

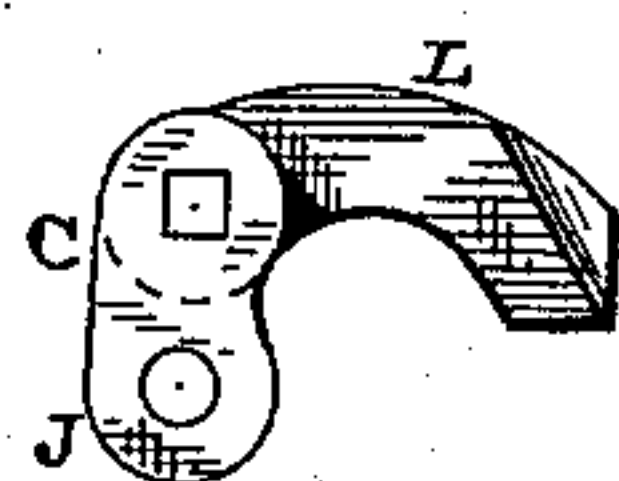
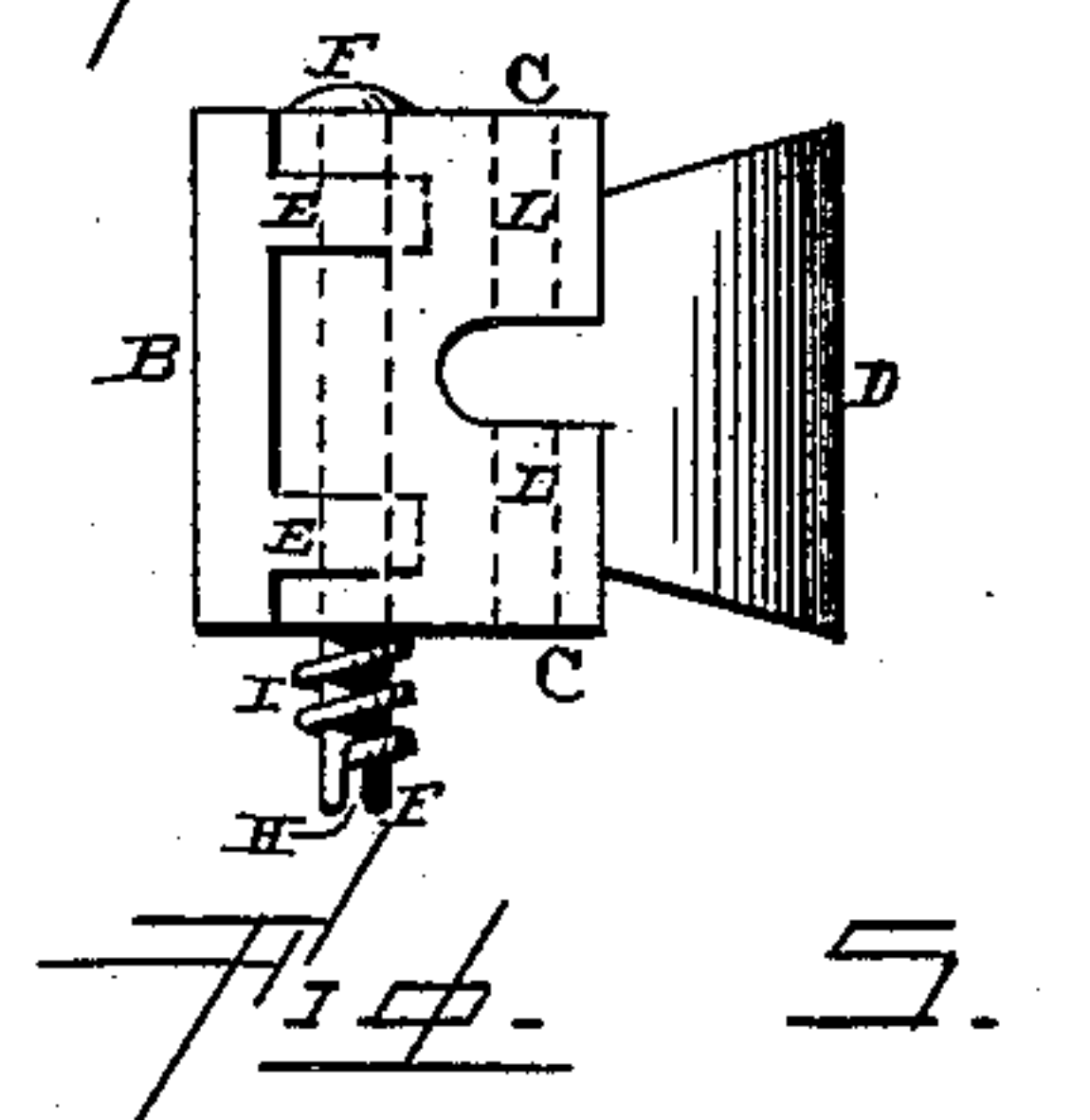
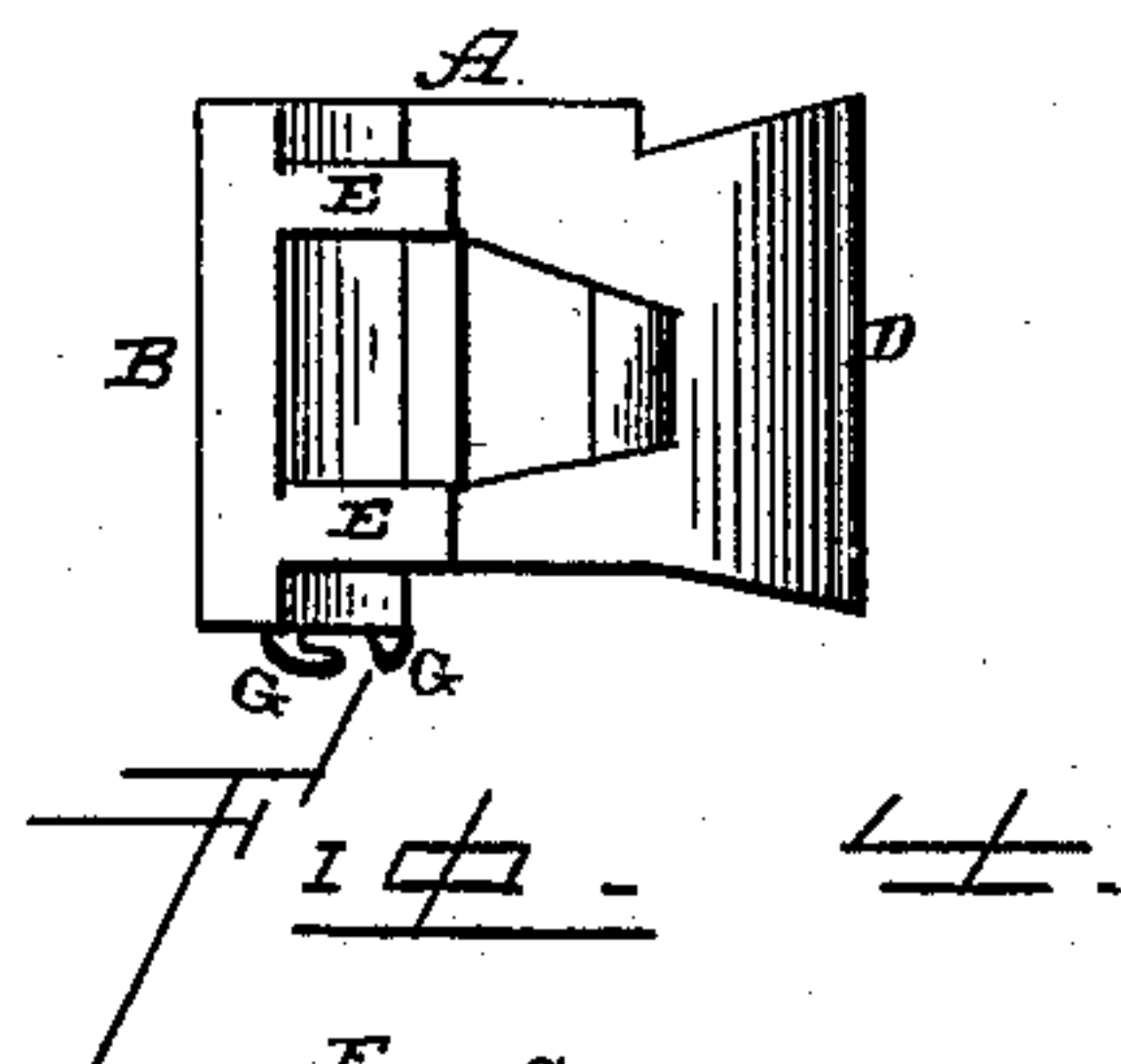
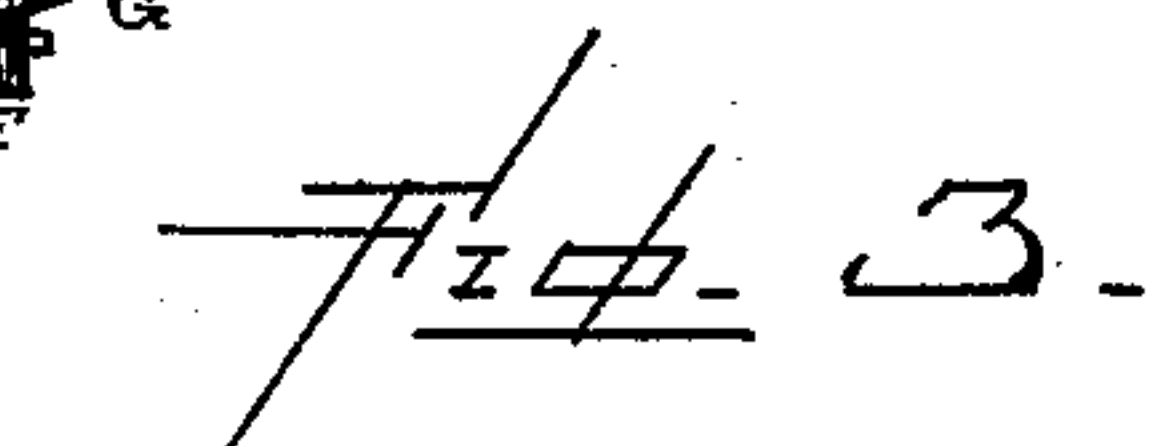
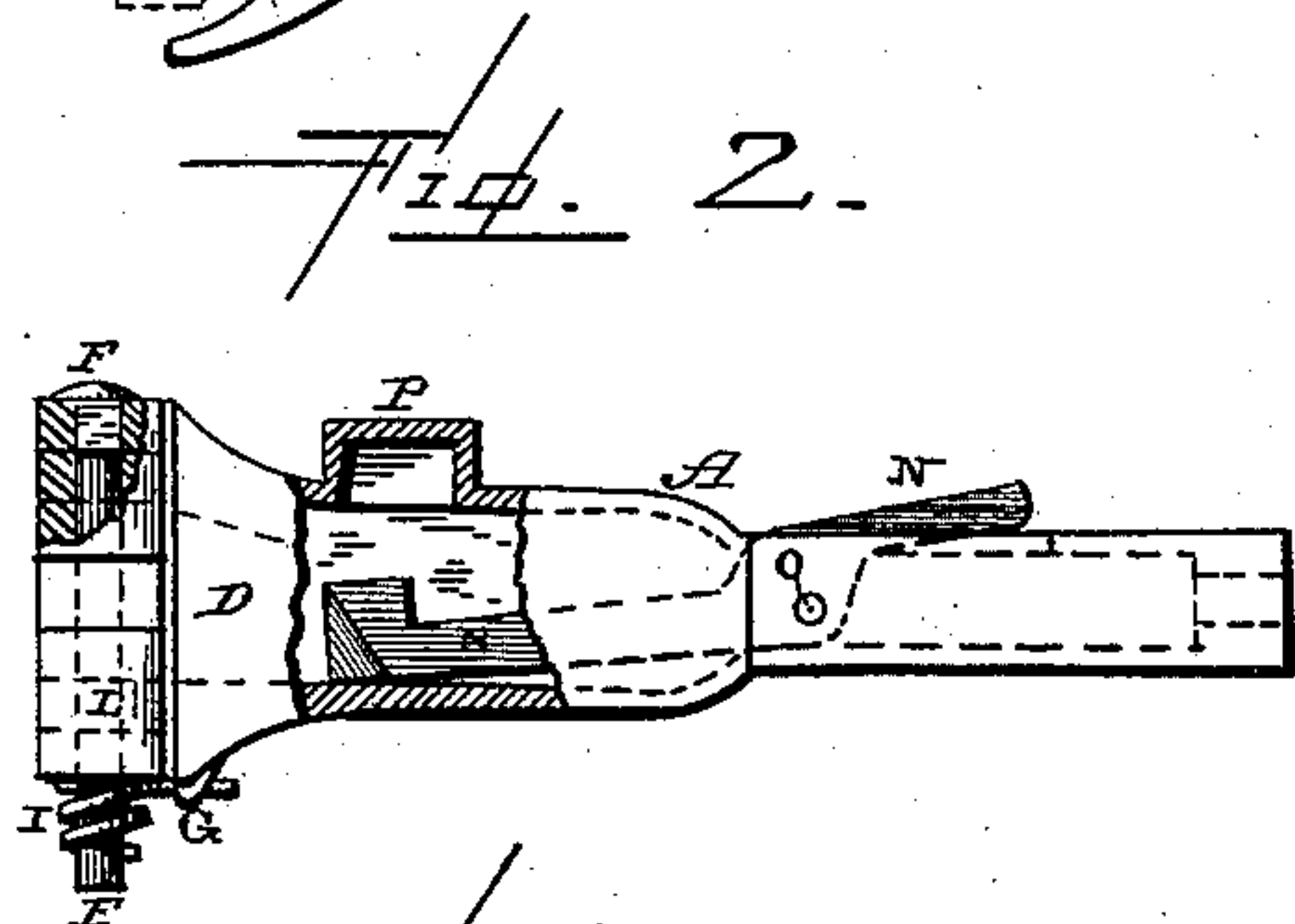
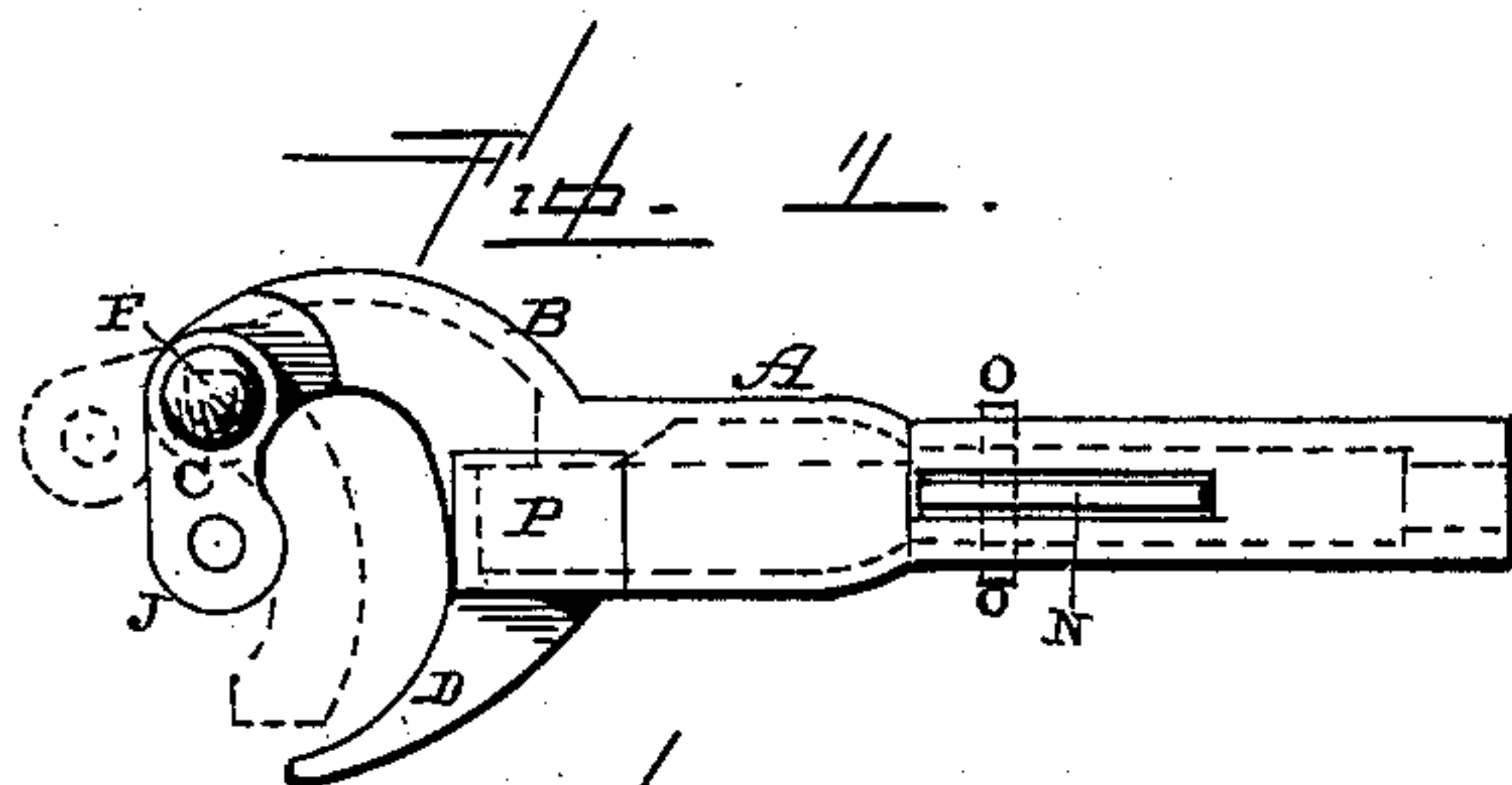
(No Model.)

F. A. WESTBROOK & W. S. COOK.

CAR COUPLING.

No. 371,289.

Patented Oct. 11, 1887.



WITNESSES.
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UNITED STATES PATENT OFFICE.

FRANK A. WESTBROOK, OF PORT JERVIS, AND WINFIELD S. COOK, OF
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CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 371,289, dated October 11, 1887.

Application filed July 11, 1887. Serial No. 244,011. (No model.)

To all whom it may concern:

Be it known that we, FRANK A. WESTBROOK and WINFIELD S. COOK, of Port Jervis and Middletown, respectively, in the county of Orange and State of New York, have invented certain new and useful Improvements in Automatic Car-Couplings; and we 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.

Our invention relates to an improvement in automatic car-couplings; and it consists in the combination of the draw-head provided with a prong or projection upon its front end, and to which the spring-actuated locking arm is pivoted, and a guiding arm or prong with the pivoted locking-arm and the automatically-acting locking lever or catch, as will be more fully described hereinafter.

The object of our invention is to produce an automatic car-coupling which can be operated from either side of the car, and thus prevent all necessity for the brakemen having to go between the cars when they run together, for the purpose of coupling them.

Figure 1 is a plan view of a car-coupling embodying our invention. Fig. 2 is a side elevation of the same. Fig. 3 is a front end view of the draw-head alone. Fig. 4 is a similar view of the coupling complete. Fig. 5 is a detached plan view of the coupling-arm.

A represents the draw-head, which has formed upon its front end the prong or projection B, to which the coupling-arm C is pivoted, and the guiding arm or prong D, which guides the coupling-arm of the opposing link into position. The front end of the prong or projection B has two perforated horizontal flanges, E, and these flanges fit in corresponding recesses in the coupling-arm C, as shown in Fig. 4. Passed down through the coupling-arm C and the flanges E of the draw-head A is the pivotal bolt F, which is made square where it passes through the top of the coupling-arm C, but is made round the remaining portion of its length, so that the coupling-arm C will freely turn upon the flanges E. By making the upper portion of the bolt F square where

it passes through the upper portion of the coupling-arm the bolt is made to turn with the arm C when the arm opens and closes. On the under side of the draw-head A are formed two small projections or catches, G, and in the lower end of the rod F is formed a recess, H. One end of the spring I, which automatically causes the coupling-arm C to open when left free to move, catches in between the projections G on the head A, and the other end of the spring catches in the recess H in the lower end of the bolt F. When the coupling-arm C is closed, as shown in solid lines in Fig. 1, the bolt F is turned at the same time, so as to wind the spring I around the bolt F, so that when the coupling-arm C is released it will instantly fly open. The coupling-arm C is shaped as shown in Fig. 5, its outer end, J, being made to couple with the coupling-arm on the adjoining car, while its inner end, L, is made to fit in a corresponding recess in the prong or projection B of the draw-head A when the coupling-arm is closed. The recess in the coupling-head A is so shaped that the end L fits snugly therein, and thus any strain brought to bear upon the end J when the cars run together is transferred to the end L which receives a portion of the strain, and thus prevents all danger of breaking the outer end, as would otherwise be the case. The upper rear corner of the end L is beveled away, so as to pass freely under the pivoted lever or catch N, which is pivoted in the draw-head A upon the bolt O. The rear end of the lever or catch N may be made to project either above or below the top of the draw-head, while the inner end extends outward through the head sufficiently far to drop down in front of the end L of the coupling-arm to prevent the arm from opening. This front end of the catch N is also beveled, so as to allow the end L of the coupling-arm to raise it upward into the pocket or recess P, formed in the top of the draw-head A. When the arm C is closed, it automatically operates the lever or catch N; but the arm cannot be made to open until this front end of the lever or catch is raised upward. Whether the rear end of the lever or catch N projects above or below the draw-head, it will be operated by a suitable cam-rod or device of any kind which can be operated from either side of the car, so as to

release the coupling-arm whenever so desired. When the coupling-arm is released by operating the lever or catch N, the spring I instantly causes the coupling-arm to fly open, and then
5 when the cars run together the coupling-arm automatically closes and couples with the coupling-arm upon the other draw-head. The coupling arm C never opens any farther than is shown by dotted lines in Fig. 1, so that when
10 the cars run together and the arm comes in contact with the present form of draw-head the old draw-head will not be forced past, and thus cause breakage, but the blow will cause the coupling-arm to revolve, and then the
15 beveled part of its inner end, L, will strike against the beveled face of the gravity locking catch or lever N, and thus raise it until the end L passes under it. After the two heads are coupled together they cannot be released
20 until one or both are opened.

When the gravity locking catch or lever N is applied to new draw-heads, the rear end will project upward, as shown; but when applied to old draw-heads now on the road it will extend downward. In operating this lever the
25 brakeman catches hold of one end of a horizontal lever which extends to one or both sides of the car, and which is placed on the draw-

timbers and against the under side of the sills of the car. This lever is provided with a cam 30 or crank, which, when the lever is turned, operates the lever or catch N, thereby causing its front end to rise, so that the end L of the coupling-arm C can be forced outward by the spring I.

Having thus described our invention, we claim— 35

1. The combination of the draw-head A, provided with the two prongs B D, the coupling-arm C, the pivotal bolt F, the spring I, 40 applied to the lower end of the bolt, and the gravity-operating catch or lever, substantially as described.

2. The combination of the draw-head A, provided with the projections or prongs B D, 45 the flanges E, the coupling-arms C, provided with recesses to receive the flanges E, the bolt F, the spring I, and the gravity-acting lever or catch N, substantially as set forth.

In testimony whereof we affix our signatures 50 in presence of two witnesses.

FRANK A. WESTBROOK.
WINFIELD S. COOK.

Witnesses:

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