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[54] CHECKING AND CANCELING DEVICE

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[52] **U.S. Cl.** **355/64,** 95/1.1

[51] **Int. Cl.** **G03b 17/24**

[58] **Field of Search** 355/64, 30; 95/1.1

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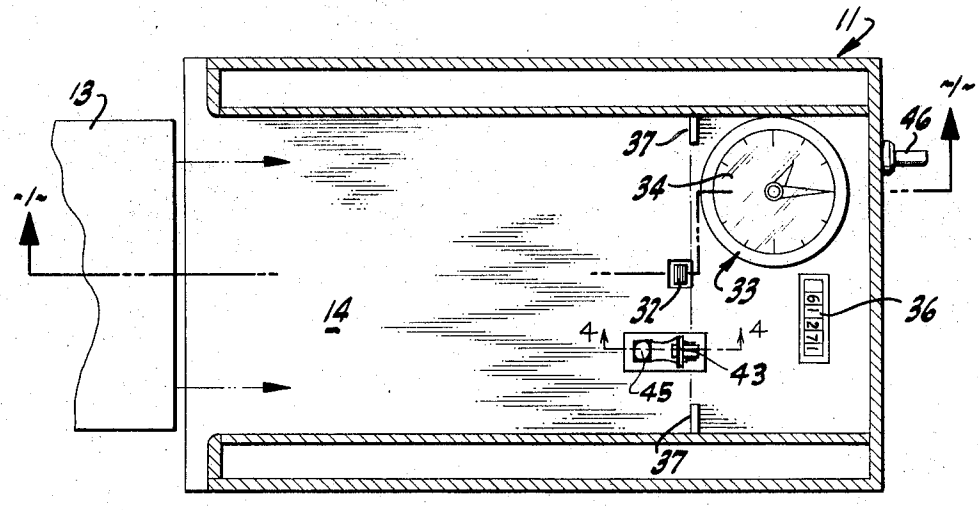
[57] **ABSTRACT**

A device for utilization with checks or bills as may be employed in restaurants, for example, to photograph same with the time and date of photography as well as to mark the bills so as to preclude peculations, including those involving collusion.

4 Claims, 4 Drawing Figures



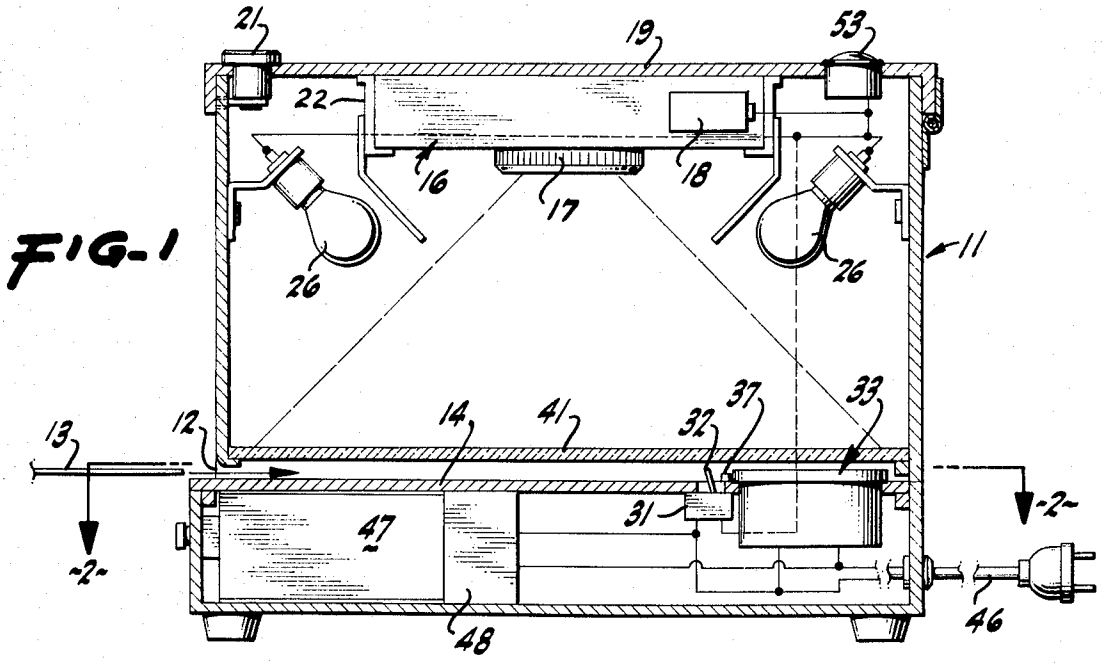


FIG-1

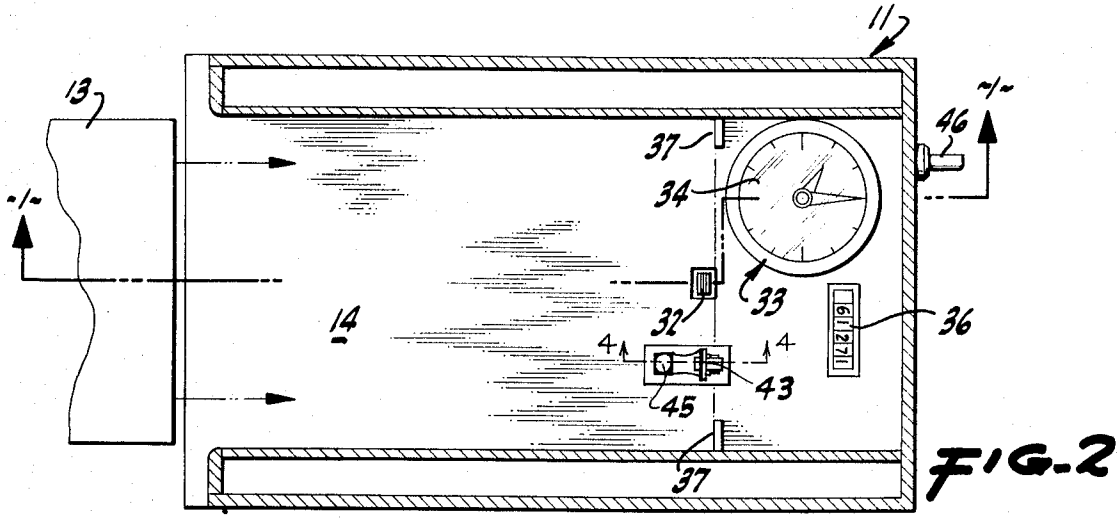


FIG-2

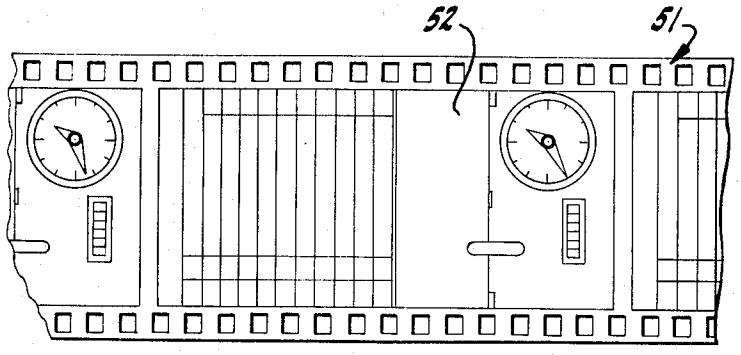
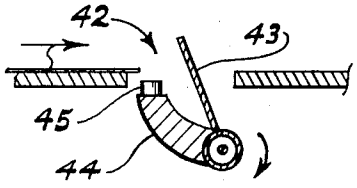


FIG-3

FIG-4



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CHECKING AND CANCELING DEVICE

BACKGROUND OF INVENTION

There have been developed numerous systems or methods of doing business incorporating means for checks and balances within establishments handling currency in order to preclude improper or illegal practices whereby all or portions of monies received may be stolen, embezzled or otherwise removed from the normal and proper course of commerce. Some of these systems and methods have, in fact, been subject to court action both with regard to patentability thereof and to infringement thereof.

It is well recognized that in those businesses dealing with the general public and wherein receipts in the form of currency are obtained from such public in return for goods or services, there exists an acute problem of insuring registration and receipt of all cash paid for the goods or services. Some types of businesses are more prone to difficulties in this area than others and, in particular, problems are found in the fields of restaurants, sales establishments, and the like wherein substantial sums of money are paid for both the goods delivered and services rendered and yet a considerable loss is often accepted by the proprietor therein.

In direct contrast to prior methods of doing business and the like, the present invention provides a simple and relatively inexpensive device for producing a complete and accurate record of the correspondence between charges and receipts.

It is furthermore recognized that in various fields, such as in the handling of bank checks and the like, there have been developed a wide variety of devices for microfilming transaction documents such as sales checks. Such devices are, however, generally unsuited for the application of the present invention which must not only be quite compact and substantially foolproof in use but is required also to record the sales check together with the time of recording and to cancel the sales check to prevent reuse thereof.

SUMMARY OF INVENTION

There is provided by this invention a compact, enclosed device having a slot therein for receiving a restaurant food sales check, bill or the like, and including a trigger or switch operated by check insertion to actuate a motion picture camera in single frame operation while at the same time energizing appropriate lighting means within the device so that each food sales check is correctly photographed upon insertion. Within the device there is also disposed time and data recording and/or indicating means in full view of the camera so that there is photographed and/or recorded upon the film a picture of the check which includes the time and date of its insertion in the device.

It is furthermore provided by the present invention that each check or the like inserted therein shall be canceled or otherwise operated upon to indicate that it has been recorded by the device. Such cancellation may be provided by characteristic alteration of the check that will not be visible except by special means.

The device of the present invention is provided as an enclosed and locked unit so that the interior thereof is unavailable to those normally using the device. As noted above, the present invention is particularly directed to providing a record of particular transactions in order to guard against and to identify improper transactions as may be carried out by those handling restaurant and/or food sales checks, for example. Thus the unit of this invention is provided in a sealed condition so as to preclude tampering therewith. It is, in fact, the very personnel that use the present invention which are being checked upon thereby, and consequently a substantially foolproof device is required and is provided.

DESCRIPTION OF FIGURES

The present invention is illustrated as to a single preferred embodiment thereof in the accompanying drawing wherein:

FIG. 1 is a longitudinal sectional view taken in elevation as, for example, in the plane 1—1 of FIG. 2;

FIG. 2 is a sectional view through the slot of the present invention and taken in a horizontal plane such as indicated at 2—2 of FIG. 1;

FIG. 3 is an enlarged partial view of the motion picture film facsimile illustrating a type of photograph taken in the device of the present invention; and

FIG. 4 is a sectional view of cancelling means taken in the plane 4—4 of FIG. 3.

DESCRIPTION OF PREFERRED EMBODIMENT

Referring to FIGS. 1 and 2 of the drawing, there will be seen to be shown a closed case or housing 11 with a slot 12 in the front thereof for receiving a restaurant check or the like 13. Internally of the housing 11 there is provided a plate or table 14 forming the base of the slot 12 upon which the check 13 may slide as it enters the slot. This check 13 is preferably made of a relatively rigid lightweight material such as a quality paper, cardboard or the like and, in fact, restaurant sales checks, for example, are often so formed.

Within the housing or case 11 there is mounted a camera 16 in spaced relation above the table 14 and having a suitable lens 17 to view the entire interior of the case at the base of the slot. This camera may comprise a motion picture camera having an actuator 18 operable to actuate the camera in single frame operation. Thus each actuation of the camera will product exposure of one frame of motion picture or film strip carried in the camera and this camera may, for example, comprise a conventional motion picture camera or other photographic device and/or recording device.

The case 11 is formed of a light-opaque material such as metal with a movable or removable top 19 which may be locked in position as by locking means 21. The camera 16 is mounted internally of the case by suitable mounting means 22. Provision is made within the case 11 for appropriately illuminating the card, check or the like 13 which is inserted in the slot 12 so that film in the camera 16 will be properly exposed to made adequate reproductions of the original sales check. Such means include one or more lamps 26 disposed within the housing or case and directed generally toward the table 14.

It will be appreciated that the camera 16 must be sufficiently displaced from the table 14 for the camera lens 17 to fully view the entire table in order that a whole picture of the complete sales check will be effected upon triggering or actuation of the device. To this end a suitable camera lens 17 of focal length, resolution and aperture, is provided.

Provision is made within the device for actuating same each time that a card **13** is inserted in the slot **12**. Such means may, for example, comprise a switch **31** having a movable arm **32** extending through a small opening in the table **14** at the inner end of the slot **12**, as indicated. This switch **31** is employed to operate the camera actuator **18** as described below. In addition to the above-noted portions of the present invention, there is also provided a clock unit **33** having an upper transparent surface and immediately beneath which there is disposed a conventional clock face **34** with hour and minute hands moving thereabout and also a data indicator **36** which may be driven by the same clock mechanism in conventional manner. This clock unit **33** is disposed at the inner end of the slot **12** and one or more card stops **37** may be provided to prevent movement of the card over the face of the clock mechanism so that the camera **16**, upon actuation, will take a picture of the card **13** and, at the same instant, of the time and date portions **34** and **36** of the clock.

There may be additionally provided within the case **11** a transparent plate **41** disposed across the top of the slot above the table **14** to prevent the entry of dust or the like into the upper portion of the case. Care should be exercised, however, to ensure that the lighting means **26** are appropriately located so that when energized they will actually illuminate the surface of the card **13** inserted in the slot rather than merely reflect light from the transparent slot cover **41**.

In addition to photographing a sales check and clock, the present invention further provides for marking the check itself when it is photographed. This marking is preferably accomplished in such a manner that it is not normally visible. By the subsequent use of appropriate reading or sensing means, it can then be determined whether or not a check was ever placed in the machine.

In FIGS. **2** and **4** there is illustrated a simple mechanically operable check marker **42** including an actuator arm **43** extending upwardly through the table **14** near the inner end of the table. The actuator is connected to the marker **42** which may comprise a tube **44** of invisible ink having a porous head **45**. The actuator and tube are pivotally mounted as indicated in the drawings so that insertion of a check, receipt, or the like, into the slot **12** and pushing it forward to operate the machine engages the actuator to pivot the marker into engagement with the under side of the check or the like. This then applies ink to the check. The ink may take a variety of forms such as one that is not visible in ordinary light but becomes visible in ultraviolet light, for example. Of course, the actuator **43** may be comprised as the switch arm **32** appropriately linked to the marker **42**.

Further with regard to the identification of card registration, it is noted that restaurant checks or the like forming the card **13** normally carry an identification number and thus the taking of a picture thereof positively identifies the presence of such a card in the device of this invention. This, however, does not identify to one immediately thereafter handling the card that same has been entered in the device of this invention. Consequently, the stamping of the card is provided to ensure that a chef, cashier, owner, or other responsible person that may subsequently take action on information entered upon the card, can be immediately apprised of the fact that the card has been registered by the invention.

Electrical energization of the camera actuator **18** and illuminating means **26** of the present invention through the switch **31** may be accomplished from generally available convenience outlets of 115 to 120 volt alternating current power, as by means of an extension cord **46** extending from the housing **11**. Alternatively, it is possible to provide an integral power supply in the form of a battery **47**. In the latter instance, wherein both alternating current and direct current energization of internal elements of the device are possible, there should be provided a converter **48** by means of which the internal elements of the invention may be operated either from a.c. or d.c. power. As shown, the clock unit **33** is connected for continuous energization either from a.c. or d.c. power so that it at all times indicates the proper time and date on the face thereof. Insofar as the camera actuator **18** and illuminating means **26** are concerned, however, it is only upon operation of the switch **31** that same are connected to the power supply means. Thus the switch is connected to energize the illuminating means **26** and camera actuator **18** upon movement of the switch arm **32** by insertion of a card **13**.

Again it is noted that the device of the present invention is intended to guard against improper actions by those inserting the card and thus provision is made in the internal circuitry hereof for instantaneously energizing the illuminating means **26** and the actuator **18** so that one inserting the card cannot merely hold the card fully within the slot and thereby overexpose the picture taken thereof. The foregoing may be accomplished in a variety of relatively conventional ways such as, for example, by the provision of a capacitor discharge circuit operating the illuminating means **26** and actuator **18**. There may also be provided as a portion of the present invention an indicator **53** in the form of a counter, light or audio signal means producing an indication exteriorly of the case **11** upon each operation of the camera **16**. In the instance wherein this indicator comprises merely a light or audio signal generator the one using the present invention will be then apprised of the proper and complete operation thereof. Under the alternative circumstances wherein it is desired to insure that a picture is actually taken by the camera **16**, the indicator may alternatively, or in addition, comprise a counter indicating, exteriorly of the case **11**, the number of pictures taken or the number of pictures remaining to be taken by the camera **16** so that an owner or manager may periodically check the device to insure that each time it is actuated there is an available frame of film to be exposed by the camera.

There is produced by the present invention a series of single frames of a motion picture film **51**, as generally illustrated in FIG. **3**. The frame **52** of the film **51** will be seen to include not only a reproduction of the card, check or the like **13** inserted in the slot **12** of the present invention, but also a representation of the time and date at which such insertion occurred. The camera **16** takes a picture not only of the card inserted in the slot but also of the clock face at the time of insertion. This is clearly shown in FIG. **3**.

Although not vital to the present invention, it is noted that the device hereof may be further employed to gain photograph a dinner sales check, for example, with a credit card receipt attached thereto. The slot **12** of the case hereof is sufficiently high or thick to accom-

modate more than one piece of paper or cardboard at a single time. Thus, after a diner, for example, has completed a meal and signed a credit card receipt for the meal, the dinner check and receipt may be connected and simultaneously inserted in the slot of the case hereof so that a picture is taken of the two together. This then provides an additional bit of information available to a manager or owner as to whether or not any variations or changes have been made in either the credit card receipt with respect to the dinner check or the check itself. There is in fact provided by the present invention a device by means of which both immediate and subsequent checking is possible over the manner in which individual receipts or restaurant sales checks, for example, are handled. The problems of restaurant owners and the like in the field of petty peculations is indeed enormous. Over even a short period it is possible for dishonest personnel employed by a restaurant owner, for example, to siphon off from the receipts more money than would comprise the profit of the entire operation. The present invention provides means for limiting or precluding such loss.

Operation of the present invention is believed to be apparent from the foregoing description of a preferred embodiment of the invention. It is only necessary for a waiter or the like, upon filling out of a bill, sales check or the like, to slide same into the slot **12** of the case **11** hereof. This then moves the switch arm **32** to actuate the invention so that a picture is taken of the sales check and also of the time and date at which same was entered in the slot. The operation of the present invention also includes stamping or cancellation of the sales check so that it is possible for someone else involved in handling the sales checks to know whether or not it has been registered by the present invention. At any time desired such as, for example, the end of the day, an owner or manager may sort the sales checks in the cash register and compare them to the pictures taken by the recorder **16** of this invention. Any discrepancy immediately calls attention to some improper operation by the one or ones handling the check. As it is not a part of the present invention, no further description is herein set forth of the particular procedures that may be initiated in a restaurant or the like to take full advantage of the present invention. It is, however, noted that at all stages of operation, it is possible for those involved to substantially immediately determine whether or not appropriate procedures involving the present invention have been followed. This then provides not only a way in which improper operations may be detected but also provides a severe deterrent to any such improper operations. Even under the circumstances wherein the present invention may be inoperative and as long as the indicator **53** does not apprise a waiter or the like of such situation, the deterrent factor noted above remains.

It will be seen that the present invention does truly provide an improved device for detecting and deterring falsification or the like of restaurant sales checks, for example. While the invention has been described with respect to a particular embodiment and application, it is to be understood that the invention is not limited to the details of description or illustration. Reference is made to the appended claims for a precise delineation of the scope of this invention.

What is claimed is:

1. A device for recording bills, sales checks, and the like and particularly those identifying money to be paid, comprising

a light-opaque housing having a slot therein for receiving semi-rigid cards,

means defining at least one surface within said housing in extension from said slot for positioning cards one at a time in a plane in said housing,

time indicating means disposed within said housing substantially in said plane in position for alignment with a card inserted therein,

photographic means disposed within said housing and directed toward the position of a card inserted in said slot, and focused substantially on said plane,

power supply means, and

switch means disposed in the path of a card inserted in said slot for operation by card engagement and energizing said photographic means for photographing each card inserted in said slot and at the same time photographing said time indicating means.

2. The device of claim **1** further comprising means within said housing and actuated by said switch for altering a characteristic of each card inserted in said slot.

3. The device of claim **2** further defined by the means thereof comprising a stamp disposed to engage a card placed in said slot for marking the card.

4. The device of claim **1** further defined by the means defining at least one surface comprising a pair of spaced surfaces extending from top and bottom of said housing slot with the first of said surfaces being transparent and separating said photographic means from the slot, and said time indicating means being disposed at the inner end of said second surface with card stop means limiting card insertion at said timing means whereby a card inserted in said slot is longitudinally aligned with said timing means when fully inserted in the slot in engagement with said switch means.

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