Sept. 8, 1942. A. PURSELL 2,294,933

IDENTIFICATION DEVICE

Filed Aug. 11, 1941 2 Sheets-Sheet 1

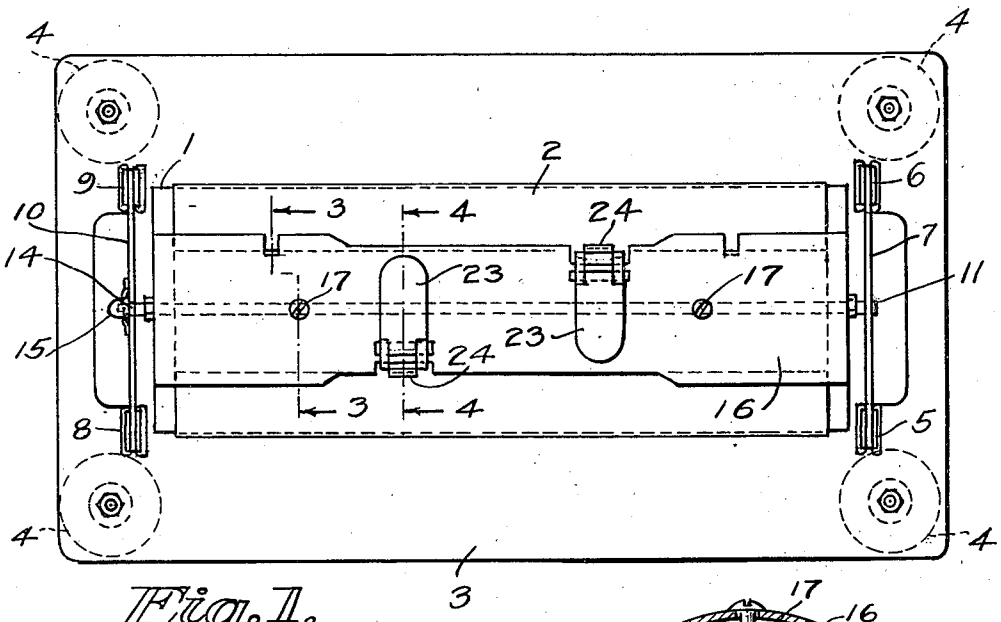


Fig. 1.

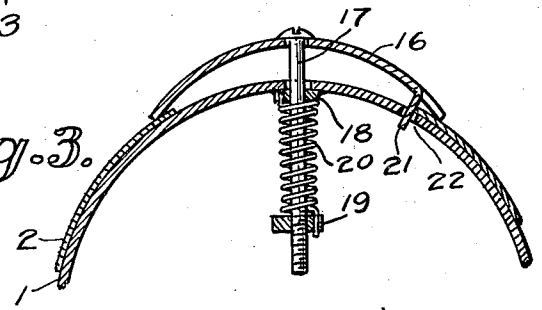


Fig. 3.

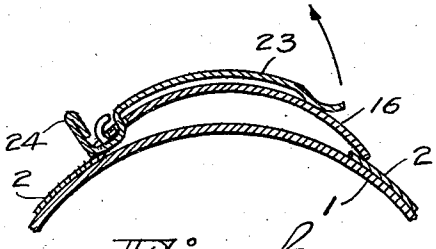


Fig. 4.

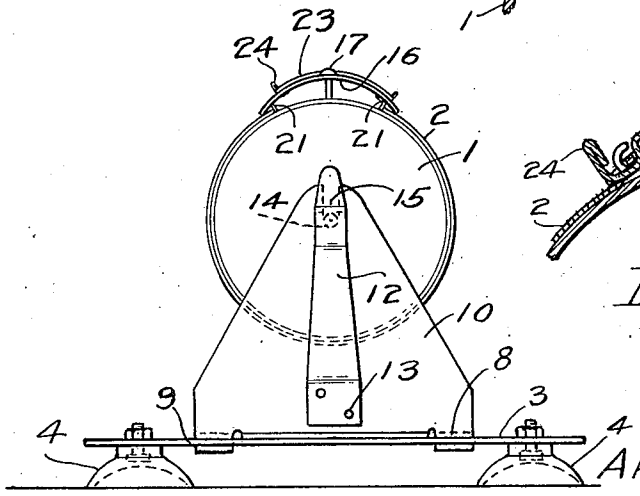


Fig. 2.

ARTHUR PURSELL
INVENTOR

BY J. T. Motherhead

ATTORNEY

Sept. 8, 1942. A. PURSELL 2,294,933

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Filed Aug. 11, 1941 2 Sheets-Sheet 2

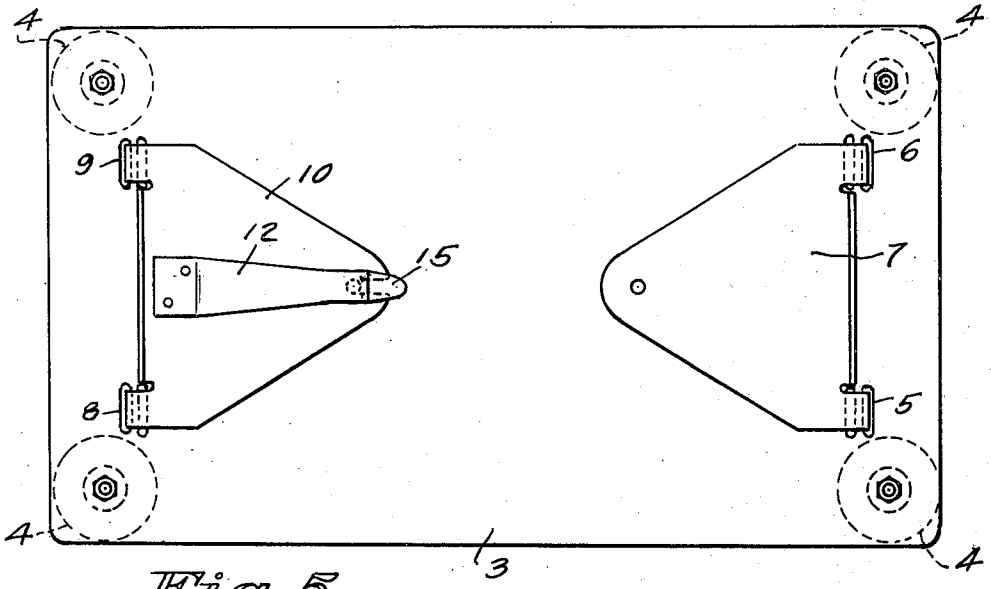


Fig. 5.

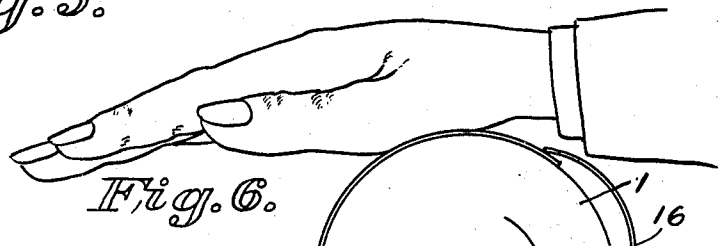


Fig. 6.

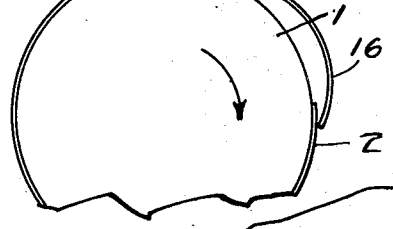
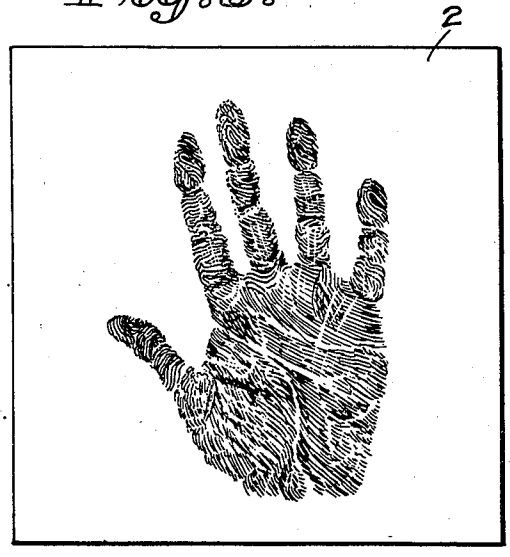


Fig. 8.



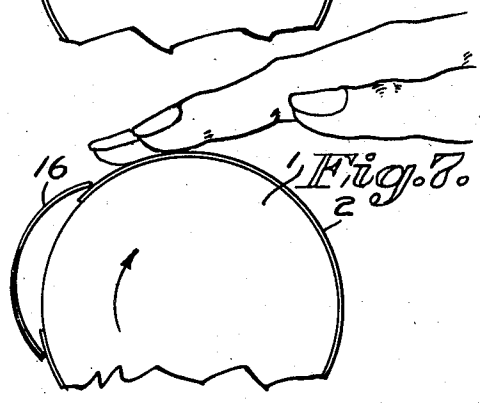


Fig. 7.

ARTHUR PURSELL
INVENTOR

BY J. Motherhead

ATTORNEY

Patented Sept. 8, 1942

2,294,933

UNITED STATES PATENT OFFICE

2,294,933

IDENTIFICATION DEVICE

Arthur Pursell, Jonesboro, Tenn.

Application August 11, 1941, Serial No. 406,426

5 Claims. (Cl. 41—4)

(Granted under the act of March 3, 1883, as amended April 30, 1928; 370 O. G. 757)

The invention described herein may be manufactured and used by or for the Government of the United States for governmental purposes without the payment to me of any royalty thereon, in accordance with the provisions of the act of April 30, 1928 (ch. 460, 45 Stat. L. 467).

This invention relates to improvements in method and means of obtaining inked impressions of the palms of the hands and the soles of the feet for identification purposes.

Heretofore it has been common practice to use a flat surface base for the cardboard upon which the impression of the fingers or toes, or hands or feet, are taken. Under this practice great difficulty has arisen in obtaining satisfactory palm prints. This is mainly because the surface of the palm does not present a smooth even surface for printing. This uneven surface makes it extremely difficult to obtain satisfactory impressions when they are taken on a flat surface base since the entire area must be simultaneously printed on such a base.

Moreover, it is essential that the exact correct amount of pressure be applied to the area being printed in order to leave a clear impression of the inked surface. If pressure is applied to the back of the hand in order to print the concave portion, the convex portion will receive too much pressure. Too much pressure leaves a smear or pressure blur which makes ridge tracing difficult and frequently impossible. On the other hand, unless some effort is made to print the concave areas, the impression will be incomplete and of little or no value for identification purposes.

It is therefore the primary object of my invention to provide a new and useful method of obtaining palm prints whereby uniform contact of the concave and convex palm areas under uniform pressure are made with the card, which latter is flat for inspection and identification purposes.

It is also an important object of my invention to provide a new and useful means whereby the printing surface may be so supported as to provide for a uniform impression of the concave and convex palm portions under uniform pressure.

Having these and other objects in mind I have discovered that by placing a cardboard, or sheet, or continuous roll thereof, about a rotatably supported cylinder, the palm print may be taken with only a relatively small portion of the palm contacting the card at any given time. This eliminates difficulties of smear or faintness that commonly arise in printing the entire palm surface simultaneously. The hand is preferably drawn over the card from the butt of the hand to the finger tips in a direction perpendicular to the axis of rotation of the cylinder as the latter rotates under the pressure and movement of the hand. This rolling method, I have found, is the most practical and efficient method of obtaining satisfactory palm impressions. It is to be understood, of course, that to a marked degree, palm impressions, far superior to those obtained under the prevailing flat base method, may be obtained whether the cylinder remains stationary or the hand is drawn over the cylinder supported card from finger tip to hand butt or from side to side.

With the foregoing and other objects in view, the exact nature of the improved method and means constituting my invention will become more apparent upon a further reading of the following specification and appended claims, certain embodiments of my invention being illustrated in the accompanying drawings, in which:

Figure 1 is a view in top plan of the device in accordance with my invention including a card supporting rotating cylinder and the support for the cylinder.

Figure 2 is a view in end elevation of the same.

Figure 3 is a detail enlarged view in section, taken along line 3—3 of Figure 1, showing an elongated spring operated clip for engaging the card in contact with the cylinder.

Figure 4 is a detailed enlarged view in section taken along line 4—4 of Figure 1, showing a manually operated lever for raising the spring operated clip away from the cylinder to withdraw and replace the card to be carried by the cylinder.

Figure 5 is a view in top plan of the cylinder support, showing the base and showing the hinged uprights folded flat and out of operative supporting position.

Figure 6 is a diagrammatical view showing the start of the operation of the palm impression operation with the hand butt resting on the card on the roller.

Figure 7 similarly shows the ending of the operation with the finger tips resting on the roller supported card.

Figure 8 is a diagrammatical view of the card and the recorded palm print thereon.

Referring more particularly to the drawings, the device may comprise a suitably supported roller, or cylinder 1, which is adapted to freely rotate, and suitable means whereby the cylinder may carry and have releasably secured thereto a sheet, or card 2, or continuous paper roll, as may be desired.

As an example of means for supporting the cylinder there is shown a base, or platform 3, having four resilient fibrous supporting members 4. Hingedly secured to the platform at 5 and 6 is an end support 7 and at 8 and 9 an end support 10 for supporting the cylinder. Support 7 is provided with a hole near its top to receive an end stud 11 carried by the cylinder. Support 10 is provided with a spring clip 12 secured thereto at 13. The upper end of support 10 has an open slot to receive an end stud 14 carried by the cylinder. The spring clip upper offset portion 15 tends to close the slot and lightly engage the stud 14 to render the cylinder releasably supported in free rotatable relation with its support.

As stated before, the material used for recording the palm impression may be either in the form of a roll, a sheet or a card that is readily secured to the cylinder and as readily withdrawn and replaced with another card. As an example of an improved new and useful means of accomplishing this, there is shown an elongated arcuate clip 16 which extends the major portion of the length of the cylinder. This clip 16 is shown secured to the cylinder by means of screw bolts 17. Each of these bolts 17, as shown in detail in Figure 3, passes loosely through an aperture in the clip 16 and thence through a guideway 18 and is screwed into a free nut 19. Surrounding the bolt 17 and secured at its ends to the guideway 18 and nut 19 is a tension coil spring 20 which normally urges the clip 16 downwardly toward the cylinder to which it is loosely secured by the bent flange 21 of the clip extending through an aperture 22 in the cylinder. As viewed in this figure, the sides of the clip engage the card 2 in overlapping relationship under the tension of spring 20 to hold the card in proper assembled position on the cylinder.

If desired, the clip may be lifted manually, against the action of the springs 20 to permit insertion, removal or replacement of the card. As a more convenient means, however, I may employ a pair of lifting levers 23, one of which is shown in detail in Figure 4. The lever 23 has a long arcuate handle portion and is bent to extend through a suitable slot in the clip 16 in pivotally movable relation and terminates in a protruding extension, or flange 24. As the lever 23 is rotated about its pivot in a counterclockwise direction or in the direction of the arrow in Figure 4, the flange 24 engages the cylinder (or possibly the card thereon) and thus raises the clip away from the cylinder against the action of the spring 20. While in this adjusted position, the card may be readily inserted, removed or replaced. A manual return of the lever 23 to its normal position, Figure 4, permits spring 20 to draw the clip into the engaging position of Figure 3.

For convenience in packing of the equipment the end supports 7 and 10 for the cylinder are hinged, as previously described, and may be folded flat, as shown in Figure 5.

Figures 6 and 7 diagrammatically illustrate the preferred sequency of operation. With the card in place on the cylinder, the user of the device first applies printer's ink, or any suitable material for impression purposes, thoroughly to the entire palm of the hand, or foot. He then rests the butt of his hand on the roller supported card, as illustrated in Figure 6, with the proper amount of muscular pressure. Then while maintaining that pressure, he pulls his hand towards him, thus causing the roller to rotate clockwise, and he continues this operation through the sequence of operation depicted in Figure 7, with the finger tips engaged, until his entire palm has been once brought into contact with the rolling card. The resulting print obtained by such novel method and means of palm printing is diagrammatically illustrated on the card shown in Figure 8.

It will be seen from the foregoing disclosure that I have provided a new and useful method and means for obtaining a uniform contact, under uniform pressure, of the concave and convex portions of the palm with the card, resulting in a satisfactory print, free from blur and faintness of detail. Other apparent advantages of my improved method and means of palm printing reside in the fact that it may be used in palm or finger printing where regular conventional equipment is not available. In cases of deformities, wherein the hands or feet cannot be straightened out, the cylinder supported card permits palm and finger prints to be satisfactorily taken whereas this would be impossible with the use of the conventional flat card method and equipment.

I claim:

1. In a device of the character described, a cylinder and a support therefor upon which said cylinder is rotatably mounted, said cylinder being adapted to carry a sheet for recording inked palm impressions, whereby the engagement of an inked palm with said sheet under pressure and movement of said palm in a direction perpendicular to the axis of rotation of said cylinder is adapted to effect the recording of said palm impression on said sheet subtsantially uniformly in outline and detail with respect to the concave and convex contours of said palm by reason of their contact with the cylindrical surface of said sheet, the support for said cylinder, including a base and collapsible hinged uprights to releasably engage the ends of said cylinder to render the latter freely rotatable.

2. In a device of the character described, a cylinder and a support therefor upon which said cylinder is rotatably mounted, said cylinder being adapted to carry a sheet for recording inked palm impressions, whereby the engagement of an inked palm with said sheet under pressure and movement of said palm in a direction perpendicular to the axis of rotation of said cylinder is adapted to effect the recording of said palm impression on said sheet substantially uniformly in outline and detail with respect to the concave and convex contours of said palm by reason of their contact with the cylindrical surface of said sheet, the support for said cylinder including a base and collapsible cylinder holding uprights, said base having spaced openings therein and said uprights having registering integrally formed tongues engaged in said openings to constitute hinges.

3. In a device of the character described, a cylinder and a support therefor upon which said cylinder is rotatably mounted, said cylinder being adapted to carry a sheet for recording inked palm impressions, whereby the engagement of an inked palm with said sheet under pressure and movement of said palm in a direction perpendicular to the axis of rotation of said cylinder is adapted to effect the recording of said palm impression on said sheet substantially uniformly in outline and detail with respect to the concave and convex contours of said palm by reason of their contact with the cylindrical surface of said sheet, said

support comprising a base having spaced openings therein and collapsible cylinder holding uprights having registering hinge forming tongues inserted in the openings, said uprights having stop flanges at their lower edges for limiting movement of said braces when in open position.

4. In a device of the character described, a cylinder and a support therefor upon which said cylinder is rotatably mounted, said cylinder being adapted to carry a sheet for recording inked palm impressions, whereby the engagement of an inked palm with said sheet under pressure and movement of said palm in a direction perpendicular to the axis of rotation of said cylinder is adapted to effect the recording of said palm impression on said sheet substantially uniformly in outline and detail with respect to the concave and convex contours of said palm by reason of their contact with the cylindrical surface of said sheet, said cylinder having means for releasably and resiliently securing said sheet thereto, said means including a clip and tension spring means normally urging said clip towards said cylinder and releasably securing said sheet in surface engagement with said cylinder, and manual means consisting of a plurality of levers hingedly secured to said clip and provided with a protruding stop member which when operated to raise said clip will hold the same in open position for insertion of the edges of recording sheet.

5. In a device of the character described, a cylinder and a support therefor upon which said cylinder is rotatably mounted, said cylinder being adapted to carry a sheet for recording inked palm impressions, whereby the engagement of an inked palm with said sheet under pressure and movement of said palm in a direction perpendicular to the axis of rotation of said cylinder is adapted to effect the recording of said palm impression on said sheet subtsantially uniformly in outline and detail with respect to the concave and convex contours of said palm by reason of their contact with the cylindrical surface of said sheet, said cylinder having means for releasably and resiliently securing said sheet thereto, said means including a clip and tension spring means normally urging said clip towards said cylinder and releasably securing said sheet in surface engagement with said cylinder, manual means for releasing such engagement, said manual means comprising a pivoted lever carried by said clip and adapted upon operation from normal assembled position to bear against said cylinder and to raise said clip away from said cylinder to permit insertion, removal and replacement of said sheet on said cylinder for subsequent attachment thereon by engagement of said clip under the tension of said spring when said lever is manually returned to normal position.

ARTHUR PURSELL.