

J. JARVEY.
CULVERT.

APPLICATION FILED MAR. 30, 1915.

1,198,554.

Patented Sept. 19, 1916.

Fig. 3.

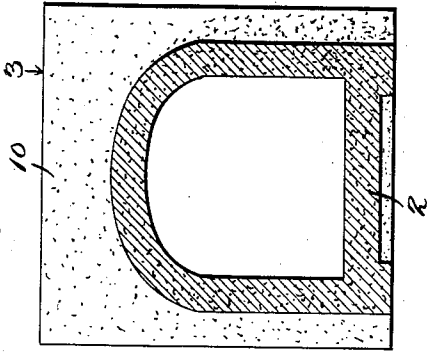


Fig. 1.

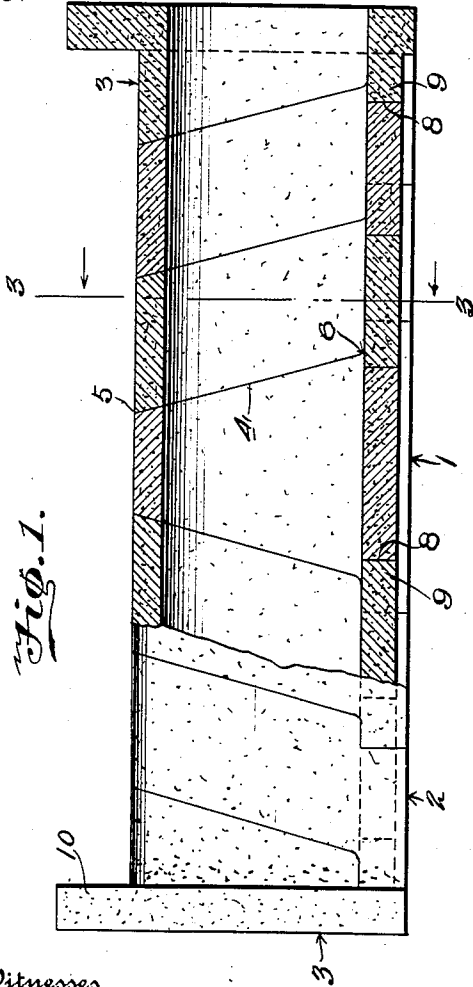


Fig. 4.

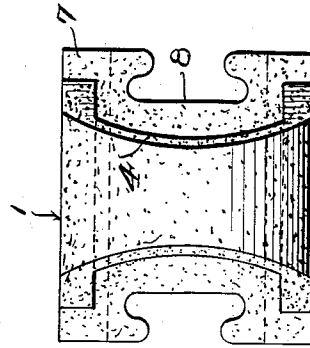
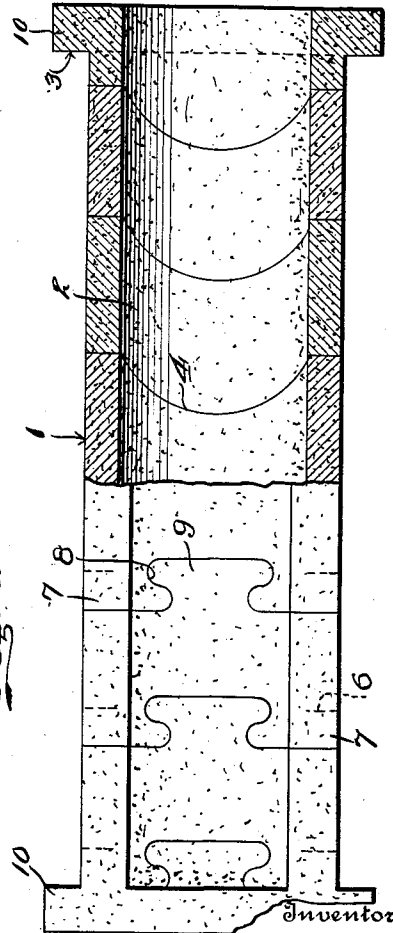


Fig. 2.



Witnesses
Edw. S. Hall.
Wm. E. Clark Jr.

Jacob Jarvey.
By Richard E. Owen,

Attorney

UNITED STATES PATENT OFFICE.

JACOB JARVEY, OF RED LODGE, MONTANA.

CULVERT.

1,198,554.

Specification of Letters Patent.

Patented Sept. 19, 1916.

Application filed March 30, 1915. Serial No. 18,039.

To all whom it may concern:

Be it known that I, JACOB JARVEY, citizen of the United States, residing at Red Lodge, in the county of Carbon and State of Montana, have invented certain new and useful Improvements in Culverts, of which the following is a specification.

My invention is designed as an improved plastic culvert and primarily aims to provide an interlocking arrangement of the culvert sections whereby stresses and strains at the culvert ends will tend to force the sections together rather than out of locking relation as heretofore.

As a further object of the invention I contemplate a novel and peculiarly designed intermediate or major culvert section, the ends of which are inclined oppositely and arranged to underlap and interlock with the duplicate culvert sections which constitute and determine the length of the culvert.

I further aim to provide a novel arrangement whereby the several culvert sections may be readily, easily and positively interlocked.

The above and additional objects are accomplished by such means as are illustrated in their preferred embodiment in the accompanying drawings, described in the following specification and then more particularly pointed out in the claims which are appended hereto and form a part of this application.

In describing my invention in detail reference will be had to the accompanying drawings wherein like characters denote like or corresponding parts throughout the several views, and in which:—

Figure 1 is a part side elevation and part longitudinal section of a complete culvert; Fig. 2 is a bottom plan view, partly in section and partly in elevation; Fig. 3 is a section on the line 3—3 of Fig. 1; and Fig. 4 is a top plan view of the intermediate or major culvert section.

Referring now to the drawings by numerals, 1 designates as an entirety the intermediate or major culvert section, 2 as an entirety one of the duplicate culvert sections and 3 as an entirety the end or terminal sections. The intermediate or major culvert section 1 is provided with oppositely inclined end walls 4, the respective walls, as shown to advantage in Fig. 1, diverging from a point 5 at the top of the culvert to a point 6 at the bottom thereof, the end walls at the point 6, merging into the base

or bottom of the culvert, the latter being longitudinally extended whereby to underlap the duplicate culvert sections 2 arranged in abutting relation thereto. The extended portion, designated 7, is cut away or recessed as indicated at 8 to provide, in effect, a recess designed to receive what might be termed a dove-tailed locking tongue 9, the latter forming a part of the abutting duplicate culvert section 2. Tongue 9 and recess 8 are substantially complementary and, when properly assembled or interlocked, preclude longitudinal and lateral displacement of the culvert sections. By underlapping the duplicate culvert sections, the said duplicate culvert sections being of course made complementary, it is evident that vertical displacement is to a certain extent precluded and the interlocking engagement made positive and secure.

By reason of the oppositely inclined end walls 4 of the major culvert section 1, it is apparent that the duplicate culvert sections situated to abut the opposite ends of said section will of a necessity lean thereon, and, by reason of the inclination aforesaid, bear hard against said major section upon the exertion of stresses and strains incident to the imposition of weight thereon. Any number of these duplicate culvert sections may be placed end to end at the opposite ends of the intermediate section 1, the said duplicate culvert sections determining the length of the completed culvert.

Each end of the completed culvert, by reason of the underlapping arrangement above noted, affords a support for the terminal culvert section 3, the latter, if desired being enlarged as at 10 for an obvious purpose and to add to the artistry of the structure as a whole.

From the foregoing, taken in connection with the accompanying drawings it will be noted that the ends of the duplicate culvert section extend in parallelism and at an angle parallel to the end inclined wall of the major section which they abut; that by constructing the intermediate or major culvert section in the manner aforementioned, all stresses and strains directed upon the culvert ends will be borne indirectly by the major culvert section, this, for the reason that the duplicate culvert sections, by reason of their arrangement at an inclination and in overlapping relation will so equally distribute the weight as to preclude longitudinal displacement and tend, in any event, to

more firmly interlock and hold the sections in such interlocking relation; and that by arranging the several sections in overlapping or underlapping relation as occasion may be, direct vertical stresses upon the duplicate culvert section will be partially borne by one or more of said sections or by one of said sections and the intermediate or major section 1.

10 In reduction to practice, I have found that the form of my invention, illustrated in the drawings and referred to in the above description, as the preferred embodiment, is the most efficient and practical; yet realizing that the conditions concurrent with the adoption of my device will necessarily vary, I desire to emphasize the fact that various minor changes in details of construction, proportion and arrangement of parts may be resorted to, when required, without sacrificing any of the advantages of my invention, as defined in the appended claims.

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

1. A sectional culvert comprising an intermediate section having upwardly converging terminal faces, lateral extensions on each terminal, and end sections having inclined terminals for engaging the terminals of the intermediate section in osculatory relation and recesses for receiving the extensions.

2. A sectional culvert comprising an intermediate section having upwardly converging terminal faces and interlocking lower edges, and end sections having inclined terminals for engaging the terminals of the intermediate section and interlocking lower edges for engagement with the lower edges of the intermediate section to preclude lateral separation of the sections and to maintain said sections in osculatory relation.

3. A sectional culvert comprising an intermediate section having upwardly converging terminal faces and oppositely extending ledges at said terminals, duplicate sections having inclined terminal faces for engagement with the faces of the intermediate section and recesses to receive the ledges, ledges on said duplicate sections and inclined faces disposed in parallelism with their aforesaid faces, and end sections having inclined faces and recesses for receiving the ledges of the duplicate sections.

4. A sectional culvert comprising an intermediate section having upwardly converging terminal faces and oppositely extending ledges at the base portion thereof which are provided with grooves having lateral extensions, end sections having inclined faces for engaging the faces of the

intermediate section and recesses for receiving the ledges, and tongues on said end sections for interlocking engagement with the grooves of the intermediate section.

5. A sectional culvert comprising an intermediate section having upwardly converging terminal faces and oppositely extending ledges at said terminals, duplicate sections having inclined terminal faces for engagement with the faces of the intermediate section and recesses to receive the ledges, said ledges being provided with grooves having lateral extensions, and end sections having inclined faces for engagement with the faces of the duplicate sections and recesses to receive the ledges thereof, and tongues for interlocking engagement with the duplicate sections.

6. A sectional culvert comprising an intermediate section having upwardly converging terminal faces and oppositely extended ledges at said terminals, said ledges having interlocking grooves, duplicate sections having inclined terminal faces for engagement with the faces of the intermediate section and recesses to receive the ledges, the ledges of said duplicate sections having tongues for engagement with the grooves of the intermediate section, the other ledges of said duplicate sections having interlocking grooves, and end sections having inclined faces for engagement with the faces of the duplicate sections and recesses for receiving the ledges thereof, and tongues for engaging the grooves of the duplicate sections.

7. A sectional culvert comprising an intermediate section having upwardly inclined terminal faces and oppositely extended ledges at the base portion thereof, said ledges having inwardly extending interlocking grooves, duplicate sections having inclined faces at one of their terminals for engagement with the inclined faces of the intermediate section and recesses at the base portion thereof for receiving the ledges, tongues extending from the recesses for engagement with the grooves of the intermediate section, ledges at the outward terminals of the duplicate sections and having interlocking grooves in said ledges, and end sections having inclined terminal faces for engagement with inclined faces of the duplicate sections and recesses for receiving the ledges of said duplicate sections, and tongues in said recesses for engaging the grooves of said duplicate sections.

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

JACOB JARVEY.

Witnesses:

M. P. NORMILE,
A. B. COOLEY.