No. 854,947. PATENTED MAY 28, 1907.

T. G. HILL.

METALLIC BEAM OR GIRDER.

APPLICATION FILED MAR. 18, 1907.

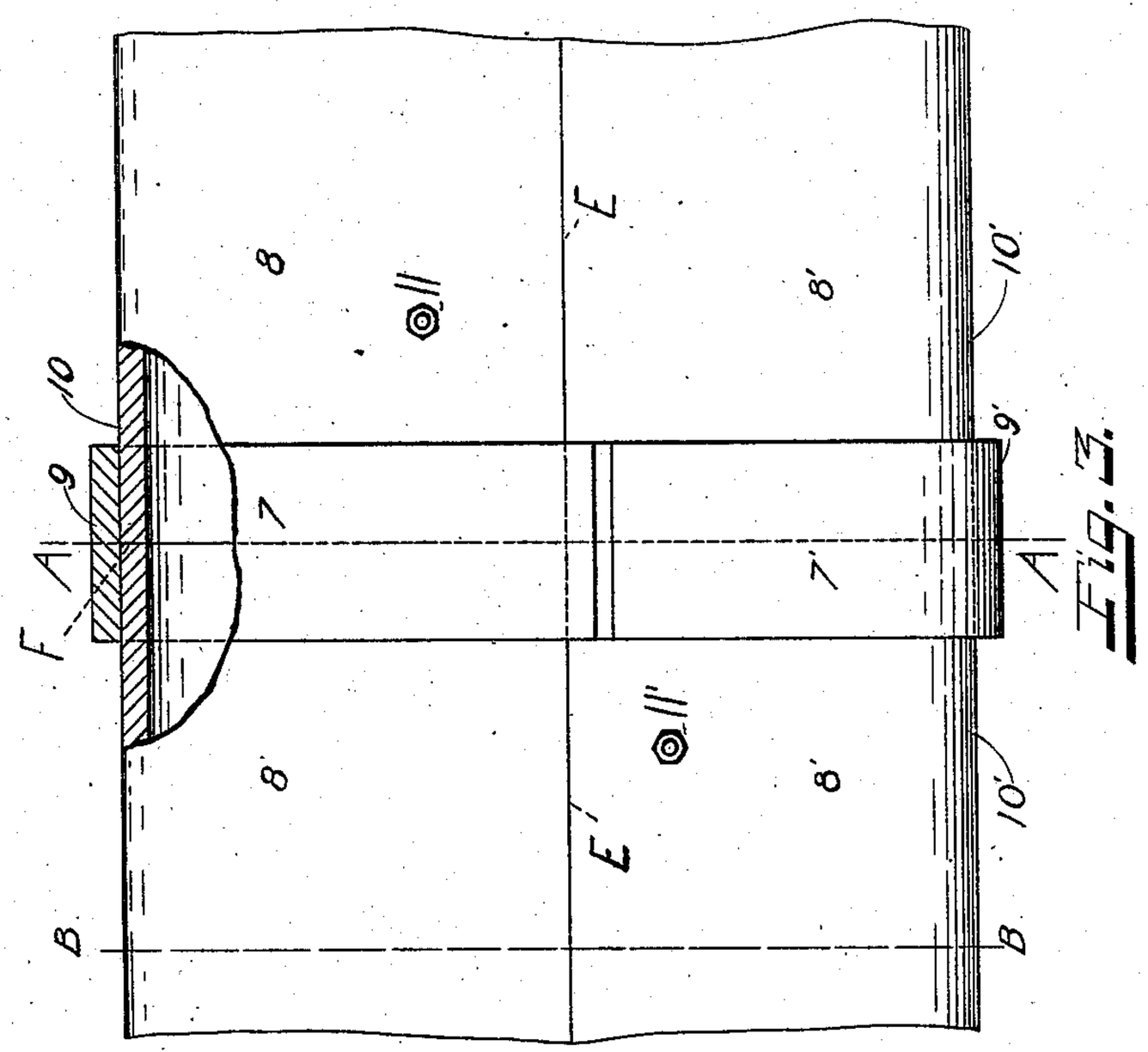

Fig. 3.

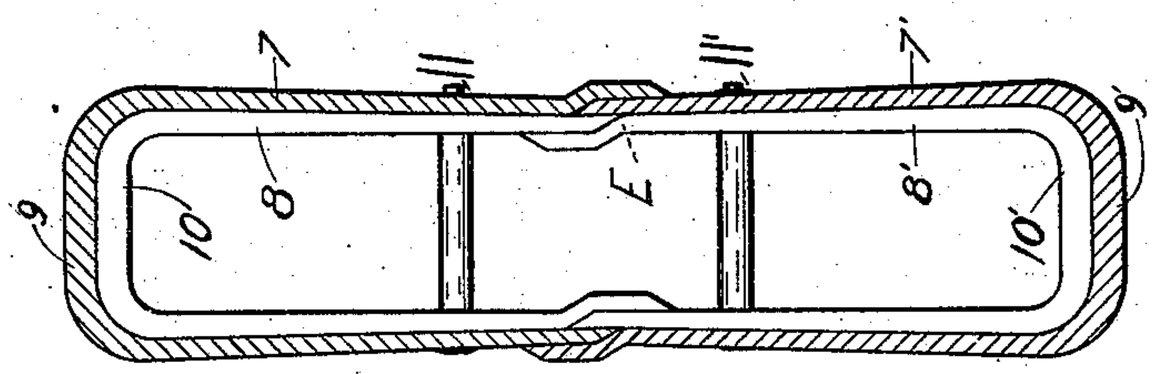

Fig. 2.

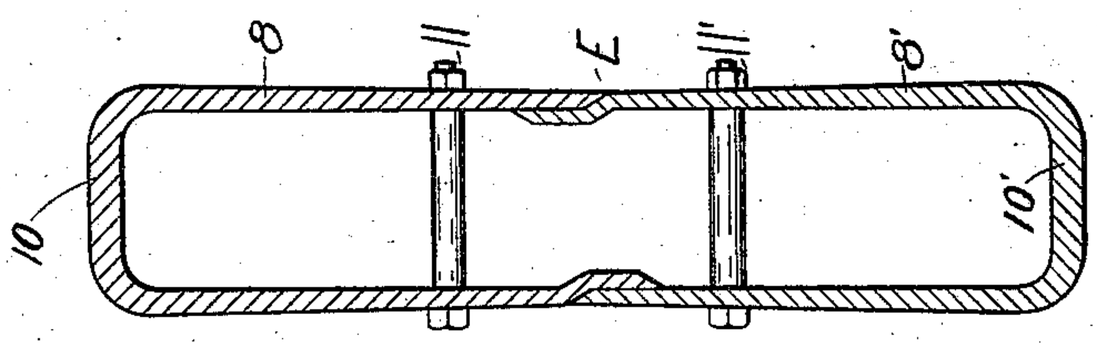

Fig. 1.

Witnesses:

Truman J. Glover.

J. Alva Reams.

Inventor:

Thomas Gunstone Hill.

UNITED STATES PATENT OFFICE.

THOMAS GUNSTONE HILL, OF PORTLAND, OREGON.

METALLIC BEAM OR GIRDER.

No. 854,947. Specification of Letters Patent. Patented May 28, 1907.

Application filed March 18, 1907. Serial No. 363,123.

To all whom it may concern:

Be it known that I, THOMAS GUNSTONE HILL, a citizen of the United States, residing at Portland, in the county of Multnomah and State of Oregon, have invented a new and useful Improvement in Metallic Beams or Girders, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to improvements in the construction of metallic beams or girders composed of two or more sections or parts.

The object of my invention is to provide in such metallic beams or girders a new and more secure and permanent joint for the different sections or parts, intended to comprise one beam when so joined. I attain these objects and other practical advantages by the construction, combination, and arrangement of parts illustrated in the accompanying drawings which form a part of the specification.

It is well known that a perfectly satisfactory jointed beam has not been placed upon the market, for bridges, buildings, and other structures, where strong beams or girders of great length are required. I claim that the beam I have devised supplies this need.

In the drawings Figure 1 is a section of the girder on the line B—B, of the view in Fig. 3. Fig. 2 is a section on the line A—A, of the same view. Fig. 3 is a side view of the girder showing end joints, with part in section.

Like numerals and letters refer to like parts in the figures.

In Fig. 1 is seen a girder composed of two oppositely disposed flat-bottomed U-shaped members 8—8′, each of which is suitably formed of sheet metal as shown, and the joints at the center E, are made by the lap of one side of each member over the adjacent side of the other longitudinally throughout each, and these joints are properly welded so that the exterior of the side of the girder shall form a plane surface. Separating bolts 11—11′, are provided for each member in suitable numbers on either side of said joint, the functions of these bolts being to retain the sides of the girder at the proper distance apart, and to secure them from spreading outwardly.

In Fig. 2 the same construction of girder is shown as in Fig. 1 but also with the straps or yokes 7—7′, adapted to be placed around the outside of the joint F Fig. 3 between ends of the sections of the girders constructed as described, these straps 7—7′, are also shown in the side view Fig. 3 and are securely brazed to the girders around the plane joints F, formed by the adjacent ends of the girder sections when placed end to end. In this manner two or more sections of my girder are joined together to form a single girder of such length as may be desired in any structure. It will further be seen that I increase the structural strength of my girder by having the outer bay-shaped ends 10—10′, of the members 8—8′, Figs. 1, and 2, where the sheet metal is bent, of thicker dimension than the remainder, the straps 7—7′, are likewise of greater thickness at their bay-shaped ends 9—9′, for the same reason. Thus it will be seen that with sections of girders constructed, arranged, and joined in the manner I have indicated that girders may be manufactured in sections of any convenient lengths for shipping, and upon arrival at the place of use, the sections may then be joined and a strong and durable girder of any desired length made near the structure into which it is to be placed.

What I claim as my invention, and desire to secure by Letters Patent, is—

A structural metal beam or girder, composed of two or more sections, each of which is formed of oppositely disposed flat-bottomed U-shaped members of sheet metal thicker at the bay-shaped ends, or sides 10—10′, and longitudinally joined by welding so as to form an integral girder with plane side surfaces, the sections being provided with a suitable number of separating bolts 11—11′, on either side of said joint, and said sections being joined together at their ends by flat-bottomed U-shaped straps 7—7′, thicker at the bay-shaped ends or sides 9—9′, the same being securely brazed over the plane section end joint, all substantially as described.

Signed at Portland, in the county of Multnomah, and State of Oregon, this 7th day of March 1907.

THOMAS GUNSTONE HILL.

Witnesses:
TRUMAN J. GLOVER,
J. ALVA REAMS.