

W. L. SWICK.

FLUME.

APPLICATION FILED JULY 31, 1912.

1,061,424.

Patented May 13, 1913.

2 SHEETS—SHEET 1.

Fig. 1

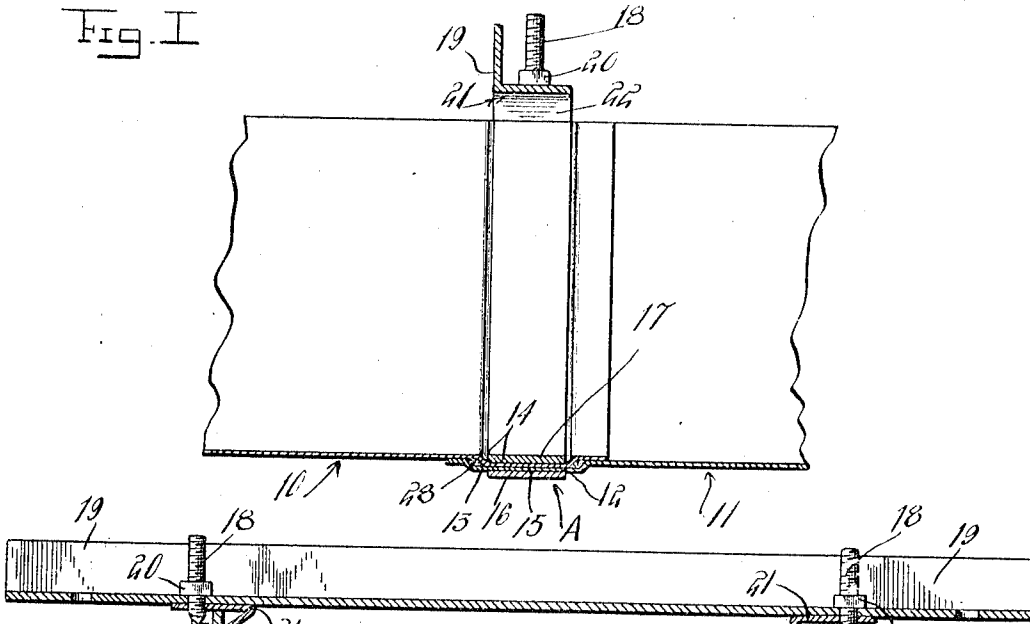


Fig. 2.

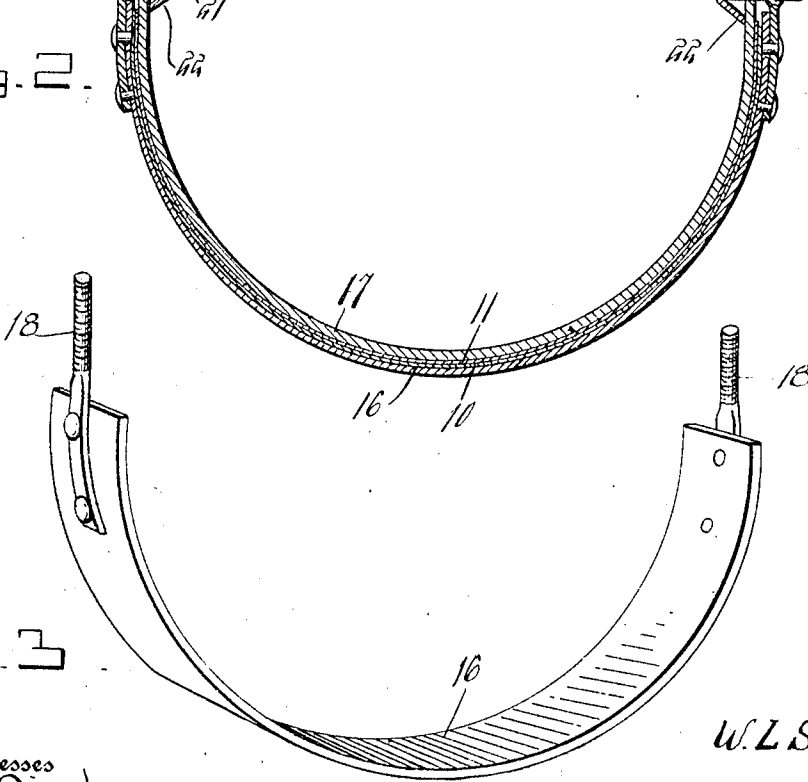


Fig. 3

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2 SHEETS-SHEET 2.

Fig. 4.

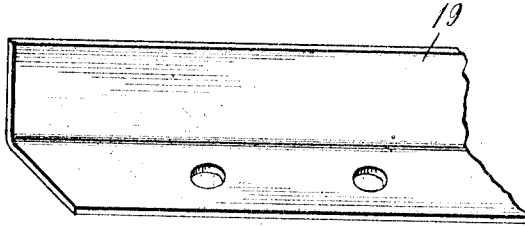


Fig. 5.

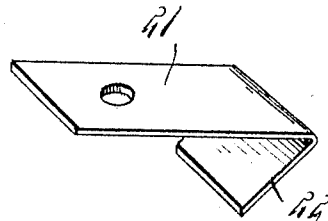


Fig. 6.

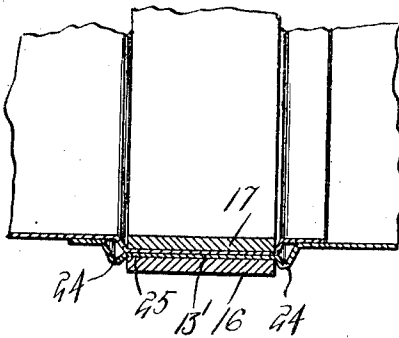


Fig. 7.

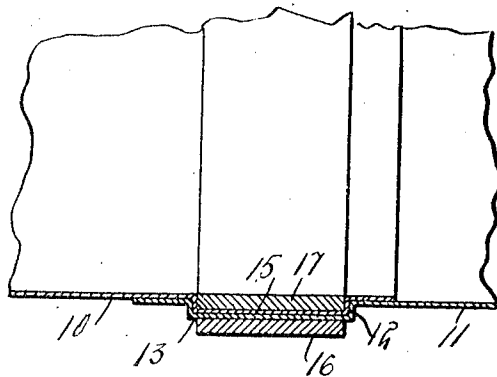
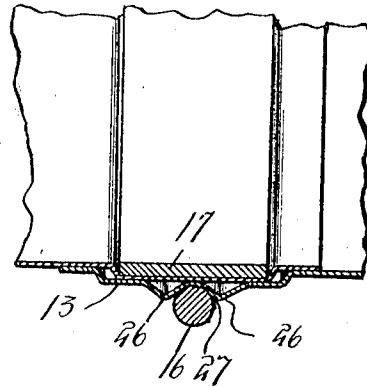


Fig. 8.

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FLUME.

1,061,424.

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Patented May 13, 1913.

Application filed July 31, 1912. Serial No. 712,516.

To all whom it may concern:

Be it known that I, WILLBERT L. SWICK, a citizen of the United States, residing at Glenwood Springs, in the county of Garfield, State of Colorado, have invented certain new and useful Improvements in Flumes; 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.

This invention relates to flumes of the type employed in irrigation.

The object of the invention resides in the provision of a plural section flume which includes an improved construction for securing the flume sections together in such manner as to offer a minimum resistance to the passage of water through the flume and which will also allow for the expansion and contraction of the section and thereby avoid the possibility of breakage or disarrangement of parts as the result of such expansion and contraction.

With the above and other objects in view, the invention consists in the details of construction and in the arrangement and combination of parts to be hereinafter more fully described and particularly pointed out in the appended claims.

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

Figure 1 is a longitudinal section through a pair of flume sections connected together by a joint constructed in accordance with the invention, Fig. 2, a transverse section of what is shown in Fig. 1 taken through the joint, Fig. 3, a perspective view of the outer clamping bar of the joint, Fig. 4, a fragmental detail perspective view of the carrier beam employed in the joints between the flume sections, Fig. 5, a detail perspective view of one of the wedging shoes of the joint, Fig. 6, a view similar to Fig. 1 showing a modified form of the invention, Fig. 7, a view similar to Fig. 1 showing still another modified form of the invention, and Fig. 8, a view similar to Fig. 1 showing another modified form of the invention.

Referring to the drawings 10 and 11 indicate a pair of adjacent flume sections connected together at their adjacent ends by means of a joint A. The section 11 has the

end thereof disposed adjacent the section 10 positioned exteriorly of and in overlapping relation to said section 10. This end of the section 11 is formed with a groove 12, and a resultant rib 13. The end of the section 10 disposed in overlapping relation to the section 11 is likewise formed with a groove 14 and a resultant rib 15, which latter is of less width than the groove 12 and in which groove 12 said rib 15 seats. The sections 10 and 11 are secured together when the rib 15 is seated in the groove 12 by means of outer and inner clamping bars 16 and 17 respectively. The terminals of the outer clamping bar are each provided with threaded stems 18 which pass through the ends of a carrier beam 19 having an angular cross section and which extends across the sections of the flume. Nuts 20 mounted on the threaded stems 18 respectively serve, when manipulated, to draw the carrier bar firmly against the rib 13. The inner clamping bar 17 is seated in the groove 14 and has its ends in engagement respectively with wedging shoes 21 which are interposed between the ends of the inner clamping bar and the carrier beam 19, said wedging shoes 21 being pierced by respective threaded stems 18. The wedging shoes 21 each have their inner ends bent downwardly and outwardly into engagement with the inner side of the inner clamping bar 17, said inwardly bent portions of the wedging shoes being indicated respectively at 22. By this construction it will be apparent that when the nuts 20 are manipulated to effect the clamping of the bars 16 and 17 upon the sections 10 and 11 the inwardly bent portions 22 of the wedging shoes will force the ends of the clamping bar 17 outwardly and thus evenly distribute the clamping action of the bars 16 and 17. It will also be apparent that as the groove 12 is wider than the rib 15 the sections 10 and 11 can move a predetermined distance longitudinally relatively to each other and such movement will serve to compensate for the expansion or contraction of the flume sections so as to obviate the possibility of breakage or disarrangement of parts in the joint between the sections as the result of such expansion or contraction. It will also be apparent that by positioning the inner face of the clamping bar 17 in registration with the inner face of the section 10 a substantially smooth joint is formed between the sections which will re-

duce to a minimum the resistance offered to the passage of water through the flume.

In the modified form of joint shown in Fig. 6 the rib 13' is provided at each side with an outwardly directed supplemental ribs 24 which form a resultant exteriorly disposed groove 25 in which the outer clamping bar 16 seats. By this construction it will be apparent that the outer clamping bar 16 is held against lateral displacement while the ribs 24 also enhance the expansible nature of the joint. In all other respects the joint illustrated in Fig. 6 is similar to that illustrated in Fig. 1.

In the modified form of joint shown in Fig. 7 the rib 13 is provided with a plurality of eminences 26 forming a resultant exteriorly disposed groove 27 in which latter the outer clamping member 16 seats. In this instance the clamping member 16 is shown as having a circular cross section and is held against lateral displacement by means of the eminences 26.

In the modified form of joint shown in Fig. 8 the rib 15 is shown as having substantially the same width as the groove 12 and may be utilized in cases where it is not desired to provide for the expansion and contraction of the flume sections.

If desired, a suitable packing may be disposed between the side edges of the rib 15 and the adjacent side walls of the groove 12, such a packing is disclosed at 28 in Fig. 1.

What is claimed is:

1. The combination of a pair of flume sections having their adjacent ends formed with interior grooves and resultant exterior ribs and disposed in overlapping relation with the rib of one section seated in the groove of the other section, the rib of the first named section being of less width than the groove of the second named section whereby said sections may be moved longitudinally a predetermined distance rela-

tively to each other, and inner and outer clamping members, the inner clamping member being seated in the groove of the first named section and having its inner face in registration with the inner face of said first named section.

2. The combination of a pair of flume sections having their adjacent ends formed with interior grooves and resultant exterior ribs and disposed in overlapping relation with the rib of one section seated in the groove of the other section, the rib of the first named section being of less width than the groove of the second named section whereby said sections may be moved longitudinally a predetermined distance, relatively to each other, and inner and outer clamping members, the inner clamping member being seated in the groove of the first named section.

3. The combination of a pair of flume sections having their adjacent ends formed with interior grooves and resultant exterior ribs and disposed in overlapping relation with the rib of one section seated in the groove of the other section, the rib of the first named section being of less width than the groove of the second named section whereby said sections may be moved longitudinally a predetermined distance relatively to each other, and the rib of the second named section being provided with a plurality of supplemental exteriorly disposed ribs forming an exteriorly disposed groove and inner and outer clamping members, the inner clamping member being seated in the groove of the first named section, and the outer clamping member being seated in the exterior groove formed by said supplemental ribs.

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

WILLBERT L. SWICK.

Witnesses:

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