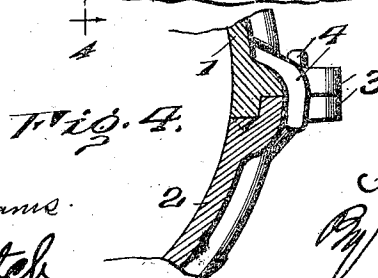
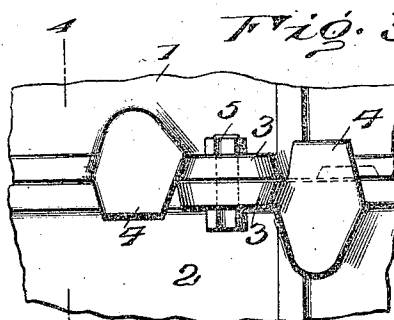
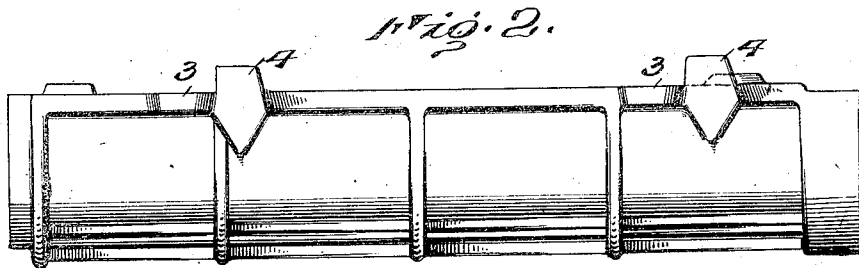


1,053,134.



WITNESSES  
W. A. Williams  
Gloyd W. Patch

Frank B. Zieg <sup>INVENTOR</sup>  
By Louis D. Zieg <sub>Attorneys</sub>

# UNITED STATES PATENT OFFICE.

FRANK B. ZIEG, OF FREDERICKTOWN, OHIO, ASSIGNOR TO THE F. B. ZIEG MANUFACTURING COMPANY, OF FREDERICKTOWN, OHIO.

## CULVERT AND CULVERT-PIPE.

1,053,134.

Specification of Letters Patent.

Patented Feb. 11, 1913.

Application filed October 26, 1912. Serial No. 727,932.

*To all whom it may concern:*

Be it known that I, FRANK B. ZIEG, a citizen of the United States, residing at Fredericktown, in the county of Knox and State of Ohio, have invented certain new and useful Improvements in Culverts and Culvert-Pipes, of which the following is a specification.

My invention relates to an improvement in culverts and culvert pipes, and more particularly to the variety cast in half-sections, the object being to provide a simple means of fastening the sections together if desired, or of connecting them in such a manner that they will not become accidentally displaced by frost or other conditions even though not bolted together.

With this general object in view, the present invention consists in the main, of a construction similar to that disclosed in Letters Patent No. 1,037,709, granted to me September 3, 1912, but to that construction is added the embracing and interlocking side lugs which prevent either lateral or longitudinal displacement, although admitting of the half-sections being separated from each other when they are not bolted together.

In the accompanying drawings:—Figure 1 is a plan view looking into the interior of one half-section, Fig. 2 is a view in side elevation of one of these sections, and Fig. 3 is an enlarged detail in side elevation showing the joint formed by the lugs of two half-sections. Fig. 4 is a section on the line 4—4 of Fig. 3.

The two sections 1 and 2 are counterparts of each other and may both be cast in the same mold. They interlock at the edges and are provided with lateral lugs 3, 3, as

well as embracing lugs 4, 4, which extend at right angles to the lugs 3, 3, and are adjacent thereto, the lateral and embracing lugs being located at opposite points on opposite sides of each section, so that the lateral lugs have two functions, namely of receiving bolts 5, 5,—if such are used to permanently secure the sections together—and to serve as stops to prevent longitudinal movement of the half-sections with respect to each other as the embracing lugs from one half-section engage the opposite edge of the lateral lug of the other section, thereby preventing longitudinal sliding or slipping of one section with respect to the other, while at the same time precluding lateral displacement. Thus provision is made for either bolting the half-sections together or for joining them without the use of bolts, thus effecting a simple and inexpensive mode of joining the half-sections together.

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

A culvert-pipe comprising two similarly-cast sections, each of which is provided with lateral and embracing lugs adjacent to each other and arranged reversely on opposite edges, whereby, when placed together, the embracing lugs of opposite half-sections engage the opposite edges of the lateral lugs, thus preventing longitudinal as well as lateral sliding or displacement.

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

FRANK B. ZIEG.

Witnesses:

L. P. BRENTLINGER,  
ERNEST V. ACKERMAN.