

**No. 746,570.**

PATENTED DEC. 8, 1903.

C. F. PIDGIN.  
INDICATOR.

APPLICATION FILED JUNE 22, 1899.

NO MODEL.

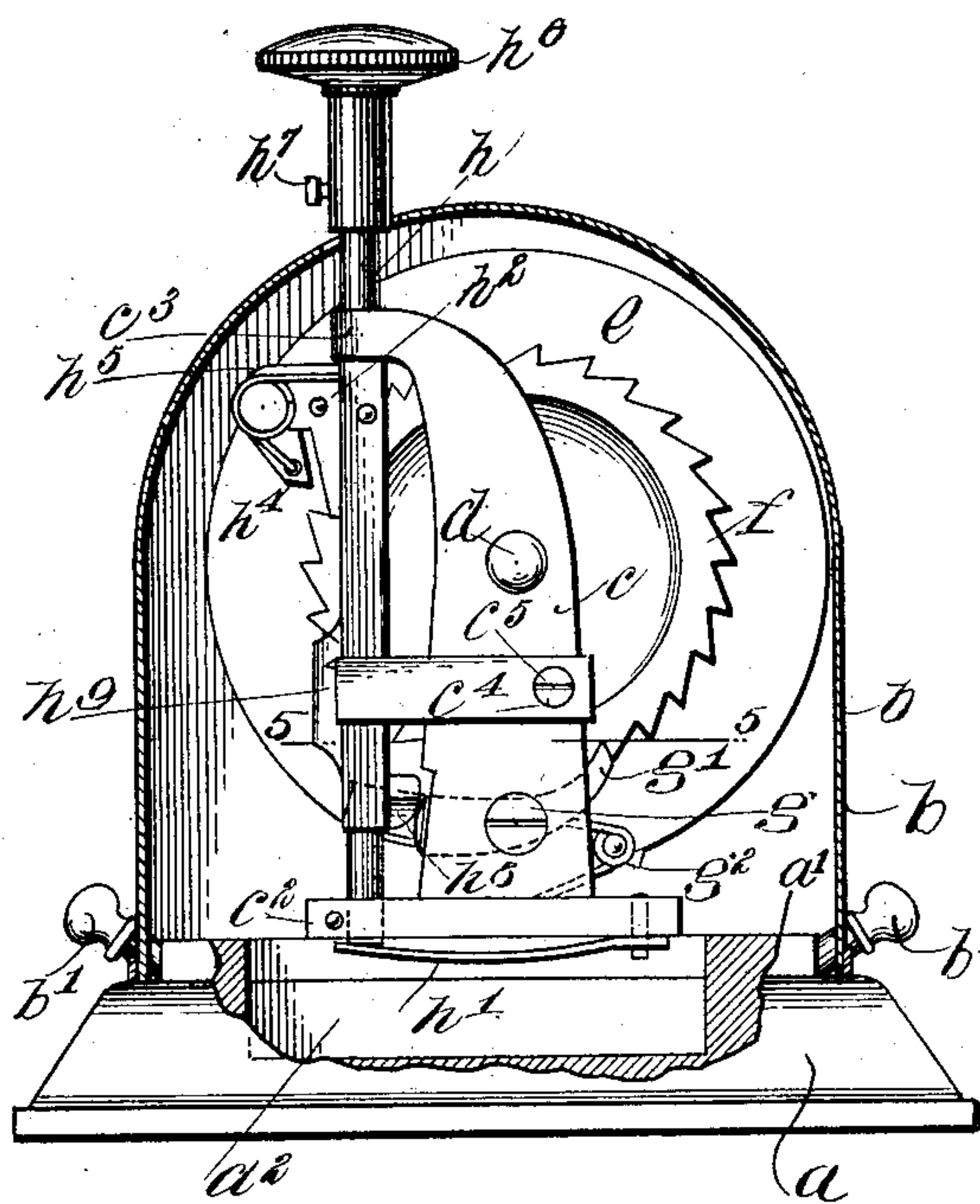


Fig-1-

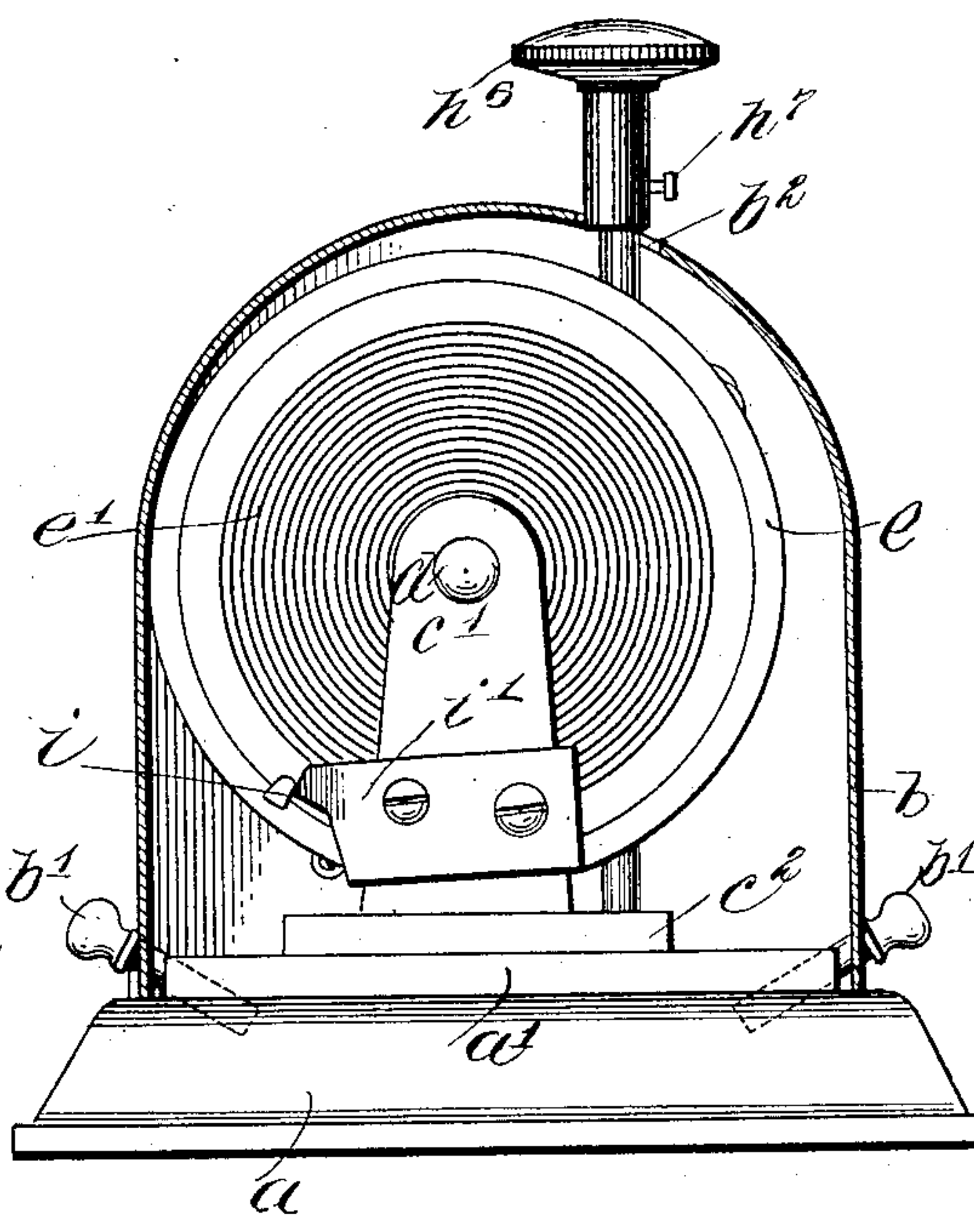


Fig-2.

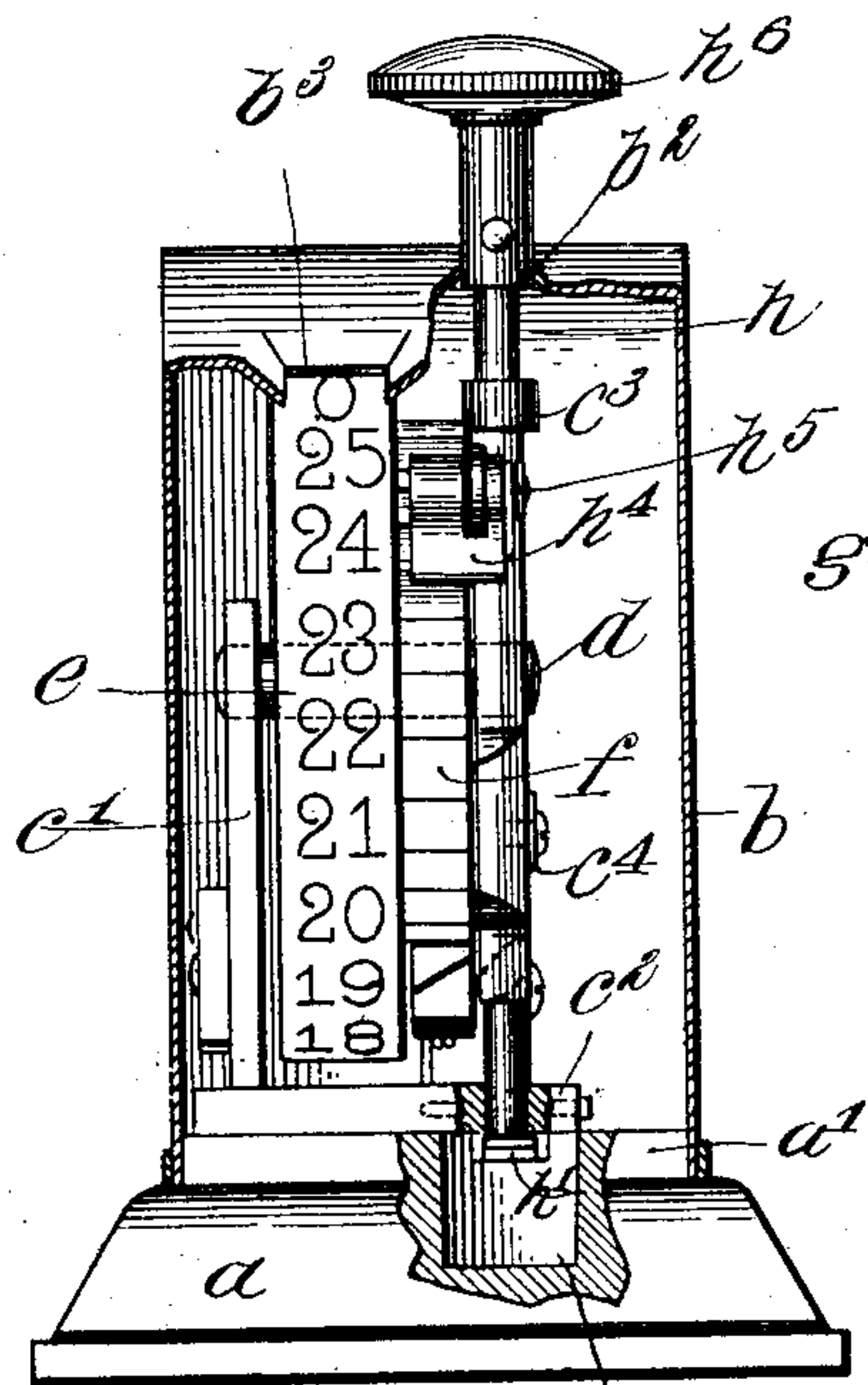


Fig-3-

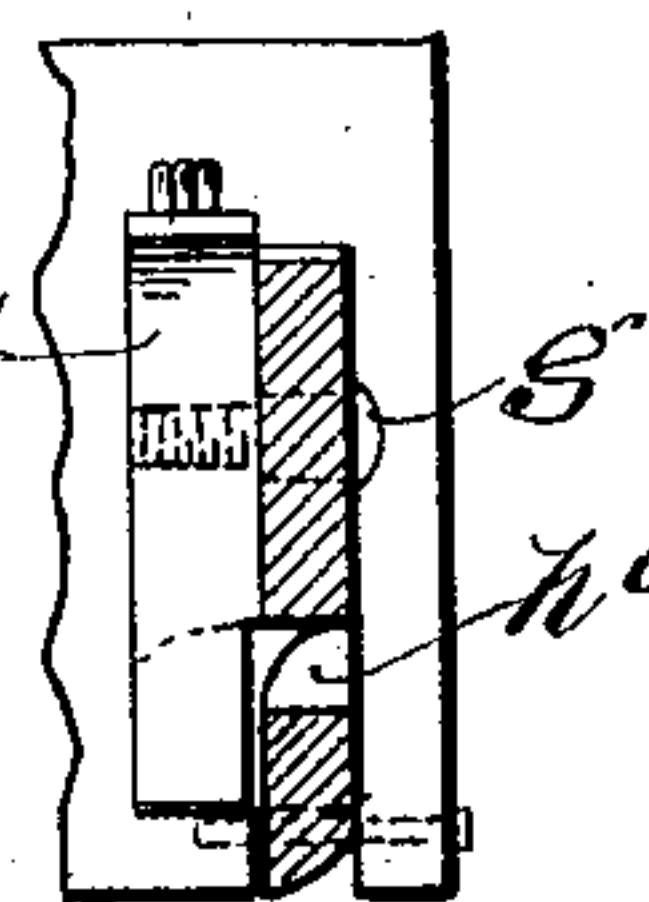


Fig-5-

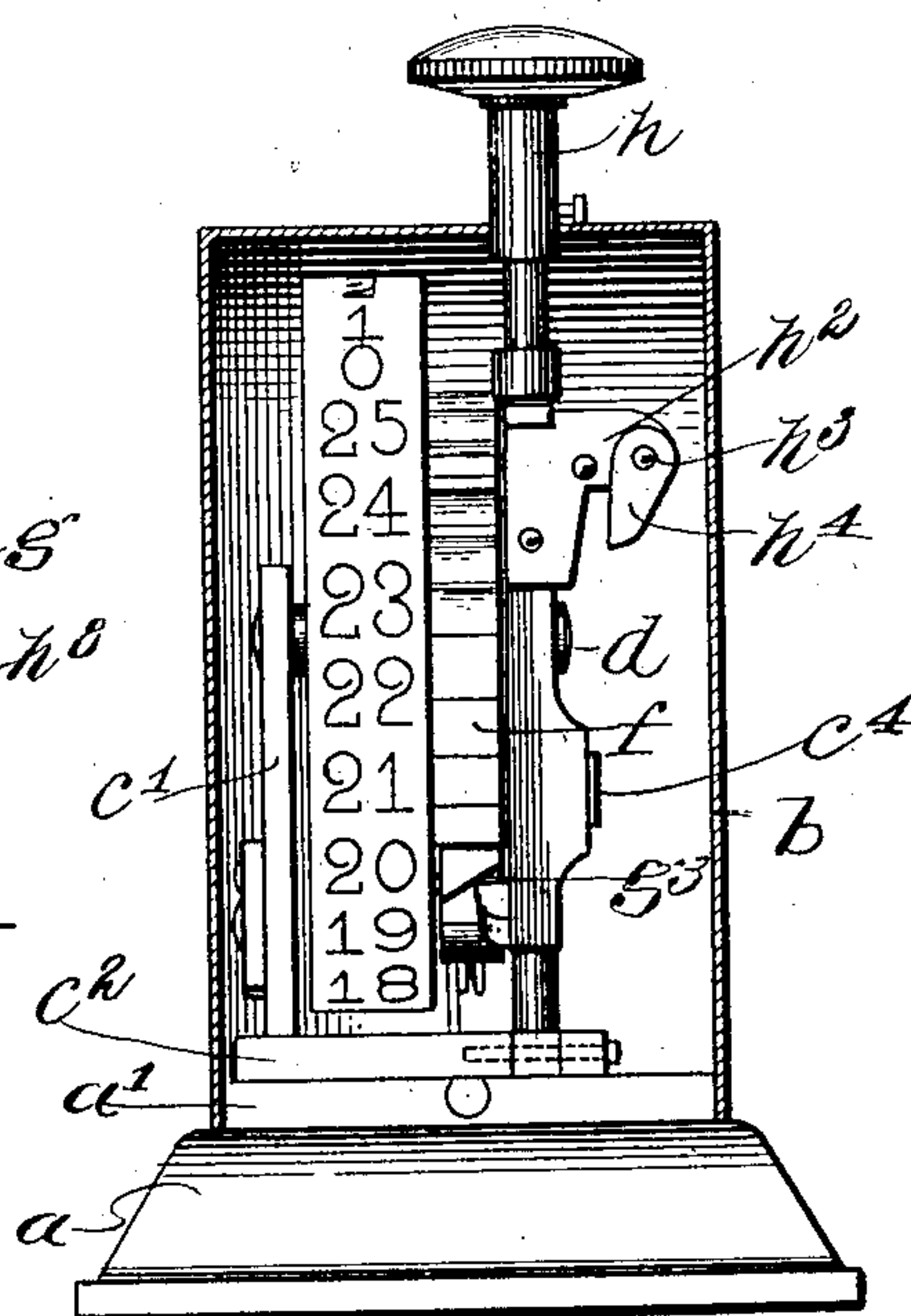


Fig 4

WITNESSES

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# UNITED STATES PATENT OFFICE.

CHARLES F. PIDGIN, OF BOSTON, MASSACHUSETTS.

## INDICATOR.

SPECIFICATION forming part of Letters Patent No. 746,570, dated December 8, 1903.

Application filed June 22, 1899. Serial No. 721,482. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES F. PIDGIN, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Indicators, of which the following is a specification.

This invention has for its object to provide an indicator or a machine for tallying items of various kinds, such as the number of hundreds when a long column of figures is being added; and it consists of a machine of the character specified having certain features of construction and arrangement of parts whereby the indicator may be reset or returned to zero by mechanism controlled by the actuator through which the indicator is moved.

The invention further consists of certain features of construction and relative arrangement of parts possessed by the machine, as clearly illustrated upon the drawings, subsequently to be described in detail, and finally pointed out in the claims.

Reference is to be had to the accompanying drawings, and to the letters marked thereon, forming a part of this specification, the same letters designating the same parts or features, as the case may be, wherever they occur.

Of the drawings, Figure 1 represents, partially in section and partially in side elevation, a machine embodying my invention. Fig. 2 represents a similar view looking at the other side of the machine. Fig. 3 represents a front elevation of the machine with the casing and a part of the base in section. Fig. 4 represents a similar view with the actuator rotated to one side. Fig. 5 represents a section on the line 5 5 of Fig. 1.

Referring to the drawings, *a* indicates a base formed of wood or other suitable material, having a boss *a'* to receive a casing *b*, which incloses the indicating mechanism and which is secured in place by pins *b'*, passed through apertures in its lower edge into apertures in the base *a*. Secured to the top of the boss *a'*, within the casing, is a frame consisting of two upright standards *c'*, supported by a plate *c<sup>2</sup>*. In the standards is journaled a shaft *d*, on which is loosely mounted an indicator *e*, consisting of a flanged wheel bearing upon its periphery a series of numerals commencing with "0" and ending with "25," as

shown in Figs. 3 and 4. A coiled spring *e'*, which is wound within the flange of the wheel *e*, has one end connected to the said wheel and the other to the shaft *d*, and on the outer face of the wheel a ratchet *f* is secured thereto, so as to turn with it. Pivoted upon a screw-pin *g*, projected through the standard *c*, is a retaining-pawl *g'*, which engages the ratchet-wheel to hold it against reverse rotation. The standard *c* is bent laterally at its upper end to form a guide or bearing *c<sup>3</sup>* for a vertically-movable actuator *h*, the lower end of which is projected through an aperture in the plate *c<sup>2</sup>* and bears against a spring *h'*, affixed to the under side of the said plate and located in an aperture *a<sup>2</sup>* in the base *a*. Between the guide *c<sup>3</sup>* and the plate *c<sup>2</sup>* the pawl carrier or actuator *h* is formed with flat sides, one of which bears slidably against a spring *c<sup>4</sup>*, secured to the standard *c* by a screw *c<sup>5</sup>*, so that the said arm is held normally against rotation.

The actuator *h* has an arm *h<sup>2</sup>* secured to it, which carries a pivot *h<sup>3</sup>*, upon which is fulcrumed a pawl *h<sup>4</sup>*, said pawl being held in operative position by a spring *h<sup>5</sup>*. To the upper cylindrical end of the actuator *h*, which projects through an aperture *b<sup>2</sup>* in the casing *b*, is secured a knob *h<sup>6</sup>*, which may be grasped by the fingers and which is held in place by a set-screw *h<sup>7</sup>*. The actuator is normally held in a raised position by the spring *h'* bearing against the lower cylindrical end; but by depressing the knob *h<sup>6</sup>* the pawl *h<sup>4</sup>* engages a tooth in the ratchet *f* and moves it a single step or tooth, the lazy pawl *g'* preventing it from being moved backward by the spring *h'*, and then the spring *h<sup>4</sup>* returns the actuator to its normal position. Hence by successively depressing the actuator *h* the indicator-wheel will be rotated with a step-by-step movement. The casing *b* has an aperture *b<sup>3</sup>*, with which the numerals of the indicator-wheel respectively register as the latter rotates, and when the parts are in their normal condition prior to the actuator being depressed the numeral "0" registers with said aperture. As the indicator-disk is rotated the spring *e'* is wound up, and hence I provide means operable at will for disengaging the lazy pawl *g'* and the pawl *h<sup>4</sup>* from the ratchet *f*, and thereby permitting the spring *e'* to return the indicator to zero position. The pawl *g'* is held in yielding en-



gagement with the ratchet by a spring  $g^2$ , as shown in Fig. 1, and the tail or end of said pawl is cut away to form a cam-surface  $g^3$ , as shown in Figs. 3 and 4. The actuator  $h$  is formed with a cam  $h^8$ , (see Figs. 1 and 5,) which is adapted to engage the cam-surface  $g^3$  and raise the rear end or tail of the pawl, so as to throw its forward end out of engagement with the ratchet when said actuator is rotated about its axis, said cam  $h^8$  normally lying out of the path of said pawl, as shown in Fig. 5. Hence all that is necessary to do to return the indicator to zero position is to hold the actuator  $h$  at its upward extreme of movement and at the same time rotate it so as to bring the cam  $h^8$  into engagement with the cam  $h^3$  and move the pawl  $g'$  out of engagement with the ratchet, and as the actuator  $h$  rotates it swings the pawl  $h^4$  laterally out of engagement with the ratchet, so as not to impede its reverse movement. The actuator is rotated back into operative position automatically by the spring  $c^4$ , which bears against the curved cam  $h^9$ , formed on the spindle, as shown in Figs. 1 and 3.

It is evident that a stop must be provided to limit the return movement of the indicator, and to this end I attach to the indicator a clip  $i$ , which is adapted to engage a stop  $i'$ , secured to the standard  $c'$ , as shown in Fig. 2.

The details of construction of the machine as I have described it may be varied to suit particular requirements without departing from the spirit and scope of the invention.

Having thus explained the nature of the invention and described a way of constructing and using the same, although without having attempted to set forth all the forms in which it may be made or all the modes of its use, I declare that what I claim is—

1. A device of the character specified comprising an indicator, a pawl-and-ratchet mechanism for advancing said indicator, an actuator for operating the pawl and thereby rotating the ratchet, said actuator being capable of rotary movement whereby said pawl is moved to inoperative position, permitting the automatic resetting of the indicator, and a spring holding said actuator normally against rotation.

2. A device of the character specified comprising an indicator, a pawl-and-ratchet mechanism for advancing said indicator, a reciprocatory actuator for operating the pawl and thereby rotating the ratchet, a resetting-spring, said actuator being capable of rotary movement whereby said pawl is moved to inoperative position, permitting said spring to reset the indicator, and a spring holding said actuator normally against rotation.

3. A device of the character specified com-

prising an indicator, a pawl-and-ratchet mechanism for advancing said indicator, an actuator for operating said pawl, and thereby rotating said ratchet, said actuator being provided with a flattened portion, a guide for said actuator in which the latter is capable of rotary movement whereby said pawl is moved into inoperative position, and a spring carried by said guide and bearing against the flattened portion of said actuator.

4. A device of the character specified comprising an indicator, a pawl-and-ratchet mechanism for advancing said indicator, a reciprocatory actuator, a resetting-spring for said indicator, and a retaining-pawl, said actuator being capable of rotary movement whereby said retaining-pawl is engaged and moved into an inoperative position.

5. A device of the character specified comprising an indicator, a ratchet connected to said indicator, a pawl for advancing the indicator, a retaining-pawl, a resetting-spring, and an actuator for moving the first-mentioned pawl and having means for throwing both said pawls into an inoperative position.

6. A device of the character specified comprising an indicator, a ratchet connected to said indicator, a pawl for advancing the indicator, a retaining-pawl, a resetting-spring, and an actuator for moving the first-mentioned pawl, said actuator and retaining-pawls having coacting cams for moving said retaining-pawls to an inoperative position.

7. A device of the character specified, comprising an indicator, a ratchet connected to said indicator, a pawl for advancing the indicator, a retaining-pawl, a resetting-spring, and a reciprocatory actuator adapted to rotate about its axis, said actuator carrying the indicator-advancing pawl, and having a cam adapted to engage the retaining-pawl and move it to an inoperative position when said actuator is rotated.

8. A device of the character specified, comprising an indicator, a casing, a numeral-bearing indicator-wheel in said casing and having one of its numerals always visible through an aperture in said casing, a pawl and ratchet for advancing said indicator, an actuator for said pawl having a portion projected through said casing, a spring for resetting said indicator-wheel, and a retaining-pawl, said actuator having means for moving both of said pawls to an inoperative position to permit the spring to reset the indicator-wheel.

In testimony whereof I have affixed my signature in presence of two witnesses.

CHARLES F. PIDGIN.

Witnesses:

MARCUS B. MAY,  
C. C. STECHER.