

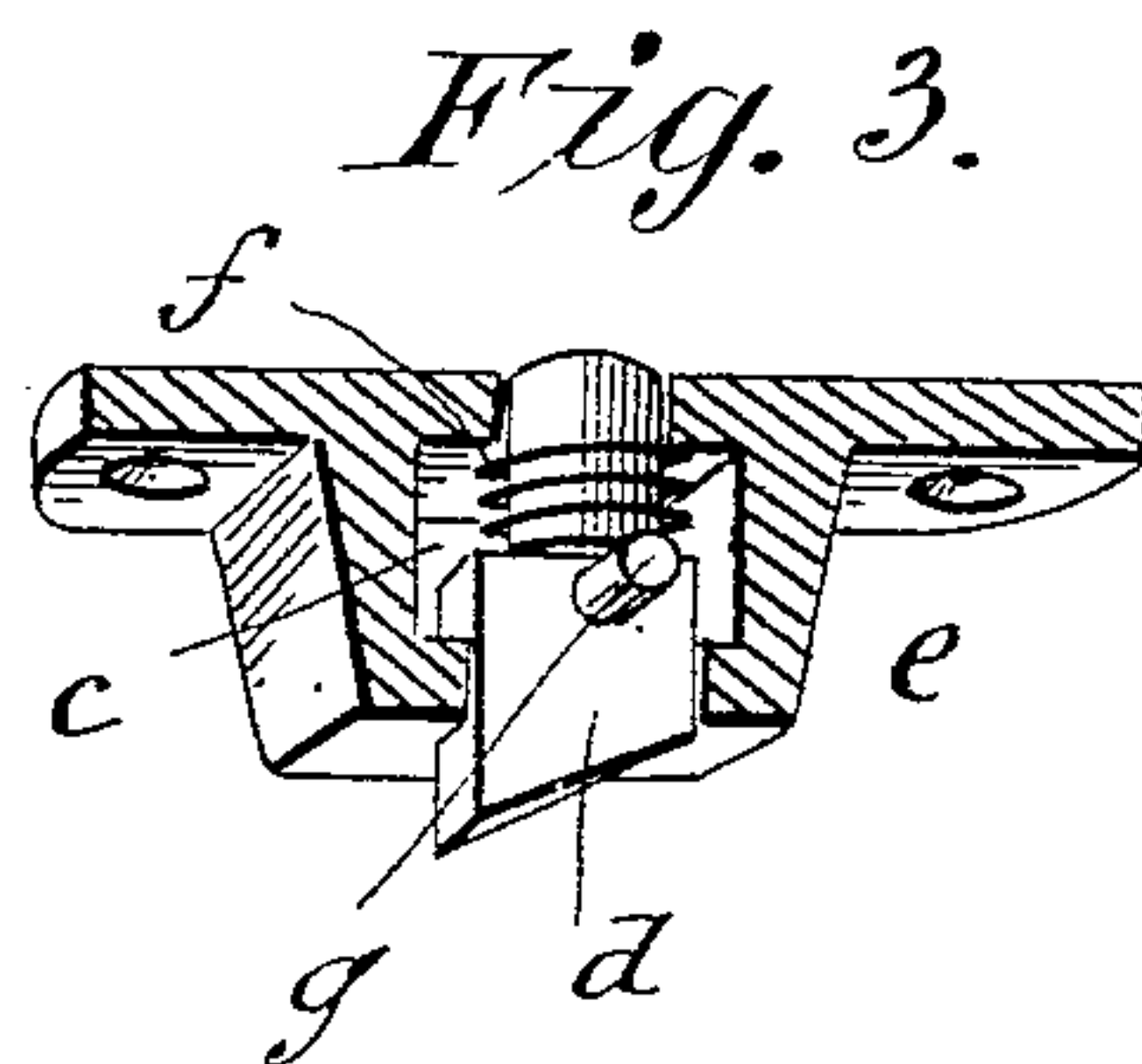
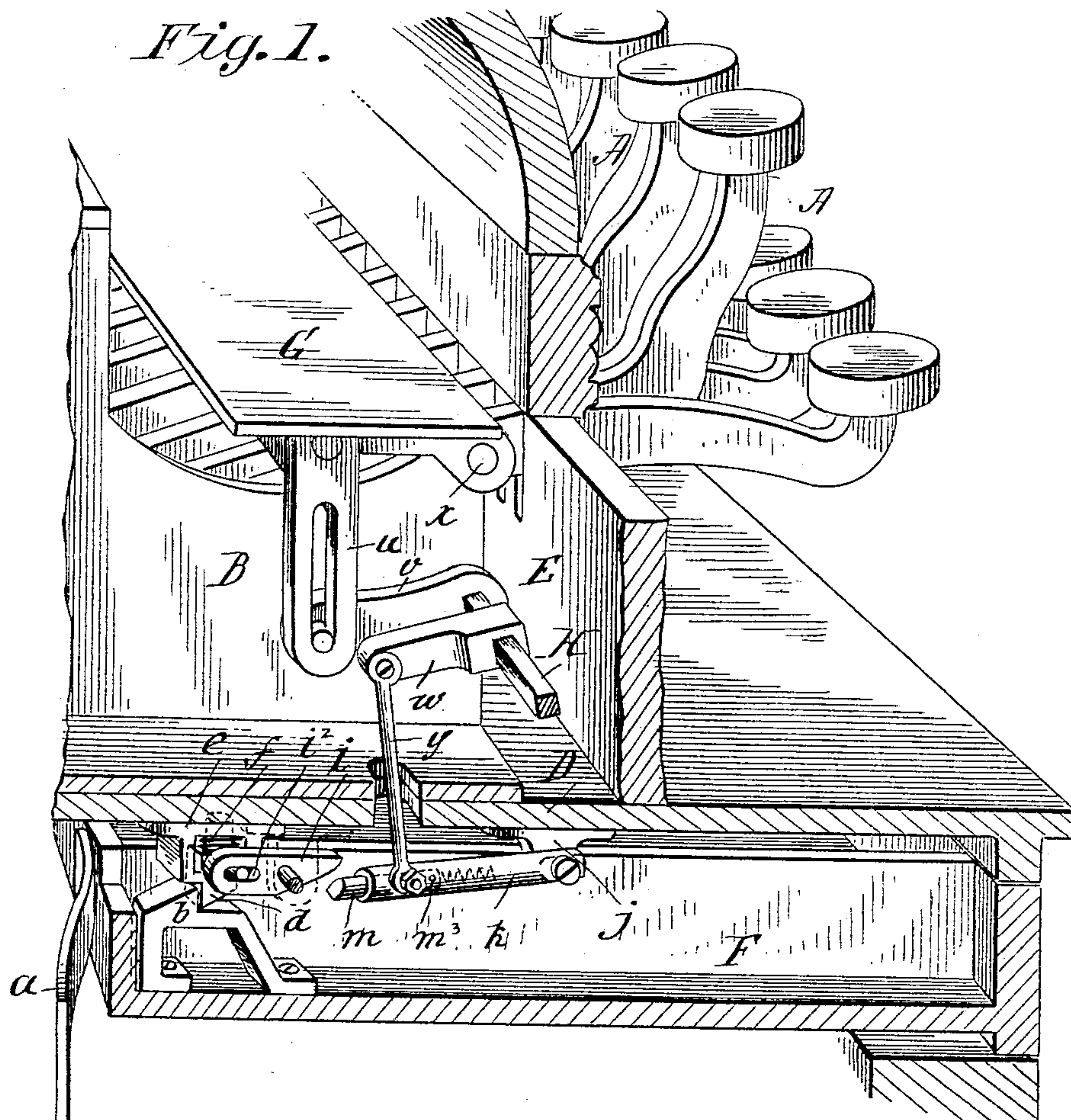
(No Model.)

2 Sheets—Sheet 1.

J. J. RANGE & E. N. FOOTE.  
CASH REGISTERING MACHINE.

No. 495,948.

Patented Apr. 18, 1893.



Witnesses:

J. D. Garfield  
R. J. Clemons

Inventors:

John J. Range,  
Edward N. Foote,  
per Chapman & Co., Attys.

(No Model.)

2 Sheets—Sheet 2.

J. J. RANGE & E. N. FOOTE.  
CASH REGISTERING MACHINE.

No. 495,948.

Patented Apr. 18, 1893.

Fig. 2.

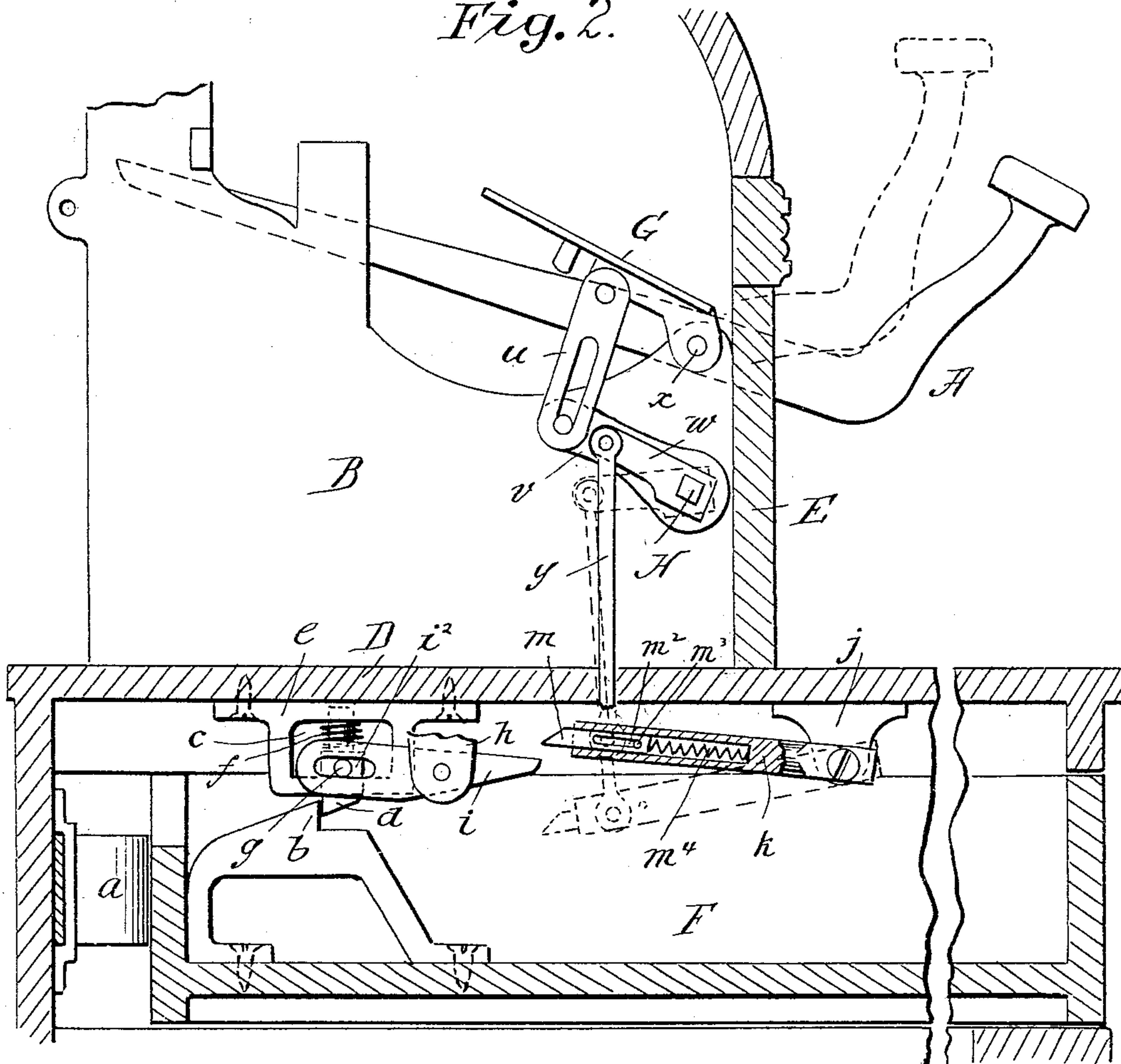
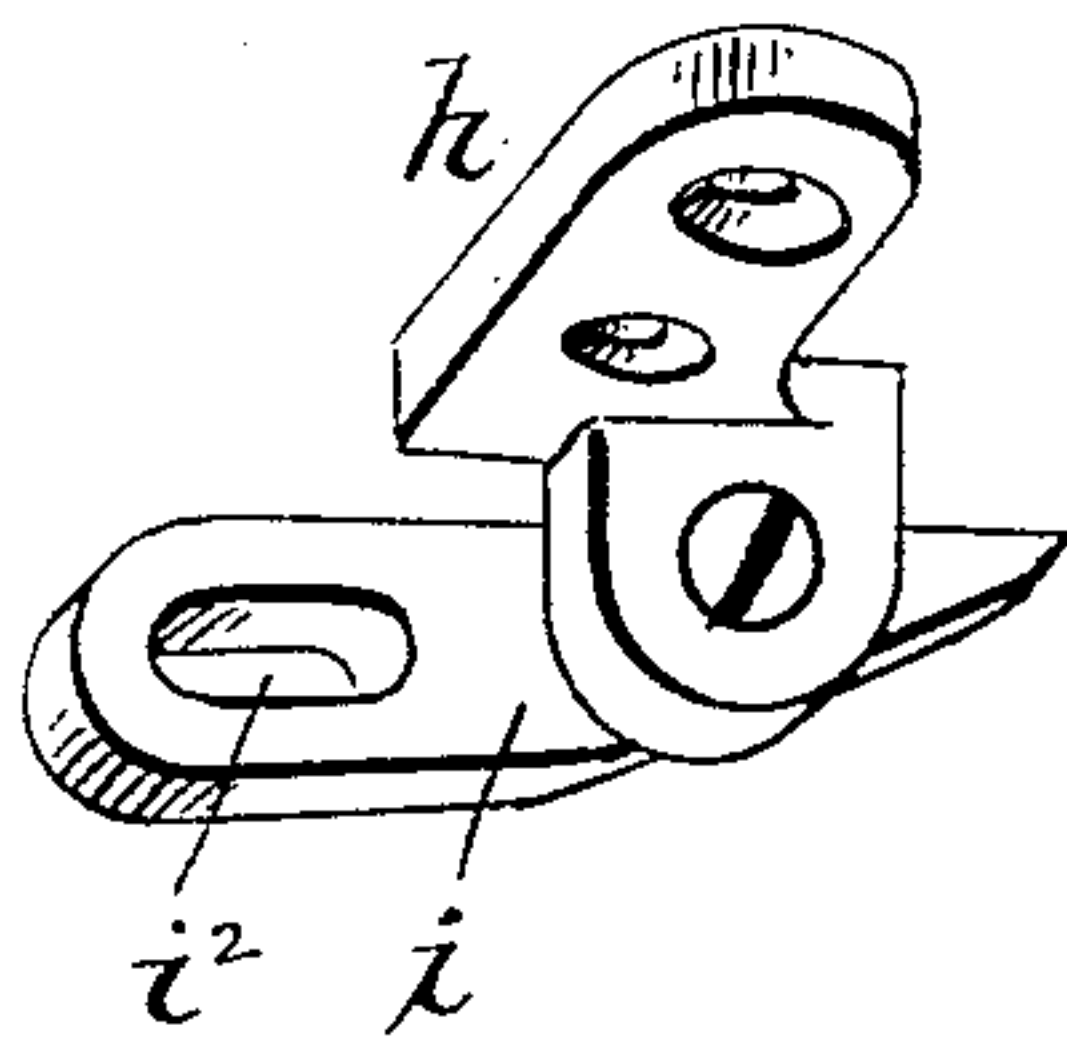


Fig. 4.



Witnesses:

J. D. Garfield  
H. J. Clemons

Inventors:

John J. Range  
Edw. N. Foote,  
per Chapman & Co. Attys.



# UNITED STATES PATENT OFFICE.

JOHN JAMES RANGE AND EDWARD N. FOOTE, OF NORTHAMPTON, MASSACHUSETTS, ASSIGNORS TO THE BOSTON CASH REGISTER COMPANY, OF SAME PLACE.

## CASH-REGISTERING MACHINE.

SPECIFICATION forming part of Letters Patent No. 495,948, dated April 18, 1893.

Application filed December 29, 1892. Serial No. 456,656. (No model.)

*To all whom it may concern:*

Be it known that we, JOHN JAMES RANGE and EDWARD N. FOOTE, citizens of the United States, both residing at Northampton, in the  
5 county of Hampshire and State of Massachusetts, have invented new and useful Improvements in Cash-Registering Machines, of which the following is a specification.

This invention relates to improvements in  
10 cash registering-machines, the particular object being to provide an improved mechanism in conjunction with the heretofore well known, or any suitable or approved, form of registration devices essentially embodying keys and  
15 a cash drawer, whereby after a key of a given bank has been started in its register operating movement it must necessarily move to the end of such movement and commence its return movement before the drawer can be  
20 opened.

The improved means for the attainment of this object in a cash registering machine consists in the combination with a drawer having a suitable abutment or part to be latched and  
25 a latch having, normally, a position to engage the abutment, and movable to disengage it, of a lever pivotally mounted and connected to the latch, a part herein termed a dog, adapted for a movement in one direction to pass the  
30 latch-lever without effect thereon and to assume a position of engagement therewith so that on the reversed movement of the dog a swinging movement of the latch-lever may be insured, one or more key-levers and a medium  
35 of engagement between the dog and key-levers whereby said parts have movements in unison.

The invention also comprises novel structural features embodied in the drawer latch  
40 mechanism and operating devices therefor, all substantially as will hereinafter fully appear and be set forth in the claims.

Reference is to be had to the accompanying two sheets of drawings in which these im-  
45 provements are fully and clearly illustrated.

Figure 1 is a perspective view with the drawer and a part of the cabinet in vertical section, showing the drawer or latch mechanism and its connections for being controlled  
50 and operated by the key-levers, the parts of the latch mechanism being shown in the posi-

tion occupied by them when no key is depressed. Fig. 2 is a sectional elevation of the same mechanism, certain parts thereof, however, being shown as in their positions occasioned by the full depression of one of the key-  
55 levers. Fig. 3 is a perspective and sectional view of the latch and the depending bracket in which it is supported and guided. Fig. 4 is a perspective view of a depending hanger  
60 and the latch operating lever pivotally supported thereon.

In the drawings A, A, represent the key-levers of the cash registering machine, the same, as usual, being pivotally mounted on  
65 the supporting frame, B, which rests upon the table or base, D, of the cabinet, E, which incloses the greater portion of the cash registering mechanism, and F represents the cash drawer movable under the said base, as  
70 usual, having the forwardly forcing spring, *a*, which is held in compression while the drawer remains closed and latched.

The drawer is provided with the abutment, *b*, to be engaged by the latch, *d*. This latch  
75 is vertically movable in the depending bracket, *e*, supported at the under side of the base D. The bracket is recessed, as at *c*, for lightness and also for the accommodation of the  
80 spring, *f*, which is applied to the shank-spindle of the latch to insure its depression, except when the latter is positively raised by the means hereinafter described, and the recess also permits the free play, when the  
85 latch is moved, of the laterally projecting stud, *g*. The part of the bracket constituting the lower boundary of the recess also serves as a rest for this stud, insuring the proper  
90 limitation of the latch in its lower position. Adjacent the said bracket, *e*, there is another depending bracket or ear-piece *h* which is  
95 also secured to the base D, of the cabinet; and the lever, *i*, is intermediately pivotally supported on said ear-piece, *h*, one arm thereof being longitudinally slotted, as seen at *i*<sup>2</sup>,  
100 the oppositely extended arm having its under edge upwardly and forwardly inclined preferably as shown. There is still farther in advance and projecting downwardly from the under side of the aforesaid base, D, another  
depending ear-piece, *j*, on which the swinging dog, *k*, is pivotally supported to have a



swinging movement in a vertical plane. This dog, as clearly shown in the drawings, is in the form of a tubular bar, the rear end of which is adjacent the forward end of said latch-lever, *z*. The nose, of this dog is comprised in the block, *m*, which is fitted for a limited extent of movement longitudinally within the tubular dog-bar. This block, *m*, is longitudinally slotted, as seen at *m*<sup>2</sup>, while the pin, *m*<sup>3</sup>, is driven through perforations therefor in the sides of the tubular bar, *k*, the pin loosely passing through the said slot. The spring, *m*<sup>4</sup>, placed within the tubular bar, *k*, bears against the aforesaid block, *m*, forcing it to the limit of its rearward presentation, as clearly seen in Figs. 1 and 2. The outer end of this block, *m*, is forwardly and upwardly inclined.

The arrangement of the dog relative to the latch-lever, *z*, is such that with the parts in their normal positions, as seen in Fig. 1, the nose of the dog will underlie the forward extremity of the latch-lever and all so that as the dog is upwardly swung the impingement of the block, *m*, against the latch-lever will cause the block to so recede within the tubular bar as to permit the bar to be swung into its upper position, indicated in Fig. 2, the block, *m*, then snapping outwardly to overlie a short portion of the proximate extremity of the latch-lever. Now as force is positively imparted to the aforesaid dog to swing it downwardly it has, during a portion of the period of its downward movement such an engagement as to tilt the latch-lever causing the latch to disengage the latch abutment of drawer leaving the drawer free to be forwardly thrust by the spring, *a*. The dog having moved sufficiently far, effecting the results last explained, passes out of engagement with the latch-lever, which with the latch resumes its normal position, and the dog resumes its normal position with its nose again under the extremity of the latch-lever.

Explaining the medium of connection here shown for imparting the movements to the dog in unison with the movements of any of the key-levers,—it is understood that the rocker-plate, *G*, pivoted at *x*, coincident with the pivot line of the key-levers has its rocking movement insured by the operation of any of the key-levers. The rocker shaft, *H*, necessarily rocks with the rocker-plate by reason of the connection constituted by the link, *u*, and arm, *v*; connected to and radially extended from said rocker-shaft, *H*, is another arm, *w*, while the link, *y*, connects the said arm, *w*, and the swinging dog.

The mechanism of connection or engagement between the key-levers, *A*, *A*, and said rock-shaft, *H* has been fully illustrated in previous Letters Patent and is well known and constitutes no part of the novelty which inures to this invention.

We claim—

1. In a cash registering machine the com-

bination with one or more operating key-levers, a drawer having a latching abutment, and a latch normally in engagement with the abutment, and movable to disengage it, of a pivotally mounted lever having an engagement with the latch, a dog adapted for a movement in one direction to pass the latch-lever, without effect thereon, and assume a position of engagement relative to its extremity whereby on the reverse movement of the dog a swinging movement of the lever may be insured, and a medium of engagement between the dog and the key-levers, for the purpose set forth.

2. In a cash registering machine, the combination with the key-levers, the drawer having a latch abutment, a vertically movable normally depressed latch, and a lever pivoted adjacent the latch and having an engagement therewith to raise it, of one or more key-levers, a dog pivotally mounted and having connections for its movement in unison with any of the key-levers and having an outwardly spring-pressed nose, with an inclined end, to yield in its upwardly swinging impingement against the latch-lever, and on its reversed movement to engage and swing said lever and raise the latch, substantially as and for the purpose set forth.

3. In a cash registering machine, the combination with a drawer having a part or abutment to be latched, and a latch, vertically movable and normally depressed for its latching engagement, and having a laterally projected stud, of a lever immediately pivotally mounted adjacent the latch and having one member thereof slotted to engage said latch-stud, the dog pivotally mounted for a swinging movement, and formed tubular and provided with a part spring-pressed and outwardly movable in a limited extent, and having the inclined end, a series of keys, the common rocker-plate and the rocker-bar having an arm linked to the plate, and having another arm linked to the swinging dog, substantially as and for the purpose set forth.

4. In a cash registering machine, the combination with the base or table thereof and the cash-drawer movable thereunder and provided with a latch-abutment, of the bracket supported by and depending from said base and having the vertical guide-way and recess and the latch vertically movable therein and provided with the lateral stud, and the spring, the bracket and slotted lever pivoted thereon, and the dog with the inclined and yielding nose, the key-levers and a medium of engagement between them and the dog, substantially as and for the purpose set forth.

JOHN JAMES RANGE.  
E. N. FOOTE.

Witnesses:

WM. S. BELLOWS,  
J. D. GARFIELD.