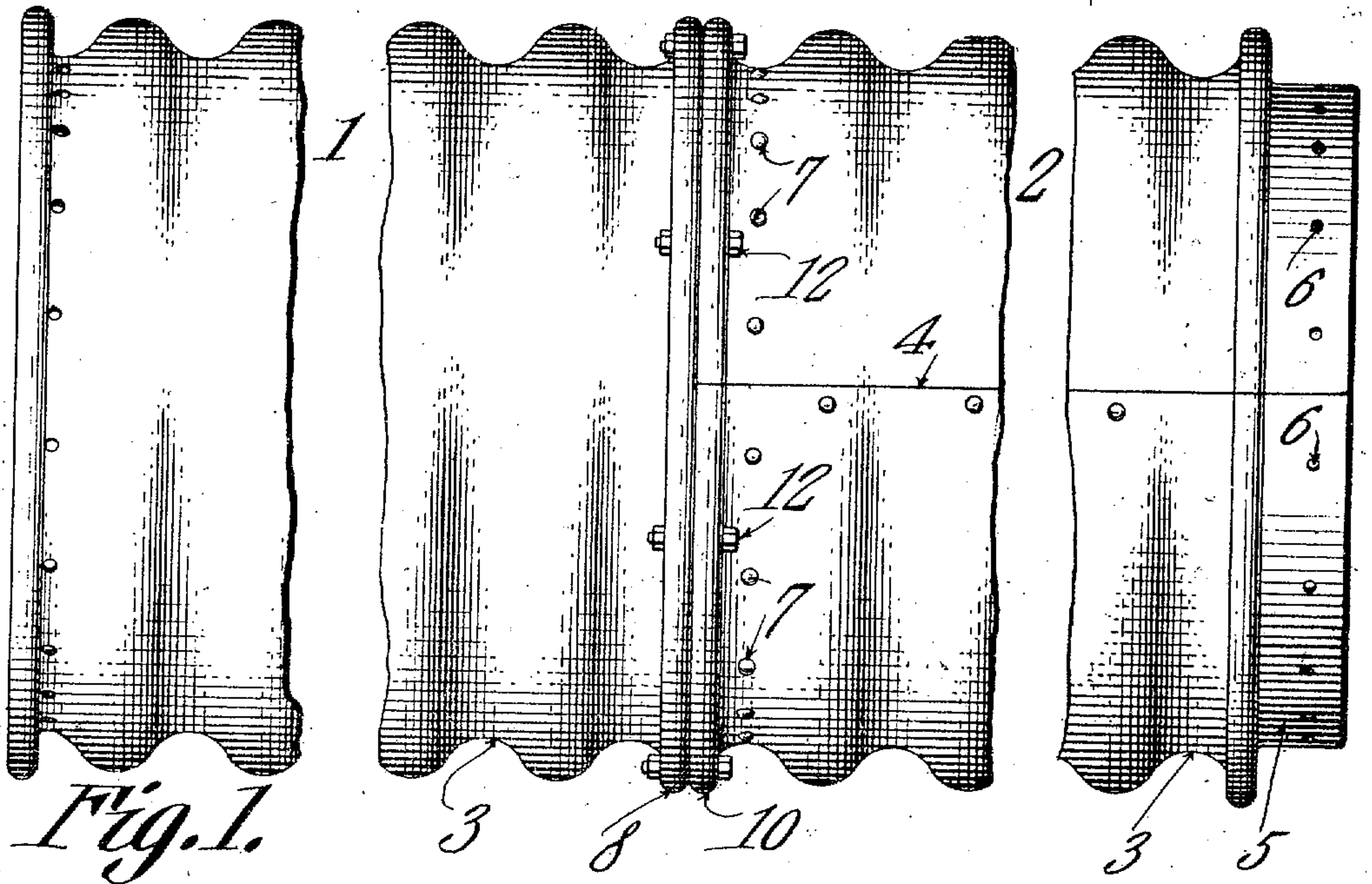


A. G. FELKER.  
CORRUGATED METAL CULVERT PIPE.  
APPLICATION FILED DEC. 29, 1909.

954,673.

Patented Apr. 12, 1910.



Witnesses  
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# UNITED STATES PATENT OFFICE.

ALBERT GEO. FELKER, OF MARSHFIELD, WISCONSIN.

## CORRUGATED-METAL CULVERT-PIPE.

954,673.

Specification of Letters Patent.

Patented Apr. 12, 1910.

Application filed December 29, 1909. Serial No. 535,429.

*To all whom it may concern:*

Be it known that I, ALBERT G. FELKER, a citizen of the United States, residing at Marshfield, in the county of Wood and State of Wisconsin, have invented a new and useful Corrugated-Metal Culvert-Pipe, of which the following is a specification.

This invention relates to improvements in corrugated metal culverts and has for its object the provision of a structure which will provide a secure joint and in which the sections of the culvert may be readily fitted and secured together and which will hold the sections of the culvert in perfect alinement. This object is attained in the use of the device illustrated in the accompanying drawings and the invention consists in certain novel features of the same as will be hereinafter first fully described and then specifically pointed out in the appended claims.

In the accompanying drawings,—Figure 1 is a side elevation of two sections of a culvert fitted together and embodying my invention, the central portions of the sections being broken away in order that the drawing may more clearly illustrate the details of construction. Fig. 2 is an enlarged detail section of a joint.

In carrying out my invention I construct the sections 1 and 2 of the culvert of sheet metal provided with annular corrugations 3, as shown, and these sections are formed at the ends in such manner as to readily fit together so that the culvert may be made of any desired length and may be assembled at the factory or at the place where it is to be located, as may be more convenient. The sections are preferably arranged so that the meeting longitudinal edges 4 of one section will be at the side opposite the meeting edges of the adjoining section so that the culvert will be able to withstand the strains placed upon it. One end, which will be designated as the male end, of each section is formed into a flat annular band or flange 5 which may be provided with suitable openings 6 for the reception of securing bolts or rivets 7 and at the inner edge of the said flange or band the body of the section is shaped to provide a sharp corrugation 8 whereby a radial shoulder or face 9 will be presented. The opposite end of the section, which will be designated as the female end, is also provided with a sharp corrugation 10 and the

extremity of the said end is turned inward so as to present a radial shoulder 11 adapted to bear against the radial shoulder 9 on the male end of a meeting section, as will be readily understood on reference to Fig. 2. In order to secure the sections firmly together bolts 12 are inserted through the said corrugations 8 and 10 so as to rigidly connect the same.

The construction of the parts of the culvert being thus made known, it is thought the advantages and manner of setting up the same will be readily appreciated.

When the sections of the culvert are assembled at the factory the band 5 of one section will be caused to enter the meeting end of the adjoining section so that the shoulder 9 will be brought squarely against the shoulder 11 and rivets are inserted through the openings 6 and the side of the outer section and upset so that the sections will be held together, the bolts 12 being subsequently inserted through the corrugations 8 and 10 whereby the members of the joint will be doubly secured together and separation of the members of the joint will be positively prevented.

When the sections of the culvert are assembled at the point of use, ordinary bolts are used instead of the rivets inserted through the openings 6 and in the very small sizes of pipes the fastenings 7 may be omitted without detriment. The flat annular band 5 by entering the end of the meeting section, serves to preserve the alinement of the sections notwithstanding the pressure which may be applied to the same when the culvert is in position and the provision of the narrower and more extended corrugations 8 and 10 at the ends of the sections presents an extended bearing for the members of the joint so that the joint will be strengthened and the securing bolts may be readily inserted through the same.

Having thus described my invention, what I claim is:

1. In a culvert, the combination of meeting sections, one section having a smooth annular band adapted to enter the end of the opposite section and the two sections being provided with radial shoulders adapted to bear against each other.

2. The combination of meeting sections, the male section having a smooth annular band and a radial shoulder at the inner edge

of the said band, and the female section fitting around the annular band and having a radial shoulder bearing against the radial shoulder of the male section, securing bolts  
5 inserted through the said radial shoulders, and fastenings inserted through the annular band and the side of the female section.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

ALBERT GEO. FELKER.

Witnesses:

JOHN F. DOHERTY,  
CECILIA VOLZ.