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FINGER NAIL POLISH REMOVING TOOL

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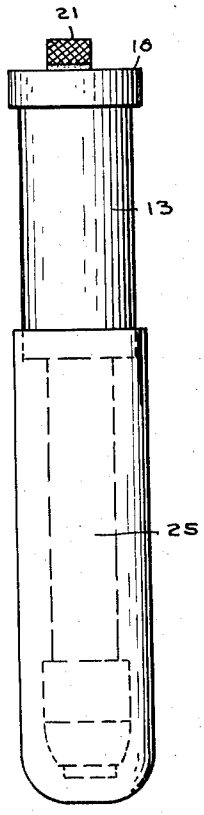


Fig. 1.

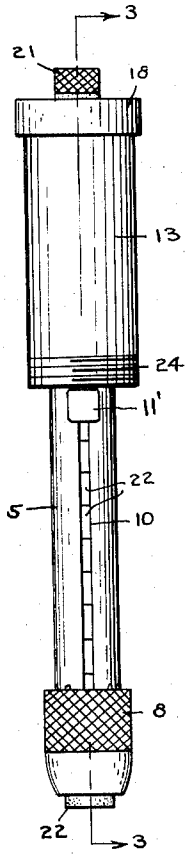


Fig. 2.

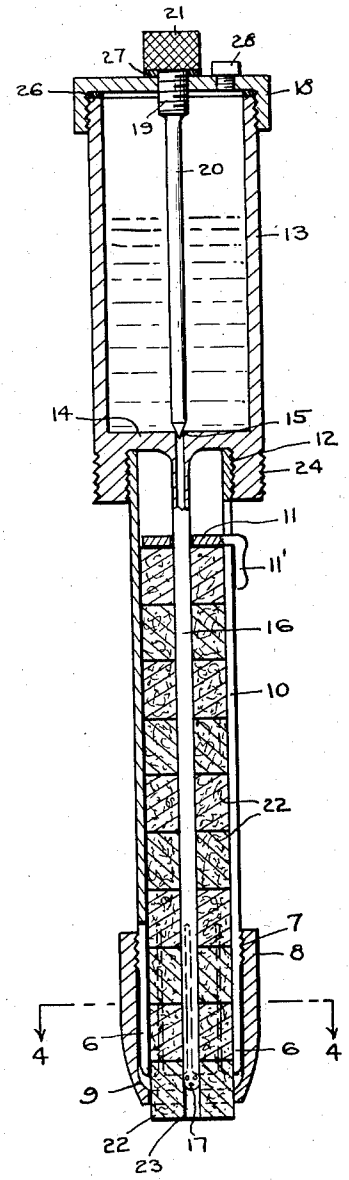


Fig. 3.

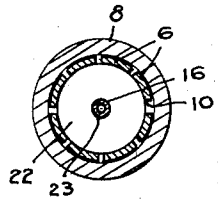


Fig. 4.

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FINGER NAIL POLISH REMOVING TOOL

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4 Claims. (Cl. 15—138)

This invention relates to a finger nail polish remover and has particular reference to such a device that is provided with means for scrubbing the finger nail polish in combination with the feed means for polish remover.

The invention contemplates a tubular barrel wherein is disposed a plurality of cotton or felt disks that are progressively fed downwardly to be fixedly held in the end of the device to constitute a scrubbing element and with the barrel supporting a receptacle carrying a fluid finger nail polish remover and valve controlled means wherein the polish remover is fed downwardly to saturate the lowermost disk employed as the scrubbing element and whereby the operator may quickly and conveniently remove finger nail polish free of contaminating engagement by the hand of the operator with the saturated disk and the polish being removed.

The invention further contemplates a feed mechanism for the disks whereby a lowermost disk is projected to a point where it extends beyond the lower end of the barrel and with clamping means whereby the lowermost disk is held against accidental displacement during the scrubbing action of removing the polish.

Novel features of construction and operation of the device will be more clearly apparent during the course of the following description, reference being had to the accompanying drawings wherein has been illustrated a preferred form of the device and wherein like characters of reference are employed to denote like parts throughout the several figures.

In the drawings:

Figure 1 is a side elevation of a device constructed in accordance with the invention and including a removable enclosing cover,

Figure 2 is a side elevation of the device with the cover removed,

Figure 3 is an enlarged vertical section taken substantially on line 3—3 of Figure 2 and,

Figure 4 is a horizontal section taken substantially on line 4—4 of Figure 3.

Referring specifically to the drawings, the numeral 5 designates a cylindrical barrel that is slotted at its lower end to provide a plurality of equidistantly spaced flexible tongues 6. The barrel 5 is threaded at a point adjacent the upper ends of the tongue 6, as at 7 for the threaded reception of a tubular nut 8. The nut 8 is provided at its lower end with an internal circumferential beveled face 9 that serves as a cam service for simultaneously engaging the several tongues 6 to flex them inwardly, for a purpose to be presently described. The barrel 5 is slotted upon one side as at 10 for the shiftable and guiding reception of a follower plate 11. The upper end of the barrel is externally threaded as at 12, for the threaded reception of a cylindrical fluid chamber 13. The chamber 13 is provided with a closed bottom wall 14 and with the wall 14 being centrally apertured at 15 for communication with a cylindrical feed 16. The aperture 15 constitutes a valve seat. The tube

16 extends throughout the length of the barrel 5 axially thereof and terminates at a point slightly below the lower ends of the tongues 6. The lower end of the tube 16 is closed and provided with a plurality of discharged apertures 17. The chamber 13 is externally threaded at its upper end for the threaded reception of a closure cap 18. The cap 18 at its axial center line is apertured and threaded for the reception of a threaded shank 19 that carries a valve rod 20. The valve rod extends axially of the chamber 13 and its lower end is beveled for seating engagement with respect to the aperture 15 and whereby to control the passage of fluid from the chamber 13 to the tube 16. The shank 19 is provided with a knurled head 21 whereby the valve rod may be shifted toward and from a closure engagement with respect to the seat 15.

Disposed within the barrel 5 are a plurality of felt or cotton disks 22. The disks 22 are centrally apertured at 23 for sliding engagement over the tube 16. The disks 22 have a relatively snug engagement within the barrel 5 and upon the tube 16 whereby they are frictionally engaged therewith. The lower end of the chamber 13 is externally threaded as at 24 for the threaded engagement of a tubular cover 25 and whereby the mechanism including the barrel 5, the follower 11, the nut 8 and the lowermost disk 22 are substantially housed at such times as the device is not in use. Suitable gaskets 26 and 27 are employed beneath the cap 18 and the knurled head 21 to prevent leakage of the fluid from the chamber 13, should the device be disposed in a horizontal position when not in use. The follower 11 is provided with a thumb rest 11′ that overlies the outer face of the barrel 5 as a means whereby the disks may be progressively fed downwardly. A filler plug 28 is carried by the cap 18 to facilitate the filling of the chamber 13.

In the use of the device, the barrel is first loaded with a plurality of disks 22, such loading being performed by sliding the disks axially of the barrel over the tube 16 until such time as the barrel is completely filled and with the lowermost disk 22 projecting beyond the lower end of the nut 8. Now, when the device is to be employed for purpose of removing finger nail polish, the operator shifts the head 21 to open the valve stem 20 with respect to the seat 15, permitting a quantity of the fluid to flow downwardly through the tube 16 to be discharged through the aperture 17 for saturating the lowermost disk. The valve is then closed and the device is ready for operation. The operator then proceeds to engage the finger nails with the saturated risk, employing the barrel 5 as a handle and with a scrubbing action, readily dissolves the finger nail polish, and the continued scrubbing action completely removes the polish in a very effective manner. Prior to the scrubbing action, the nut 8 is screwed upwardly causing the beveled face 9 to force the tongues inwardly at their lower extremities, creating a biting action upon the edge of the lowermost disk, thus clamping the disk against displacement during the scrubbing action. After the operation has been completed, the nut 8 is screwed downwardly releasing the tongue 6 and permitting the employing of the thumb piece 11′ to shift the follower 11 downwardly to dispose another disk in operative position, where it is again clamped by the nut 8 and the tongues 6. This operation is continued as often as necessary and provides a very desirable magazine for the storage of the several disks 22 and a very novel means for feeding the disks progressively to their operative position where they will be saturated as needed. The saturation only engages the lowermost disk, while all of the other disks are maintained in a dry condition. The employment of the barrel 5 as a handle, avoids any unnecessary contact by the operator with the polish, such as heretofore been neces-

sary where a piece of absorbent cotton has been saturated and employed to remove the polish, by the fingers of the operator.

It will be apparent from the foregoing that a very novel tool has been provided for the removal of finger nail polish. The device is made in such a size as to constitute a handle for the easy manipulation thereof and the structure forms a housing for both the polish removing fluid and the magazine for the several disks. It will also be apparent that the barrel is capable of holding a supply of disks requiring infrequent filling. The disks are projected outwardly and held against displacement in a novel manner and the long feed tube from the chamber 13 permits the saturation of the lowermost disk only as the device is brought into use. The device is simple in construction, is strong, durable, economical to manufacture and is easily assembled or disassembled with a minimum of effort. The device provides a very desirable means of cleaning fingernail polish from the fingernails and avoids the very messy practice heretofore employed.

It is to be understood that the invention is not limited to the precise construction shown, but that changes are contemplated as readily fall within the spirit of the invention as shall be determined by the scope of the subjoined claims.

Having described my invention, what I claim as new and desire to secure by Letters Patent is:

1. A finger nail polish removing tool comprising a cylindrical barrel open at its opposite ends, a plurality of super-imposed disk-shaped wads disposed in the barrel for its major length, a follower in the barrel for progressively feeding the wads downward and whereby a lowermost wad projects below the lower end of the barrel, clamping means adjustably connected to the lower portion of the barrel and whereby to clamp a lowermost wad against displacement during a scrubbing action, a fluid containing chamber connected to the upper end of the barrel and whereby to carry a finger nail polish dissolving fluid, a feed tube connected to and communicating with the chamber, the tube terminating downwardly in a closed and perforated end within the lowermost wad and whereby fluid may be discharged to engage and saturate the lowermost wad, valve means carried by the chamber for controlling the flow of fluid through the feed tube to the lowermost wad, the feed tube being axially disposed with respect to the barrel and the fluid chamber, the said wads being formed of flexible and compressible disks of absorbent material, the said wads having a diameter to snugly engage the inner surface of the barrel and with the wads being axially apertured for sliding engagement over the feed tube.

2. A finger nail polish removing tool, comprising an

elongated handle forming cylindrical and tubular barrel that forms a magazine, the barrel at its lower end being slotted to form a plurality of flexible clamping tongues, a nut rotatably supported upon the lower portion of the barrel, means formed upon the nut whereby to flex the tongues inwardly, a plurality of cylindrical absorbent wads carried within the barrel concentric thereto, a follower plate in the barrel to overlie the uppermost wad and whereby the group of wads may be progressively fed downwardly to dispose a lowermost wad partially projecting below the lower end of the barrel, the said tongues when flexed inwardly adapted to have a circumferential clamping engagement with the lowermost wad to prevent displacement, a fluid chamber connected to the upper end of the barrel, an elongated fluid conducting tube leading from the chamber axially thereof to terminate within the lowermost wad, the lower end of the tube being perforated whereby fluid may be discharged from the tube to engage and saturate the lowermost wad, and valve means for controlling the flow of fluid through the tube.

3. The structure according to claim 2, wherein the barrel adjacent the upper ends of the tongues is threaded for the reception of the said nut, the said nut at its lower end being provided with an inner circumferential beveled shoulder that simultaneously engages the lower end of the tongues to flex them inwardly to bite upon the circumferential edge of the lowermost wad and with the lowermost wad projecting below the lower ends of the tongues and below the lower end of the nut.

4. The structure according to claim 2, wherein the chamber is externally threaded at its lower end for the reception of a tubular cover that overlies the barrel for its full length and the clamping nut, the said barrel being slotted upon one side for substantially its full length, the follower plate having a lateral extension projecting through the slot and a finger piece carried by the extension and overlying the side of the barrel for manually shifting the follower plate to progressively feed the wads downwardly.

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