

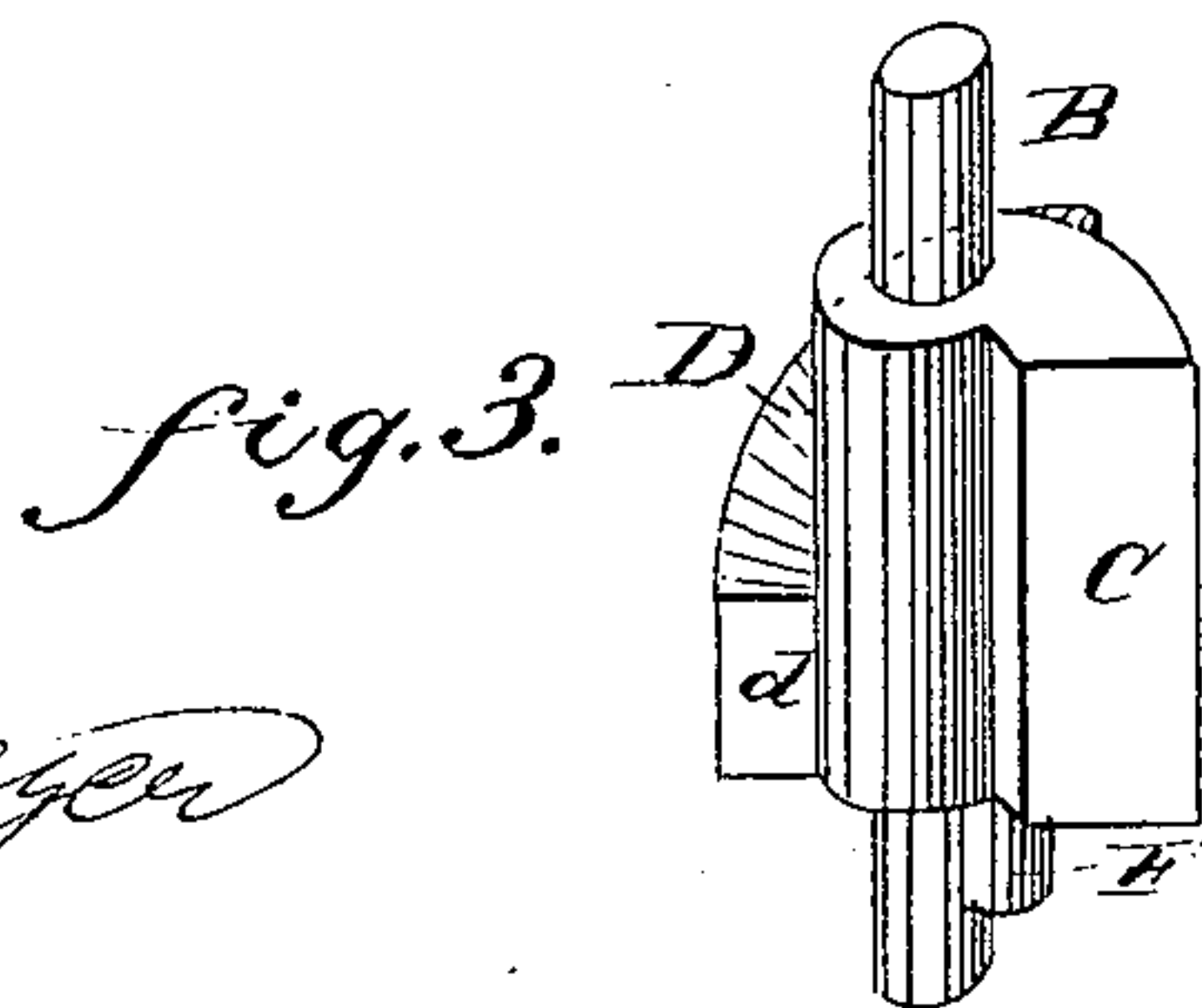
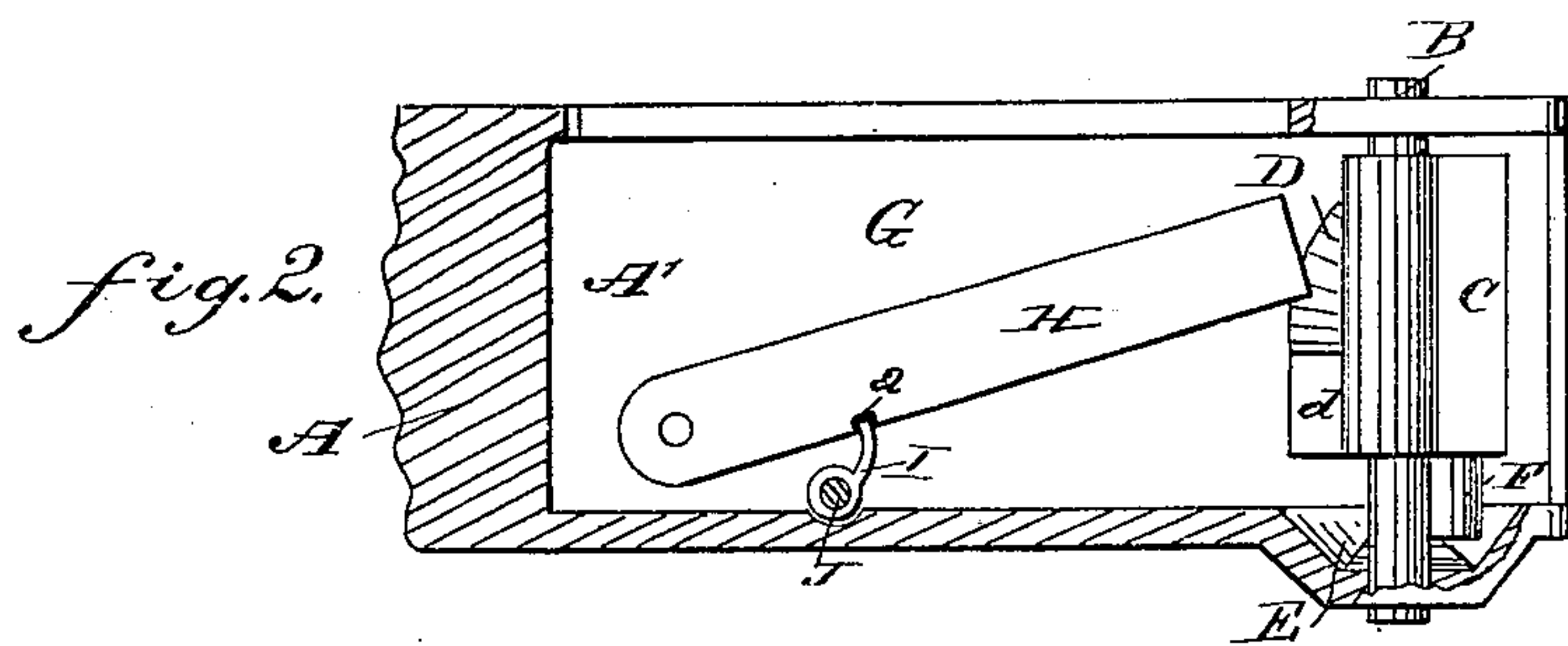
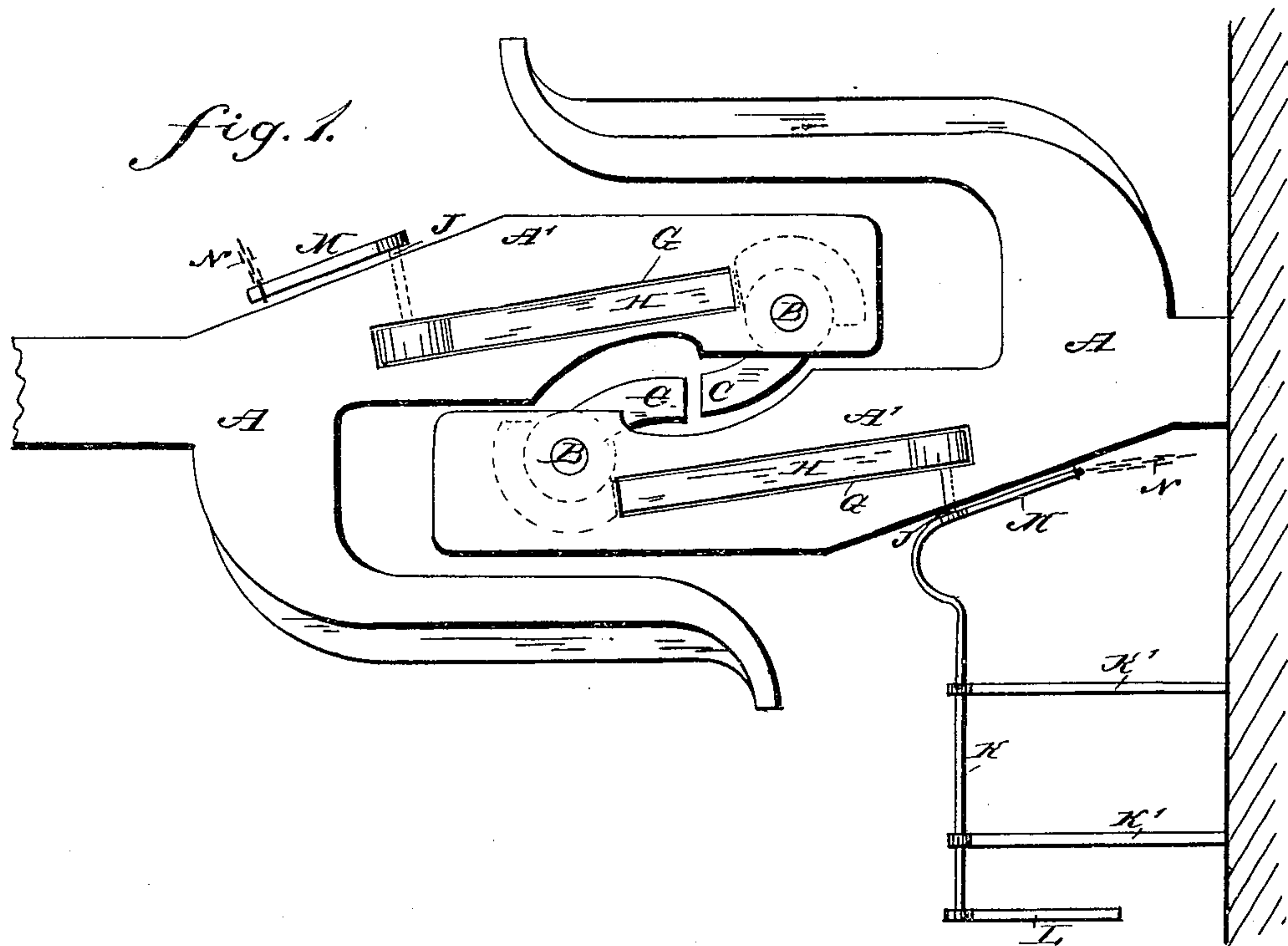
(No Model.)

M. J. McCrone.

CAR COUPLING.

No. 262,449.

Patented Aug. 8, 1882.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

MICHAEL J. McCRONE, OF LOUISVILLE, KENTUCKY.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 262,449, dated August 8, 1882.

Application filed June 10, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, MICHAEL J. McCRONE, of Louisville, in the county of Jefferson and State of Kentucky, have invented a new and Improved Car-Coupler, of which the following is a full, clear, and exact description.

The invention consists in a U-shaped draw-head, in one shank of which a spindle is mounted, on which a hook-projection and a spiral shoulder are attached, which hooks of two opposite draw-heads engage, and thus couple the cars.

The invention further consists in a pivoted latch in the draw-head for locking the hook in place, in combination with a cam-finger for raising the latch to release the hook for uncoupling the cars.

The invention further consists in the combination, with the draw-head, hook, latch, and cam-finger, of devices for operating this cam-finger from the top of the car.

The invention also consists in a check-projection on the bottom of the spindle, which check strikes against the sides of a beveled recess in the bottom of the draw-head and prevents swinging the hook inward too far.

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

Figure 1 is a plan view of two of my improved car-couplers, showing them engaged. Fig. 2 is a longitudinal sectional elevation of one of them. Fig. 3 is a detail perspective view of the coupling-hook.

The draw-head A is made U-shaped, and at the end of one of the shanks A' a short vertical spindle, B, is journaled, which is provided with a curved lateral projection or hook, C, and with an inclined or preferably spiral shoulder, D. The lower end of the spindle B is contained in a beveled recess, E, in the bottom of the recess in the shank A'. A check-lug, F, projects from the spindle B below the curved lug or hook C. The shank in the end of which the spindle B is journaled is provided with a vertical longitudinal recess, G, in which a latch, H, is pivoted at that end of the recess toward the inner end of the draw-head. This latch is provided in its underside with a notch, a. A cam-finger, I, within the recess G is at-

tached to the inner end of a short transverse shaft, J, in the side of the draw-head. The outer end of this shaft J is attached to a shaft, K, journaled in suitable arms, K', on the end of the car. At its outer end this shaft K is provided with a handle, L, and at its inner end with an arm, M, to which a chain or rod, N, is attached, reaching to the top of the car.

The operation is as follows: If the cars are to be coupled, the latches H rest in the bottoms of the recesses and the ends of the latches rest against the bottom straight parts, d, of the spiral or inclined shoulders D, and prevent the hooks or curved projections from being swung outward—that is, toward the opposite shank—as the straight part d of the shoulders D strike against the ends of the latches H, when the spindles B are turned by swinging the hooks outward. The draw-heads pass into each other in such a manner that the inner sides of those shanks A' containing the hooks C will face each other, these hooks C swinging inward or toward the shanks in which they are held sufficiently to let the shanks of the draw-head pass into each other. The cars will then be coupled, and if an attempt is made to draw them apart the end of the hooks or curved projections C catch on each other, as is shown in Fig. 1.

If the cars are to be uncoupled, the latch H is raised by turning the shaft of the cam-finger I until the end of this finger rests in the notch a. If the draw-heads are now drawn apart, the hook-projections C will turn each other outward, as they are no longer held by the latches H. As soon as the pintles B are turned by the outwardly swinging movement of the hooks C the ends of the latches H, which rest on the spiral shoulders D, are raised by these shoulders, whereby the cam-fingers I will be disengaged from the notches a, thus permitting the cam-fingers to drop. When the hooks C swing outward the lug F strikes the outer beveled edge of the recess E and runs up the same and will slide down again, thereby swinging the hook toward the inner side of the shank A'. The latch H drops and locks the hook in place, the outer end of the latch resting against the straight part d of the shoulder. When the draw-heads come together the hooks C must swing inwardly slightly to let the hooks pass



each other. The lug F' then slides up the inner beveled side of the recess E, and when the hooks C have passed each other the lugs F slide down again and swing the hooks C outward into their normal positions, as shown in Fig. 1.

The shank A' of the draw-head, which is heavier than the other shank, forms the buffer and passes in between the shanks of the opposite draw-head.

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

1. The combination, with the U-shaped draw-head A, of the hook C, attached to the pintle B in the end of the shank A', and the latch H, pivoted in the shank A', substantially as herein shown and described, and for the purpose set forth.

2. The combination, with the U-shaped draw-head A, of the spindle B in the end of the shank A', the hook C on this spindle, the spiral or inclined shoulder D on this spindle, and the latch H, pivoted in the shank A', substantially as herein shown and described, and for the purpose set forth.

3. The combination, with the U-shaped draw-head A, of the spindle B, the hook C, the spiral

shoulder D, the latch H, provided with a notch, a, and the cam-finger I, attached to a shaft, J, in the draw-head, substantially as herein shown and described, and for the purpose set forth.

4. The combination, with the U-shaped draw-head A, of the spindle B, the hook C, the spiral shoulder D, the latch H, provided with a notch, a, the cam-finger I, the shaft J, and the shaft K, substantially as herein shown and described, and for the purpose set forth.

5. The combination, with the U-shaped draw-head A, of the spindle B, the hook C, the spiral shoulder D, the latch H, provided with a notch, a, the cam-finger I, the shaft J, the shaft K, the arm M, and the chain N, substantially as herein shown and described, and for the purpose set forth.

6. The combination, with the U-shaped draw-head A, provided with a beveled recess, E, in the bottom, the spindle B, the hook C, and the projection F on the lower part of the spindle, substantially as herein shown and described, and for the purpose set forth.

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Witnesses:

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