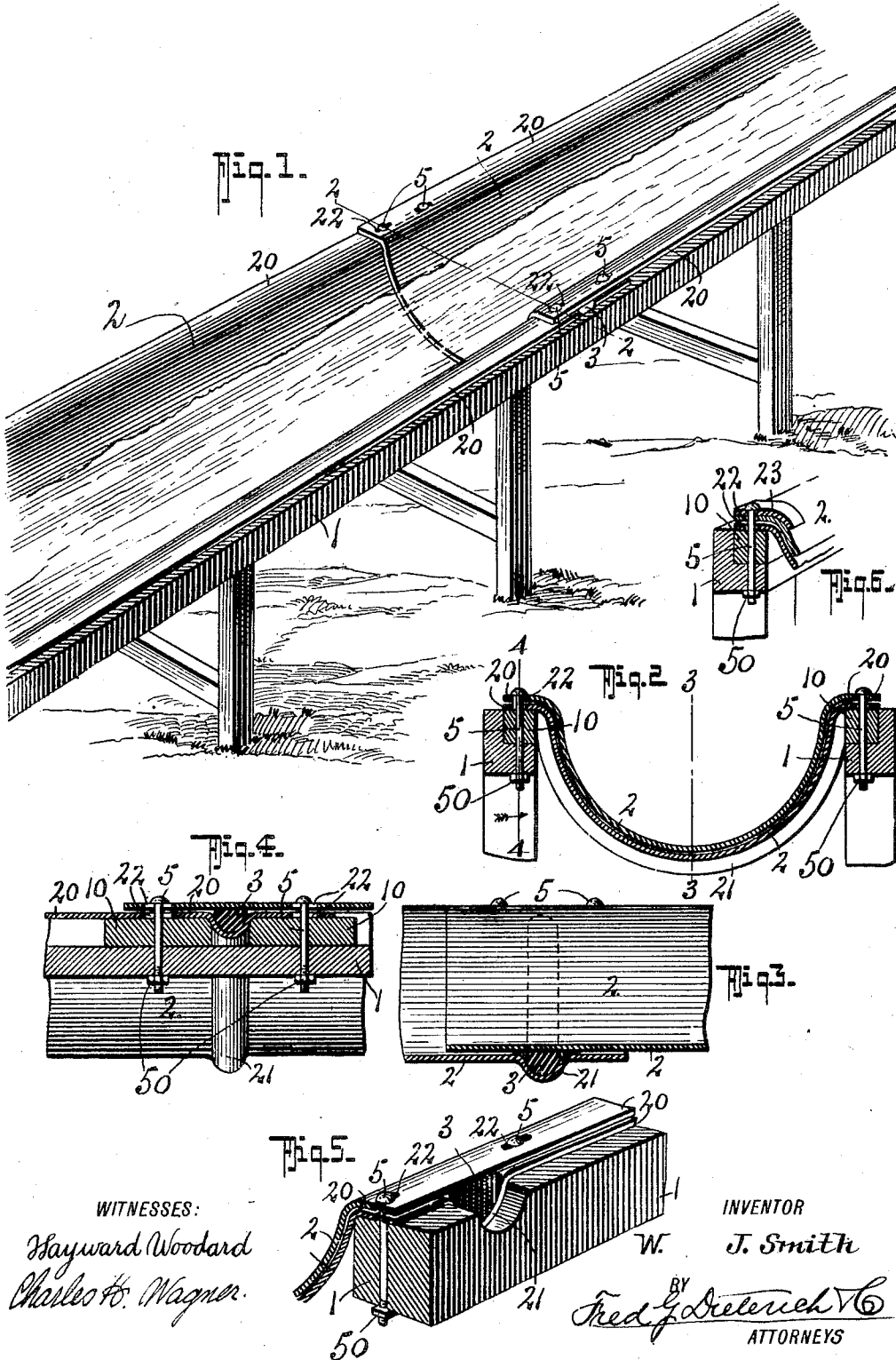


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FLUME OR CONDUIT.
APPLICATION FILED DEC. 20, 1909.

971,087.

Patented Sept. 27, 1910.



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WILLIAM JOHN SMITH, OF SAN LUIS OBISPO, CALIFORNIA.

FLUME OR CONDUIT.

971,087.

Specification of Letters Patent. Patented Sept. 27, 1910.

Application filed December 20, 1909. Serial No. 534,136.

To all whom it may concern:

Be it known that I, WILLIAM JOHN SMITH, residing at San Luis Obispo, in the county of San Luis Obispo and State of California, have invented a new and Improved Flume or Conduit, of which the following is a specification.

This invention, which generally relates to water carrying troughs or flumes for irrigating or other ditches, more particularly has for its object to provide an improved construction of flume or conduit formed of sheet metal sections with overlapping ends and especially the means for joining the said ends whereby a simple and economical smooth and water tight joint of the sections is obtained, the efficiency of which is not affected by the contraction or expansion of the sheet metal sections.

In its generic nature, my invention comprehends an improved arrangement and construction of the lapped ends of adjacent sheet metal flume sections, including special provision on one section for holding a packing strip of expansible material adapted to be tightly compressed as the two lapped ends are secured in the opposite flume rails, together with means for firmly securing the lapped ends onto the said rails, so the adjacent or lapped sections have sliding movement in direction of their length, during the contraction or expansion of the parts without affecting the packed joint.

In its more subordinate features, my invention consists in certain details of construction and peculiar combination of parts, all of which will be hereinafter fully described, specifically pointed out in the appended claims and illustrated in the accompanying drawing, in which:—

Figure 1, is a perspective view of my improvement and shows the preferred manner of mounting the metal sections on the side sills. Fig. 2, is a cross section of the same, taken substantially on the line 2—2 on Fig. 1. Fig. 3, is a detail longitudinal section on the line 3—3 on Fig. 2, and Fig. 4, is a section on the line 4—4 on Fig. 2. Fig. 5, is a detail view that illustrates a modified way of mounting the lapped ends of the sections on the sills, and hereinafter described. Fig. 6, is a view of a further modification hereinafter referred to.

In the practical construction, my improved flume or conduit comprises the usual continuous side rails or sills 1—1, upon

which the metal sections 2—2 are mounted and secured. In my arrangement the sections 2—2 are approximately of semi-circular shape and have their opposite edges turned down to form horizontal flanges 20—20 to rest on the rails 1. The upper end of each section is formed with a transverse groove or pocket 21 that extends the full width of the section, such pocket being provided for receiving a packing 3 of any suitable expansible material that compresses tightly when the flat end of the adjacent section is placed thereon in the manner clearly understood from the drawing. The pockets 21 are preferably semi-circular and the packing members are preferably of cylindrical shape, so that when placed in the pockets their upper portions protrude to form a yielding bearing for the smooth end of the section that rests thereon, which, when drawn down tightly, compresses or spreads the packing, see Fig. 3, and thereby makes a positive water tight joint. As best seen in Figs. 2 and 3, the pockets extend the full width of the sections including the side flanges, and to provide for conveniently fitting the said flanges onto the sills 1—1 the inner edges of said sills are grooved longitudinally to form flanges for the pocket or depressed portions to rest on, while the upper straight portions of the side flanges of the section rest on fillets 10—10.

Instead of forming the sills as stated, they may be solid, as in Fig. 5 and formed with transverse recesses or grooves to receive the pocket or depressed portions of the flume section flanges. In either way of mounting the flanged edges of the metal sections, the meeting ends of the flanges 20—20 have longitudinally elongated slots 22 through which pass the bolts 5—5 that go down through the side sills and are secured by the nuts 50, the tightening of which firmly clamps the two section plates together and squeezes the packing tight, and by providing the elongated bolt slots, it is obvious that the plates can expand or contract without in the least, affecting the efficiency of the joint, and particularly without loosening up the packing connection.

From the foregoing, the complete construction and the advantages of my invention will be readily apparent, it being understood that other modifications of the means for clamping the flanged ends of the sections on the side sills might be made

without departing from the scope of the appended claims.

In Fig. 6, I have shown a further modification of my invention in which the lapped ends of the members 2—2 are held down by a clip that is secured by a bolt 5.

Having thus described my invention, what I claim is:—

1. In a flume or conduit of the character described, in combination with the opposite side rails, of a plurality of metallic sections, whose adjacent ends overlap, the upper end of each section having a transverse groove, a compressible packing in said groove and means for clamping the overlapping portions of the sections together and securing them on the side rails.

2. The combination with the opposite side sills; of a plurality of sheet metal sections of semi-circular shape whose opposite edges are bent out to form rest flanges, the adjacent ends of each pair of sections overlapping, a packing strip section held between the sections and extending the full transverse width thereof, the flanges of the sections being mounted on the side sills and provided with longitudinally elongated slots, and fastening bolts that pass through the said slots and the side sills.

3. The combination with the side sills,

of the metallic trough sections, each section having a depressed portion that forms a pocket and extending its full width and side flanges, the sills having portions in which the depressed portions of the sections rest and other portions for receiving the side flanges of the sills, a packing held in the said pockets, and means that engage the flat ends of the side flanges and the sills for clamping the trough sections together and securing them on the sills.

4. The combination of a plurality of sheet metal trough sections having flat side flanges, each section being transversely depressed its full width near one end to form a pocket, a packing of compressible material held in said pocket, the adjacent ends of the several sections overlapping the side sills, said sills having rest portions for the depressed pocket portions of the sections and other rest portions for the flat side flanges of the sections, said side flanges having registering elongated slots and the clamping bolts that pass through the slots and the sills.

WILLIAM JOHN SMITH.

Witnesses:

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