

March 25, 1958

R. W. PATTERSON ET AL.

2,827,832

MACHINE FOR PHOTOGRAPHING SIMULTANEOUSLY A PERSON
AND ONE OR MORE RELATED DOCUMENTS

Filed Aug. 1, 1955

2 Sheets-Sheet 1

Fig. 1

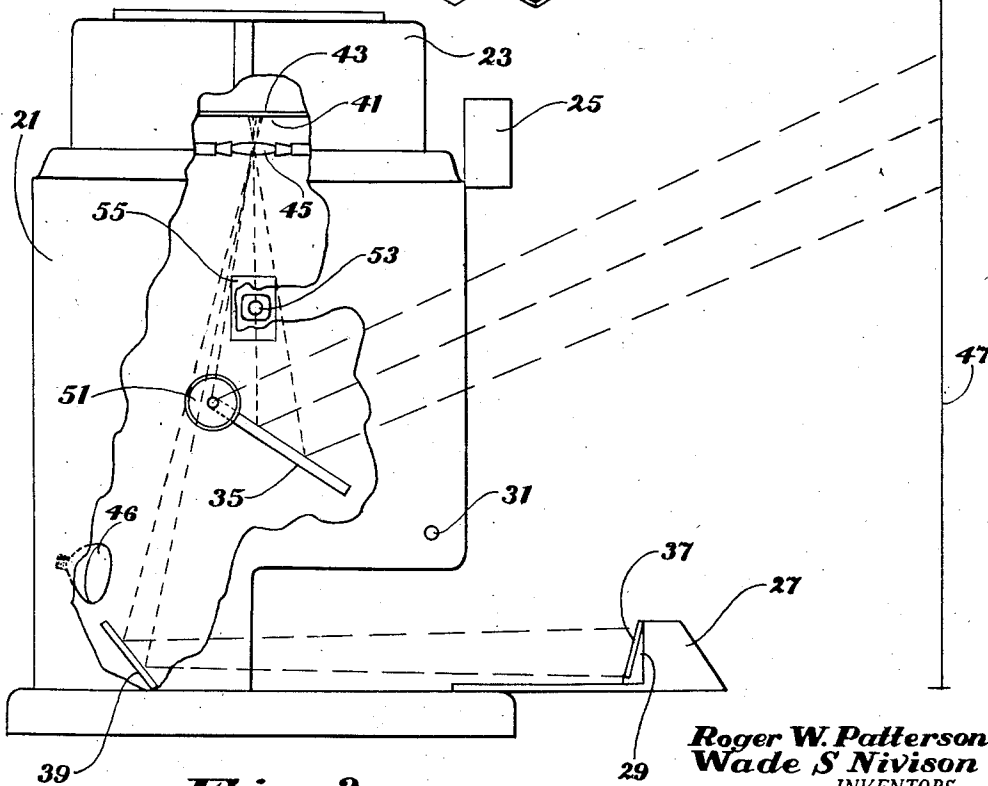
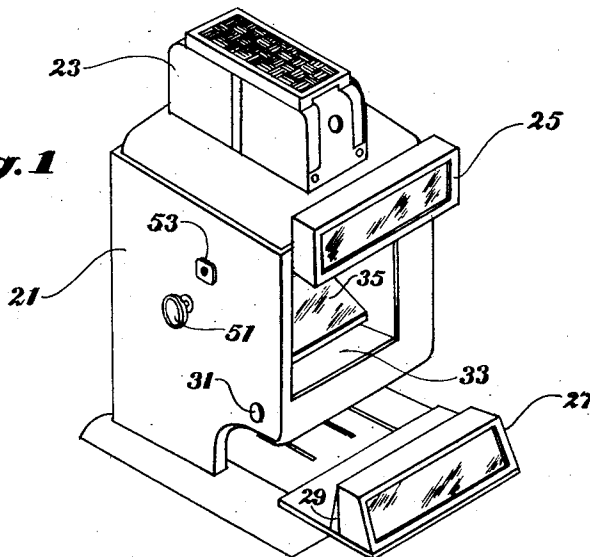


Fig. 2

Roger W. Patterson
Wade S. Nivison
INVENTORS

BY *Daniel J. Mayne*
Paul R. Holmes
ATTORNEYS

March 25, 1958

R. W. PATTERSON ET AL
MACHINE FOR PHOTOGRAPHING SIMULTANEOUSLY A PERSON
AND ONE OR MORE RELATED DOCUMENTS

2,827,832

Filed Aug. 1, 1955

2 Sheets-Sheet 2

Fig.3

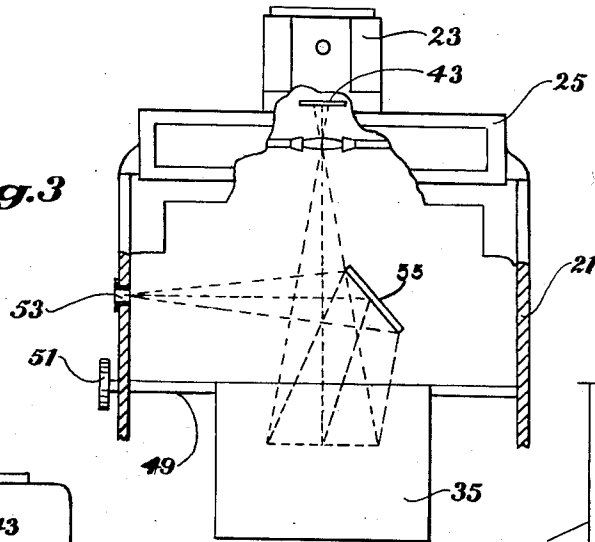


Fig.4

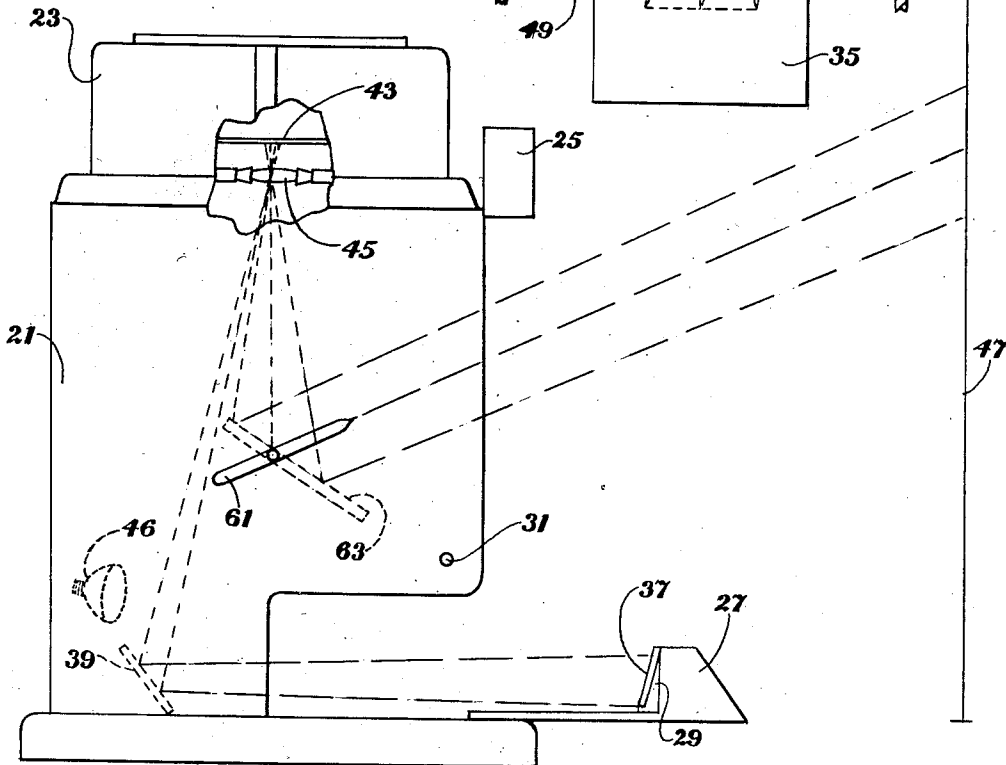
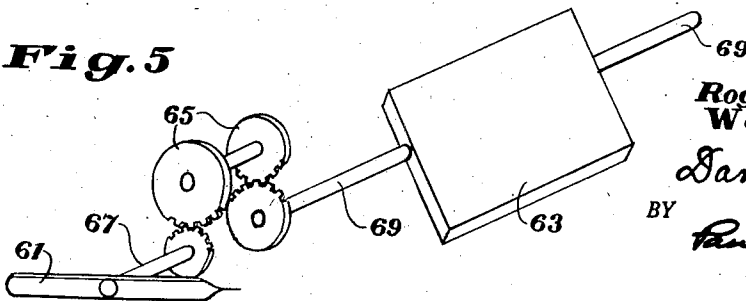


Fig.5



Roger W. Patterson
Wade S. Nivison
INVENTORS
Daniel J. Mayne,
BY Paul R. Holmes
ATTORNEYS

1

2,827,832

MACHINE FOR PHOTOGRAPHING SIMULTANEOUSLY A PERSON AND ONE OR MORE RELATED DOCUMENTS

Roger W. Patterson and Wade S. Nivison, New York, N. Y., assignors to Eastman Kodak Company, Rochester, N. Y., a corporation of New Jersey

Application August 1, 1955, Serial No. 525,486

2 Claims. (Cl. 88—24)

This invention relates to a photographic apparatus and more particularly to a machine for photographing simultaneously a person and one or more related documents.

Many firms including grocery stores, department stores and others receive and cash many personal checks for individuals and customers during the course of a year. Occasionally a bad check is received and by the time that this fact is discovered, it is often impossible to locate the individual who passed the check because of lack of identification. Losses resulting from transactions of this nature can and sometimes do amount to an appreciable sum during the course of a year's operation. It has been suggested, therefore, to provide a photographic apparatus which can simultaneously photograph a person, the check being passed by the person, and the identification offered by the person. Thus, this provides an exact photographic record of the transaction which can be readily referred to at a future date in the event that the check is not paid by the drawee.

We are aware of some prior art devices in which separate lenses are used to transmit images of the document and of the person respectively to light-sensitive image recording means in an exposure station. In accordance with our invention, only one lens is utilized to transmit images of the person, the person's check and the person's identification to the light-sensitive image recording means in the exposure station in closely spaced non-overlapping relation thereon. Since the individuals passing the checks are of varying heights, it is necessary to provide an adjusting device for varying the field of the lens within certain limits in order that a complete image of the head portion of the person can be recorded. The adjusting device according to the present invention comprises an adjustable mirror which is manually adjustable within certain limits to thereby insure that a complete image of the head portion of the person being photographed will be received and recorded on the image recording means in the exposure station.

The primary object of the present invention is therefore to provide in a machine for photographing simultaneously a person and one or more related documents, an adjustable mirror for adjusting the field of the camera lens within certain limits as required when photographing persons of different heights, in order to insure that a complete image of the head portion of such person is recorded.

Another object of the present invention is to provide in a machine for photographing simultaneously a person and one or more related documents, an adjustable mirror and a viewfinder for manually adjusting the field of the camera lens within certain limits as required when photographing persons of different heights in order to insure that a complete image of the head portion of such person is recorded.

Still other objects and advantages of the present invention will be readily recognized by those skilled in the art from the following description with reference to the draw-

2

ings wherein like characters denote like parts and wherein;

Fig. 1 is a perspective view of an apparatus for photographing a person and one or more related documents and utilizing our invention;

Fig. 2 and Fig. 3 are side elevation views partly in section illustrating the preferred embodiment of our invention;

Fig. 4 is a side elevation view partly in section and illustrating another embodiment of our invention; and

Fig. 5 is a detailed view of our invention as utilized in the embodiment illustrated in Fig. 4.

The apparatus for photographing the person and one or more related documents which utilizes our invention is illustrated in Fig. 1 as comprising a housing 21, a camera 23 mounted on top of housing 21, exposure lamp housings 25 and 27 and a document holder 29 for receiving the documents to be photographed. A trip button 31 for actuating the photographing mechanism is conveniently positioned on the side of housing 21. The front face of housing 21 is provided with a large aperture 33 in back of which a suitable reflecting means in the form of a reflecting mirror 35 directs the image of a person standing in front of the housing 21 to the camera 23.

Our invention is best described with reference to Fig. 2 and Fig. 3 in which the housing 21 has been partly broken away to facilitate the showing of the parts. The document holder 29 supports one or more documents in side by side relation in the photographing station 37. The image of the documents in the photographing station 37 is directed by the mirror 39 to the exposure station 41 in the camera 23. Exposure station 41 comprises a light-sensitive image recording means 43 here illustrated as a film strip, which records the images of the documents transmitted by the lens 45 of camera 23. The documents in photographing station 37 are illuminated by lamps 46 positioned within the housing 21.

The reflecting mirror 35, directs an image of the person standing in the photographing station 47 to the recording means 43 in exposure station 41 in closely spaced non-overlapping relation to the images of the documents which are simultaneously received thereon. Photographing station 47 is the vertical plane on which the lens 45 is focused when the plane of mirror 35 is disposed at an angle of 45° with respect to the optical axis of lens 45, and which is parallel to the front face of housing 21. It will be readily appreciated by those skilled in the art that the optical distance from the head portion of either a tall or a short person to lens 45 will be greater than the corresponding distance from the head portion of a person of average height. Thus it is necessary to utilize a lens 45 in camera 23 having sufficient depth of field to permit a sharp image to be recorded on the recording means 43 irrespective of the height of the person being photographed.

It is desirable to photograph the head portion of the person who is to be identified with the related one or more documents. In order to always accomplish this, we mount the reflecting mirror 35 on a shaft 49 supported at both ends in the side walls of housing 21. A knob 51 is fixed on one end of shaft 49 outside of housing 21 to facilitate the turning adjustment of reflecting mirror 35 and shaft 49. In order to determine when the reflecting mirror 35 is adjusted to the proper position with respect to lens 45 of camera 23 so that a complete image of the head portion of the person being photographed will be recorded on the recording means 43, we provided a small peephole 53 in one side wall of housing 21 located above the turning knob 51 on shaft 49. The longitudinal axis of peephole 53 is made perpendicular to the optical axis of lens 43 and lies in a plane common to the optical axis

of lens 45. A small viewfinder mirror 55 is mounted within the housing 21 in optical alignment with peephole 53 and reflecting mirror 35. By this arrangement the operator of the photographic apparatus need only look through the peephole 53 at mirror 55 and rotate reflecting mirror 35 by means of knob 51 until that portion of photographing station 47 occupied by the head portion of the individual being photographed, appears centrally located on the mirror 35. As a further safety measure, to insure that the head portion of the person is completely within the field of lens 45, the size of viewfinder mirror 55 is such that the field covered by the mirror 55 is slightly less than the field covered by lens 45. When the operator has correctly adjusted the reflecting means 55 and has positioned the documents related to the person being photographed in the photographing station 37 on holder 29, which documents might include for example a check which is being passed and the identification offered by the person, the operator need only depress the trip button 31 and lamps 46 illuminate the documents in the photographing station 37, and the lamps in holders 25 and 27 illuminate the person in photographing station 47. Images of the documents and of the person are transmitted simultaneously by lens 45 to the exposure station 41 and recorded in closely spaced non-overlapping relation on the recording means 43. The electrical circuitry for accomplishing this operation in the proper timed relation as well as the mechanical apparatus for advancing the recording means through the exposure station 41 after each exposure do not form any part of the present invention and since they may be of any form well known in the art, no further explanation is deemed necessary at this time.

In Figs. 4 and 5, we have illustrated another embodiment of our invention. In accordance with this embodiment, the use of a viewfinder mirror and peephole for correctly adjusting the field of lens 45 is dispensed with and instead a pointer 61 is connected to a reflecting mirror 63 in a manner such that movement imparted to pointer 61 results in proportional movement in reflecting mirror 63. To obtain this proportional movement, we utilize a reduction gear train 65 having a reduction ratio of 2:1 and connected between shaft 67 on which pointer 61 is mounted, and shaft 69 on which reflecting mirror 63 is mounted. With this arrangement, the reflecting mirror 63 can be adjusted to include the head portion of the individual being photographed in the field of the lens 45 by merely directing the pointer 61 at a medial portion of the person's head, such as for example the person's nose. Thus, it is a simple matter for the operator to change the field of lens 45 to include that portion of photographing station 47 occupied by the head portion of the person being photographed which portion of photographing station 47 is determined by the height of such person.

The related one or more documents are positioned in the holder 29 in the photographing station 37 and images thereof are directed by mirror 39 to the exposure station 41 through lens 45 and onto the recording means 43 in non-overlapping relation to the image of the person in photographing station 47 which is simultaneously directed thereto by reflecting mirror 63 and transmitted by lens 45 in the manner identical to that previously described with respect to the embodiment illustrated in Fig. 1.

It will now be appreciated by those skilled in the art that we have disclosed a machine for simultaneously photographing a person and one or more related documents

in which the field of the camera lens can be readily varied within certain limits as required when photographing persons of different heights by means of a manually adjustable mirror, the correct adjustment of the mirror being determined by means of a peephole and viewfinder mirror arrangement, or by means of a pointer which is directed at the head portion of the person being photographed.

While we have disclosed only two embodiments of our invention, it is realized that many modifications and variations are possible and will be readily apparent to those skilled in the art. Therefore the description is intended to be only illustrative and the scope of the invention is defined in the appended claims.

Having now particularly described our invention what we desire to secure by Letters Patent of the United States and what we claim is:

1. In apparatus for simultaneously photographing a person and a document the combination with a first photographing station for receiving the document, a second photographing station for receiving the person, and an exposure station provided with a light-sensitive image recording means for receiving and recording images of said document and of said person, of stationary means for reflecting an image of said document in said first photographing station to said recording means, means for directing an image of the head portion of said person in said second photographing station to said recording means in non-overlapping relation to the image of said document thereon, and means for adjusting said directing means in accordance with the position of that portion of said second photographing station occupied by the head portion of said person thereby maintaining said image of said head portion of said person in the same position relative to said image of said document on said recording means, said adjusting means comprising a viewfinder device for visually determining the field of said exposure station and means permitting angular displacement of said directing means with respect to said exposure station.

2. In apparatus for simultaneously photographing a person and a document, the combination with a first photographing station for receiving the document, a second photographing station for receiving the person, and an exposure station provided with a light-sensitive image recording means for receiving and recording images of said document and of said person, of stationary means for reflecting an image of said document in said first photographing station to said recording means, means for directing an image of the head portion of said person in said second photographing station to said recording means in non-overlapping relation to the image of said document thereon, and means for adjusting said directing means in accordance with the position of that portion of said second photographing station occupied by said head portion of said person comprising a pointer for visually determining the field of said exposure station, said pointer being connected to said directing means through a motion reduction device to permit angular displacement of said directing means with respect to said exposure station and to maintain thereby said image of said head portion of said person in the same position relative to said image of said document on said recording means.

References Cited in the file of this patent

UNITED STATES PATENTS

1,479,212	Ames	Jan. 1, 1924
2,420,046	Loeb	May 6, 1947