

[54] **APPARATUS FOR PHOTOGRAPHING A PERSON WHILE A DOCUMENT IS HANDLED AT A WORK STATION**

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[57] **ABSTRACT**

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[58] **Field of Search:** 95/1.1; 194/9; 346/107; 355/64

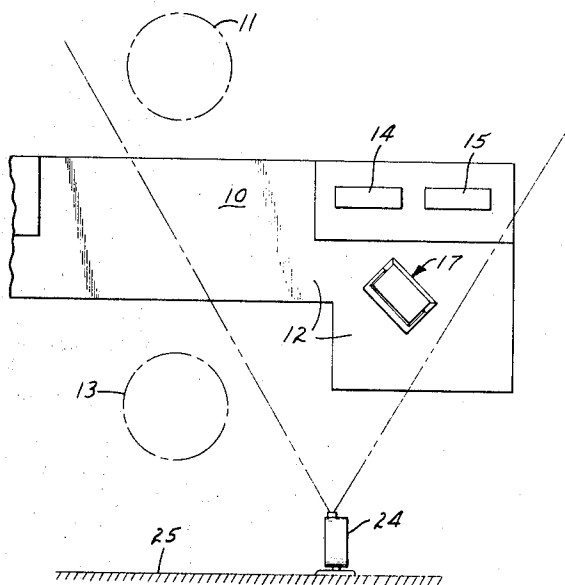
A photographic record of a person at a work station that can later be at least approximately identified with a document that was handled at the work station while the person was there is provided by simultaneously displaying a code adjacent the person, applying the same code to the document handled, and photographing on one film both the person and the displayed code.

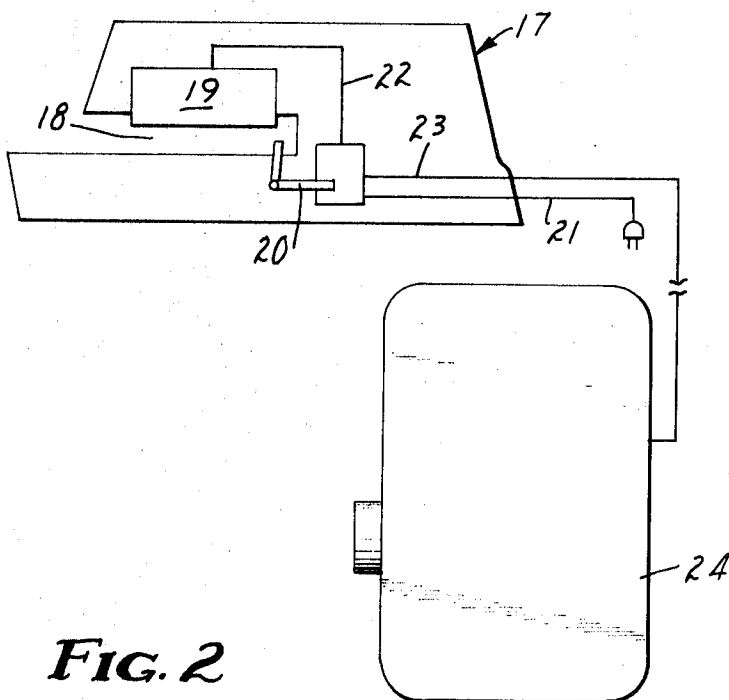
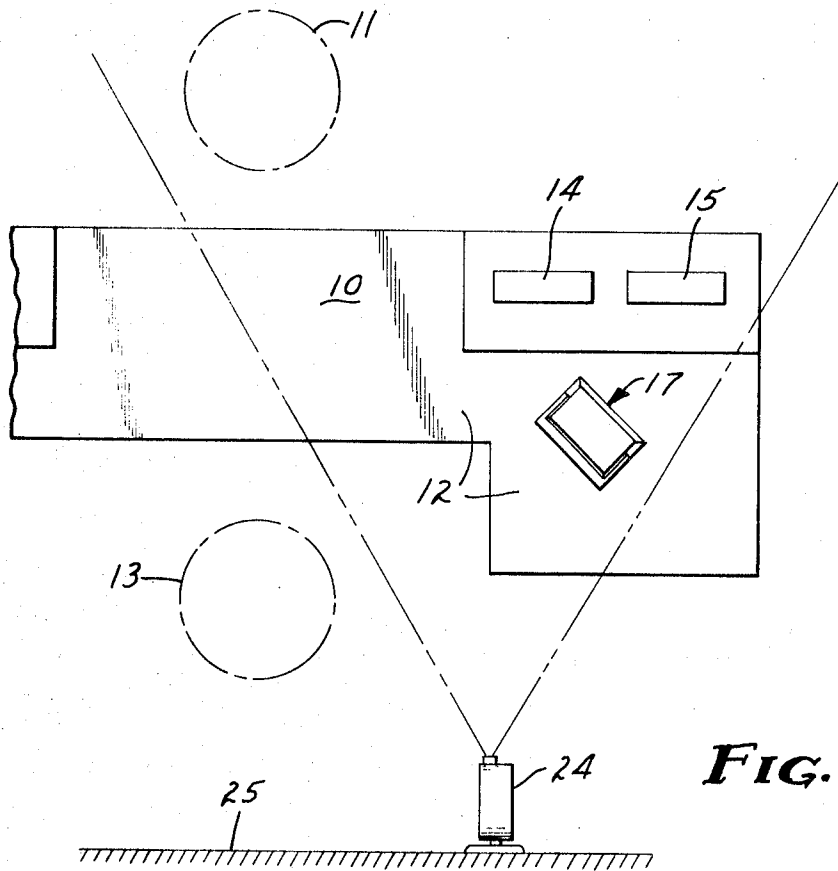
[56] **References Cited**

UNITED STATES PATENTS

2,717,069 9/1955 Driscoll 194/9

10 Claims, 2 Drawing Figures





APPARATUS FOR PHOTOGRAPHING A PERSON WHILE A DOCUMENT IS HANDLED AT A WORK STATION

A traditional method for photographing a person while a document is being handled at a work station, for example a person cashing a check at a bank or at a customer service window, is to have the person face a camera, lay the document face up on a table in front of the person, and through a split beam technique photograph on one film both the person and the document. A major disadvantage of this method is that it is so bold and obtrusive as to be offensive to many persons. As a result this traditional method has declined in usage, despite the continuing need for a method for identifying persons associated with certain documents at a time several days or longer after the documents were handled.

The present invention provides a method and apparatus for unobtrusively photographing persons while documents are being handled at a work station. An additional important advantage is that the method and apparatus of the invention are adapted to being part of an existing surveillance-camera system for the work area. And photographic records made by the invention are well indexed so that a photographic record for any document can be easily and rapidly retrieved.

Briefly, a method of the invention comprises the steps of

1. positioning code display means adjacent the work station to visually display a code that is changed at short periodic time intervals so that a different code is displayed for substantially each handling of a document at the work station;
2. mounting camera means in position to photograph in one picture the displayed code as well as a person positioned at the normal location at the work station for awaiting handling of the document;
3. applying to the handled document substantially the same code as the displayed code; and
4. actuating the camera simultaneously with applying the code to the document.

Apparatus for use in this method includes

1. camera means as described above;
2. code applicator means for applying a code that includes substantially the same elements as the displayed code and that is changed automatically at substantially the same rate as the displayed code so that at any instant in time the code applicator means applies substantially the same code as the displayed code; and
3. actuating means for simultaneously actuating the camera and the code applicator means.

DESCRIPTION OF THE DRAWINGS

FIG. 1 is a schematic diagram of a work station of the invention; and

FIG. 2 is a schematic diagram of a document labeling means and camera of the invention.

DETAILED DESCRIPTION

FIG. 1 illustrates schematically an installation of apparatus of the invention at a typical work station, such as a teller's window at a bank. As shown, the work station typically includes a counter 10 at which an individual 11 presents a document such as a check, and a work table 12 next to the counter on which is placed equipment used by an attendant 13 such as a bank teller.

Work stations of the invention may take many different forms beside the one shown; for example, they may include a desk at which an attendant and a person to be identified with a document sit or a counter in a retail store. And a variety of documents may be handled, including the seller's copy of receipts for payments made by presentation of an identification or "charge" card, tickets attached to pawned articles, and a variety of negotiable instruments. And the document need not be a flat sheet or set of sheets, but may be a box containing merchandise or even a bulky article itself.

Adjacent the counter 10 in the illustrative work station are a calendar 14 and clock 15 which comprise a code display means providing a code that automatically changes at short periodic time intervals so that it is substantially specific to each individual presenting a document. Clocks that present the time in digital form are preferred for use in the invention, though other clocks can be used. In addition, other code display means can be used, such as a display manually operated by an attendant to present a succeeding number whenever a new document is to be handled at the work station. It should be noted that when it is stated in this specification that the code display means is adjacent an individual presenting a document at a work station, it is meant that the code displayed will appear in a photograph taken of the individual at the work station. A clock that is part of a code display means of the invention may be on a wall behind the individual presenting a document rather than on a counter at his side, for example.

A document labeling means 17 is located on the work table 12 at a position convenient to the attendant 13. As shown schematically in FIG. 2, the illustrative document labeling means 17 is powered electrically through a line 21, has a slot 18 into which a document may be inserted, and includes a code applicator means 19 such as a solenoid-operated printing platen that stamps a code on the document when the solenoid is actuated. The code applied by the code applicator means includes substantially the same elements as the displayed code (that is, where the displayed code includes day, month, year and time of day, the code applied to the document will likely include the same information, though it might include only the day and time of day), changes at substantially the same rate as the displayed code, and is adjusted to be in substantial registry with the displayed code.

Also included in the document labeling means 17 is an actuating means comprising two components, a pivotable trigger switch 20 that is operated when engaged by a document inserted in the slot and connection means connecting the trigger switch to the code applicator means 19 and the camera 24. In this embodiment, the connection means comprise an electrical conductor 22 leading to the code applicator means 19 and an electrical conductor 23 leading to a camera 24. When a document is inserted in the slot 18, the switch 20 is operated to simultaneously actuate the code applicator means 19 and the camera 24. Depending on the degree of registry between the displayed and applied codes, the code applied to the document will be at least approximately the same as the code photographed.

Instead of using the movement of a single switch to actuate both the code applicator means 19 and the camera 24, the trigger means in some document labeling means of the invention includes two switches, one

to operate the code applicator means and a second to complete a circuit for the camera. Also, instead of using an electrical conductor for the connection means between the document labeling means and the camera, the connection means sometimes comprises a radio transmitter which transmits a cue signal to the camera. And in other embodiments of the invention, insertion of a document in the slot 18 actuates the code applicator means through a mechanical linkage. Sometimes the document labeling means is actuated by manually operating a part of the means to apply a code, with that manual actuation operating the camera. Further, instead of a solenoid-operated printing platen, printing rollers, which have a quieter operation, may be used. Existing commercial time and date recorders, which are similar to the structure shown in FIG. 2 except that they do not provide for connection to a camera, may be modified to provide document labeling means of the invention. Such a commercial device is the "Model 250 Executive" time and date recorder made by Stromberg Products.

As shown in FIG. 1, the camera 24 may be mounted on a wall 25 behind the attendant. Alternatively, it may be mounted behind a window in the wall, or at other locations near the work station. The camera may be a typical "sequence" camera capable of taking a sequence of pictures at various rates of speed, one such camera being described in the copending application, DeVries, Ser. No. 7,529, filed Feb. 2, 1970. Often the camera will form part of a larger surveillance system. For example, beside taking pictures upon command from a trigger switch 20, the camera may be preset to photograph a picture at periodic time intervals ranging from seconds up to minutes; or the camera may be set to operate in a certain mode when an emergency signal is transmitted to it as by a radio transmitter or through electric conductors from switches throughout the work area.

What is claimed is:

1. Apparatus for providing a photographic record of a person at a work station that can later be at least approximately identified with a document that was handled at the work station while the person was there, said apparatus being used in cooperation with code display means located physically adjacent the normal location at the work station at which a person awaits handling of a document he presented at the work station, the code display means visually displaying a code that is changed at short periodic time intervals so that there is a different code for substantially each handling of a document at the work station, said apparatus comprising

1. camera means adapted to be supported at a location sufficiently remote from the displayed code and from said normal location so as to include said displayed code and a person positioned at said normal location directly, without use of intervening optical means, in focus in the field of view of the camera means;
2. code applicator means for applying a code on a document, the code applied including substantially the same elements as the displayed code and being changed at substantially the same rate as the displayed code so that at any instant in time the code applicator means applies substantially the same code as the displayed code; and

3. actuating means for simultaneously actuating the camera and the code applicator means.

2. Apparatus of claim 1 in which said code comprises a calendar date and the time of day.

3. Apparatus of claim 1 in which the code applicator means is part of a document labeling means that includes a slot into which the document is inserted, and the actuating means is positioned in said slot in the document labeling means so that insertion of the document into the slot operates the actuating means.

4. Apparatus for providing a photographic record of a person at a work station that can later be at least approximately identified with a document that was handled at the work station while the person was there, said apparatus being used in cooperation with code display means located physically adjacent the normal location at the work station at which a person awaits handling of a document he presented at the work station, the code display means visually displaying a code that automatically changes at short periodic time intervals so that there is a different code for substantially each handling of a document at the work station, said apparatus comprising

1. camera means adapted to be supported at a location sufficiently remote from the displayed code and from said normal location so as to include said displayed code and a person positioned at said normal location directly, without use of intervening optical means, in focus in the field of view of the camera means;
 2. document labeling means having a slot into which a document can be inserted and comprising code applicator means for applying a code on a document inserted in the slot, the code applied by the code applicator means including substantially the same elements as the displayed code and changing automatically at substantially the same rate as the displayed code so that at any instant in time the code applicator means applies substantially the same code as the displayed code; and
 3. actuating means comprising (a) trigger means located in the slot in the document labeling means so as to be operated by insertion of a document into the slot and (b) connection means connecting the trigger means to the code applicator means and to the camera so that operation of the trigger means simultaneously actuates the code applicator means and the camera.
5. Apparatus of claim 4 in which said code comprises a calendar date and the time of day.
6. Apparatus of claim 4 in which the camera means includes motor means and timer means adapted to operate the camera means to photograph a sequence of photographs at periodic time intervals in addition to photographs taken on command of said actuating means.
7. Apparatus of claim 1 in which the camera means includes motor means and signal-receiving means whereby the camera means is adapted to photograph upon receipt of a signal in said signal-receiving means in addition to photographing on command of said actuating means.
8. Apparatus of claim 1 in which the camera means includes motor means and timer means set to operate the camera means to take photographs at a regular periodic rate in addition to the photographs taken upon actuation of the actuating means.

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9. Apparatus for providing a photographic record of a person at a work station that can later be at least approximately identified with a document that was handled at the work station while the person was there, said apparatus being used in cooperation with code display means located physically adjacent the normal location at the work station at which a person awaits handling of a document he presented at the work station, the code display means visually displaying a code that is changed at short periodic time intervals so that there is a different code for substantially each handling of a document at the work station, and comprising

1. camera means supported at a location remote from the work station so as to include, in focus, in its direct field of view, without intervening optical devices, both the displayed code and a person posi-

tioned at said normal location;

2. code applicator means for applying a code on a document, the code applied including substantially the same elements as the displayed code and being changed at substantially the same rate as the displayed code so that at any instant in time the code applicator means applies substantially the same code as the displayed code; and

3. actuating means for simultaneously actuating the camera means and the code applicator means.

10. Apparatus of claim 9 in which the camera means includes motor means and timer means set to operate the camera means to take photographs at a regular periodic rate in addition to the photographs taken upon actuation of the actuating means.

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