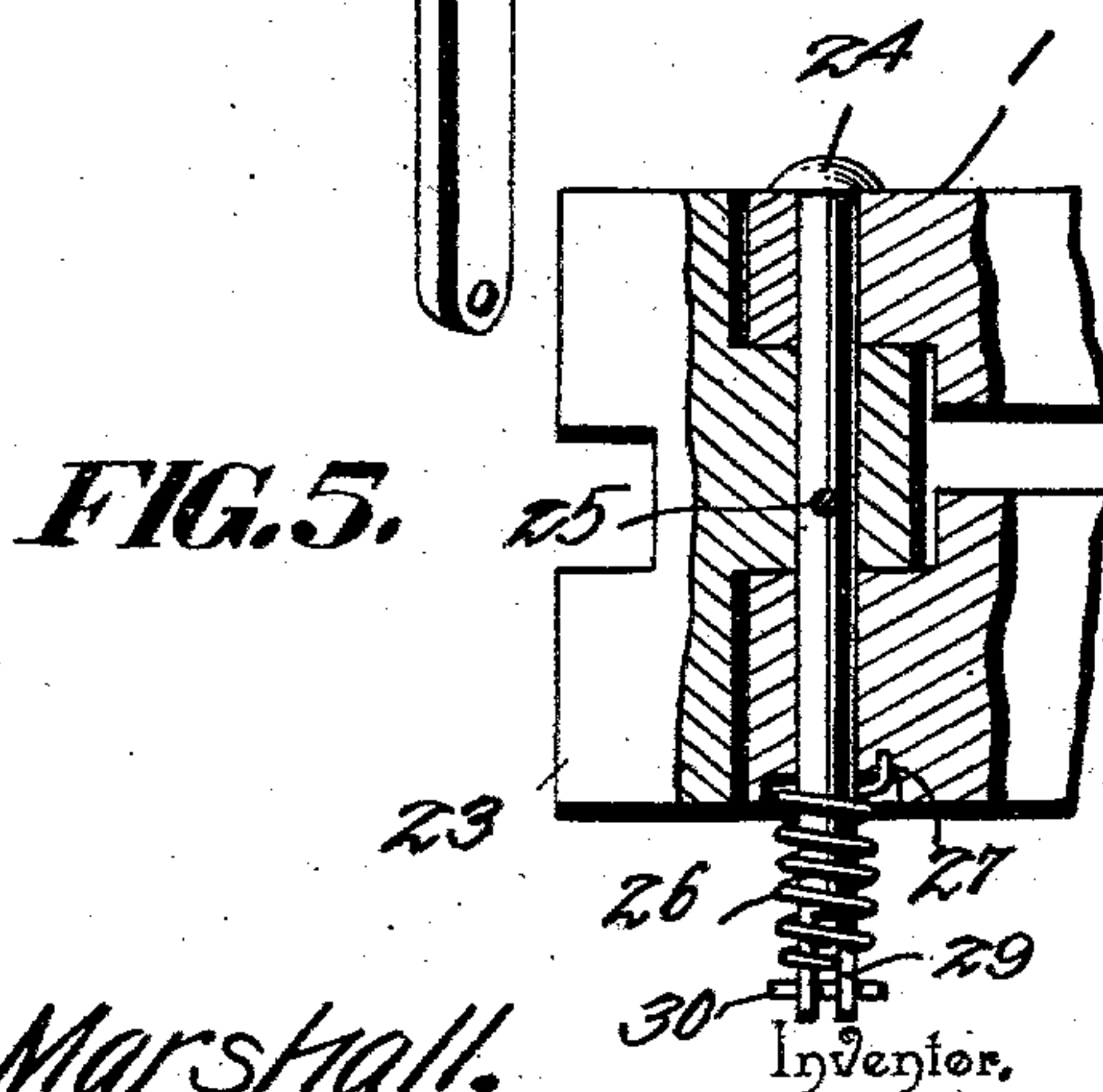
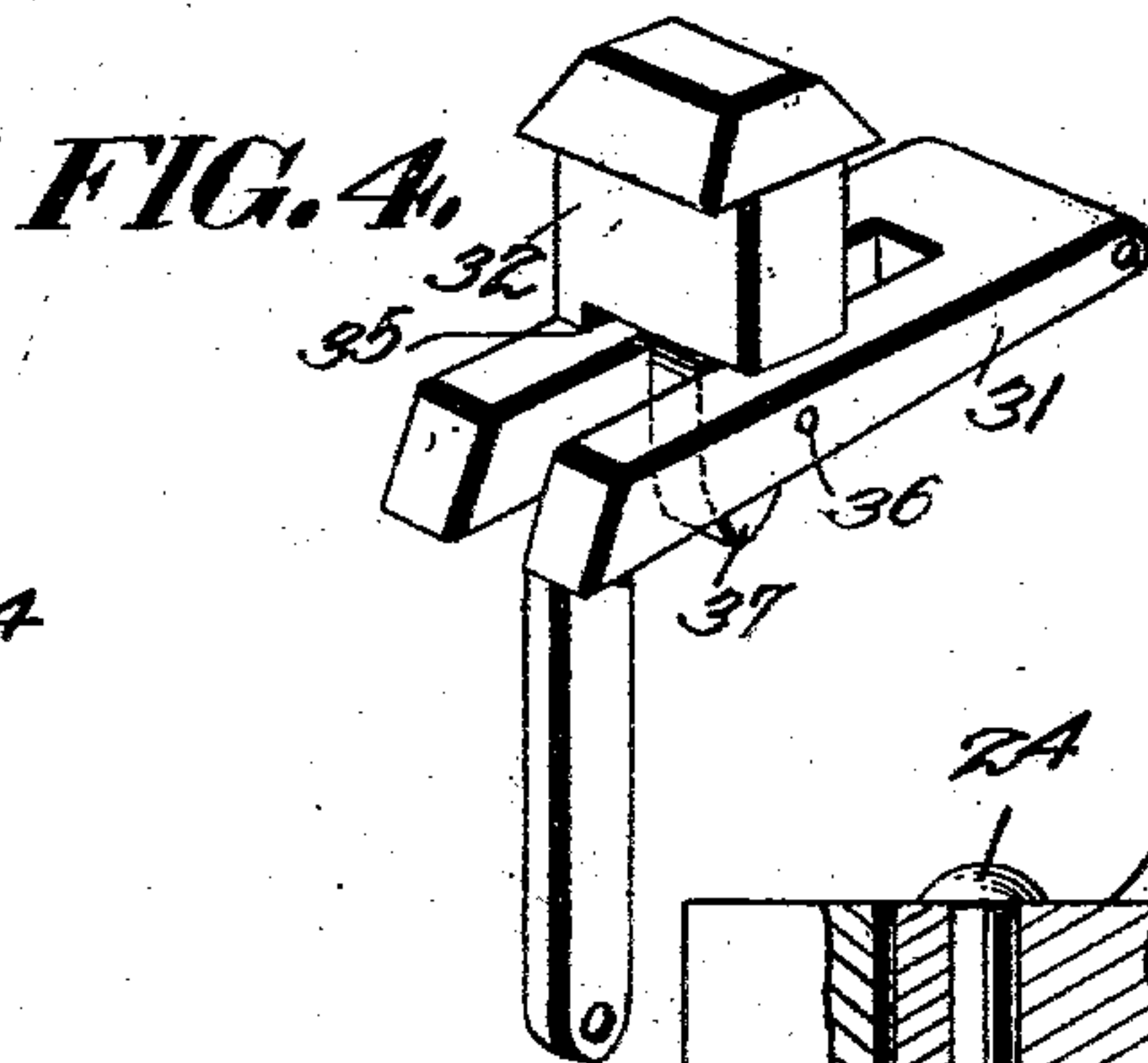
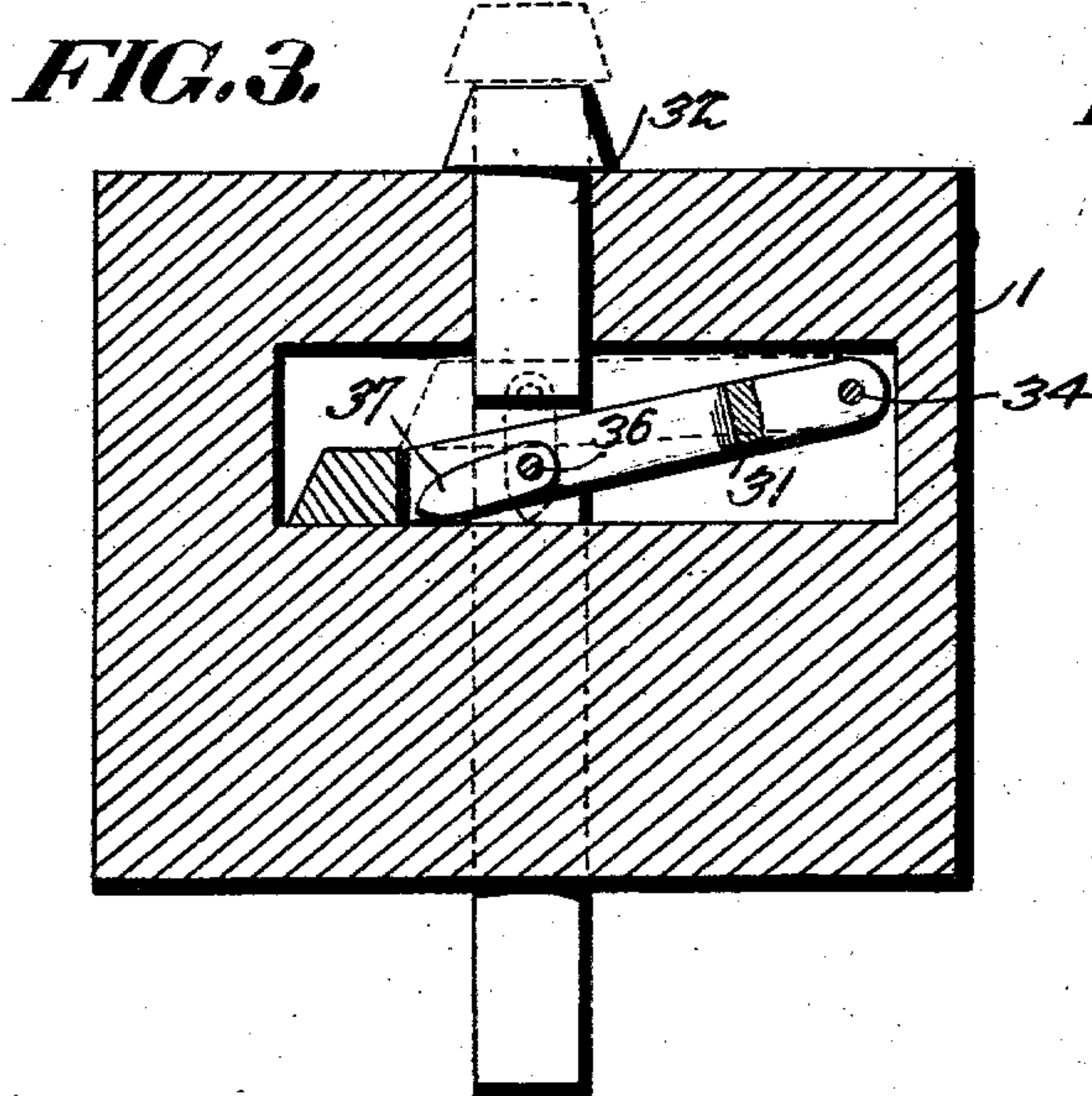
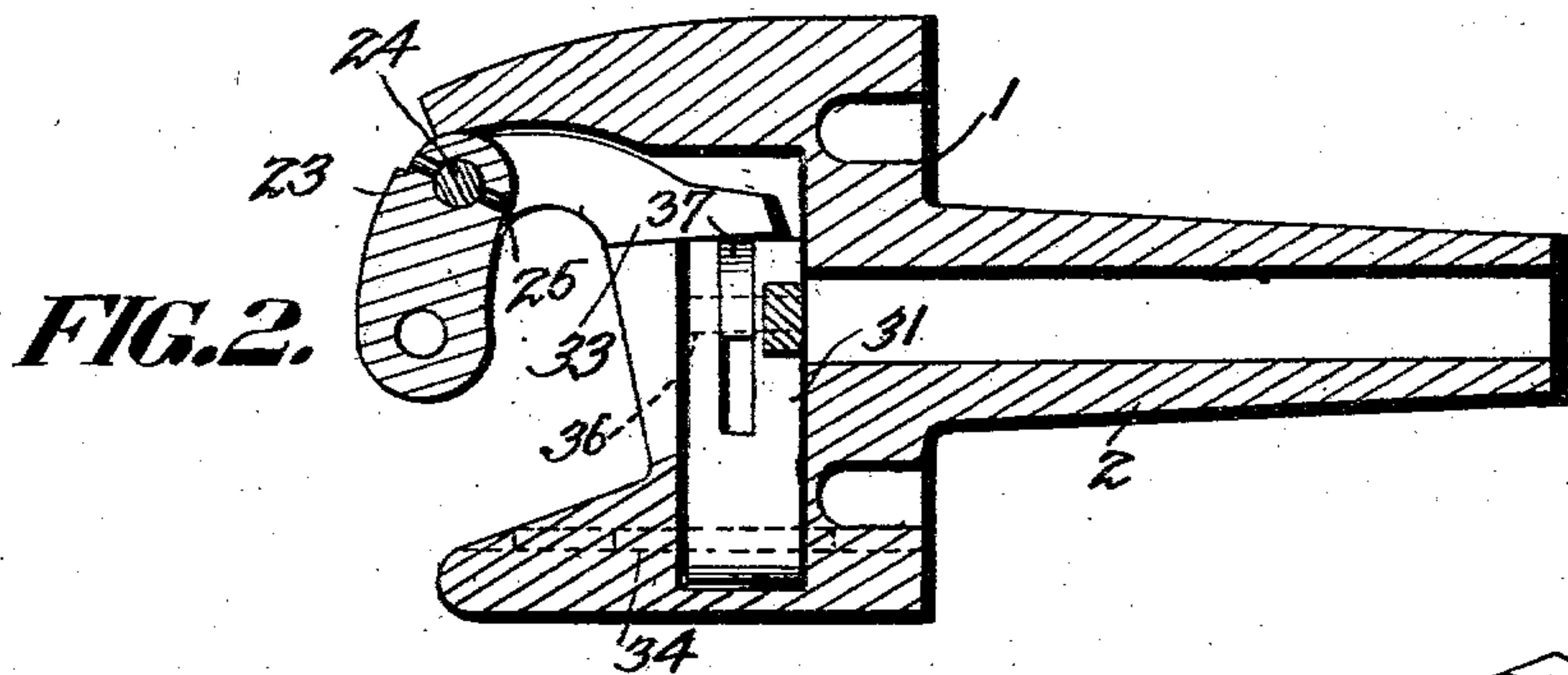
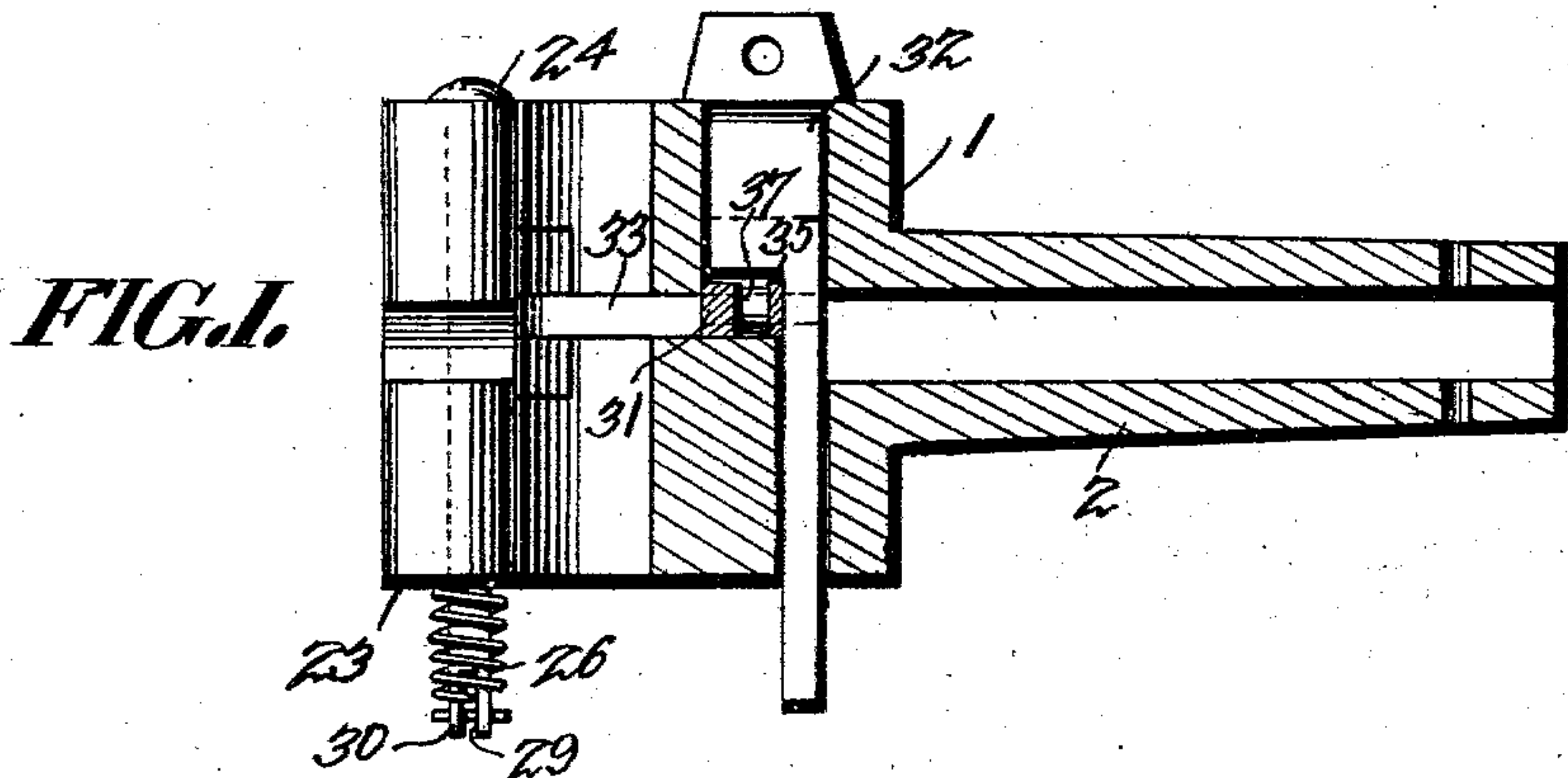


H. H. MARSHALL.

CAR COUPLING.

(Application filed Feb. 26, 1902.)

(No Model.)



Witnesses
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UNITED STATES PATENT OFFICE.

HENRY H. MARSHALL, OF LINCOLN, NEBRASKA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 704,888, dated July 15, 1902.

Application filed February 26, 1902. Serial No. 95,783. (No model.)

To all whom it may concern:

Be it known that I, HENRY H. MARSHALL, a citizen of the United States, residing at Lincoln, in the county of Lancaster and State of Nebraska, have invented a new and useful Car-Coupling, of which the following is a specification.

The invention relates to improvements in car-couplings.

10 The object of the present invention is to improve the construction of car-couplings and to provide a simple and comparatively inexpensive one capable of coupling automatically and adapted to be readily set for auto-
15 matic uncoupling.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed
20 out in the claims hereto appended.

In the drawings, Figure 1 is a longitudinal sectional view of a car-coupling constructed in accordance with this invention and illustrating the arrangement of the vertically-movable pin and the locking-block when the
25 knuckle is closed. Fig. 2 is a horizontal sectional view, the knuckle being closed. Fig. 3 is a transverse sectional view, the locking-block being shown in its engaging position in full lines and elevated in dotted lines. Fig.
30 4 is a detail perspective view of the locking-block, the vertically-movable pin, and the supporting device. Fig. 5 is a vertical sectional view of the knuckle, illustrating the construction of the knuckle-pin and the arrangement of the spring for opening the
35 knuckle.

Like numerals of reference designate corresponding parts in all the figures of the drawings.
40

1 designates a draw-head provided with a shank or draw-bar 2 and having a pivoted knuckle 23, and a knuckle-pin 24 is held against vertical movement by means of a
45 transverse fastening device 25, passing through the eye of the knuckle and through the knuckle-pin. The lower end of the knuckle-pin is extended to receive a coiled spring 26, having its upper end seated in a
50 socket 27 of the knuckle-pin-receiving eye at the bottom of the draw-head. The draw-head is provided in the upper wall of the socket

27 with a recess for the reception of the upper end of the spring 26, which has its lower end arranged in a slot or bifurcation 29 of the lower end of the knuckle-pin. The lower
55 end of the spring is retained in the slot or bifurcation of the knuckle-pin by means of a key 30, arranged beneath the spring and passing through a suitable perforation of the
60 knuckle-pin. By connecting the spring with the draw-head and with the knuckle-pin, which is fixed to the knuckle, the latter is opened automatically when it is free to move.

The arm of the knuckle is engaged by a
65 pivoted block 31, extending transversely of the draw-head in a suitable opening or cavity thereof and connected with a vertically-movable pin 32, arranged in a suitable slot or opening of the draw-head. The block 31,
70 which is arranged at an inclination when it is in engagement with the arm 33 of the knuckle, is pivoted at its upper or outer end by a horizontal pin 34, and it is provided at its inner or rear edge with a recess 35, receiving the vertically-movable pin 32. The pin
75 32 is perforated for the reception of a pivot 36, which also passes through the block 31, and the latter is perforated near its engaging end to receive a swinging supporting device 37,
80 which is pivoted to the block by the said pivot 36. When the vertically-movable pin is raised, the block is lifted to the position illustrated in dotted lines in Fig. 3 of the accompanying
85 drawings, and the swinging supporting device assumes a vertical position directly beneath the pivot 36, and thereby supports the block in the said elevated position. The
90 knuckle is then free to open, and the arm 33 thereof in moving outward will strike the pivoted supporting device 37 and will swing the same toward the pivoted end of the block, whereby it is adapted to pass the supporting
95 device. When the locking-block is in its inclined position, it presents an inclined lower face to the arm of the knuckle, which is adapted to engage the same when the knuckle closes, whereby the said arm 33 is adapted to lift the block. After the arm of the knuckle
100 passes the block in the closing movement of the knuckle the said block will drop into engagement with the arm and lock the knuckle in its closed position. The pivoted block may be elevated when the knuckle is open, and the

arm 33 will then swing the supporting device to the position illustrated in full lines in Fig. 3 of the drawings when the knuckle closes.

It will be seen that the car-coupling is exceedingly simple and inexpensive in construction, that it is capable of coupling automatically when two cars come together, and that the parts may be readily set for uncoupling to permit the knuckle to open freely.

10 What I claim is—

1. The combination of a draw-head, a pivoted knuckle, a vertically-movable pin, a transversely-disposed block pivotally connected with the pin and arranged to swing
15 upward and downward and adapted to engage the arm of the knuckle, and a pivoted supporting device arranged to swing transversely of the draw-head and adapted to hold the block in an elevated position and arranged
20 to be engaged by the arm of the knuckle, substantially as described.

2. The combination of a draw-head, a pivoted knuckle, a vertically-movable pin, a transversely-disposed block arranged to swing
25 upward and downward and adapted to engage the arm of the knuckle and provided with a slot, a supporting device adapted to hold the block in an elevated position and arranged to be engaged by the arm of the knuckle, and

a pin pivoting the support in the slot of the block and connecting the latter to the vertically-movable pin, substantially as described. 30

3. The combination of a draw-head having a pivoted knuckle, a transverse block pivotally connected at one end with the draw-head
35 and arranged to swing upward and downward and adapted to engage the arm of the knuckle, a support pivoted to the block and adapted to hold the latter in an elevated position and arranged to swing transversely of the draw-
40 head and capable of swinging in either direction from a vertical position, and means for lifting the block, substantially as described.

4. The combination of a draw-head having a pivoted knuckle, a transversely-disposed
45 locking-block engaging the knuckle and arranged to swing upward and downward, a vertically-movable pin connected with the block, and a supporting device pivoted to the block for holding the same in an elevated position,
50 substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

HENRY H. MARSHALL.

Witnesses:

H. E. WOOD,
H. W. NOBLE.