

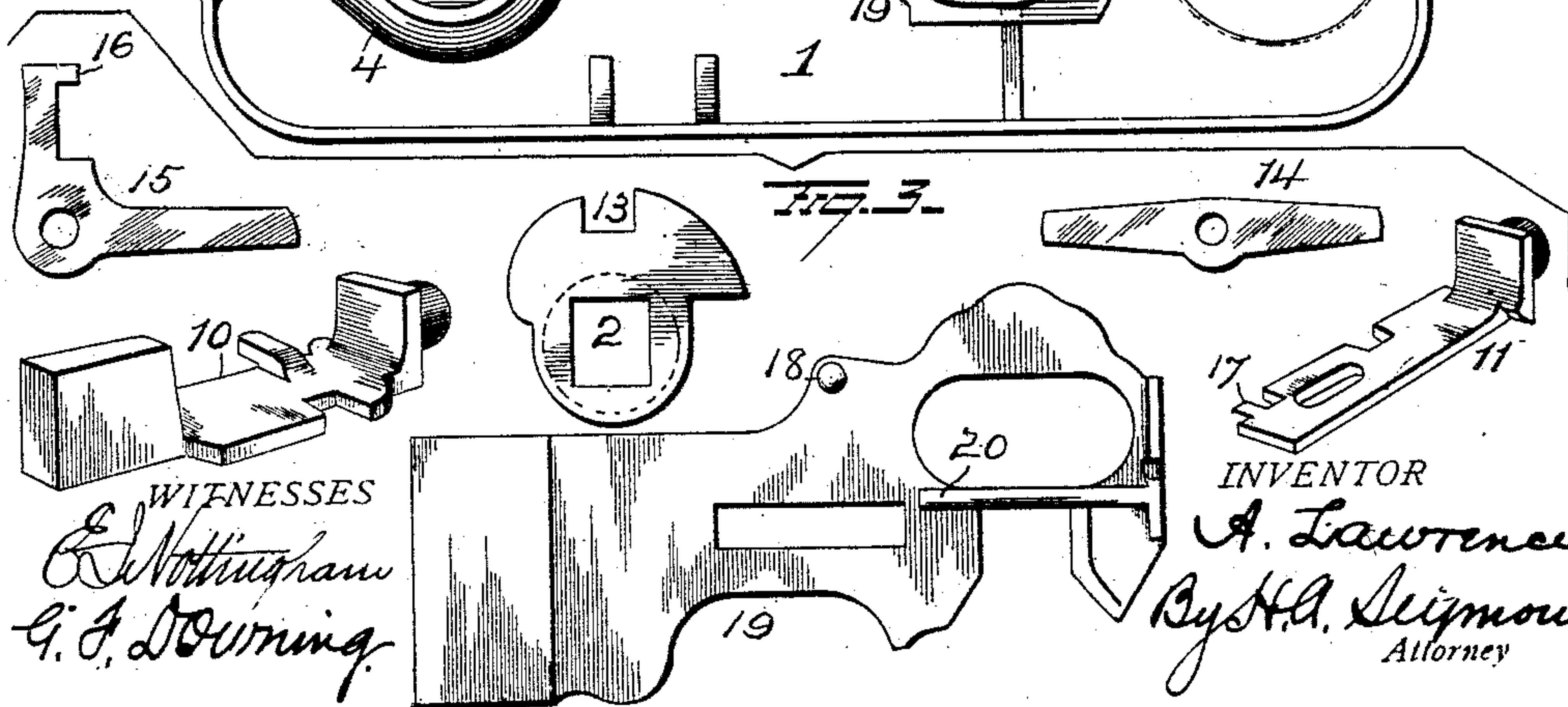
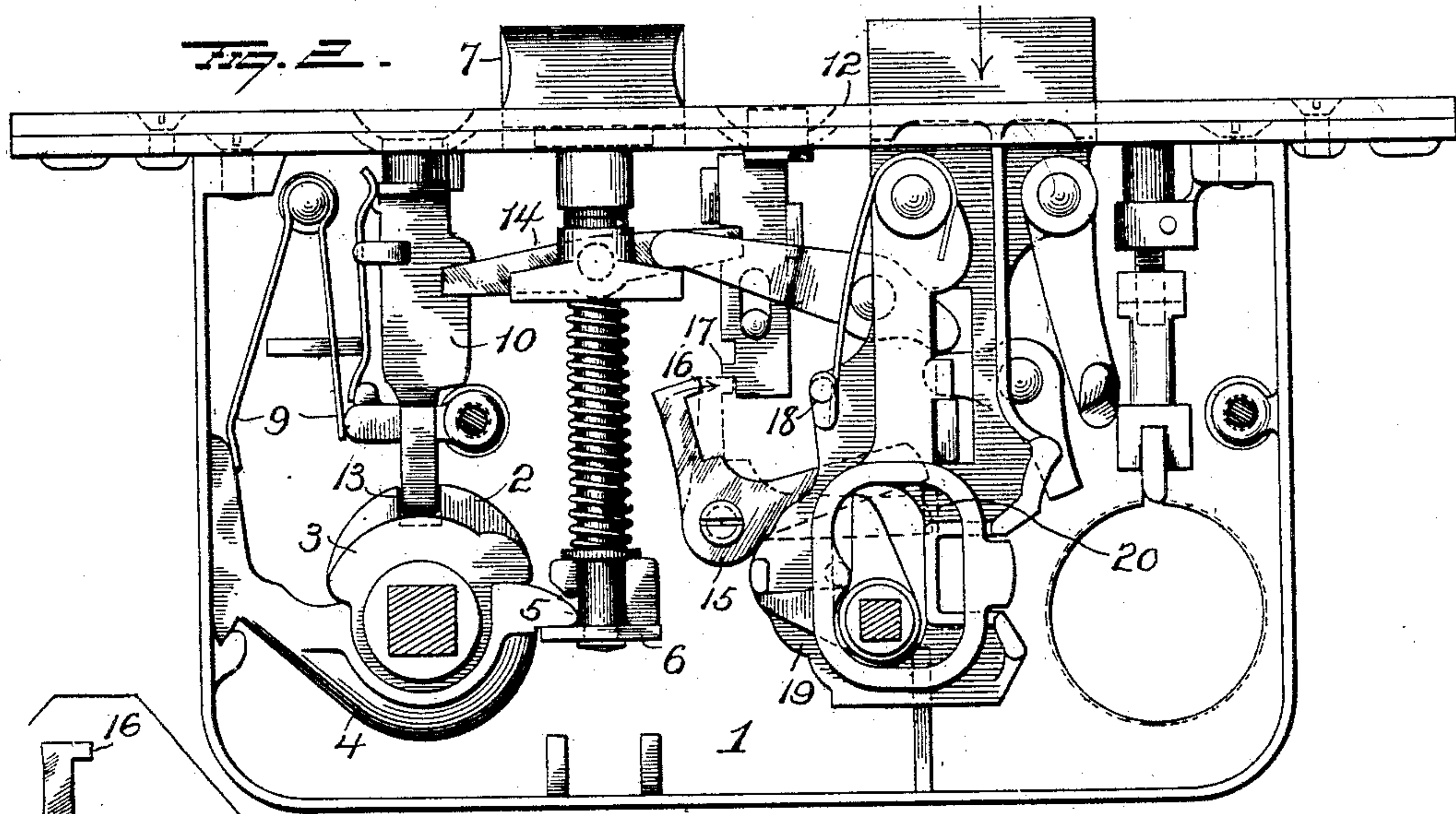
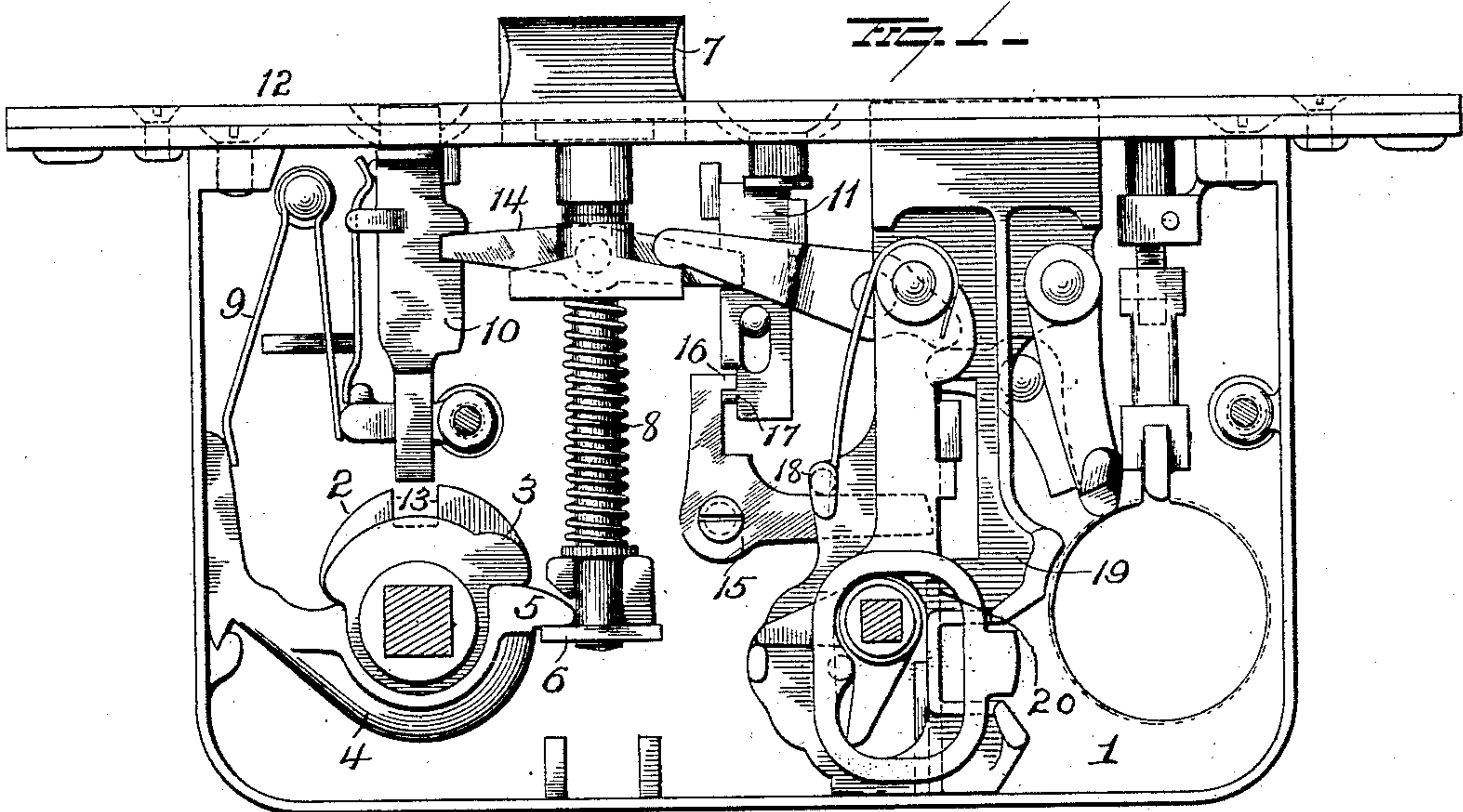
A. LAWRENCE.

LOCK.

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963,591.

Patented July 5, 1910.



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LOCK.

963,591.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, ALFRED LAWRENCE, of Stamford, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in 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 an improvement in locks, and particularly to that class of locks wherein stop work mechanism is employed for deadlocking the outer knob, the object of the invention being to provide means for deadlocking the stop work mechanism, whereby when the door is closed, the stop work cannot be manipulated by an instrument inserted between the door frame and the face plate of the lock.

With this object in view my invention consists in two connected sliding levers operable through the face plate of the lock, the inner end of one lever adapted to enter a slot in the roll back of the outer knob, and a deadlocking lever operated by the sliding movement of the dead bolt, adapted to engage said stop work mechanism and prevent any movement thereof when the dead bolt is retracted.

My invention further consists in the parts and combinations of parts as will be more fully described and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view in elevation of my improved lock, showing the stop work disengaged from the roll back of the outer knob. Fig. 2 is a similar view showing the stop work dogging the roll back for the outer knob, and Fig. 3 is a view of the stop work mechanism, roll backs, stop work dogging lever and bolt showing the means on the latter for actuating the dogging lever.

1 represents the lock case, 2 the roll back for outer knob and 3 the roll back for the inner knob.

The knob spindles of the two knobs have independent rotary motion, and each engages its respective roll back, hence a turning movement of either knob operates to turn its respective roll back. Both roll backs engage the actuating lever 4, the toe 5 of which rests in front of and in contact with the cross head 6 on the stem of latch

bolt 7. The latch bolt is normally held in its forward or projected position by the spring 8 and the lever 4 is held in its normal position by the spring 9.

10 and 11 are the stop work plungers suitably mounted within the casing, and in the present instance, on opposite sides of the latch bolt. The outer ends of these plungers project through the face plate 12 of the lock, so as to be actuated from the outside when the door is open. The rear end of plunger 10 when in its inner position, is adapted to enter slot 13 in the roll back of the outer knob, and as the plunger is supported against any lateral movement, it will be seen that when in such position, the outer knob will be deadlocked, thus preventing the latch bolt from being retracted by the outer knob. The plungers 10 and 11 are connected by the rocking lever 14, the ends of which rest in slots in the sides of the plungers. This lever 14 is centrally pivoted to the lock case, so that when one plunger is pushed in the other will be forced out. It has been found that stop work mechanism of this type, may be manipulated by a bent wire inserted in the space between the door frame and face plate of the lock, in a position to engage plunger 11, and by turning the wire push in plunger 11, thus forcing out plunger 10 and disconnecting it from the roll back, which of course leaves the door free to be opened by the outer knob. In order to prevent such manipulation of the lock I have provided the lever 15 pivoted to the lock case and having a lip 16 adapted to engage either the front or rear side of shoulder 17 on plunger 11 and lock the latter and also the plunger 10 against movement. This lever 15, in the present instance, is bell crank in shape, with one arm thereof resting behind and in the path of movement of the lug 18 on the dead bolt 19, so that when the dead bolt is in its unlocked or retracted position, the lug 18 on the dead bolt will be in contact with the arm of lever 15, and hold the lip of the latter in contact with the shoulder 17. If the stop work be in a position to dead lock the outer knob, the lip 16 on lever 15 will rest in rear of shoulder 17 on plunger 11 and thus prevent the latter from being forced in, whereas if the stop work plunger 10 be out so as to release the outer knob, the lip will engage the front of shoulder and thus prevent plunger 10 from

being forced in. When the dead bolt is moving to its locking or projected position the lug 18 thereon will be moved away from bell crank lever 15, while the end of rib 20 will engage said lever 15 and turn the latter to a position out of engagement with shoulder 17 on plunger 11, hence in order to manipulate the stop mechanism it is first necessary to open the door so as to render the ends of the plungers accessible. After the door has been opened the dead bolt should be thrown to its locking or projected position, which movement disengages the deadlocking bell crank lever from the plunger 11 thus leaving the plungers free to be moved. After the plungers have been adjusted so as to either deadlock or release the outer knob, as desired, the retraction of the dead bolt locks the parts against further adjustment, hence in order to readjust the stop work mechanism the dead bolt must be moved to its locking position when the door is open.

In the drawings I have shown a dead bolt constructed to be operated by a cylinder or pin tumbler lock, but this is not essential, as my invention contemplates the use of a sliding bolt of any kind for releasing the stop work deadlocking mechanism.

It is evident that many slight changes might be resorted to in the relative arrangement of parts shown and described without departing from the spirit and scope of my invention hence I would have it understood that I do not wish to confine myself to the exact construction of parts shown and described, but,

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

1. In a lock the combination with a latch bolt and knob mechanism for retracting same, of a slide for deadlocking the outer knob, a dead bolt and means controlled by the movement of the dead bolt for deadlocking the slide.

2. In a lock the combination with a latch bolt, and knob mechanism for retracting same, of a slide for deadlocking the outer knob, one end of said slide projecting through the face plate of the lock whereby the slide may be moved longitudinally, a dead bolt, and means controlled by the movement of the dead bolt for deadlocking the slide.

3. In a lock, the combination with a bolt and knob mechanism for retracting same, of a manually operable slide accessible through the outer face of the lock for dead locking the outer knob, a dead bolt and means controlled by the movement of the dead bolt for deadlocking the slide.

4. In a lock, a dead bolt, a latch bolt, in-

dependently operable inner and outer roll backs, means of connection between said roll backs and latch bolt, stop work mechanism for dogging one of said roll backs, and means controlled by the movements of the dead bolt for deadlocking said stop work mechanism.

5. In a lock and latch mechanism, a bolt, a roll back adapted to be operated by a knob and spindle, means of connection between said roll back and bolt, stop work plunger mechanism, accessible through the face plate of the lock for dogging the operation of said bolt by said roll back and key actuated means for preventing the operation of said dogging mechanism.

6. In a lock and latch mechanism, a bolt, a means for retracting said bolt, stop work plunger mechanism accessible through the face of the lock for dogging said retracting means, and key actuated means for locking said dogging device against movement.

7. In a lock the combination with a latch bolt and knob mechanism for retracting same, of a stop work mechanism for dogging the operation of said bolt by said knob mechanism, a key actuated bolt and dogging means for the stop work mechanism actuated by the movement of the key actuated bolt.

8. In a mortise lock the combination with a bolt, and knob mechanism for retracting same, of stop work mechanism operable through the face plate of the lock for dogging the outer knob, and means manually operable through the side of the lock for deadlocking the night latch mechanism.

9. In a mortise lock, the combination with a face plate a bolt, and knob mechanism for actuating same, of stop work mechanism operable through the face plate of the lock for dogging the outer knob, and key actuated means operable through the side of the lock for deadlocking said night latch mechanism.

10. In a mortise lock the combination with a latch bolt, knob mechanism for retracting same and a dead bolt, of stop work mechanism for dogging the outer knob, and means for dogging said stop work mechanism, the said stop work dogging means being always released from said stop work when the dead bolt is projected and always dogging same when the dead bolt is retracted.

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

ALFRED LAWRENCE.

Witnesses:

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