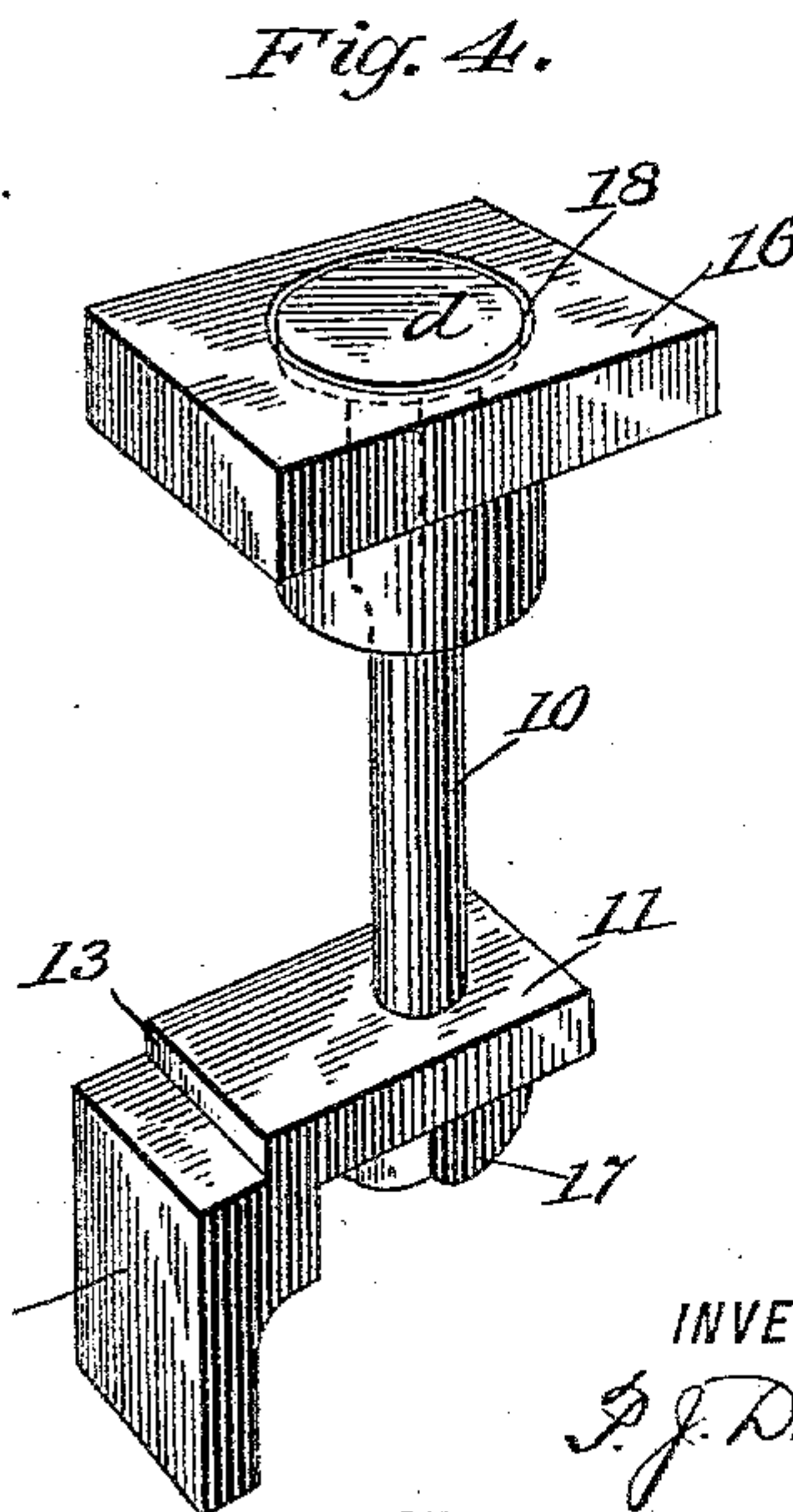
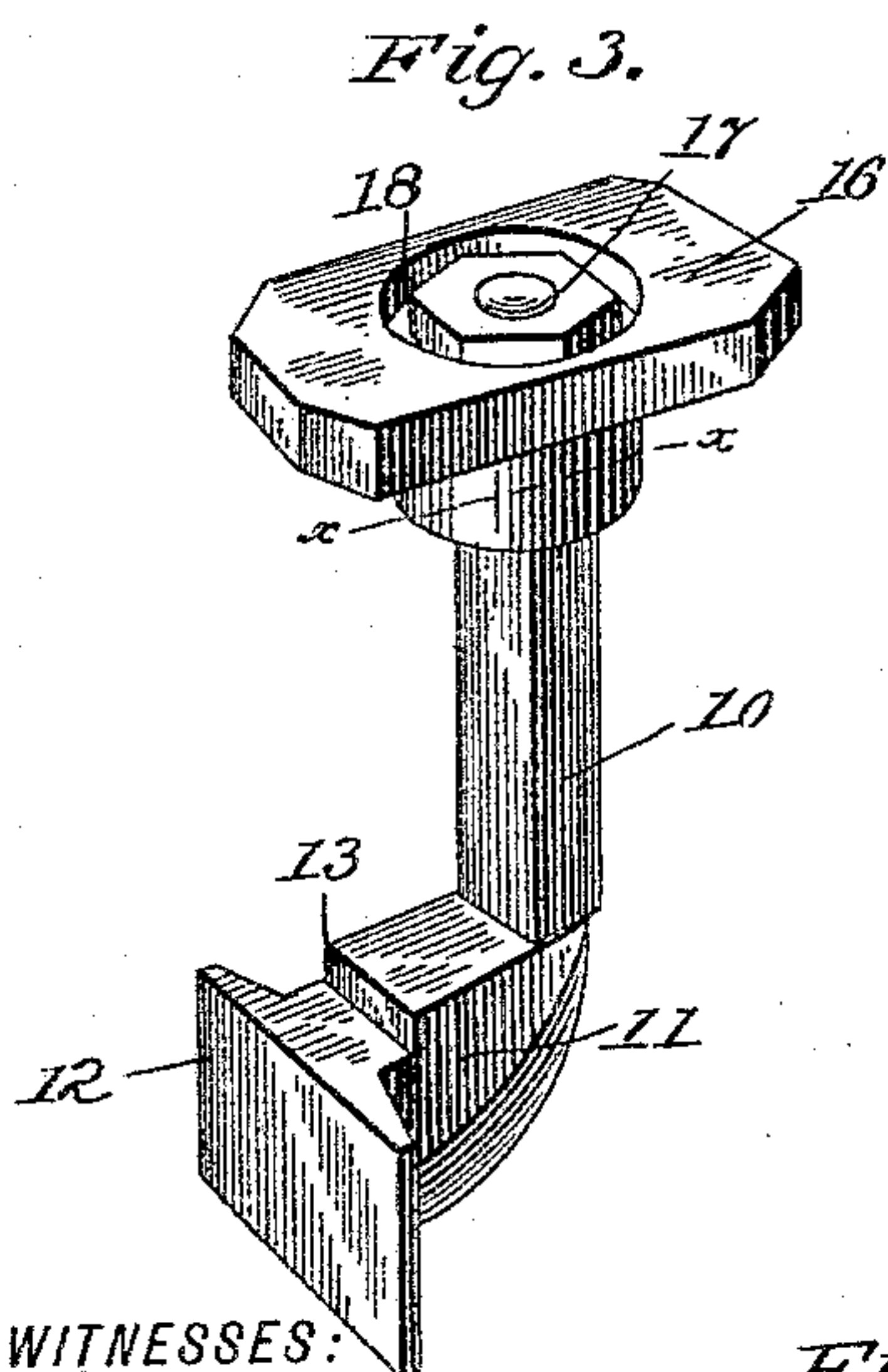
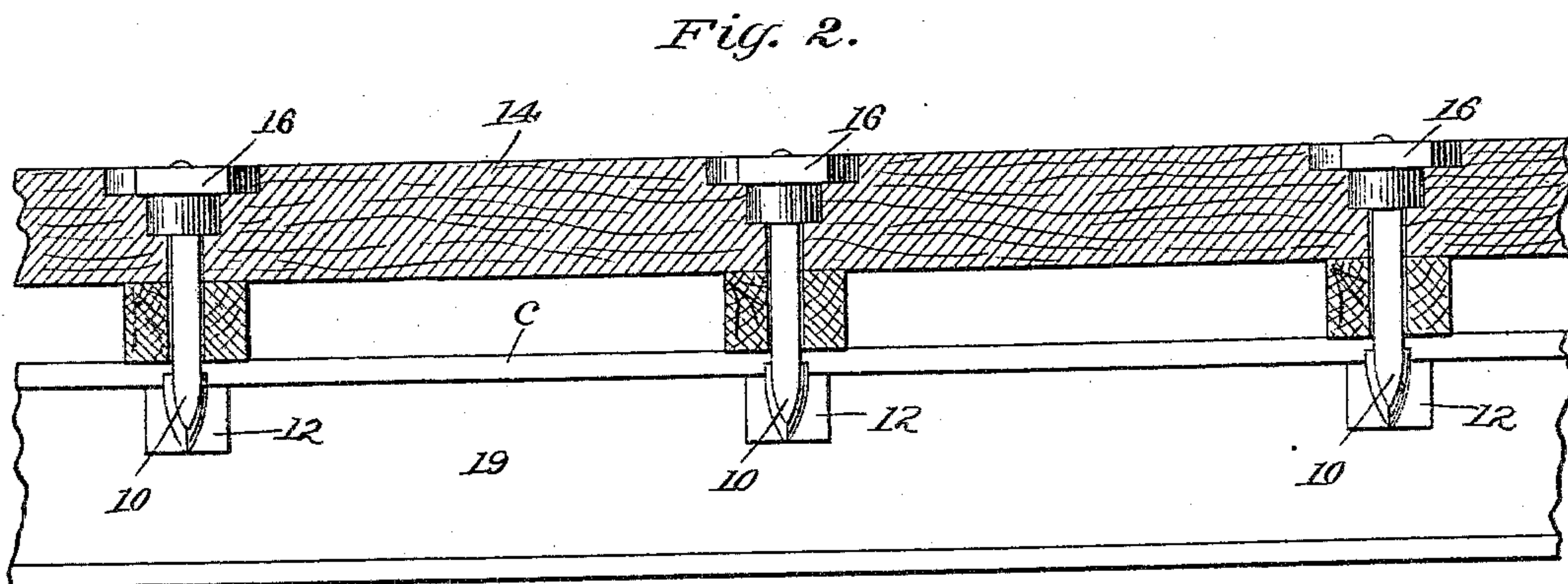
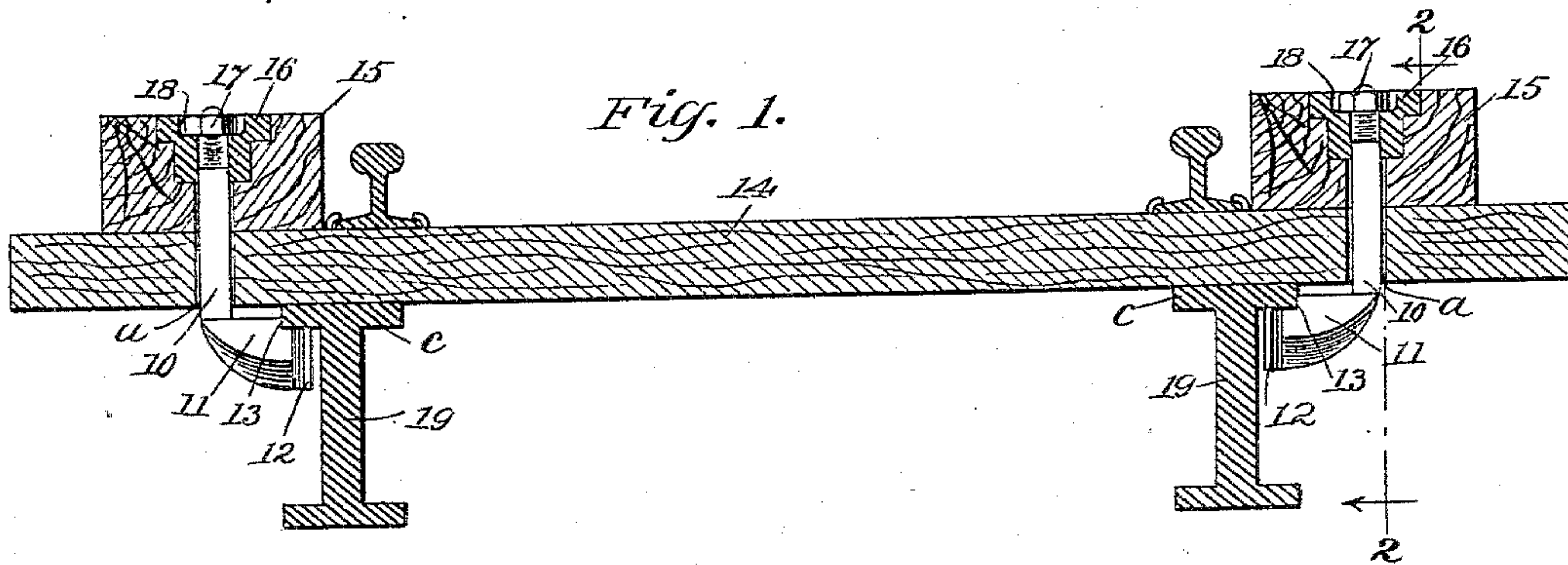


(No Model.)

P. J. DREELAND.
BOLT.

No. 414,383.

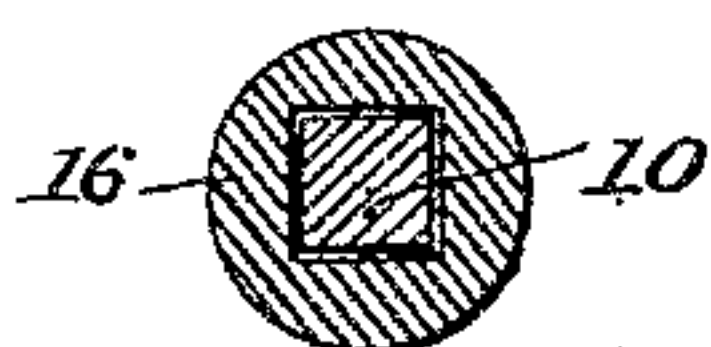
Patented Nov. 5, 1889.



WITNESSES:

J. A. Griswold
C. Sedgwick

Fig. 5.



INVENTOR:

P. J. Dreeland

BY

Munn & Co

ATTORNEYS.

UNITED STATES PATENT OFFICE.

PETER J. DREELAND, OF NEW YORK, N. Y.

BOLT.

SPECIFICATION forming part of Letters Patent No. 414,383, dated November 5, 1889.

Application filed July 29, 1889. Serial No. 319,069. (No model.)

To all whom it may concern:

Be it known that I, PETER J. DREELAND, of New York city, in the county and State of New York, have invented a new and Improved Bolt, of which the following is a full, clear, and exact description.

This invention relates to bolts, the object of the invention being to provide a bolt that is especially applicable for use in the binding of ties and guard-rails to the longitudinal girders of bridge or elevated-railway structures; and to the end named the invention consists, essentially, of a bolt provided with a laterally-extending flanged head, as will be hereinafter fully explained, and specifically pointed out in the claims.

Reference is to be had to the accompanying drawings; forming a part of this specification, in which similar figures and letters of reference indicate corresponding parts in all the views.

Figure 1 is a view of a portion of a railway or bridge structure, representing the same as it appears when the ties and guard-rails are held to place by means of my improved bolt, all parts except the bolt proper being shown in section. Fig. 2 is a sectional view on line 2 2 of Fig. 1. Fig. 3 is a perspective view of my preferred form of bolt, and Fig. 4 is a view of a modified form of bolt. Fig. 5 is a cross-sectional view on the line *x x* of Fig. 3.

In the drawings, 10 represents a bolt-shank, which is formed or provided with a laterally-extending head 11, having a flange 12 and a shoulder 13. The shank 10 is threaded, in order that it may be engaged by a nut in the usual manner. In the construction illustrated in Figs. 1, 2, and 3 the shank and head are integral, and the flange 12 extends from either side of the head proper.

In employing the bolt for the purpose of connecting the guard-rails and ties to the longitudinal girders of a railway or bridge structure, I pass the shank (which is preferably square) through an aperture *a*, formed in the tie 14, and through a second aperture formed in the guard-rail 15, then upward through a socketed bearing-plate 16, that is fitted into the upper side face of the guard-rail, the nut 17 resting within the socket 18 of the said bearing-plate. The aperture *a* is so located that when the bolt-head 11 is turned toward

the longitudinal girder 19 the girder-flange *c* will rest upon the top of the flange 12 and abut against the shoulder 13, as is clearly shown in the drawings.

The parts having been adjusted, as illustrated and described above, the nut 17 is turned home, the head of the shank 10 being so proportioned as to length that it will extend to a level with the upper face of the guard-rail, or only slightly above said guard-rail.

Instead of forming the head 11 integral with the shank 10, such head might be in the form shown in Fig. 4, in which case the shank 10 would be provided with an auxiliary head *d*, arranged to fit within the socket 18 of the bearing-plate 16, the lower end of the shank in this case being threaded, and the nut 17 being arranged below the head 11. Of the two constructions described I greatly prefer that illustrated in Figs. 1, 2, and 3.

In order that the bolt-head may be readily brought and held in proper register with the girder-flange, I form the aperture of the bearing-plate 16 so that it will fit closely about the upper portion of the squared section of the bolt-shank.

Such a bolt as the one above described may be quickly adjusted to position, and when in position will act to firmly hold the parts together.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A bolt provided with a laterally-extending head, said head being integral with the shank and formed with a flange 12 and shoulder 13, substantially as described.

2. In a railway or bridge structure, the combination, with a longitudinal girder, of a square-shanked bolt formed with a head adapted to engage the upper flange of said girder, a cross-tie through which the bolt passes, a guard-rail, and a bearing-plate, said plate being socketed to receive the retaining-nut and formed with a square aperture in which the upper part of the bolt-shank fits, substantially as described.

PETER J. DREELAND.

Witnesses:

EDWARD KENT, Jr.,
EDGAR TATE.