

(No Model.)

I. JONES.
ROD JOINT OR COUPLING.

No. 477,596.

Patented June 21, 1892.

Fig. 1.

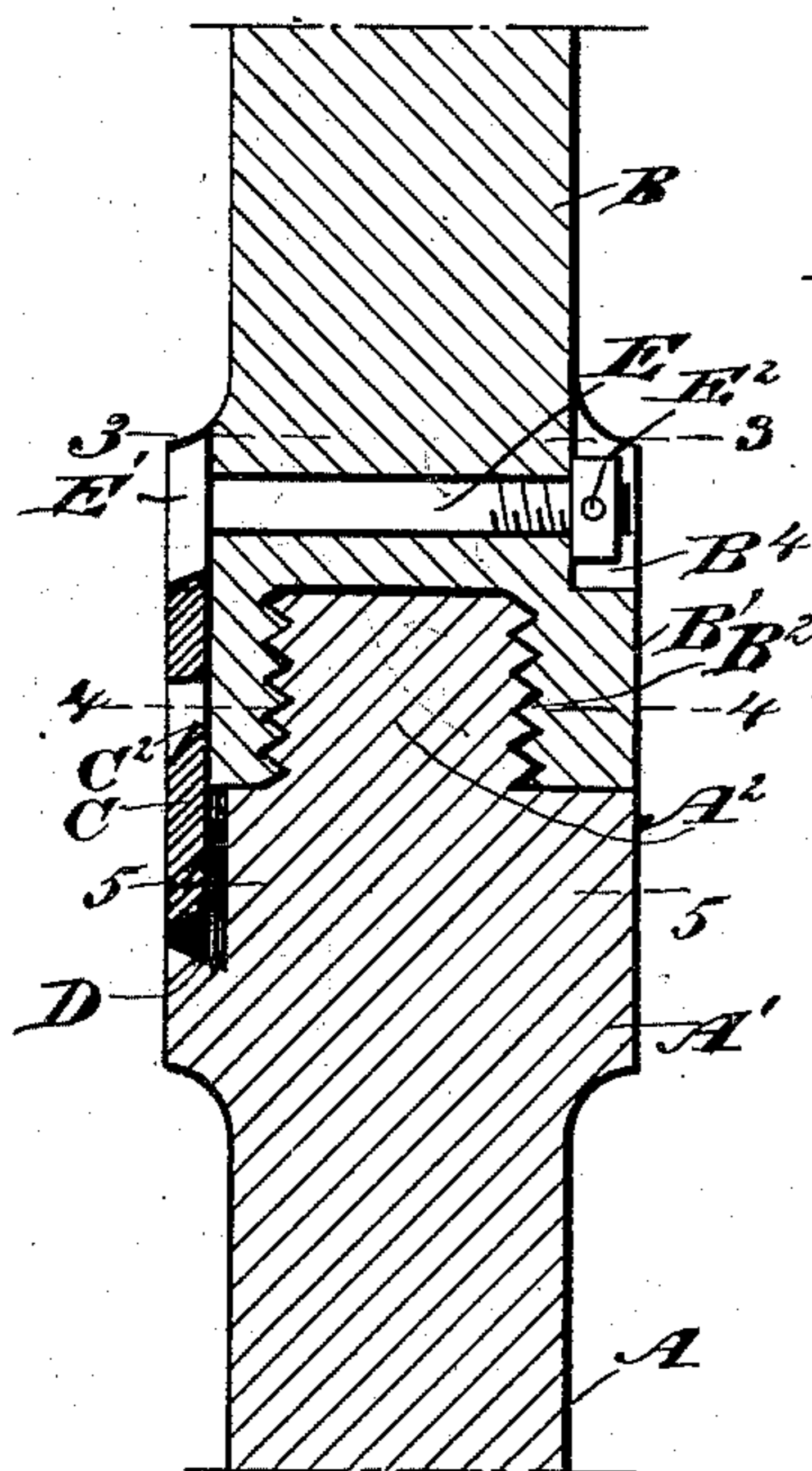


Fig. 3.

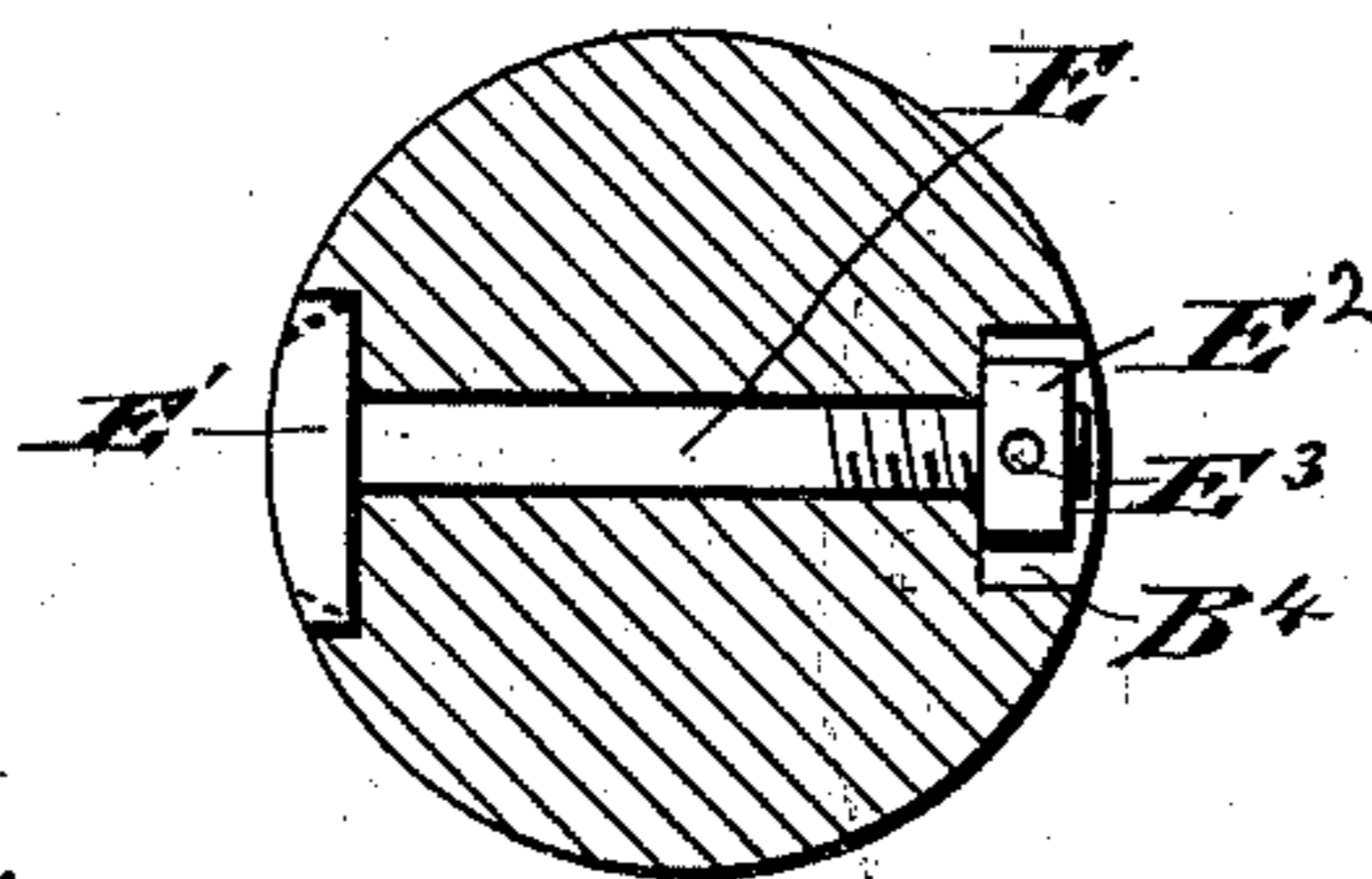


Fig. 2.

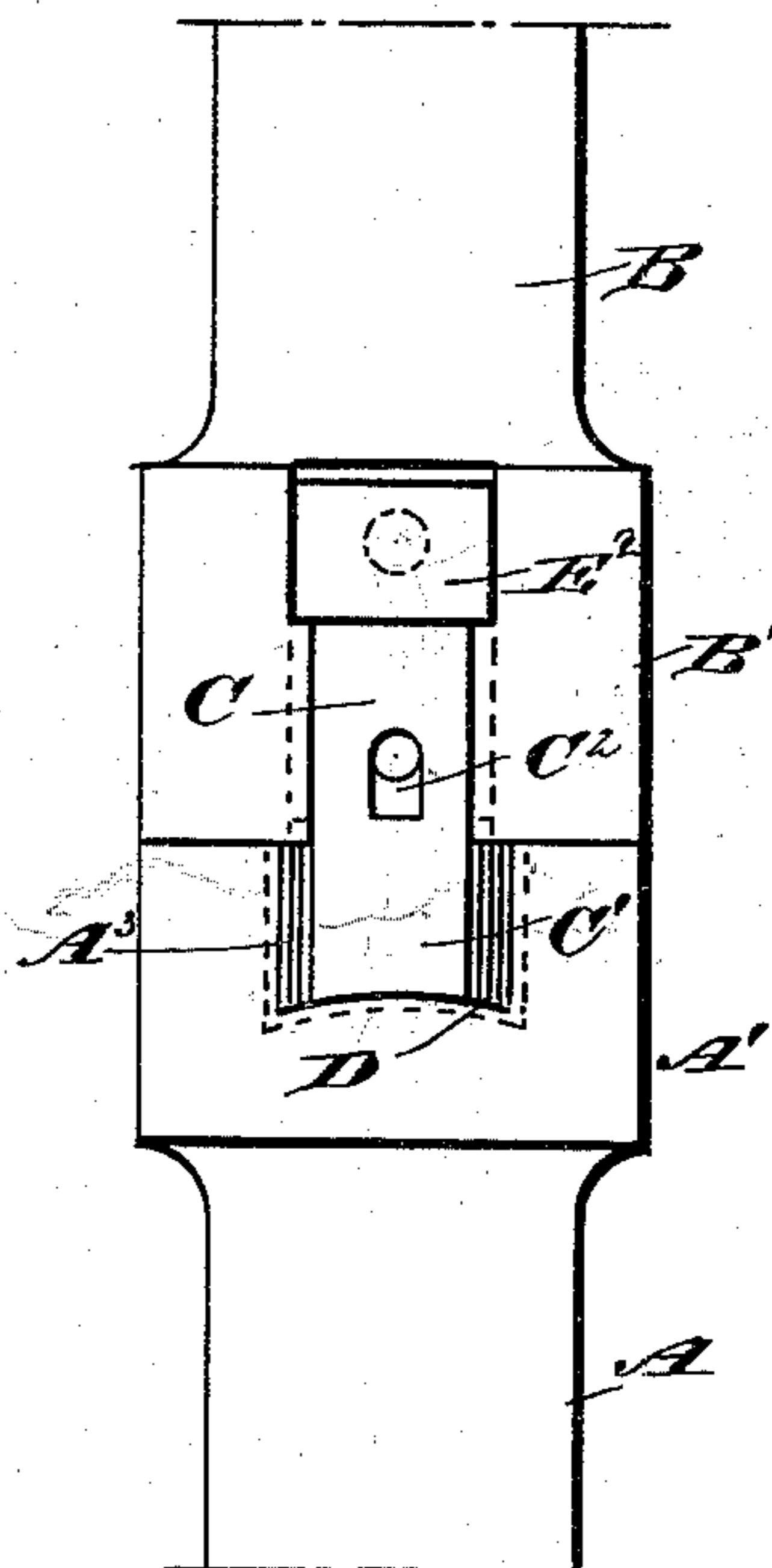


Fig. 4.

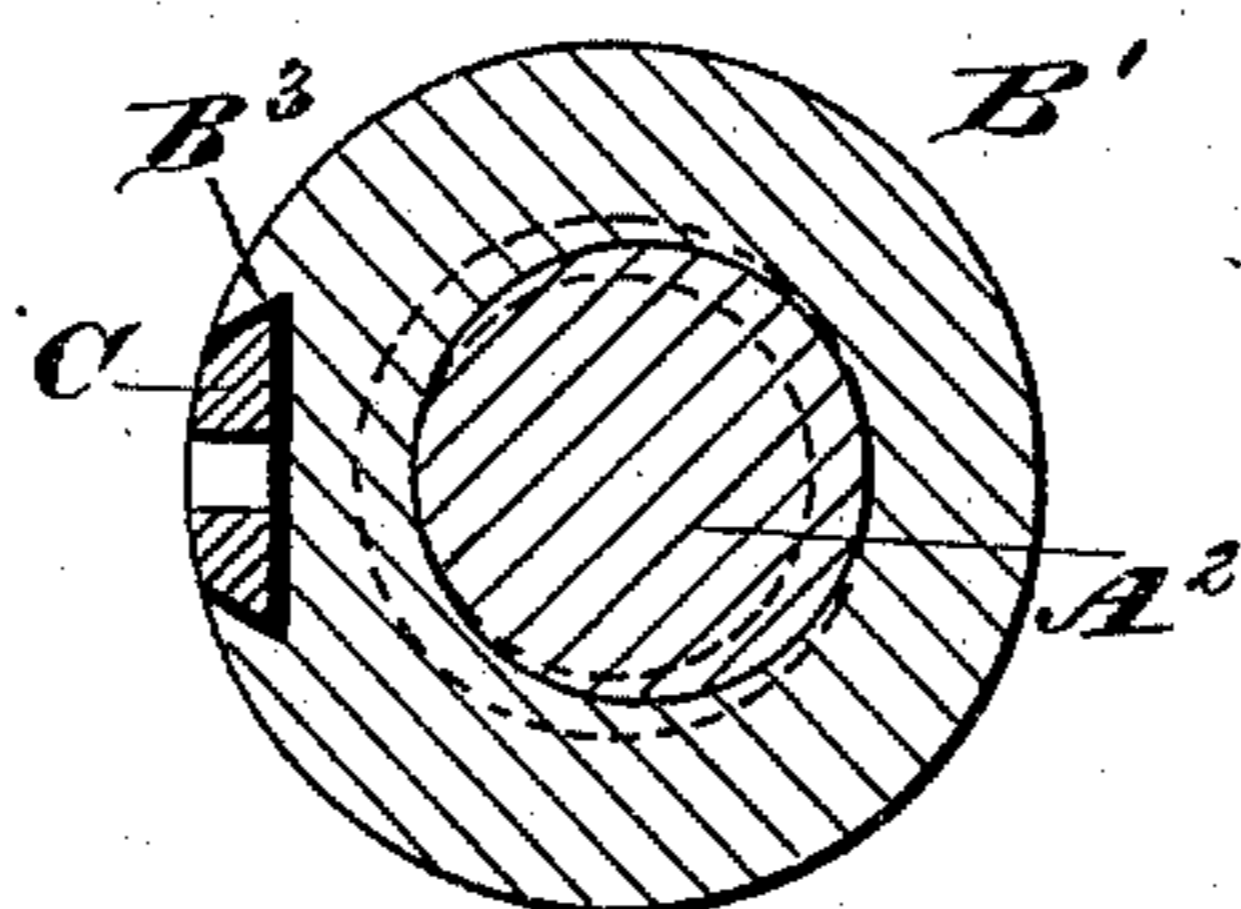


Fig. 6.

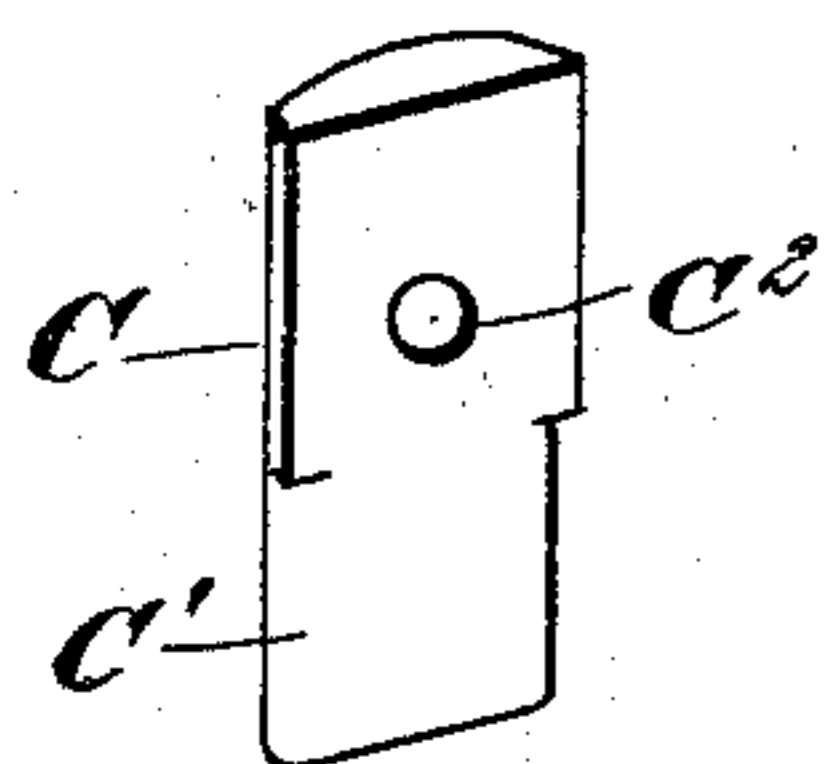


Fig. 5.

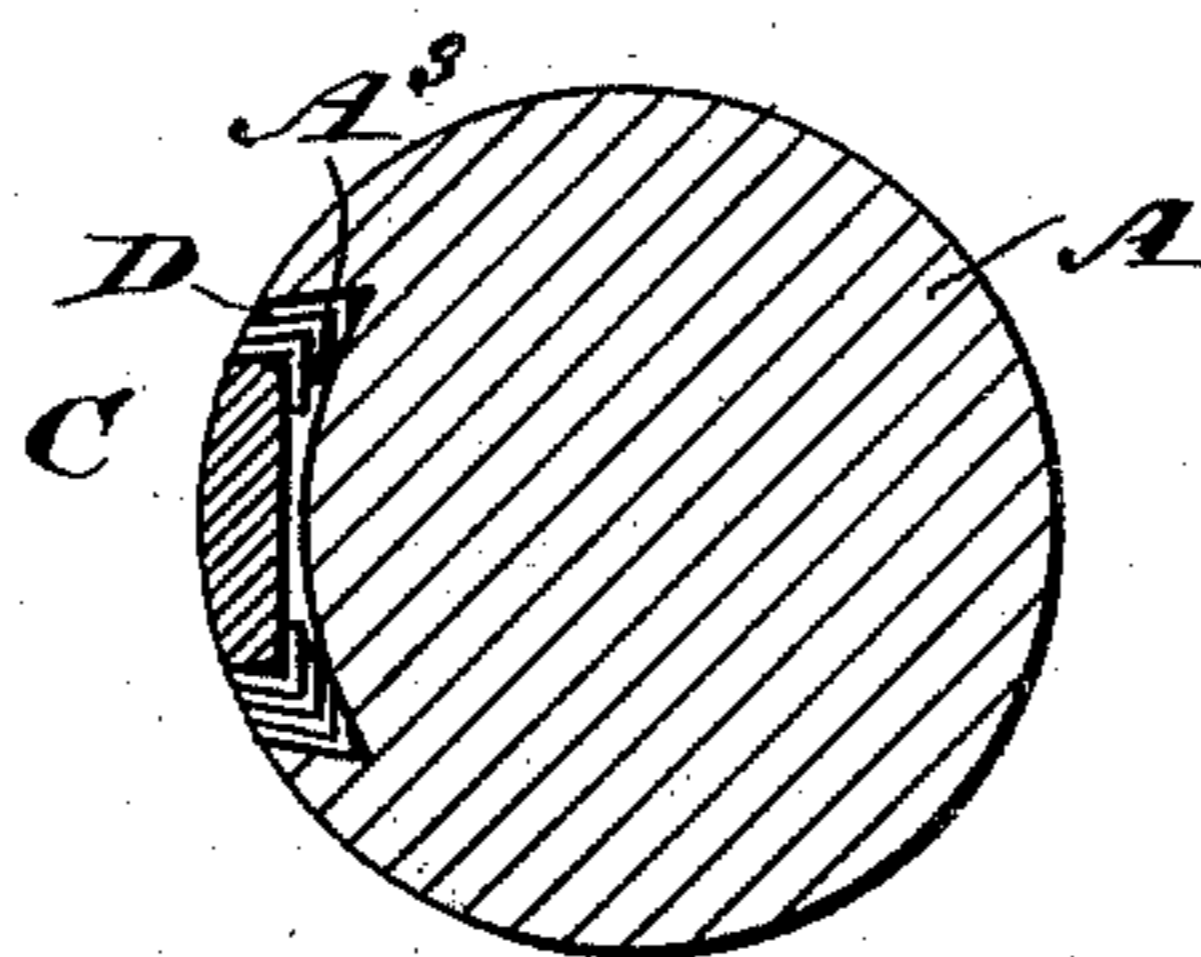


Fig. 7.



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UNITED STATES PATENT OFFICE.

ISAAC JONES, OF DE LANCEY, PENNSYLVANIA.

ROD JOINT OR COUPLING.

SPECIFICATION forming part of Letters Patent No. 477,593, dated June 21, 1892.

Application filed March 11, 1892. Serial No. 424,528. (No model.)

To all whom it may concern:

Be it known that I, ISAAC JONES, of De Lancey, in the county of Jefferson and State of Pennsylvania, have invented a new and Improved Rod Joint or Coupling, of which the following is a full, clear, and exact description.

The invention consists of certain parts and details and combinations of the same, as will be hereinafter described, and then pointed out in the claims.

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

Figure 1 is a sectional side elevation of the improvement. Fig. 2 is a front elevation of the same. Fig. 3 is a sectional plan view of the same on the line 3 3 of Fig. 1. Fig. 4 is a similar view of the same on the line 4 4 of Fig. 1. Fig. 5 is a like view of the same on the line 5 5 of Fig. 1. Fig. 6 is a perspective view of the key, and Fig. 7 is a perspective view of one of the liners.

The drill-rods A and B are provided with the usual heads A' and B', of which the former has the threaded end A², screwing into a corresponding recess B² in the head B'. On the head B' is formed a vertically-extending dovetail B³, into which fits the correspondingly-shaped key C, having a projecting end C', adapted to pass into a recess A³, formed in the head A' of the drill-rod A. The two recesses B³ and A³ register with each other when the heads are screwed up, as plainly illustrated in Figs. 1 and 2, the recess A³, however, being somewhat larger than the dovetail B³, so that liners D, preferably of L-shape in cross-section, can be inserted in the said recess on either side of the projecting end C' of the key C. In case the joint formed by the two heads A' and B' wears, then the recess A³ still registers with the dovetail B³; but then some of the liners are removed from one side of the projecting end C' of the key C and placed on the other side to compensate for the wear of the joint. The outer surface of the key C is preferably segmental to correspond with the surface of the heads A' and B', so that the key presents no projection whatever, and consequently does not obstruct

the up-and-down movement of the drill-rod in the well.

In order to lock the key C in place, the head E' of a bolt E fits in the upper end of the recess B³, so that the lower edge of the head engages the upper end of the key C. The bolt E passes transversely through the head B' of the drill-rod B, and its nut E² fits into a recess B⁴, formed in the said head B', so that the bolt presents no projection whatever in the well-hole. The head E' is rounded off at its outer surface, so as to correspond with the rounded surface of the head B'. In order to prevent the nut E² from accidentally unscrewing on the bolt E, a pin E³ passes through the said nut and through the bolt to lock the two together. In order to conveniently remove the key C from its recess after the bolt E is withdrawn, the said key is provided with an aperture C² for insertion of a tool to push the key out of its recess.

It will be seen that this device is very simple and durable in construction, can be very cheaply manufactured, and readily applied or removed in case it is desired to unscrew the two drill-rods A and B. In order to uncouple the rods, the operator first unlocks the nut E² and unscrews the nut from the bolt, then withdraws the latter from the head B', then slides the key C upward out of engagement with the recess A³ to permit of unscrewing the head A' from the head B'.

It is understood that the device can be used not only on drill-joints, but also on joints of other machines or parts.

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

1. A rod joint or coupling comprising the rods having a screw-threaded connection and aligning longitudinal dovetail keyways on their outer faces at their abutting ends, a key slid into the said ways, and a bolt the head of which closes the entrance end of the keyway.

2. The combination, with the rods A B, having their abutting threaded ends enlarged or headed, as at A' B', of a dovetail keyway formed longitudinally in the outer faces of the heads and open at one end to admit the key and closed at its opposite end, a key slid into

5 said way and crossing the joint, a transverse bolt the head of which closes the open end of the keyway, and a nut on the opposite end of the bolt and lying within a recess in the rod-head, substantially as set forth.

10 3. A rod joint or coupling comprising a key fitted to slide in one of the members of the joint and engaging a recess in the other member, a bolt held in one of the members of the joint and extending with its head into the guideway of the said key, so as to lock the latter in place, and sets of liners held in the recess of the second member and engaging the projecting end of the said key, substantially
15 as shown and described.

4. In a rod joint or coupling, the combina-

tion, with the two members of the joint screwed together and formed with registering recesses on their outer surface, a key fitted to slide in one of the said recesses and engaging with its projecting end the recess in the other member, liners held in the recess of the second member and engaging the sides of the said key, and a bolt held in the first-named member and formed with a head arranged in the path of the said key to lock the latter in place, substantially as shown and described.

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Witnesses:

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