

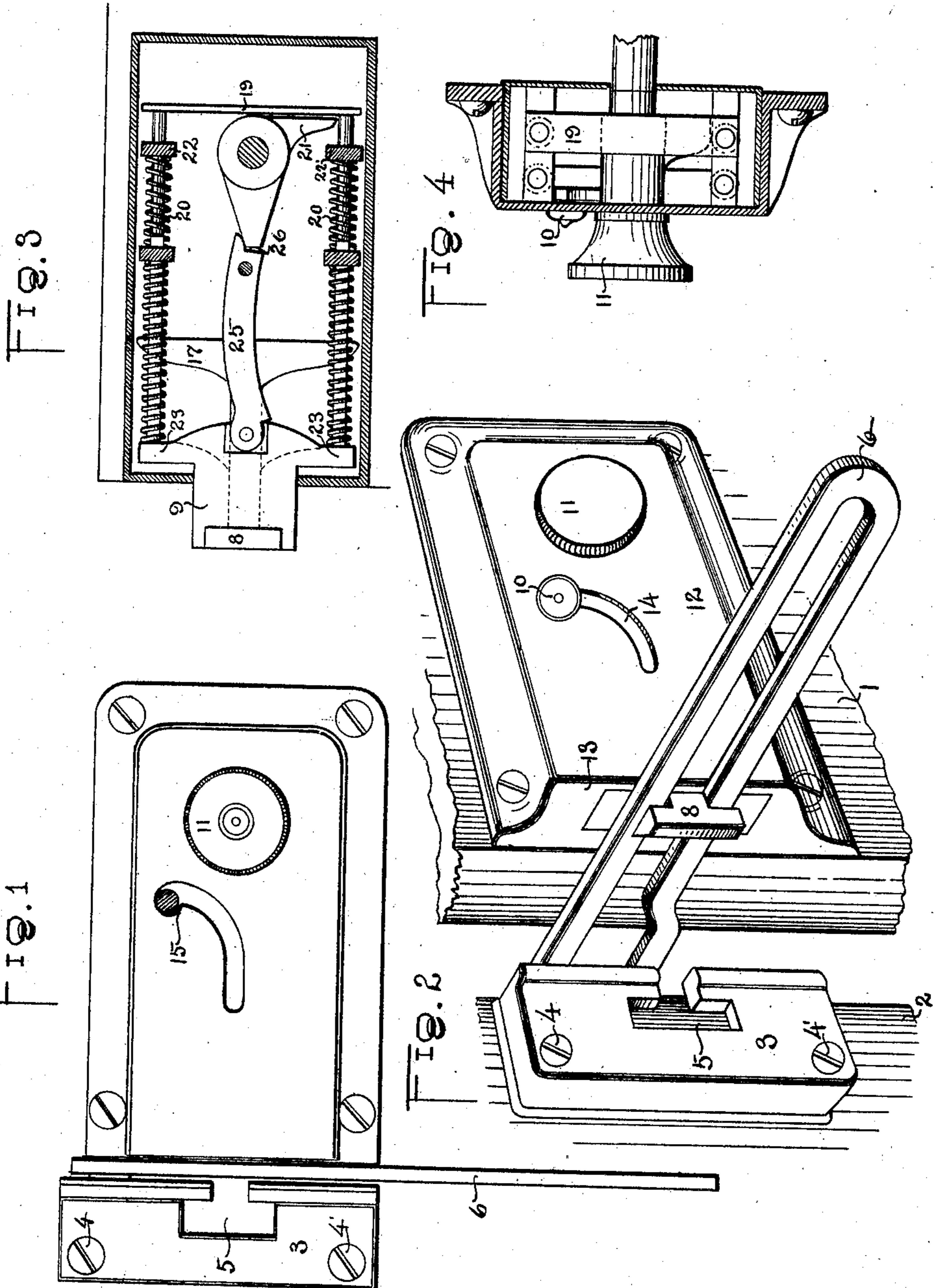
C. R. ERKENS.
DOOR LOCK.

APPLICATION FILED NOV. 30, 1909.

963,427.

Patented July 5, 1910.

2 SHEETS—SHEET 1.



Witnesses
Gilbert F. Greene
M. Newcomb.

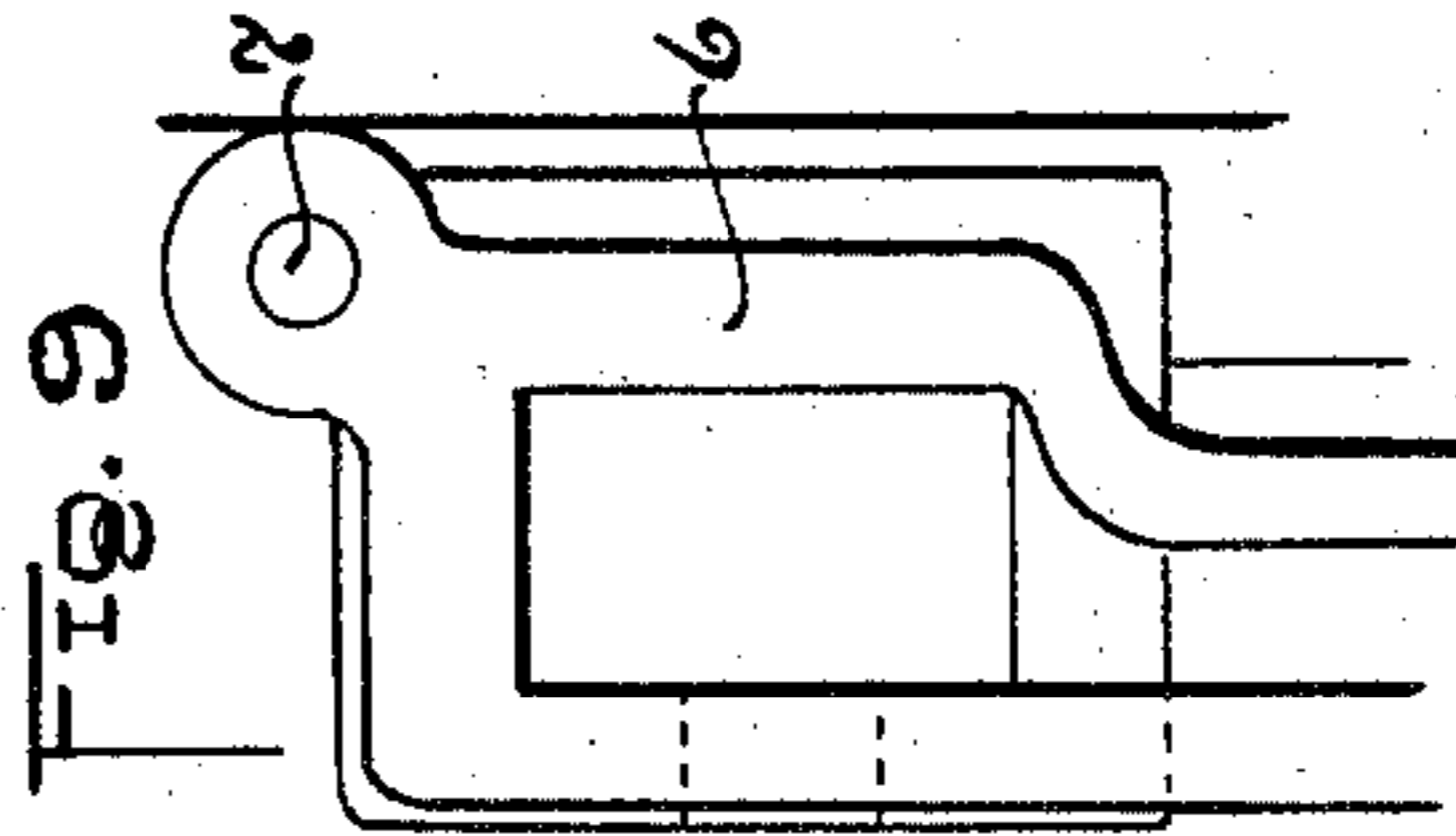
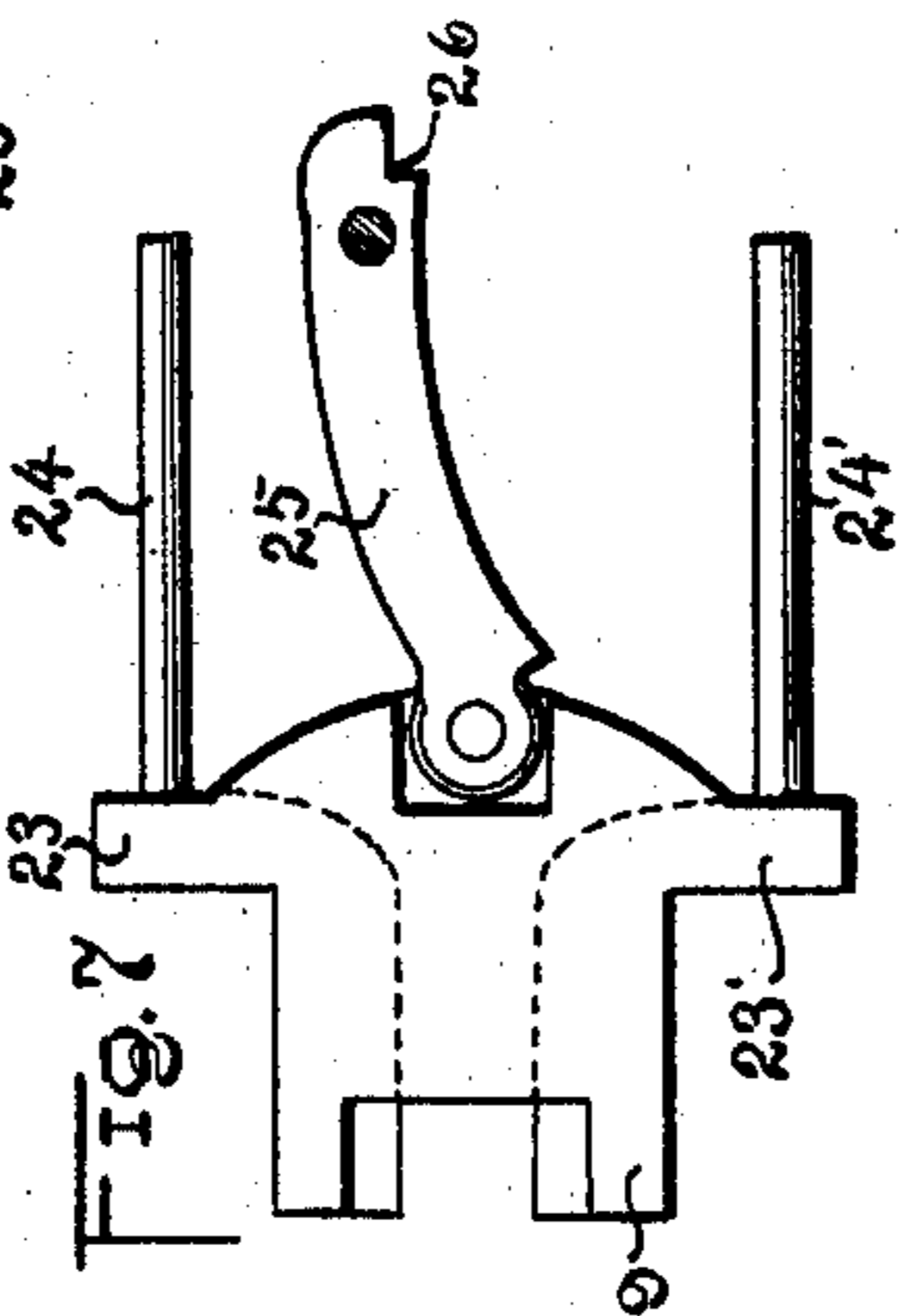
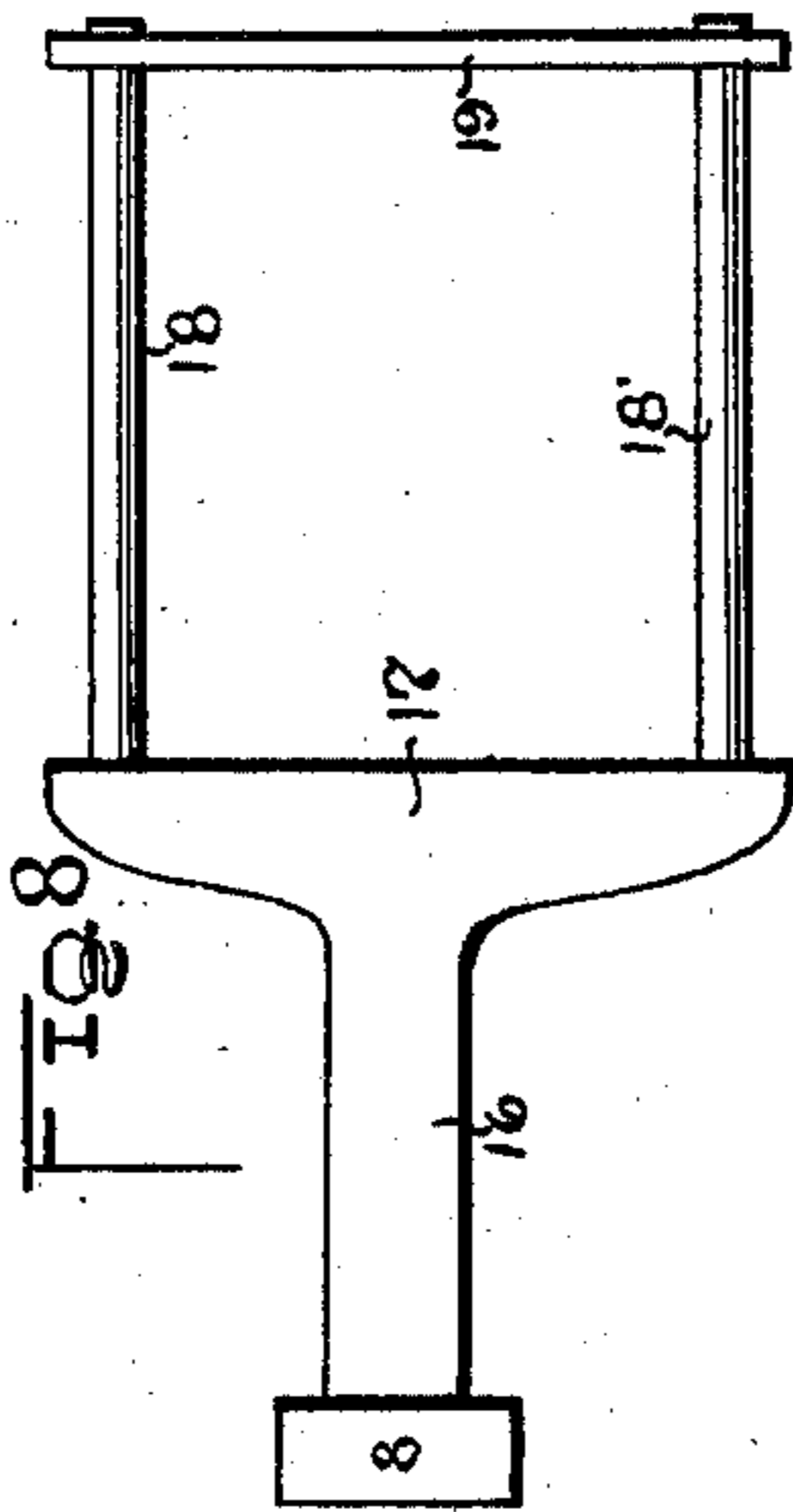
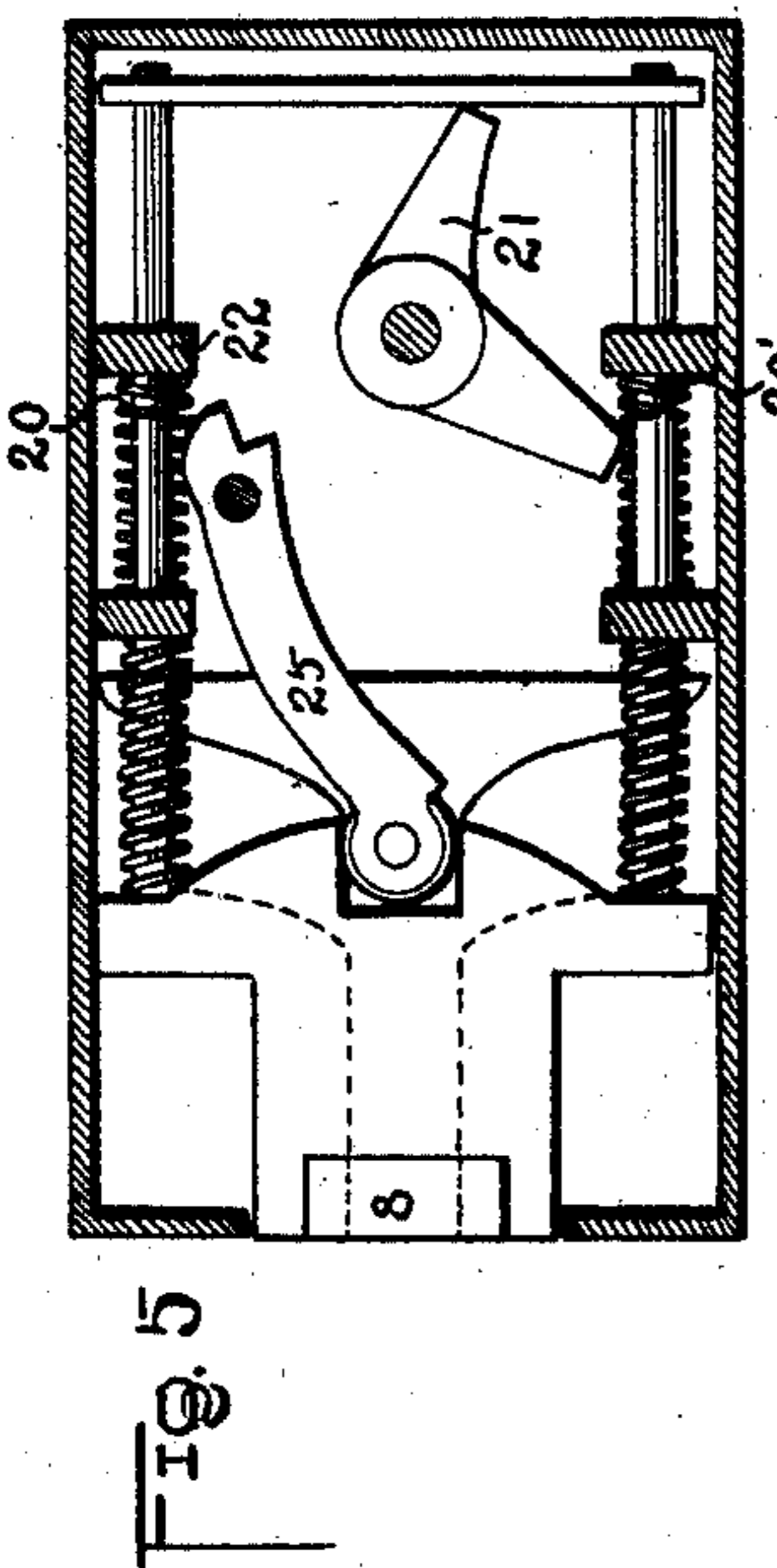
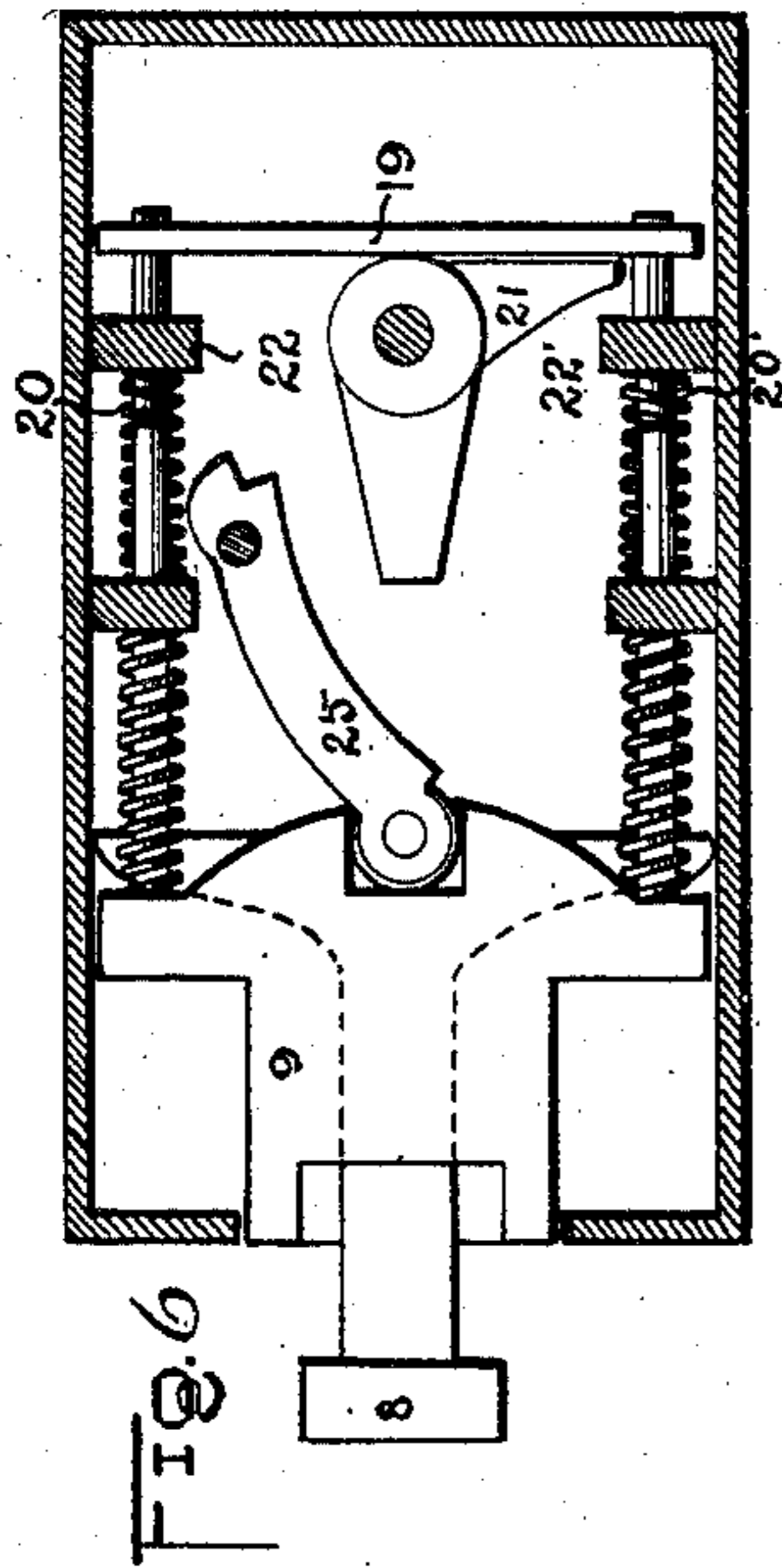
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2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

CHARLES R. ERKENS, OF NEW YORK, N. Y.

DOOR-LOCK.

963,427.

Specification of Letters Patent.

Patented July 5, 1910.

Application filed November 30, 1909. Serial No. 530,576.

To all whom it may concern:

Be it known that I, CHARLES R. ERKENS, a citizen of the United States, residing at New York city, in the county of New York and State of New York, have invented certain new and useful Improvements in Door-Locks; 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 appertains to make and use the same.

My invention relates to new and useful improvements in door locks and especially to the class adapted to permit the door being partly opened for ventilating purposes, yet not sufficiently to allow entrance from the outside.

An object of my invention is to provide a lock having a pair of locking bolts, one working within the other and a further object is to provide a device to cooperate with one of said locking bolts, in order that the door may be partly opened yet secured against entrance from the outside.

These and other objects will be more particularly referred to in the accompanying specification and claims.

In the drawings forming a part of this application, Figure 1 is a front elevation of my improved lock in its assembled position. Fig. 2 is a perspective view showing how the lock would appear in cooperation with a door, said door being partly open. Fig. 3 is a longitudinal sectional view showing both of the locking bolts extending outwardly for the purpose of locking the door. Fig. 4 is a transverse sectional view of the lock. Fig. 5 is a longitudinal sectional view showing both of the locking bolts withdrawn, in order that the door may be opened. Fig. 6 is a longitudinal sectional view showing the secondary bolt extended beyond the lock. Fig. 7 is a detail plan view of the main locking bolt. Fig. 8 is a detail plan view of the secondary locking bolt. Fig. 9 is a fragmentary detail view of the guard used in connection with my lock.

Referring to the drawings in which similar reference numerals designate corresponding parts throughout the several parts, 1 and 2 are the usual form of door and door-frame and upon the frame 2, is secured by any preferred means, a keeper 3, said keeper consisting of the usual base and top plates secured by means of screws 4 and 4' or the

like, while in the top plate of said keeper is fashioned a substantially T shaped opening 5, and a guard 6 is pivotally mounted on a bolt 7 within the keeper 3, said guard comprising a substantially rectangular strip of metal or the like, having a portion of its surface stamped out to form a channel, said channel being of the same width from a point adjacent the free end of said guard and extending for a part of the length thereof to a point adjacent the lower end of the keeper 3, where it is broadened out in order that a substantially T shaped locking bolt 8 may pass into the keeper 9 and be held in engagement by the guard when said bolt is moved laterally along the narrow portion of the channel.

The secondary locking bolt 8 is adapted to move longitudinally through the main locking bolt 9, each of the said bolts being so constructed as to allow the independent operation of each by means of knobs 10 and 11 respectively, extending beyond the face plate 12 of the housing 13, the knob 10 being adapted to move in an arcuate channel 14 cut in the face plate 12, the upper portion of said channel having a shoulder 15 in which the knob 10 is adapted to rest when it is desired to secure said knob in its normal closed position.

Referring to Fig. 8, it will be seen how the secondary locking bolt 8 is constructed. The stem 16 thereof is of T shaped outline and to the head 17 of the T, near its ends, are secured the outer ends of parallel rods 18, 18', having applied to their inner ends a plate 19.

By referring to Fig. 5, it will be seen how the secondary bolt 8 is held in a retracted position in order to overcome the pressure exerted by the springs 20 and 20' which encompass the rods 18 and 18'. Integral with the knob 11 is a dog 21 which is designed to rotate with said knob and bear against the plate 19 when it is desired to hold the secondary bolt 8 in a retracted position. A pair of oppositely disposed lugs 22 and 22' extend inwardly from the housing, while one end of the springs 20 and 20' respectively bear against said lugs and the rods 18 and 18' are adapted to move laterally through openings provided in said lugs. When it is desired to release the secondary bolt, the knob 11 is rotated out of its locked position, thus releasing the dog 21 from pressure against the plate 19 and thus the springs

20 and 20' having one end in engagement with the member 17 respectively will cause said secondary locking bolt 8 to slide beyond the housing and also out of the main locking bolt 9, all as disclosed in Fig. 6.

Referring to Fig. 7, it will be seen how the main locking bolt is constructed. Said main locking bolt has a channel extending longitudinally therethrough corresponding in outline to the shape of the secondary locking bolt 8, while adjacent the inner end is a pair of vertically extending lugs 23 and 23' to which are secured rods 24 and 24' respectively, while a dog 25 is let into and pivoted to said main bolt, said dog being also engaged at one end by the knob 10. A shoulder 26 is cut in the end of the dog 25 adjacent said knob and designed to cooperate with the dog 21 when both the main and secondary locking bolts are sprung outward to lock the door, thus preventing either of said locking bolts from being drawn within the lock without a suitable key.

By referring to Fig. 3, it will be appreciated how the dogs 21 and 25 cooperate to hold the locking bolt 9 projected and in what would otherwise be the corresponding position of the bolt 8, although retracted within the bolt 9. The end of the dog 25 opposite to the end which has a shoulder 26 is substantially circular, said circular portion finding a bearing surface on the inclosing walls of the cut out portion in which the dog is countersunk, so when the knob 10 is slid along the channel 14, the dog 25 will draw the locking bolt 9 inwardly and the pivoted end of said dog will rotate accordingly in order to facilitate the operation.

Of course, the mechanism shown and described so far, is for the lock as applied to the inside of the door, but for purposes of unlocking the door from the outside, means may be provided to cooperate with the herein described lock, whereby a key may be inserted from the outside and the door opened.

Should the door have been left open and the secondary locking bolt in engagement with the guard 6, it would be necessary first to close the door in order that the secondary locking bolt might register within the keeper 3, after which the key might be turned to withdraw said locking bolt from within the keeper, through the wide portion of the channel in said guard and thence into the housing 13.

Although the arrangement of parts, as herein shown, is the preferred form, yet I

wish it understood that I am not to be restricted by the same, should I care to make any changes without departing from the spirit of the invention.

What I claim is:—

1. A door lock, comprising a main locking bolt carrying a dog thereon, a secondary locking bolt adapted to move longitudinally through said main locking bolt, said secondary locking bolt having spring encompassed parallel rods projecting therefrom and connected at their ends, an additional dog adapted to have engagement with said other dog and cooperating with said secondary bolt, a keeper adapted to receive the end of said secondary bolt and a slotted guard adapted to receive the stem thereof and permit said stem to travel therein when said main bolt is not in use.

2. A door lock, comprising a main locking bolt, a substantially T shaped secondary locking bolt adapted to move longitudinally in said main locking bolt, a dog pivoted to said main locking bolt, means projecting through an arcuate channel in the locking case for moving said dog, an additional dog adapted to engage with the first referred to dog for holding said main bolt in projected position and means for actuating said additional dog, said secondary locking bolt having parallel rods projecting therefrom and means connecting the ends of said rods and adapted to be engaged by said additional dog for actuating said secondary bolt, springs applied to said rods for delivering pressure upon said secondary locking bolt, a keeper adapted to laterally receive the outer end of the secondary locking bolt, and a slotted guard adapted to receive the stem of said secondary locking bolt.

3. A door lock, comprising a main locking bolt, a secondary locking bolt sliding there-through, means to operate said main locking bolt, additional means to operate said secondary bolt independently of said main bolt and adapted to engage said first referred to means for holding said main bolt projected, a keeper adapted to receive the outer end of said secondary bolt and a slotted guard adapted to receive the stem thereof.

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

CHAS. R. ERKENS.

Witnesses:

WILLIAM LINDER,
ARTHUR E. WOOD.