

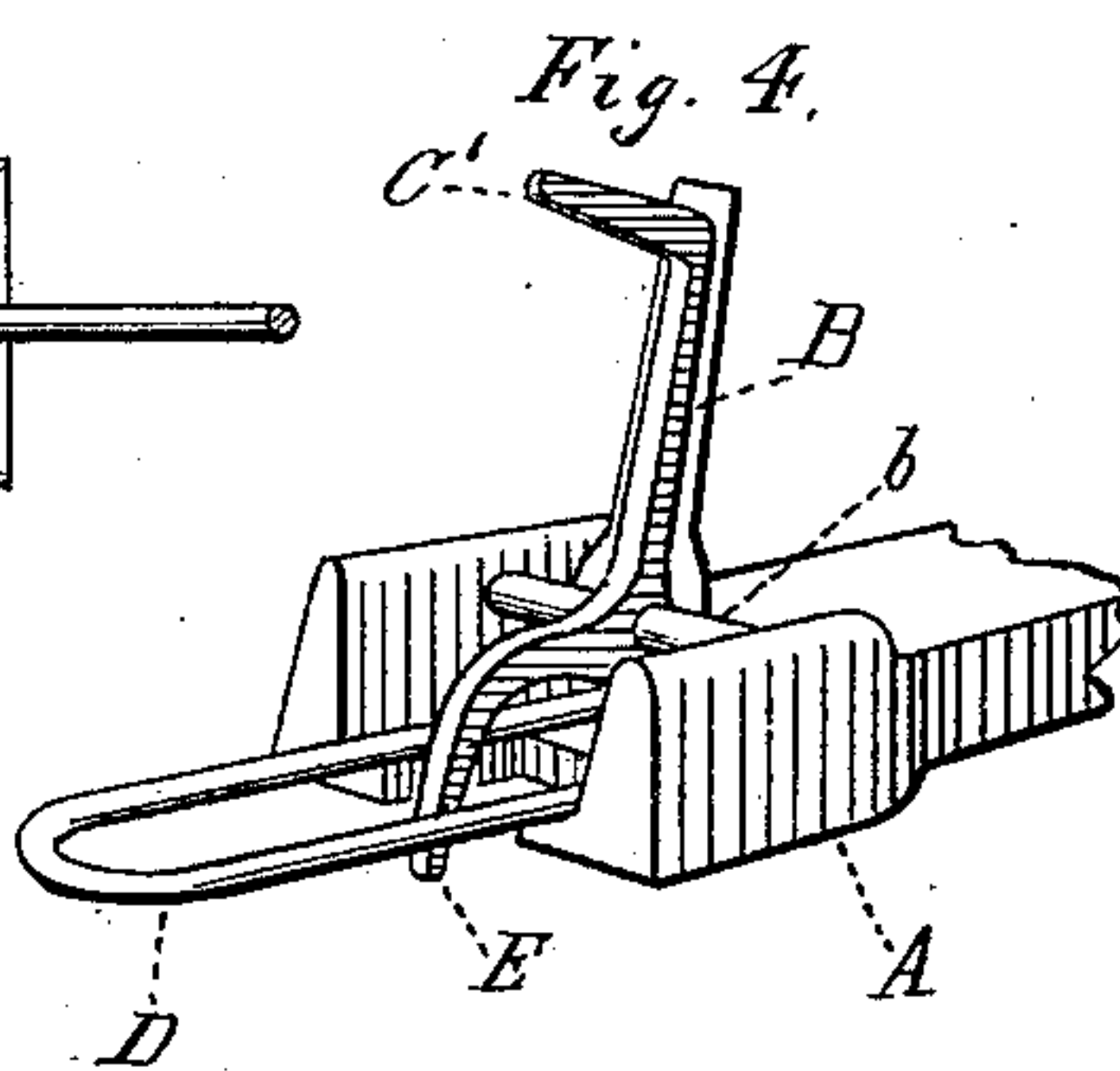
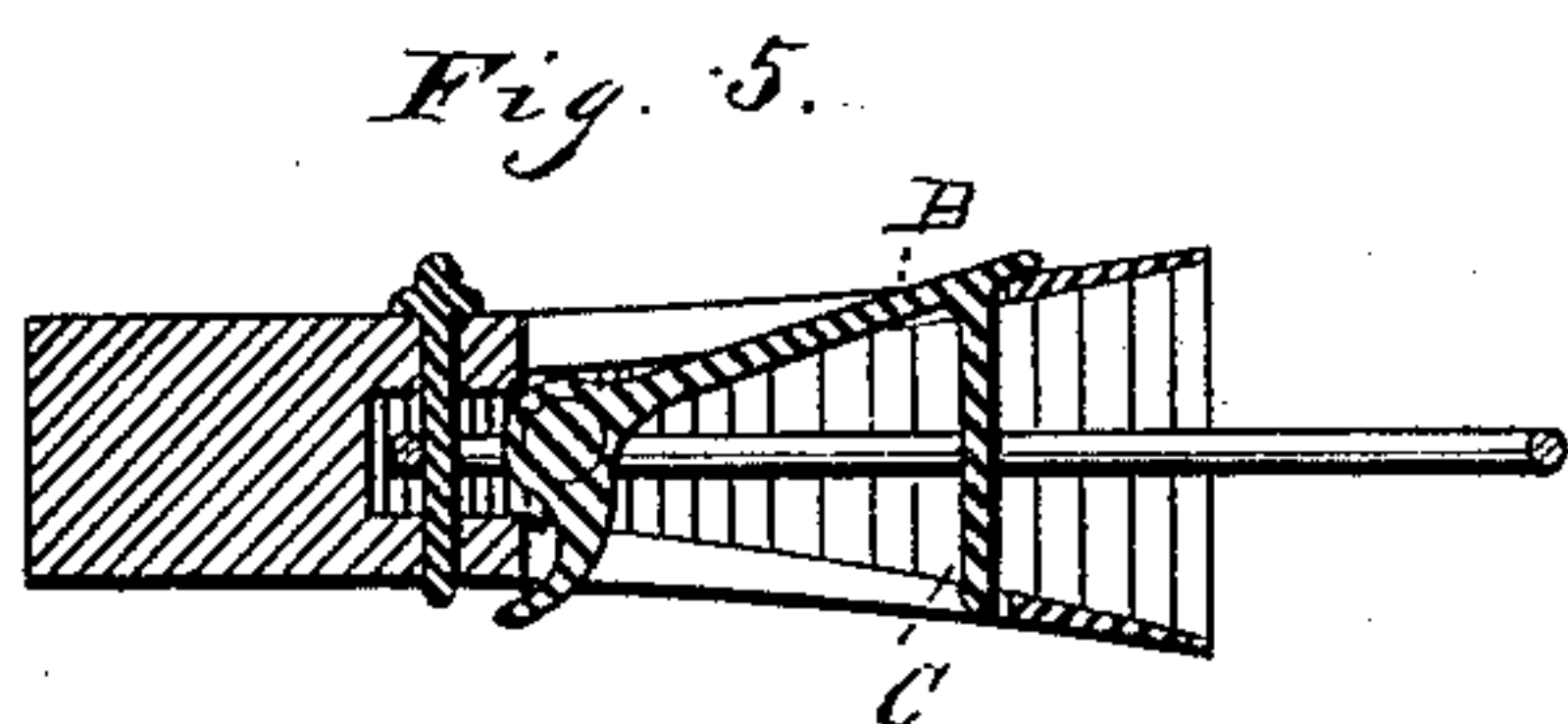
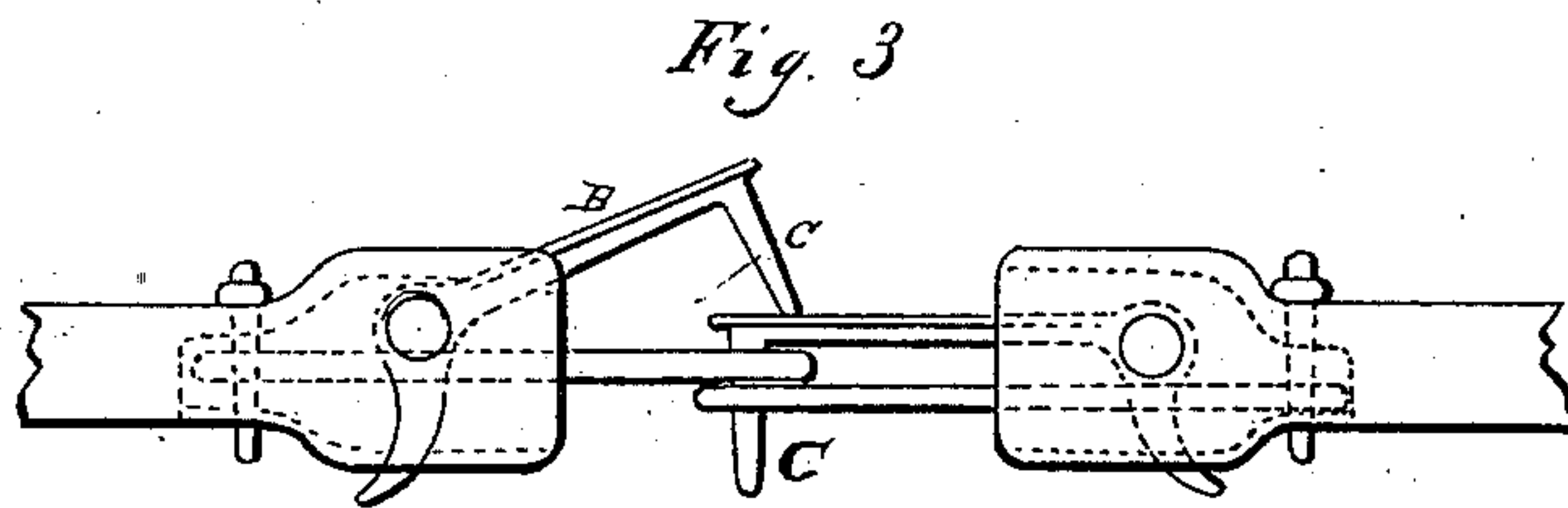
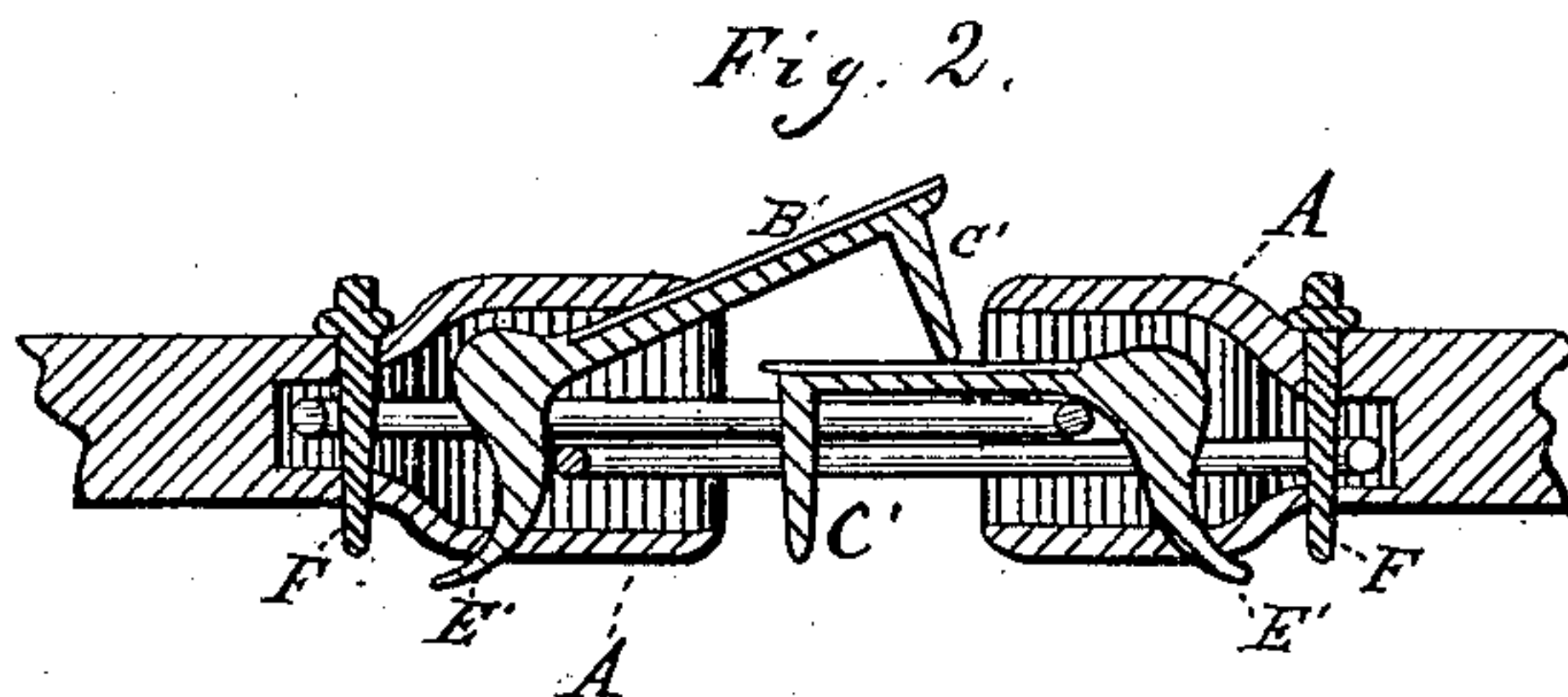
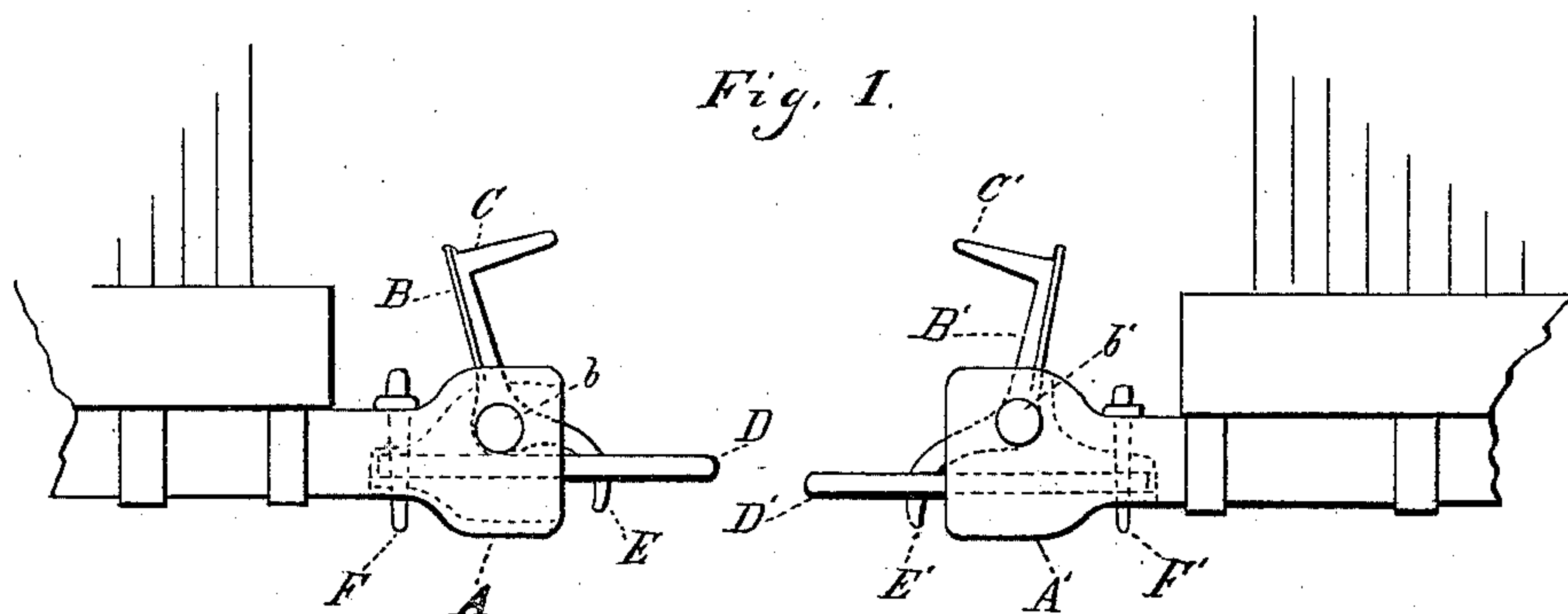
(No Model.)

T. B. KNOWLES.

CAR COUPLING.

No. 246,017.

Patented Aug. 23, 1881.



WITNESSES

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UNITED STATES PATENT OFFICE.

THOMAS B. KNOWLES, OF GENEVA, OHIO.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 246,017, dated August 23, 1881.

Application filed June 18, 1881. (No model.)

To all whom it may concern:

Be it known that I, THOMAS B. KNOWLES, of Geneva, in the county of Ashtabula and State of Ohio, have invented certain new and useful Improvements in Car-Couplers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to car-couplers; and it consists in a hooked finger pivoted in the draw-head, and provided with an arm adapted to be operated upon by the link in the opposite draw-head, and in parts and combination of parts, as will more fully hereinafter appear.

The object of my invention is to furnish a device by means of which cars can be readily coupled automatically, thus avoiding the dangers incident to the use of the ordinary coupler.

In the drawings, Figure 1 is a view in elevation of opposing draw-heads provided with my device in an open or unlocked position. Fig. 2 is a vertical sectional view of the same, showing the couplers locked together. Fig. 3 is a view in elevation of draw-heads provided with my coupler, showing their relative position when a strain is exerted upon either car. Fig. 4 is a view in perspective of a draw-head provided with my improved coupling mechanism, showing its construction in an open position. Fig. 5 is a longitudinal section, showing a modification.

In the said drawings, A represents the ordinary draw-heads attached to freight-cars.

B and B' represent arms pivoted within the opposing draw-heads at *b* and *b'*. These arms are provided with fingers C and C', which serve the purpose of the ordinary coupling-pins, and are adapted to engage with the link carried by the opposing draw-head.

E and E' are second arms, curved in form, permanently attached to the arms B and B', and turning upon the pivot *b* and *b'*.

D and D' are the ordinary links used in coupling cars. These are removably attached to the draw-heads A, and held in place by the pins F and F'.

The operation of my device is as follows: The draw-heads A and A' approaching each other, the link D strikes the arm E' in the draw-head A' and forces it back, thereby bringing

the finger C' down to a vertical position and through the link D, thus coupling the cars together; or, if the opposite link, D', should strike the arm E in the opposite draw-head, the arm E would be forced to a horizontal position and the finger C passed through the link D', accomplishing the same purpose as the other portion—viz., coupling the draw-heads together, as shown in Figs. 2 and 3 of the drawings.

I have described my invention and its operation where a link is attached to each draw-head. It is apparent, however, that but a single link is necessary for a complete coupling of the draw-heads together. It is apparent that this draw-head is also adapted for use with the ordinary draw-head. The link of the ordinary draw-head would occupy substantially the same relative position as that shown in the drawings in either of the opposing draw-heads, and when the draw-heads approach each other the link should necessarily strike the arm E or E' and force the finger C or C' through the link, thereby coupling the cars.

In Fig. 5 is shown a modification of my invention, wherein the bolt passes through the draw-head, instead of bearing upon the outside, as shown in the other figures of the drawings.

What I claim is—

1. In a car-coupling, the combination, with the draw-head, of the coupling-hook B C, provided with the curved arm E, and a link secured within the draw-head, substantially as set forth.

2. In a car-coupling, the combination of the hooked finger B C, curved arm E, draw-head A, link D, and pin F, substantially as and for the purposes shown.

3. In a car-coupling, the combination, with a draw-head, of a coupling-hook pivoted within the draw-head, said coupling provided with a curved arm, E, that projects in front of the draw-head when the coupling-hook is thrown back in position for being coupled, substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

THOMAS B. KNOWLES.

Witnesses:

JNO. CROWELL, Jr.,
ALBERT E. LYNCH.