

J. H. SCHLAFLY.

CULVERT.

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973,708.

Patented Oct. 25, 1910.

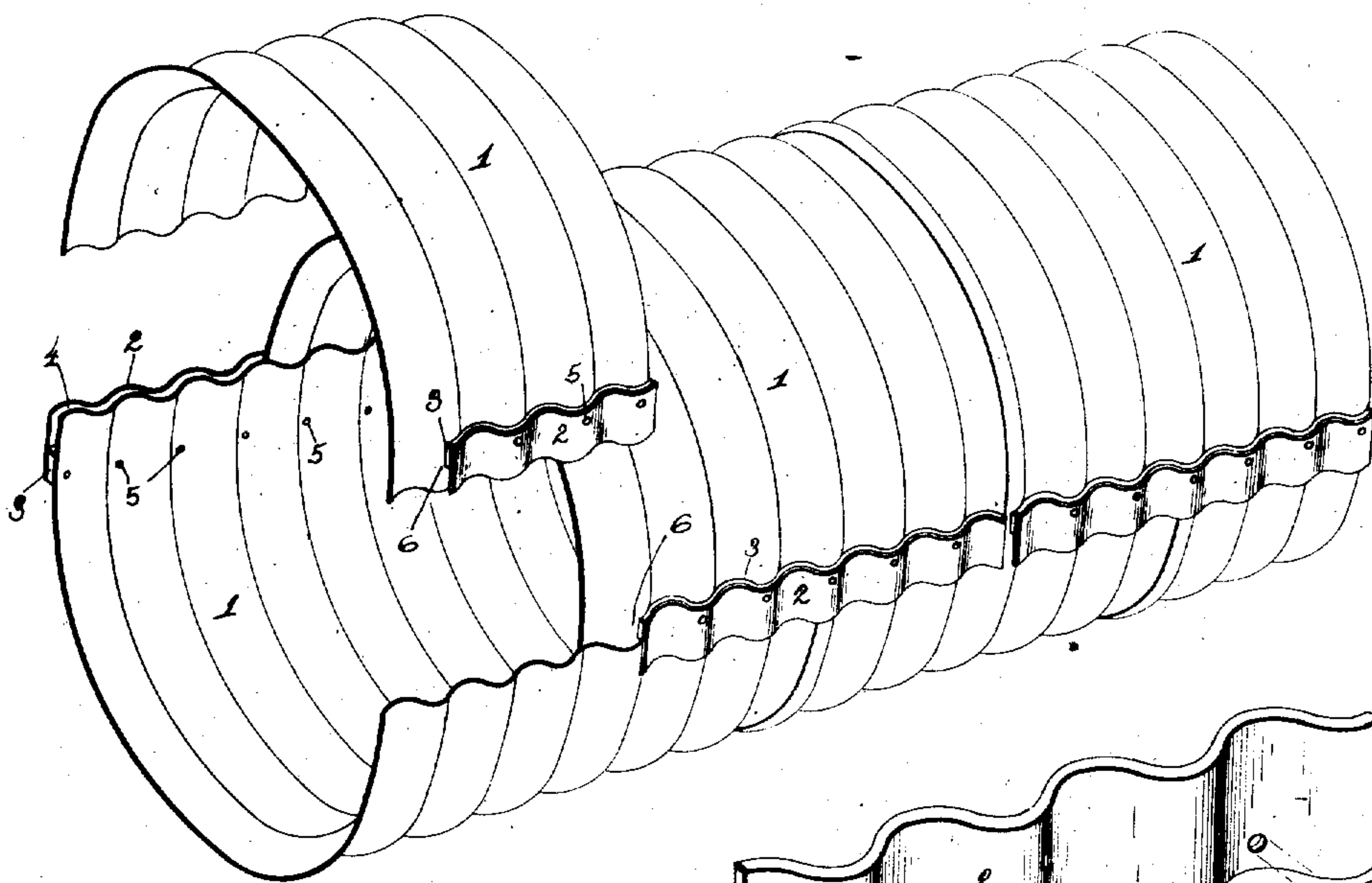


Fig. 1.

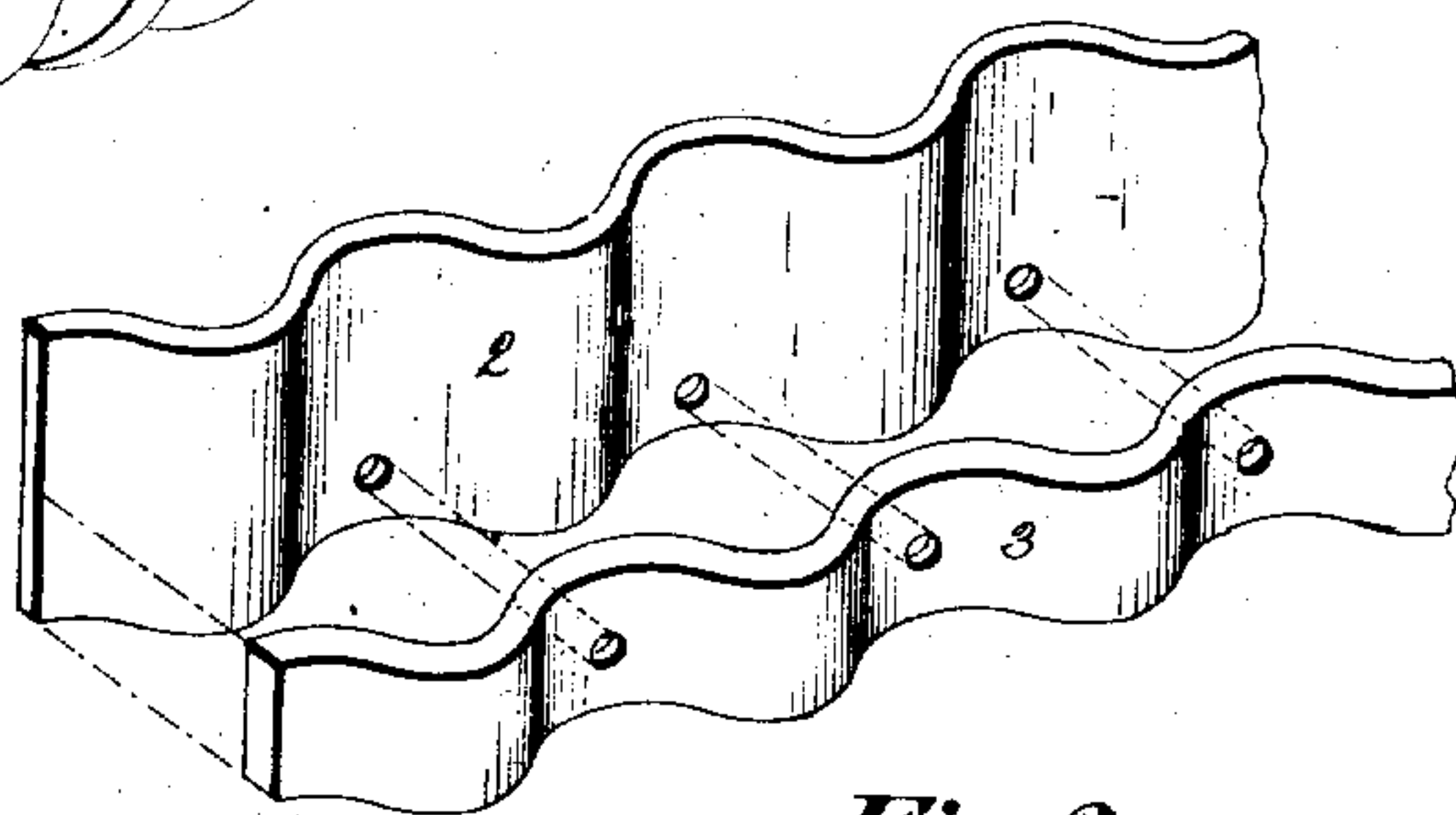


Fig. 2.

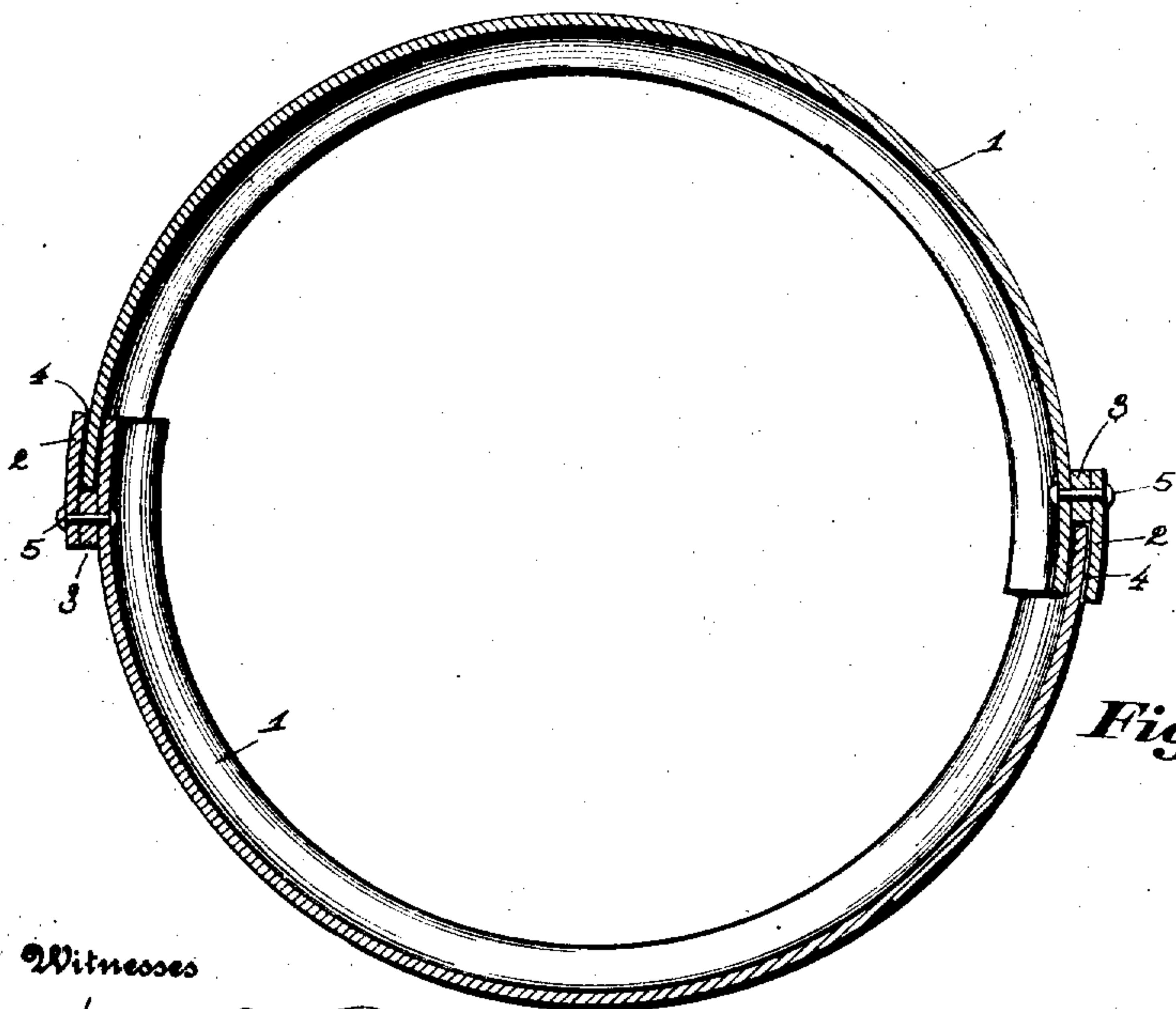


Fig. 3.

Witnesses

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UNITED STATES PATENT OFFICE.

JULIUS H. SCHLAFLY, OF CANTON, OHIO, ASSIGNOR TO THE CANTON CULVERT COMPANY, OF CANTON, OHIO, A CORPORATION OF OHIO.

CULVERT.

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To all whom it may concern:

Be it known that I, JULIUS H. SCHLAFLY, a citizen of the United States, residing at Canton, in the county of Stark and State of Ohio, have invented a new and useful Culvert, of which the following is a specification.

My invention relates to sheet metal culverts and more particularly to such culverts built of sections adapted to be knocked down and nested together in shipment and storage and to be set up and formed into a complete pipe or culvert at the place where the same is to be used, and the object of the improvement is to provide a sectional nestable culvert cheaply constructed, and convenient in handling and erecting as well as strong and durable. I attain these objects by the construction illustrated in the accompanying drawing, in which—

Figure 1 is a perspective view of a culvert composed of nestable half-sections embodying my invention, one half-section being partly removed to more fully disclose the construction. Fig. 2 is a perspective view of a detached portion of the spacing strip and flange plate used in constructing the offset flange. Fig. 3 is a vertical transverse section through a culvert formed of half-sections embodying my invention.

Throughout the several views similar numerals of reference indicate similar parts.

The numeral 1 indicates a culvert half-section which is preferably corrugated circumferentially although such corrugations are not essential to my invention. The entire culvert is composed of a number of such half-sections arranged preferably as top and bottom complementary half-sections, the longitudinal seams or lines of union between said top and bottom half-sections lying preferably in the same horizontal plane. Each half-section is provided with an offset flange, 2, consisting of a flange plate extending along the edge of said half-section and corrugated as in Fig. 2 in order to follow the lines of the half-section if the corrugated form of half-section is employed. The spacing strip 3, consisting of a strip similar to the flange plate but narrower than said plate may be arranged between the edge of the half-section and the said strip 2 for the purpose of spacing or offsetting the plate from the edge.

The strip and plate are so arranged with

reference to the edge of the half-section that a longitudinal groove or socket, 4, is produced into which the edge of the complementary half-section may be introduced. Rivets, 5, or their equivalents are used for fastening the flange plate and spacing strip together and in place. For the purpose of permitting a lapping of the longitudinally adjacent half-sections, where the end edges of said half-sections meet, the plate and strip are caused to terminate short of one end edge of each half-section, as shown at 6. In the case of corrugated half-sections, as shown in the drawing herewith, this will permit the overlapping of the terminal corrugation of one half-section over the terminal corrugation of the adjacent half-section, producing an engagement between corrugations adapted to lock the half-sections against relative displacement. An obvious advantage of the corrugated form shown in the drawing is not only that the relative displacement between adjacent half-sections is rendered improbable but also the relative longitudinal displacement as between complementary half-sections is also practically prevented, and it will be understood that when a culvert constructed of half-sections as disclosed in the drawing is arranged underground with the said ground well packed about it any relative displacement as between any of said half-sections is impossible.

While the drawing discloses half-sections, each of which is provided along one edge with an offset flange producing a longitudinal notch or socket, the culvert might well be constructed with flanges on the two edges of one half-section, the complementary half-section being wholly without said flanges without departing from the spirit of the present invention. The practical advantage of forming each half-section with one flange edge and one plain edge is that the half-sections will all be the same so that a culvert may be constructed at any time out of any number of said half-sections thus making it unnecessary to carry two different forms of half-sections in stock. It should also be stated that it is found practicable in some instances to form culverts of third-sections instead of half-sections, and also of entire sections, thus necessitating but one seam.

I claim:—

1. A sheet metal culvert comprising longitudinally adjacent sections overlapping

at their meeting ends, each section having longitudinal seam edges and each section comprising means for uniting said longitudinal seam edges, and a portion of each section cut away to permit the overlapping of the meeting ends of longitudinally adjacent sections.

2. A sectional sheet metal culvert composed of complementary half-sections provided with circumferential corrugations, an offset corrugated flange plate secured to one seam edge of each half-section, whereby to form a corrugated longitudinal slot along said edge, said plate terminating short of one end edge for the purpose of permitting the lapping of terminal corrugations of longitudinally adjacent half-sections, and the said half-sections assembled with the unflanged edge of each half-section located within the longitudinal slot of its complementary half-section, and the terminal corrugations of longitudinally adjacent half-sections overlapping.

3. A sectional sheet metal culvert composed of complementary half-sections, an offset flange plate secured to one seam edge of each half-section, whereby to form a longitudinal slot along said edge, said plate terminating short of one end edge, for the purpose of permitting the overlapping of said

end edge with the end edge of a longitudinally adjacent half-section, and the said half-sections assembled with the unflanged edge of each half-section located within the longitudinal slot of its complementary half-section, and the end edges of longitudinally adjacent half-sections overlapping.

4. A sheet metal culvert composed of circumferentially corrugated complementary sections, each section provided with an offset flange comprising a flange plate extending along the edge of said section, said plate being corrugated to follow the corrugations in said sections and a spacing strip arranged between the said flange plate and the said section, the said plate, spacing strip and section forming a groove adapted to receive the edge of the complementary section, means for fastening said plate, strip and section together, said plate and strip terminating short of one end of said section, whereby longitudinally adjacent sections may be overlapped at their ends.

In testimony that I claim the above, I have hereunto subscribed my name in the presence of two witnesses.

JULIUS H. SCHLAFLY.

Witnesses:

CHAS. W. KING,
A. D. McINERN.