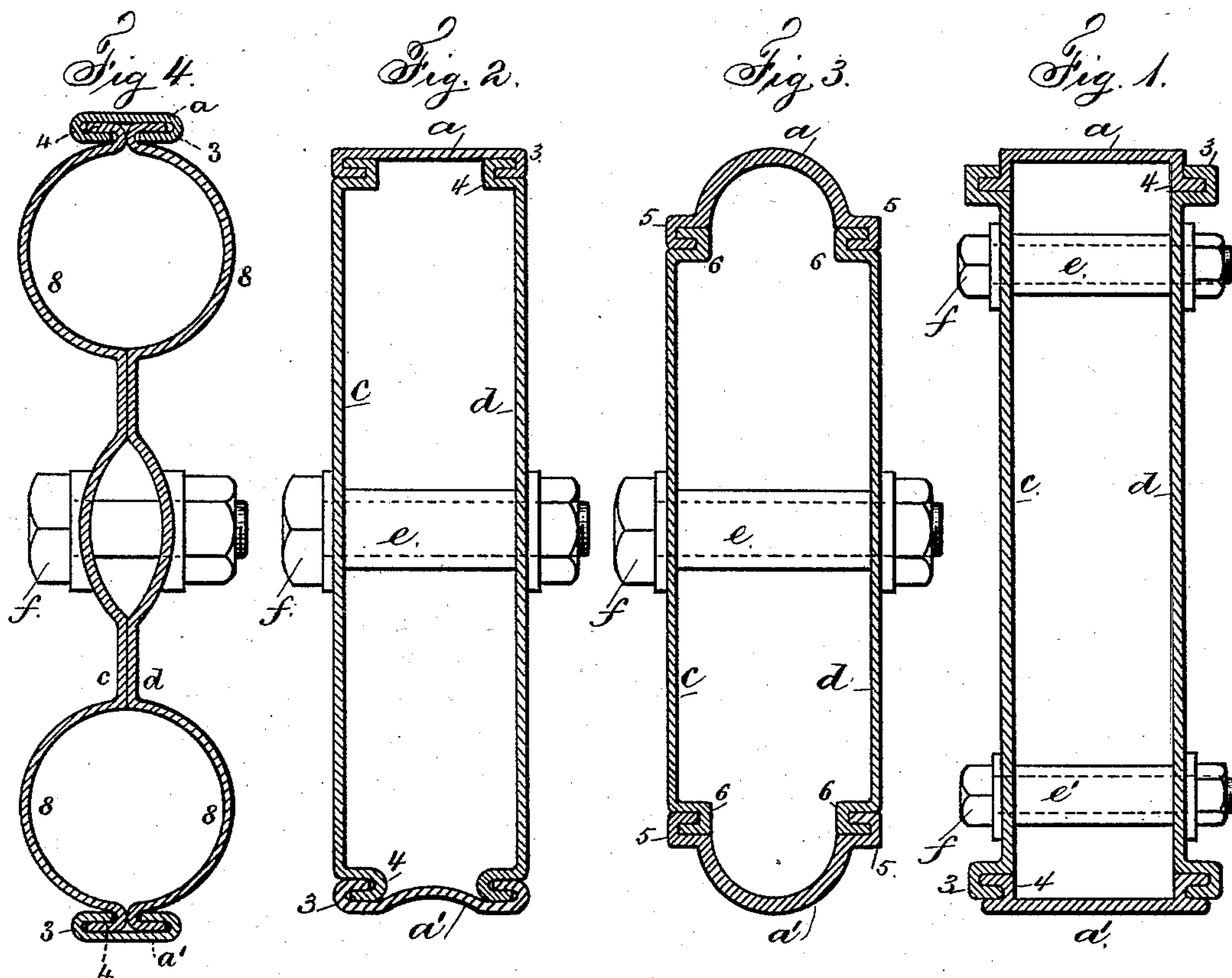


(No Model.)

G. W. DITHRIDGE.  
BEAM OR GIRDER.

No. 426,559.

Patented Apr. 29, 1890.



Witnesses—  
Harold Ferrell  
Chas. H. Smith

Inventor  
George W. Dithridge  
per Lemuel W. Ferrell  
att'y.

# UNITED STATES PATENT OFFICE.

GEORGE W. DITHRIDGE, OF NEW YORK, N. Y.

## BEAM OR GIRDER.

SPECIFICATION forming part of Letters Patent No. 426,559, dated April 29, 1890.

Application filed August 28, 1889. Serial No. 322,178. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE W. DITHRIDGE, of the city, county, and State of New York, have invented an Improvement in Beams or Girders, of which the following is a specification.

My invention relates to a metal beam, girder, or sill adapted for use in buildings, railway structures, car-bodies, &c. I make use of upper and lower edge plates and side plates having interlocking edge tongues formed integral therewith, and bolts by which the parts are connected together.

In the drawings, Figures 1, 2, 3, and 4 show by cross-sectional views some of the different shapes in which my improved girder or beam is made.

In Figs. 1 and 2 I have shown my improved beam or sill as constructed with flat or nearly flat upper and lower or edge plates *a a'* and flat side plates *c d*, the edges of which have return-bends 3 4, to form interlocking edge tongues and grooves, these return-bends being made integral with said plates, and in Fig. 1 I have shown tubular studs *e e'* between the side plates *c d*, and bolts or rivets *f f'*, which pass through said plates and studs and unite the parts together to form the beam or sill.

In Figs. 2 and 3 I have shown the tubular

studs *e* and bolt *f* midway between the top and bottom edges of the girder.

Several different forms of interlocking tongues and grooves are shown at the edges of the beams in Figs. 1 and 2, because any of these forms may be employed as desired.

In Fig. 3 the top and bottom or edge plates *a a'* are as half-tubes, their convex sides being outward and their edges formed with return-bends 5, which interlock with the return-bends 6 of the side plates *c d*. The side plates *c d* are preferably continuous; but, if desired, they may be of any suitable lengths and placed so as to leave spaces between the ends of the respective plates.

The side plates *c d* (shown in Fig. 4) are provided with nearly half-circle stiffening-ribs 8 8, the edges of the side plates interlocking at 3 and 4 with the edge plates *a a'*.

I claim as my invention—

The combination, in a beam or sill, of upper or lower edge plates and side plates having return-bend edges that interlock, and connecting-bolts, substantially as set forth.

Signed by me this 22d day of August, A. D. 1889.

GEORGE W. DITHRIDGE.

Witnesses:

GEORGE T. PINCKNEY,  
WILLIAM G. MOTT.