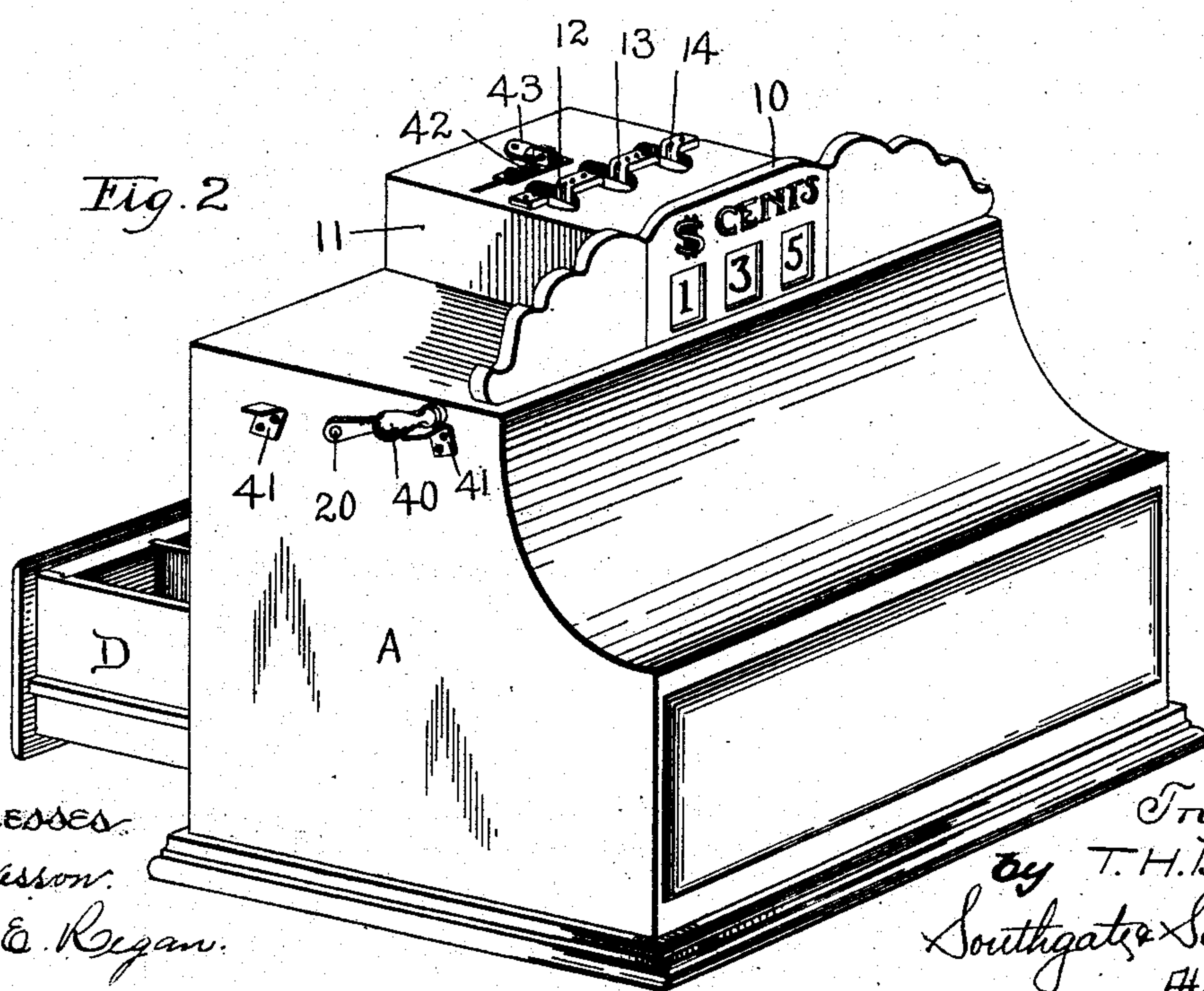
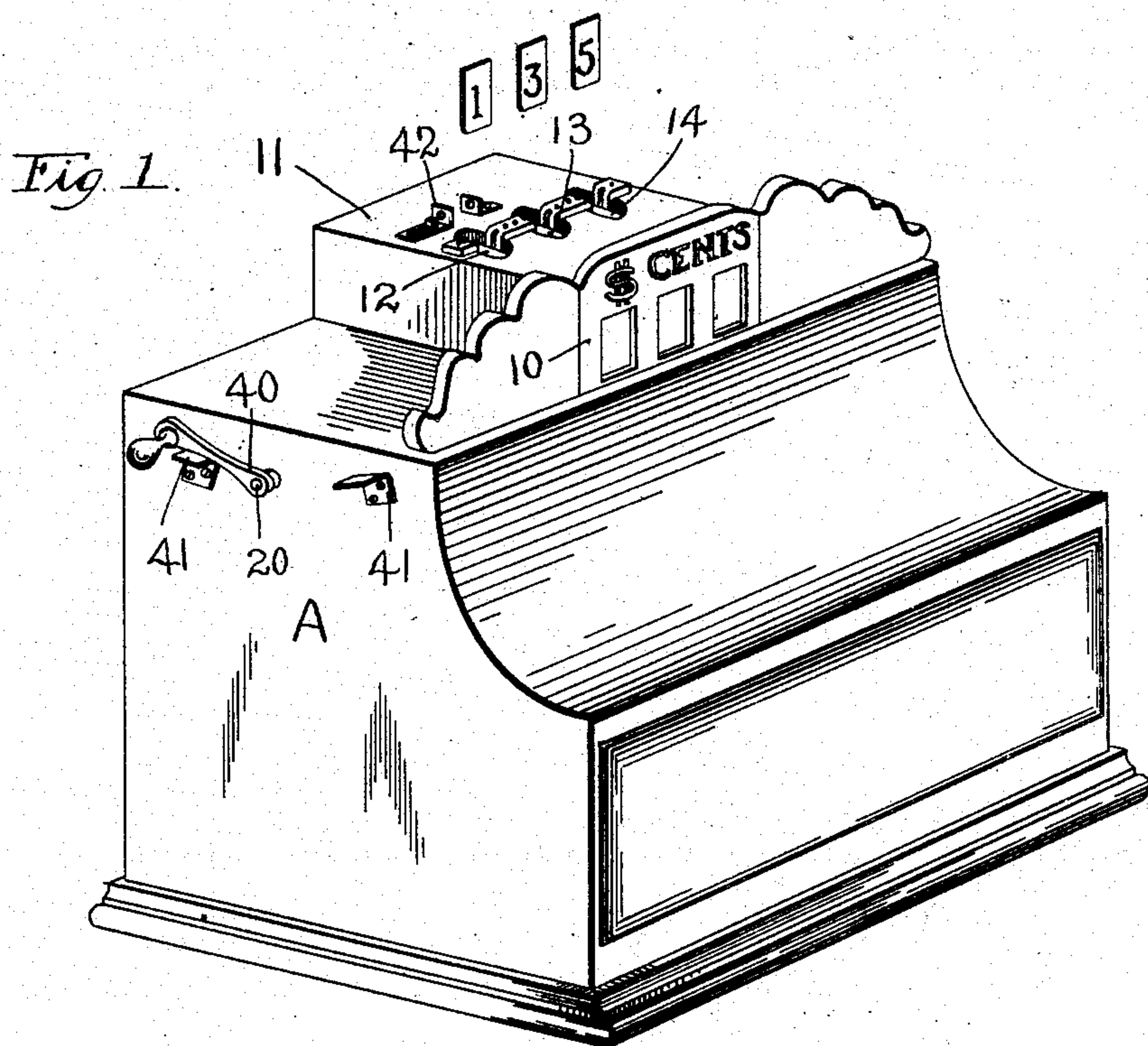


T. H. BLAIR.
CASH REGISTER.

(Application filed Feb. 19, 1900.)

(No Model.)

3 Sheets—Sheet 1.



Witnesses:
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M. E. Regan.

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Attorneys

T. H. BLAIR.
CASH REGISTER.

(Application filed Feb. 19, 1900.)

(No Model.)

3 Sheets—Sheet 2.

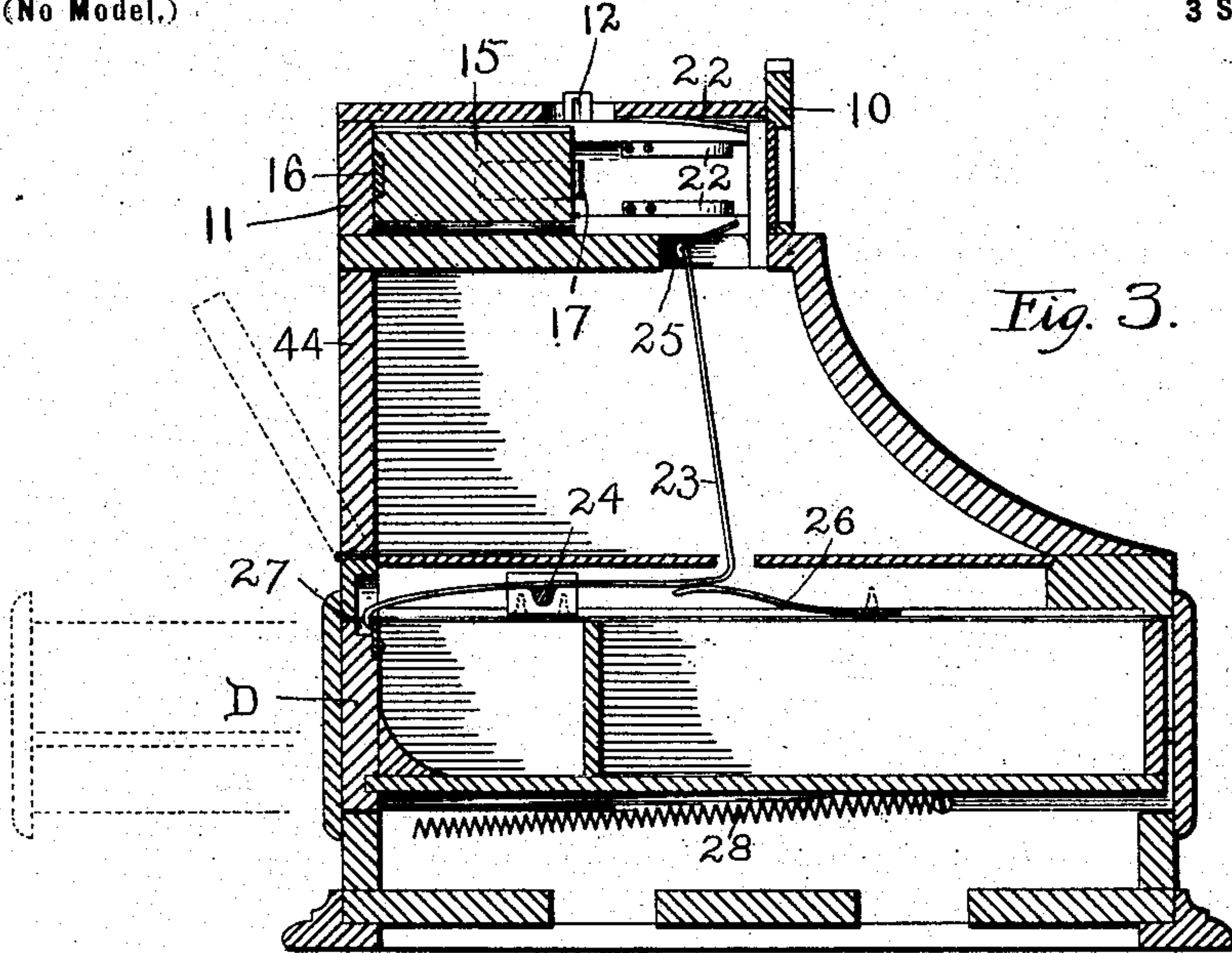


Fig. 3.

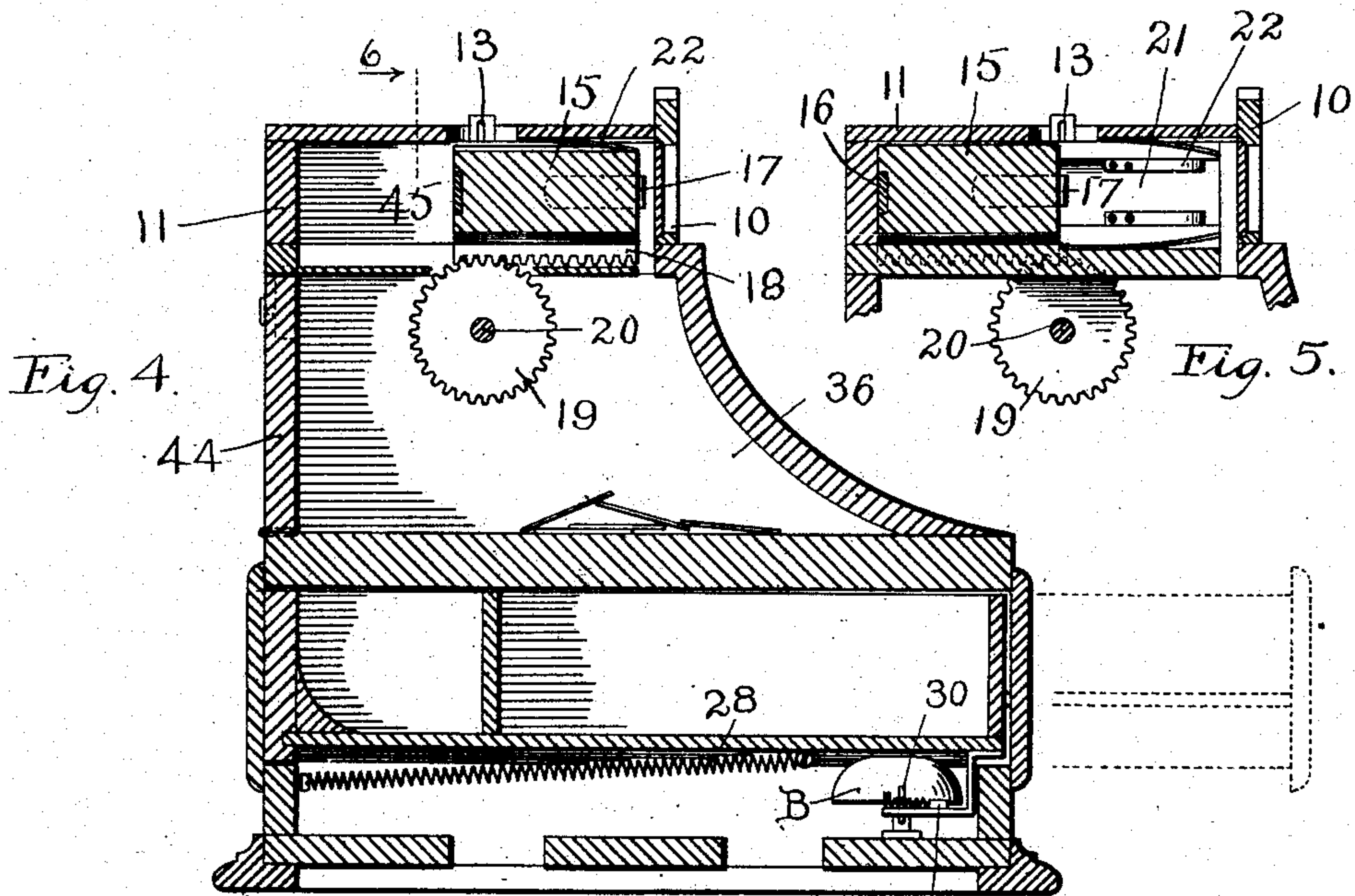


Fig. 4.

Fig. 5.

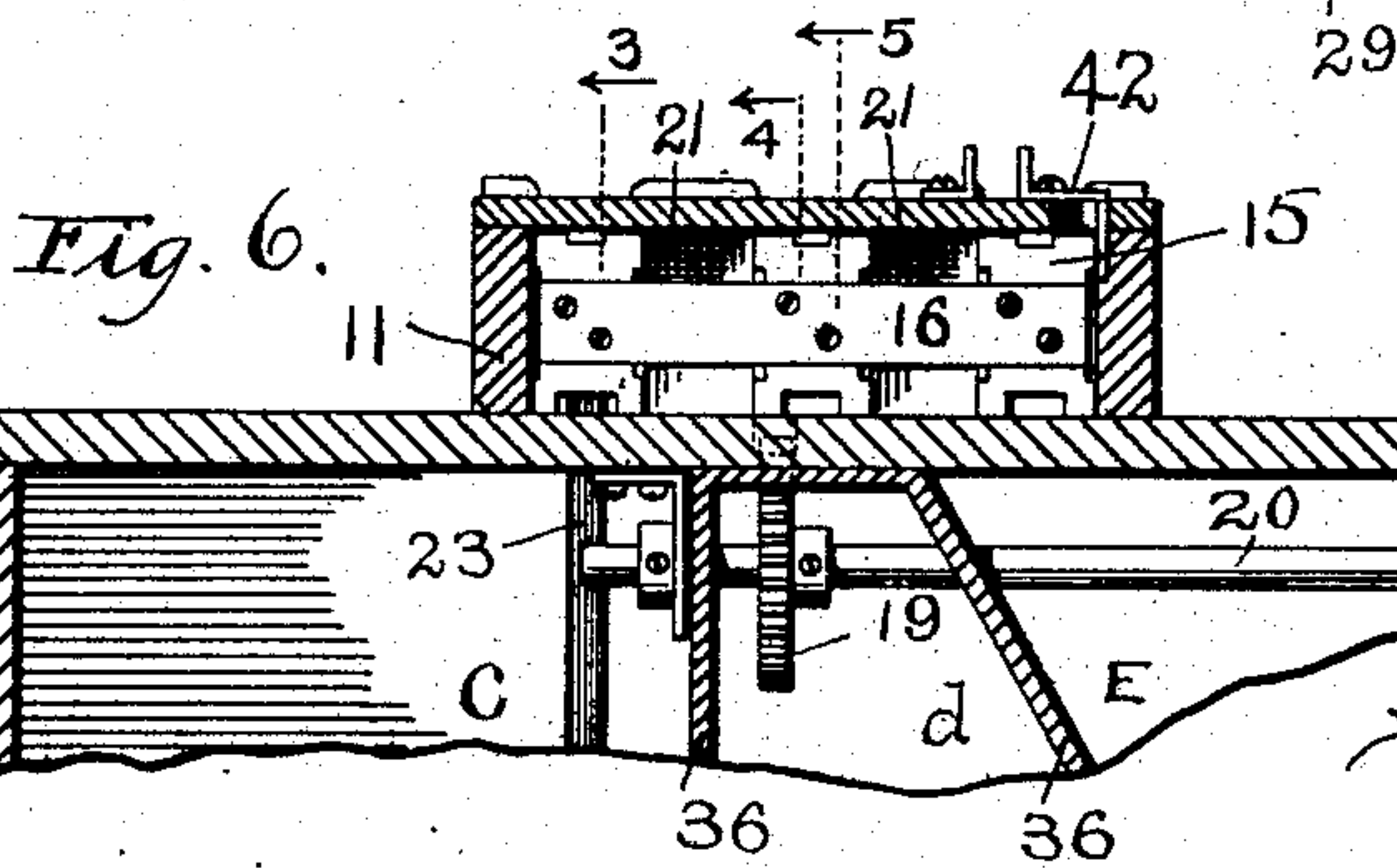


Fig. 6.

Witnesses.
C. F. Wilson.
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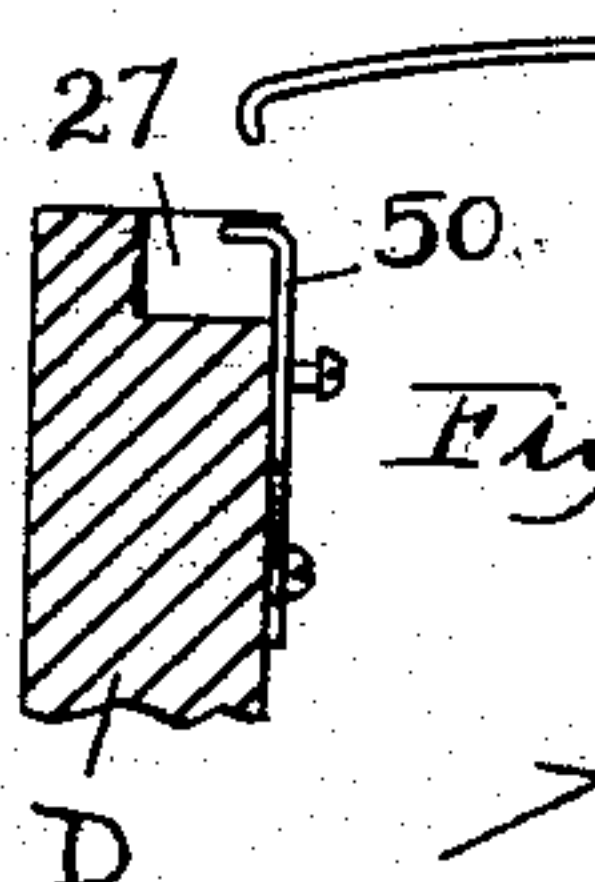
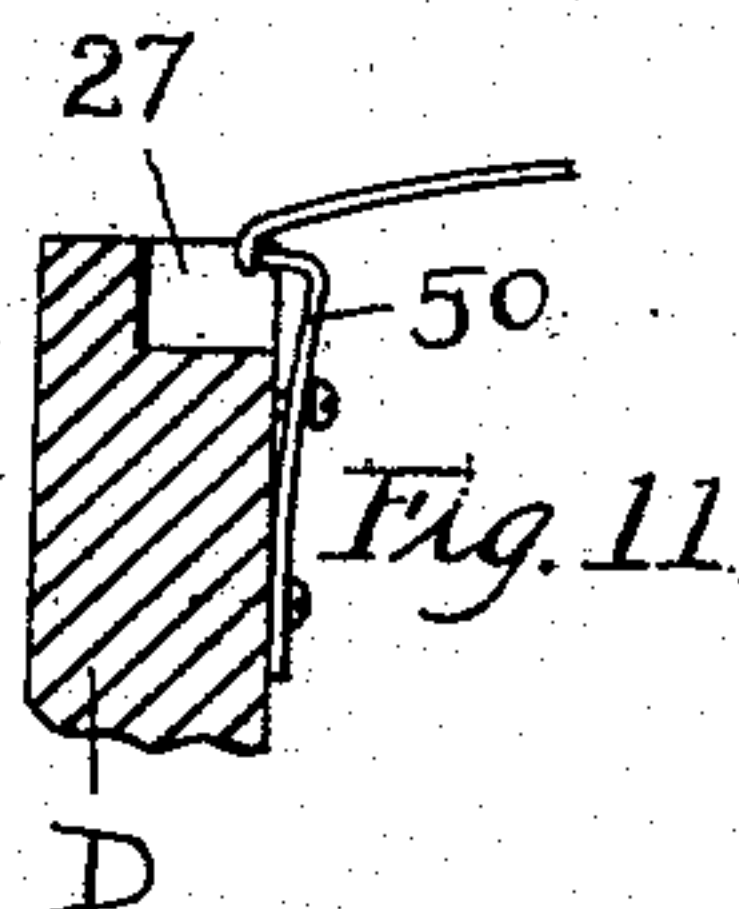
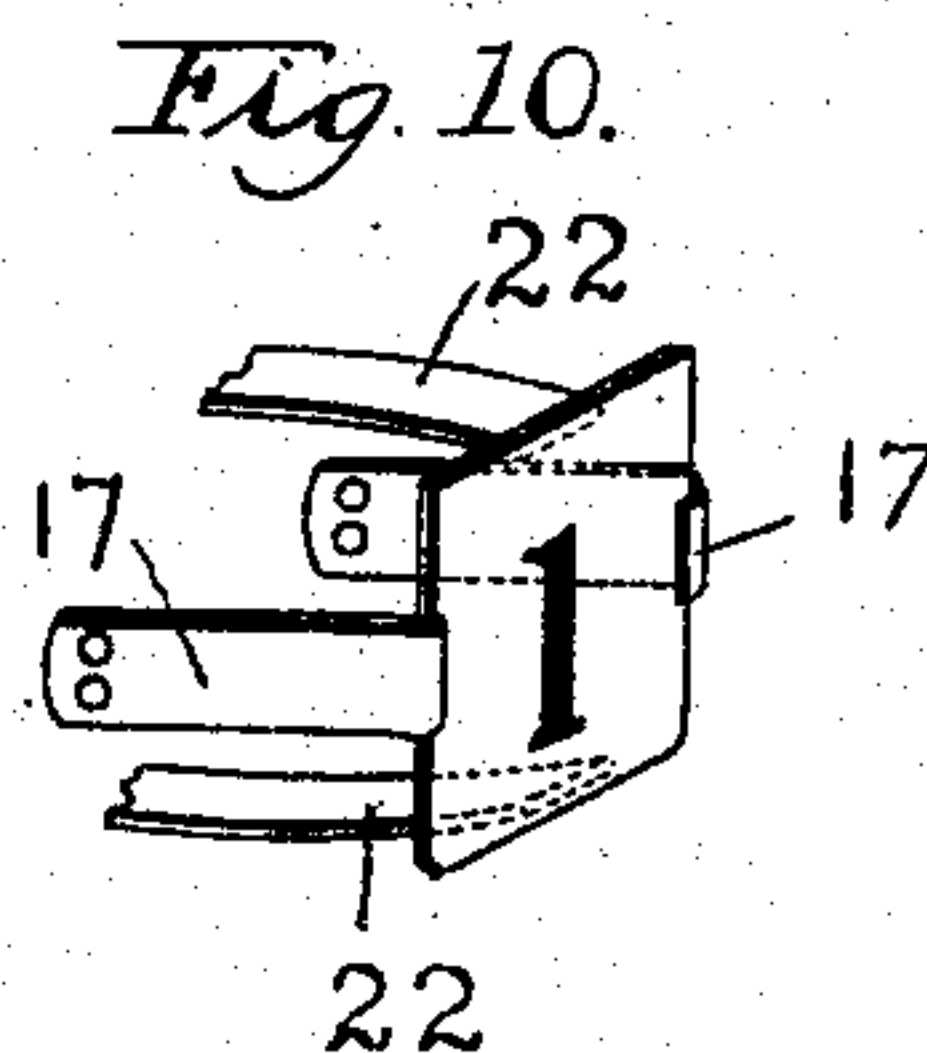
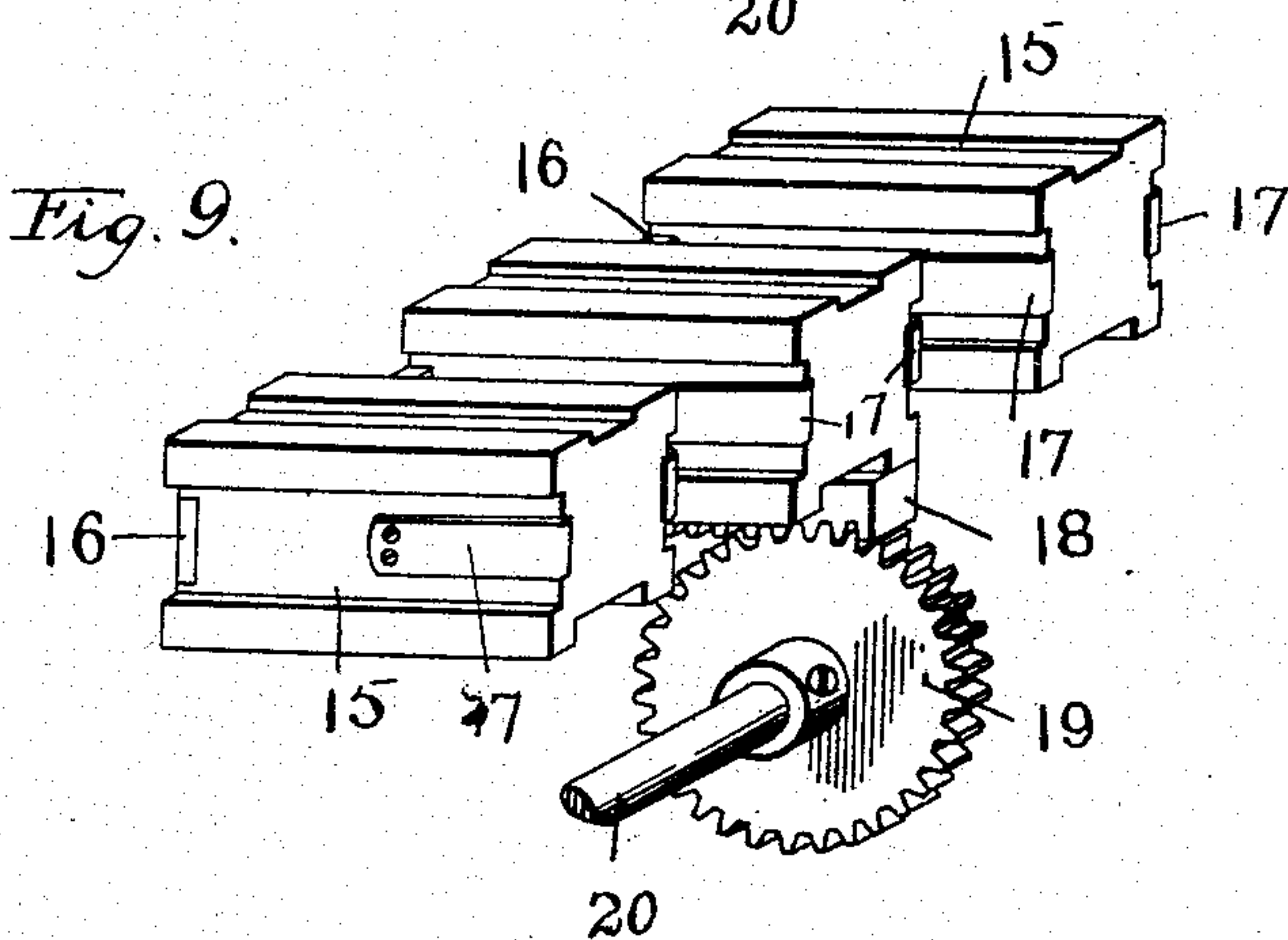
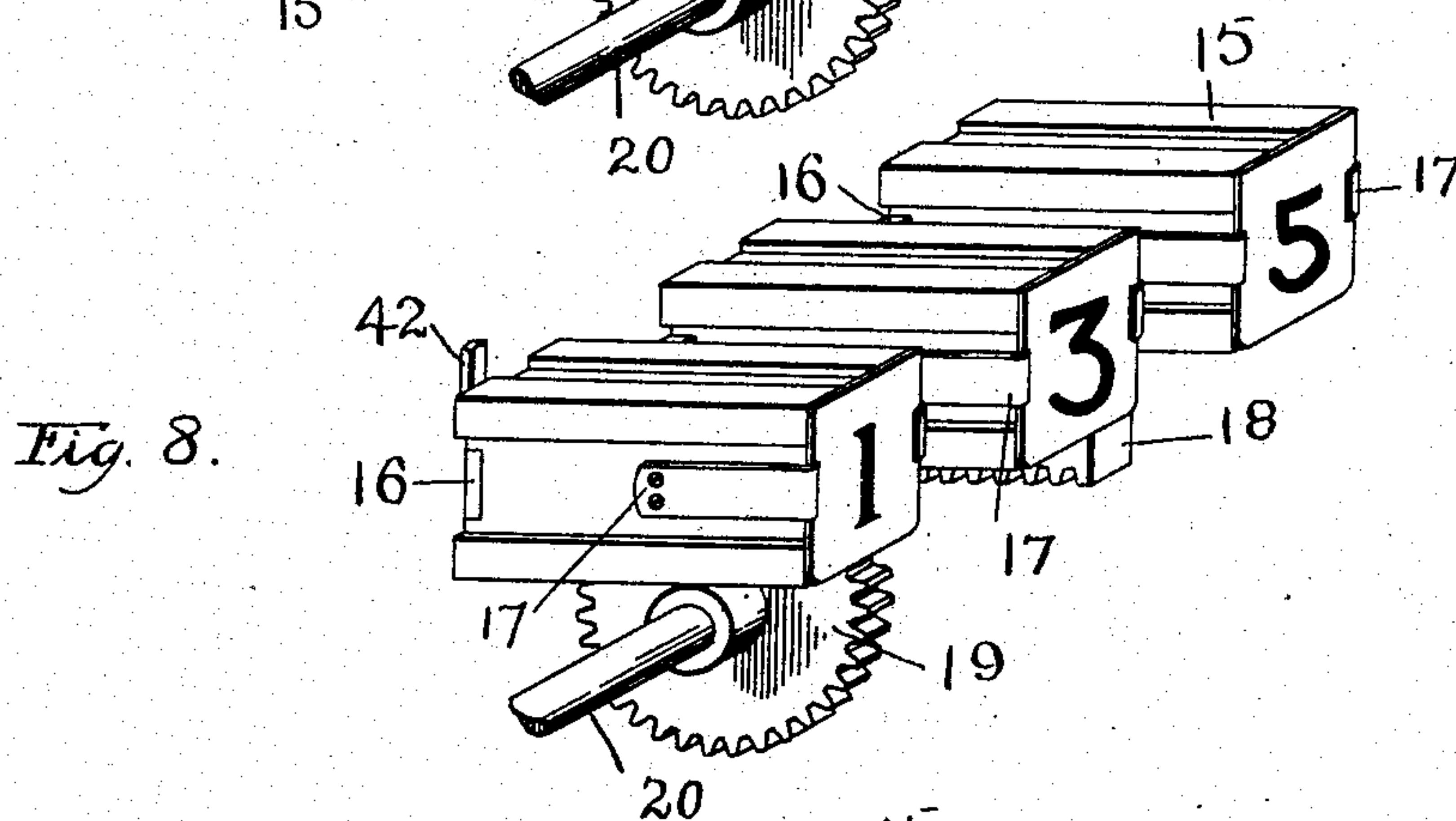
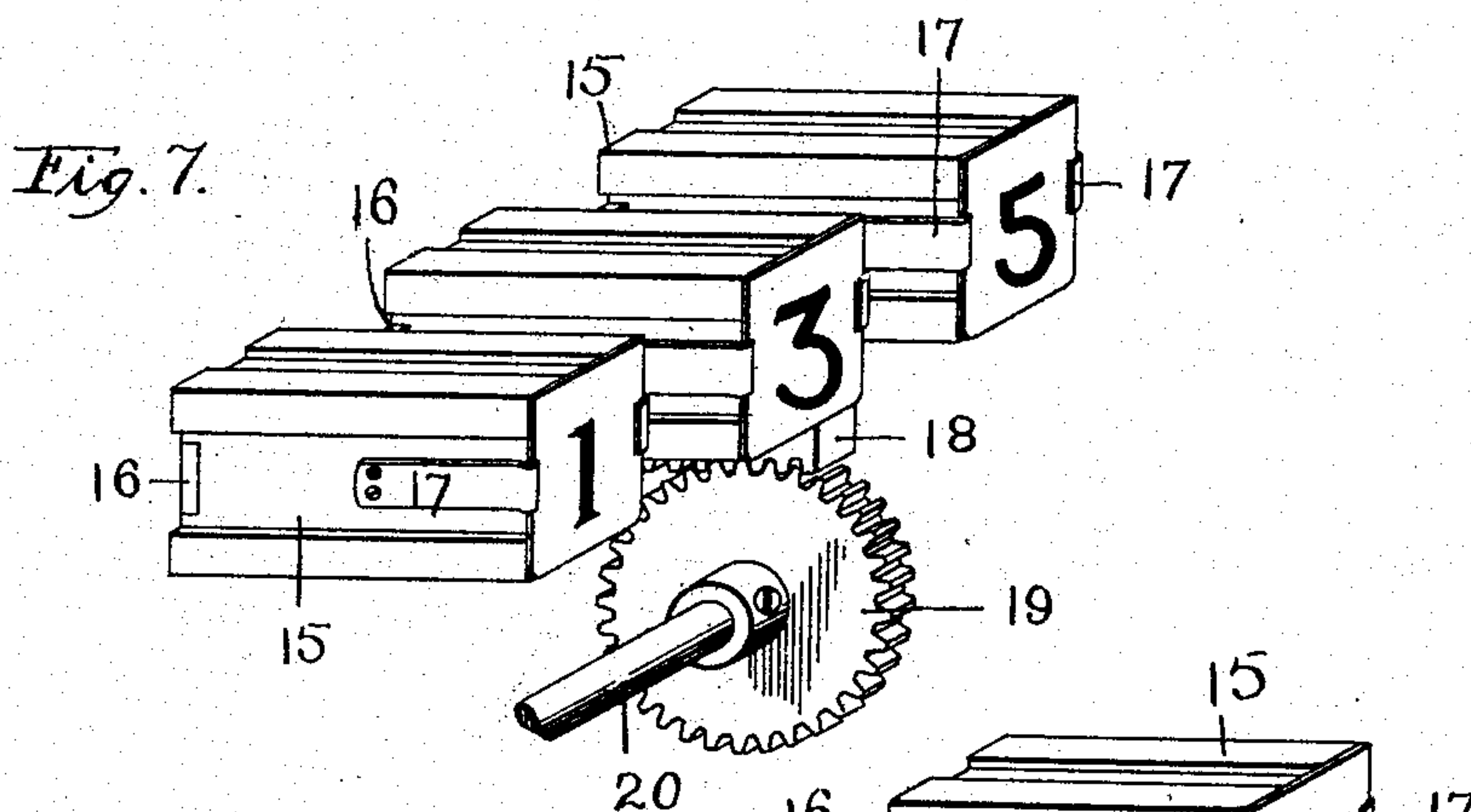
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T. H. BLAIR.
CASH REGISTER.

(No Model.)

(Application filed Feb. 19, 1900.)

3 Sheets—Sheet 3.



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UNITED STATES PATENT OFFICE.

THOMAS H. BLAIR, OF NORTHBORO, MASSACHUSETTS.

CASH-REGISTER.

SPECIFICATION forming part of Letters Patent No. 676,216, dated June 11, 1901.

Application filed February 19, 1900. Serial No. 5,720. (No model.)

To all whom it may concern:

Be known that I, THOMAS H. BLAIR, a citizen of the United States, residing at Northboro, in the county of Worcester and State of Massachusetts, have invented a new and useful Cash-Register, of which the following is a specification.

This invention relates to a cash-register which is controlled and operated by the use of independent checks.

The object of this invention is to provide a compact, simple, and efficient cash-register which will keep an accurate record of transactions and will furnish security and protection in an equal degree with the expensive cash-registers now on the market and which may be manufactured and sold at a price that can be afforded by all.

To this end this invention consists of the cash-register and of the combinations of parts therein, as hereinafter described, and more particularly pointed out in the claims at the end of this specification.

In the accompanying three sheets of drawings, Figure 1 is a perspective view of a three-slot cash-register constructed according to this invention, showing the manner in which the checks are inserted into the machine. Fig. 2 is a similar view illustrating the position of the parts when the checks are moved forward to expose them to view and unlock the cash-drawer. Fig. 3 is a sectional view taken on the line 3-3 of Fig. 6. Fig. 4 is a sectional view taken on the line 4-4 of Fig. 6, with the check-carrier moved forward. Fig. 5 is a fragmentary sectional view taken on the line 5-5 of Fig. 6, showing the check-receiver in its retracted position. Fig. 6 is a fragmentary sectional view taken on the line 6-6 of Fig. 4. Figs. 7, 8, and 9 are perspective views illustrating different relative positions of the check-carrier. Fig. 10 is a fragmentary view illustrating the action of the springs which release the checks from the check-carrier, and Figs. 11 and 12 are fragmentary views illustrating the form of catch preferably employed for locking the cash-drawer.

The connections which are employed for controlling the operative parts of an ordinary cash-register from a keyboard are necessarily complicated and expensive.

One object of this invention is therefore to

dispense with the use of a keyboard in a cash-register and to provide a cash-register of simple and efficient construction which is controlled by the use of checks.

In using a single-slot machine constructed according to this invention a single check will be used for recording each transaction. Such machines may be used to advantage where there is but small variation in the amounts to be recorded. For example, in barber-shops or similar places the amounts to be recorded are comparatively small and the transactions are usually limited to multiples of five cents. On the other hand, if it should be attempted to employ a single-slot cash-register constructed according to this invention for recording transactions of a mercantile business checks of so many different denominations would have to be employed as to seriously interfere with its successful use.

A further object of this invention is therefore to provide a check-controlled cash-register in which a plurality of checks may be employed for recording a single transaction.

To this end a cash-register constructed according to this invention preferably has a plurality of slots for receiving checks representing different fractions of the same transaction. For example, for recording transactions in United States currency checks inserted into one slot will represent dollars, checks inserted into a second slot will represent dimes, and checks inserted into a third slot will represent cents. Coöperating with the guideways which receive the checks is a check-carrier which simultaneously moves all the checks from the position in which they are inserted into the machine to position exposing them to view. As the checks are moved forward by the check-carrier a connection is operated by one of the checks (preferably the check designating cents) to unlock the cash-drawer. To release the checks from the check-carrier after they have been exposed to view, spring-detents are provided, which engage behind the checks and release the checks from the check-carrier when the same is retracted or moved back to its normal position. The checks representing dollars fall into one compartment, the checks representing dimes fall into a second compartment, and the checks representing cents fall into a

third compartment. The total amount of sales recorded by the cash-register may be ascertained whenever desired by opening the cash-register and adding the checks, the checks representing dollars being added in one column, the checks representing dimes being added in a second column, and the checks representing cents being added in a third column. A cash-register constructed according to this invention is also preferably provided with a lock for fastening the machine, so as to prevent the insertion of checks or the opening of the cash-drawer, and a special construction is also preferably employed for preventing an accidental relocking of the cash-drawer even when comparatively heavily loaded.

Referring to the accompanying drawings for a specific description of a cash-register embodying this invention, the cash-register herein illustrated comprises a main casing A. Secured on top of the casing A is a front piece or casting 10, having openings, preferably glazed, for exposing the checks to view when the same are brought forward by the check-carrier, as hereinafter described. Secured on top of the casing A is a supplemental casing 11, having a plurality of slots or guideways 12, 13, and 14 for receiving checks to record dollars, dimes, and cents, respectively. Movably mounted in the casing 11 is a check-carrier, the construction of which is most clearly illustrated in Figs. 7 to 9, inclusive. As shown in these figures, the check-carrier comprises a plurality of longitudinally-grooved blocks or pieces 15, connected at their rear ends by a cross-strip 16. Each block 15 is provided near its front end with check-retaining-clips 17.

Any desired form of connection may be employed for reciprocating the check-carrier. As herein illustrated, an operating-shaft 20 is provided with a pinion 19, which engages with a rack 18 on the check-carrier. The operating-shaft 20, as shown most clearly in Figs. 1 and 2, is provided with a crank or handle 40, the motion of which is limited by stops 41. By turning the handle 40 the check-carrier will be moved forward or backward, as desired.

The front part of the casing 11 is divided into separate cells or passage-ways to receive the blocks 15 of the check-carrier by means of partitions 21, (shown in Fig. 6,) while the rear portion of the casing 11 is left open, as at 45 in Fig. 4.

Secured in the guideways or slots which receive the blocks 15 of the check-carrier are detents or springs 22, which engage behind the checks when the check-carrier is moved forward, as indicated in Fig. 10. The springs or detents 22 act as stops or strippers for releasing the checks from the check-carrier when the check-carrier is moved back, the operation of these parts being most clearly illustrated in the third sheet of the drawings.

As shown in Fig. 7, three checks are illus-

trated as having been inserted into the machine, so as to be carried by the holding-clips 17. Fig. 8 illustrates the position of the parts when the check-carrier has been moved forward to expose the checks to view and Fig. 9 illustrates the check-carrier moved back to its first position, the checks having been released or removed from the check-carrier by the spring-detents 22 engaging behind the checks, as illustrated in Fig. 10.

Above the cash-drawer the main casing A of the cash-register is divided into separate compartments or cells. For example, as shown in Fig. 6, the main casing A is divided into three compartments C, d, and E by means of partitions 36, and, as indicated in Figs. 3 and 4, slots connect these compartments with the casing 11, so that when the checks are released from the check-carrier the checks recording cents will fall into the compartment C, the checks recording dimes will fall into the compartment d, and the checks recording dollars will fall into the compartment E.

The rear of the casing A is closed by a hinged door 44, which may be provided with a lock, if desired, as indicated by the dotted lines in Fig. 4, so that by opening the door 44 and taking out the checks the total amount recorded by the machine may be ascertained by adding the checks, as before described.

To provide for unlocking and automatically opening the cash-drawer, the spring-detent on the lower side of the channel or cell receiving the checks recording cents is replaced by a releasing-lever which normally holds the cash-drawer locked, but which will release the cash-drawer when a check recording cents is moved forward. This construction is most clearly illustrated in Fig. 3. As shown in this figure, an L-shaped lever 23 is pivotally mounted, as at 24, so that its rear end engages a notch 27 in the cash-drawer, while its upper end extends up into position to be engaged by a check as the same is moved forward by the check-carrier. The position of the lever 23 may be regulated by a stop-screw 25, and the lever is normally held in the position illustrated in Fig. 3 by a spring 26. A spring 28 normally tends to throw the cash-drawer open, so that when a check representing cents is moved forward to be exposed to view by the check-carrier the upper end of the lever 23 will be depressed to release the cash-drawer, which will then fly open, as illustrated in Fig. 2 and as shown by dotted lines in Fig. 3. When the check has passed over the top of the lever 23, the lever is restored to its normal position by the spring 26, the upper end of the lever 23 then acting as a detent or stripper to release the check from the check-carrier in the same manner as the spring-detent 22.

Any desired construction of bell may be employed for indicating the opening of the cash-drawer. For example, as illustrated in Fig. 4, a bell B, having a clapper 30, may be secured in the base of the machine, and the cash-drawer may be provided with an arm

carrying a pawl 29 to engage the clapper 30 of the bell.

In the machine herein illustrated the cash-drawer opens from the back of the machine.

5 If desired, however, the same connections may be used for controlling a cash-drawer opening from the front of the machine, as indicated by dotted lines in Fig. 4.

10 When the cash-drawer of a machine constructed according to this invention is heavily laden or is of an unusually heavy construction or when the machine is operated very rapidly, the spring of the cash-drawer may not have time enough to start the cash-drawer
15 in motion before the lever 23 again moves down to its locked position. To prevent this from happening, a special catch may be employed, as illustrated in Figs. 11 and 12. As shown in these figures, the rear wall of the
20 notch 27 in the cash-drawer is formed by a spring-plate 50, which is firmly held in place by screws at the bottom, the distance its top can be sprung back being limited by stop-screws at its upper end. The spring-plate 50
25 is of less strength than the spring of the cash-drawer, so that the same will be normally bent back thereby to the position illustrated in Fig. 11. By means of this construction when the lever 23 is moved by a check, as indicated in Fig. 12, the spring-plate 50 having
30 substantially no weight to start will immediately move to a position under the end of the lever and will prevent the relocking of the cash-drawer, even should the cash-drawer
35 fail to open promptly. In closing the cash-drawer the cash-drawer will be pushed in a short distance beyond its normal position, so that the spring-plate 50 will engage the lever 23, the parts then being restored to their normal
40 positions, as illustrated in Fig. 11, by the spring of the cash-drawer.

To lock the machine so as to prevent the opening of the cash-drawer or the insertion of checks, any suitable slide or bolt may be
45 employed for holding the check-carrier in its forward position. For example, as shown in Figs. 1, 2, and 6, a slide 42 on top of the casing 11 may be provided with a leg for engaging behind one of the blocks of the check-carrier, as indicated in Fig. 8, so that by using
50 a small padlock 43 or other fastening device, as indicated in Fig. 2, the cash-register may be locked to prevent the opening of the cash-drawer or the insertion of checks into the machine.
55

Numerous changes may be made in building cash-registers according to this invention by those who are skilled in the art. For example, by employing ten varieties of checks
60 representing the ordinals from "0" to "9," inclusive, the three-slot machine herein illustrated can register any amount from one cent up to ten dollars. If a greater capacity is desired, the number of slots may be increased, and larger amounts may be registered without increasing the variety of checks employed.
65 On the other hand, when a comparatively

small variety of transactions are to be recorded a smaller number of slots may be employed. For example, if desired, the slots
70 for receiving checks representing dimes and dollars may be omitted, the check-carrier then being provided with a single slide or block 15, so that each transaction recorded will be represented by a single check. This single-
75 slot form of machine is especially useful when the check for each transaction is printed or numbered by hand or when it is desired to keep a record of the sequence and exact amount of various transactions, and such modifications
80 as these are to be regarded as within the scope of this invention as expressed in the claims. I do not wish, therefore, to be limited to the form of cash-register herein shown and described; but
85

What I do claim, and desire to secure by Letters Patent of the United States, is—

1. In a cash-register, the combination of a check-carrier for moving checks from the position in which they are inserted into the machine to position exposing them to view, and
90 a connection operated by the checks for unlocking the cash-drawer, substantially as described.

2. In a cash-register, the combination of a
95 guideway for receiving checks, a check-carrier having holding-clips for receiving the checks inserted into the guideway, means for actuating the check-carrier to move the checks from the position in which they are inserted
100 into the machine to position exposing them to view, and means for releasing the checks from the holding-clips when the check-carrier is moved back, substantially as described.

3. In a cash-register, the combination of
105 guideways for receiving checks, a check-carrier comprising a plurality of connected slides or blocks having holding-clips for receiving the checks inserted into the guideways, means for operating the check-carrier to move the
110 checks from the position in which they are inserted into the machine to position exposing them to view, and means for releasing the checks from the holding-clips, substantially as described.
115

4. In a cash-register, the combination of a check-carrier comprising a plurality of connected longitudinally-grooved blocks having holding-clips for receiving the checks inserted into the machine through different guideways,
120 connections for moving the check-carrier, and springs which act as detents engaging behind the checks and releasing them from the holding-clips when the check-carrier moves back, substantially as described.
125

5. In a cash-register, the combination of a check-carrier for simultaneously moving a plurality of checks from the position in which they are inserted into the machine to position exposing them to view, an operating-
130 shaft having a crank or handle, and a pinion secured on the operating-shaft and engaging a rack on the check-carrier, substantially as described.

6. In a cash-register, the combination of a check-carrier comprising a plurality of connected blocks having holding-clips for receiving the checks inserted into the machine through different slots, an operating-shaft having a crank or handle, a pinion secured on the operating-shaft and engaging a rack on the check-carrier, and springs for engaging behind the checks to release the checks from the holding-clips when the check-carrier is moved back, substantially as described.

7. In a cash-register, the combination of a check-carrier, a cash-drawer, and connections arranged to be operated by a check moving with the check-carrier to unlock the cash-drawer, substantially as described.

8. In a cash-register, the combination of a check-carrier, a cash-drawer, and a lever having one end thereof forming a detent for holding the cash-drawer in its locked or closed position, and having its other end arranged to be engaged by a check moving with the check-carrier, substantially as described.

9. In a cash-register, the combination of a check-carrier having holding-clips for receiving the checks inserted into the machine, a cash-drawer, and a lever having one end forming a detent for holding the cash-drawer in its closed or locked position and having its other end arranged to be engaged and actuated by a check moving with the check-carrier, and to then engage behind the check to release the check from the holding-clips when the check-carrier is moved back, substantially as described.

10. In a cash-register, the combination of a casing having a cash-drawer movably mounted in the base thereof, and check compartments or cells above the cash-drawer, a front plate having exposing slits or openings, a check-carrier, connections for operating the check-carrier to move the checks from the position in which they are inserted into the machine to expose them to view through the exposing slits or openings, an L-shaped lever having one end forming a detent for holding the cash-drawer in its locked or closed position, and having its opposite end arranged to be engaged and actuated by a check moving with the check-carrier, and means for releasing the checks from the check-carrier in position to permit said checks to fall into the separate compartments in the casing, substantially as described.

11. In a cash-register, the combination of a check-receiving guideway, a closing-piece for preventing the insertion of checks into said guideway, and means for locking the same in place, substantially as described.

12. In a cash-register, the combination of a guideway for receiving checks, a check-carrier, and means for locking the check-carrier in position to prevent the insertion of checks into the guideways, substantially as described.

13. A cash-register having a check-receiving guideway and a cash-drawer, and a single locking device for preventing the opening of the cash-drawer or the insertion of checks into the machine, substantially as described.

14. In a cash-register, the combination of a cash-drawer, a check-carrier, a lever having one end forming a detent for holding the cash-drawer in its closed or locked position, and having its other end arranged to be engaged and actuated by a check moving with the check-carrier, and means for locking the check-carrier in position to prevent the release of the cash-drawer, or the insertion of checks into the machine, substantially as described.

15. In a cash-register, the combination of a cash-drawer, a spring tending to open the cash-drawer, and a catch for normally holding the cash-drawer in its locked or closed position, said catch being arranged to engage a spring-plate, said spring-plate being arranged to fly forward to insure the opening of the cash-drawer when the catch is released, substantially as described.

16. In a cash-register, the combination of a cash-drawer, a check-carrier, a lever having one end forming a detent for holding the cash-drawer in its closed or locked position, and having its other end arranged to be engaged by a check moving with the check-carrier, and a spring-plate cooperating with said lever, said spring-plate being arranged to fly forward so as to insure the opening of the cash-drawer whenever said lever is actuated, substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

THOMAS H. BLAIR.

Witnesses:

LOUIS W. SOUTHGATE,
PHILIP W. SOUTHGATE.