No. 846,924. PATENTED MAR. 12, 1907.

O. KAMPFE.

NAIL CLIPPER.

APPLICATION FILED APR. 16, 1906.

Fig. 1.

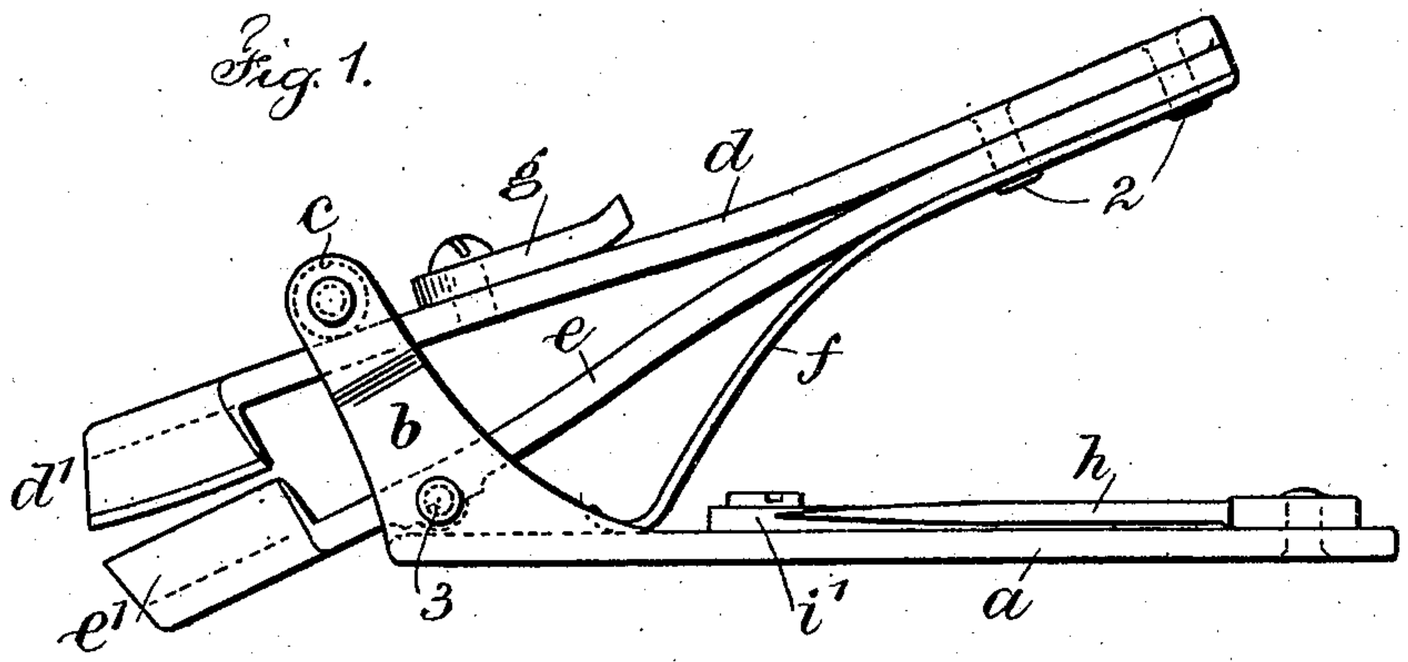


Fig. 3.

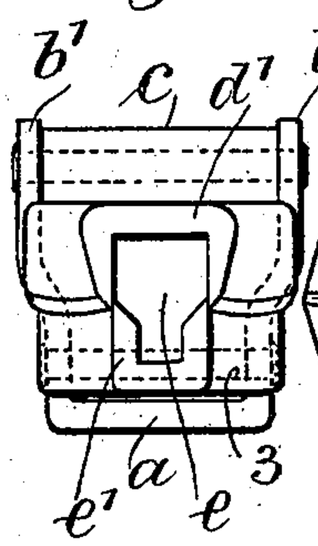


Fig. 2.

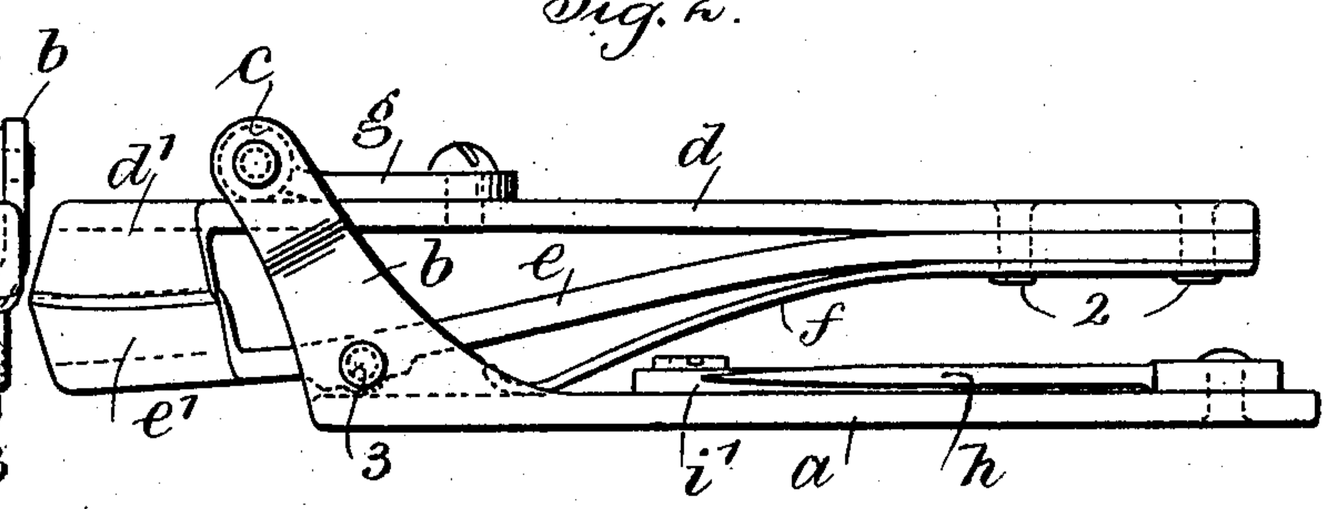


Fig. 4.

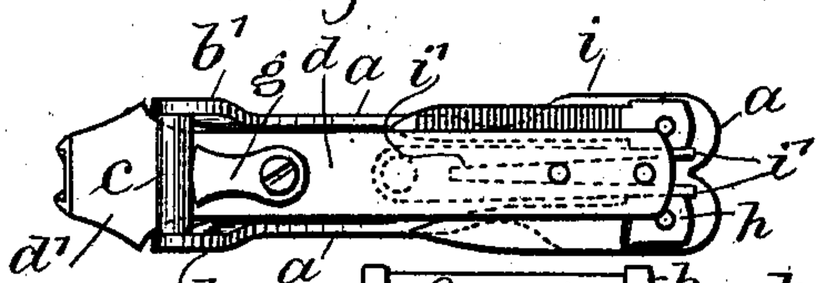


Fig. 5.

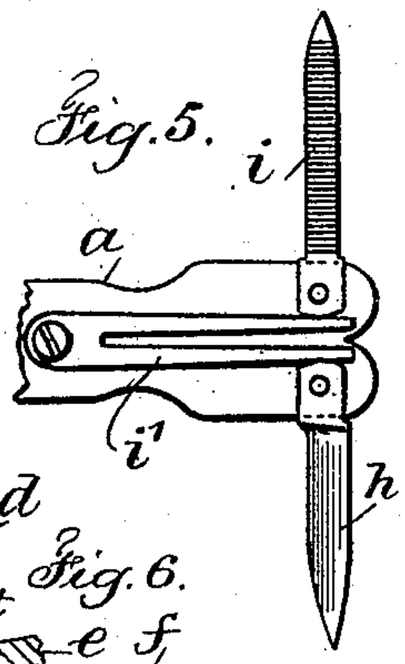


Fig. 7.

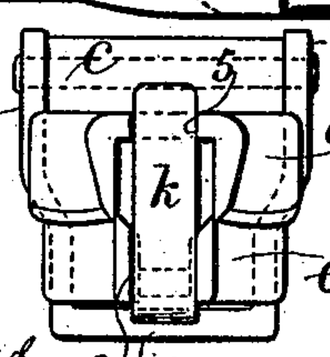
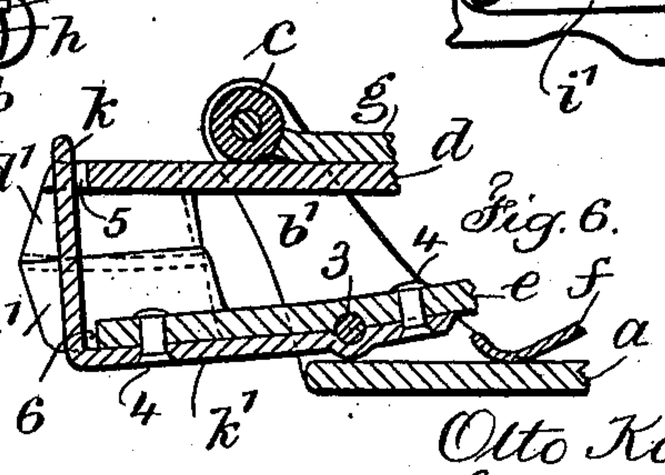


Fig. 6.



Witnesses

Chas. F. Smith

A. Harold Ferrell

Inventor

Otto Kampfe.

by Harold Ferrell

his atty

UNITED STATES PATENT OFFICE.

OTTO KAMPFE, OF NEW YORK, N. Y.

NAIL-CLIPPER.

No. 846,924. Specification of Letters Patent. Patented March 12, 1907.

Application filed April 16, 1906. Serial No. 311,829.

To all whom it may concern:

Be it known that I, OTTO KAMPFE, a citizen of the United States, residing at the borough of Brooklyn, Kings county, city and State of New York, have invented a new and useful Improvement in Nail-Clippers, of which the following is a specification.

This invention relates to an improved form of clipper for finger and toe nails. Heretofore in manicuring instruments of this character the cutting-jaws have closed or shut down upon one another, severing and at the same time crushing the nails between their sharp and opposing edges, leaving more or less of a ragged edge; and the principal object of my invention is to so arrange the cutting-jaws as to provide a shearing cut similar to a scissors, so that in cutting the nails a clean cut is made.

In the device of my improvement I provide a base-plate and upturned inclined arms with a roller pivotally mounted between their free ends or extremities. I provide slightly-bent spring-blades riveted together at one end placed between said upturned arms and coming flatwise between the said roller and base-plate, the lowest blade or one nearest the base-plate pivoted to the said inclined upturned arms and having a spring-tongue secured to the union of the bent spring-blades and at its free end bearing upon the surface of the base-plate and acting to raise the connected ends of said blades upon the pivot of the lowest blade to the upturned arms. The free ends of said blades are provided with shear-cutting jaws spaced apart and curved to the shape of the nails and arranged in opposite directions for right and left hand, and I prefer to provide a locking device to hold the parts in a closed position. In order that there may not be undue strain by the jaw performing work upon the other jaw, I provide a guide adapted to center the cutting-jaws and relieve them of strain. The details of the construction and operation are more particularly described.

The drawings, Figure 1 represents a side elevation of the device of my improvement with the jaws open. Fig. 2 is a similar view with the jaws closed and held in a closed position; Fig. 3, an elevation at the cutting-jaw end of my improved nail-clipper. Fig. 4 is a plan view, in smaller size, with the jaws closed. Fig. 5 is a plan view of the base-plate alone at one end showing a knife-blade and file attachment which I prefer to employ with the device of my improvement. Fig. 6 is a vertical section at the cutting-jaw end of the clipper, showing the guiding device for centering the jaws; and Fig. 7 is an elevation at the end of the part shown in Fig. 6.

The metal base-plate *a* is provided at one end with upturned inclined arms *b b'*, between the free ends of which is pivotally mounted a roller *c* upon its trunnion ends. Between these arms and also between the roller *c* and the base-plate *a* are spring-blades *d e*. These are connected at one end by the rivets 2 and I provide a spring-tongue *f*, secured to the union of the bent spring-blades by the same rivets 2, said spring-tongue lying against the under surface of the spring-blade *e*. These spring-blades *d e* are slightly bent, so that as connected there is a divergence forward of their connected ends. Their free ends are provided with the shear-cutting jaws *d' e'*, which are oppositely placed and curved in pairs. The curve of these jaws approximates the arc or curve upon which the nails should be cut, and these jaws in pairs are arranged in opposite directions for right and left hand cutting.

The lower spring-blade *e* is pivotally connected to the upturned arms *b b'* near the base-plate *a* by a pivot-pin 3, and as the result of the expansion of these spring-blades the upper surface of the blade *d* bears upon the roller *c*, and when pressure is applied against the raised end of these spring-blades they are forced down from the position Fig. 1 into the position Fig. 2, and the blade *d* moves through between the inclined arms *b b'*, the roller *c* revolving against the upper surface of the arm *d*, and simultaneously with this movement the pairs of cutting-jaws *d' e'* close and overlap with a shearing cut, the action being similar to the cut of a scissors. This bearing-down movement is of course against the power of the spring-tongue *f*, which when released is sufficient to raise the connected ends of the spring-blades *d e* from the position Fig. 2 to the position Fig. 1, and in this movement the said blades return to an initial position separating and the jaws open ready to repeat the cut. I have shown and preferred to employ a locking-pawl *g*, pivotally connected to the upper surface of the blade *d*, and adapted when the jaws are closed, as in Fig. 2, to be turned around from the position of Fig. 1 to the position Figs. 2 and 4, against the roller *c*, so as to hold the jaws in a closed and compact position against

the opening tendency of the spring-tongue *f*. I have shown and preferred to employ at the end of the base-plate *a* opposite to the arms *b b'* a knife-blade *h* and file-blade *i*, pivoted to the base-plate *a*, and an actuating-spring *i'* for holding these two members either closed or open or at the intermediate place or position shown in Fig. 5, and while these members are advantageous to employ and are auxiliary to the operation of the nail-clipper they do not form any necessary part of my present invention.

For the purpose of relieving the shear-cutting jaws *d' e'* of strain in their operation and so as to prevent a strain in cutting the nails by one jaw coming upon the other jaw I have shown and preferred to employ a tongue *k* made integral with an arm *k'*, the arm in turn connected by rivets 4 to the under surface of the spring-blade *e* adjacent to the cutting-jaws and which arm *k'* may form part of the devices for pivotally connecting the said blade *e* between and to the arms *b b'*, the tongue *k* being positioned substantially at right angles to the arm *k'* and fitting within recesses 5 6, located between the pairs of cutting-jaw, said tongue in one jaw acting to guide and direct the other jaw with reference thereto, so that the strain upon the cutting edges is relieved.

This device is simple yet exceedingly efficient, and because of the shearing cut of the cutters a clean scissors-like cut is made in clipping the nails in contradistinction to the crushing severance produced ordinarily with this class of devices.

I claim as my invention—

1. A nail-clipper comprising a base-plate, a pair of arms rising therefrom, a pair of spring-blades connected at one end and pivotally secured at an intermediate place to said arms and their free ends provided with shear-cutting jaws in oppositely-arranged pairs.

2. A nail-clipper comprising a base-plate, upturned arms formed therewith at one end, spring-blades secured together at one end, shear-cutting jaws arranged in opposite directions at the opposite ends of said blades and spaced apart and in pairs curved to the shape of the nails for right and left hand cut.

3. A nail-clipper comprising a base-plate, upturned arms formed therewith at one end, spring-blades secured together at one end, shear-cutting jaws arranged in opposite directions at the opposite ends of said blades and spaced apart and in pairs curved to the shape of the nails for right and left hand cut, a pivot-pin pivotally connecting the blade nearest the base-plate to said arms, a spring bearing upon the base-plate and connecting with the spring-blades, and means for holding the spring-blades and their jaws in a closed position.

4. A nail-clipper comprising a base-plate, upturned inclined arms formed therewith at one end, a pivot-pin passing across through said arms near the base-plate and a roller pivotally mounted between the free ends of said arms, bent spring-blades riveted together at one end and coming between said arms, the blade nearest the base-plate connected by the pivot-pin to said arms and said roller coming above the upper surface of the other blade, shear-cutting jaws formed at the end of the blades opposite from their end connected by rivets, said jaws being spaced apart, arranged in opposite directions for right and left hand cut and curved approximately to the shape to be given the nails, and in their movement under pressure swinging on the aforesaid pivot and moving beneath the aforesaid roller to force the jaws together to effect the cut.

5. A nail-clipper comprising a base-plate, upturned inclined arms at one end thereof, a pivot-pin passing across through said arms near the base-plate and a roller pivotally mounted between the free,ends of said arms, bent spring-blades riveted together at one end and coming between said arms, the blade nearest the base-plate connected by the pivot-pin to said arms and said roller coming above the upper surface of the other blade, shear-cutting jaws formed at the end of the blades opposite from their end connected by rivets, said jaws being spaced apart, arranged in opposite directions for right and left hand cut and curved approximately to the shape to be given the nails, and in their movement under pressure swinging on the aforesaid pivot and moving beneath the aforesaid roller to force the jaws together to effect the cut, and a locking-pawl pivoted to the upper spring-blade and when the jaws are closed adapted at its free end to come against the roller to hold the parts in a closed position.

6. A nail-clipper comprising a base-plate, upturned inclined arms at one end thereof, a pivot-pin passing across through said arms near the base-plate and a roller pivotally mounted between the free ends of said arms, bent spring-blades riveted together at one end and coming between said arms, the blade nearest the base-plate connected by the pivot-pin to said arms and said roller coming above the upper surface of the other blade, shear-cutting jaws formed at the end of the blades opposite from their end connected by rivets, said jaws being spaced apart, arranged in opposite directions for right and left hand cut and curved approximately to the shape to be given the nails, and in their movement under pressure swinging on the aforesaid pivot and moving beneath the aforesaid roller to force the jaws together to effect a cut, a knife-blade and a file-blade pivotally connected to the inner face of the base-plate at one end, and a spring whose free ends bear against the

knife-blade and file-blade to hold them closed or open.

7. A nail-clipper comprising a base-plate, upturned inclined arms at one end thereof, a pivot-pin passing across through said arms near the base-plate and a roller pivotally mounted between the free ends of said arms, bent spring-blades riveted together at one end and coming between said arms, the blade nearest the base-plate connected by the pivot-pin to said arms and said roller coming above the upper surface of the other blade, shear-cutting jaws formed at the end of the blades opposite from their end connected by rivets, said jaws being spaced apart, arranged in opposite directions for right and left hand cut and curved approximately to the shape to be given the nails, and in their movement under pressure swinging on the aforesaid pivot and moving beneath the aforesaid roller to force the jaws together to effect the cut, and a tongue and integral arm secured to one spring-blade and passing through a recess in the other spring-blade in proximity to the shear-cutting jaws.

8. A nail-clipper comprising a base-plate, upturned inclined arms at one end thereof, a pivot-pin passing across through said arms near the base-plate and a roller pivotally mounted between the free ends of said arms, bent spring-blades riveted together at one end and coming between said arms, the blade nearest the base-plate connected by the pivot-pin to said arms and said roller coming above the upper surface of the other blade, shear-cutting jaws formed at the end of the blades opposite from their end connected by rivets, said jaws being spaced apart, arranged in opposite directions for right and left hand cut and curved approximately to the shape to be given the nails, and in their movement under pressure swinging on the aforesaid pivot and moving beneath the aforesaid roller to force the jaws together to effect the cut, an arm k' secured by rivets 4 to the under surface of the lowermost spring-blade and an integral tongue rising from and at right angles to said arm and passing through recesses formed between the shear-cutting jaws, said tongue forming a guide to insure the accurate movement of the jaws.

9. In a nail-clipper the combination with a pair of connected blades and cutting-jaws on the free ends thereof, of a support to which said jaws are pivotally connected, said support occupying an inclined relation, a movable bearing formed with said inclined support and a spring for effecting the return movement of the spring-blades, whereby the swinging movement of said blades on their pivotal connection closes the cutting-jaws, and effects the cut, and when released, the spring returns the parts to an initial position.

10. In a nail-clipper, the combination with a suitable support, of a pair of spring-blades connected at one end, mounted upon said support and overlapping shear-cutting jaws in oppositely-arranged pairs formed at the other and free ends of said spring-blades.

11. In a nail-clipper, the combination with a suitable support, of a pair of spring-blades connected at one end, mounted upon said support and overlapping shear-cutting jaws in oppositely-arranged pairs formed at the other and free ends of said spring-blades and a guiding device secured adjacent to one jaw and moving through an aperture of the other jaw.

12. A nail-clipper comprising a base-plate, an arm device rising therefrom, a pair of spring-blades connected at one end and pivotally secured at an intermediate place to said arm device and base, and their free ends provided with normally open shear-cutting jaws in oppositely-arranged pairs.

13. A nail-clipper comprising a base-plate, an inclined arm device formed therewith at one end, spring-blades secured together at one end, and normally open shear-cutting jaws arranged in opposite directions at the opposite ends of said blades and spaced apart and in pairs curved to the shape of the nails for right and left hand cut.

14. A nail-clipper comprising spring-blades secured together at one end and normally open shear-cutting jaws spaced apart and arranged in opposite directions at the opposite ends of said blades, a base-plate, an inclined arm device formed therewith at one end, and the base and arm device pivotally connected to the spring-blades at an intermediate place of the latter and in such a manner that the arm device acts as a guide for the movement of the spring-blades.

Signed by me this 11th day of April, 1906.

OTTO KAMPFE.

Witnesses:
GEO. T. PINCKNEY,
JEANNETTE WEILL.