

NOT AVAILABLE COPY

A. BRUCE.
KNOCKDOWN CULVERT PIPE.
APPLICATION FILED MAR. 31, 1913.

1,065,429.

Patented June 24, 1913.

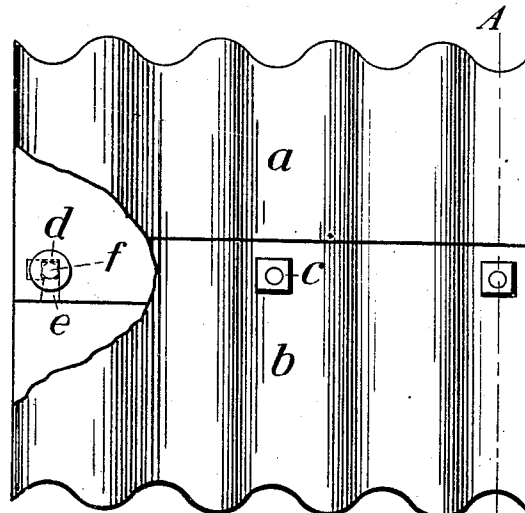


Fig. 1.

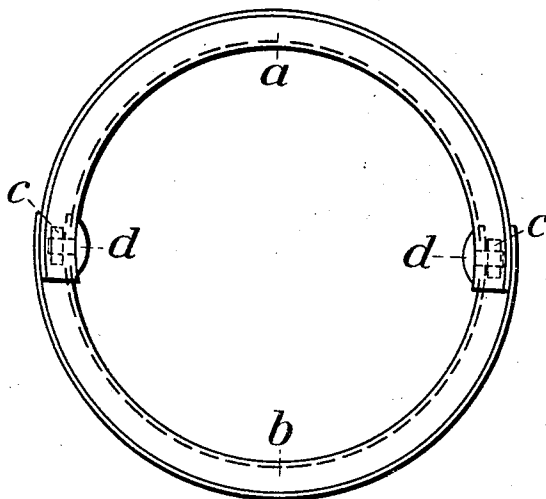


Fig. 2.

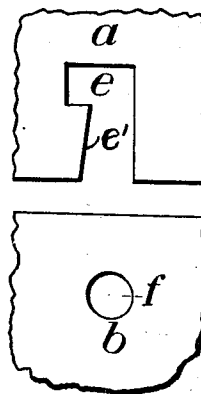


Fig. 3.

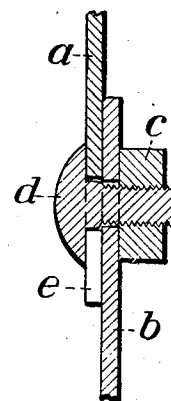


Fig. 4.

WITNESSES

Philip R. Drough
J. H. Sherwood

INVENTOR

Alex Bruce,

By Franklin D. Drough

ATTORNEY

UNITED STATES PATENT OFFICE.

ALEX BRUCE, OF FARGO, NORTH DAKOTA.

KNOCKDOWN CULVERT-PIPE.

1,065,429.

Specification of Letters Patent.

Patented June 24, 1913.

Application filed March 31, 1913. Serial No. 758,029.

To all whom it may concern:

Be it known that I, ALEX BRUCE, a citizen of the United States, residing at Fargo, in the county of Cass and State of North Dakota, have invented certain new and useful Improvements in Knockdown Culvert-Pipes; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in knock-down culvert pipes made up of sections and adapted to be held together by means of lock slots.

The invention comprises a simple and efficient device of this nature having various details of construction and combinations and arrangements of parts which will be hereinafter fully described, shown in the accompanying drawings, and then specifically defined in the appended claims.

I illustrate my invention in the accompanying drawings, in which:—

Figure 1 is a side elevation of a section of my improved culvert pipe, parts being broken away. Fig. 2 is an end view showing two sections connected together. Fig. 3 is a detail view showing two sections disassembled and Fig. 4 is a detail sectional view on line A—A of Fig. 1.

Reference now being had to the details of the drawings by letter, *a* and *b* designate two semicylindrical, corrugated shell sections, the former of which *a* is provided with slots *e* formed in one edge thereof, each of which slots has an inclined edge *e'*, while the sections *b* have each a series of apertures *f* therein, which sections, when adjusted together, overlap each other. Bolts *d* have threaded shank portions passing through the registering slots *e* and apertures *f*, and nuts *c* are fitted to the ends of said bolts. As the edges having the slots are pushed down over the bolts, the inclined edges of the slots coming in contact with the bolts will cause the sections *b* to spring slightly

longitudinally until the bolt has passed the inclined edge of the slot, after which the resiliency of the section *b* will cause the bolt to engage the angled or offset end of the slot, thereby securely holding the sections together. After the sections have been joined together, the nuts may be tightened upon the outer ends of the bolts and thus the sections be securely held together.

By the provision of a culvert pipe made in accordance with my invention, it will be noted that the sections may be easily taken apart and nested together when desired for packing, transportation, etc., and making it possible to replace any of the sections if desired.

What I claim to be new is:—

1. A knock-down culvert pipe made up of sections, the edges of which are adapted to overlap each other, one section being provided with apertures, bolts mounted therein, the overlapping section having angular slots for the reception of said holes, as set forth.

2. A knock-down culvert pipe made up of sections, the edges of which are adapted to overlap each other, one section being provided with apertures, bolts mounted therein, the other section having its opposite edges provided with slots, the inner ends of which have offsets for the reception of said bolts, and nuts fitted to the bolts, as set forth.

3. A knock-down culvert pipe made up of sections, the edges of which are adapted to overlap each other, one section being provided with apertures, bolts mounted therein, the other section having its opposite edges provided with slots each having an offset at its inner end, one edge of each slot being at an inclination to the other edge of the slot, thereby causing the section to yield slightly as the one having the slots is forced down upon the bolts, the resiliency of the section causing the latter to move so that the bolt will engage the offset, and nuts fitted to the bolt, as set forth.

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

Witnesses:

EDITH PETERSON,
R. C. KIEFER.