

W. A. LEVANWAY.
Thill-Coupling.

No. 228,086.

Patented May 25, 1880.

FIG 1

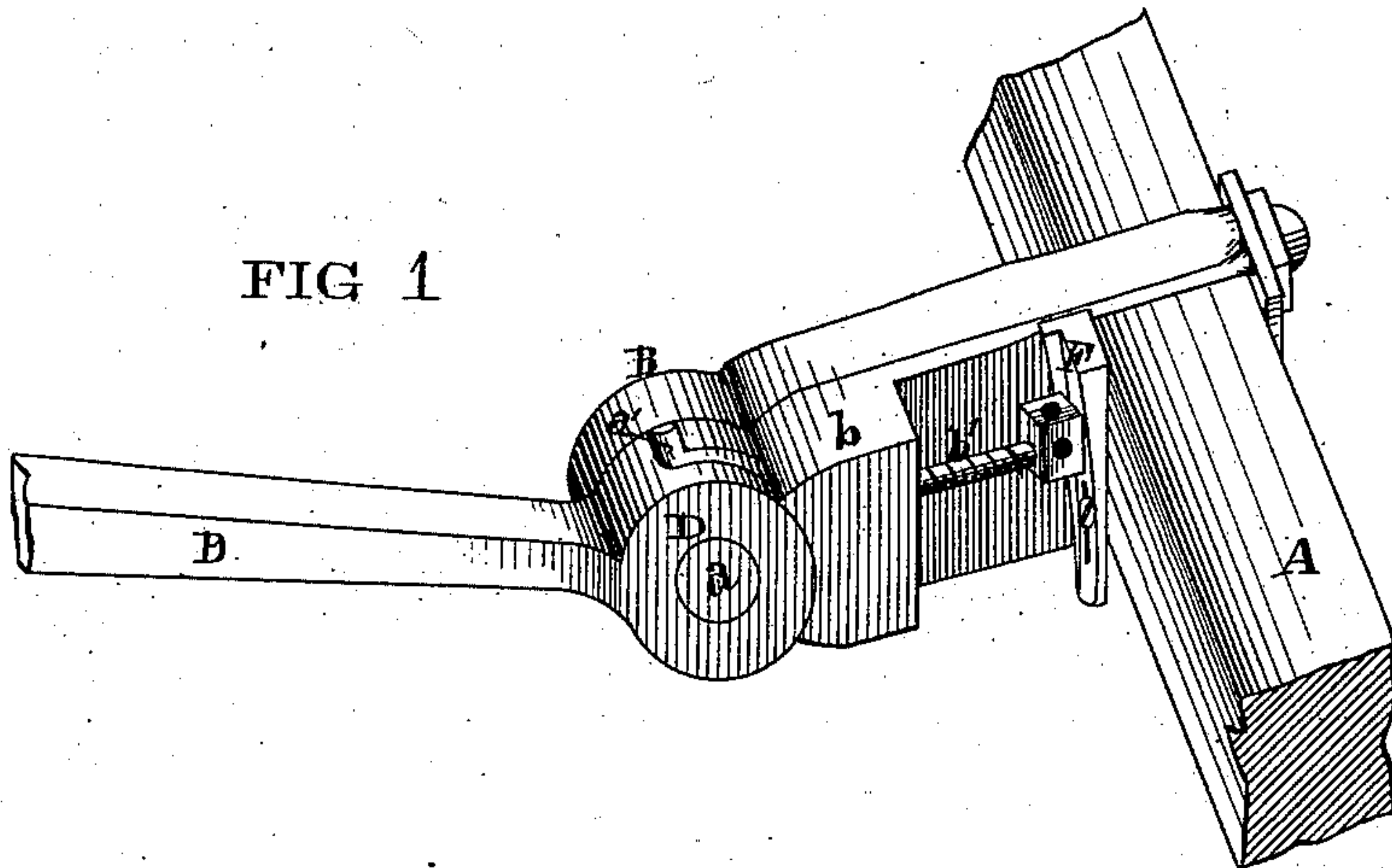


FIG 2

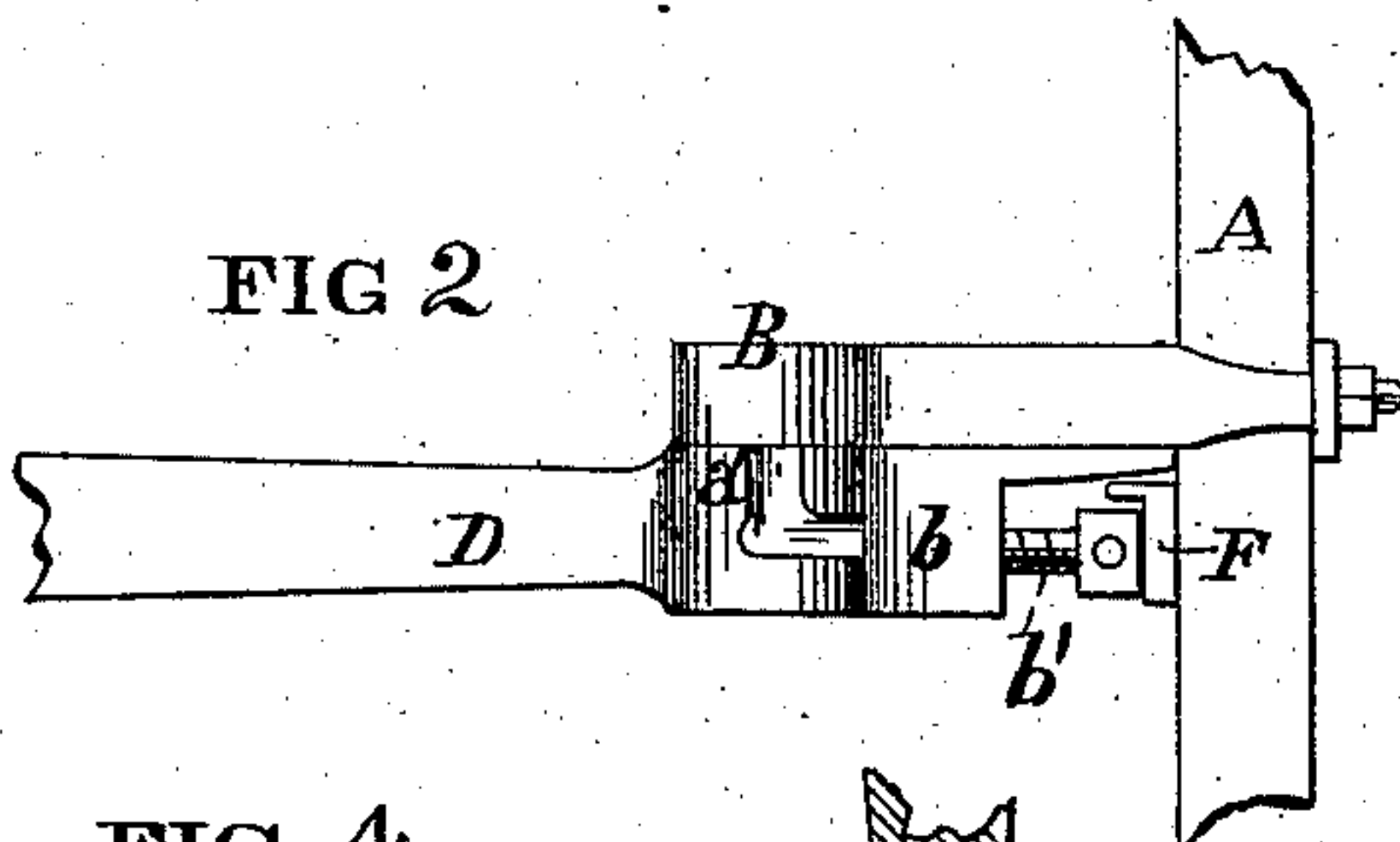


FIG 4

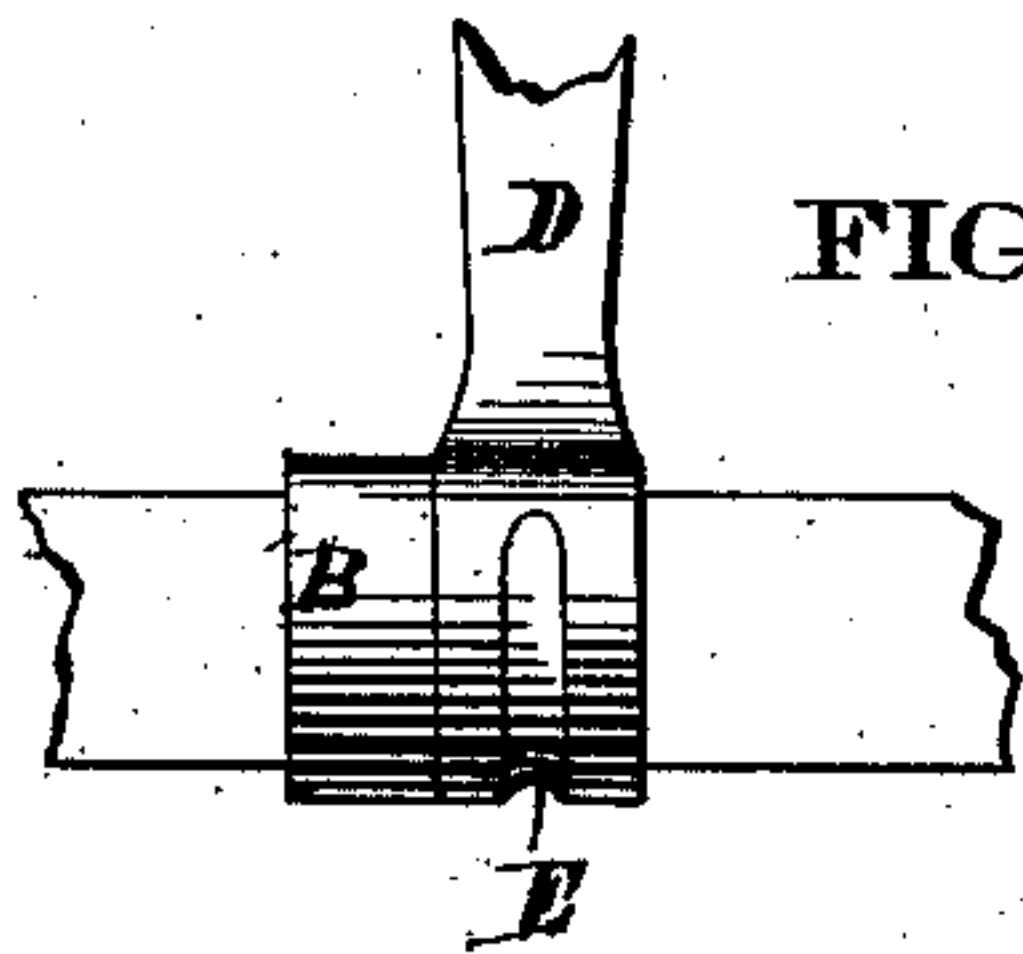


FIG 5

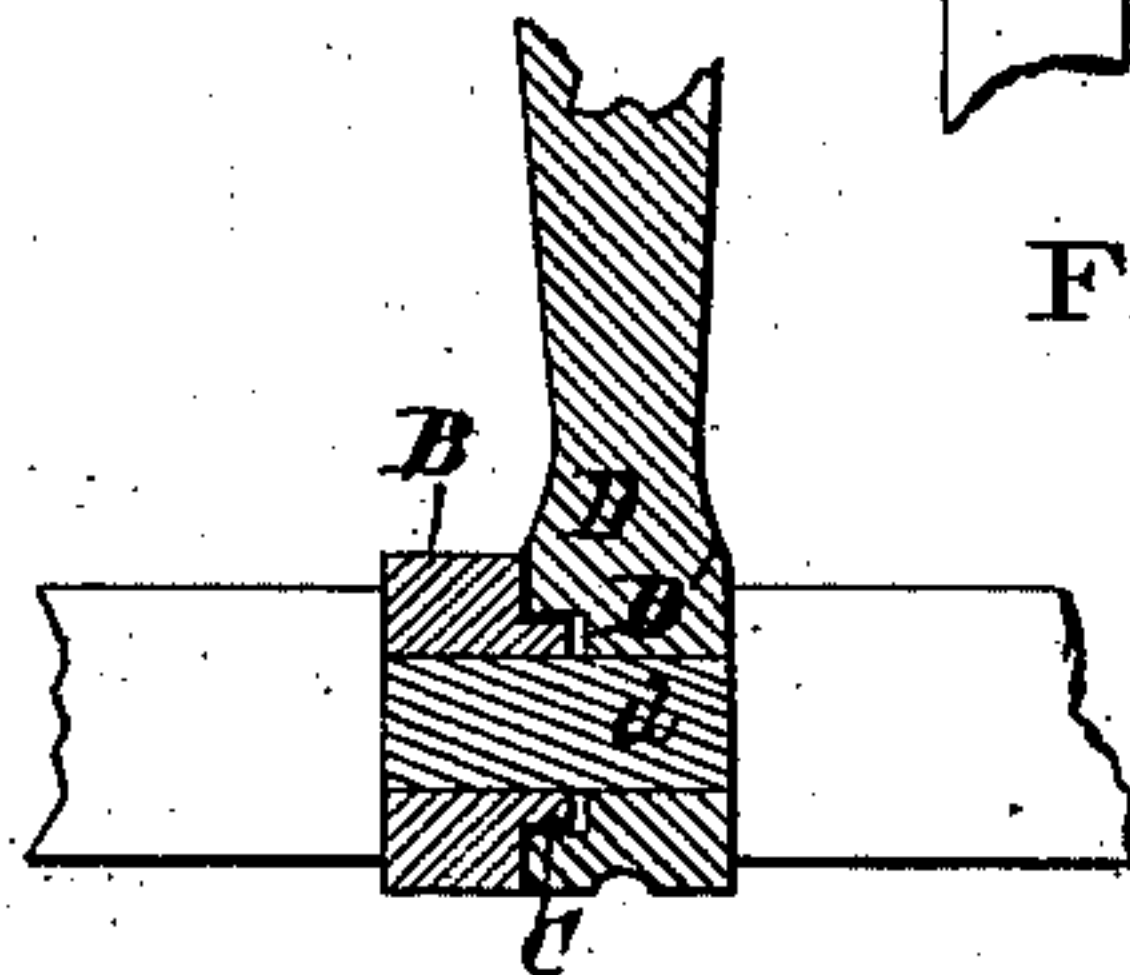


FIG 3

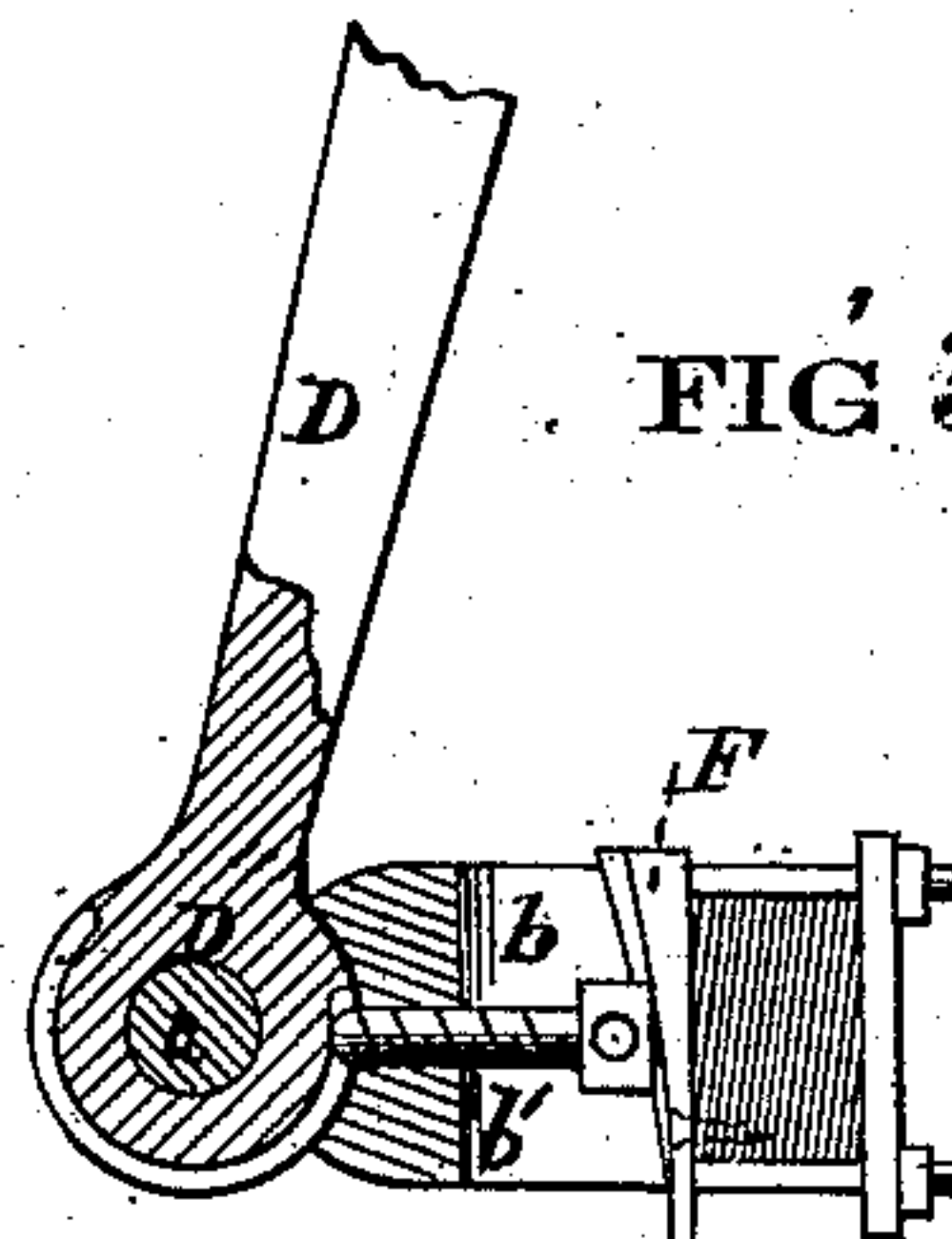
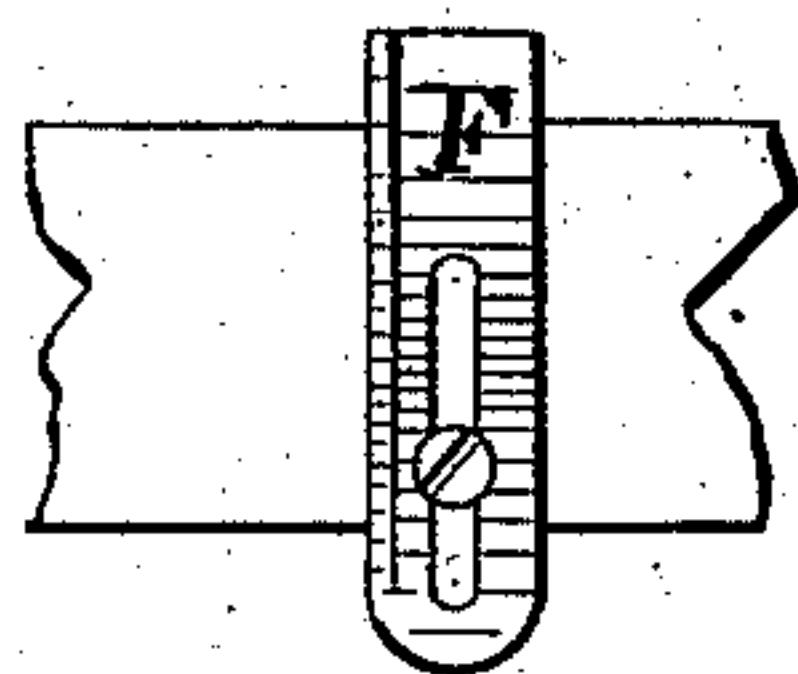


FIG 6



WITNESSES

Wilmer Bradford.
J. L. Skimmer

INVENTOR

William A. Levanway.
By C. W. Smith.
his Attorney

UNITED STATES PATENT OFFICE.

WILLIAM A. LEVANWAY, OF OAKLAND, CALIFORNIA.

THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 228,086, dated May 25, 1880.

Application filed September 8, 1879.

To all whom it may concern:

Be it known that I, WILLIAM A. LEVANWAY, of Oakland, in the county of Alameda and State of California, have invented a certain new and useful Improvement in Thill-Couplings, which invention is fully described in the following specification and accompanying drawings, where letters of reference indicate like parts.

10 The object of my invention is to provide a simple, secure, and convenient means of attaching and detaching the thills or shafts of vehicles to and from their axles, the device being such as to give great security and 15 firmness to the coupling, while avoiding all tendency or liability of the parts rattling or getting loose from wear, and avoiding the necessity of using india-rubber packing.

It consists in forming around the thill-iron 20 an annular depression and a bushing in the socket-coupling, which bushing projects sufficiently far to receive and engage with the depression around the thill-iron, the iron fitting closely against the conical surface of the socket, through which a set-screw passes, held by 25 a wedge attached to the axle, the point of the set-screw engaging with a groove around the thill-iron to keep it in place with the bushing, all of which will hereinafter more fully appear.

30 In the drawings, Figure 1 is a perspective view of my coupling in position. Fig. 2 is a plan or top view; Fig. 3, a cross-section; Fig. 4, an edge view. Fig. 5 is a section showing the manner in which the thill-iron connects 35 with the bushing. Fig. 6 shows front view of the adjustable wedge used to lock the set-screw.

40 A is the axle, to which is clipped the socket B in the usual way. I construct this socket with a bushing, C, which projects somewhat from the inner face of the socket, so that the thill-iron D, which has an annular counter-sunk depression, D', around it, will receive the bushing; and when the two parts are locked 45 together a strong and reliable coupling is had, with a bolt, a, passing through the socket, and the bushing surrounding the bolt in position in the annular depression, by which a close joint is formed.

The lug b of the socket is concave, against 50 which the head of the thill-iron works; and a set-screw, b', passes through this lug, the point of which engages the circular groove E around its face and holds the thill-iron in close connection with the socket and prevents any rattling of the parts or liability to become loosened. 55

A slotted wedge, F, is attached to the front face of the axle, as shown in Figs. 3 and 6, which holds and prevents this screw from becoming loose, and when it becomes necessary 60 to tighten up the screw, in case of wear and consequent rattling of the parts, the wedge should be driven down.

In order to detach the thills, it will not be 65 necessary to disturb the screw, as the thill-iron is provided with a groove, d', and at a right angle and intersecting with the groove E, so that when the head of the set-screw is in line with the intersecting groove the thill-iron can be 70 withdrawn from the socket. This intersecting groove may be made at any point along the circular groove, reference being always had to the curvature of the thills or shafts.

Having thus described my invention, what 75 I claim, and desire to secure by Letters Patent, is—

1. The combination of the socket B and thill-iron and bolt D a with the annular groove E and intersecting groove a' and set-screw b', arranged and operating substantially as described, and for the purpose set forth. 80

2. The combination of a thill-iron having a circular groove, E, and intersecting groove a' with the set-screw b' and tightening-wedge F, 85 when constructed and arranged substantially as and for the purposes herein set forth and specified.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 19th 90 day of August, 1879.

WM. A. LEVANWAY. [L. S.]

Witnesses:

C. W. M. SMITH,
JAMES C. WARD.