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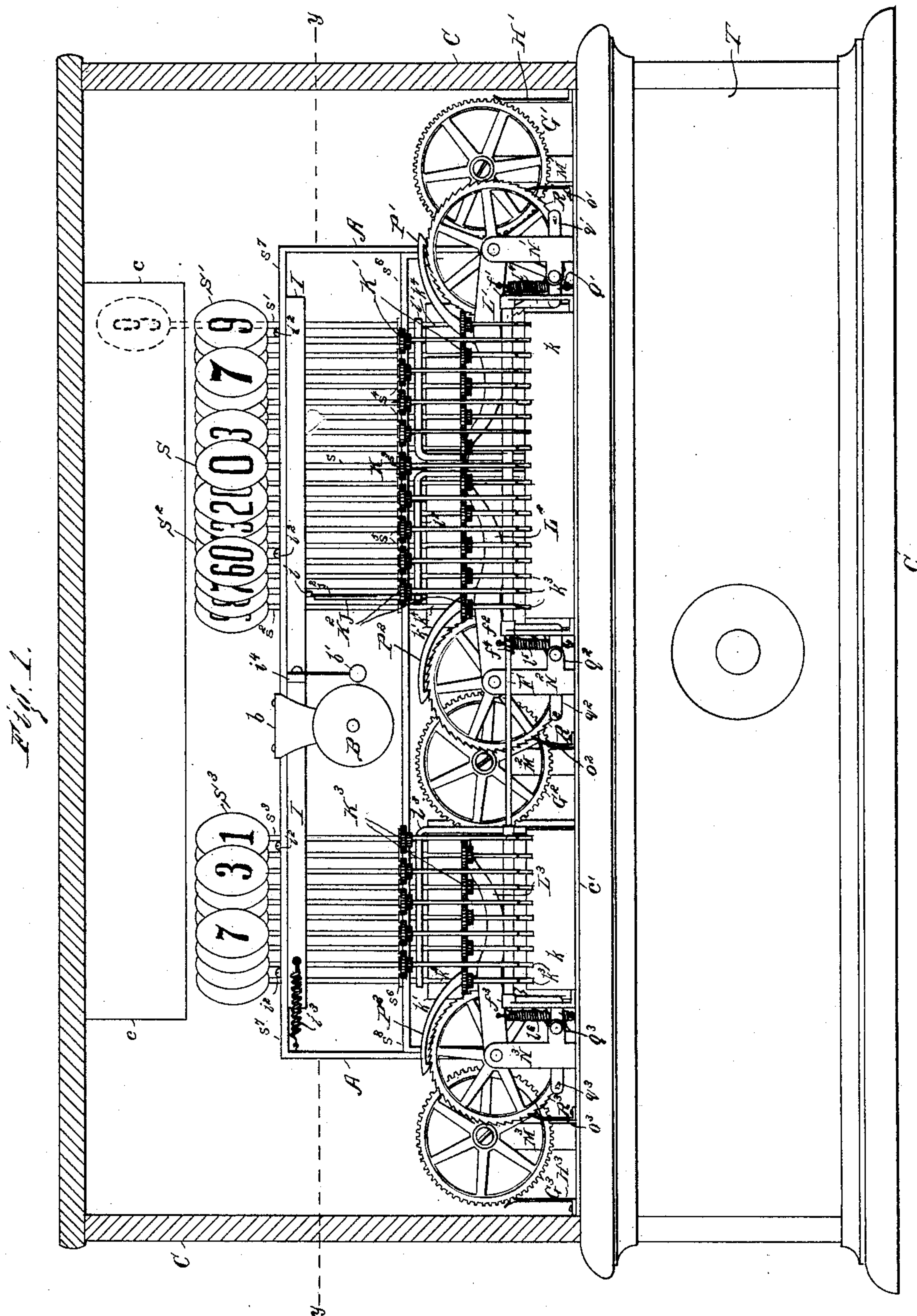
3 Sheets—Sheet 1.

J. J. WEBSTER.

CASH INDICATOR AND REGISTER.

No. 370,363.

Patented Sept. 20, 1887.



WITNESSES—

*Wickley Hyde,*  
*Esther M. Day*

INVENTOR—

*Jerome J. Webster,*  
*By Albert M. Moore,*  
*His Attorney.*

(No Model.)

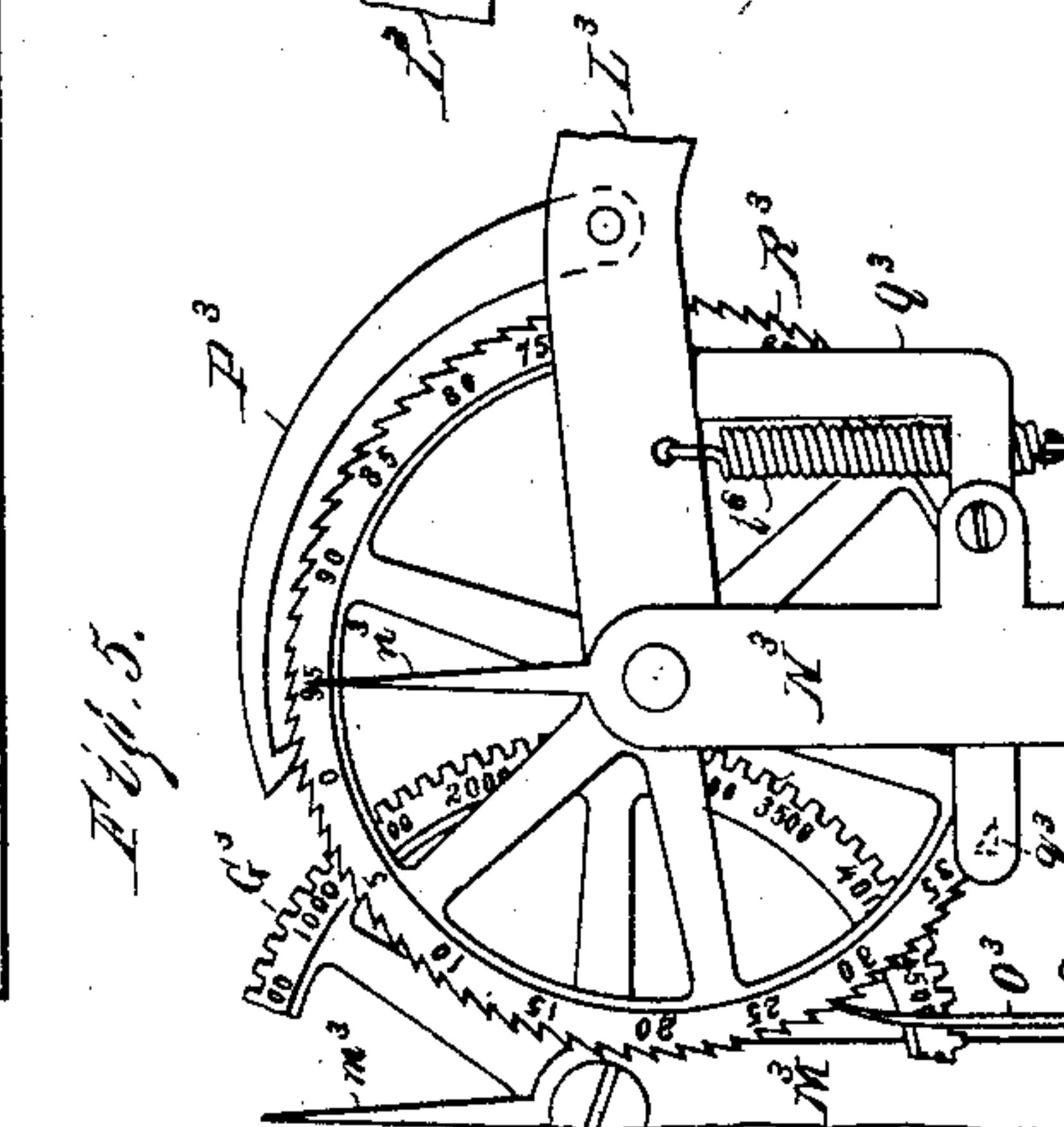
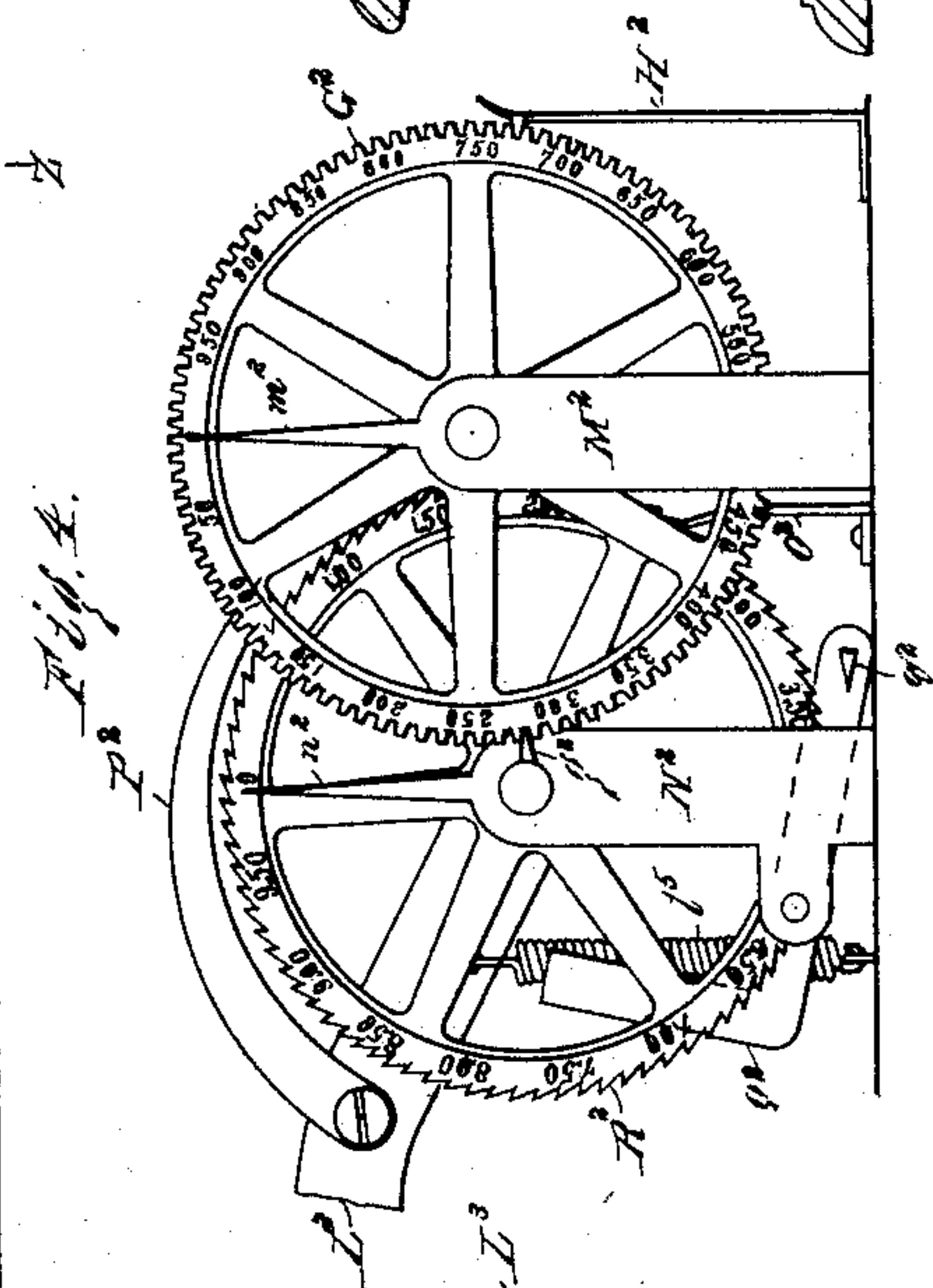
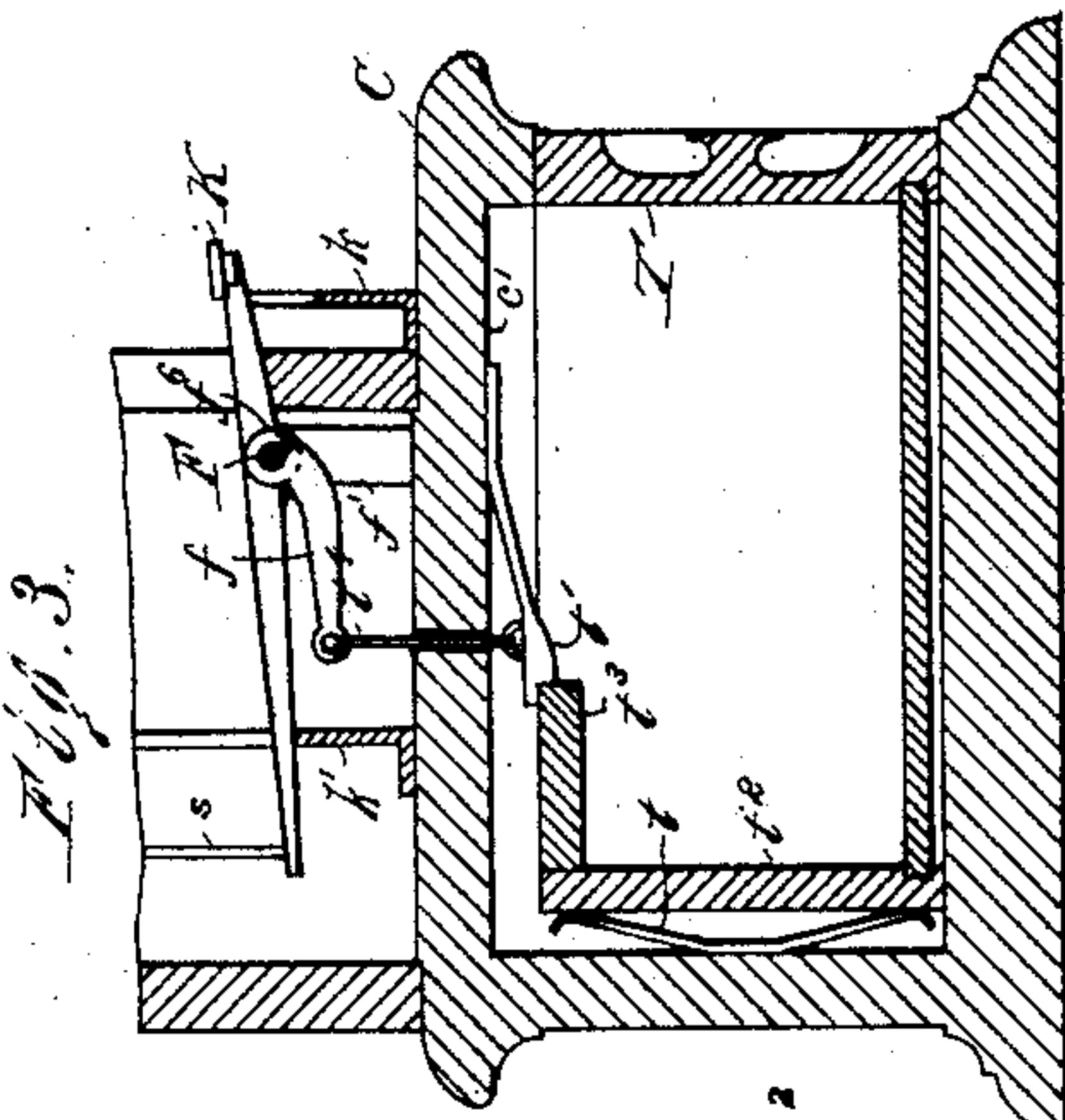
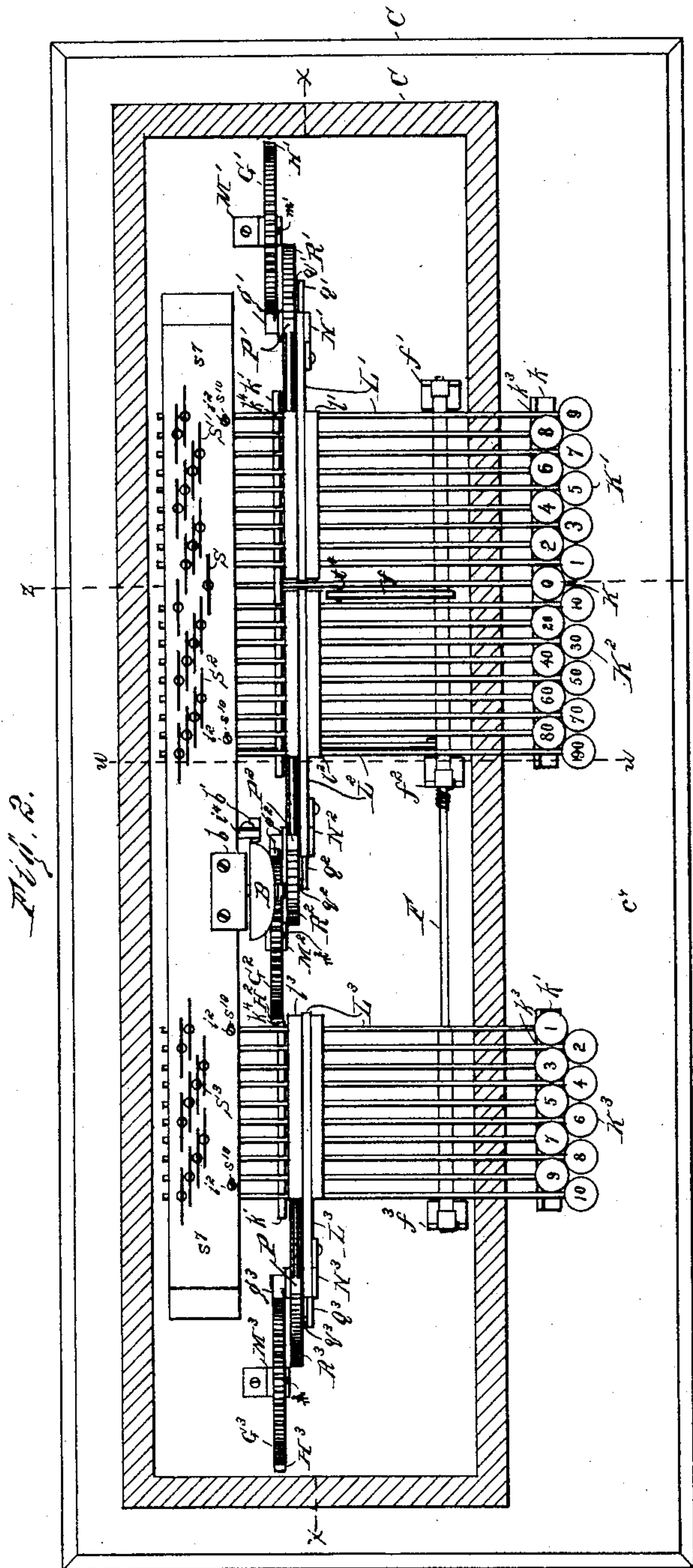
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J. J. WEBSTER.

CASH INDICATOR AND REGISTER.

No. 370,363.

Patented Sept. 20, 1887.



WITNESSES—

*Wirkley Hyde,*  
*Antoine M. Day*

INVENTOR—  
*Jerome J. Webster,*  
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(No Model.)

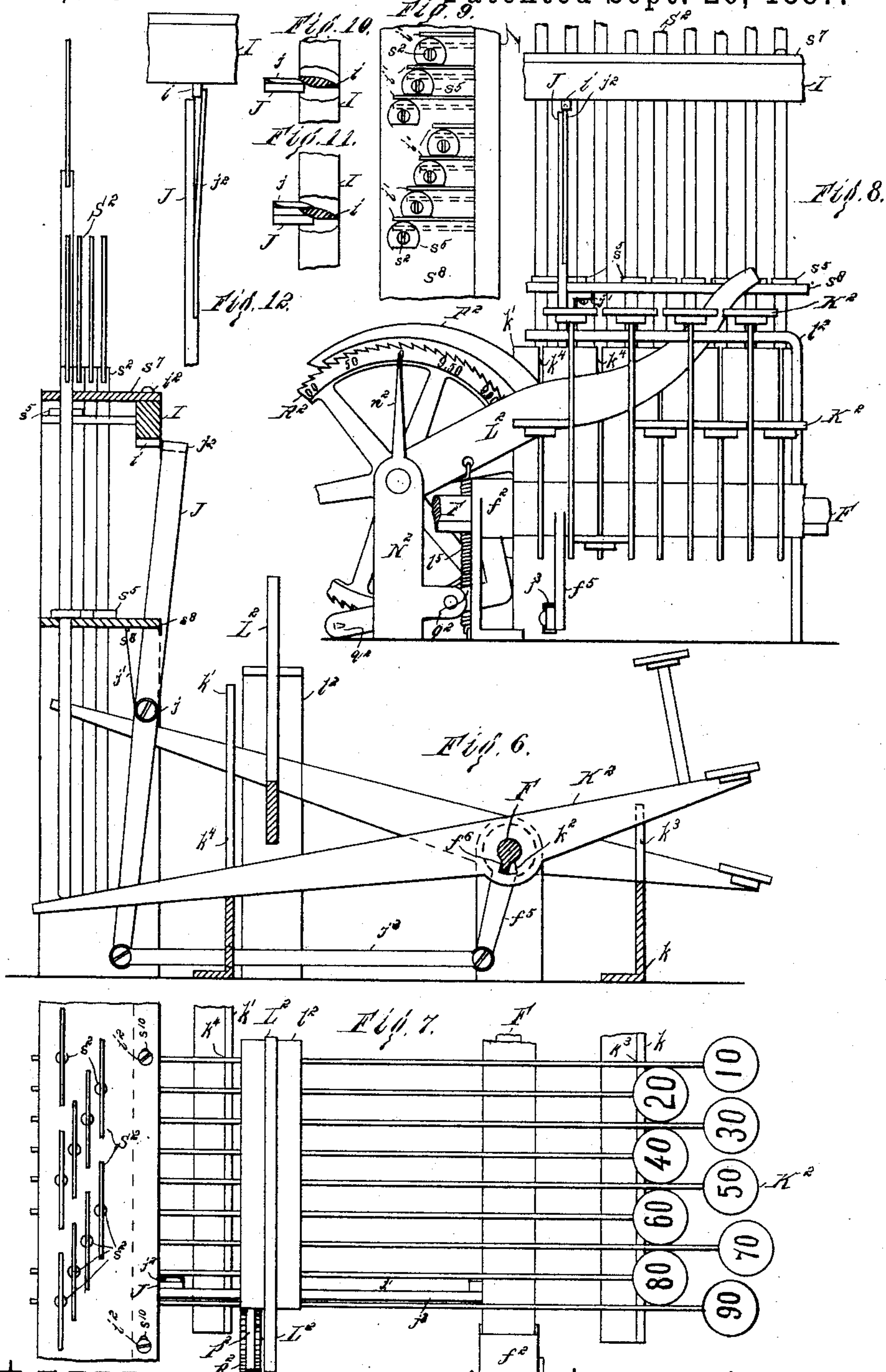
3 Sheets—Sheet 3.

J. J. WEBSTER.

CASH INDICATOR AND REGISTER.

No. 370,363.

Patented Sept. 20, 1887.



Witnesses—

Henry Hyde.

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Jerome J. Webster,  
By Albert M. Moore,  
His Attorney.



# UNITED STATES PATENT OFFICE.

JEROME J. WEBSTER, OF NEWPORT, VERMONT, ASSIGNOR TO THE BOSTON CASH INDICATOR AND RECORDER COMPANY, OF BANGOR, MAINE.

## CASH INDICATOR AND REGISTER.

SPECIFICATION forming part of Letters Patent No. 370,363, dated September 20, 1887.

Application filed October 7, 1886. Serial No. 215,538. (No model.)

*To all whom it may concern:*

Be it known that I, JEROME J. WEBSTER, a subject of Victoria, Queen of the United Kingdom of Great Britain and Ireland, and a resident of Newport, in the county of Orleans and State of Vermont, have invented a certain new and useful Improvement in Cash Indicators and Registers, of which the following is a specification.

My invention relates to cash indicators and registers; and it consists in the devices and combinations hereinafter described and claimed.

In the accompanying drawings, on three sheets, Figure 1 is a front elevation of a cash indicator and register constructed in accordance with my invention, a part of the case being in vertical section on the line  $xx$  in Fig. 2; Fig. 2, a plan of the same, the case being in horizontal section on the line  $yy$  in Fig. 1; Fig. 3, a vertical section on the line  $zz$  in Fig. 2 of the case, (except the upper part, which is broken off,) till, stop and guide plates, and fulcrum-rod, and a side elevation of the till-opening spring, the till-locking spring, the link which connects said locking-spring to the arm projecting from the fulcrum-rod, said arm, the fulcrum-rod stand, and the lower part of a signal-rod; Fig. 4, a rear elevation of the middle or dime ratchet and gear, the stands which support the same, part of the registering-lever, and the impelling, retaining, and locking pawls; Fig. 5, a front elevation of the left-hand or dollar ratchet and gear; Fig. 6, a side elevation of the signal-keys, one of which is depressed, the signals, the signal-rods, the locking-rod lever, the link which connects said lever to an arm of the fulcrum-rod, said arm, and the registering-lever guide, and a section on the line  $ww$  in Fig. 2 of the stop and guide plates, the fulcrum-rod, the registering-lever, the signal-rod guides, and the locking-rod; Fig. 7, a plan of the middle group of signal-keys and their signals, a part of the stop and guide plates, a part of the fulcrum-rod, a part of a registering-lever and its guide, a part of a ratchet and its impelling-pawl, the link which connects the arm of the fulcrum-rod and the locking-rod lever, said arm, the spring which restores the fulcrum-rod to position, a fulcrum-rod stand, a part of the upper signal-rod guide,

a part of the locking-rod, (indicated by a dotted line,) locking-pins, and a spring-cam on the locking-rod lever; Fig. 8, a front elevation of the parts shown in Fig. 7 and of the locking-pawl; Fig. 9, a plan of the lower signal-rod guide, the locking-rod and its pins, and the signal-rods and their collars—the signals being omitted—the position of the locking-rod pins shown by the dotted lines being their normal position; Fig. 10, a plan of a part of the locking-rod and the locking-rod lever, a part of the locking-rod being broken away on each side of the locking-rod cam to show said cam, said lever being represented as beginning to press the locking-rod cam aside to unlock the signals; Fig. 11, a plan of the parts shown in Fig. 10, representing the locking-rod lever returning to its normal position; Fig. 12, a front elevation of the same parts in the position shown in Fig. 11.

The case C is of any usual construction which will conceal the operating mechanism and the signals except when the signals are raised, as hereinafter described, and preferably has a glass window,  $c$ , on each side to allow the signals to be read by a cashier or other person seated behind the case, as well as by customers standing in front thereof, said signals being numbered on both sides in the usual manner.

In the lower part of the case slides the till T, pressed outward by a spring,  $t$ , secured to the inside of the back of the case and pressing against the back of the till in the usual manner. The till is locked in its closed position (see Fig. 3) by a locking-spring,  $t'$ , secured at its front end to the under side of the table  $c'$ , which supports the indicating and registering mechanism, and springing down in front of the back  $t^2$  of the till, or preferably in front of a bar,  $t^3$ , which extends across the top of said till near the back of the same. The free end of the locking-spring is raised to allow the till to be opened (by the pressure of the spring  $t$ ) by the rocking of the rock-shaft or fulcrum-rod F, which is supported in a horizontal position by and turns in vertical stands  $f'$ ,  $f^2$ ,  $f^3$ , secured on the table  $c'$ , said fulcrum-rod being provided with a backwardly-projecting arm,  $f$ , rigidly secured thereto, which is connected by a link,  $t^4$ , to said locking-spring near its free end. The fulcrum-rod is rocked to open



the till by depressing any one or more of the signal-keys, as hereinafter described, all of which keys have their fulcrums upon said rod. The fulcrum-rod F is provided with a spline or projection,  $f^6$ , except at its bearings in the stands  $f' f^2 f^3$ , and the openings  $k^2$  (see Fig. 6) in the keys  $K K' K^2 K^3$ , which receive the fulcrum-rod, are of the shape shown, each of said openings being partly circular to fit the cylindrical portion of said rod, and having a slot,  $k^2$ , leading out of said circular opening to receive said spline and to allow the same to turn therein without turning any of said keys. All of the slots  $k^2$  are in line with each other, and their front sides are in contact with the front side of the spline  $f^6$ , so that depressing any one of the keys will rock the fulcrum-rod, and said slots are of such a width that depressing any key to its utmost will not carry the back side of said spline against the back side of the slots of the other keys. The keys are guided vertically and limited in their motion by stop and guide plates  $k' k'$ , respectively placed in front of and behind said fulcrum-rod and provided with vertical slots  $k^3 k^4$ , within which said keys move and against the bottom of which they are stopped.

When the zero-signal key K is depressed, the zero-signal S is thrown up into sight, its vertical stem or signal-rod  $s$  resting upon said key K, near the outer end of the same, indicating merely that the till is opened, this key being used when the till is to be opened for other purposes than the making of change. The signal-rod  $s$  is guided vertically by horizontal guide-plates  $s^7 s^8$  through holes in which said signal-rod is passed, and is provided with an annular collar,  $s^9$ , which normally rests upon the lower guide,  $s^8$ . There is a horizontal locking-rod, I, running from end to end of the upper guide,  $s^7$ , and provided with horizontal backwardly-projecting pins  $i'$ , said locking-rod I being supported from said upper guide,  $s^7$ , by means of screws  $i^2$ , which pass down through longitudinal slots  $s^{10}$  in said upper guide, which slots allow said locking-rod with its pins to be moved longitudinally, the ends of said slots serving as stops to limit the longitudinal motion of said locking-rod. The pins  $i'$  are so arranged that a vertical line will pass through one of said pins and through the collar  $s^9$  on the zero-signal rod when the locking-rod is in its normal position—that is, when drawn to the left by the spring  $i^3$  (shown in Fig. 1)—and connecting the frame A and said locking-rod, so that if the locking-rod be first pushed to the right, and the zero-signal be then raised until its collar is above the pins  $i'$ , and the locking-rod be allowed to resume its normal position, one of the locking-pins will be under said collar and prevent the signal from falling until the locking-rod is again moved to the right. The locking-rod is provided on its under surface with a cam,  $i$ , of a double-wedge shape, (see Figs. 6, 10, 11, and 12,) and a nearly vertical locking-rod le-

ver, J, is pivoted at  $j$  to a bracket,  $j'$ , secured to the lower guide,  $s^8$ , (see Figs. 6 and 8,) which lever J is provided near its upper end with a spring-cam,  $j^2$ , the lower end of which is secured to the side of said lever J, and the upper end of which is formed into a double wedge-shaped cam, the spring of said spring-cam tending to press said cam against the right side of said lever and (the parts being suitably arranged therefor) to bring the upper end of said cam (which projects above the upper end of said lever J) to the left of the locking-rod cam. The upper end of the lever J is normally back of the locking-rod, so that when the upper end of said lever is thrown forward (to the right in Figs. 6 and 7) the right side of the spring-cam will press against the left side of the locking-rod cam and throw the locking-rod to the right until the spring-cam passes by the locking-rod cam and allows the locking-rod to be restored to its normal position by the spring  $i^3$ , as above described.

The lower end of the rocking-rod lever J is connected by a link,  $j^3$ , to an arm,  $f^5$ , depending from and rigidly secured to the fulcrum-rod F, so that rocking the fulcrum-rod in such a manner as to throw the lower end of the arm  $f^5$  backward will cause the upper end of the lever J to move forward and the locking-rod to move to the right, as above described; hence depressing the zero-key will not only raise the zero-signal, but will cause the same to be locked in its raised position. Besides the zero-key, there are three groups of signal-keys,  $K' K^2 K^3$ , each of which is precisely like the zero-key, and each of which has a corresponding signal,  $S' S^2 S^3$ , precisely like the zero-signal, except in the marks or numbers on said signals and keys, each key and the corresponding signal bearing the same number. Each key of each group will raise its signal, and will move the rocking-rod and allow the signals then in a raised position to fall and at the same time lock its own signal in a raised position, and will perform all the functions above ascribed to the zero-key, including the unlocking of the till, and differs from the zero-key only in indicating the amount of money placed in the till and in operating the registering mechanism, as described below.

A bracket,  $b$ , is secured to the upper guide,  $s^7$ , as shown in Figs. 1 and 2, and supports a small bell or gong, B, and a spring-hammer,  $b'$ , is secured to an ear,  $i^4$ , projecting from the front of the locking-rod I, in proximity to said bell, so that the return motion of the locking-rod causes said hammer to strike said bell every time the till is opened, and to call attention thereto.

The right-hand group of signals,  $S'$ , is numbered to indicate cents, the middle group,  $S^2$ , to indicate dimes, and the left-hand group,  $S^3$ , to indicate dollars.

The registering devices used with each group of signals being the same in principle and differing only in matters of arrangement—as in the direction in which the registering-lever



extends from its fulcrum, in the direction in which the gears and ratchets rotate, and therefore in the position of these parts and their pawls relatively to each other—it will be convenient to look at the corresponding parts of the dime-registering and dollar-registering devices, (shown on a larger scale in Figs. 4 and 5,) the corresponding parts being marked with the same letter of reference, but with a different exponent, the exponents being increased by one in going from right to left from each group to the next.

For convenience, the dime-registering devices, partly represented in rear elevation in Fig. 4, will first be described.

Upon the stand  $N^2$  is pivoted the registering-lever  $L^2$ , concentrically with the ratchet  $R^2$ , and to said registering-lever is pivoted the pawl  $P^2$ , which engages the teeth of said ratchet. The lever  $L^2$  reaches to the right (as one faces the machine) over the keys of the group  $K^2$ , back of their fulcrum, and is drawn down into or nearly into contact with one of the keys of said group by a spring,  $b^5$ , connected to said lever and to the table  $c'$ , so that the complete depression of said key will raise said lever  $L^2$  sufficiently to cause the pawl  $P^2$  to slide over a number of teeth of said ratchet corresponding to one-tenth of the number of said key, so that when said key is let go and the lever  $L^2$  is restored to its normal position by the spring  $b^5$  the ratchet  $R^2$  will be moved by the pawl  $P^2$  an angular distance represented by the number of its teeth over which the pawl slides in the upward movement of the registering-lever. The keys all have the same length of movement, and the under side of the registering-lever is so shaped or curved, as shown in Figs. 1 and 8, that depressing and letting go the key next to the right of said first-named key will turn the ratchet  $R^2$  a tooth less than depressing and letting go said first-named key, and depressing and letting go the key next to the left of said first-named key will slide the pawl and turn the ratchet  $R^2$  one tooth more than depressing and letting go said first-named key, and so that depressing any one of the keys of the group  $K^2$  will slide the pawl  $P^2$  over a number of the teeth of said ratchet corresponding to one-tenth of the number borne by said key and by its corresponding signal,  $S^2$ —that is, depressing and letting go the key marked "10" will cause the ratchet to turn one tooth and depressing and letting go the key marked "20" will cause the ratchet to turn two teeth, and so on. The ratchet  $R^2$  is prevented from being turned by the friction of the pawl  $P^2$  by the spring-retaining pawl  $O^2$ , secured to the table  $c'$  and engaging with the teeth of said ratchet, and is prevented from jumping past the pawl  $P^2$  by the locking-pawl  $Q^2$ , the latter being a bent lever pivoted on said stand  $N^2$ , and having a tooth,  $q^2$ , which is forced by the registering-lever striking the upper end of said locking-pawl up into engagement with said ratchet, from which engagement it is released by its own weight when said register-

ing-lever is raised. The shaft or pivot of the ratchet  $R^2$  is provided with a single radial tooth,  $g^2$ , making it in effect a single-toothed pinion, which tooth  $g^2$  engages with a gear,  $G^2$ , once in every revolution of said ratchet, and, as the ratchet and gear have each a hundred teeth, one revolution of the ratchet indicates the receipt of one hundred dimes, one thousand cents, or ten dollars, and one revolution of the gear  $G^2$  indicates one hundred revolutions of the ratchet or the receipt of ten hundred dollars. The stand  $M^2$  supports the gear  $G^2$ . A spring-retaining pawl,  $H^2$ , secured to the table  $c'$  and engaging with the teeth of said gear  $G^2$ , prevents the teeth of said gear from jumping past said pawl  $H^2$ . The sides of the ratchet  $R^2$  and gear  $G^2$  are graduated, and the graduations are numbered, the numbers on the ratchet running from 0 to 950, the 0 indicating the starting-point and also one thousand cents, and the numbers on the gear running from 0 to 950, the 0 indicating the starting-point and also one thousand dollars.

The stands  $N^2$   $M^2$  are each provided with an index-finger,  $n^2$   $m^2$ , to denote the place of the 0 at the beginning of business, and to point to the figures indicating the amount of money taken up to the time of observation. The registering-ratchet  $R'$ , gear  $G'$ , their supporting-stands  $N'$   $M'$ , impelling-pawl  $P'$ , locking-pawl  $Q'$ , retaining-pawls  $O'$   $H'$ , single-toothed pinion  $g'$ , registering-lever  $L'$ , its spring  $b'$ , and index-fingers  $n'$   $m'$  are substantially like the parts of the same name above described, except as above indicated, and except, also, that the ratchet and gear last named have their graduations differently numbered, a single tooth of the last-named ratchet indicating one cent instead of one dime, and a single tooth of the gear  $G'$  indicating one dollar instead of ten dollars, and except, also, that the registering-lever  $L'$  extends to the left over the cent-registering keys instead of to the right, and that the ratchet  $r'$  is therefore at the left of the center of the gear  $G'$ . So, too, the left-hand ratchet,  $R^3$ , gear  $G^3$ , single-toothed pinion  $g^3$ , ratchet-stand  $N^3$ , gear-stand  $M^3$ , impelling-pawl  $P^3$ , locking-pawl  $Q^3$ , retaining-pawls  $O^3$   $H^3$ , registering-lever  $L^3$ , its spring  $b^6$ , and index-fingers  $n^3$   $m^3$  are like the parts of the same name in Fig. 4, and similarly arranged, the ratchet registering dollars up to one hundred, and the gear recording ten thousand dollars in a complete revolution, said last-named ratchet and gear being numbered accordingly. In reckoning up the receipts it will only be necessary to add the six amounts indicated by the ratchets and gears to ascertain the total amount received since the last previous reckoning.

It will be seen that the zero-lever does not operate any registering-lever, being placed between the registering-levers  $L'$  and  $L^2$ .

The devices for locking the signal-rods in their raised position and of subsequently releasing the same are not broadly claimed herein, being shown and claimed in another



application, Serial No. 226,411, filed February 3, 1887.

I claim as my invention—

1. The combination of the frame, the locking-rod provided with a cam and adapted to slide on said frame, a spring adapted to draw said locking-rod in one direction, a locking-rod lever adapted, when turned on its fulcrum, to press against said cam and to push aside said locking-rod against the resistance of said spring and to pass by and release said cam and locking-rod, a spring bell-hammer secured to said locking-rod, one or more signal-keys supported upon a fulcrum-rod, said fulcrum-rod, any one of said keys being adapted, when depressed, to rock said fulcrum-rod, an arm rigidly secured to said fulcrum-rod, and a link connecting said arm and said locking-rod lever, and a bell supported by said frame, as and for the purpose specified.

2. The combination of the locking-rod provided with pins and with a double wedge-shaped cam and adapted to slide horizontally on the frame, said frame, signals provided with stems or signal rods guided vertically in said frame and provided with collars, a locking-rod lever provided with a spring-cam normally pressing against said lever and adapted, when said lever is turned, to press against the side of said first-named cam and to slide said locking-rod, and a spring connecting said locking-rod and said frame, signal-keys, upon which the lower ends of said signal-rods rest, a fulcrum-rod supporting said keys and adapted to be rocked by depressing any one or more of said keys and provided with an arm rigidly secured thereto, and a link connecting said arm and said locking-rod lever, as and for the purpose specified.

3. The combination of the case, a till sliding in said case, a locking-spring secured to said case and adapted to spring down in front of the back of said till or in front of a bar extending across the top of said till near the back of the same, the fulcrum-rod, signal-keys supported thereon and adapted, when depressed, to rock the same, an arm rigidly secured to said fulcrum-rod, and a link connecting the free end of said arm to said locking-spring to unlock said till by depressing any of said keys, as and for the purpose specified.

4. The combination of the case, a till sliding in said case, a locking-spring secured to said case and adapted to spring down in front of the back of said till or in front of a bar extending across the top of said till, the fulcrum-rod provided with a spline, keys provided with openings to receive said fulcrum-rod and spline, said openings being shaped, as herein described, to allow said fulcrum-rod to be turned without turning any of said keys and to cause said rod to be turned by the depression of any of said keys, an arm rigidly secured to said fulcrum-rod, and a link connecting the free end of said arm to said locking-spring, as and for the purpose specified.

5. The combination of a series of keys or signal-levers differently numbered, a suitable stand, a registering-lever pivoted on said stand and extending over said keys, and arranged to be struck by said keys when the same are depressed, a ratchet concentric with the pivot of said registering-lever, a pawl pivoted on said registering-lever and engaging the teeth of said ratchet, the under side of said registering-lever being curved, substantially as described, and stops to limit the motion of said keys, whereby the depression of any one of said keys will cause said pawl to travel over a number of the teeth of said ratchet corresponding to the number of said key, as and for the purpose specified.

6. The combination of a series of keys differently numbered, a suitable stand, a registering-lever pivoted on said stand and extending over said keys, and arranged to be struck by said keys when the same are depressed, a ratchet concentric with the pivot of said registering-lever, a registering-pawl pivoted on said registering-lever and engaging the teeth of said ratchet, the under side of said registering-lever being curved, substantially as described, stops to limit the motion of said keys, and a spring to restore said registering-lever to position when a depressed key is released, whereby the depression of any one of said keys will cause said pawl to travel over a number of the teeth of said ratchet corresponding to the number of said key, and the release of said key will cause said ratchet to be rotated an angular distance corresponding to the same number of said teeth, as and for the purpose specified.

7. The combination of a series of keys differently numbered, a fulcrum common to said keys, a suitable stand, a registering-lever pivoted on said stand and extending over said keys, and arranged to be struck by said keys when the same are depressed, a ratchet concentric with the pivot of said registering-lever, a registering-pawl pivoted on said registering-lever and engaging the teeth of said ratchet, the under side of said registering-lever being curved, substantially as described, stops to limit the motion of said keys, a spring to restore said registering-lever to position when a depressed key is released, a single-toothed pinion concentric with and turning with said ratchet and engaging with said gear, the sides of said ratchet and gear being marked with figures to indicate the numbers of their respective teeth, and stationary index-fingers to point out said figures, as and for the purpose specified.

In witness whereof I, the said JEROME J. WEBSTER, have hereunto set my hand this 11th day of August, A. D. 1886.

JEROME J. WEBSTER.

Witnesses:

ALBERT M. MOORE,  
KIRKLEY HYDE.