

H. BLANK.
SIGNAL LOCK.

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986,962.

Patented Mar. 14, 1911.

Fig. 1,

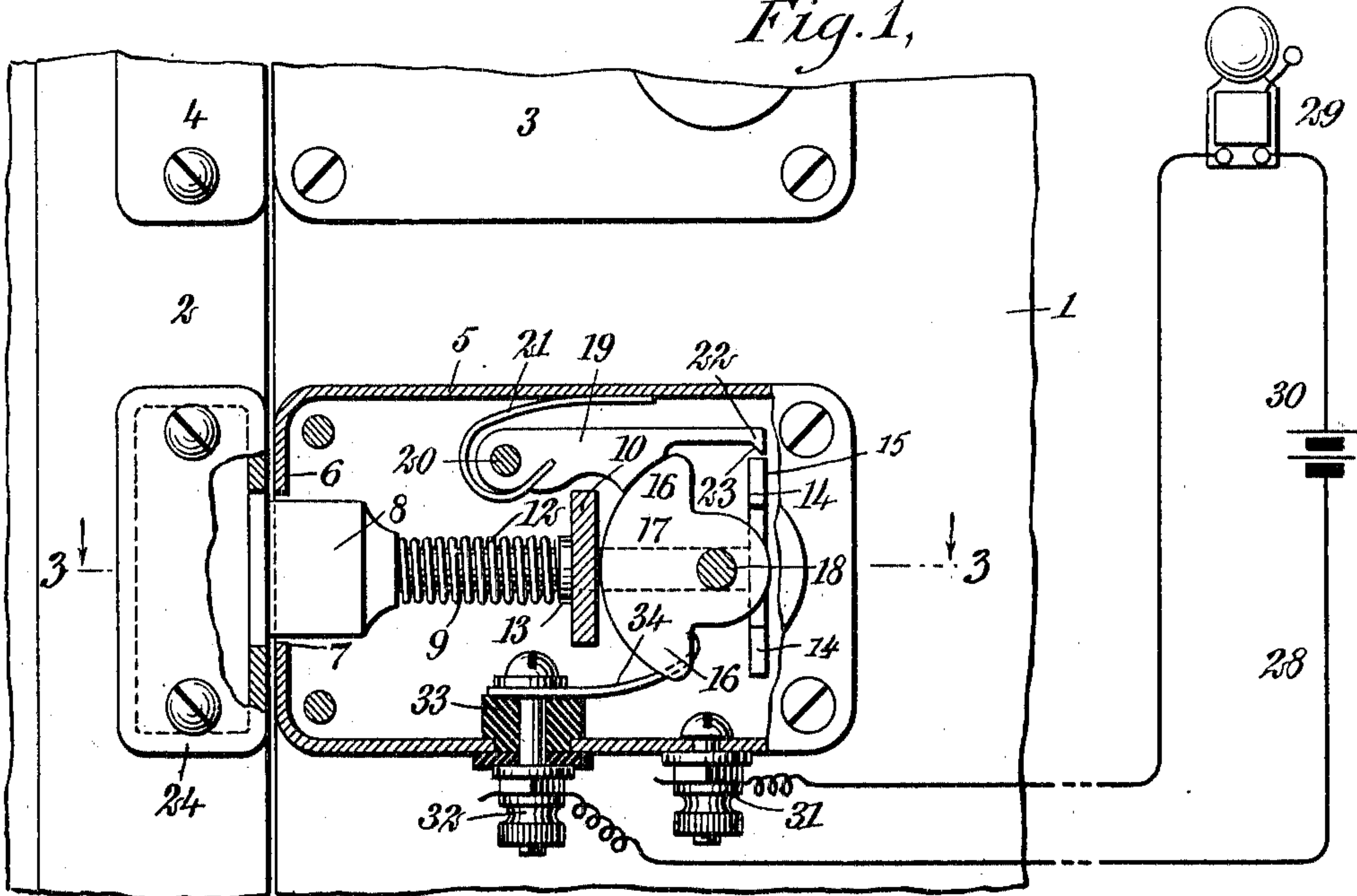


Fig. 2,

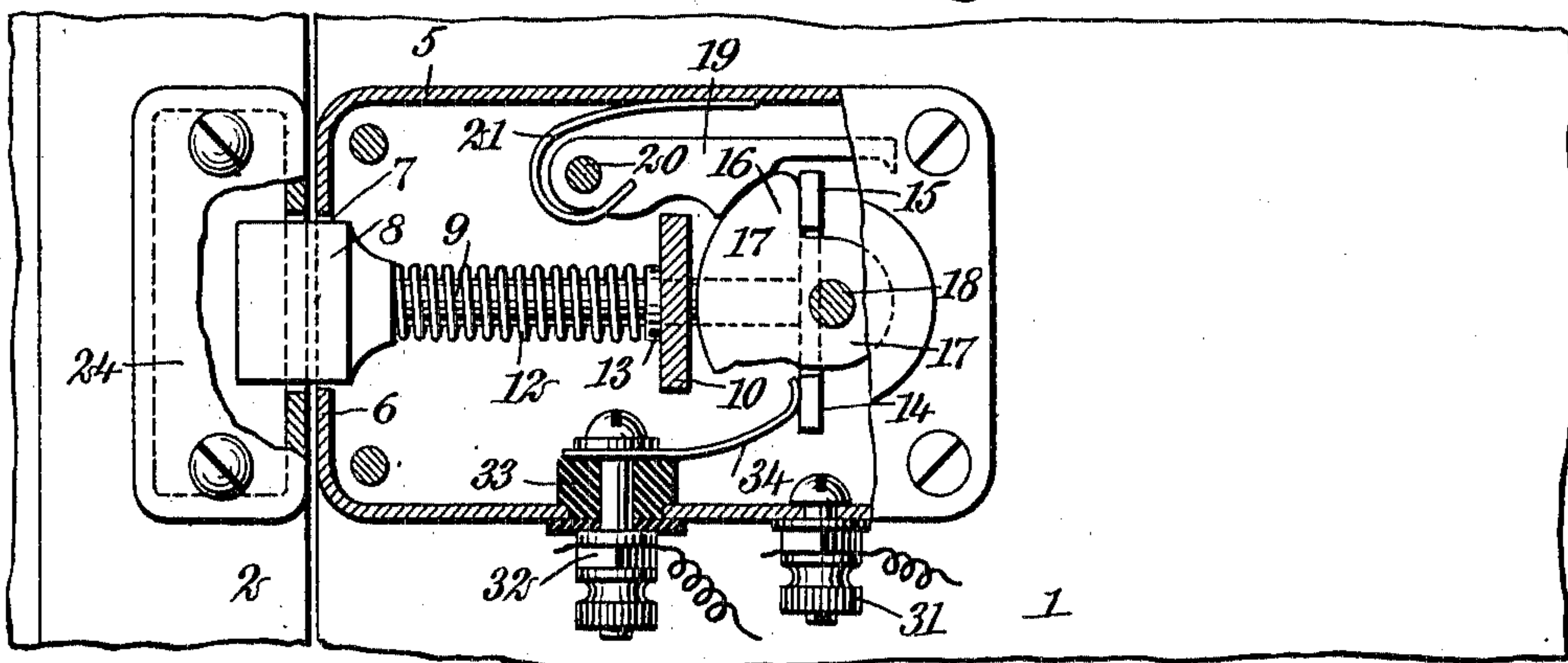
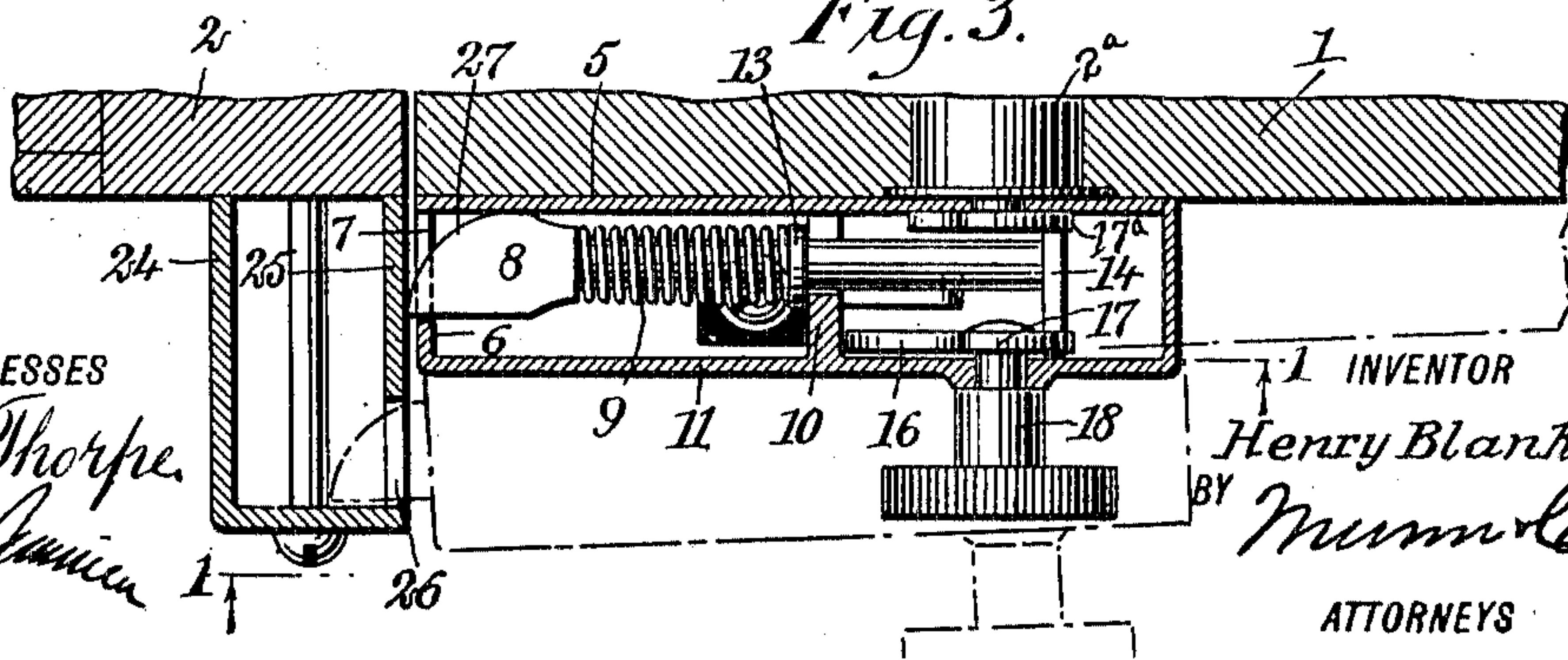


Fig. 3.



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SIGNAL-LOCK.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, HENRY BLANK, a citizen of the United States, and a resident of the city of New York, Richmond Hill, borough of Queens, in the county of Queens and State of New York, have invented a new and Improved Signal-Lock, of which the following is a full, clear, and exact description.

10 This invention relates to locks or latches, and the object of the invention is to produce a latch or lock which may be used as an auxiliary attachment for a door or window, and which will normally operate to leave the door or window unlocked, but when an attempt is made to open the door or window, the device operates to lock the door against being completely opened and at the same time it closes a circuit so that an alarm, such as an electric bell, will be rung.

20 The invention consists in the construction and combination of parts to be more fully described hereinafter and particularly set forth in the claim.

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

30 Figure 1 is a front elevation showing a portion of a door and jamb to which the invention has been applied; in this view the case of the lock is represented as broken away so as to disclose its inner construction, and may be considered as a section upon the line 1—1 of Fig. 3; Fig. 2 is a view similar to Fig. 1, but showing the device in its operative position such as the parts would assume if it were attempted to open the door; and Fig. 3 is a horizontal section taken on the line 3—3 of Fig. 1.

Referring more particularly to the parts, 1 represents a door which is adapted to close against the jamb 2. This door may be provided with a lock 3 of any suitable construction, cooperating with a keeper 4. In applying my invention, I employ a lock case 5 of substantially rectangular form, the forward wall 6 of which is provided with an opening 7, through which slides the head 8 of a bolt 9. The rear end of this bolt 9 is guided in a post 10 which is made integral with the outer wall or cover 11 of the case, as indicated in Fig. 3. On the body of this bolt, a coil spring 12 is placed, which thrusts against the post 10 through the medium of

a washer 13. The outer end of this spring thrusts against the head 8 and tends to force the head of the bolt through the opening 7. The opposite end of the bolt is provided with a cross head 14, having outwardly projecting ears 15, which ears are adapted to be engaged by oppositely projecting dogs or toes 16 formed on the dog plates 17 and 17^a. The dog plate 17 is rigidly attached to a spindle 18 which passes into the lock. The dog plate 17^a is rotatable by a key barrel 2^a with which it connects. By rotating the spindle 18 toward the left, one of the dogs 16 will withdraw the bolt, as will be readily understood, and if the bolt is sufficiently withdrawn, the upper edge of the cross head will be engaged by the extremity of a tumbler 19 which is pivotally mounted on a pin 20 and constrained by a spring toward the cross head, and this will operate to latch the bolt back in an inoperative position. In order to bring about this mode of operation, the end of the tumbler is provided with a tooth 22 which projects toward the cross head, and this tooth has an inclined face 23. As the cross head moves outwardly, it engages this inclined face so as to pass beyond the tooth, and the tooth then comes down near the front of the cross head and prevents the cross head from turning. These features are only described in order to disclose the fact that the latch mechanism can be arranged so as to lock the bolt in a retracted position. In the daytime the bolt will be held in this condition.

It should be understood that if the spindle 18 is rotated toward the right the bolt will be withdrawn by the uppermost dog 16, but the edge of the dog plate maintains itself against the edge of the tumbler 19 and prevents the tumbler from locking the bolt in its withdrawn position. From this arrangement it will be evident that if the knob of the lock is rotated in either direction, the bolt can only be latched in its withdrawn position by rotating the spindle toward the left. The bolt will remain latched in this position because there is no spring which returns the dog plate to its normal position to release the tumbler, as will appear from an inspection of Fig. 2.

The lock described is of a common type. Cooperating with the head 8 of the bolt, I provide a keeper 24 which is of special form, as indicated in Fig. 3. This keeper pre-

sents a blank wall 25 at the point where the opening is usually provided for a bolt head. Instead of putting the opening at this point, I put the opening 26 farther out on the
 5 keeper, so that the keeper projects substantially twice the usual extent from the door jamb. As indicated in Fig. 3, the device is represented as set, the inclined face 27 of the bolt head 8 being disposed inwardly to-
 10 ward the jamb in the usual manner. When the bolt is in this condition, it should be understood that the tumbler 19 is not in engagement with the cross head to prevent the bolt from advancing, and the bolt is held
 15 back simply by the blank wall 25. Now if it is attempted to open the door, when the bolt head 8 arrives at the opening 26 in the keeper it is sprung forward by its spring so as to project into the keeper and lock the
 20 door against being opened farther. I utilize this movement of the bolt to close an electric circuit 28, which includes an alarm 29 and a battery or source of current 30. One side of the circuit is attached to a bind-
 25 ing post 31 on the metal case of the lock, and the other side of the circuit is attached to a binding post 32 mounted in an insulating block 33 in the case. This binding post 32 is in connection with a contact finger 34
 30 which projects in the direction of the cross head 14, and is engaged by the cross head, as indicated in Fig. 2. Only, however, when the cross head is in the advanced position which it occupies on the bolt, is there

any engagement with the opening 26. As 35 soon as contact takes place between the cross head 14 and the contact finger 34, it will be evident that the circuit will be closed through the battery and through the alarm. In this way the device operates to lock the 40 door against further opening movement and simultaneously gives an alarm or signal.

Having thus described my invention, I claim as new and desire to secure by Letters Patent,— 45

In combination, a door, a spring-actuated bolt carried by said door, a rotatable member for withdrawing said bolt, a keeper attached to the door-jamb and having a blank wall normally engaged by said bolt when 50 the door is in its closed position, and holding said bolt against advancement by the spring, said keeper having an opening in the path of said bolt when the door opens transversely of said keeper, and adapted to be 55 engaged by said bolt to lock the door against further opening, and a tumbler carried by said door and controlled by said rotatable member, said tumbler serving to se- 60 cure said bolt in a withdrawn position.

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

HENRY BLANK.

Witnesses:

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 HENRY HERROLD.