

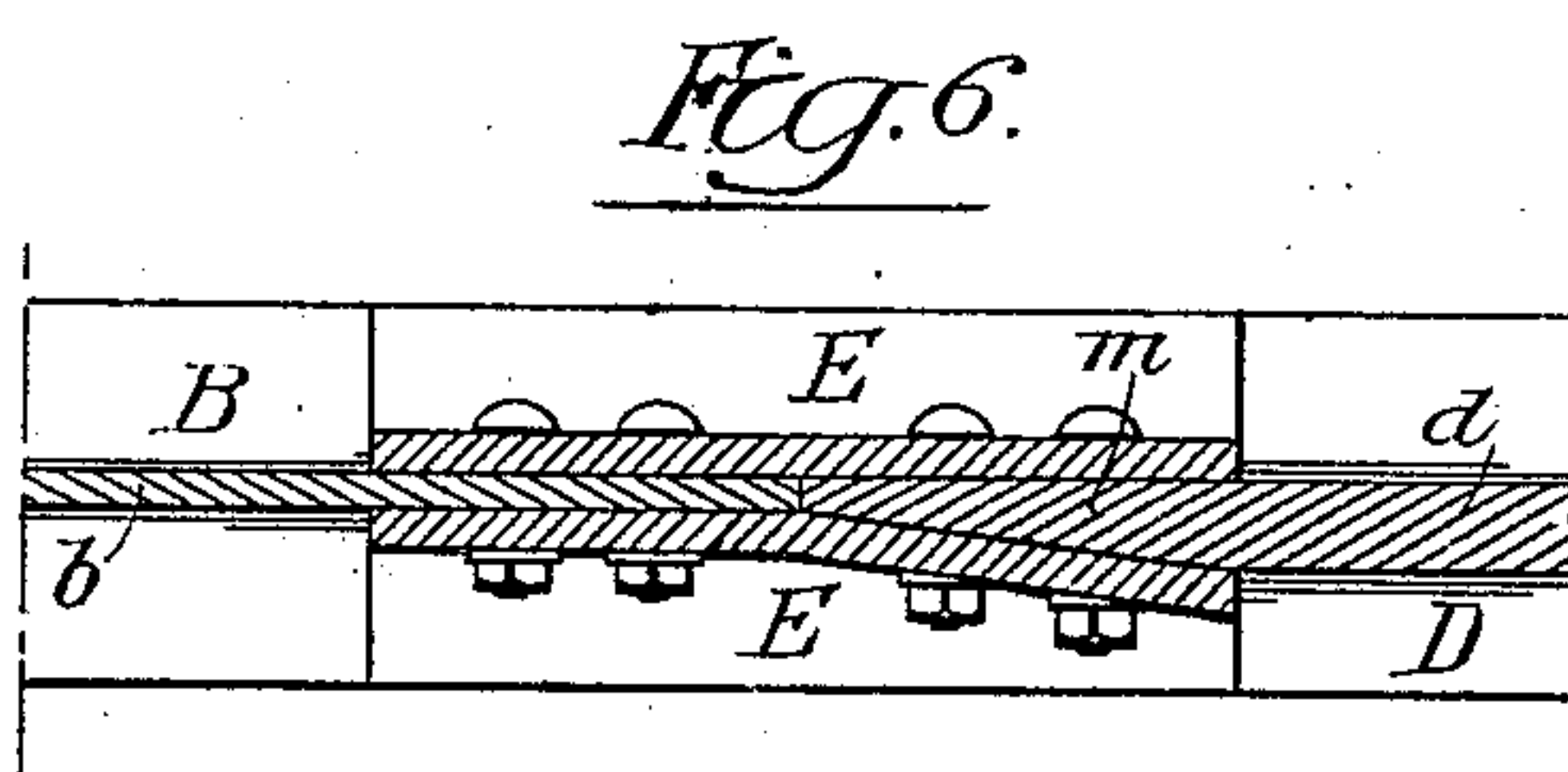
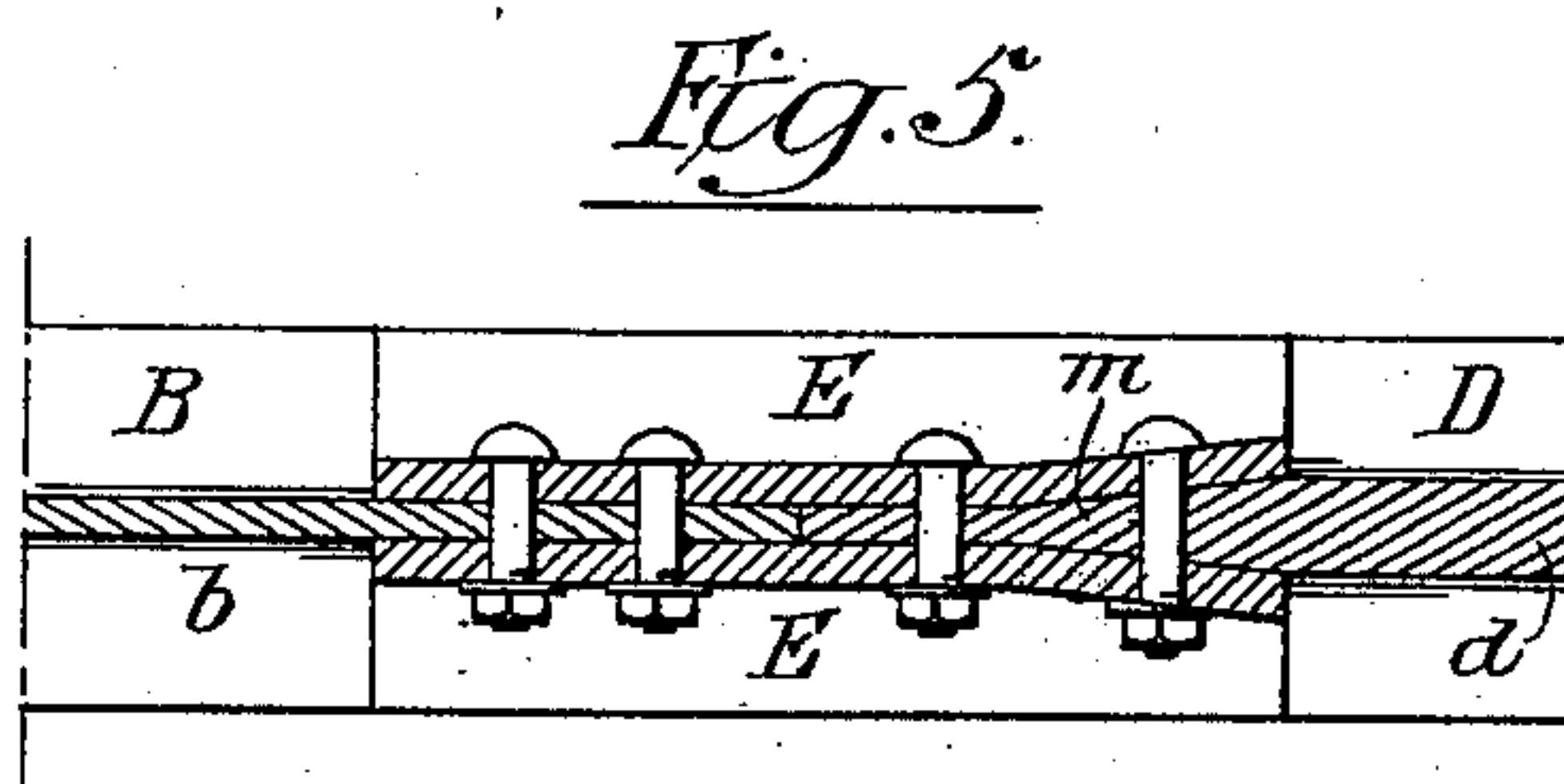
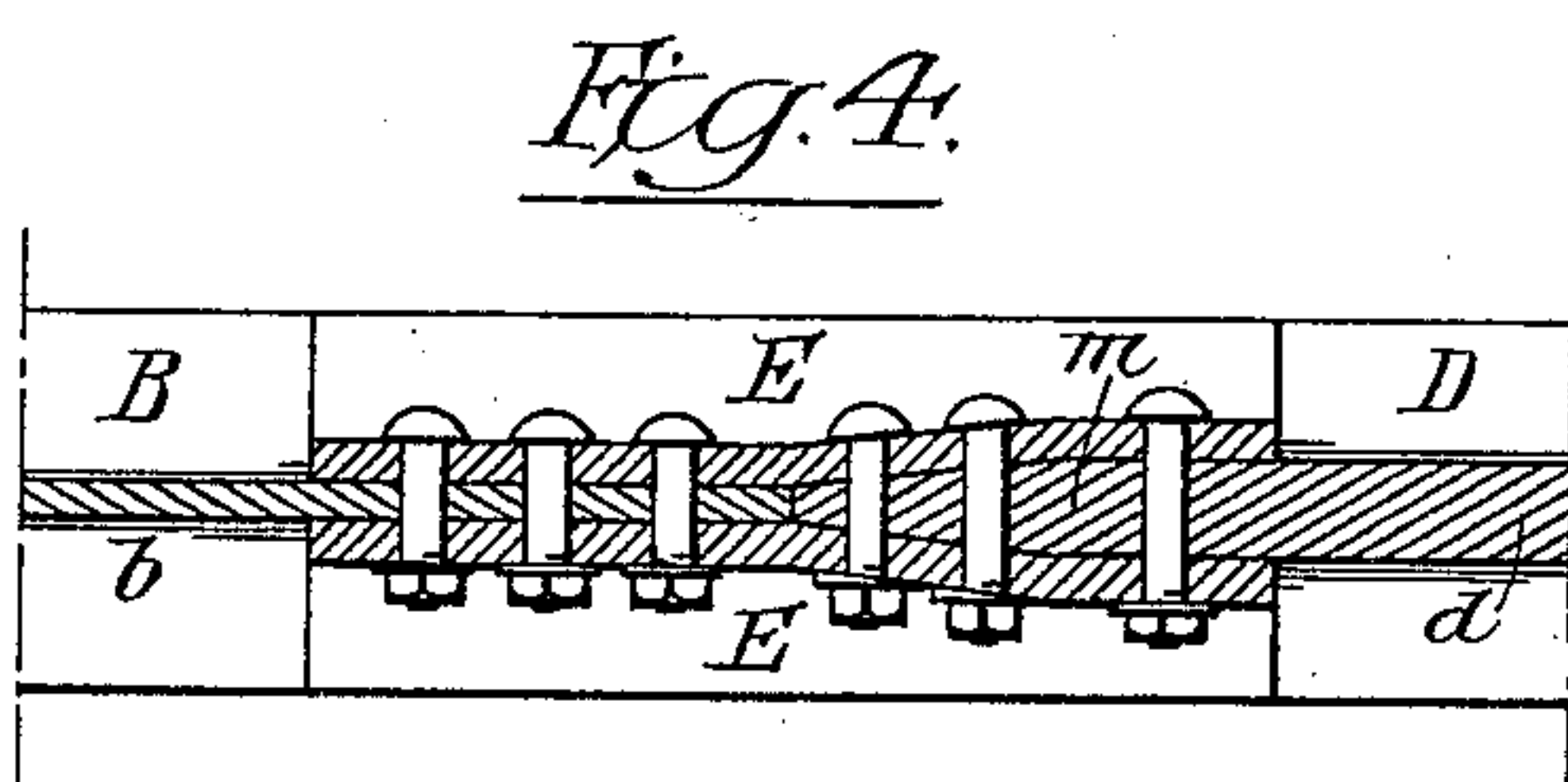
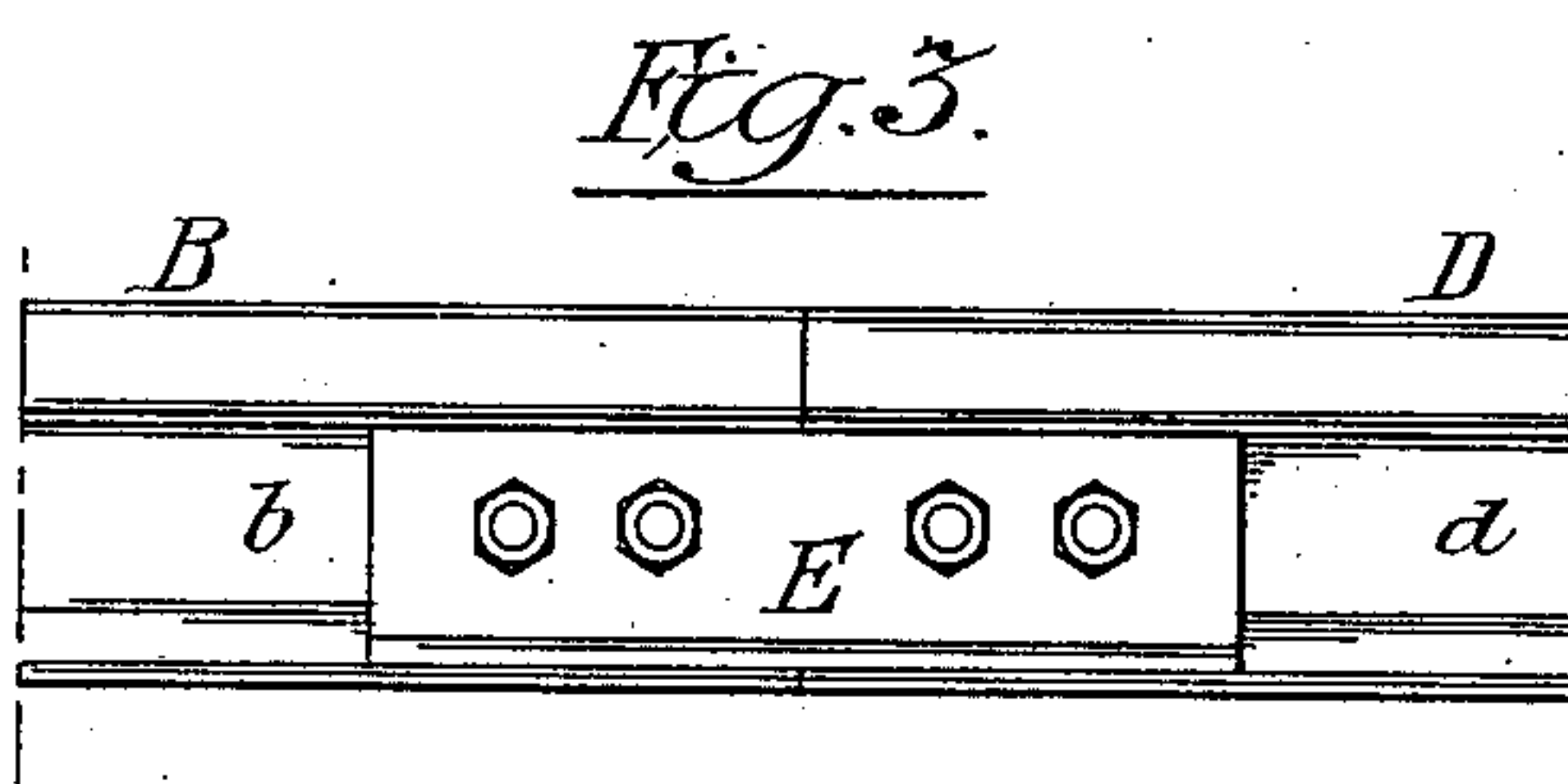
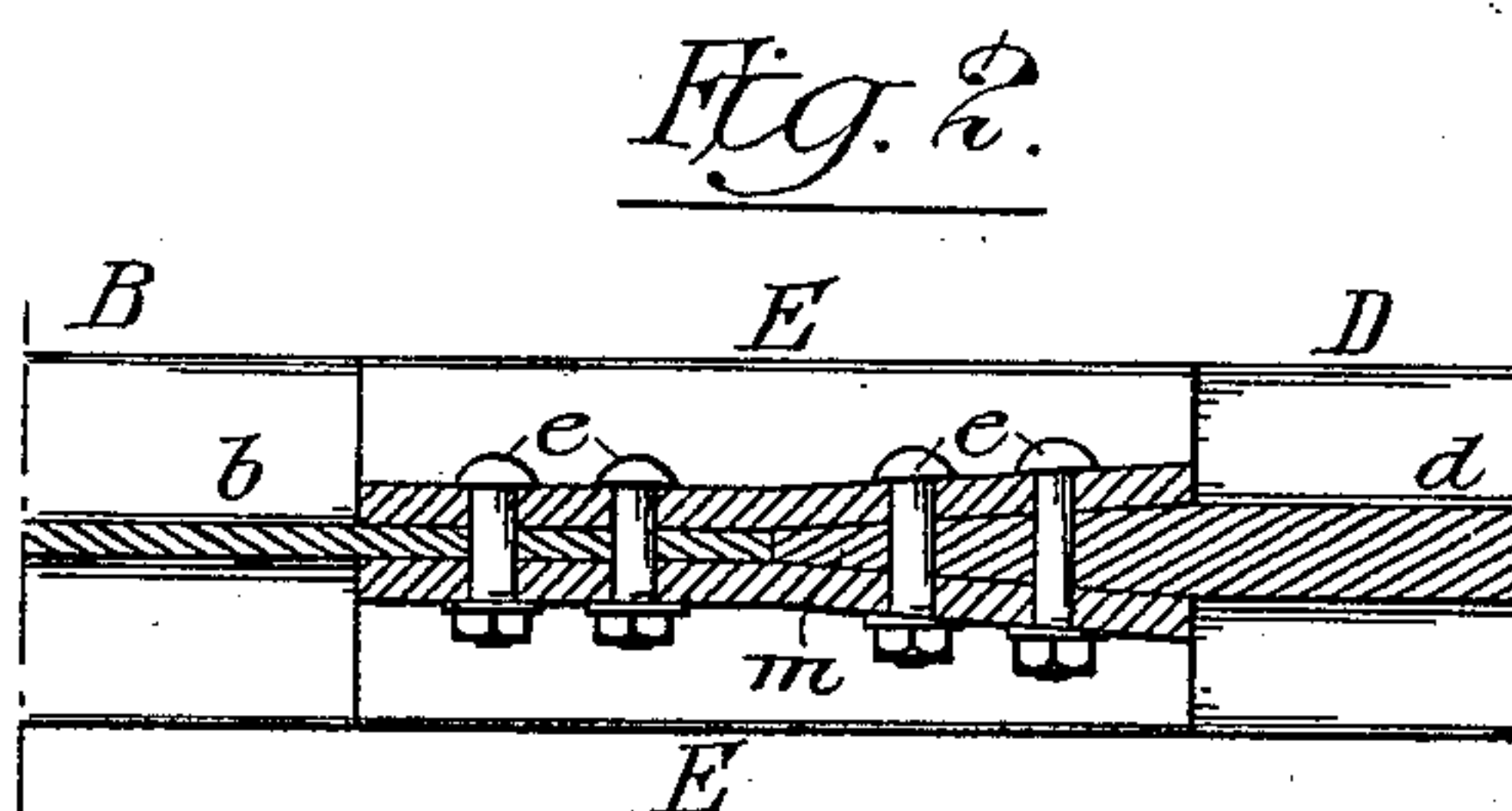
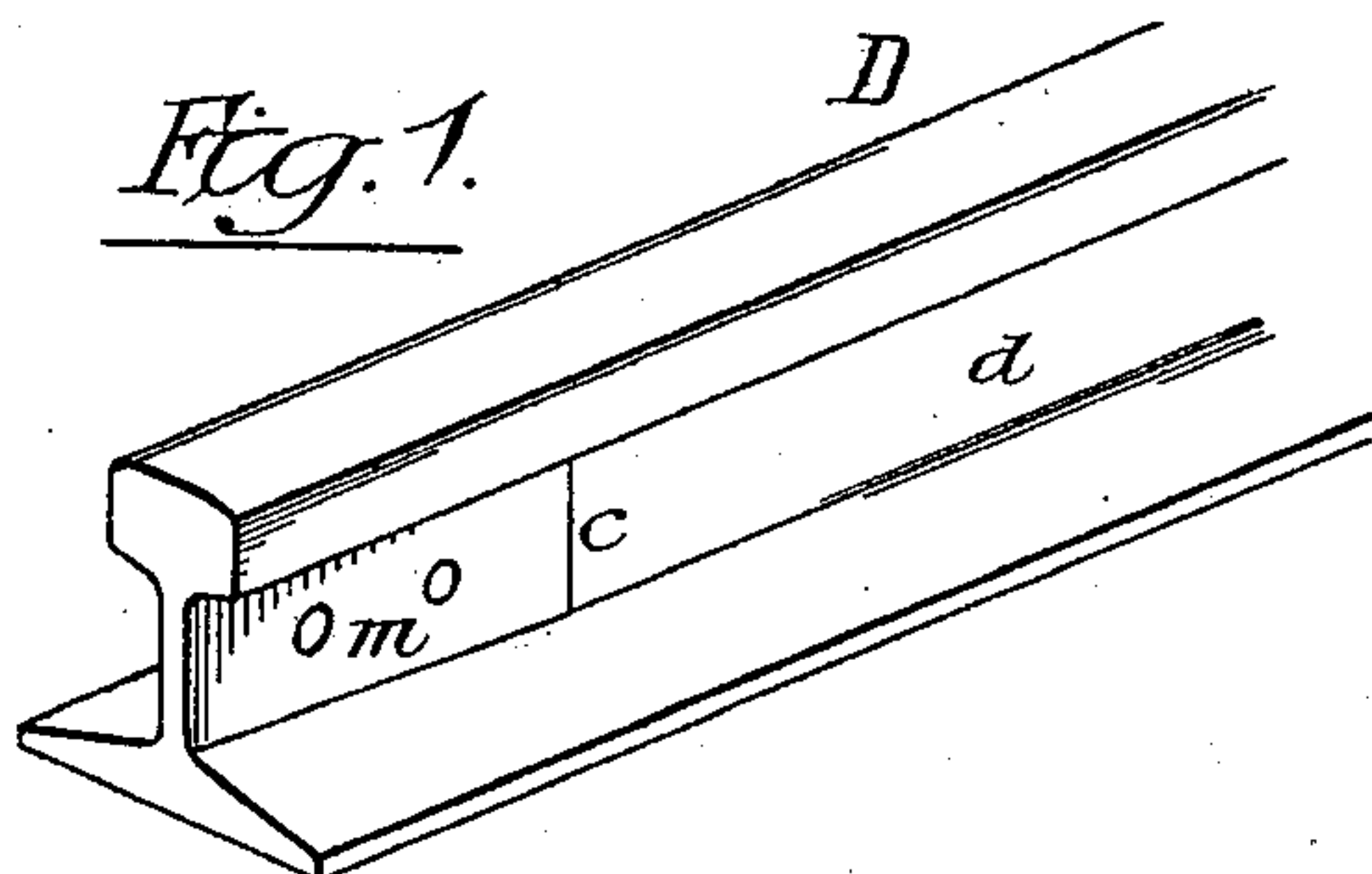
No. 674,228.

Patented May 14, 1901.

W. WHARTON, JR.
RAIL JOINT.

(Application filed Oct. 25, 1900.)

(No Model.)



Witnesses:

Herman C. Morris.

Louis H. Whitehead.

Inventor:

William Wharton, Jr.

by his Attorneys:

Hamm & Howson

UNITED STATES PATENT OFFICE.

WILLIAM WHARTON, JR., OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR
TO WILLIAM WHARTON, JR., & COMPANY, OF SAME PLACE.

RAIL-JOINT.

SPECIFICATION forming part of Letters Patent No. 674,228, dated May 14, 1901.

Application filed October 25, 1900. Serial No. 34,372. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM WHARTON, JR., a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented certain
5 Improvements in Rail-Joints, of which the following is a specification.

The object of my invention is to provide a strong rail-joint between two abutting rails having webs of different thicknesses.

10 In the accompanying drawings, Figure 1 is a perspective view of the end of a rail with a thickened and beveled web. Fig. 2 is a sectional plan view illustrating my rail-joint. Fig. 3 is a side view of the same. Figs. 4, 5,
15 and 6 are sectional plan views of modifications of my rail-joint.

My invention is especially useful in making joints between a rail having its web of the usual thickness and an abutting rail hav-
20 ing its web of increased thickness for use in switches, frogs, crossings, curves, and other special trackwork. The strains to which the rails used in switches, frogs, and other special trackwork are subjected are much more
25 severe than the strains imposed upon the other rails of the track. In addition to this severe service these rails are often planed or otherwise cut away, so that their normal strength is thereby much reduced. For these
30 reasons it is desirable to strengthen the rails used for such purposes, which I accomplish by considerably increasing the thickness of the web of the rail, so that it may be stronger and safer. While attaining this important
35 result, it is necessary to make a good joint between the end of the rail having this thickened web and the end of its abutting rail, having a web of the ordinary thickness. In order to do this, I cut away on a bevel the
40 thickened web near the end of the rail, so that the web at its end shall be of the same thickness as the web of the abutting rail. This is clearly illustrated in Fig. 1, where it will be seen that the beveled portion *m* of the
45 web *d* extends from the line *c* to the end of the rail.

The joint-plates *E E* for a portion of their length are parallel with and lie against the

sides of the web *b*, of the usual thickness, of the rail *B* and for a portion of their length 50 conform to and lie against the tapering sides of the web *d* of the rail *D*. These joint-plates in other respects may be of any form desired without departing from my invention, and they may be secured to the webs of the rails 55 by bolts *e e e e* or by any other means desired. The joint-plates may extend beyond the tapered portion of the web if desired, as shown in Fig. 4, or the thickened web of the rail *D* may be so formed that for a short distance 60 from its end it may be of the same thickness as the web of the abutting rail and then be beveled, so as to become of the increased thickness, as shown in Fig. 5, the joint-plates in both cases conforming to the respective 65 shapes of the webs. The modification shown in Fig. 6 may also be used, in which the taper or bevel is on one side only of the web. In this case I use an ordinary straight fish-plate upon one side of the rail and upon the other 70 side I use a fish-plate conforming to the taper of the web.

I claim as my invention—

1. The combination in a rail-joint, of a rail having a thin web, and a rail having a thick 75 web, the two rails being in line with each other, the thick web being diminished at its end to conform to the thickness of the thin web and joint-plates, and fastenings there-
80 for, substantially as described.

2. The combination in a rail-joint, of two abutting rails, the joint being at right angles to the longitudinal line of the rails, one rail having a thick web and the other rail having a thin web, the thick web only being dimin- 85 ished at its end which abuts the rail having a thin web, and means for securing the rails together, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of 90 two subscribing witnesses.

WILLIAM WHARTON, JR.

Witnesses:

WILL. A. BARR,
JOS. H. KLEIN.