

2. Sheets—Sheet 1.

No. 472,123.

Patented Apr. 5, 1892.

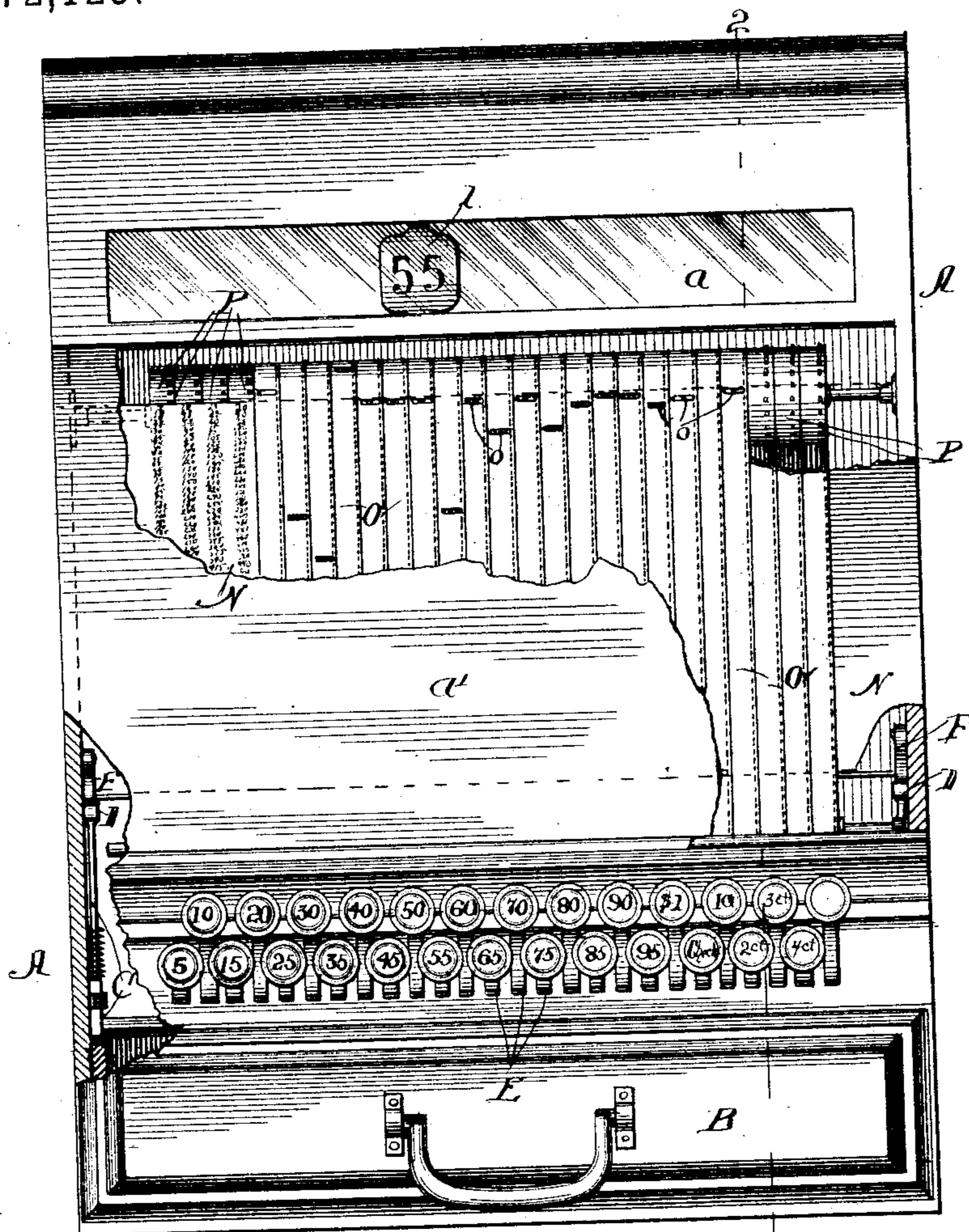
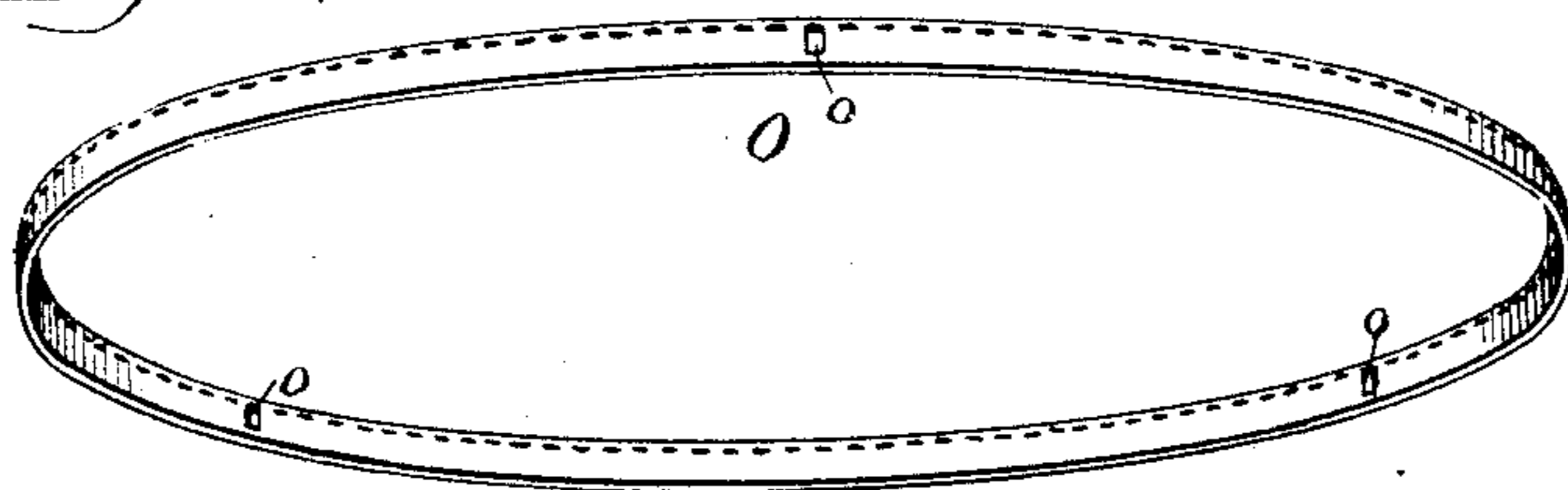


Fig. 8.



Witnesses:

Thos O Shrovet  
C. P. Smith.

*Inventor.*

Ferdinand S. Hunt

By Niles, Moore & Putner,  
Attys.



# UNITED STATES PATENT OFFICE.

FERDINAND S. HUNT, OF CHICAGO, ILLINOIS.

## CASH REGISTER AND INDICATOR.

SPECIFICATION forming part of Letters Patent No. 472,123, dated April 5, 1892.

Application filed March 2, 1891. Serial No. 383,464. (No model.)

*To all whom it may concern:*

Be it known that I, FERDINAND S. HUNT, a citizen of the United States of America, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Cash-Registers, of which the following is a specification.

My invention relates to an apparatus designed for use in stores and other places where a large number of small sales are made and where it is desirable to have some check upon the honesty of employes.

In its general features the apparatus is well-known, consisting, as it does, of a receptacle for the money which is normally locked and can be released only by operating one of a series of keys, which operation automatically displays a tablet in plain view of the purchaser or of any other person near by, which tablet bears a figure or figures to indicate the amount of the sale.

The apparatus also has a recording device automatically operated by the manipulation of the keys to make a permanent record of the amount of the sale where the same can be referred to by the owner.

The invention consists in certain improvements in the means for performing these different functions, which will be fully described below and closely defined in the appended claims.

The preferred form in which I have embodied my improvements is illustrated in the drawings by means of six figures, of which—  
Figure 1 is a front elevation; Fig. 2, a vertical section in line 2 2 of Fig. 1; Fig. 3, a detail view of a metal ribbon, the use of which will appear below; Fig. 4, a section looking downward from line 4 4 of Fig. 2; and Figs. 5 and 6, sectional detail views.

The apparatus is shown as inclosed within and protected by an ornamental case A, having near the top a glass plate *a* and below the same a door *a'*, provided with a lock. In the lower part of the case a drawer B is mounted upon rollers *b* and when closed bears against a spring *b'*, putting the same under sufficient tension to enable it to automatically throw out the drawer when the latter is released. The drawer is locked by means of spring-bolts C at opposite ends of the case pivoted at the top to levers D, ful-

crumed upon pivots *d* rigid with the case. A series of sliding keys E are mounted in guides above the drawer and carry upon their exposed ends buttons marked with different figures corresponding to the denominations of money or rather to the amounts thereof that are likely to be received in payment for purchases. These sliding keys are normally held outward by means of springs *e*, but may be pressed inward against the tension of said springs. Within the case each key bears a projecting pin or stud *e'*, and two levers F are pivoted at the opposite ends of the case having arms *f*, adapted to engage with the levers D to operate the sliding bolts, and other arms *f'*, carrying between their free ends a bar or rod *f<sup>2</sup>*, extending from one end of the case to the other. A plate *g*, also extending from end to end of the case, is pivoted to the levers F, as seen in Fig. 5, in position to engage with the projections *e'* as the keys E are moved back and forth. This plate is placed in front of the rod *f<sup>2</sup>*, so that as the keys are pressed inward and the projections *e'* strike it the long arms of the lever F will be pressed backward and the spring-bolt released; but as the keys return under the push of the springs *e* the plate *g* will merely swing away from the rod *f<sup>2</sup>* without moving the levers F. One of the depending arms *f'* of the latter also carries a striker *f<sup>3</sup>*, which when the lever has been forced back by the inward movement of one of the keys and then released is thrown by means of a spring *f<sup>4</sup>* against a bell H, hung in a convenient position in the case.

At the extreme inward end of the keys the latter bear blocks or studs I, and immediately above these blocks a series of rods J are pivoted at one end to the case and at the other to vertically-sliding bars K, held normally in their lowest positions by means of springs *k* and pivoted at the top to oscillating arms L, which carry at their free ends tablets *l*, bearing numbers respectively corresponding to the keys with which the arms carrying these tablets are connected. When one of the sliding bars K is in its lowest position, the tablet upon the arm L, with which it is connected, is held up where it cannot be seen through the glass front; but when one of the keys is pressed inward the block I upon said key throws the bar K up and drops the tablet into

view. A laterally-sliding bar M is mounted in rear of the bars K and in the path of the extended ends of the arms J. The upper corners of the latter are rounded off, as shown, so that as they are raised they will force the bar M backward and pass the same. The latter is, however, connected to the levers F by means of rods *m*, so that it is returned after the arm J has passed by the spring *f*<sup>4</sup> and blocks the return of the arm J, holding the tablet connected with that particular arm in view until a key is again pushed inward and the bar M forced from under the arm J by means of the connecting-rods *m*.

The recording device consists of a plate N, secured within the case beneath the door in the front thereof, bearing several series of numbers arranged in arithmetical progressions, as many series being employed as there are keys in the machine and the common difference in each series corresponding to the figure upon one of the keys and the tablet which said key exposes. A number of metal ribbons O are mounted upon pulleys P, so that each ribbon covers one series of numbers upon the plate N. These ribbons have slots *o* large enough to expose a single number, there being enough slots so that one will always be over the plate N, and if to accomplish this more than one slot is necessary the slots should be numbered. To prevent the ribbons from slipping upon the pulleys, I prefer to either puncture or indent their edges and provide studs upon the pulleys to engage with these holes or indentations. The pulleys are each provided with a spring detent or pawl R, adapted to engage with teeth upon the periphery of said pulley and to hold the same in any position unless forced against its spring. Each one of the keys bears a spring-arm S, so located as to engage with the studs upon the pulley P above it just as the key reaches the inward limit of its traverse and to force the pulley far enough to move the slot in the metal ribbon running thereon from the figure which it covers to the next higher number of the series. When the key returns, the pawl R prevents the ribbon from being drawn back, and the spring S merely leaves the pulley.

In operation the ribbons are all set at the start, so that slot No. 1 in each ribbon shows the zero-mark of the series beneath it. Then as the key is operated from time to time said slot will show a number equal to the product of the denomination of the key by the number of times it has been operated. The slots are so arranged that as slot No. 1 leaves the series slot No. 2 shows the first term thereof. Hence if, upon looking at the register, any of the slots No. 2 are in sight the number seen through the same should be added to the last

term of the series to get the proper reading. It will be readily seen that any length of ribbon can be used, and hence that the capacity of the machine is unlimited.

The above construction makes an exceedingly simple, cheap, and durable machine and one easily manipulated and cared for by any person who happens to have it in charge. It is not technically a self-adding machine, yet it accomplishes the same result as far as the amount registered by each key is concerned. At the same time there is no complicated and expensive mechanism for adding together the different amounts, and hence the liability to get out of order is greatly decreased.

I claim as new and desire to secure by Letters Patent—

1. In a machine of the class described, the combination, with a plate N, having a number of series of numbers arranged in arithmetical progressions marked thereon, of a series of ribbons having openings adapted to expose one or more of the numbers and provided with means whereby said ribbons may be advanced automatically by the operation of the machine, substantially as described.

2. In a machine of the class described, the combination, with the plate N, having the figures marked thereon, of the metal ribbons O, having openings *o*, the pulleys P, and the keys E, provided with suitable devices for advancing the metal ribbons, substantially as described.

3. In a machine of the class described, the combination of the sliding keys E, carrying the blocks I, the oscillating levers J, the vertical reciprocating rods K, pivoted thereto, the pivoted arms L, connected with the rods K at one end and bearing the tablets *l* at the other, substantially as described.

4. In a machine of the class described, the combination of the drawer B, the bolt C, the lever F, suitably connected with said bolt and having the swinging plate *g* thereon, adapted to swing freely in one direction, but to carry the lever with it in the other direction, and a key E, adapted to engage with said plate, substantially as described.

5. In a machine of the class described, the combination of the keys E, having the blocks *e'* and I, the spring-bolt C, the lever F, suitably connected therewith and adapted to engage with the projections *e'*, the arms J, the plate or bar M, the connecting-rods *m*, the rods K, and tablets operated thereby, substantially as described.

FERDINAND S. HUNT.

Witnesses:

C. P. SMITH,  
CHAS. O. SHERVEY.