Jan. 1, 1952 A. B. DEE 2,580,893

FINGER SHIELD DEVICE

Filed Aug. 13, 1947

Fig. 1

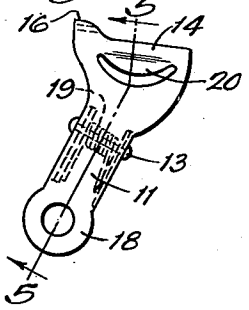


Fig. 2

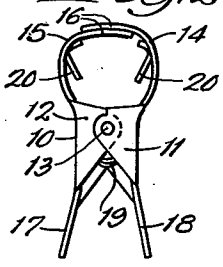


Fig. 3

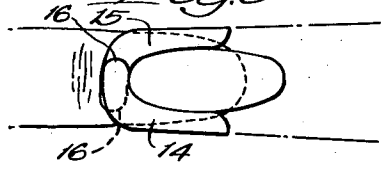


Fig. 4

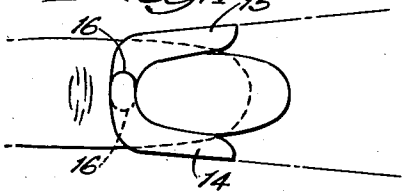


Fig. 5

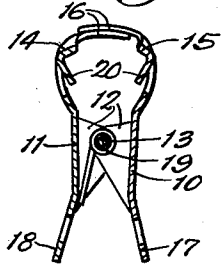


Fig. 6

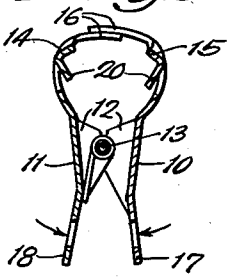


Fig. 7

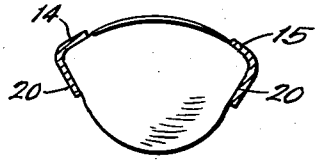


Fig. 8

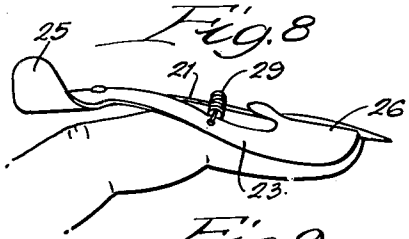


Fig. 11

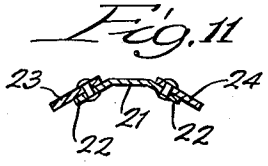


Fig. 9

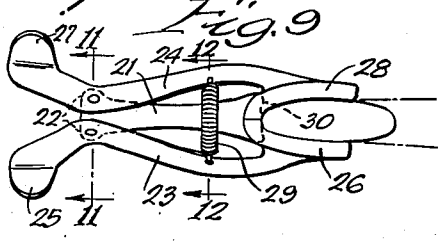


Fig. 12



Fig. 13

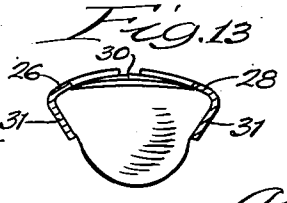
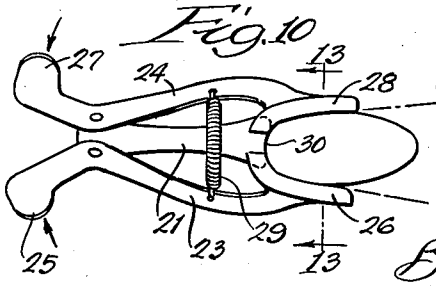


Fig. 10



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Patented Jan. 1, 1952 2,580,893

UNITED STATES PATENT OFFICE

2,580,893

FINGER SHIELD DEVICE

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Application August 13, 1947, Serial No. 768,421

4 Claims. (Cl. 132—88.5)

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This invention relates to a finger shield device. The invention is particularly useful for the shielding of the finger while enamel or other treating material is applied to the fingernail.

Various devices have been provided for shielding the portions of the finger about the fingernail while treating material is applied to the nail. Such devices permit expansion so as to adapt them to larger and smaller nails. The difficulty, however, with such devices is that they do not adjust themselves accurately to the fingernails of different sizes and leave portions of the nail either shielded so that they do not receive the treating material, or expose portions of the finger about the nail.

An object of the present invention is to provide a finger shield device which accurately follows the contour of the nail, not only in a lateral plane, but in a vertical plane. Another object is to provide a shield device which moves outwardly and downwardly when being expanded, and which moves inwardly and upwardly when being contracted, thus adjusting the shield portions thereof to the arcuate shape of the finger and nail. Yet another object is to provide presser wings below the shield, which engage the flesh of the finger and press the fingernail itself up evenly within the jaws or confines of the shield. Other specific objects and advantages will appear as the specification proceeds.

The invention is illustrated, in preferred embodiments, by the accompanying drawing, in which—

Figure 1 is a side view in elevation of a device embodying my invention; Fig. 2, a front view in elevation; Fig. 3, a top plan view; Fig. 4, a view similar to Fig. 3, but showing the shield expanded to fit a larger fingernail; Fig. 5, a vertical sectional view, the section being taken as indicated at line 5 of Fig. 1; Fig. 6, a view similar to Fig. 5, but showing the device expanded to fit a larger fingernail; Fig. 7, a schematic view showing the application of the presser flanges for bringing about a tight fitting of the shield device with the fingernail; Fig. 8, a side view in elevation of a modified form of the invention; Fig. 9, a top plan view; Fig. 10, a view similar to Fig. 9, but showing the shield members expanded to fit a larger fingernail; Fig. 11, a transverse sectional view, the section being taken as indicated at line 11 of Fig. 9; Fig. 12, a transverse sectional view, the section being taken as indicated at line 12 of Fig. 9; and Fig. 13, a transverse sectional view, the section being taken as indicated at line 13 of Fig. 10.

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In the illustration given in Figs. 1 to 7, inclusive, 10 and 11 designate a pair of members having inwardly-turned flanges 12 pivotally connected by a pin 13.

The member 10 has an integrally-formed horizontally-extending shield 15 adapted to extend over the finger adjacent the fingernail. The member 11 has a similar shield 14. Each of the shields 14 and 15 have inwardly-extending portions 16 which overlap, as shown more clearly in Fig. 5. The shields have the contour as shown more clearly in Figs. 3 and 4.

The members 10 and 11 have at their bottom extensions forming handles 17 and 18, and the handles permit the members to be manipulated about the pivot 13 so as to swing the shields 14 and 15 inwardly and outwardly. A coil spring 19 is received about the pin 13 and has extensions engaging the members 10 and 11 to urge the handle portions 17 and 18 apart.

From the upper portions of the members 10 and 11, I prefer to strike in two arcuate presser flanges 20, which are adapted to engage the flesh of the finger and to bring the fingernail evenly into contact with the edges of the shields 14 and 15.

In the operation of the structure shown in Figs. 1 to 7, the handles 17 and 18 are pressed inwardly against the force of spring 19 so as to spread the shields 14 and 15. The finger may then be extended between the shields and the handles may be released to allow the shields to engage the edge of the fingernail. At the same time, the presser flanges 20 tend to press upwardly against the body of the finger so as to produce an even and tight fit, adjusting the fingernail to the shields 14 and 15. After the fingernail polish, enamel or other treating material has been applied to the fingernail, the shield device may be removed by simply pressing the handles 17 and 18 toward each other, and the shield may then be applied to a different finger on which the fingernail may be larger or smaller.

In the above adjusting operation, it will be noted that the shield members swing in an arc of substantially the same degree of curvature as the fingernail, and thus bring the shields evenly along the edge of the fingernail, whether the fingernail be larger or smaller.

In the structure shown in Figs. 8 to 13, inclusive, I provide a central or stationary shield member 21, having angularly-turned sides 22 at the rear thereof, as shown more clearly in Fig. 11. Pivotally connected to the angularly-turned sides 22 are the shield supporting members 23 and 24. The member 23 has a laterally-turned wing

handle 25, and carries at its forward end an arcuate shield 26. The member 24 carries at its rear a laterally-turned wing handle 27, and at its forward end an arcuate shield 28. A spring 29 is connected to the members 23 and 24 and extends over the stationary shield member 21. The stationary shield member 21 is provided at its front with an arcuate edge 30, which conforms to the curvature of the fingernail at the rear portion thereof.

In the operation of the structure shown in Figs. 8 to 13, inclusive, the user presses the wing handles 25 and 27 toward each other to spread the shields 26 and 28. The swing of the arms 23 and 24 is in an arcuate path by reason of the pivoting of the members on the angular sides 22 of the stationary member 21. Thus, when the shield members 26 and 28 are spread to engage a larger fingernail, the shield members move outwardly and downwardly. Similarly, when the shield members are brought into engagement with a smaller fingernail, the shields move inwardly and upwardly. The shields 26 and 28 provide with the stationary shield edge 30 a shield pattern which conforms to the large or small fingernail upon which the device is applied. The shield members 26 and 28 are preferably provided with downwardly and inwardly extending presser flanges 31, which engage the flesh of the finger, and the inner and upward pressure, thus exerted, causes the fingernail to be drawn into sharp alignment with the shields 26 and 28.

While in the foregoing specification, I have set forth certain details of structure for the purpose of illustrating particular embodiments of the invention, it will be understood that such structural details may be varied widely by those skilled in the art without departing from the spirit of my invention.

I claim:

1. In a finger shield device, a pair of movable shield members having a contour adapted to fit about a fingernail, actuating arms formed integrally with said shields, means connecting said arms in pivotal relation, handles connected to said arms and extending away from the fingernail beyond said pivotal connection, spring means urging said shield members toward one another, and a pair of inwardly-extending presser flanges carried by said shield members and adapted to press against the sides of the finger to force the fingernail upward into close engagement with the shield members.

2. In a finger shield device, a pair of movable shield members having a contour adapted to fit about a fingernail, actuating arms formed integrally with the shields extending around the finger, a pivotal connection between said arms below the finger, handles connected to said arms and extending away from the finger beyond said pivotal connection, spring means normally urging said shield members together, and a pair of inwardly-extending presser flanges carried by said shield members and adapted to press against the sides of the finger to force the fingernail upward into close engagement with the shield members.

3. In a finger shield device, a stationary member providing at its forward end an arcuate edge adapted to lie above and at the rear of a fingernail, said stationary member having downwardly-turned sides at its rear end, a pair of members pivotally secured to said sides and having actuating handle extensions, and a pair of shields carried by the forward ends of said members so as to fit along the sides of the fingernail and to form with said stationary member a shield enclosure for the fingernail.

4. In a finger shield device, a stationary member providing at its forward end an arcuate edge adapted to lie above and at the rear of a fingernail, said stationary member having downwardly-turned sides at its rear end, a pair of members pivotally secured to said sides and having actuating handle extensions, a pair of shields carried by the forward ends of said members so as to fit along the sides of the fingernail and to form with said stationary member a shield enclosure for the fingernail, and a spring member extending over said stationary member and engaging said movable members to urge them toward each other.

ALENE B. DEE.

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