

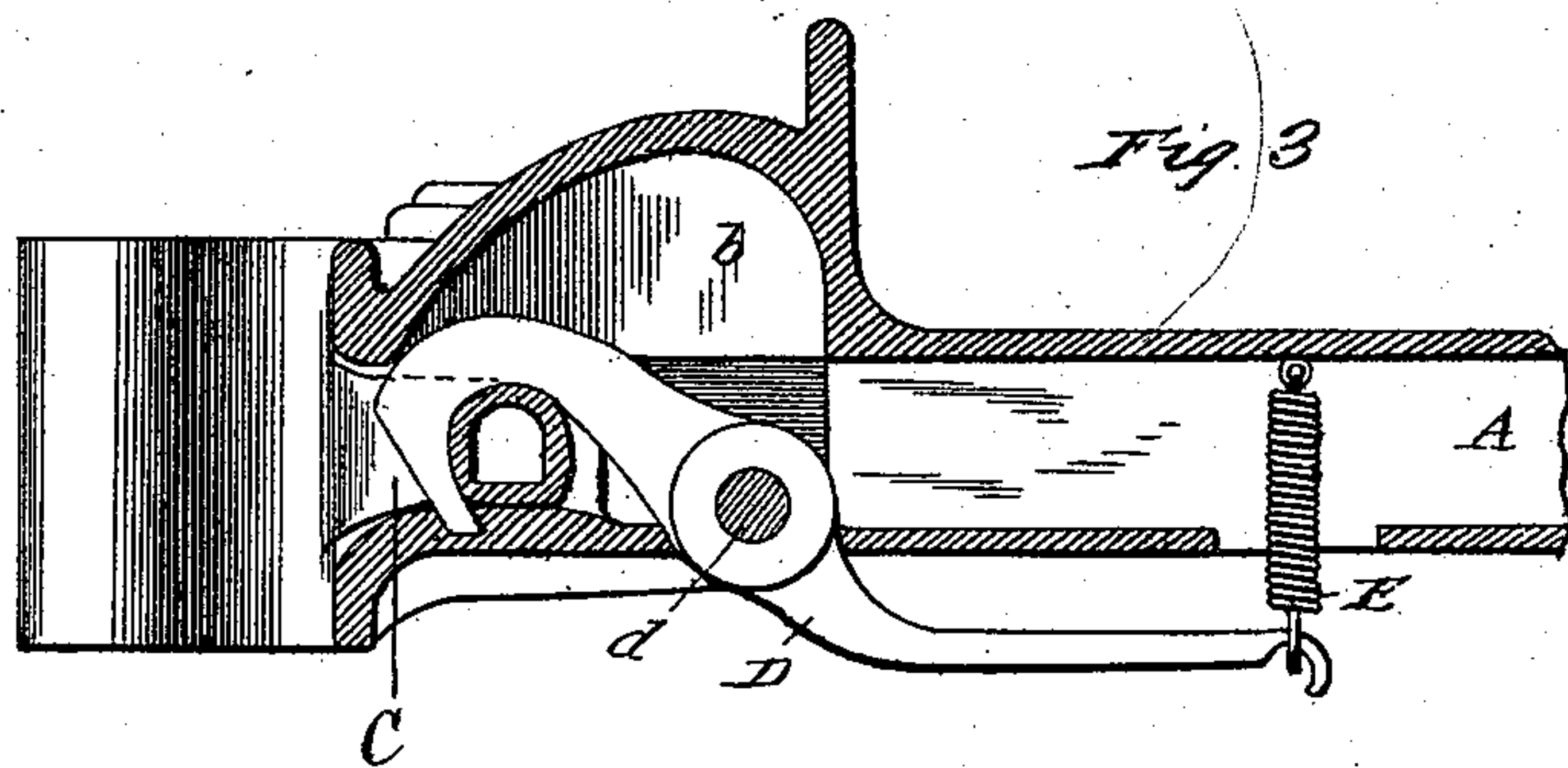
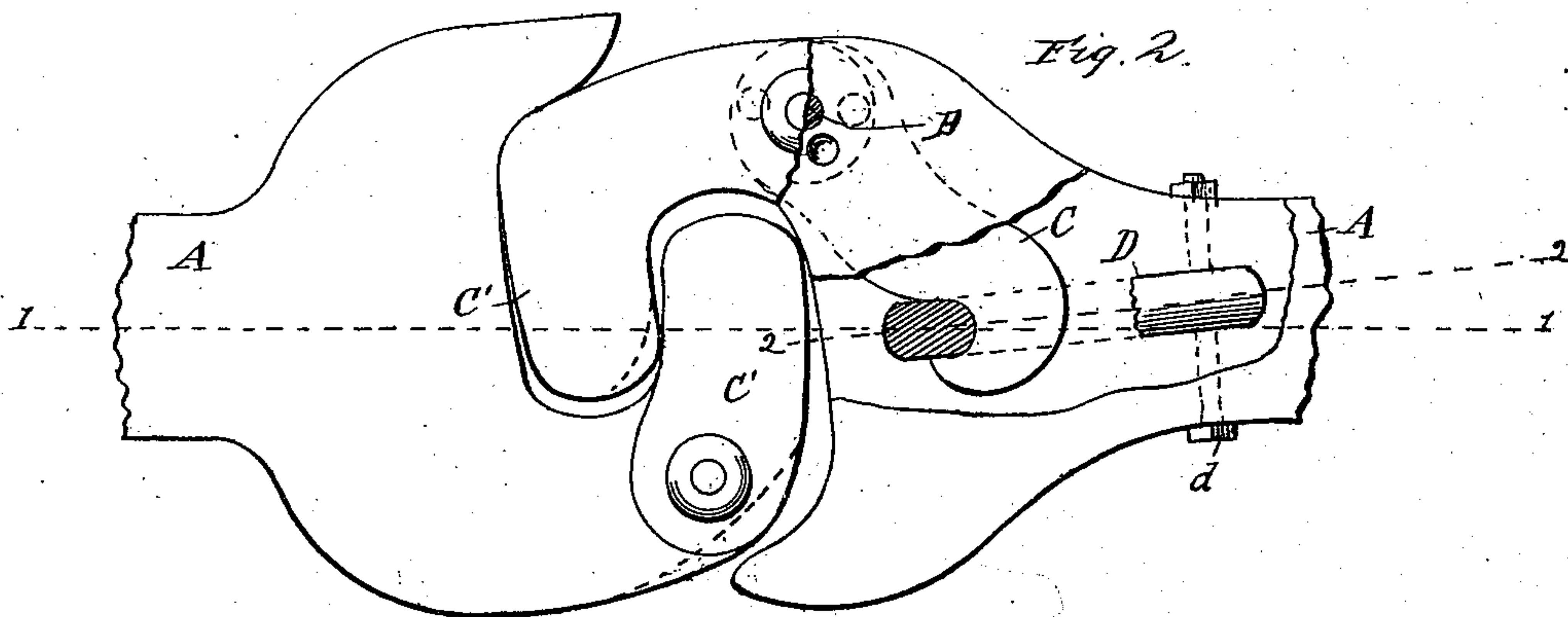
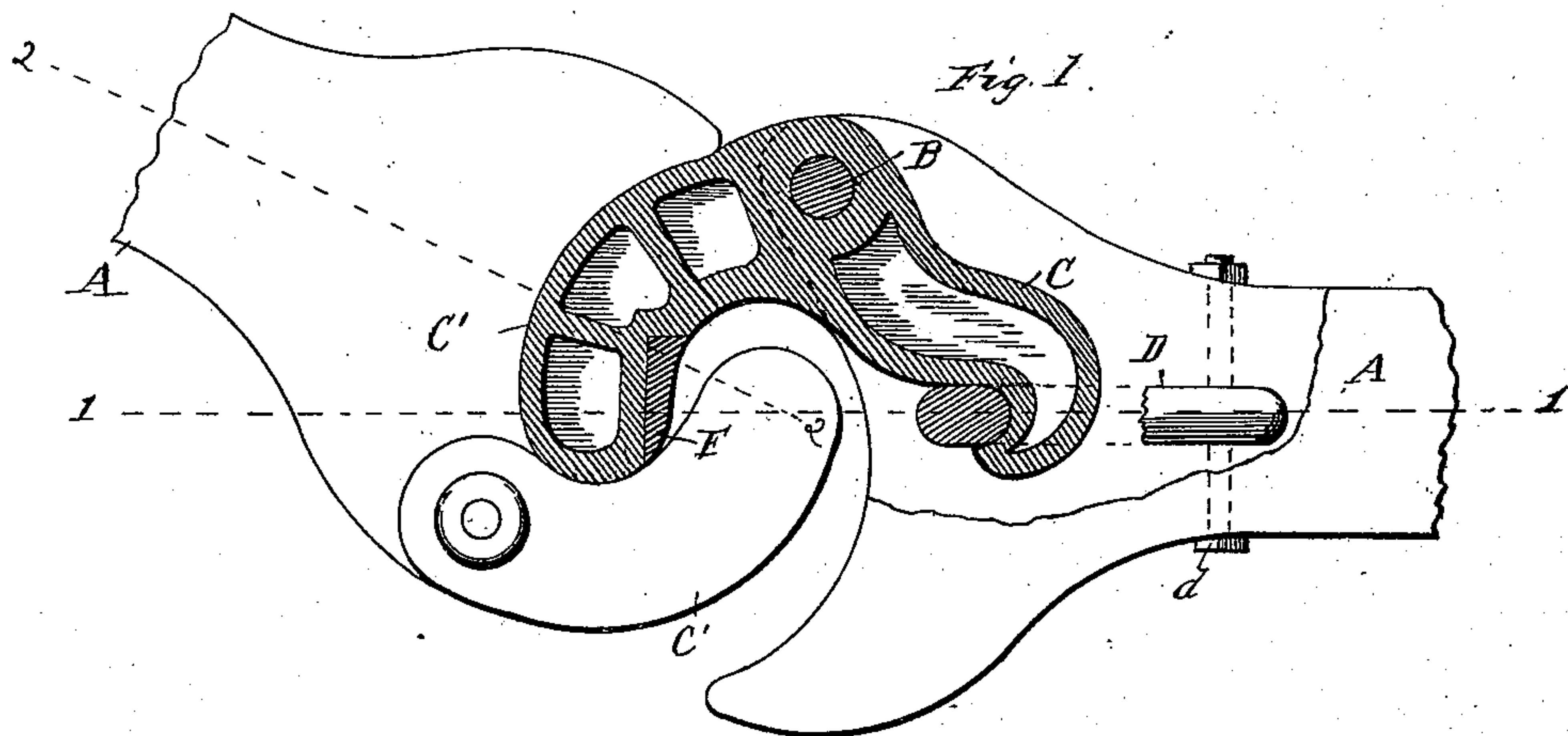
(No Model.)

2 Sheets—Sheet 1.

P. BROWN.
CAR COUPLING.

No. 378,038.

Patented Feb. 14, 1888.



WITNESSES:

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E. H. Bond.

INVENTOR,

Perry Brown.
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(No Model.)

2 Sheets—Sheet 2.

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Fig. 4

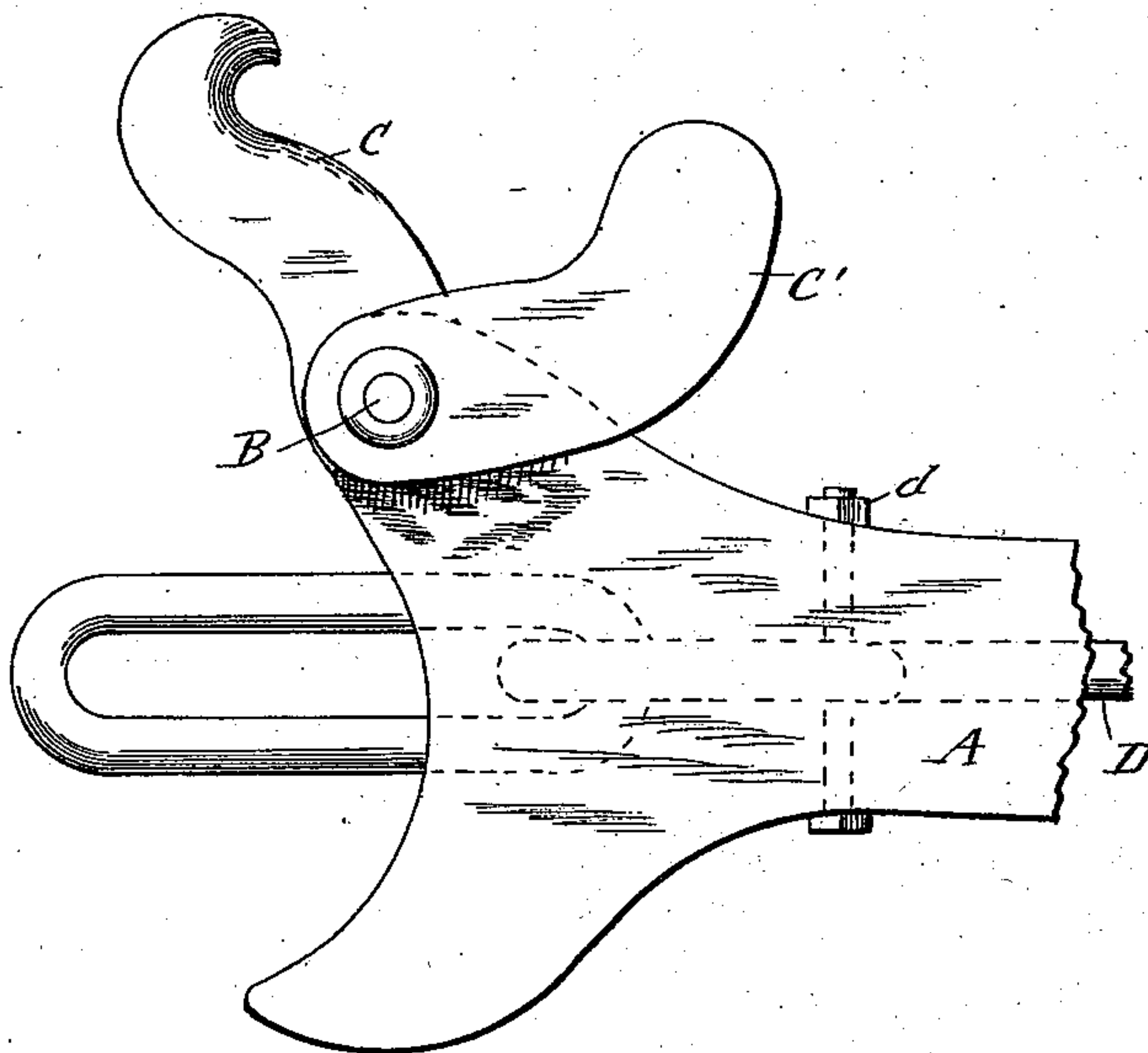


Fig. 5.

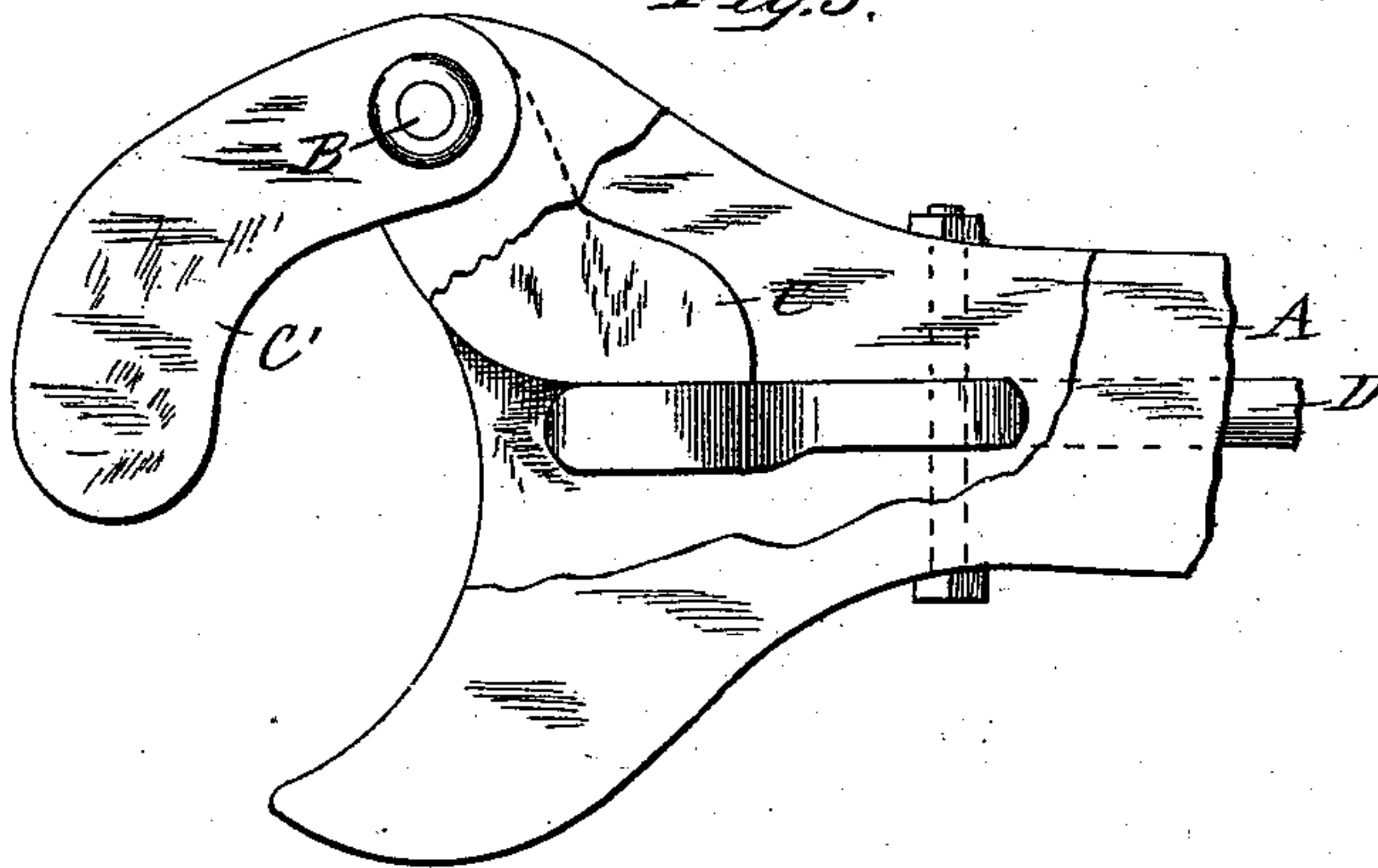
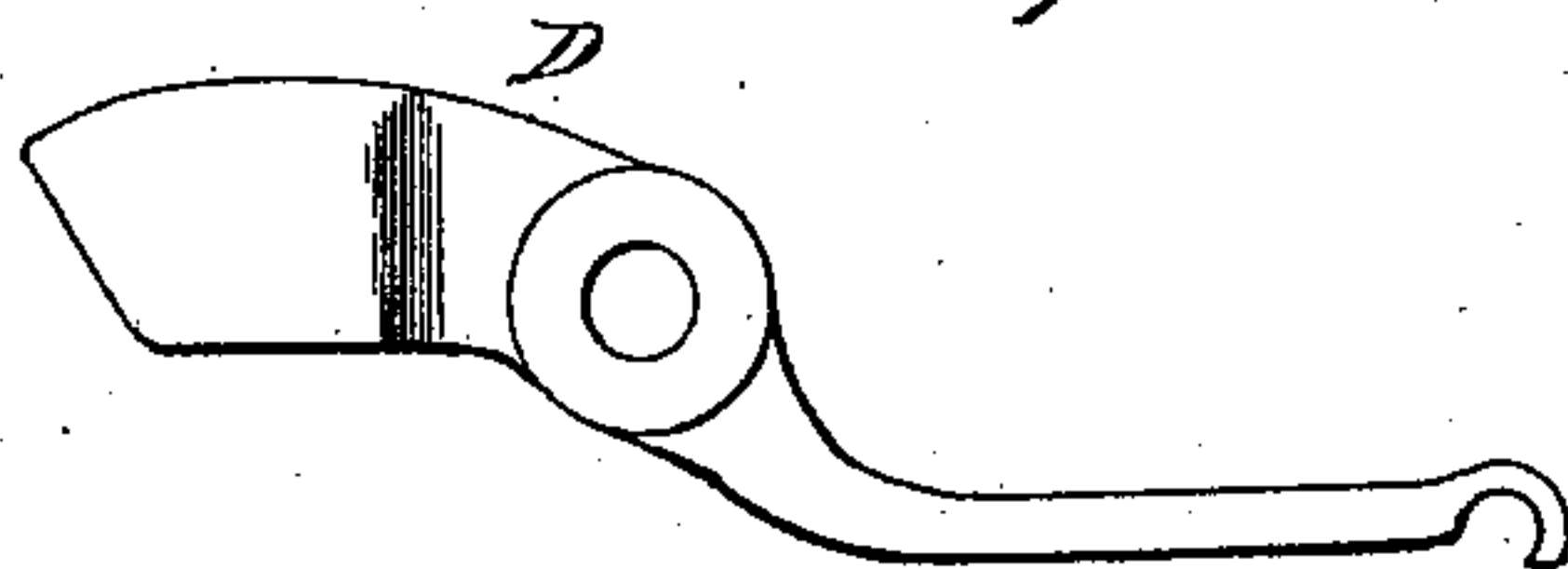


Fig. 6.



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UNITED STATES PATENT OFFICE.

PERRY BROWN, OF LOUISVILLE, KENTUCKY.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 378,038, dated February 14, 1888.

Application filed August 27, 1887. Serial No. 243,059. (No model.)

To all whom it may concern:

Be it known that I, PERRY BROWN, a citizen of the United States, residing at Louisville, in the county of Jefferson and State of Kentucky, have invented certain new and useful Improvements in Car-Couplings, of which the following is a specification, reference being had therein to the accompanying drawings, in which—

Figure 1 represents a plan view of two adjacent couplings embodying my improvements as they appear when united and upon a curve, a portion of one of said couplings being shown in section. Fig. 2 is a similar view with parts broken away and parts in section, showing two couplings, one of old construction and the other embodying my improvements. Fig. 3 is a central vertical longitudinal section through one of the couplings shown in Fig. 1. Fig. 4 is a top plan of the same, showing the clutch thrown back to allow of the coupling being used with an ordinary link. Fig. 5 is a similar view of the same with parts broken away, illustrating the manner of holding the clutch in its locked position. Fig. 6 is a side elevation of the locking-dog detached.

This invention relates to certain new and useful improvements in car-couplings of that class which are termed "twin couplings;" and it has for its object to provide for the coupling and uncoupling of the cars on a sharp curve, to take the wear off of the draw-head proper, and to otherwise increase the durability and efficiency of the coupling.

The novelty consists in the peculiar construction of the draw-head and of the clutch, the means of locking said clutch, and the peculiar combinations and the construction, arrangement, and adaptation of parts, all as more fully hereinafter described and claimed.

In previous constructions of draw-heads the wear of the parts has been on the draw-head proper, so that in a short time an entirely new draw-head has to be substituted. By my construction the wear is taken from the draw-head and all the wear is upon the clutch, which, as it becomes too much worn to perform proper service, can be readily removed and replaced by a new one without disturbing the draw-head. The cost of a new clutch being very small compared with that of the entire coupling, this will constitute a great sav-

ing in the course of a year. This and the other features of the invention will be best understood on reference to the accompanying drawings, which form a part of this specification, and in which—

A designates the draw-bar, the mouth of which is formed on the arc of a circle, and at one side formed with ears or lugs to receive the pin B, upon which is pivoted the hook C, at substantially right angles to which is the arm C', said hook and arm constituting the "clutch." The clutch (shown in Figs. 1, 2, and 3) is cored, as shown, to add strength thereto and decrease its weight, and the outer face of the hook is formed on the arc of a circle. By previous construction the hinge of the clutch was so placed that the opposite draw-head bore on the said hook and the draw-head to which it was hinged. Consequently the wear was at this point, and the same soon became worn, as indicated at *a* by dotted lines in Fig. 2, and when thus worn not only the clutch, but the draw-bar, has to be thrown away. I avoid this difficulty by placing the hinge of the clutch back of the point of contact of the draw-bar, as shown. In this way the wear comes on the clutch, which, if it becomes so worn as not to be of use, can be readily replaced by a new one at a very small cost.

The coupling shown at the right of Fig. 2 is one of old form, with the clutch arranged according to my improvement.

The peculiar form of the mouth of the draw-head admits of the coupling and uncoupling on, say, a twenty-degree curve, the line 1 1 in Fig. 1 illustrating the straight line and the line 2 2 the angle that the parts assume before they bind. The corresponding lines in Fig. 2 will show how soon the parts, by the old construction, will bind after deviating from a straight line. The arm of the clutch works in a recess in the mouth of the draw-head, which recess communicates with a chamber, *b*, in which works the dog D, pivoted on a transverse pivot, *d*, and when the arm of the clutch terminates in a hook, as shown in Figs. 1, 2, and 3, the forward end of this dog also terminates in a hook, as shown in Fig. 3, to engage the hook of the arm, as shown in said Fig. 3. The rear end of the dog is formed with a notch or curve, as shown, to engage one end of a coil-spring, E, which passes through an open-

ing in the draw-bar and is suitably secured at its other end within the draw-bar, as shown. This spring serves to more firmly and securely hold the dog in contact with the arm and lock the clutch. The hinging of the clutch in the position shown permits the same to be thrown back into the position shown in Fig. 4, to allow of the coupling being used with an ordinary link, as seen in the same figure.

10 Instead of forming the dog and the arm of the clutch of the form shown in Figs. 1, 2, and 3, I prefer that shown in Figs. 5 and 6, in which the dog instead of being hooked at its forward end is broadened to strengthen it, and the arm of the dog instead of being hook-shaped is formed with a flattened end. As the couplings unite, the arm of the clutch striking the beveled end of the dog raises the same and moves by it. When the dog falls, it falls in the path of the arm, and the latter, as soon as there is any strain on the clutch, is caused to bear on the side of the dog, as seen in Fig. 5. This relieves the pivot-pin of the dog of the direct strain, as will be readily understood.

25 In ordinary use upon a straight track the wear comes upon the inner face of the hook of the clutch, and at this point I secure, in any suitable manner, so that it may be removed when desired, a steel bearing-plate, as seen at F in Fig. 1. As this plate becomes worn, it can be replaced by a new one at a trifling expense.

The clutch shown in Figs. 4 and 5 is cored

like that shown in the other figures, and I contemplate using the spring shown in Fig. 3 with the dog shown in said figures.

What I claim as new is—

1. A draw-head of the character described, having its mouth formed on the arc of a circle drawn substantially at right angles to the axis of the draw-head, combined with a clutch pivoted to said draw-head at the rear of one end of said arc and having the outer face of its hook formed substantially on the arc of a circle, as set forth.

2. The combination, with the draw-head and the clutch pivoted thereto, of a dog pivoted to said draw-head and working in a chamber therein and engaging the arm of the clutch, and a spring secured at one end directly to the rear end of the dog and at its other end to the draw-head, substantially as described.

3. The combination, with the draw-head having a horizontal recess and a chamber, *b*, of a clutch pivoted to said draw-head and having an arm working in said recess, and a pivoted dog working in said chamber, with its side engaging the point of said arm, substantially as described.

In testimony whereof I affix my signature, in presence of two witnesses, this 27th day of August, 1887.

PERRY BROWN.

Witnesses:

W. T. ROBERTSON,
E. H. BOND.