

No. 670,633.

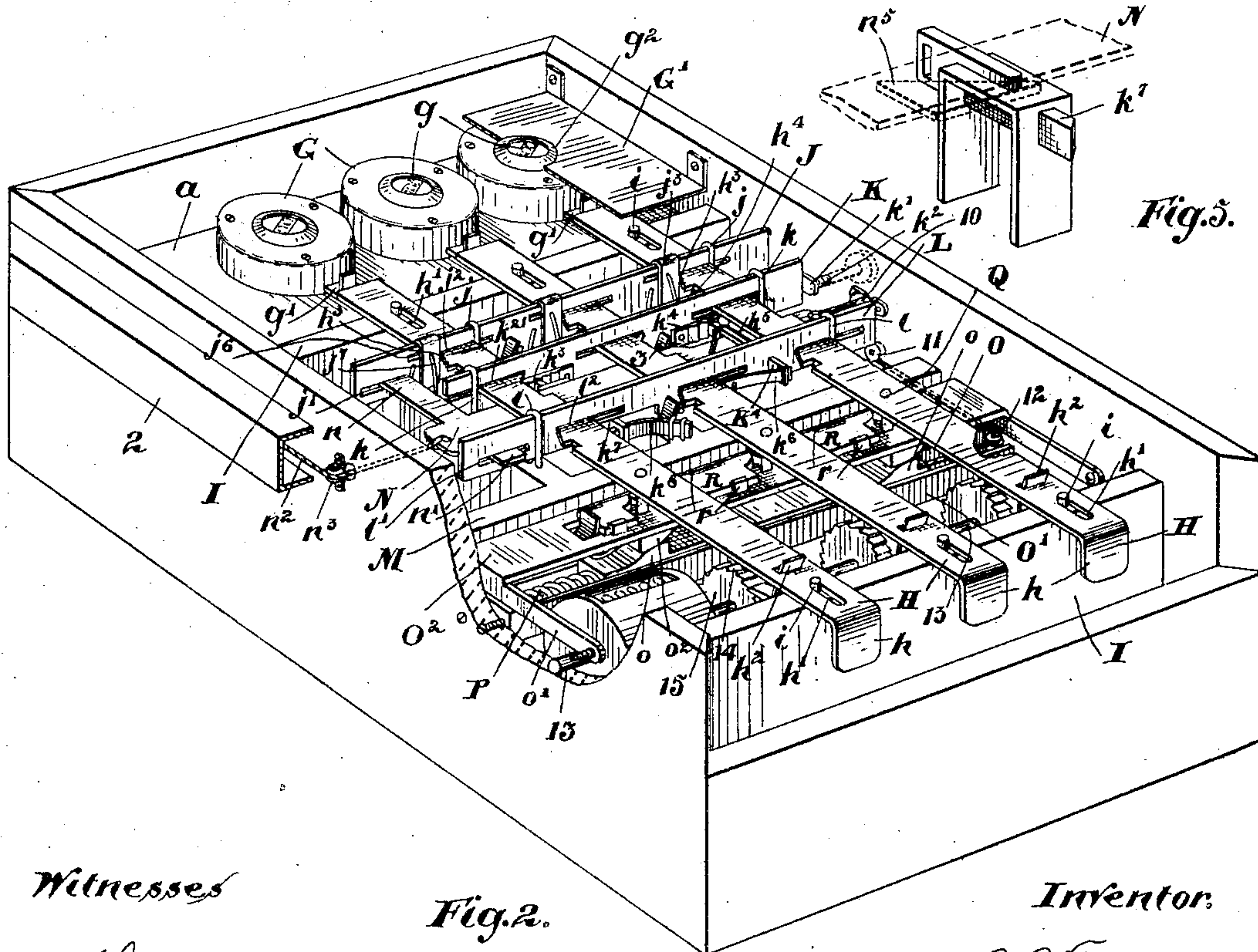
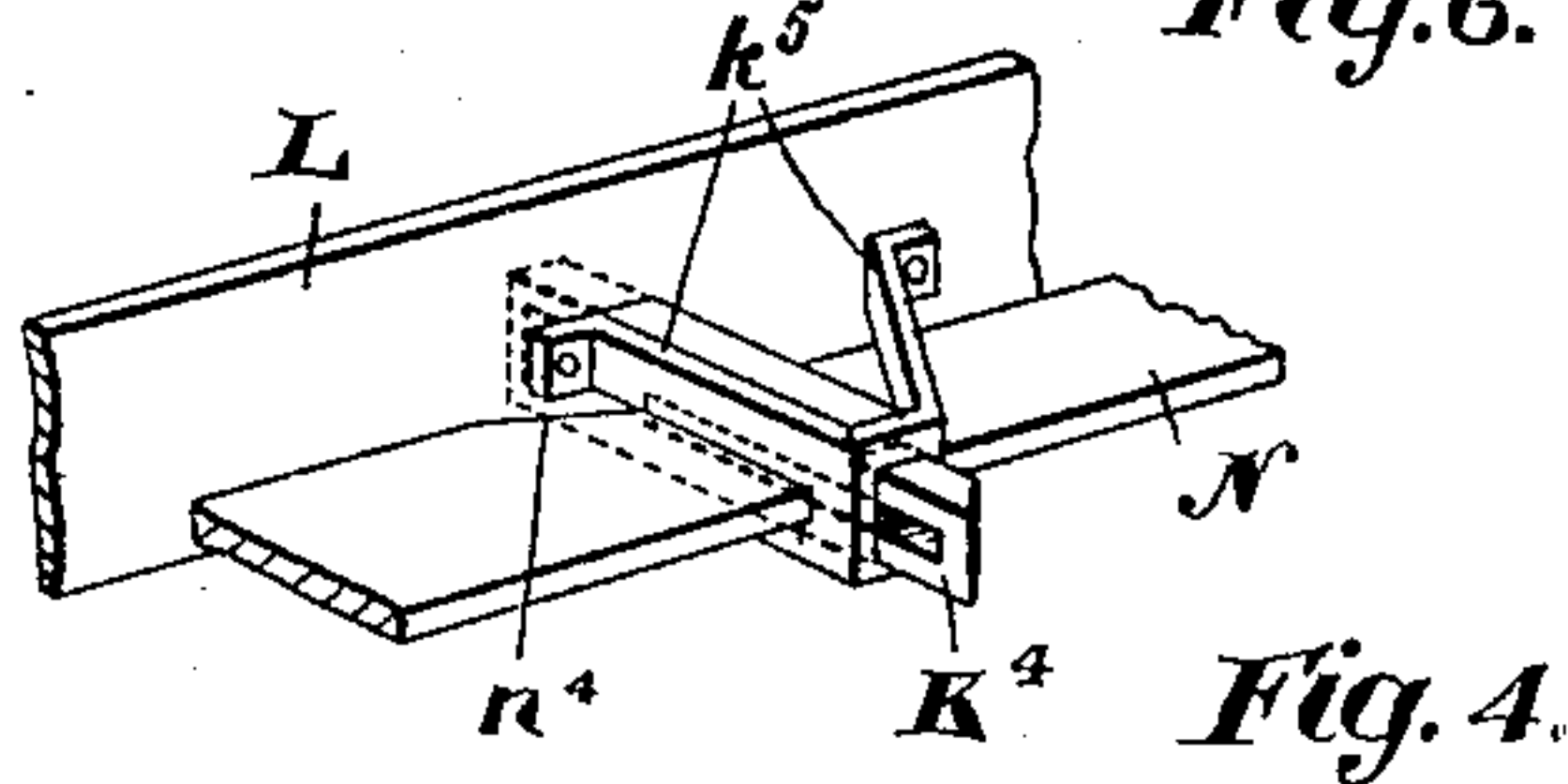
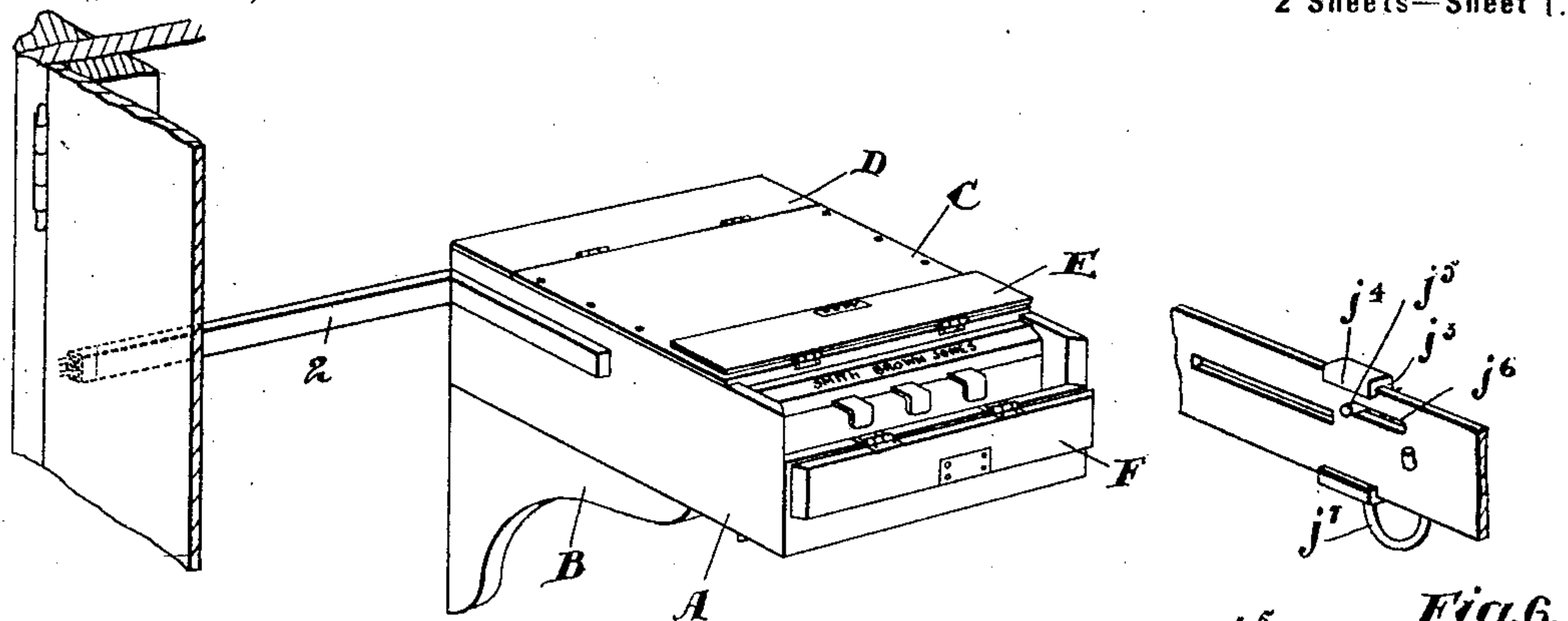
Patented Mar. 26, 1901.

A. A. FARWELL.
VOTING MACHINE.

(Application filed Mar. 13, 1900.)

2 Sheets—Sheet 1.

(No Model.)



Witnesses

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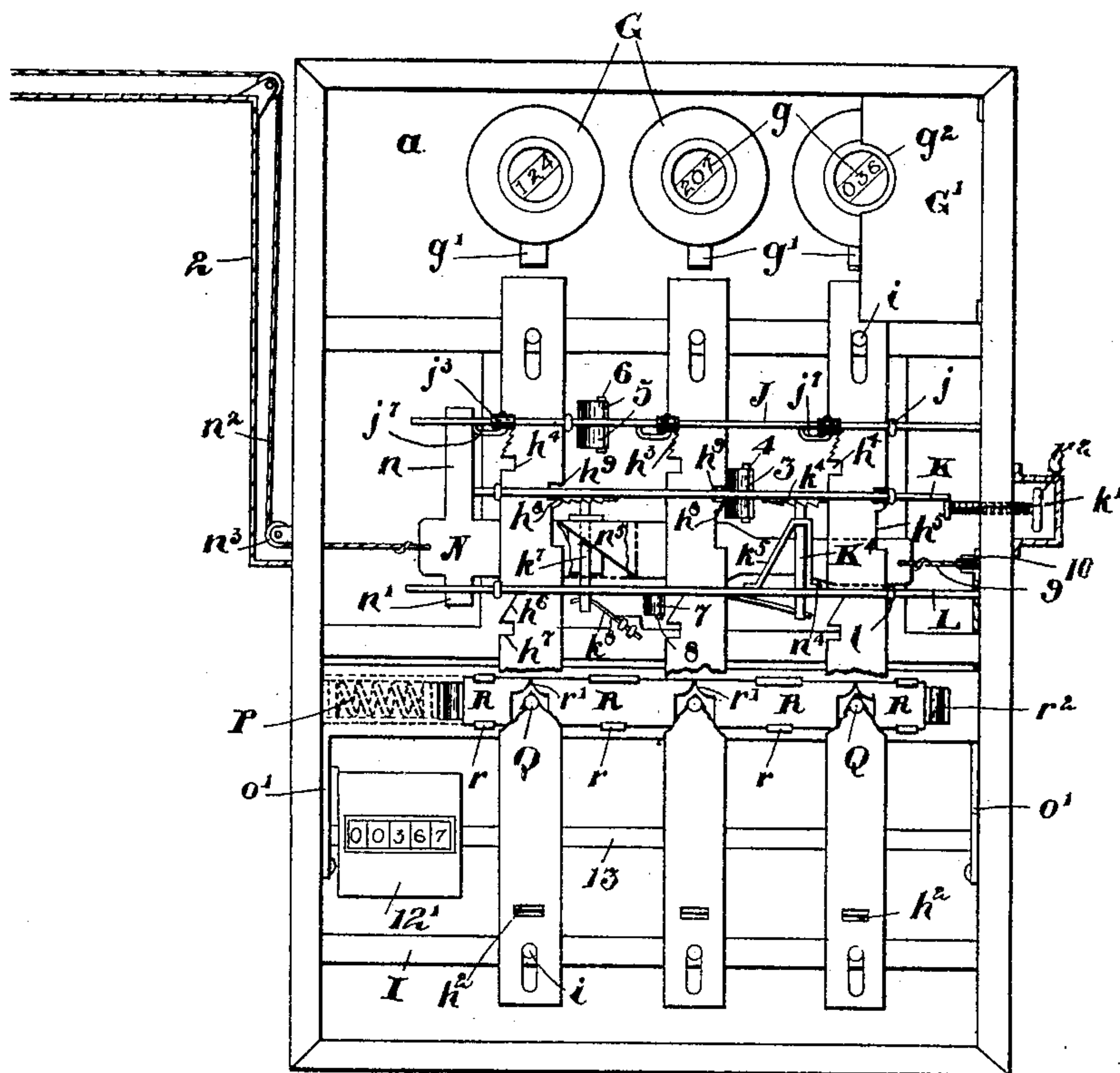


Fig. 3.

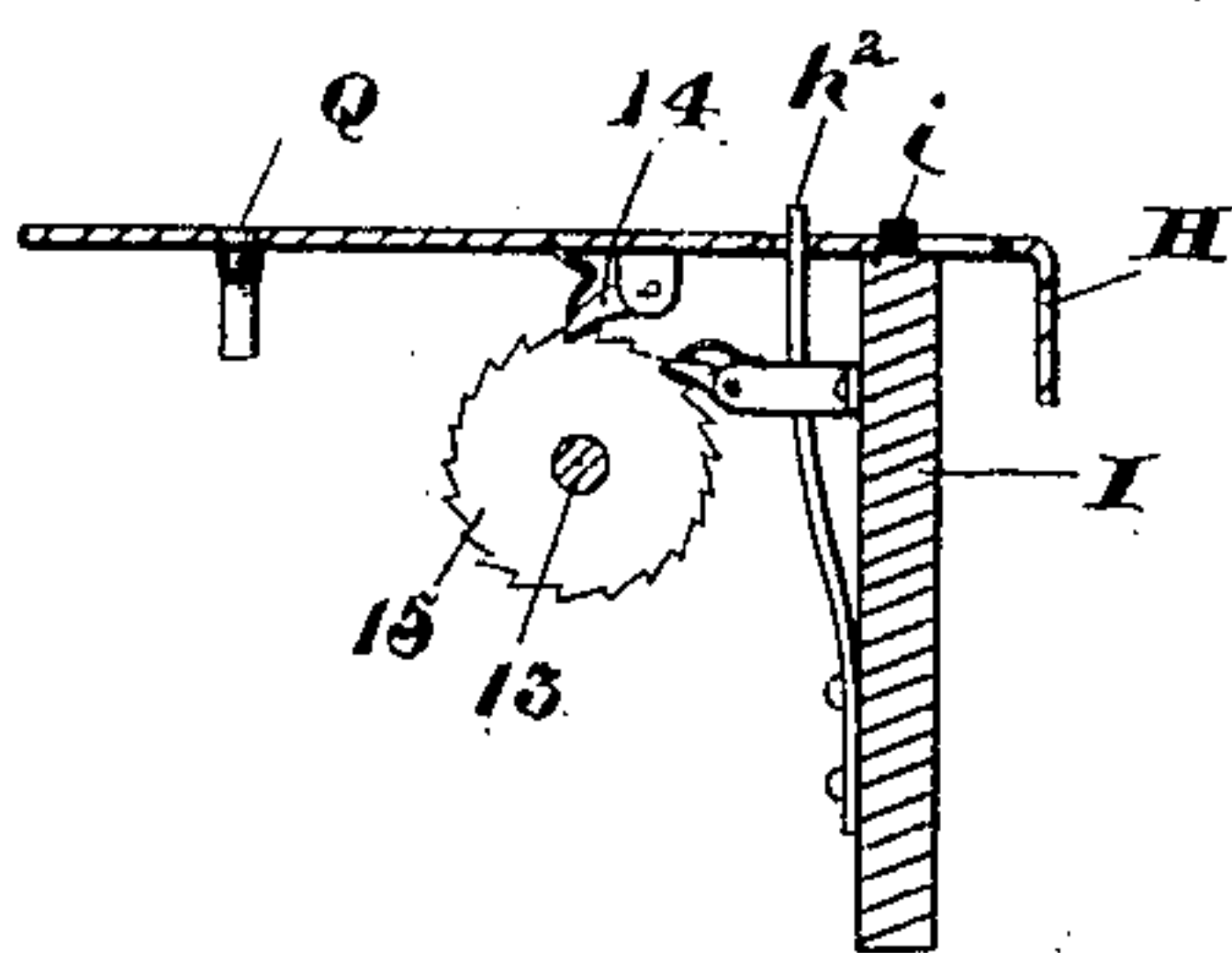


Fig. 7.

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UNITED STATES PATENT OFFICE.

ALFRED ABRAM FARWELL, OF HARRISON HOT SPRINGS, CANADA.

VOTING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 670,633, dated March 26, 1901.

Application filed March 13, 1900. Serial No. 8,507. (No model.)

To all whom it may concern:

Be it known that I, ALFRED ABRAM FARWELL, physician, of the village of Harrison Hot Springs, in the county of Westminister, in the Province of British Columbia, Canada, have invented certain new and useful Improvements in Voting-Machines, of which the following is a specification.

My invention relates to improvements in voting-machines; and the object of the invention is to devise a simple, accurate, and economical machine whereby the votes may be recorded for any desired number of candidates and one at a time; and it consists, essentially, of a case provided with a number of push-bars extending through the front thereof and designed to operate the registering-disks at the inner end, mechanism being interposed to coact with the push-bars to restore them to their normal position and to verify the total amount of votes polled, as herein-after more particularly explained.

Figure 1 is a perspective view showing my voting-machine supported on a wall in proximity to the door which is connected to the mechanism. Fig. 2 is a perspective view, partially broken away, with the cover removed, of my voting-machine. Fig. 3 is a plan view. Fig. 4 is a detail of the push-dog for moving the ratchet-bar to determine the number of candidates that may be voted for. Fig. 5 is a detail of the holdfast-dog coacting with the push-dog. Fig. 6 is a detail of the holdfast-dog for the push-bar. Fig. 7 is a detail of the ratchet-wheel and pawl for holding the verifying mechanism in position.

In the drawings like characters of reference indicate corresponding parts in each figure.

A is the case of the machine, which is supported on a bracket B and is provided with a top C and hinged tank-cover D above the registering mechanism and the hinged covers E and F, covering the push-bars. Each push-bar is designed to record a vote for a candidate. The name of the candidate appears above his respective push-bar, such as "Smith," "Brown," and "Jones." These covers are intended to be locked by the returning officer as soon as the voting is finished. The cover D is intended to be locked during the period that the voting is taking place. Under the cover D, upon the cross-

board *a*, the registers G are situated, each register being provided with the usual mechanism, which is not necessary here to describe and which is not shown, as each register is incased.

The registers preferably are of circular form and provided with the usual index-opening *g*. The registers are operated by the minor push-bars *g'*, which are opposite the main push-bars H, having the bent ends *h*. The push-bars are supported in the case upon the cross-bars I, from which extend the pins *i* up through slots *h'* in the push-bar, both at the front and rear of the machine. The push-bars are held in the forward position by springs *h²*, secured to the front cross-bar I and projecting through a slot in the push-bar. The pins *i* serve to limit the movement of the push-bars H.

The registers G are covered by the cross-plate G', which is securely fastened inside the case and provided with circular openings *g²*, through which the center index portions of the registers project.

I shall only describe three push-bars; but it will of course be understood that any desired number may be made in the machine with the coacting mechanism, which I shall now describe.

J, K, and L are cross-bars which are supported in the interior frame M by the vertically-arranged staples *j*, *k*, and *l*, respectively, which straddle the cross-bars.

N is a cross-plate which has lateral projections *n* and *n'*, which extend into the slots *j'* in the cross-bars J and L, respectively. The end of the cross-plate N is connected by the cord or wire *n²*, which passes around pulleys *n³* to the back of the door, such cord passing along the side of the case and along the wall to the door, as indicated in Fig. 1. Such cord is preferably covered by a suitable casing 2, so that it cannot be tampered with.

It will be noticed that each push-bar H passes through a corresponding slot *j²*, *k²*, and *l²* in the cross-bars J, K, and L, respectively. The cross-bar J is provided with sliding spring-catches *j³*, having top and bottom lips *j⁴* straddling the bar, and a pin *j⁵*, extending through a slot *j⁶* in the bar and designed to limit the movement of the catch, which is held by the spring *j⁷* normally against the inclined ratchet-rack *h³* in each push-bar H.

A notch h^4 is provided in the push-bar immediately in front of the ratchet-rack h^3 .

The cross-bar K is provided with a bend end k' , which is designed to normally abut the set-screw k^2 , such set-screw being provided in order to determine the number of push-bars which may be operated, and consequently the number of votes which may be polled for any desired number of candidates without resetting the machine, as will hereinafter appear.

On one face of the front bar K, near the lower edge thereof, are two ratchet-racks k^3 and k^4 . The ratchet-rack k^4 , which is located in advance of the rack k^3 —i. e., nearer to the bent end k' —is engaged by a plunger push-dog K^4 , supported in the bracket k^5 and extending through the cross-bar L, being held against the rack by the spring k^6 . The holdfast plunger-dog k^7 is held in contact with the ratchet-rack k^3 by a spring k^8 , such holdfast plunger-dog being suitably held in the frame underneath the cross-plate N. The dog K^4 extends above the plate N. The spring 3 is suitably held in the bottom of the casing and is designed to press against a pin 4, extending through the cross-bar K, so as to have a normal tendency to force the end of such cross-bar against the set-screw k^2 .

Each push-bar H has a notch h^5 located normally in front of the bar K, and each push-bar has a notch h^6 , with an inclined front side located in front of the bar H and having the base of the notch abutting the slot l^2 . The notch h^7 is provided immediately in front of each inclined notch h^6 .

A spring 5 is provided, secured to the bottom of the case and abutting a pin 6 on the cross-bar J, so as to normally force it against the right-hand side of the case, as indicated. A spring 7 is also provided, secured to the bottom of the case and normally abutting a pin 8, extending through the bar L for normally forcing such bar against the right-hand side of the case. To the right-hand end of the plate N is connected a cord or wire 9, which passes around the pulleys 10, 11, and 12 and is connected to the end of the bar O, which is located in suitable guideways O' and is provided at the upper end with the inclined planes o . The bar O is normally forced to the right-hand side of the case by the spiral spring P. Above the bar O is swung on the arms o' of the bar O^2 , which is provided with the inclined planes o^3 , designed to coact and have the apexes rest upon the top of the inclined planes o .

Q represents pins secured in the push-bars H and having triangular lower ends, the apexes being to the rear.

R R R R are a series of four plates supported in suitable guideways r and having formed at the points where they abut the V-shaped notches r' , formed by the inclined ends. The plates R are spring-held together by the springs r^2 at each end, which project through slots in the bar O^2 and are suitably

secured to the bottom of such bar, such springs being designed to hold the plates together, but yet permit them to move sufficiently far apart, so as to allow one pin Q to pass between, but not more. It will thus be seen that no more than one push-bar can be operated at one time—that is to say, the number of push-bars operated to record one or more than one vote cannot be operated more than one at a time.

When the push-bar has been pushed forward to operate the register to record a vote by pushing on the minor bar g' , it separates the corresponding notch between the abutting plates R R, and when the voter has recorded each vote successively and passes out of the door he unconsciously in opening the door pulls upon the cord n^2 , the plate N, cord 9, and bar O, so as to remove the inclined planes o from beneath the inclined planes o^3 and allow the bar O^2 to drop, and consequently the push-bars H operated to spring back into their normal position.

When the voter pushes in a bar, he must push it all the way, for the reason that the catch j^3 engages with each tooth of the ratchet-notch in its upward movement until it finally drops into the notch h^4 , when such bar cannot be disturbed until the push-bar is restored to its normal position. As each push-bar is being pushed forward the inclined notch h^6 forces the bar L along the inclined notch h^6 until it finally drops into the notch h^7 , simultaneously to the time that the catch j^3 drops into the notch h^4 . During this movement the bar L carries along the dog K^4 and with it the bar K. In the position shown in the drawings, Figs. 2 and 3, the bar K is set so that the vote for one candidate only can be recorded. This is accomplished by means of the set-screw k' , against which the end of the bar K abuts. The right-hand end of the slot k^2 also abuts the side of the projection h^8 in front of the notch h^9 in the push-bar H. It will thus be seen that immediately the push-bar is pushed in the dog K^4 has fed the bar K, so that the end of the slot k^2 enters the notch h^9 of each push-bar and necessarily locks the remainder from operation.

As soon as the door is opened by the voter in passing out the plate N is pulled upon and carries the bars J and L, and consequently the catches j^3 and slots l^2 , clear of the push-bars, thereby allowing the particular push-bar operated to assume its normal position, the bars J and L theirs, and the bar K to be forced back by its own spring, with its end against the set-screw k' . In order to allow the bar K to assume its normal position, however, it has to be released from the dogs K^4 and k^7 , and this is accomplished by the inclined portions n^4 and n^5 of the plate N passing through the slot in the dog K^4 and forcing it backwardly and the projection of the dog k^7 and forcing it backwardly. (See Figs. 3, 4, and 5.)

In order to verify the total sum of votes

polled, as indicated by the several registers, I provide a cylindrical form of register 12', which is secured on the shaft 13, supported in suitable bearings in the case. A pawl 14 is secured to each push-bar H and engages with a ratchet-wheel 15, so that upon each forward push of the bar H, and no matter which bar, a count is made in the register, so that the total number of counts will correspond to the total sum of the several registers. (See Fig. 7.) A holdfast-pawl is also provided, so as to prevent the ratchet-wheel from slipping.

What I claim as my invention is—

1. The combination with the register and push-bars operating the same, of the adjustable bar provided with inclined planes at the upper side, the coacting bar with reversely-inclined planes, the pins on the push-bars, the spring-held contact-plates provided with V-shaped recesses between them and operating in suitable guideways with a maximum space between all sufficient to let one pin alone pass and means for adjusting the upper bar so as to throw it down out of the path of the pin on the push-bar as it returns as and for the purpose specified.

2. The combination with the register and push-bars operating the same, of the adjustable bar provided with inclined planes at the upper side, the coacting bar with inclined planes, the pins on the push-bars, the spring-held contact-plates provided with V-shaped recesses between them and operating in suitable guideways with a maximum space between all sufficient to let one pin alone pass at a time and a cord connected to the end of the lower bar having the inclined plane on it, and operated from the door to move the inclined planes in the lower bar from supporting the inclined planes on the upper bar as and for the purpose specified.

3. The combination with the registers and their respective push-bars, of the rear cross-bar supported in suitable staples and provided with slots through which the push-bars extend said push-bars having an inclined toothed portion on one edge at the rear portion thereof, and a supplemental notch at the front thereof and the spring-catches on the rear cross-bar designed to engage the toothed portion of the cross-bar and means for restoring the bar to its normal position as and for the purpose specified.

4. The combination with the registers and their respective push-bars having the intermediate short notches and long notches, of the intermediate cross-plate supported in suitable staples and provided with slots through which the push-bars extend, the set-screw abutting the end of the intermediate cross-bar and means for giving a determinate movement to the intermediate cross-bar as and for the purpose specified.

5. The combination with the registers and their respective push-bars having the inter-

mediate short notches and long notches, of the intermediate cross-plate supported in suitable staples and provided with ratchet-racks and slots through which the push-bars extend, the set-screw abutting the end of the intermediate cross-bar, the front cross-bar supported in suitable guideways, the plunger-dogs supported on same and spring-held against the ratchet-racks and means for operating the cross-bar as and for the purpose specified.

6. The combination with the registers and their respective push-bars having the intermediate short notches and long notches, of the intermediate cross-plate supported in suitable staples and provided with ratchet-racks and slots through which the push-bars extend, the set-screws abutting the end of the intermediate cross-bar, the front cross-bar supported in suitable guideways, the plunger-dogs supported on same and spring-held against the ratchet-racks, the slots in the cross-bar, the inclined notches on the push-dog normally abutting the slots and the supplemental notches in front of the same as and for the purpose specified.

7. The combination with the registers and their respective push-bars having the intermediate short notches and long notches, of the intermediate cross-plate supported in suitable staples and provided with ratchet-racks and slots through which the push-bars extend, the set-screws abutting the end of the intermediate cross-bar, the front cross-bar supported in suitable guideways, the plunger-dogs supported on same and spring-held against the ratchet-racks, the cross-plate extending beneath the front and intermediate cross-bar and provided with inclined contact-plates designed to operate against the projections on the push-dog, so as to release them and means for operating such cross-plate as and for the purpose specified.

8. The combination with the registers and their respective push-bars having the intermediate short notches and long notches, of the intermediate cross-plate supported in suitable staples and provided with ratchet-racks and slots through which the push-bars extend, the set-screws abutting the end of the intermediate cross-bar, the front cross-bar supported in suitable guideways, the plunger-dogs supported on same and spring-held against the ratchet-racks, the cross-plate extending beneath the front and intermediate cross-bar and provided with inclined contact-plates designed to operate against the projections on the push-dog, so as to release them and a cord operated from the door for adjusting such plate as and for the purpose specified.

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Witnesses:

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