March 6, 1951 J. A. ZENGEL 2,544,479

FINGER NAIL TRIMMER USING SAFETY RAZOR BLADES IN A NOTCHED BLADE HOLDER

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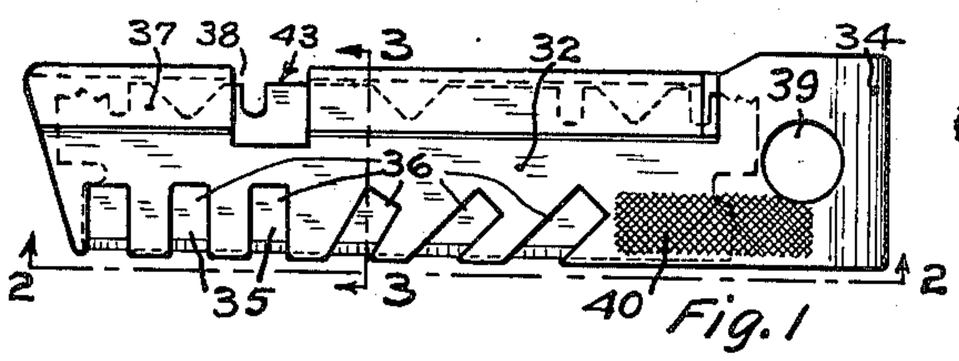

Fig. 1

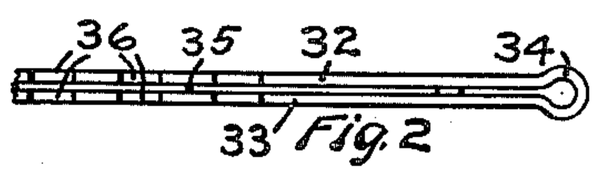

Fig. 2

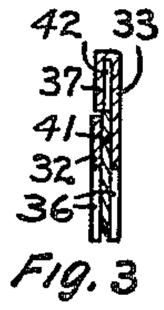

Fig. 3

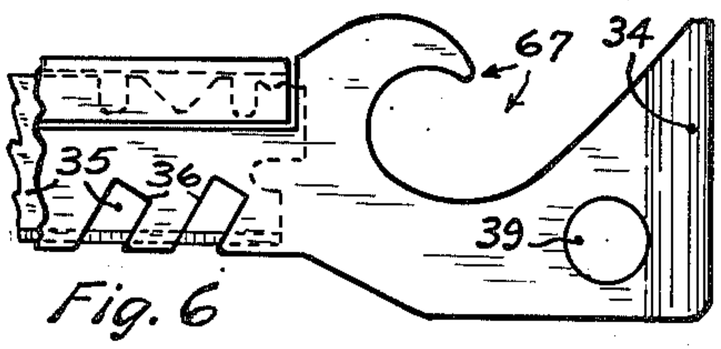

Fig. 6

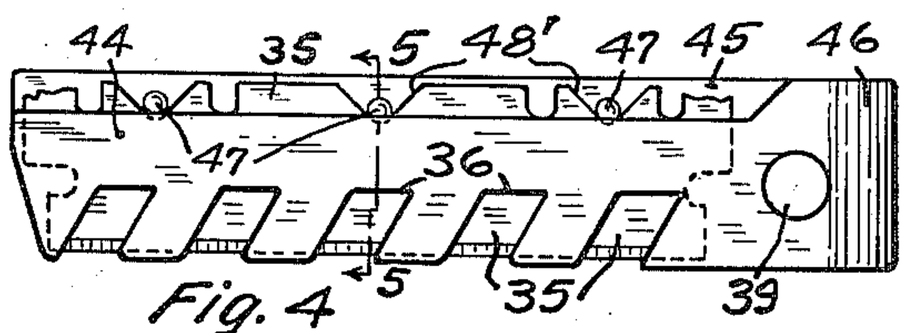

Fig. 4

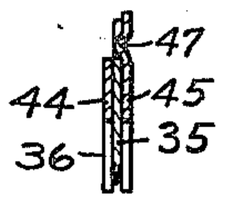

Fig. 5

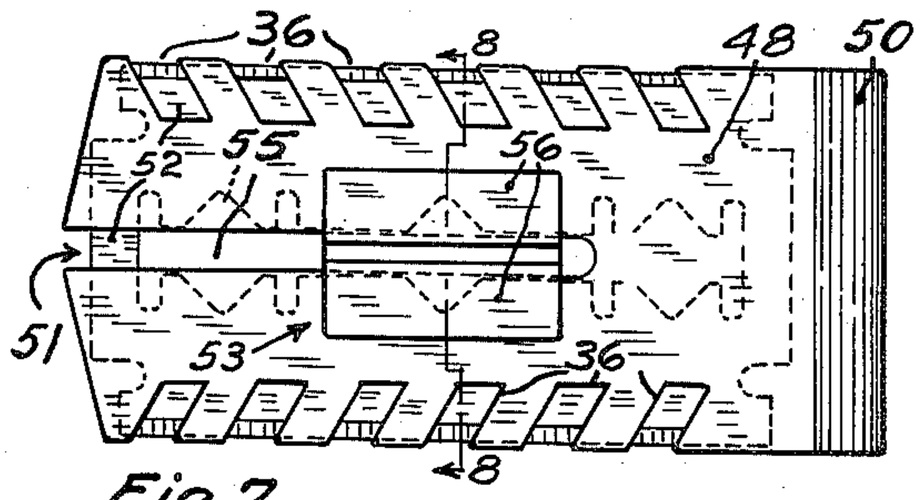

Fig. 7

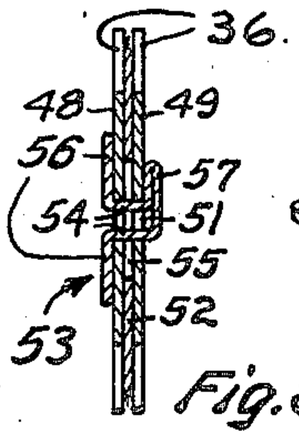

Fig. 8

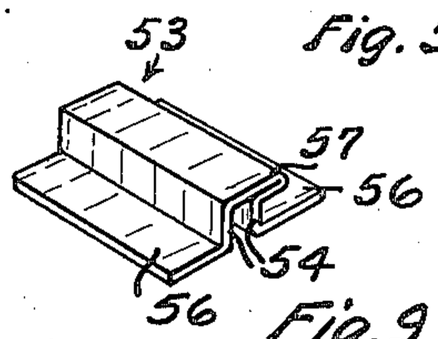

Fig. 9

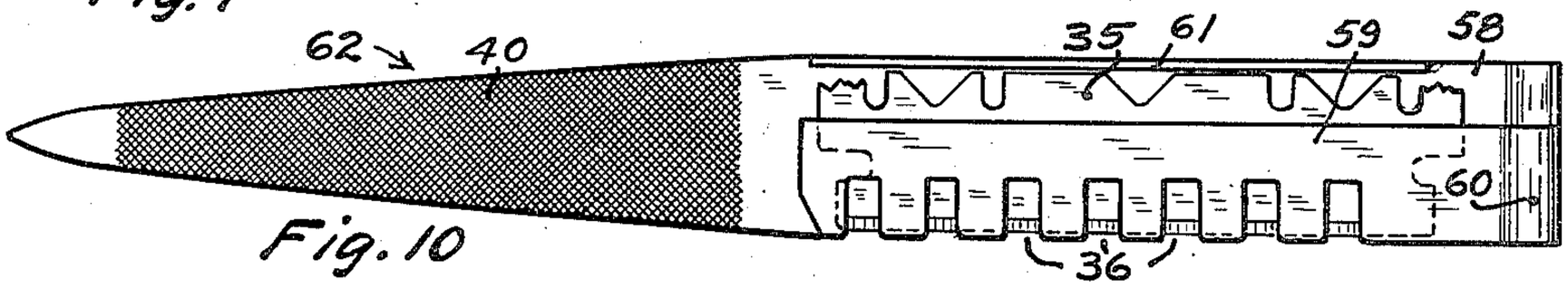

Fig. 10

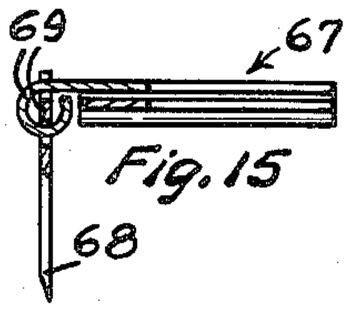

Fig. 15

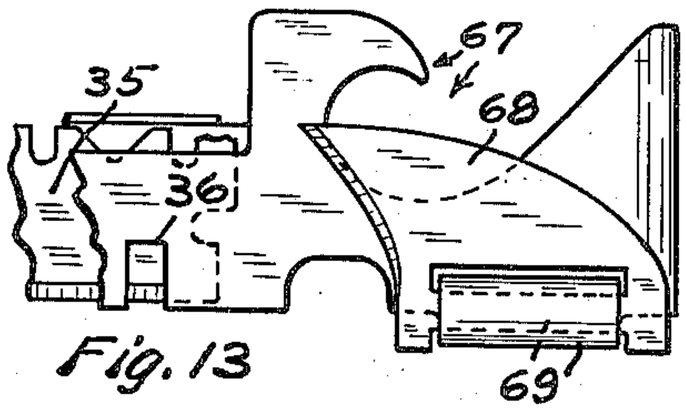

Fig. 13

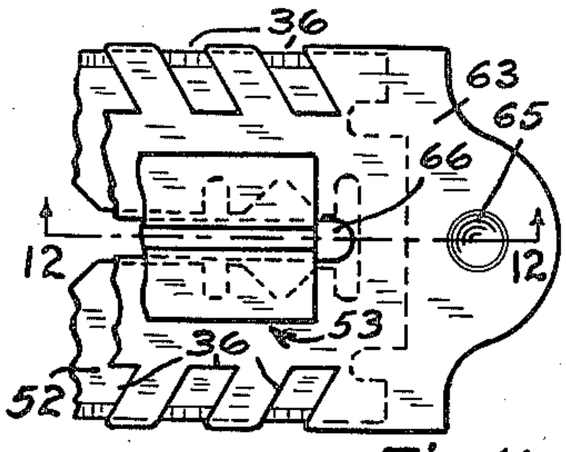

Fig. 11

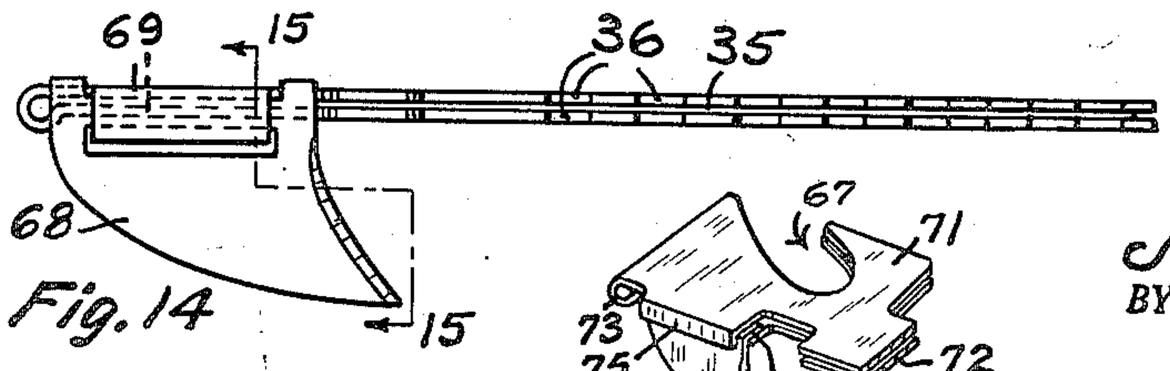

Fig. 14

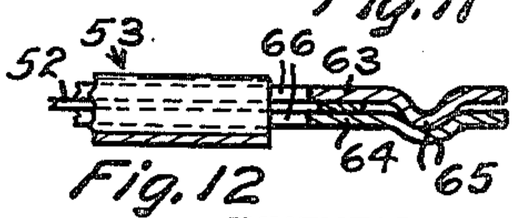

Fig. 12

Fig. 16

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FINGERNAIL TRIMMER USING SAFETY RAZOR BLADES IN A NOTCHED BLADE HOLDER

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7 Claims. (Cl. 30—27)

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This invention relates to a finger nail trimmer using safety razor blades in a notched blade holder.

An object of this invention is to provide a notched razor blade holder which will receive and hold a safety razor blade in such a manner that the blade can be safely and conveniently used for trimming the finger nails.

Another object is to provide a device of this nature by which the finger nails can be closely trimmed without danger of cutting the fingers.

Another object of this invention is to provide a safe and efficient finger nail trimmer which uses a razor blade as a cutting means and which is well adapted to have other tools, such as nail files, bottle openers, can openers and the like embodied therein.

Another object of this invention is to provide a finger nail trimmer which utilizes a safety razor blade for trimming purposes and in which the blade can be moved longitudinally in a blade holder means to properly position sharp and not previously used portions of the blade so that they can be used, the blade, in some instances being positioned so that a portion of said blade extends beyond the end of the holder and can be used like a knife blade.

Other objects of the invention will be apparent from the following description taken in connection with the accompanying drawings.

In the drawings Figure 1 is a side elevation of a finger nail trimmer constructed in accordance with this invention, showing the same with approximately one half of a broken safety razor blade therein, parts of the blade being shown by dotted lines.

Fig. 2 is a fragmentary edge view looking in the direction of broken line 2—2 of Fig. 1.

Fig. 3 is a sectional view on line 3—3 of Fig. 1.

Fig. 4 is a side elevation of a modified form of finger nail trimmer similar to the trimmer shown in Fig. 1.

Fig. 5 is a cross section taken on line 5—5 of Fig. 4.

Fig. 6 is a fragmentary view in side elevation of a finger nail trimmer which is similar to that shown in Fig. 1 except that it has a bottle opener formed in the portion thereof that holds the blade.

Fig. 7 is a side elevation of a device constructed in accordance with this invention and in which an entire double edge blade, as differentiated from a broken or half blade, is used as the cutting means.

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Fig. 8 is a cross section taken on line 8—8 of Fig. 7.

Fig. 9 is a detached isometric view of a holding clip used in the structure shown in Figs. 7 and 8.

Fig. 10 is a view in elevation of a finger nail trimmer constructed in accordance with this invention and having a finger nail file made as an integral part thereof.

Fig. 11 is a fragmentary side elevation of a modified form of the type of device shown in Fig. 7.

Fig. 12 is a sectional view taken on line 12—12 of Fig. 11.

Fig. 13 is a fragmentary elevation of a finger nail trimmer of this type having both a bottle opener and a can opener combined therewith, a can opener blade being therein shown in an inoperative or closed position.

Fig. 14 is an edge view of the device shown in Fig. 13, showing the same turned end for end and showing the can opener blade in an open or operative position.

Fig. 15 is a view partly in section and partly in elevation taken substantially on broken line 15—15 of Fig. 14.

Fig. 16 is a fragmentary perspective view showing a modified form of can opener device in which the can opener blade is a readily detachable part.

All figures of the drawings are shown on an enlarged scale and like reference numerals designate like parts throughout the drawings.

The finger nail trimmer shown in Figs. 1, 2 and 3 comprises two side plates 32 and 33 connected at one end by an integral resilient loop portion 34 and adapted to receive and hold therebetween one of the halves 35 of a broken safety razor blade of a well known standard type. In double edged blades of this type the two halves are connected adjacent their ends only and are readily broken apart to provide the half blade herein shown. The two side by side plates 32 and 33 are provided along one edge with any desired number of registering notches 36. The notches 36 can be formed transversely of the plates or at an angle thereto, as may be desired. The notches 36 when formed at an angle to the plates better adapt the trimmer for making a slicing or angular cut, as hereinafter explained. Preferably the outer corners of the metal sections between the notches 36 are rounded off, as shown in the drawings, to obviate the possibility of scratching the outer surfaces of the finger nails in the use of this finger nail trimmer.

The side plates 32 and 33 are preferably of dif-

ferent width and the edge portion 37 of the wider side plate 33 opposite the notches 36 is bent U shape as shown in Figs. 1 and 3, so that this portion 37 can be selectively used to support the rear edge portions of broken or whole blades of two different widths, as hereinafter explained. Preferably a notch 38 is provided in the plate 33 and the doubled over edge portion 37 and said notch extends into the plate 32. This notch facilitates pushing a blade out of the holder.

Preferably an attachment hole 39 is provided in the side plates 32 and 33 near the loop portion 34 so that this device can be attached to a key ring, chain or the like. Also preferably a roughened or serrated surface 40 is provided on the blade holder, such as on the plate 32 to serve as a finger nail file.

To facilitate the use either of one half 35 of a relatively thin double edged blade, as shown in Fig. 1, or of a standard safety razor blade 41 of narrower width but of greater thickness, as shown in Fig. 3, the bent over portion 37 of the plate 33 is positioned relatively close to the opposed side of said plate 33 so as to leave therebetween a space 42, Fig. 3, just wide enough to receive the thinner half blade 35, Fig. 1, but not wide enough to receive the thicker blade 41, Fig. 3. When a half blade 35 is used in this holder, as shown in Fig. 1, the back edges 43 of this half blade 35 will rest against and be supported by the part forming the bottom of the space 42. This will properly position the cutting edge portion of the half blade 35. When a thicker blade 41 of a narrower standard width is used in this holder the back edge portion of this narrower but thicker blade will rest against and be stopped and positioned by the forward edge of the bent over portion 37. In each instance the blade 35 or 41 is so positioned by the stop means that the notched edge portion of the plates 32 and 33 extend beyond and overhang the cutting edge portion of said blade and thus shield said cutting edge except at the location of the notches 36. The notches 36 are wide enough to permit the cutting edge of the blade, at the location of these notches, to be efficiently applied to a finger nail but are narrow enough so that it is substantially impossible to cut the hand on these portions of the cutting edge at the location of the notches. Notches 36 about one-sixteenth of an inch wide have been found to be satisfactory.

The plates 32 and 33 are resiliently connected by the loop portion 34 and will engage with the sides of either of the blades 35 or 41 with enough force to firmly and securely hold either of said blades. At the same time said plates will yield relative to each other sufficiently to permit easy insertion and removal of either of the blades. The notch 38 facilitates the removal of either blade 35 or 41 and said notch also facilitates endwise movement of either blade in the holder to thereby bring new and sharper portions of the blade in registration with the notches 36. Also the blade 35 can be turned end for end in the holder to bring new and sharper sections of the blade into registration with the notches 36.

Also the blade 35 can be positioned so that it extends outwardly from the end of the holder shown at the left in Fig. 1 and this outwardly extending and unguarded portion of the blade can be used like a knife blade for finger nail trimming or for other purposes.

Throughout the following description and on all figures of the drawing hereinafter described the numerals 35, 36, 39 and 40 are used to designate

respectively blade members, notches, attachment openings and serrated file surfaces similar to those shown in Figs. 1, 2 and 3.

The blade holder shown in Figs. 4 and 5 is similar to the one shown in Figs. 1, 2 and 3 and comprises two side plates 44 and 45 connected at one end by an integral resilient loop portion 46. The plates 44 and 45 have registering notches 36, of a form hereinbefore described, in one edge portion thereof. Preferably the plate 45 is of greater width than the plate 44 and is slightly wider than the half 35 of the safety razor blade shown therein. The narrower plate 44 leaves the back edge portion of the half blade 35 uncovered and allows access to said back edge portion of the half blade 35 to facilitate properly positioning said half blade in the holder. Stop members 47 are engaged by V-shaped notches 48' in the rear edge portion of the half blade 35 and said half blade is thereby positioned both longitudinally and transversely. The stop members 47 and notches 36 in the holder are relatively positioned so that different portions of the cutting edge of the blade can be brought into registration with the notches 36 by turning said blade end for end. Thus if a sharp half blade 35 is inserted and used until the exposed cutting edge portions thereof become dull it can be turned end for end to bring previously unused sharp sections thereof into registration with the notches 36. Also a blade of narrower width than the blade member 35, such as the blade member 41 shown in Fig. 3, can be used in the holder shown in Figs. 4 and 5 with the back edge of the blade resting against the stop members 47.

The blade holder shown in Fig. 6 is similar to the blade holder shown in Fig. 1 except that the closed or looped end portion thereof is made longer and wider and is suitably shaped to form a bottle opener 67 of a type adapted for removing clinched metal caps from bottles.

The finger nail trimmer shown in Figs. 7, 8 and 9 is adapted to receive and hold a double edged safety razor blade 52 of standard construction that has not been broken into two halves as has the blade 35 shown in Fig. 1. The holder of Figs. 7, 8 and 9 comprises two side plates 48 and 49 connected with each other at one end by a resilient loop portion 50. Plates 48 and 49 have registering notches 36 in both edges thereof which function in the same manner as the notches 36 in the previously described figures. Also each plate 48 and 49 is provided with a longitudinally disposed medial slot 51 which extends inwardly from the end of the plate opposite the loop 50. The two plates 48 and 49 register with each other and are adapted to slidably receive a blade holding and positioning member 53. The member 53 shown in Figs. 7 and 9 is relatively short but obviously this member can be longer if desired to provide a holding member of greater strength. The member 53 has two spaced apart portions 54 which are adapted to extend through a longitudinal slot 55 in the blade 52 and through the slots 51 in the plates 48 and 49. The portions 54 are provided at one end with two oppositely directed transverse flanges 56 and at the other end with one transverse flange 57. Preferably blade holding member 53 is formed of a single piece of sheet metal bent to provide the desired shape.

A blade 52 is inserted in the holder 48, 49, 50 by first passing the flange 57 through the slot 55 in said blade and then inserting the blade in an endwise direction between the plates 48 and 49. The parts 54 of the blade holding member

53 enter the slots 51 and the flanges 56 and 57 engage the outer sides of the plates 48 and 49 as shown in Fig. 8. The blade holding member 53 thus serves to properly position the blade 52 between the plates 48 and 49 and to firmly interconnect the blade and the holder. Obviously the blade 52 can be longitudinally adjusted between the plates 48 and 49 or can be turned end for end to position previously unused cutting edge portions in registration with the notches 36.

The blade holder shown in Fig. 10 comprises two parallel plate members 58 and 59 and connected by a resilient end loop 60. A blade stop 61 is provided on the rear edge portion of the wider plate member 58 and a nail file portion 62 of conventional shape is integral with and extends outwardly from an end of said plate member 58. Plate members 58 and 59 are adapted to receive and hold a blade member 35 and have registering notches 36 in one edge thereof, all as previously described.

The blade holder shown in Figs. 11 and 12 is similar in many respects to the blade holder shown in Figs. 7, 8 and 9 except that the two side plates 63 and 64 thereof are separable pieces. Said side plates 63 and 64 are provided near one end with hump and socket devices 65 which functions like dowel means to properly position these plates. The plates 63 and 64 have slots 66 like the previously described slots 51 and are adapted to receive a blade 52 and a blade holding and positioning member 53 of a type previously described. The member 53 properly positions the blade and securely holds the plates 63 and 64 together. The member 53 is shown broken away in Fig. 11 and, if desired, can be substantially as long as the slot in the blade 52.

The finger nail trimmer shown in Figs. 13, 14 and 15 is similar in many respects to the one shown in Fig. 6 and like parts are similarly numbered. In addition, the handle portion of the device shown in Figs. 13, 14 and 15 has a can opener blade 68 connected therewith by pivot means 69. The blade 68 is foldable alongside of the holder, as shown in Fig. 13, when not in use and can be positioned as shown in Figs. 14 and 15 when it is to be used for opening a tin can. The blade holding means shown in Figs. 13, 14 and 15 is similar to that shown in Figs. 1, 2, 3 and 6 and like parts thereof are similarly numbered.

Fig. 16 is a fragmentary perspective view of a blade holding device adapted to receive and hold a detachable can opener blade 70. The holder of Fig. 16 comprises two side plates 71 and 72 connected by a resilient loop portion 73. The blade 70 has a flange 74 extending at right angles therefrom. When the flange 74 of blade 70 is telescopically inserted, by endwise movement of said blade and flange, between the plates 71 and 72 and back of a stop member 75 on the plate 71 and blade 70 will be firmly supported in the operative position shown. When the can opener blade 70 is not to be used it is withdrawn endwise from the position shown in Fig. 16 and is taken care of by inserting said blade 70 between the plates 71 and 72 either forwardly of the flange 74 or at the side of said plates opposite to the flange 74.

In the use of any of the finger nail trimmers hereinbefore described the edge of a blade at the location of one of the notches 36 is applied to the finger nail like a knife blade to trim the nail. The notches are narrow and the adjacent portions of the side plates shield the skin and flesh on the ends of the fingers and prevent injury thereto by the blade.

The foregoing description and accompanying drawings disclose preferred embodiments of my invention but it will be understood that changes can be made within the scope of the following claims.

I claim:

1. A finger nail trimmer comprising two side plates disposed in side by side parallel relation and adapted to receive therebetween a relatively thin flat safety razor blade; an integral resilient loop portion at one end of said holder connecting said two side plates and resiliently urging said two side plates together to thereby clamp and hold the blade; and registering notches of relatively narrow width in edge portions of said side plates, said notches exposing a short length of the cutting edge of the blade.

2. A finger nail trimmer comprising two side plates disposed in side by side parallel relation and adapted to receive therebetween and hold a relatively thin flat safety razor blade; means positioning the blade between said side plates so that edge portions of said side plates slightly overhang a cutting edge of said blade and provide guard means therefor; an integral resilient loop portion at one end of said holder connecting said two side plates and resilently urging said two side plates together with sufficient force to clamp and hold a blade; and registering notches of relatively narrow width in the overhanging edge portions of said side plates exposing a short length of the cutting edge of the blade for application to the finger nail.

3. A finger nail trimmer comprising two side plates of different width disposed in side by side parallel relation with two edge portions thereof flush with each other, said side plates being adapted to receive therebetween a relatively thin flat safety razor blade which is provided with a cutting edge and a back edge; stop means carried by one of said side plates adjacent one edge thereof supporting the back edge portion of the blade and positioning the blade so that the flush edges of the side plates slightly overhang and shield the cutting edge of the blade; and registering notches in the overhanging edge portions of said side plates exposing short lengths of the cutting edge portion of said blade for application to a finger nail.

4. A finger nail trimmer comprising two side plates of different width disposed in side by side parallel relation with two edge portions thereof flush with each other and with another edge portion of the wider side plate protruding beyond the adjacent edge portion of the narrower side plate, said plates being adapted to receive therebetween a relatively thin flat safety razor blade which has a cutting edge and a back edge; a reversely bent member carried by the protruding edge portion of the wider plate member extending back toward said narrower plate member and adapted to receive the back edge of the blade and position and support the blade; and registering notches in the flush edge portions of said side plates exposing short lengths of the cutting edge portion of the blade for application to a finger nail.

5. A finger nail trimmer comprising two side plates of different width disposed in side by side parallel relation with two edge portions thereof flush with each other and with another edge portion of the wider side plate protruding beyond the adjacent edge portion of the narrower

side plate, said side plates being adapted to receive therebetween safety razor blades of different thickness and width; a reversely bent blade positioning and stop member carried by the protruding edge portion of the wider plate member and extending back toward said narrower plate member in spaced relation from but closely adjacent to the wider plate member, whereby the back edge portion of a thin blade of a predetermined width will be received between said reversely bent member and said wider member and will rest against and be positioned by the bottom portion of said reversely bent member and a thicker blade of less width will be stopped and positioned by the edge portion of said reversely bent member; and registering notches in the flush edge portions of said side plates exposing short lengths of the cutting edge portion of the blade for application to a finger nail.

6. The apparatus as claimed in claim 5 in which a notch is provided in the back edge portion of the wider plate and in the reversely bent member, whereby pressure can be applied to the back edge of a blade to facilitate removal of the blade from between the side plates.

7. A finger nail trimmer comprising two side plates of different width disposed in side by side parallel relation with two edge portions thereof flush with each other, said side plates being adapted to receive therebetween a relatively thin

flat safety razor blade which has a cutting edge and a back edge; stop means carried by one of said side plates adjacent one edge thereof supporting the back edge portion of the blade and positioning the blade so that the flush edges of the side plates slightly overhang the cutting edge of the blade; an integral resilient loop portion connecting adjacent ends of said two side plates resiliently connecting the same; and registering notches in the overhanging edge portions of said side plates exposing short lengths of the cutting edge portion of said blade for application to a finger nail.

JOSEPH A. ZENGEL.

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