April 8, 1958 D. P. KILLEN 2,829,433

NAIL CLIPPER

Filed June 6, 1957

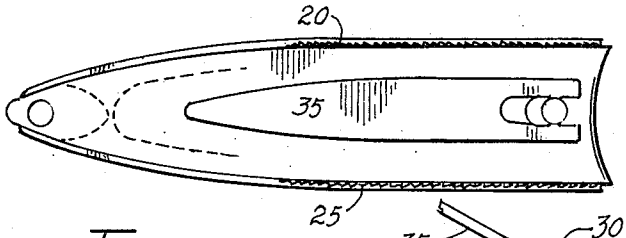


Fig-1

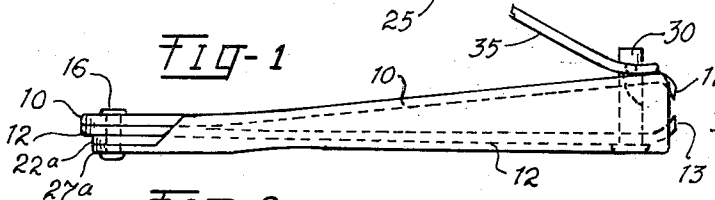


Fig-2

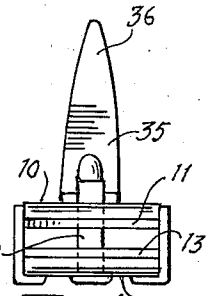


Fig-4

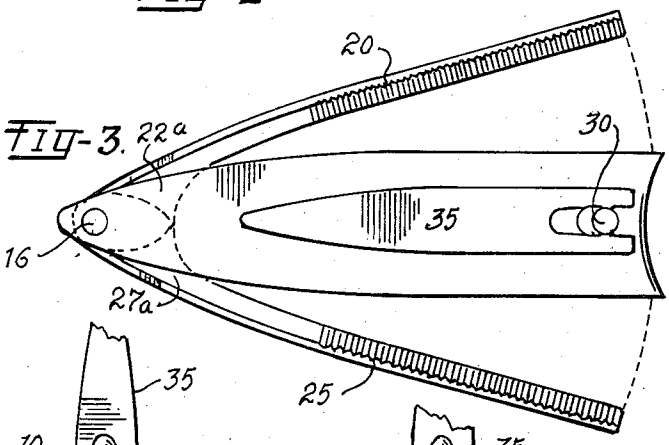


Fig-3

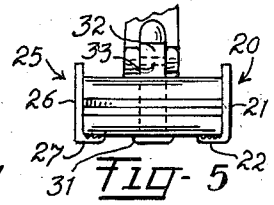


Fig-5

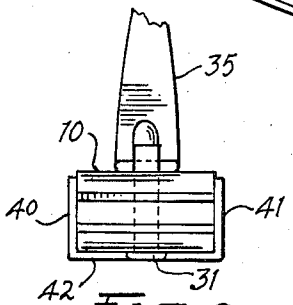


Fig-6

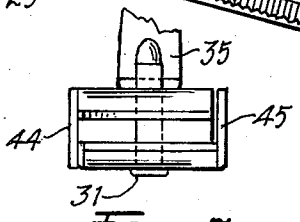


Fig-7

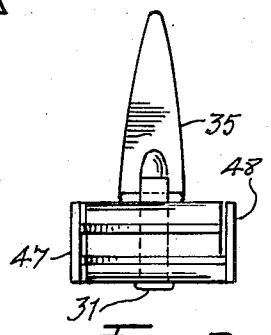


Fig-8

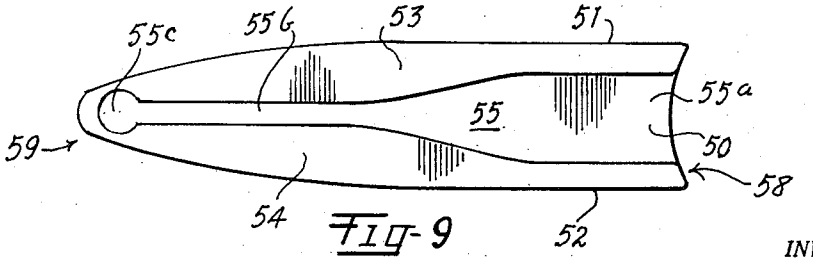


Fig-9

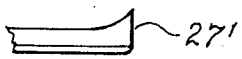


Fig-10

INVENTOR.
DONALD P. KILLEN
BY Gene W. Grant
ATTORNEY.

United States Patent Office 2,829,433 Patented Apr. 8, 1958

2,829,433

NAIL CLIPPER

Donald P. Killen, Long Beach, Calif.

Application June 6, 1957, Serial No. 663,989

4 Claims. (Cl. 30—28)

The present invention relates to an improved nail clipper, and more particularly to a nail clipper arranged to store the nail segments as they are cut off, so that an accumulation thereof may be emptied at a subsequent time.

The pocket type of nail clipper has been known and used for many years and has been most widely used in a preferred form having a retractable operating lever. The clipper has two blades having cutting edges on one end thereof, and whose other ends are firmly fastened together. The cutting edges are normally held apart due to spring action of the blades but may be brought into mesh by operating the lever. The lever may be placed in an inoperative position lying along the top blade and providing a very compact arrangement of the clipper, or it may be manipulated to its operating position in which one end thereof projects upwardly and may be depressed for causing the cutting edges to mesh.

While the conventional pocket type nail clipper as described above has received almost universal acceptance, it nevertheless has certain limitations. A very important limitation is that when the clipper is used in its intended manner the nail segments fly in every direction as they are cut off. The resulting embarrassment and inconvenience often assumes serious proportions.

It is, therefore, an object of the present invention to provide an improved nail clipper including means for storing the nail segments as they are cut.

A further object of the invention is to provide an improved nail clipper including means for storing nail segments as they are cut and for emptying an accumulation thereof at a subsequent time.

Another object of the invention is to provide an improved nail clipper having upper and lower substantially parallel cutting blades, and a pair of substantially parallel side plates arranged at a right angle to the cutting blades and removably engaging the longitudinal edges thereof.

In accordance with the present invention the above and other objects are achieved by providing a pair of side plates which are substantially parallel to each other and which, together with the cutting blades of the clipper, provide an enclosed substantially rectangular structure in which nail segments may be received as they are cut.

The above and other objects of the invention will be more readily apparent in view of the following description and the accompanying drawing, in which:

Figure 1 is a plan view of a preferred embodiment of my improved nail clipper;

Figure 2 is a side elevation view of the nail clipper of Figure 1;

Figure 3 is a plan view of the nail clipper of Figure 1, but showing the side plates thereof extended outwardly to permit the emptying of accumulated nail segments therefrom;

Figure 4 is an end elevational view of the nail clipper of Figure 1 illustrating the open position of the jaws or cutting edges thereof;

Figure 5 is an end elevational view of the nail clipper of Figure 1 showing the cutting edges meshed together in a cutting position;

Figure 6 is an end elevational view of another embodiment of my invention utilizing a U-shaped member to provide the pair of side plates;

Figure 7 is an end elevational view of another form of my invention in which the side plates are rigidly fastened to the cutting blades, one to the upper cutting blade and the other to the lower cutting blade;

Figure 8 is an end elevational view of another form of my invention in which both side plates are formed integral with the bottom blade;

Figure 9 is a plan view of still another form of my invention comprising a substantially hollow plastic sleeve adapted to provide an outer covering for a pocket type nail clipper; and

Figure 10 shows a modification of the lower side plate of Figure 3.

Referring now to Figures 1 to 5, inclusive, there is illustrated therein a preferred embodiment of my improved nail clipper, like parts being identified throughout with the same reference characters. The improvement constituting my invention is, in the preferred embodiment, simply added on to a nail clipper of the conventional type.

Thus, in Figures 1 to 5 the conventional nail clipper includes an upper blade **10** and a lower blade **12** arranged substantially parallel to each other and each having a tapered end through which a rivet **16** passes for fastening the two blades firmly together. At their opposite ends the blades have inwardly extending cutting edges disposed transversely thereto, upper blade **10** having a cutting edge **11** and lower blade **12** having a cutting edge **13**. In close proximity to the cutting edges both blades are perforated to receive a rivet pin **30** having a bottom cap **31** in contact with the lower surface of lower blade **12** and an upper end **32** extending above the upper surface of upper blade **10**. Rivet pin **30** has a transverse slot **33** therein for pivotally supporting an operating lever **35** which rests on the upper surface of upper blade **10**. Operating lever **35** has a tapered end **36** upon which pressure may be exerted for flexing the blades to bring the cutting edges thereof into cutting engagement.

The improvement provided by the present invention as illustrated in Figures 1 through 5 comprises a pair of side plates including an upper side plate **20** and a lower side plate **25** (as viewed in Figure 1). The side plates are normally disposed substantially parallel to one another and cooperate with the upper and lower blades to define a confined space into which nail clippings may be received. The side plates are pivotally supported by rivet **16**, accumulated clippings being dischargeable by pivoting one of the side plates outward to a position where it is no longer parallel to the other.

Upper side plate **20** includes a side wall **21** having a sufficient height to extend from the upper surface of upper blade **10** to the lower surface of lower blade **12**, and also has a flange **22** extending inwardly from the lower edge of side wall **21** and adapted to slidably engage the lower surface of lower blade **12** when the nail clipper is arranged in a position for accumulating nail segments as they are clipped. When upper side plate **20** is pivoted outwardly away from the main body of the clipper, either side wall **21** or flange **22** may be conveniently used as a nail file, each being provided with a corrugated surface for that purpose. Lower side plate **25** includes a side wall **26** and a flange **27** arranged in a similar manner.

As shown in Figure 1, the side plates are shaped so as to be in relatively tight engagement with blades **10** and **12** throughout their length when the clipper is closed up in a position to accumulate nail segments. Flange **22** has an extended portion **22*a*** thereon through which the rivet **16** passes, and flange **27** has a similar extended

portion 27*a*. Thus, as is most clearly shown in Figure 2, rivet 16, reading from top to bottom, passes successively through upper blade 10, lower blade 12, flange portion 22*a*, and flange portion 27*a*. It will be readily appreciated that flange 27 and its extended portion 27*a* is a substantially flat piece but bent slightly in order that flange portion 27*a* may fit underneath flange portion 22*a* while flange 27 slides upon the under surface of lower blade 12.

Reference is now made to Figure 6 which again illustrates a conventional nail clipper to which has been added a substantially U-shaped trough including a left-hand side plate 40, a right hand side plate 41, and a bottom plate 42 interconnecting the lower edges of the side plates. Bottom plate 42 is held firmly in position by means of rivet 16. When operating lever 35 is depressed the upper blade 10 slides up and down between the upper portions of the side plates. Accumulated nail clippings are emptied out between the cutting edges simply by shaking the clipper.

Reference is now made to Figure 7 illustrating another embodiment of the invention in which there is added to a conventional clipper a left-hand side plate 44 which is integrally formed with upper blade 10, and a right-hand side plate 45 which is integrally formed with lower blade 12. The operation of the embodiment of Figure 7 is substantially the same as described for Figure 6.

Reference is now made to Figure 8 illustrating another embodiment of the invention which is like the embodiment of Figure 7 except that both of the side plates 47 and 48 are integrally formed with lower blade 12. The operation of the embodiment of Figure 8 is the same as for the embodiment of Figure 6.

Figure 9 illustrates another embodiment of my invention comprising a flexible case which may be easily slipped onto, or removed from, a conventional nail clipper of the type previously described. The flexible case of Figure 9 includes a bottom panel 50, an upper side panel 51 (as viewed in Figure 9), a lower side panel 52, an upper flange 53 and a lower flange 54. Bottom panel 50 together with the side panels 51 and 52 provides a substantially U-shaped trough having suitable width and depth for enclosing a nail clipper similar to the one shown in Figures 1 to 5, in slidable contact with the exposed outer surfaces thereof. The trough has an open end 58 through which the cutting edges of the clipper remain accessible, and a tapered and closed end 59 for fitting snugly around the tapered ends of blades 10 and 12 adjacent rivet 16. Flanges 53 and 54 are substantially parallel to bottom panel 50 and extend inwardly from the respective upper longitudinal edges of their associated side panels. Flanges 53 and 54 do not extend inwardly a sufficient distance to meet each other but are symmetrically arranged to provide a slot 55 extending therebetween substantially the entire length of the flexible case. Thus slot 55 has at the forward end of the case a very wide portion 55*a* to permit ample working space for operating lever 35; throughout the tapered part of the case a narrow portion 55*b* to insure that the case is firmly retained on the nail clipper; and at the tapered end of the case an enlargement 55*c* for fitting around the exposed upper end of rivet 16. When the case is slipped over a nail clipper of the type shown in Figures 1 to 5 it fits snugly and is retained in position by enlargement 55*c* which snaps around rivet 16. When it is desired to empty accumulated nail clippings, the case may be temporarily removed from the clipper for this purpose.

The flexible case of Figure 9 may, for example, be made of plastic.

Reference is now made to Figure 10 illustrating an alternate form of flange 27 of Figures 1 to 5, and designated as 27′. Flange 27′ has its forwardly protruding end drawn to an angle of approximately 45 degrees and providing a sharp point usable as an under-nail cleaner when the associated side plate is in its outwardly pivoted position.

Although my invention is fully capable of achieving the results and providing the advantages hereinbefore mentioned, it is to be understood that it is merely the presently preferred embodiment thereof, and that I do not mean to be limited to the details of construction above described other than as defined in the appended claims.

I claim:

1. In a nail clipper of the class wherein a stationary cutting plate and a movable resilient cutting plate are held in aligned and normally partially separated position by a plurality of longitudinally separated rivets, the combination with one of said rivets of two side plates pivotally supported thereby, with said side plates when disposed substantially parallel to one another cooperating with said cutting plates to define a confined space into which nail clippings are received, and accumulated clippings being dischargeable from said space by pivoting one of said side plates to a position where it is not parallel to the other of said side plates.

2. The device defined in claim 1 wherein each of said side plates includes an inwardly extending flange associated with the normally lowermost longitudinal edge thereof.

3. In a nail clipper of the class including a pair of substantially flat metal blade members aligned in a substantially parallel arrangement, a rivet fastening said blade members together at one end, said blade members having at their other ends respectively sharp transverse flanges which are selectively engageable in response to the flexing thereof, a rivet pin interconnecting said blade members adjacent said other ends, and a lever associated with said rivet pin and selectively operable for flexing said blade members: the combination with said blade members of a pair of side plates disposed substantially parallel to one another and cooperating with said blade members in movable engagement therewith to define a confined space into which nail clippings are received, said pair of side plates being pivotally supported by said rivet, and said clippings being dischargeable from said space by pivoting one of said side plates to a position where it is not parallel to the other of said side plates.

4. In a nail clipper of the class including a pair of substantially flat metal blade members aligned in a substantially parallel arrangement, a rivet fastening said blade members together at one end, a rivet pin interconnecting said blade members adjacent their other ends, said blade members having at their other ends inwardly extending sharp transverse flanges, and a lever associated with said rivet pin and selectively operable for flexing said blade members to cause engagement of said flanges: the combination with said blade members of a pair of side plates normally disposed substantially parallel to one another and cooperating with said blade members to define a confined space into which nail clippings are received, said pair of side plates being pivotally supported by said rivet, each of said side plates including an inwardly extending flange associated with the normally lowermost longitudinal edge thereof for slidably engaging the under surface of the lowermost one of said blade members, and from which accumulated clippings are dischargeable by pivoting one of said side plates to a position where it is not parallel to the other of said side plates.

References Cited in the file of this patent

UNITED STATES PATENTS

1,426,696	Wiesenberg	Aug. 22, 1922
2,179,435	Smith	Nov. 7, 1939
2,515,852	Bilsky	June 18, 1950
2,664,624	Bassett	Jan. 5, 1954
2,753,626	Bowers	July 10, 1956
2,774,138	Gowday	Dec. 18, 1956

U. S. DEPARTMENT OF COMMERCE

PATENT OFFICE

CERTIFICATE OF CORRECTION

Patent No. 2,829,433 Donald P. Killen April 8, 1958

It is hereby certified that error appears in the printed specification of the above numbered patent requiring correction and that the said Letters Patent should read as corrected below.

Column 4, line 31, for "respectively" read -- respective --.

Signed and sealed this 3rd day of June 1958.

(SEAL)

Attest:

KARL H. AXLINE
Attesting Officer

ROBERT C. WATSON
Commissioner of Patents