

(No Model.)

3 Sheets—Sheet 1.

C. H. DRURY.
CASH REGISTER.

No. 446,330.

Patented Feb. 10, 1891.

Fig. 1.

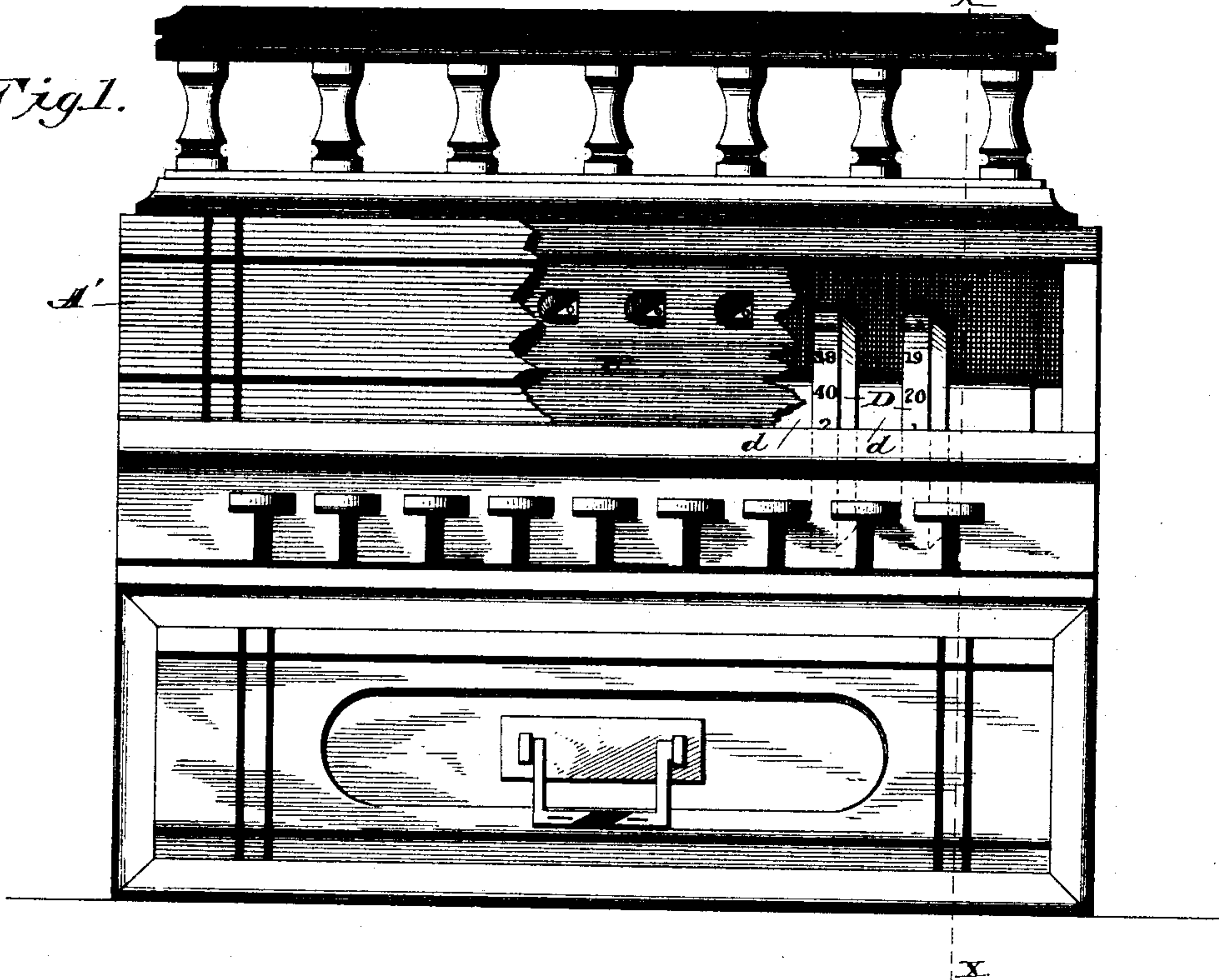
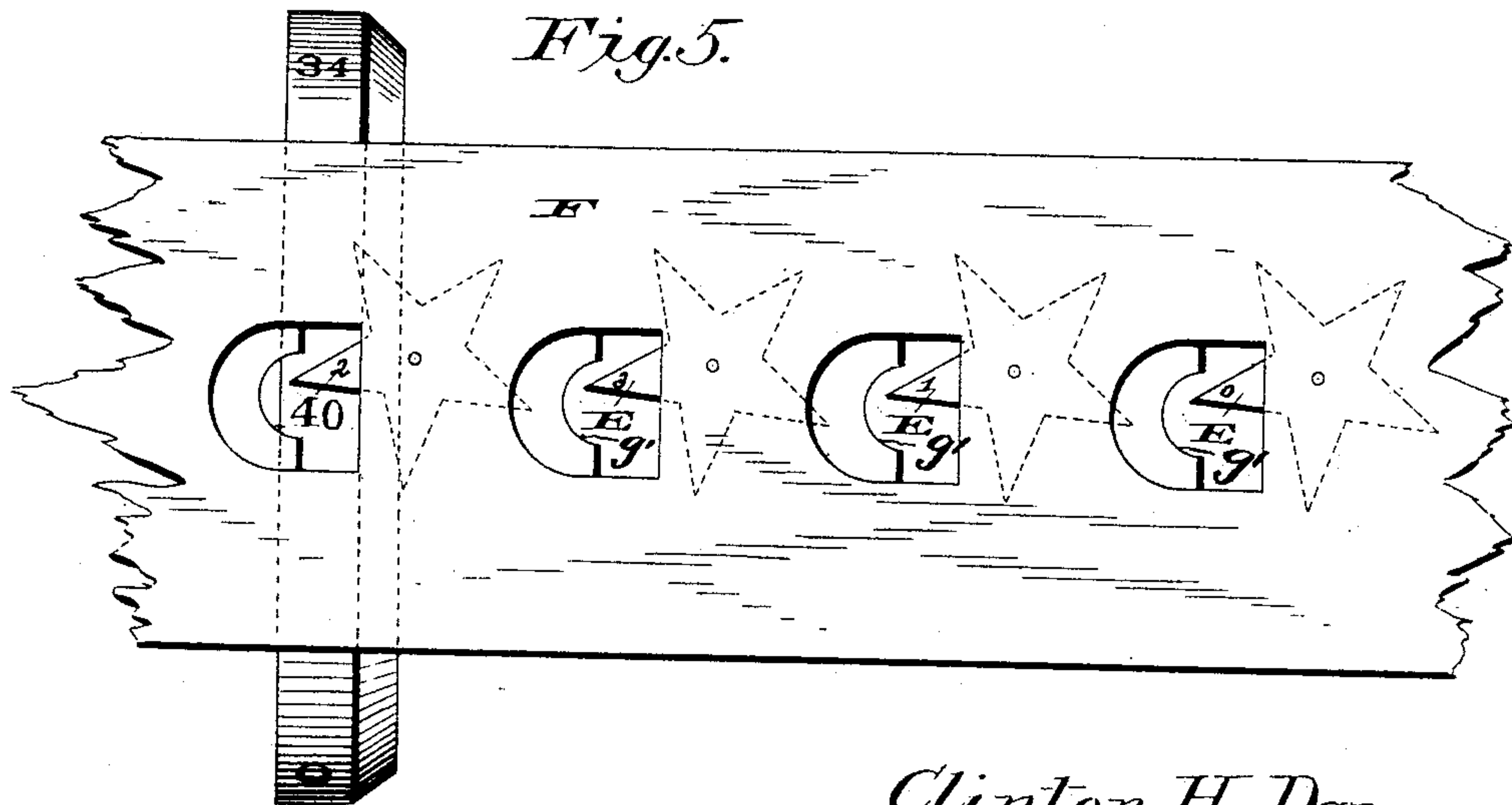


Fig. 5.





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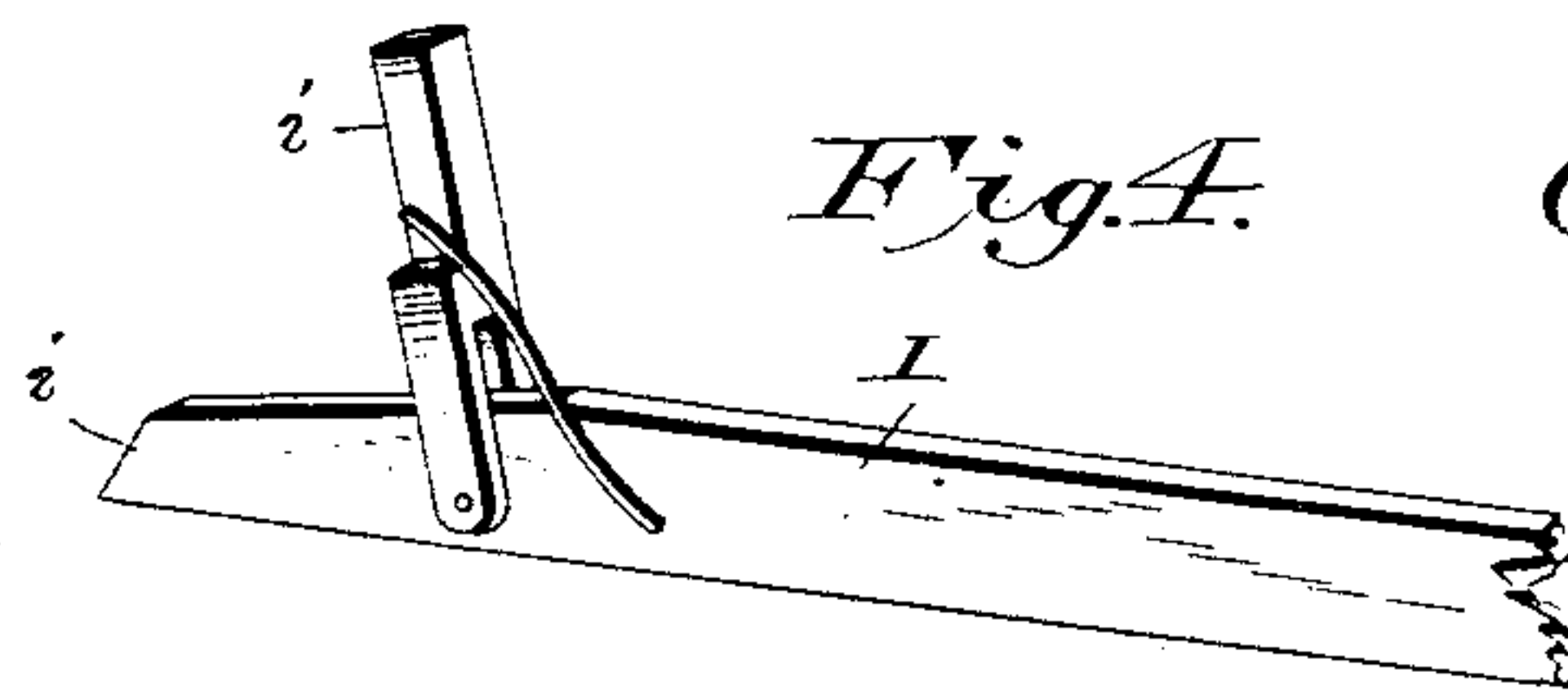
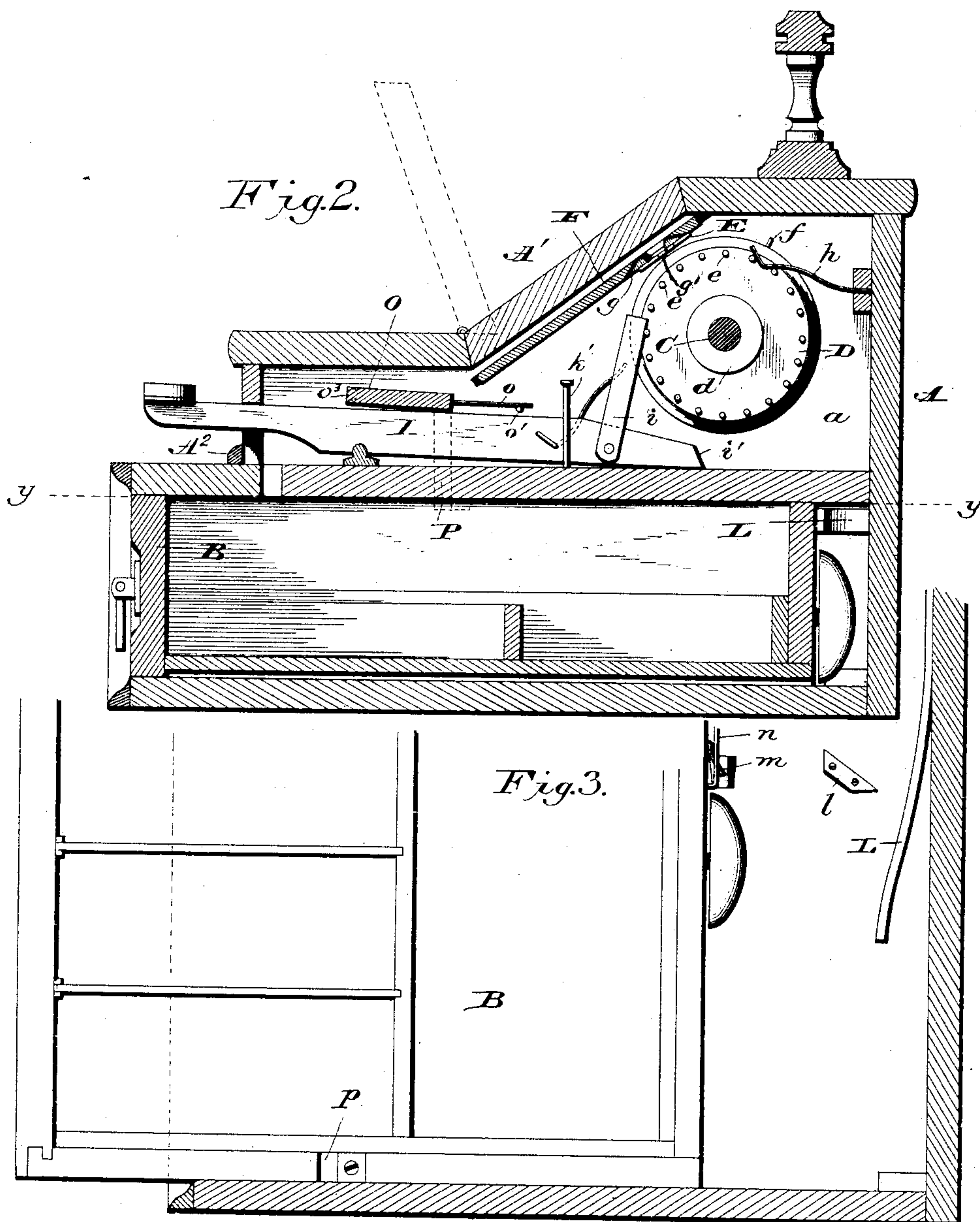
(No Model.)

3 Sheets—Sheet 2.

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3 Sheets—Sheet 3.

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Fig. 6.

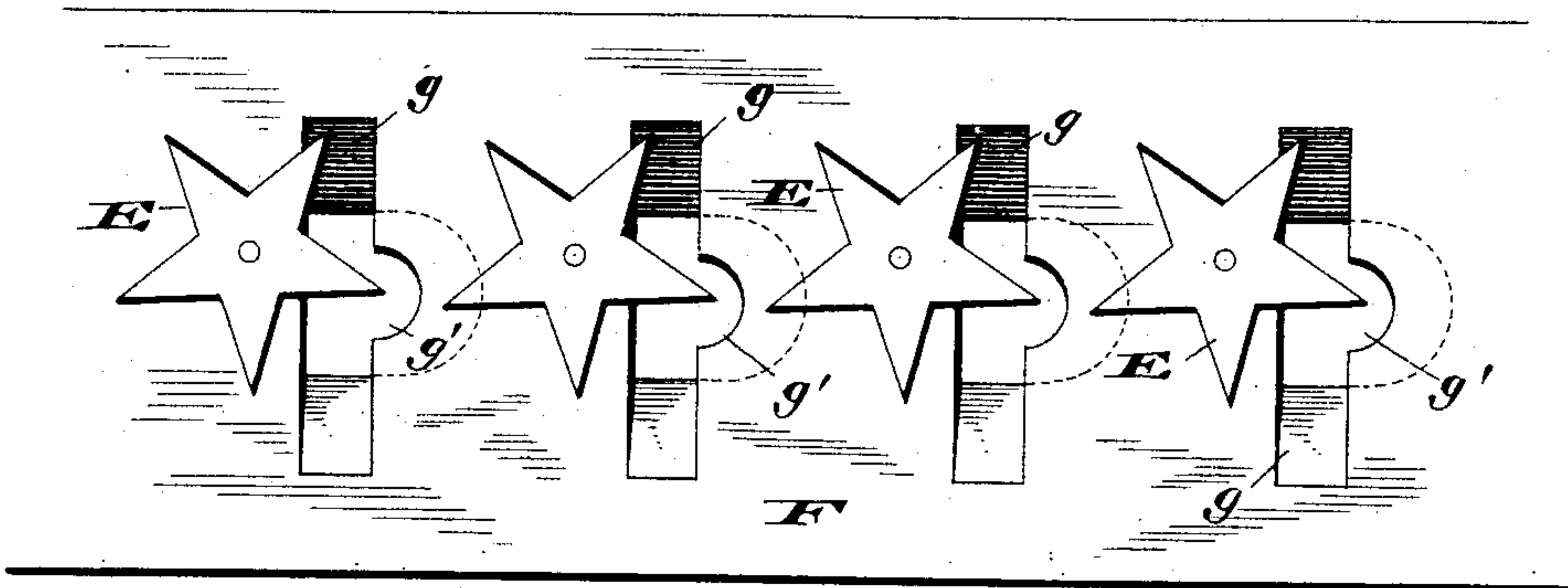
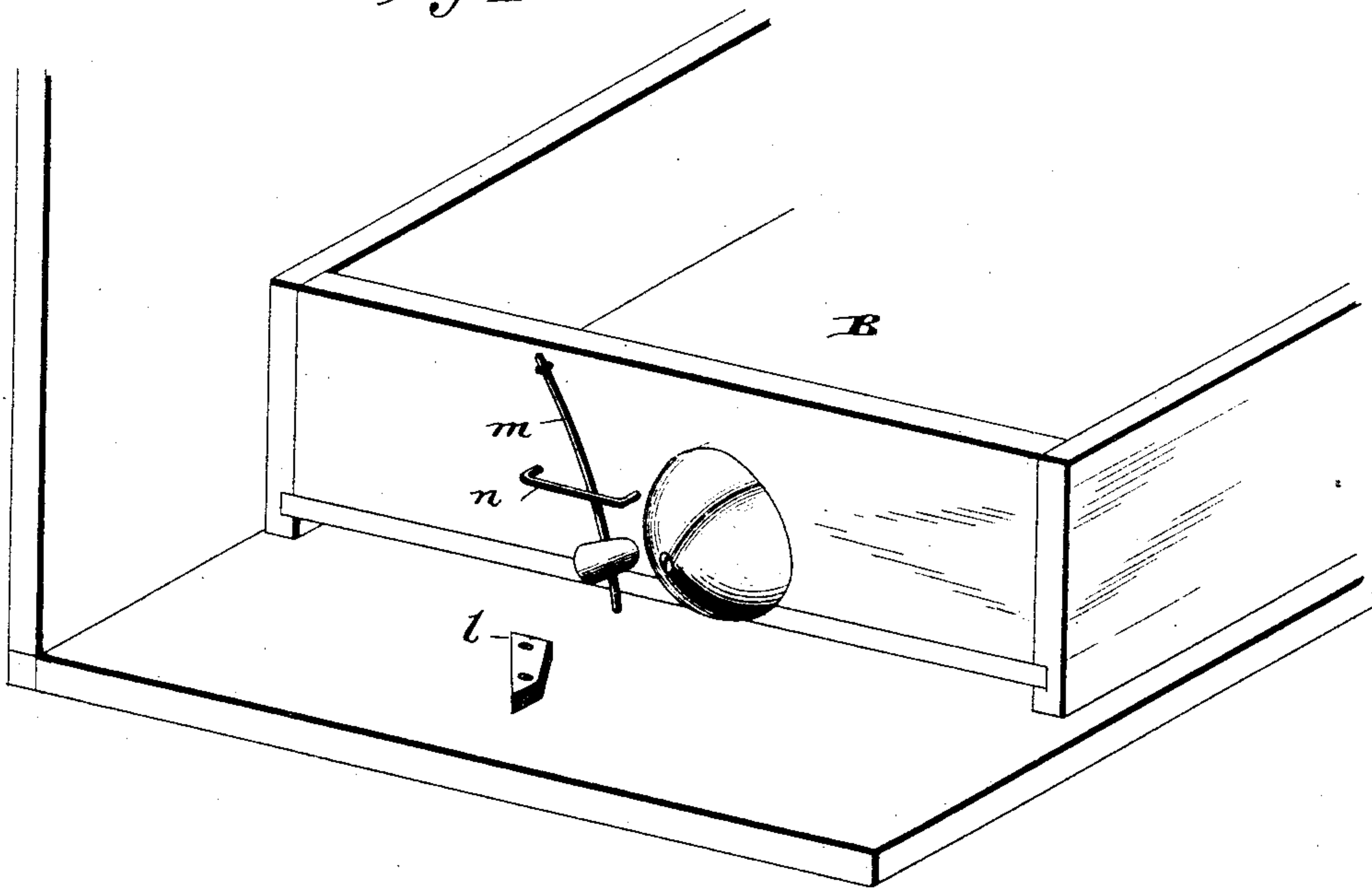


Fig. 7.

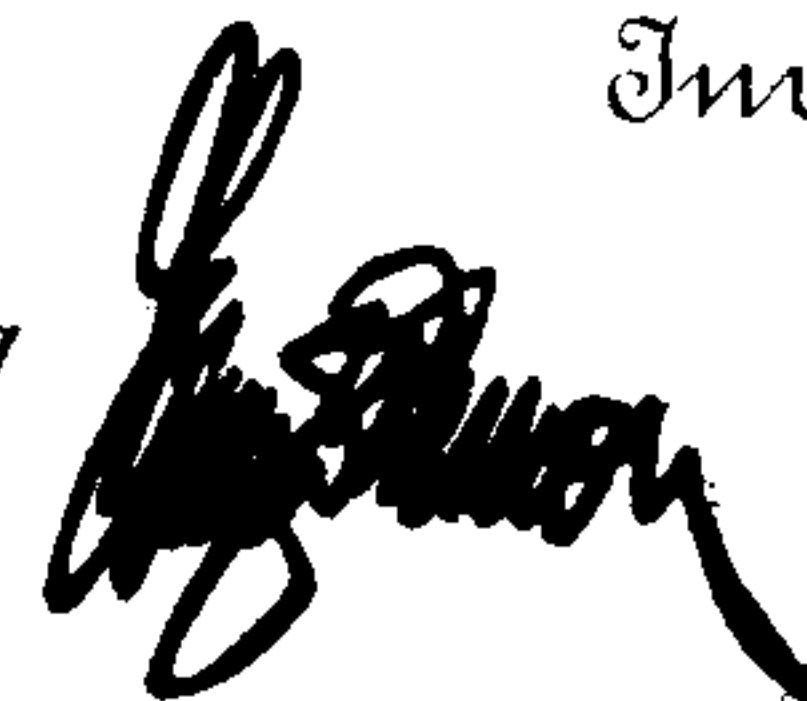


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UNITED STATES PATENT OFFICE.

CLINTON H. DRURY, OF HARTFORD, OHIO.

CASH-REGISTER.

SPECIFICATION forming part of Letters Patent No. 446,330, dated February 10, 1891.

Application filed May 27, 1890. Serial No. 353,300. (No model.)

To all whom it may concern:

Be it known that I, CLINTON H. DRURY, a citizen of the United States of America, residing at Hartford, in the county of Trumbull and State of Ohio, have invented certain new and useful Improvements in Cash-Registers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

This invention relates to certain new and useful improvements in cash-registers.

The object of the invention is to provide a simple, cheap, and effective register and cash-drawer having an alarm which will be sounded when said cash-drawer is opened; and it consists in the combination, with a casing, of a main shaft having mounted thereon a series of independent disks having laterally-projecting pins corresponding with the numerals on the peripheries of said disks, the periphery of each disk carrying a pin for operating a star-wheel for registering the rotation of said disk, and means for operating said disk, as will be hereinafter fully set forth, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a front elevation of a cash-register constructed in accordance with my invention, the top being raised and a portion of the interior construction broken away to better illustrate the parts that are concealed thereby. Fig. 2 is a longitudinal section taken through the line x x of Fig. 1. Fig. 3 is a sectional view of the drawer, showing the alarm mechanism carried thereby, taken on the dotted line y y , Fig. 2. Fig. 4 is a detail view. Fig. 5 is a front view of the disk-carrying plate or board. Fig. 6 is a rear view of the same, and Fig. 7 is a detail view showing the construction of the bell-hammer and its operating devices.

A refers to the casing, which is provided with a drawer B and a hinged top A', which can be locked when desired, or thrown back, as shown by the dotted lines in Fig. 2, to rest upon the upper edge of the casing.

C refers to a shaft rigidly secured to the

side pieces a of the frame A, and has mounted thereon a series of disks or wheels D, which are held apart by blocks d , which may be loosely or rigidly mounted on said shaft. These disks are provided on their peripheries with numerals which correspond with a series of laterally-projecting pins e , which extend from one side of the disk D on a line with the shaft C. The numbers on the first disk may run from 0 to 19, on the second disk a series of numbers progressing by two from 0 to 38. On the third disk the numbers progress by five from 0 to 95, and so on, according to the number of disks employed. The periphery of each disk is provided with a projecting pin f , which is adapted to engage as the disks D rotate with a star-wheel E, pivotally secured to the under side of a board F, to which they are held by suitable supports above the disks D. This board F has a series of openings, each for exposing one of the numbered portions of the adjacent star-wheel E, and on the under side of the board, adjacent to each opening, the board is recessed to present cut-away portions g above the face of the disks to provide a slot through which the pins f can pass. The upper face of the board, adjacent to the sight-openings, is recessed, as shown at g' , so that the star-wheels can be set by hand. The star-wheels E are suitably numbered at their points, and they are moved one step forward at each rotation of the disks D by the pins f contacting therewith. The disks D are held against backward rotation by the springs h , which are secured to the frame A and have their ends bent to engage with the laterally-projecting pins e , so as to permit the rotation of the disk in one direction and partly hold it against reverse movement.

I refers to the keys, which are pivoted as shown, and to near the inner ends thereof are pivoted pawls i , the ends of which are squared, so that they will abut against the projecting pins e and rest against the pin adjacent thereto. The downward movement of these keys is limited by the projecting ledge A² of the frame, as well as by the angular ends i' abutting against one of the pins e' , so as to lock on a dead-center of the disks D when the pawl reaches the limit of its upward movement.

k' and k' refer to guide bars or wires for preventing lateral movement of the keys I.

B refers to the cash-drawer, in rear of which is located an angular block l , with which the end of the spring bell-hammer m , depending below the lower edge of the drawer, abuts to ride over the front edge of said block and normally rest against the rear inclined edge thereof, so that when the drawer is pulled to open the same the end of the bell-hammer will ride upon the rear edge of this block, and when it passes beyond the same will spring in contact with the bell to sound an alarm. A bail n prevents the hammer being drawn rearwardly from the back of the drawer when the end of said bell-hammer upon the disks D contacts with the block. A spring L is secured to the upper edge of the drawer-compartment, so that it will project the drawer forward, so that the front edge will be slightly beyond the frame when said drawer is not locked.

O refers to a transverse board which is pivotally secured at O^3 to the inner edges of the side pieces of the frame above the keys I, so that its front edge will rest upon the upper edges of said keys, and one end of this bar is provided with a spring o , which projects from the board O and bears against one of the inner edges of the frame and also upon a pin o' to limit the downward movement of the weighted board and prevent the whole weight thereof resting upon the keys, and the opposite end of this board carries a pivoted pin P, which passes through the casing above the drawer-compartment and is adapted to engage with a recess p in one of the side edges of the drawer. This pin P when in engagement with the recess holds the drawer locked, so that it cannot be opened without first depressing one of the keys to tilt the pivoted board O and raise said pin out of engagement with the recess. The top A' may be provided with a suitable lock, as well as the drawer B.

To set the hereinbefore-described register, each of the indicators or star-wheels E should be moved so that the points marked 0 are exposed to view through the openings in the board F, after which they are moved back one point and the keys operated until 0 or zero on each disk is exposed. The register will then be set so that 0 or zero will be exposed to view both on the disks and star-wheels. To note the amount registered, commence at the left and take the amount on each star-wheel and add the same to the amount on each disk. For instance, if the one-dollar disk exposes on the indicator or star-wheel the figure 20 and the disk itself shows 13, the total amount registered would equal thirty-three dollars. Hence by simply adding together the amounts on the indicators and the amounts on the disks the proper amount that should be in the case-drawer will be obtained.

The hereinbefore-described cash-register is extremely simple, and by properly manipu-

lating the keys according to the amount of cash received a complete record will be kept.

Having thus described my invention, I claim —

1. The combination, in a cash-register, of a series of disks mounted loosely upon a common shaft, said disks having a series of lateral pins corresponding as to numbers with numerals on the periphery of the disk, radial pins adapted to engage with star-wheels for registering the number of rotations of the disks, and keys and pawls for operating the disks one step on each depression of the key, substantially as set forth.

2. The combination, in a cash register or recording apparatus, of a series of disks loosely mounted on a common shaft and provided with a series of laterally-projecting pins corresponding with the numerals on the face of the disks, pivoted keys carrying pawls which engage with the lateral pins for moving the disks forward, and springs h for holding the same against backward movement, substantially as set forth.

3. The combination, in a cash register or recorder, of a casing A, having a shaft, a series of disks mounted on said shaft, intermediate blocks carried by said shaft, a series of laterally-projecting pins fixed upon said disks, pawls adapted to engage therewith and pivoted to the inner ends of the keys, means for operating the disks when the keys are depressed, and guide for preventing the lateral movement of the keys, substantially as set forth.

4. The combination, in a cash-register having a series of disks, operating-keys, and radial pins f , of a board sustained above the disks and having openings through which the numerals on the periphery of the disks will be visible, and five-pointed star-wheels E, pivoted to the board F adjacent to the openings therein, so that said star-wheels will be rotated one point upon each rotation of the disks, substantially as set forth.

5. The combination, in a cash-register, of a drawer provided on its rear end with a bell, a spring bell-hammer the end of which projects below the lower edge of the drawer, a bail for preventing a rearward movement of said bell-hammer, and an inclined block l , secured to the frame so that the bell-hammer will engage therewith, substantially as shown, and for the purpose set forth.

6. The combination, in a cash-register, of numbered disks, horizontal pivoted keys carrying pawls to actuate said disks, drawer and ejecting-spring, together with a transverse pivoted board above said keys in the rear of their fulcrum and having limiting-spring o engaging stop o' , together with arm P, depending from board O and engaging a recess in the drawer, substantially as set forth.

7. The combination, in a cash-register having disks with laterally-projecting pins e , of a key carrying a pawl i , which engages with

said pins to move the disks one point when the exposed end of the key is depressed, the inner ends of said keys extending beneath said disks and their pins and being beveled
5 to contact with the laterally-projecting pins and serve as a lock to prevent further rotation of the disks, substantially as set forth.

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

CLINTON H. DRURY.

Witnesses:

FRANK MASON,

R. J. McDOWELL.