Dec. 27, 1955 L. L. MOYLE 2,728,520

BILL HOLDING MEANS FOR CASH REGISTERS

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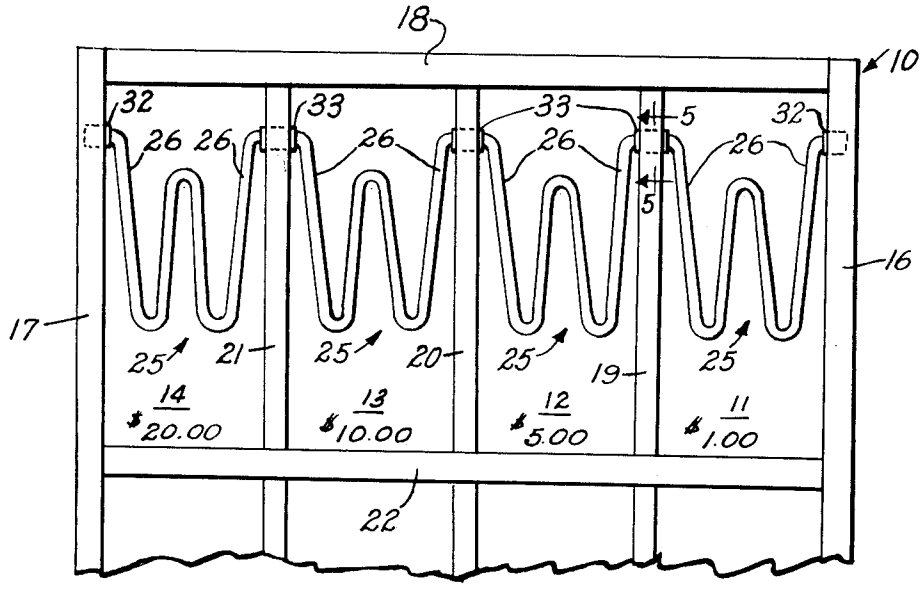


Fig. 1.

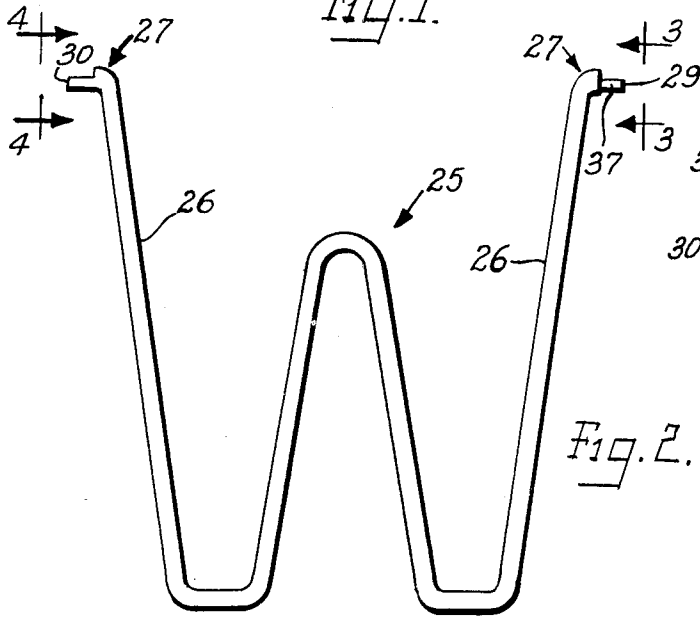


Fig. 2.

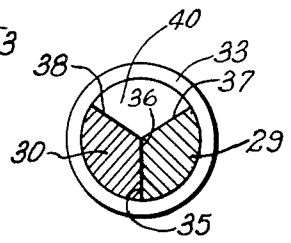


Fig. 5.

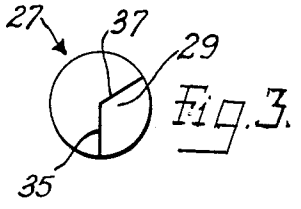


Fig. 3.

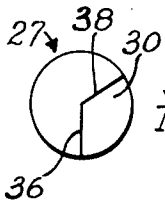


Fig. 4.

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BILL HOLDING MEANS FOR CASH REGISTERS

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2 Claims. (Cl. 235—22)

This invention relates generally to cash register tills or cash drawers and relates more particularly to bill weight means or mechanism for such drawers whereby identification of a bill tendered by a customer to pay for a purchase may be readily made until the transaction has been completed and change has been made by the cashier or other operator of the register.

It is not uncommon for a dispute to arise between a customer and the cashier or cash register operator as to the size or denomination of a piece of paper money or bill which the customer has tendered or presented to pay for a purchase. In order to avoid such trouble it is a common practice, when a customer tenders a bill, for the operator of the register to place the bill on the shelf of the register above the till or money drawer until change has been made and checked by the customer and thereafter place the bill in its proper bill compartment.

However, this procedure is not entirely satisfactory. One of the difficulties encountered is that the bill may slip off the shelf when it is inadvertently brushed by the operator's hand or arm. Another difficulty is that the bill may be blown off the shelf by a current of air such as might be stirred up by an electric fan, for example. Moreover, this procedure is time consuming and when a cashier is rushed the checking of items purchased and the making change is annoyingly slowed down.

It is therefore an object of the present invention to provide bill weight means or mechanism which does away with the above difficulties.

Another object of the invention is to provide mechanism of this character whereby the making of change is facilitated.

Still another object of the invention is to provide mechanism of this character whereby the cashier may readily keep track of the bill tendered by the customer so that it can be positively identified should a dispute arise regarding its denomination.

A further object of the invention is to provide mechanism of this character wherewith a bill tendered by the customer may be immediately placed in its proper compartment and still be identified to the satisfaction of both the register operator and the customer, so long as the till or cash drawer remains open.

A still further object of the invention is to provide mechanism of this character wherein the weights in the lower denomination compartments are automatically raised with the raising of a weight in a higher denomination compartment so that the weights of all the compartments involved in the making of change are raised and there is immediate and easy access to the bills in said compartment.

Another object of the invention is to provide mechanism of this character wherein all of the weights which have been raised may be automatically and simultaneously lowered with the lowering of a single weight.

Still another object of the invention is to provide mechanism of this character which is adapted for easy and

quick installation and removal in cash register tills or cash drawers.

A further object of the invention is to provide mechanism of this character which may be readily installed in present cash register drawers.

Other objects and advantages of the invention will be apparent from the following part of the specification.

Referring to the drawings, which are for illustrative purposes only,

Fig. 1 is a top plan view of a portion of a cash register till or money drawer having the bill compartments with the bill weight means or mechanism embodying the present invention installed therein;

Fig. 2 is an enlarged plan view of one of the bill weight devices embodying the said invention;

Fig. 3 is a view of one end of the weight device as seen from line 3—3 of Fig. 2;

Fig. 4 is a view of the other end of the weight device as seen from line 4—4 of Fig. 2; and

Fig. 5 is a view taken on line 5—5 of Fig. 1 showing the interlocking elements of the weight devices in section and located in the sleeve or bearing therefor.

Referring to Fig. 1, the cash register till or money drawer is indicated generally at **10**, and is provided with a plurality of compartments for paper money or bills of various denominations, there being shown compartments indicated respectively by reference numerals **11**, **12**, **13** and **14** for $1.00 bills, $5.00 bills, $10.00 bills and $20.00 bills respectively. The compartments are variously defined by portions of the side walls **16** and **17** of the drawer, the rear wall **18** of said drawer, longitudinally extending partitions or walls **19**, **20**, and **21** respectively and a transverse partition or wall **22** intermediate the front and rear of the drawer.

In each compartment is a bill hold down device or weight, indicated generally by the reference numeral **25**, shown as formed of wire of suitable gage, bent in the general shape of a **W**, as seen in the drawings, although these weights may be otherwise shaped or formed. As all of the devices **25** are formed and constructed alike only one need be described in detail.

As best shown in Fig. 2, at the free ends of the outer arms **26** of the W there are outwardly turned free end portions, indicated generally at **27**, which are axially aligned with each other and which include segmental end parts **29** and **30** respectively at their terminal or outer ends. These parts **29** and **30** are shown as 120° segments (Figs. 3, 4 and 5) as viewed from their outer ends or in cross-section, although they may be of other angularity and still function properly as long as they permit the required amount of free movement relative to adjacent devices and the proper cooperative relationship thereto so as to function as hereinafter described.

The end portion **27** having the segmental part **29** of the device **25** in the $1.00 bill till compartment, is rotatively received in a sleeve **32** set into a recess provided therefor in the outer side wall **16** of the till or drawer **10**, the opposite end portion **27** being rotatably received in a sleeve **33** mounted in an opening provided therefor in the longitudinal partition **19** defining the side of the $1.00 bill compartment opposite the side defined by the outer side wall **16**.

The end portion **27** of the device **25** in the $20.00 bill compartment, which has the segmental part **30**, is received in a sleeve **32** mounted in a recess provided therefor in the outer side wall **17** of the till and the opposite portion **27** of the device is operably received in a sleeve secured in an opening provided therefor in the partition **21**. The end portions **27** of the devices in the $5.00 bill and $10.00 bill compartments have their ends **27** operably received in adjacent sleeves **33**, there also being a sleeve **33** mounted in an opening provided therefor in the lon-

gitudinal partition 20. It is to be noted that all of the sleeves are in axial alignment with each other and operably house the various end portions 27 of the devices 25.

The segmental parts of the devices 25, which are mounted in the sleeves 33 are inter-relates, as shown in Fig. 5, so that under certain conditions there is relative movement between said parts and under other conditions there is engagement between said parts so that one device 25 is positively actuated or moved with movement of another of said devices 25, the above mentioned conditions being hereinafter fully described.

Referring now to Figs. 2, 3 and 4 particularly each of the devices 25 have their segmental parts so arranged relative to each other that they have two sides substantially in a common plane. The segmental part 29 has a side 35 which lies in substantially the same plane as side 36 of segmental part 30. Thus the parts 29 and 30 are on opposite sides of the plane of said sides 35 and 36.

This relationship of the segmental parts to each other is clearly shown in Fig. 5. While the segmental parts shown in Fig. 5 are on different weight devices 25, said devices are in relatively the same plane so that their relative positions are the same as in the case the device per se.

When the weight devices are in the same plane, and in the bill holding position shown in Fig. 1, the segmental parts 29 and 30 are operably disposed in their bearing or sleeve 33 as shown in Fig. 5, the sides 35 and 36 thereof being in abutment. These parts also have sides 37 and 38 respectively which are circumferentially spaced apart a substantial distance, as at 40.

Now, if a $1.00 bill is presented, only the device 25 in the $1.00 bill compartment is raised, showing that a one dollar bill is to be changed, and this bill is placed immediately in compartment 11 which is for $1.00 bills. This independent movement of the device 25 in compartment 11 is possible because of the space 40 between the walls 37 and 38 of the segmental parts 29 and 30. In Fig. 5 the part 30 belongs to the device 25 in compartment 11 while the segmental part 29 belongs to the device 25 in compartment 12. As the device in compartment 11 is raised the segmental part 30 thereof rotates in the clockwise direction, as viewed in said Fig. 5, in the space 40 and hence said device is free to move upwardly to a position where the bill which has been tendered may be placed in said compartment. Reverse or lowering movement may also be made independently by said device for obvious reasons.

Should a $5.00 bill be presented the bill weight 25 in the compartment 12 or $5.00 bill compartment is raised causing the end part 29 thereof to be rotated in the clockwise direction as viewed in Fig. 5. As the wall 35 of this part 29 is in engagement with the wall 36 of the part 30 of the device 25 in compartment 11 the latter will be raised simultaneously with the raising of the device 25 in compartment 12. The $5.00 bill which has been tendered by the customer is then placed in compartment 12 and the weight in compartment 11 is in the raised position so that $1.00 bills from this compartment may be removed in making change without additional motions being necessary to raise the device 25 in compartment 11 from them. Moreover, the cashier knows that the denomination of the bill presented by the customer is that of the highest denomination compartment having a raised bill weight device.

While the device 25 in compartment 11 is raised simultaneously with the raising of the device in compartment 12, it will be understood that the device 25 in compartment 13 will not be raised because the relationship of the segmental parts in sleeve 33 in partition 20 is the same as the relationship of the corresponding parts in sleeve 33 in partition 19 which is shown in Fig. 5. Therefore, weight devices to the left of a device 25 are not raised when the latter is raised but those to the right are raised.

Referring again to the situation where the devices 25 in both compartments 11 and 12 are raised, the segmental portions thereof are positioned so that the sides 35 and 36 thereof are either in abutment with each other or almost in such relationship. Then, if the device 25 in compartment 11 is manually moved to the lowered position the part 30 thereof will be rotated in counterclockwise direction and positively and simultaneously move the device 25 in the compartment 12 to its lowered position.

It is believed to be apparent from the foregoing that lowering the device 25 in compartment 11 will effect lowering movement of all the other devices 25 which have been raised to the left of it. It also will be understood that raising a device 25 in compartment 13 or compartment 14 will raise all of said devices in lower denomination compartments and the cashier will always know the denomination of a tendered bill and will always have ready access to the various bill compartments from which it may be necessary to take bills in making change for such tendered bill.

As the devices 25 have resiliency it is easy to install or remove them. By pressing the free ends of the arms 26 toward each other the end portions 27 are moved together a sufficient distance so that they may be readily inserted into or removed from their respective sleeves or bearings.

It is to be understood that the sleeves 32 and 33 may be free in the respective recesses and/or openings provided therefor or they may be secured against rotation in said recesses or openings.

The normal spacing of the arms 26 from each other may be such that said arms do not bear particularly against the adjacent ends of the sleeves so that the weight devices may freely move.

Should said sleeves be secured against rotation in said recesses and/or openings, the adjacent parts of the arms 26 may be normally spaced apart from each other so as to functionally engage the adjacent ends of the sleeves so that the weight devices 25 will remain in whatever position to which they are moved.

As pointed out hereinabove, the weight devices may have other shapes than the shape shown in the drawings. Another shape could, for example, be in the form of a V. Also additional known weights could be added to the free ends of the weight devices so as to add to them operative effectiveness including the holding down of bills.

I claim:

1. In a cash register money drawer: a plurality of bill compartments in side by side relation defined by walls having openings therethrough, said opening being in axial alignment; journal sleeves secured in said openings; a bill hold down weight device in each bill compartment, each bill weight device having a main body portion and outwardly extending trunnions in axial alignment with each other, said trunnions being received in the sleeves at the sides of each compartment; and terminal portions at the ends of said trunnions, said terminal portions being segmental in cross-section and less than 180°, the segmental terminal portions of each weight device being symmetrically disposed at opposite sides of a common plane passing through the axis of the trunnions and including respective radial walls parallel to and substantially in said plane, the respective segmental portions in each sleeve overlapping and forming a lost motion connection therebetween, the respective radial wall surfaces of adjacent hold down devices being in engagement with each other when the adjacent weight devices are in corresponding positions in the respective compartments so that manually raising a weight device will effect raising all other weight devices at one side of said manually raised device, and lowering one of the other raised devices will effect lowering all the other raised devices at the side of the first mentioned lowered device adjacent the first mentioned raised device.

2. In a cash register money drawer: a plurality of bill compartments in side by side relation defined by walls

having openings therethrough, said openings being in axial alignment transversely of said drawer, said compartments being respectively for bills in progressively increased denominations from one side to the other of said drawer; a journal bearing sleeve in each of said openings; and a bill hold down device in each compartment, each device being formed of resilient wire having a main portion and axially aligned outwardly turned end portions, each end portion having a terminal portion segmental in cross section, each segmental portion of a hold down device being less than 180° having a wall that is in substantially the same plane as a wall of the other segmental portion of said device, said segmental portions being on opposite sides of said plane; the segmental portions of adjacent hold down devices in the respective sleeves being so positioned that said walls of said segmental portions are in abutment when adjacent hold down devices are correspondingly positioned in their

respective compartments, said portions being arranged so that raising of a higher denomination hold down device will effect raising all lower denomination hold down devices, and lowering of a lower denomination hold down device will effect lowering of all raised higher denomination hold down devices.

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