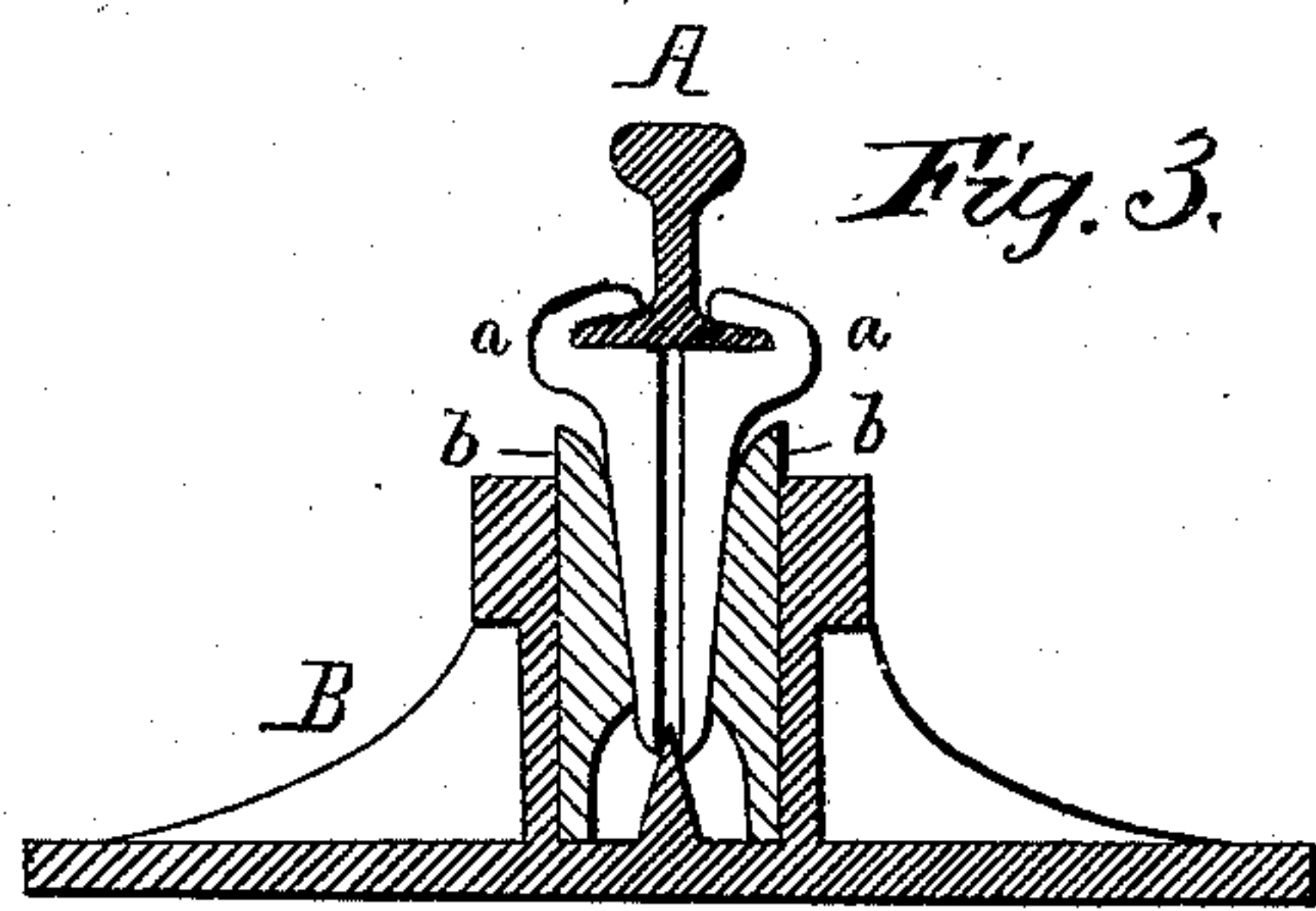
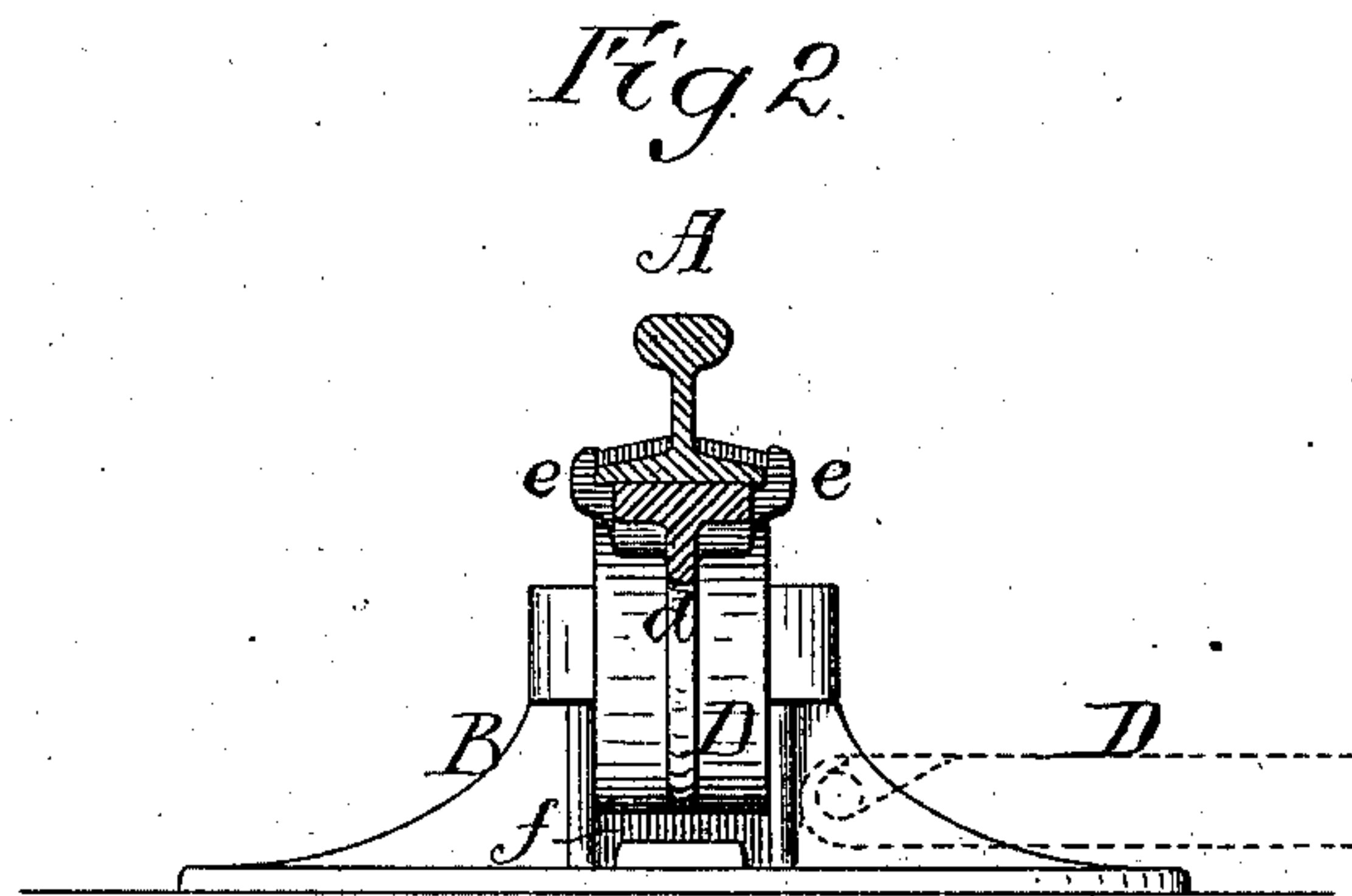
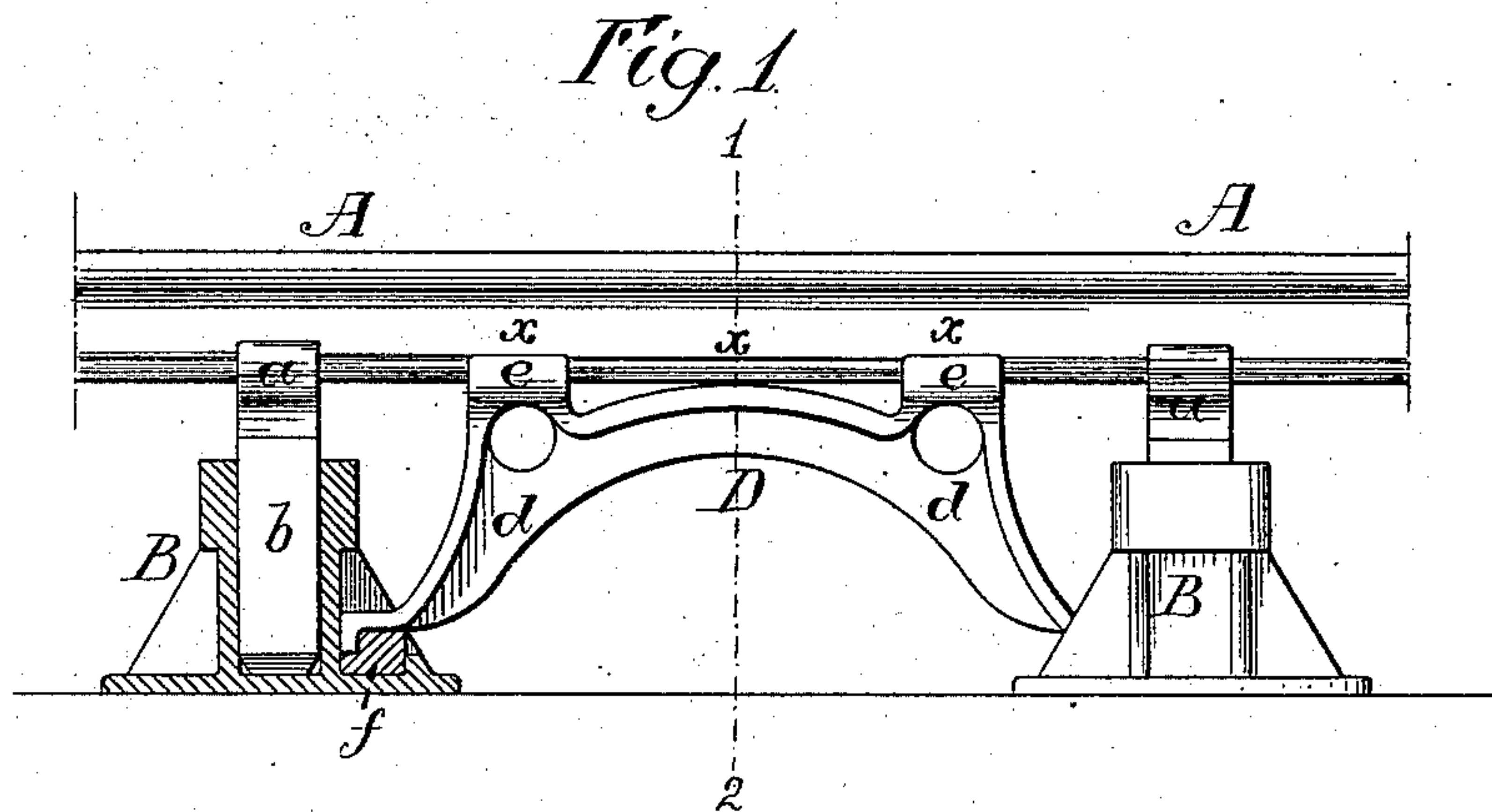


T. W. TRAVIS.  
 Railway Rail-Supporting Device.

No. 224,808.

Patented Feb. 24, 1880.



Witnesses  
 Alexander Patterson  
 Harry Smith

Inventor  
 Thomas W. Travis  
 by his Attorneys  
 Howson and Co.



# UNITED STATES PATENT OFFICE.

THOMAS W. TRAVIS, OF PHILADELPHIA, PENNSYLVANIA.

## RAILWAY-RAIL-SUPPORTING DEVICE.

SPECIFICATION forming part of Letters Patent No. 224,808, dated February 24, 1880.

Application filed July 7, 1879.

*To all whom it may concern:*

Be it known that I, THOMAS W. TRAVIS, of Philadelphia, Pennsylvania, have invented a new and useful Improvement in Railway-Rail-Supporting Devices, of which the following is a specification.

The object of my invention is to provide for the firm support of railway-rails with a less number of cross-ties than usual, an object which I attain in the following manner, reference being had to the accompanying drawings, in which—

Figure 1 is a side view, partly in section, of a portion of a railway-track with my improvements applied to the railway cross-tie for which Letters Patent of the United States No. 214,208 were granted to me on the 8th day of April, A. D. 1879, Fig. 2 being a transverse section on the line 1 2, and Fig. 3 a transverse section on the line 3 4, Fig. 1.

A represents the rail, and B B flanged boxes similar to those shown in the aforesaid patent, these boxes containing clamps *a*, adapted to the flanges of the rail and having arms supported by wooden blocks *b* in the boxes, wedge-shaped blocks in the latter acting on the arms of the clamps in a manner shown in Fig. 3. Opposite boxes B are connected together by tie-bars D, as shown by dotted lines in Fig. 2, so as to maintain the boxes at a proper lateral distance from each other.

The metal cross-ties constructed according to said patent cost considerably more than wooden cross-ties; and in order to construct or repair a road with my improved cross-ties at an expense but little if any greater than would be incurred if wooden ties were used, I ar-

range the ties at a greater distance apart than usual, and support the rail at one or more points between the ties by means of a longitudinal girder, D. As shown in the drawings, this girder is made in the form of an arch, with strengthening-ribs *d* and projecting lugs *e e*, one on each side of the longitudinal center of the arch, the opposite ends of the girder resting upon blocks *f*, of wood or other elastic material, adapted to suitable sockets formed on the base-plates of the boxes B. By this means the rail is supported at three points, *x x x*, between each pair of boxes B, so that the latter can be set at a much greater distance apart than ordinary cross-ties without materially weakening the support of the rail, a less number of cross-ties being therefore used, and the expense of providing a road with the improved cross-ties being correspondingly decreased.

I claim as my invention—

1. The combination of a rail, A, and cross-ties or rail-supporting boxes B, with longitudinal arched girders for supporting the rail at one or more points between said cross-ties or boxes, the ends of the girders resting at the bases of the boxes or cross-ties, as set forth.

2. The combination of the rail A and the boxes B, the girder D, and the elastic supporting-blocks *f*, as described.

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

THOMAS W. TRAVIS.

Witnesses:

ALEXANDER PATTERSON,  
HARRY SMITH.