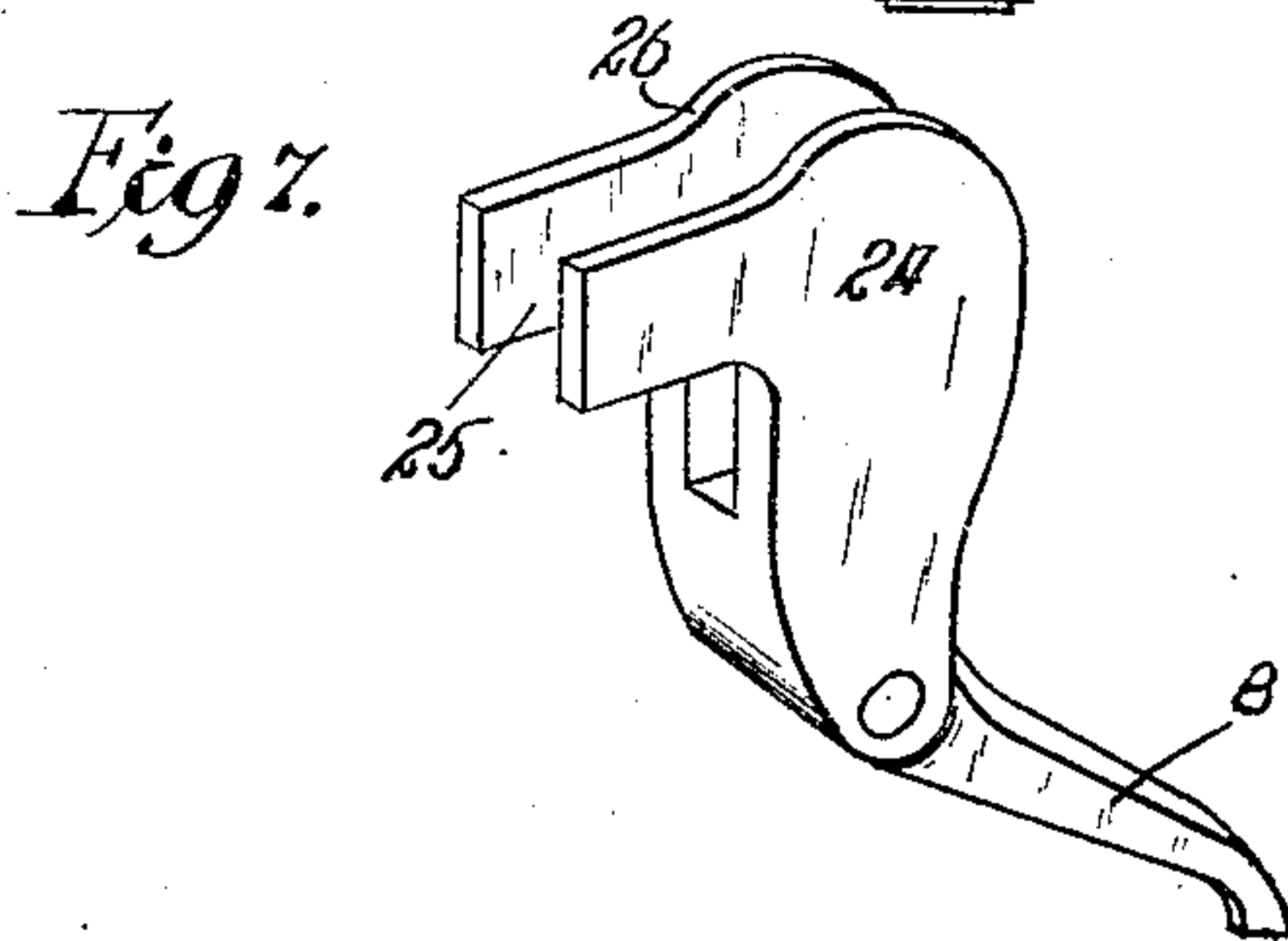
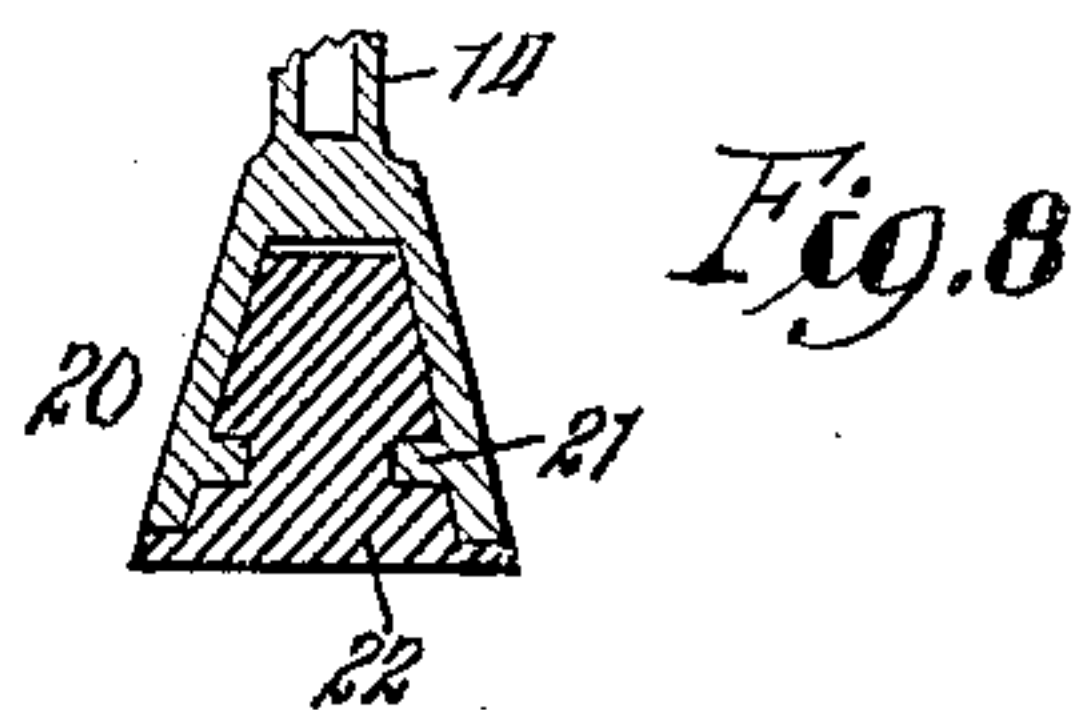
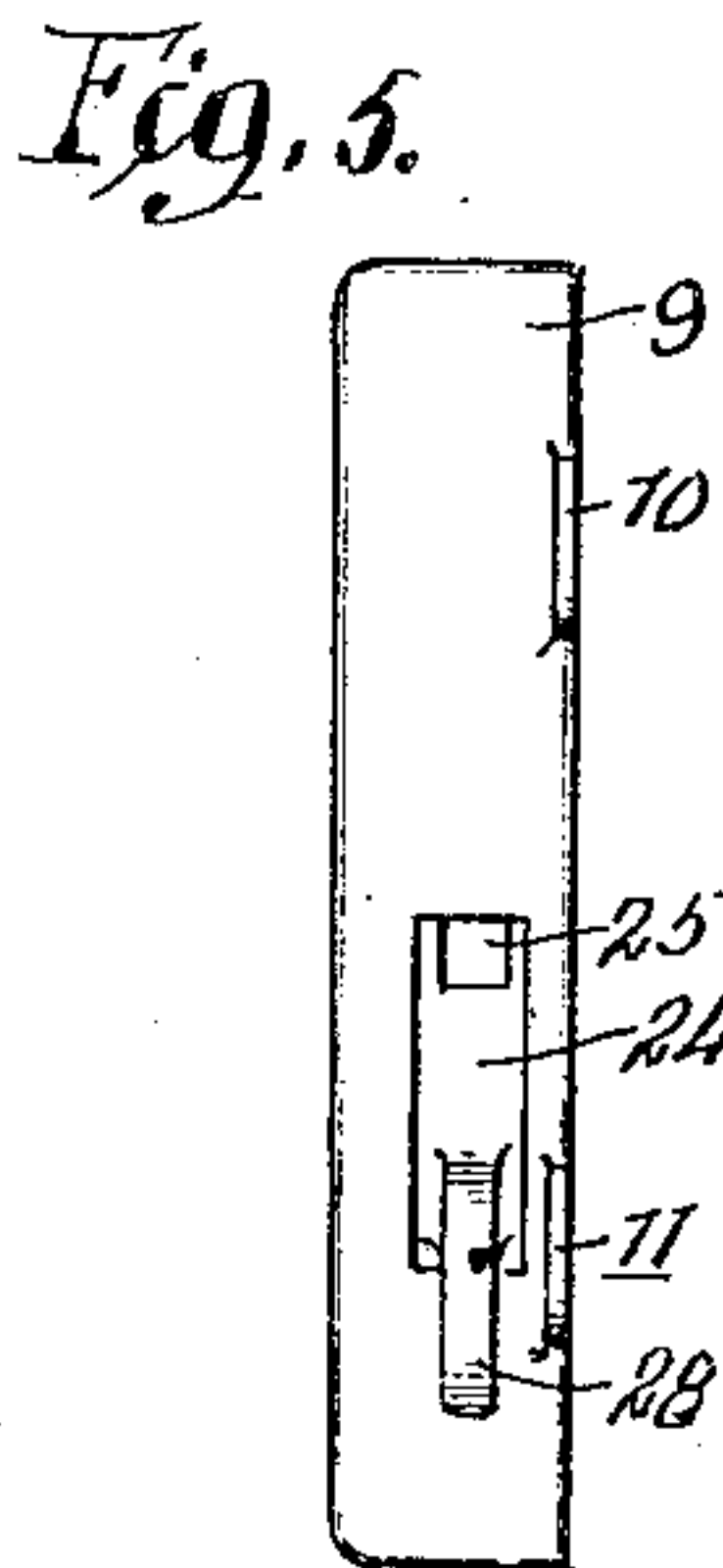
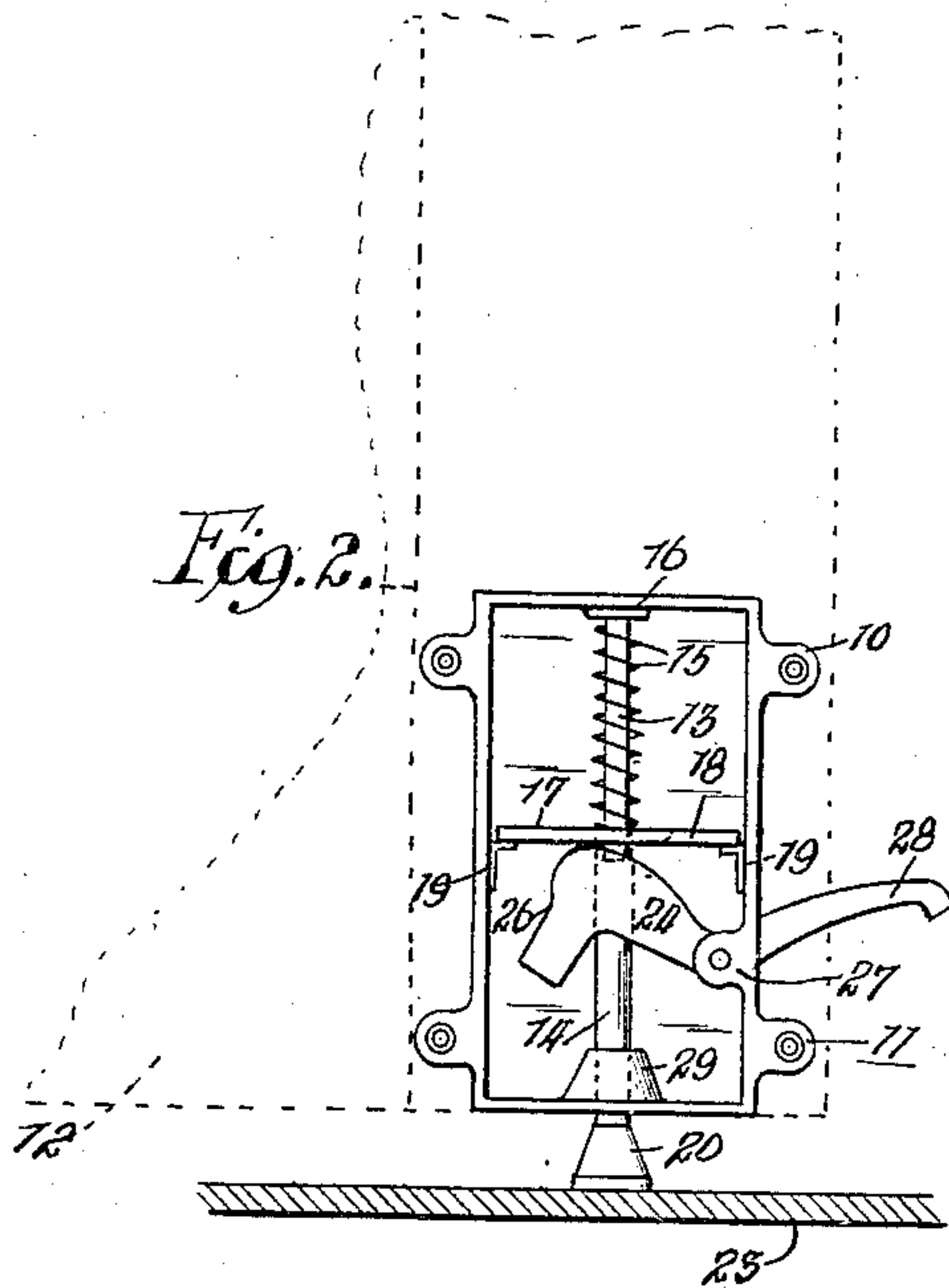


DOOR STOP.

908,252.

Patented Dec. 29, 1908.



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UNITED STATES PATENT OFFICE.

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DOOR-STOP.

No. 908,252.

Specification of Letters Patent.

Patented Dec. 29, 1908.

Application filed June 4, 1908. Serial No. 436,626.

To all whom it may concern:

Be it known that I, WILLIAM B. HALL, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Door-Stops, of which the following is a specification.

The present invention relates to an improved door stop, and has for its object to provide a comparatively simple, effective and economical construction, whereby the checking or stopping means may be quickly engaged or released, the plunger mechanism instantly descending and having its projected plunger shoe contact and engage the floor.

The invention consists in the features of construction and combination of parts hereinafter described and claimed.

In the drawings, Figure 1 is an inner side elevation of the improved door stop in its raised position; Fig. 2 a similar view to Fig. 1, the door stop being in its lowered or released position; Fig. 3 a vertical sectional view, taken on line 3—3 of Fig. 1, looking in the direction of the arrow; Fig. 4 a similar view to Fig. 3, taken on line 3—3 of Fig. 1, looking in the opposite direction; Fig. 5 a side view of the casing, showing, in part, the trigger mechanism; Fig. 6 a transverse section, taken on line 6—6 of Fig. 1, looking in the direction of the arrow; Fig. 7 a perspective view of the trigger; and Fig. 8 a detail of the plunger shoe.

The mechanism of this improved door stop is housed, preferably within a rectangular casing 9 having a pair of upper and lower brackets 10 and 11, respectively, as shown, thus enabling the same to be secured along the lower edge of the door 12. The plunger mechanism, within this casing, comprises an upper guide tube 13, and a lower movable plunger rod 14 which is somewhat larger in diameter than the upper guide tube 13 and serves to maintain the plunger section in proper operative position. The helically coiled spring 15 is positioned about the upper guide tube 13, as shown, its upper end engaging a boss 16, and its lower end abutting against a movable shelf 17 which extends laterally across the interior of the casing. This laterally disposed shelf 17 has its sides 18 partly recessed, as shown in Fig. 6, and the upper end of the movable plunger rod 14 is firmly secured within the laterally disposed

shelf, so that, when the plunger rod 14 is actuated, the shelf moves therewith.

A pair of inwardly projecting stops 19 are secured to the side walls of the casing structure for limiting the downward movement of the movable shelf 17, which in turn regulates the descent of the plunger mechanism. A plunger shoe 20, is secured to the outer end of the lower plunger rod 14, as illustrated in Fig. 8, having an inner annular shoulder 21 which serves to firmly retain the rubber or other suitable material 22 in proper position, the upper and lower portions of the rubber acting in opposition to each other when the plunger is brought into sudden contact with the floor 23.

A trigger 24 has its upper end 25 slotted so as to not interfere with the piston mechanism, and its upper head is slightly notched, as at 26, for engaging the recessed sides 18 of the movable shelf 17, as shown in Fig. 1. The trigger is pivotally mounted between lugs 27 secured to the inner side walls of the casing, the outer end of the trigger terminating in a diagonally disposed handle 28.

In use, when the trigger is in engagement with the movable shelf, as in Fig. 1, the plunger mechanism is in its raised position, the shoe of the plunger lodging within the recessed retainer 29. When the trigger is released, the spring tension upon the upper side of the movable shelf will cause the trigger and plunger mechanism to descend to the position assumed in Fig. 2, the door stop positively contacting the floor 23. The handle 28 of the trigger projects sufficiently beyond the edge of the casing to permit the device to be operated by foot.

The device is exceedingly simple to operate, only the handle of the trigger projecting outside the casing; and, as all of the mechanism can be conveniently housed within a comparatively small structure, it will not be in the way when secured to the lower edge of the door.

What I claim as new and desire to secure by Letters Patent is:

1. In a door stop, a movable plunger rod, a guide for the movable plunger rod, a movable shelf secured to the plunger rod, and trigger mechanism engaging the movable shelf, substantially as described.

2. In a door stop, a movable plunger rod, a guide for the plunger rod, a movable shelf secured to the plunger rod, a spring secured

about the guide and contacting the movable shelf, and trigger mechanism adapted to engage the movable shelf and retain the plunger rod in raised position, substantially as described.

3. In a door stop, an upper guide tube, a lower movable plunger rod traveling upon the guide tube, a notched movable shelf secured to the upper end of the movable plunger rod, a spring encircling the upper guide tube and contacting the upper surface of the movable shelf, and trigger mechanism for regulating the ascent and descent of the movable plunger mechanism, substantially as described.

4. In a door stop, a movable plunger rod, a guide tube about which the movable rod travels, a notched movable shelf secured to

the plunger rod, and a trigger having its head notched and engaging the notched movable shelf when in raised position, substantially as described.

5. In combination, a movable plunger rod, a guide tube about which the plunger rod travels, a movable shelf secured to the plunger rod, trigger mechanism for retaining and releasing the movable plunger rod, and a casing provided with inwardly disposed stops for regulating the downward movement of the movable plunger rod, substantially as described.

WILLIAM B. HALL.

Witnesses:

FRED. H. SASSER,
ARTHUR H. DOUGLAS.