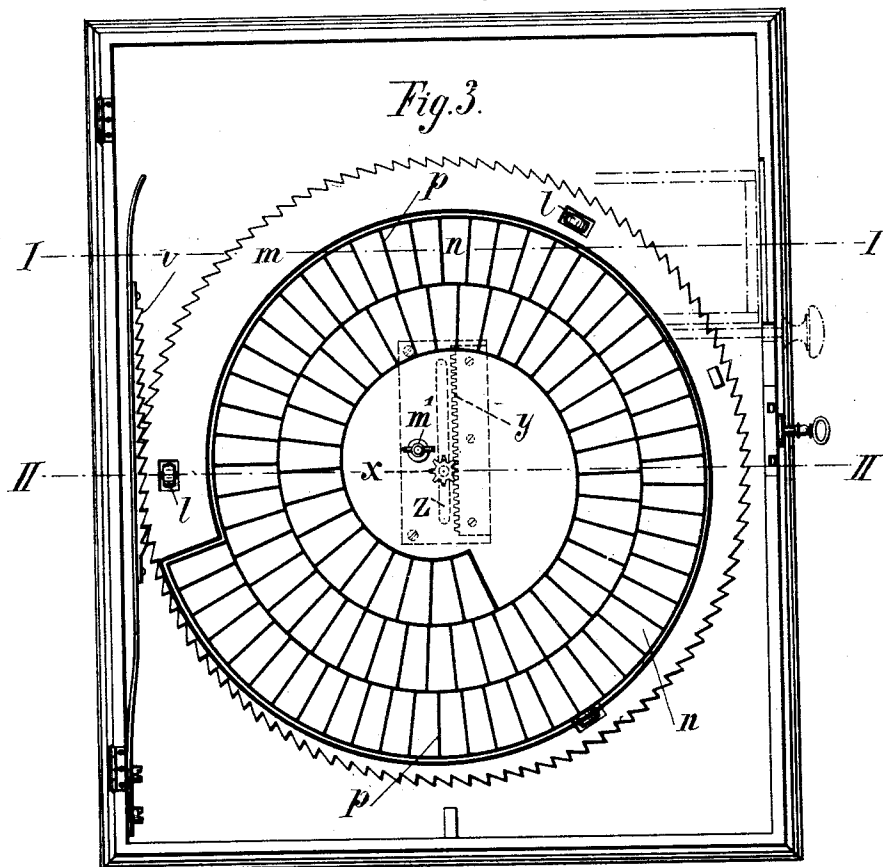
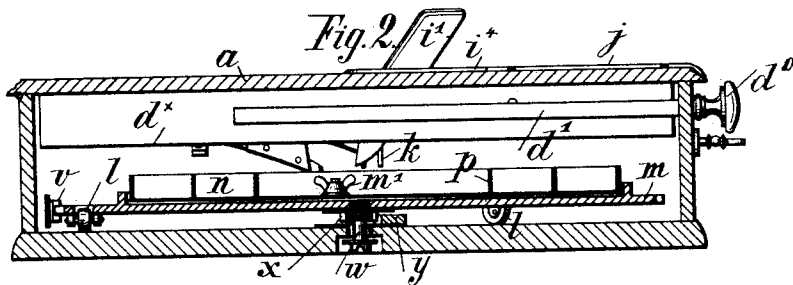
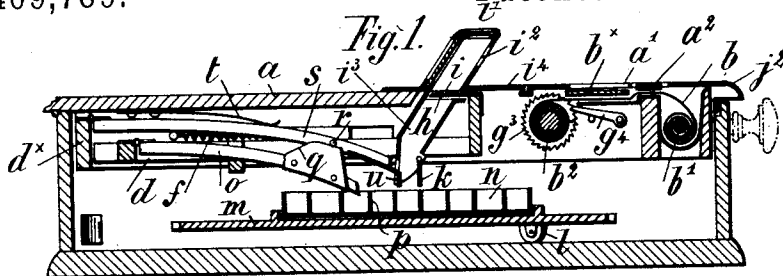


E. E. A. LAVES.
CASH DRAWER AND RECORDER.

No. 469,789.

Patented Mar. 1. 1892.



Witnesses.

Holly S. Heath

B. G. Mahoney

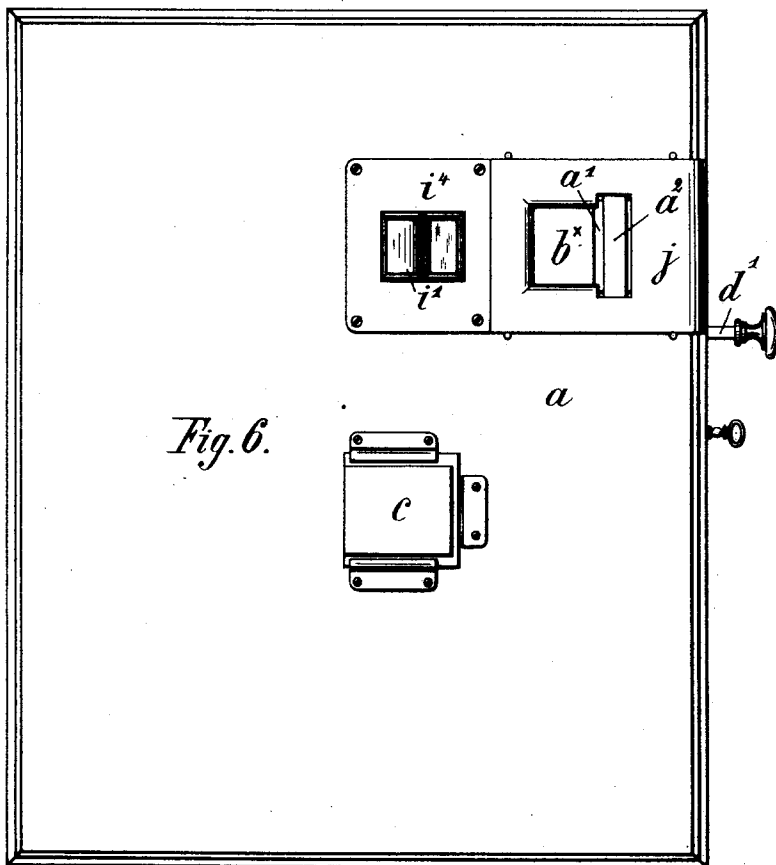
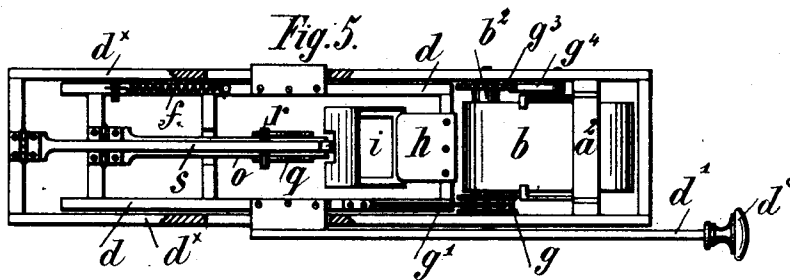
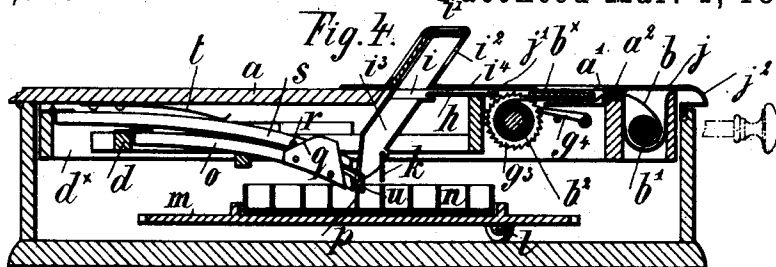
Inventor.

Eduard Ernst August Laves
By Paine Lord & attys

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R. C. Mahoney

Inventor.

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UNITED STATES PATENT OFFICE.

EDUARD ERNST AUGUST LAVES, OF HAMBURG, GERMANY.

CASH DRAWER AND RECORDER.

SPECIFICATION forming part of Letters Patent No. 469,789, dated March 1, 1892.

Application filed August 26, 1891. Serial No. 403,804. (No model.)

To all whom it may concern:

Be it known that I, EDUARD ERNST AUGUST LAVES, a subject of the Emperor of Germany, residing at Hamburg, in the German Empire, have invented certain new and useful Improvements in Cash Recording and Controlling Apparatus, of which the following is a specification.

This invention relates to improvements in cash recording and controlling apparatus or money-tills; and the object of the same is to enable an effectual control of the amounts received by reason of the fact that for removing each separate amount an empty compartment of the till is, through the medium of a mechanism operated by the cashier, placed below the slot through which the said amount is introduced, and a strip of paper divided and numbered in accordance with the locked compartments of the till and upon which the cashier produces an impression by means of an inking-band when making out the receipt to be handed to the purchaser is at the same time caused to travel so that in the inspection which is periodically carried out there will be for every receipt marked on the strip of paper the corresponding amount in the same compartment of the till. I attain this object by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a vertical cross-section through the till on the line I I; Fig. 2, a similar section on the line II II, showing the mechanism in the position of rest; Fig. 3, a top view of the till with removed cover; Fig. 4, a vertical cross-section of the till corresponding with that of Fig. 1; Fig. 5, a horizontal section of the mechanism to be actuated by the cashier, but removed from the cover of the till; and, finally, Fig. 6, a top view of the locked till. The acting mechanism, as far as they may be recognized from Figs. 4 to 6, are in the position in which they are commanded to begin their action.

Similar letters refer to similar parts throughout the several views.

In the aperture a' , formed in the cover-plate a of the till, I arrange an exchangeable inking-band a^2 , and below this band a strip of paper b , which is wound from one roller b^1 upon a second roller b^2 and moved on by steps through the medium of a handle d^o .

This handle is connected by a draw-rod d' with a sliding frame d , guided below the said cover-plate a between slats d^x and carrying at its inner side, Fig. 5, a pawl g' , arranged to engage with a ratchet-wheel g on the aforesaid second roller b^2 . When the sliding frame d is pulled out by means of the handle d^o in opposition to the tendency of a spring f , the pawl g' engages with the teeth of the ratchet-wheel g for turning the second roller b^2 a certain distance on the release of the said handle d^o and the consequent return movement of the sliding frame d and for moving the strip of paper b below the inking-band a^2 a distance corresponding to the height of a section upon which is the impression of the receipt to be made out by the cashier.

The forms of the receipts to be made out for the amounts paid are suitably taken from a tablet c , arranged by the side of the slot for introducing the money, and the purchaser is only obliged to pay the amount on such a receipt being handed over.

The receipt marking, transferred by means of the inking-band to the strip of paper which is locked up, becomes visible in the following displacement of the strip of paper through the above-mentioned aperture a' , which behind the inking-band is covered by a glass plate b^x , so that subsequent alterations cannot be made upon the said strip. A return movement of the strip of paper b is prevented by a pawl g^1 , which engages with a ratchet-wheel g^2 , secured to the second roller b^2 , heretofore referred to.

With the sliding frame d is connected a plate h , which in its position of rest closes the slot i , so that the said sliding frame must under any circumstances be drawn back for enabling the amount received each time to fall into the empty compartment, which occupies a proper position for the purpose.

Above the slot i for the introduction of the money is suitably arranged a glass case i' , which enables the amount inserted by the cashier through a narrow opening i^2 in the rear side of this case to be controlled by the purchaser. Below the slot i is, moreover, provided a channel i^3 , which conducts the amounts into the empty compartments of the till when the aforesaid plate is drawn back by means of the handle d^o . These compart-

ments n , designed for the separate reception of the several amounts, are for enabling the use of a great number of them, arranged spirally upon a rotary disk m , so that the latter every time when an amount is introduced or in every forward and backward movement of the sliding frame d must make a lateral movement in addition to the turning movement, in order to bring the compartments n , which gradually approach the center of the said disk m one after the other, exactly below the aforesaid channel i^3 , through which the amount is introduced. The turning movement of the said disk m is obtained by means of a pawl o , connected with the sliding frame d , which pawl, when the latter is drawn out, slides over the partitions p between the several compartments, but which, when the sliding frame d is pushed in, strikes against the partition between two adjoining empty compartments, and thus causes the disk m to turn a certain distance. However, in order that the compartment of the disk which is designed for the reception of money shall invariably be placed in the proper position below the aforesaid channel i^3 , I arrange above the pawl o , connected with the sliding frame, a second pawl s , pivoted to the cover-plate a of the till, which pawl is continually under the action of a spring t to force it downward, and bears by means of a pin r upon the guide-path q of the said pawl o . On the sliding frame d being pulled out and on the consequent displacement of the pawl o , connected with this frame, the aforesaid pin r slides upon the guide-path q in such a manner that the hooked end u of the second pawl s falls over the partition of the compartment n to be put in the proper position for the reception of money, Fig. 4, thereby preventing the further turning movement of the disk m at the given moment. In the rearward movement of the sliding frame d and pawl o , attached to it, the hooked end u of the second pawl s is raised from the compartment n , so that at the beginning of the next forward movement of the disk m the latter shall not be checked. A spring-rack v , held in engagement with the teeth of the rotary disk m , acts as a kind of pawl, which in the outward movement of the sliding frame d , when the pawl o , fixed to the latter, moves back for the next advance, prevents the rotary disk m from turning back.

For obtaining a gradual lateral displacement of the rotary disk m during the turning movement I fix upon the journal w of the same a toothed pinion x , which engages with a stationary rack y . In the turning movement of the disk m this toothed pinion must therefore gradually move along the said rack y , the journal w of the disk being guided in a slot z , formed in the bottom of the till.

In order that, for taking out the coin received in payment, the case containing the compartments n may be conveniently removed from the rotary disk m , the said case is se-

cured upon this disk simply by means of a screw-threaded bolt and thumb-nut m' . The disk m is provided with friction-rollers l for facilitating its movement.

The cover a of the till serving as a table-plate is cut out to a suitable width above the two rollers b' b^3 for the strip of paper and above the inking-band, in order to enable the exchange of the said strip; but the aperture thus formed is partially covered by a suitable plate j , which has at one end a bent edge j' , taking below the plate i^4 , carrying the device for the introduction of the money, but which extends at the other end j^2 round the edge of the cover-plate a in such a manner that it can be removed only when the cover-plate is raised—that is to say, when the till is opened.

As above stated, the several compartments n may be numbered continuously and the strip of paper may be divided lengthwise into sections, the height of which corresponds to the distance traveled in each displacement. These sections bear successive numbers corresponding to the said compartments n , so that the compartments and sections appertaining to each other can be distinguished at once.

In the arrangement above described the compartments in the case are supposed to be arranged spirally. It is evident that while retaining the turning movements of the case they may be arranged in a circle, and they may also be grouped one behind the other in a straight line, in which instance a rectilinear step movement is imparted to the said case.

If the payments received from various persons are deposited in the same till, these should, when they make out a receipt, be obliged to give their signature, which is transmitted by the inking-band onto the strip of paper.

Having fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. A cash recording and controlling apparatus in which, through the medium of a mechanism operated by the cashier, an empty compartment of a casing within a locked till is placed below the slot through which the cash is introduced and simultaneously a strip of paper designed for marking every receipt, and preferably divided and numbered in accordance with the locked compartments, is caused to travel, substantially as and for the purpose set forth.

2. A cash recording and controlling apparatus in which, by means of a sliding frame guided below the locked cover-plate of a till and carrying a pawl arranged to engage with the ratchet-wheel of a roller, a strip of paper wound upon the latter is caused to travel, and at the same time a casing provided with a number of compartments is moved by steps in accordance with the advance of the said strip of paper, substantially as and for the purpose set forth.

3. In a cash recording and controlling apparatus, the spring-operated pawls, provided with a pin *r* and a hooked end *u*, and the guide-path *q* on the pawl *o*, connected to the
5 sliding frame *d*, in combination with the casing provided with a number of compartments *n* and the mechanism for periodically advancing the strip of paper for marking every receipt, substantially as and for the purpose set
10 forth.

4. In a cash recording and controlling apparatus, a casing with spirally-arranged compartments, in combination with the station-

ary rack *y* and a pinion *x*, the pivot of which is guided within a slot *z* in the bottom of the
15 till, substantially as and for the purpose set forth.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 26th day of June, 20
1891.

EDUARD ERNST AUGUST LAVES.

Witnesses:

ALEXANDER SPECHT,
JULIUS THIODE.