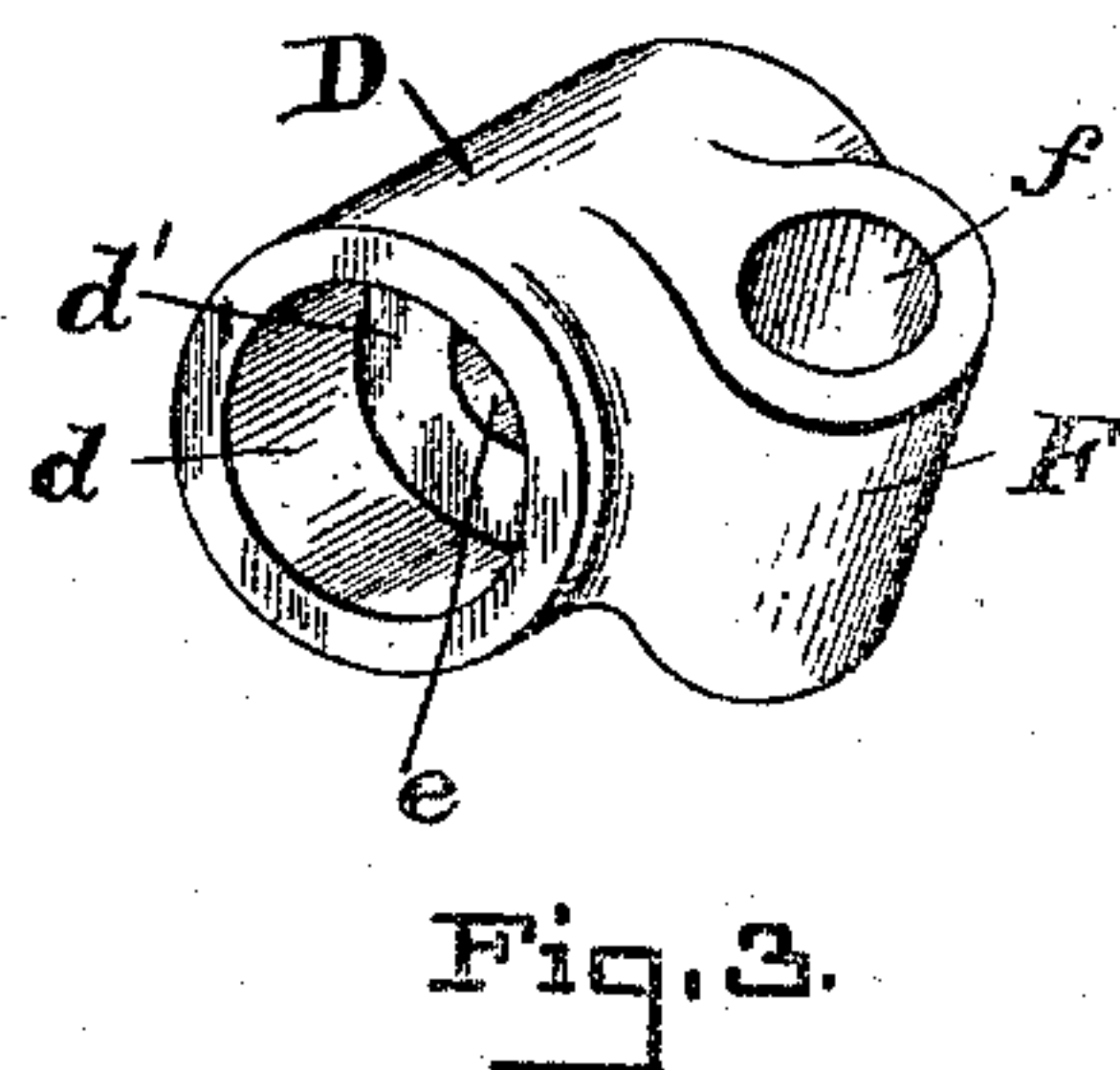
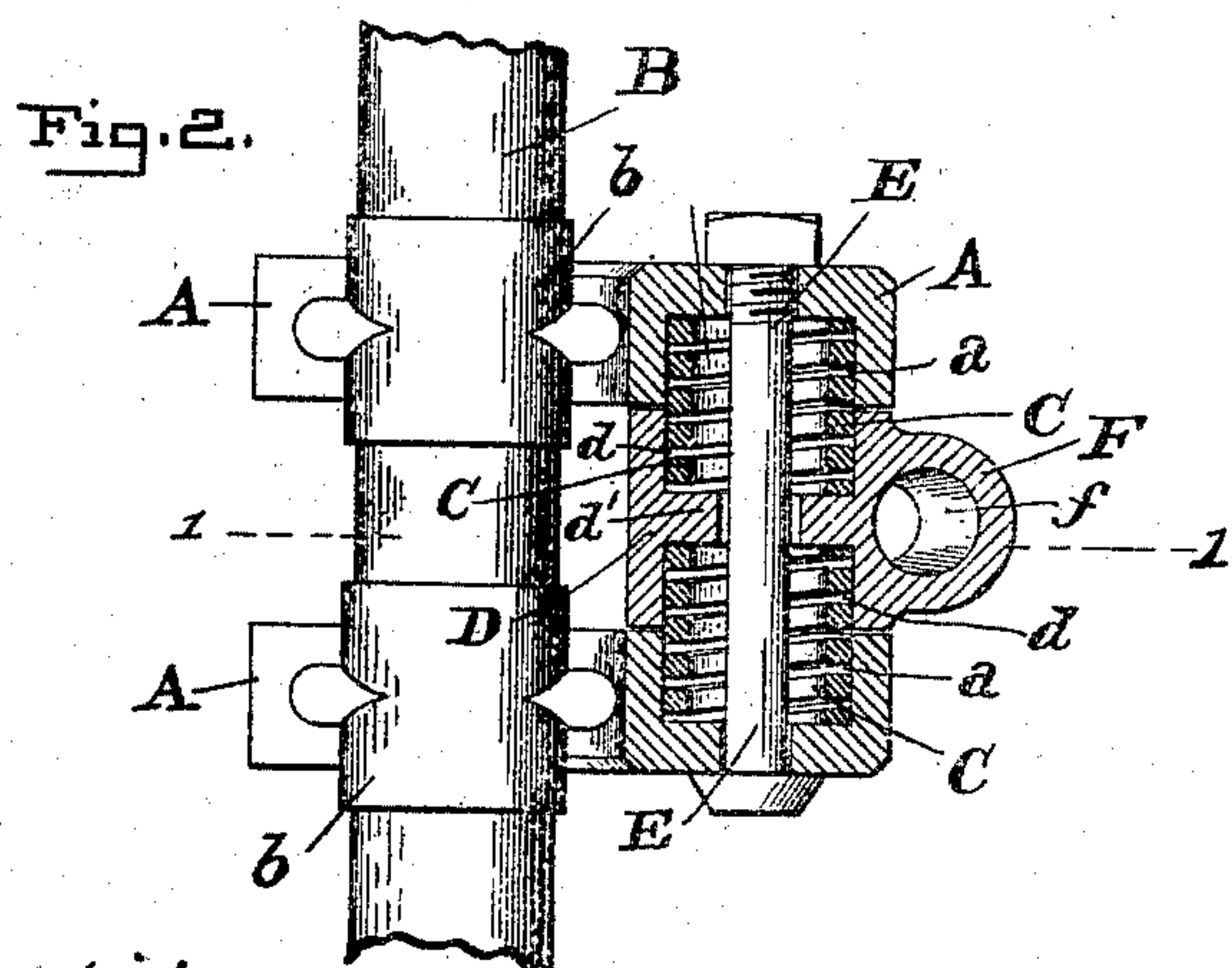
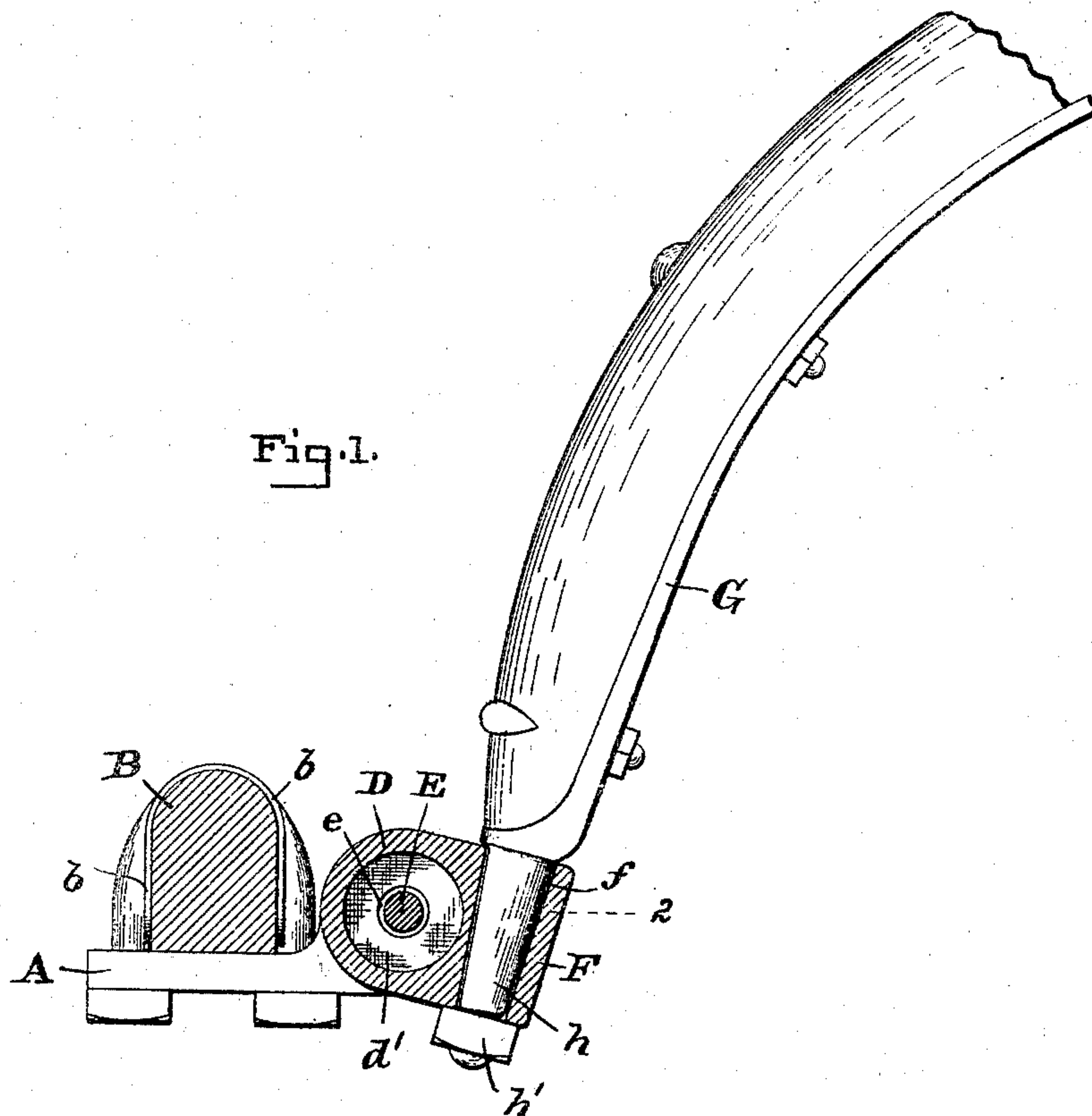


(No Model.)

J. W. HODDINOTT.
THILL COUPLING.

No. 500,895.

Patented July 4, 1893



Witnesses:—

A. O. Babendreier.

Alvan Macaulay.

Inventor:—

John W. Hoddinott

By Chas B. Mann

Attorney

UNITED STATES PATENT OFFICE.

JOHN W. HODDINOTT, OF RUXTON HEIGHTS, MARYLAND.

THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 500,895, dated July 4, 1893.

Application filed April 4, 1893. Serial No. 469,027. (No model.)

To all whom it may concern:

Be it known that I, JOHN W. HODDINOTT, a citizen of the United States, residing at Ruxton Heights, in the county of Baltimore and State of Maryland, have invented certain new and useful Improvements in Thill-Couplings, of which the following is a specification.

This invention relates to thill-couplings and has for its object to provide an anti-rattling device with means for readily detaching the thills or shaft for the substitution of a pole or for other purposes.

In the accompanying drawings, Figure 1 shows a side elevation of the coupling, partly in section. Fig. 2 shows a top plan view, also partly in section. Fig. 3, shows a perspective view of the shaft-head.

Referring to the drawings, the letters, A, A, indicate two arms which extend forward from clips, b, on the vehicle axle, B. A cylindric socket, a, is formed in the side of each arm near the forward end and each receives an end of one of the compression springs, C.

A head, D, fits between the two arms, A, near their forward ends, and has two sockets d, one on either side which correspond in size and register in position with the sockets, a, in the arms. The partition, d', separates the two sockets, d. The said sockets, d, each receive an end of one of the compression springs, C. The head has a bolt-hole, e, and a bolt E, secures the two arms, A, and the head together; the bolt passes longitudinally through the two compression springs, and serves simply to retain all the parts in their relative positions. The springs are kept compressed in their recesses, so that their constant tendency is to keep the head, D, centered between the two arms, A, and thus avoid wear or friction, between the head and arms. The two springs press at their ends against the partition, d', in the head and have a friction-grip therewith, whereby all rattle of the shaft-head, D, is obviated. The springs are made from a strip of metal preferably square in cross-section, as shown; they are stiff and fit closely within, or fill the recesses, and have the function of journals. The head has an extension, F, formed integral with it and the extension has a tapered socket, f, to receive the tapered end, h, of the thill or shaft iron, G; a nut h', secures the end, h, within the

socket. To change the shafts, or to replace them by a pole in case a double harness is used, it is only necessary to unscrew nut, h', withdraw the shaft, insert the end of another and replace the nut, h'. Of course the head might be formed integral upon the shaft-iron, G, but the above described construction is preferred, as it permits changing from a shaft to a pole and vice versa. In practice, in assembling the parts, the head and arms with the springs therein are first secured together by the bolt, E; the arms are then secured to the axle-clip, after which the shaft is secured to the head.

The simplicity of the device commends itself. It is a positive anti-rattler and there is no wear on the bolt because the bolt-hole, e, in the head is larger than the bolt.

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

1. In a thill-coupling for vehicles, the combination of the two arms secured to axle-clips; a head fitting loose between said arms; two compression springs located within recesses in the arms on opposite sides of the head, and each abutting at one end against the head and at the other against one of the arms and a shaft-iron secured to the head, as described.

2. In a thill-coupling, the combination of the two arms secured to axle-clips; a head fitting loose between said arms; compression springs within recesses in the arms on opposite sides of the head; a bolt passing through the arms and head, and longitudinally through the springs, for securing the parts in relative position; and a shaft-iron secured to the head.

3. In a thill-coupling for vehicles, the combination of the two arms secured to axle-clips; a head fitting loose between said arms; two compression springs located within recesses in the arms on opposite sides of the head, and each abutting at one end against the head and at the other against one of the arms; an extension on the head having a tapering socket; and a shaft-iron having a tapering shaft-end, secured within said tapering-socket, as described.

4. In a thill-coupling the combination of two arms secured to axle-clips and each arm having a socket; a shaft-head fitting between the arms, and having two sockets, one on a side

opposite the other, each of the sockets on the head, corresponding in size and registering in position with the sockets on the arms, and said head provided with a bolt-hole; a compression spring in the socket at each side of the head; a bolt passing through the said head and the hole in the head,—said bolt being smaller than the hole in the head, thereby

leaving all draft-strain on the springs; and a shaft-iron secured to the head. 10

In testimony whereof I affix my signature in the presence of two witnesses.

JOHN W. HODDINOTT.

Witnesses:

ARTHUR O. BABENDREIER,
CHAS. B. MANN, Jr.