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MANICURE NAIL PROTECTOR WITH DETACHABLE FINGER PARTITIONS

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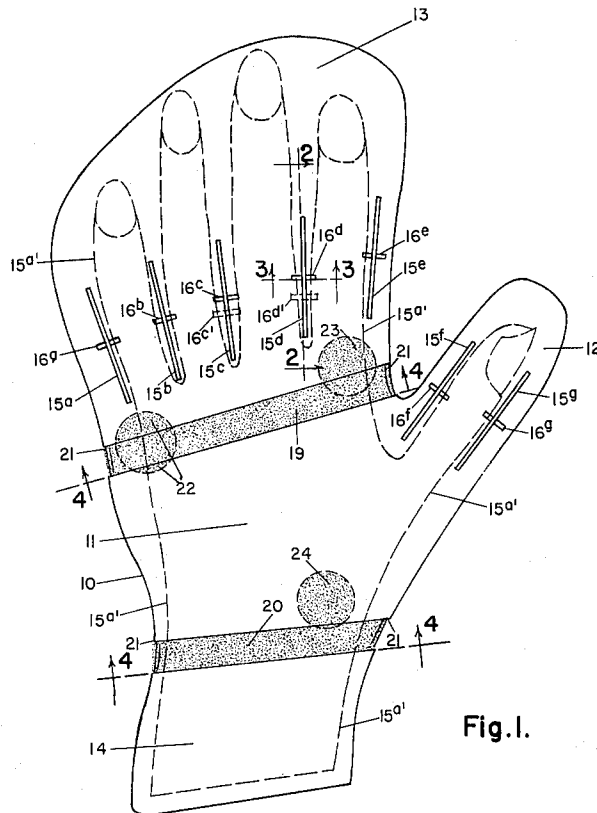


Fig.1.

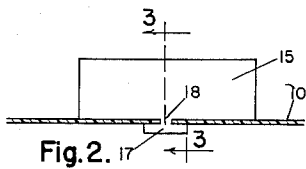


Fig.2.

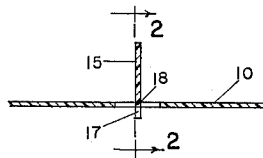


Fig.3.

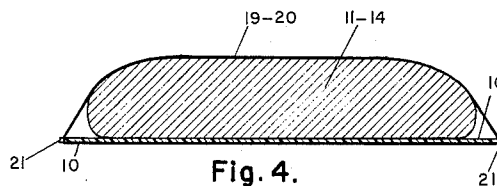


Fig. 4.

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1

3,198,197

MANICURE NAIL PROTECTOR WITH DETACHABLE FINGER PARTITIONS

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1 Claim. (Cl. 132-73)

This invention relates to improvements in manicure nail protector, and the like. The invention concerns itself with a unit which may be readily applied and used in connection with the operations incident to application of nail protecting and coloring coatings to finger nails; and the protectors hereinafter disclosed are especially useful for protection of the nails to which there have been applied such nail materials as include volatile solvents which soon dry after application to the nails. The prime object of the invention is to prevent unintentional contact of the nail of each finger with a proximate finger during the drying process, to thus avoid unintentional and improper removal of a portion of the applied material from the one nail, and transfer thereof to such proximate finger. The desirability of such protection during the drying time will be evident from the following brief statement:

After application of the coating material to the nails of one hand it is necessary to retain the fingers of such hand separated from each other to avoid contact between each treated finger nail and a proximate finger. Such avoidance can be ensured by the care exercised by the person whose finger nails have been treated, but during the waiting interval of drying, distractions of the person will usually occur, so that finger movements will be produced which result in the improper contact of one or more of the treated nails, with proximate fingers. It is the main object of the present invention to avoid such improper contacts during the drying interval. Such avoidance is provided by application to the hand of a readily attachable unit which is provided with partitions properly spaced to be received between the successive fingers of the hand, such partitions also being of form to prevent the unintentional lateral engagements of the fingers thus separated from each other.

Conveniently, the unit comprises a rather stiff sheet or board, of contour more or less approximating that of the hand, and against which sheet the palm of the hand is set and retained during the drying interval. The partitions are secured to such sheet at proper locations to be received between the successive fingers; and such partitions are of height sufficient to prevent unintentional shift of a finger to position of contact against a proximate finger; and are of length, along the fingers, to ensure this result. To these ends the locations and sizes of the successive partitions substantially conform to the natural locations and sizes of the spaces between the fingers, when such fingers are somewhat spread apart. Thus the finger nails themselves are retained well away from the proximate fingers.

An important feature of my present invention resides in the means whereby such finger partitions are connected to the sheet or board. Such connections are of type which makes the partitions removable from the sheet or board, and re-connectable thereto at other positions on such board, or to positions at the opposite face of the board. This latter feature comprises the provision of a board of configuration substantially conforming to the shape of the hand, but larger than such hand, so that such board itself may be set against either hand palm and conform to the shape thereof. Thus such board is reversible and may be used against the palm of either hand. Then, the means to connect the finger partitions to the board as such that such partition connections may be made with equal convenience to either face of the board.

2

Thereby a single such unit may be used for protection of the finger nails of both hands, successively, by merely disconnecting the finger partitions from the board face to which they may be connected, and re-connecting them to the opposite board face. The facility of such connections and re-connections is such that the entire set of such partitions may be disconnected and re-connected in a few seconds of time.

A further feature and object of the invention comprises the provision of simple means to secure the board, with its finger partitions connected thereto, to the hand in facial engagement of the board with the palm. Such connection means is such that the complete unit may be readily set onto and secured to the hand without need of special tools or connecting operations.

A further object of the invention is to provide a form of unit which can be produced from sheet material of suitable composition, such as sheet plastic, and of any selected color or facial design; such production operations being simple die cutting operations of a continuous sheet of ample width to meet the needs of the unit size. The finger partitions may also be produced from sheet material by similar die cutting operations. Thus the unit costs of production may be of the lowest. Due to the removability and simple form of connection of the finger partitions to the sheet or board, it is also possible to pack and ship the components comprising a unit, in a flat, relatively thin container, and without need of special packing operations.

Other objects and uses of the invention will appear from a detailed description of the same, which consists in the features of construction and combinations of parts hereinafter described and claimed.

In the drawing:

FIGURE 1 shows a face view of one embodiment of my present invention, with the finger partitions locked to the sheet or board; and this figure also shows simple means to temporarily connect the unit to the hand of the patient, with the palm of the hand in facial engagement with the board so as to expose the finger nails for treatment thereof; and in this figure I have also shown the board as provided with two additional slotted openings for the finger partitions between the fore-finger and the middle finger, and between the middle finger and the ring finger, so that I have exemplified the provision of a unit so formed that the finger partitions may be set onto and secured to the board in various combinations of locations to accommodate different sizes and contours of hands and fingers;

FIGURE 2 shows a fragmentary section through the showing of FIGURE 1, taken on the line 2-2 of FIGURE 1, looking in the direction of the arrows; and FIGURE 2 thus shows how the finger partition is temporarily locked to the board;

FIGURE 3 shows a fragmentary section taken on the line 3-3 of FIGURE 2, looking in the directions of the arrows; and FIGURE 3 shows how, when the finger partition is set into place and turned through substantially ninety degrees it is automatically locked to the board in manner such that it cannot become unlocked from the board, nor removed therefrom, while the patient's hand is in place against such board; and

FIGURE 4 shows a cross-section taken on the line 4-4 (either position) of FIGURE 1, looking in the directions of the arrows; and this FIGURE 4 thus shows how the unit may be easily set onto and attached to the patient's hand by use of such a simple connector as a rubber band set over the board with engagement of such band with slots or recesses formed in opposite side edges of the board at proper locations to enable the wrist or the upper portion of the palm, or both, to be thus retained firmly to the board.

3

The unit includes the stiff board or sheet 10 which is preferably, but not necessarily cut to conform generally to the outside contour of the hand (and wrist) portions, with the fingers spread apart somewhat as illustrated. Thus, such board includes the palm portion 11, the thumb portion 12, the finger or "mitt" portion 13, and the wrist portion 14. The outlines of a hand set palm side against such board is shown by the dashed lines 15^a. As thus shown, the fingers are spread slightly apart an amount convenient to the user, but sufficient to permit the accommodation of the finger partitions between the successive fingers.

I have provided the several finger partitions 15 which are removably connected to the board. For convenience of identification such partitions are numbered 15 with the suffixes "a," "b," "c," etc., as shown. Corresponding to these partitions are the slotted openings 16, with the suffixes "a," "b," "c," etc., corresponding to the partitions which are locked to the board by proper engagement with such slotted openings. It is noted that each such slotted opening is formed with its axis at a considerable angle with respect to the working position of the corresponding finger partition (the showing in the figures being substantially right-angles). Each finger partition is provided with a tongue element 17 (see FIGURES 2 and 3) separated from the body of the finger partition, but connected thereto by a neck portion 18 of dimension sufficient to allow the tongue 17 to be set down through the slotted opening (the partition being turned to substantially right-angles to its working position). Then, by turning the partition into its intended working position such tongue will no longer register with such slotted opening, and the partition will thus be retained against direct removal from the board. In fact, such removal from the board cannot be produced without turning the partition an amount prohibited by the presence of the proximate finger or fingers of the patient's hand. Thus, when once the patient's hand has been set against the face of the board the partitions will be retained in locked condition to the board. Nevertheless it is evident that this scheme of locking the partitions to the board does not forbid such an amount or degree of turning of each partition as may be needed to meet the individual requirements of the contour of the patient's hand and fingers. Thus, it is seen that I have provided means to rockingly connect each finger partition to the board, while at the same time ensuring definite lock of such partition against disconnection from the board as long as the patient's fingers are in surface contact with the board at their intended locations.

It is seen that with this "finger partition" arrangement the partitions may be made of such length as to provide against improper lateral movement of the finger-nail portions of the fingers far enough to contact proximate fingers. This is an important feature of my present invention, as it forbids staining of the contacted finger by freshly applied nail polish of a proximate finger nail, and at the same time, protects such freshly treated finger nail from contact of a foreign body with the freshly applied polish; thus protecting the so-applied polish from damage during the drying interval. It is noted that various solvents are currently being used as bases for such finger-nail polishes, but generally they are quick drying so that it is only necessary to leave the board and its partitions in place on the hand for a short time after application of the polish.

The slotted openings are formed at such positions on the board as will ensure that the partitions, when set into working positions on the board, shall be conveniently and comfortably accommodated within the spaces between the successive fingers. Thus, examination of FIGURE 1 shows that each partition extends to a position close to but not in engagement with the root between the two proximate fingers (in the cases of the forefinger and the middle finger, the middle finger and the ring finger, and

4

the ring finger and the little finger). In order to enable attachment of the several finger partitions to the board at various locations, to meet requirements of various contours of the hands, I have shown in FIGURE 1, by way of example only, the additional slotted openings 16^c and 16^d set into line with their counterparts 16^a and 16^b, but closer to the palm position 11. Like additional slotted openings may also be provided for the other finger partitions, although I have not particularly illustrated them in the drawing. By such provision of slotted openings, located at various positions of the board, a single board may be used for meeting the contour requirements of various specifications of hand.

The board may be secured temporarily to the hand in convenient manner. Thus, in the embodiment shown, I have provided the two rubber bands or elastics 19 and/or 20, encircling the hand and the board at the hand palm position, and the wrist position, respectively. To retain such bands in place the board may be provided with suitably located slotted openings adjacent to its edges, or, as illustrated, with slight recesses in its edge portions, shown at 21 in FIGURE 1 and FIGURE 4. In any case, such rubber band or elastic may be set into place either before the hand is slipped beneath such rubber band or elastic, or after. Conveniently such an elastic band may be formed of such stretchable materials as are used in the production of garters, suspenders, and like garments.

Examination of FIGURES 2 and 3, in particular, will show that the partitions may be set through their respective slotted openings from either face of the board, so as to produce projection of such partitions at either face of the board. That is, the unit is reversible. Accordingly, a single unit may be used for operation on either the right or the left-hand, as desired. Such reversibility is an incident of the removable attachment of each finger partition to the board, and the provision for attachment of each finger partition to the same board from either face of such board. Various means and constructions of parts may be provided conforming to this requirement, but the slotted opening arrangement shown is a very simple and efficient embodiment of my invention. However, I do not intend to limit myself to such particular means of removable and reversible connection of the finger partitions to the board, except as I may limit myself in the claim to follow.

The unit hereinbefore described is attached to the hand of which the finger nails are to be treated prior to such treatment so as to avoid possible lateral transfer of the liquid or semi-liquid material to a proximate finger during the treating operation; and preferably the unit will be allowed to remain thus attached to the hand, for such interval as is needed to ensure substantial drying of the treated surfaces prior to removal of the unit from such hand. Then if desired, the finger partitions may be removed from the one face of the board or sheet to which face such partitions have been attached, and, after reversing or turning over the board or sheet, such finger partitions may be attached to the opposite face of the board or sheet, using the proper slotted openings to effect such new attachments as are proper to accommodate the fingers of the other hand, now to be treated. Alternatively, two of the units may be simultaneously used, one having the finger partitions properly located to accommodate the right-hand fingers and the other having its finger partitions properly located to accommodate the fingers of the left-hand.

In place of the encircling bands to retain the unit to the hand during its intended use, such unit may be thus attached to the hand in other convenient manner. Thus, if desired, an area of the sheet or board may be provided with a suitable composition of tacky material which will adhere to the palm of the hand with sufficient adherence to ensure continued retention of the unit in proper location on the hand during the treating operation, but nevertheless of a nature to enable ready detachment from the

5

hand upon completion of the treating operation, and without leaving undesirable tacky or sticky material on the hand, or requiring excessive force for removal of the unit from such hand. Various tacky materials are well known in the arts which would comply with these requirements.

In FIGURE 1 I have shown, by the dashed line circles 22, 23 and 24, which are stippled for emphasis, such an arrangement as just above disclosed. Each of these circles represents an area which is covered with such tacky material, which areas will be engaged by the palm portions as follows: the area 22 just below the little finger, the area 23 near the thumb and the forefinger, and the area 24 near the lower joint of the thumb. Such areas of the palm are generally thicker than the central portion of the palm, and thus the provision of such tacky material at said areas will ensure good contact of the corresponding portions of the palm, with the tacky material. Thus by selection of several areas of the board which areas are provided with such tacky material, there is assurance that the board will be retained firmly engaged with the patient's hand during the drying interval, and assurance that the board will effectively resist rocking or turning with respect to the hand. Such resistance to turning is also provided by the engagement of the several finger partitions with the fingers.

Generally, when a surface is provided with such a tacky material, such surface may be protected, when the unit is not in use, by applying a thin sheet of protective material, such as a suitable specification of paper stock, stuck to the tacky areas, which protective sheet is of characteristics such that it can be readily pulled off from the tacky areas when the unit is to be used, and without impairment of the tacky nature of the thus exposed areas. Such thus exposed areas may then be temporarily adhered to the palm for the intended purposes. Restoration of such protective sheet to such areas after the intended use will assure renewed protection to such areas, and prevent improper sticking of the board to unintended bodies.

I claim:

A unit for attachment to a hand, comprising in combination, a sheet of board of contour and size to correspond to a human hand, and including a palm area, a finger area, and a thumb area; together with a series of five successively spaced apart partitions extending from the finger area normal to said area with four elongated spaces between said partitions, together with means to

6

removably attach the partitions to said finger area with the directions of the partitions lengthwise of the finger area; wherein said removable partition attaching means comprises a slot in the finger area of the board corresponding to each partition and extending at an angle non-parallel to the direction of such partition when such partition extends in the direction of the spaces at the sides of such partition, and a lug on the central portion of the edge of each partition and of thickness to extend through the corresponding slot, such lug including a part which extends in direction substantially parallel to the partition and non-parallel to the slot when the partition extends in the direction of the spaces proximate to such partition; together with an elongated partition in connection with and normal to the board at each side of the thumb area, removable means to attach the partitions of the thumb area to the board with the directions of such partitions corresponding to the direction of such thumb area; wherein said thumb area partition attaching means comprises a slot in the board at each side of the thumb area and extending at an angle non-parallel to the direction of the corresponding partition when such partition extends in the direction of the space between the thumb partitions, and a lug on the central portion of each such thumb area partition extended through the corresponding slot, which slot is non-parallel to the corresponding partition when such partition is in position at one side of and parallel to the thumb area; together with means to attach the board to a hand, wherein the last named attaching means comprises spaced areas of tacky material on the surface of the board only at each side of the board finger area, and at that side of the thumb area remote from the finger area and substantially at the board area lying between the palm area and the thumb area.

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