

O. KAMPFE.
STROPPING DEVICE FOR SAFETY RAZOR BLADES.
APPLICATION FILED OCT. 20, 1910.

1,006,949.

Patented Oct. 24, 1911.

Fig. 1.

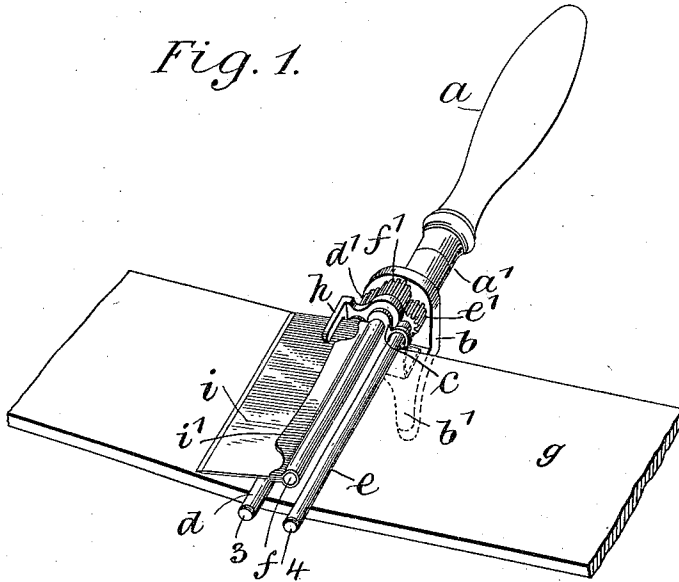


Fig. 2.

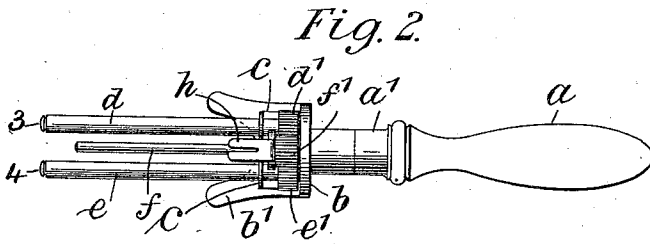


Fig. 4.

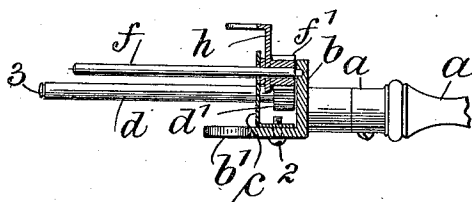


Fig. 5.

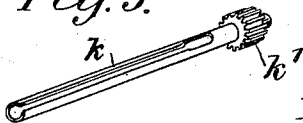


Fig. 7.

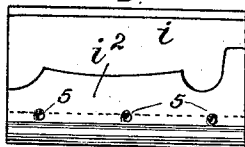


Fig. 3.

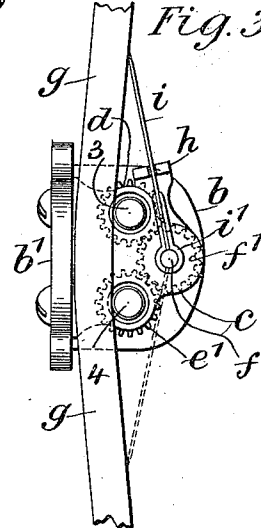
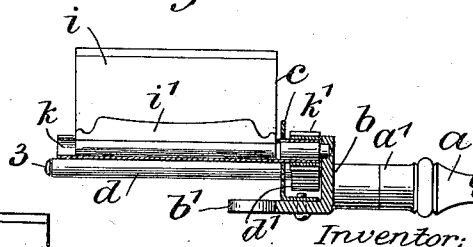


Fig. 6.



Witnesses:
Charles Smith
Alfred Terrell

Inventor:
Otto Kampfe
By *Harold Terrell*
his Attorney.

UNITED STATES PATENT OFFICE.

OTTO KAMPFE, OF NEW YORK, N. Y.

STROPPING DEVICE FOR SAFETY-RAZOR BLADES.

1,006,949.

Specification of Letters Patent.

Patented Oct. 24, 1911.

Application filed October 20, 1910. Serial No. 588,094.

To all whom it may concern:

Be it known that I, OTTO KAMPFE, a citizen of the United States, residing in the borough of Brooklyn, in the county of Kings, city and State of New York, have invented an Improvement in Stropping Devices for Safety-Razor Blades, of which the following is a specification.

Stropping devices have heretofore been employed for the blades of safety razors, which blades were like sections of the blade of an ordinary razor blade, and stropping devices have been combined with the safety razor to make unnecessary two separate instrumentalities.

My invention relates to a stropping device for the thin sheet steel blades of the most modern safety razors, with the object of increasing the useful life of said blades.

In carrying out my invention, I provide in combination with a handle and ferrule, two L-shaped frames arranged for support and guidance, tubular rollers to lie upon the strop, a support for the razor blade and meshing gears connected to said rollers and support and said parts carried by one of said frames and guided by the other; the tubular rollers actuating the gears to turn the blade over according to the direction of motion in stropping the blade, all of which is herein-after more particularly set forth.

In the drawing, Figure 1 is a perspective view representing the device of my improvement in connection with a strop showing the position of use. Fig. 2 is a plan of the devices of my improvement by themselves and without a razor blade in position to be stropped. Fig. 3 is an edge-wise view of the parts shown in Fig. 1 and of larger size. Fig. 4 is a central longitudinal section and partial elevation of the device of my improvement. Fig. 5 is a detached view of the razor blade holding device showing a modification. Fig. 6 is a partial elevation and longitudinal section similar to Fig. 4, but including the modification shown in Fig. 5, and Fig. 7 is a side elevation of a razor blade holder adapted for use with the devices of my invention illustrated and hereinafter more particularly described.

a represents a handle of suitable character to which a ferrule a^1 is secured. I employ a frame of appreciable thickness and of L-form, the upright member b of which is secured to the ferrule a^1 and the horizontal member b^1 of which is made as two arms or

prongs standing out in a plane parallel to the axis of the handle.

c represents an L-shaped frame of lighter material set in a reverse position to the frame of parts $b b^1$ where the upright frame is parallel to the upright part b and where the horizontal member lies upon the upper surface of the member b^1 and is secured to it by one or more screws 2.

Rods 3 4 forming arbors are secured to the upright member b and pass through openings in the upright member of the frame c and upon these arbors are tubular rollers $d e$ which are preferably retained in position upon the arbors by the arbors being provided with enlarged outer ends. These arbors 3 4 are securely fastened in any suitable manner to the upright and substantial member b of the larger L-frame, and upon the tubular rollers $d e$ are gears $d^1 e^1$ between the parallel parts of the frames. The upright member of the frame c forms a bearing for the tubular rollers $d e$, and also an edge-guide for the strop g .

As shown in Figs. 1 to 4 inclusive, I employ a shaft f and upon this shaft is a gear f^1 and an L-shaped arm h . The gear and the arm upon the shaft come between the upright member b and the upright member of the frame c ; the end of the shaft having a bearing in the upright member b . The free end of the arm h is forked and the razor blade i is of thin sheet steel provided with a tubular frame i^1 , or back, which is adapted to be passed over the shaft f so as to bring the edge of the razor into the forked end of the arm h .

The strop g with reference to the other parts bears the relation shown in Figs. 1 and 2, that is, where the strop g comes under or beneath the tubular rollers $d e$ and above the part b^1 of the larger L-frame; this part b^1 forms a guide and partial support for the strop g .

With the hand grasping the handle a and the tubular rollers $d e$ lying upon the strop, a movement in either direction will turn said rollers and their gears and turn the gear f^1 with its arm h . In so doing the razor blade and its tubular frame are swung from side to side upon the shaft f so as to bring first one side of its sharpened edge and then the other side to bear upon the upper surface of the strop, effecting the sharpening of the blade and the razor blade keeping its position so long as the movement of the parts

is in one direction, but reversing its position the moment the direction of the motion is reversed. As soon as the blade has been stropped sufficiently it may readily be removed and another blade be inserted by simply passing the tubular frame i^1 over the shaft f and the edge of the blade i into the forked end of the arm h and repeating the stropping operation.

10 Instead of employing the shaft f I may provide a tubular holder k (see Figs. 5 and 6) which is slotted longitudinally to receive the rounded portion of the tubular frame i^1 in the position shown in Fig. 6. 15 This tubular holder is provided with a gear k^1 similar to the gear f^1 and like said gear meshing with the gears d^1 e^1 . This tubular holder k also passes through the frame c which acts as a bearing therefor, and at its right hand end as per Fig. 6 into a bearing relation with the upright member b of the frame which is fastened to the ferrule, in which modified form of my invention the relation of the parts in the act of stropping is exactly similar to the device shown in Figs. 1 to 4 inclusive, except that the arm h is unnecessary.

I have shown in Fig. 7 and may prefer to employ in connection with this stropping device, a holder i^2 or tubular frame which is a modification of the frame shown in Fig. 1 and is adapted to hold a thin sheet metal safety razor blade for the purpose of stropping the same. The parts of this tubular frame i^2 are separated a distance which is preferably less than the thickness of the blade to be held, and the same is preferably formed near the tubular part with small projections 5 extending toward one another so as to cross the gap in said frame into which the blade is inserted and form stops for the base of the blade; there being sufficient of a frictional hold or grip between the opposed parts of said frame to secure the thin flexible blade in position for sharpening.

The device of my invention is small and light, it only occupies a minimum of space, and the handle a may be unscrewed to further compact the structure.

I claim as my invention:—

1. In a stropping device for safety razors and in combination, a handle, a main frame, a series of gears, a series of three fixed 55 arbors for said gears, means for removably connecting a thin razor blade on the intermediate arbor, a forked arm secured to the intermediate gear and adapted to receive the end of the thin razor blade for swinging the same and means for turning the gears.

2. In a stropping device for safety razors

and in combination, a handle, a main frame, a series of gears, a series of three fixed arbors for said gears, means for removably connecting a thin razor blade on the intermediate arbor, a bent arm secured to the intermediate gear and forked at the free end and adapted to receive the end of the thin razor blade for swinging the same and means for turning the gears.

3. In a stropping device for safety razors and in combination, a handle, a main frame, a series of gears, a series of three fixed arbors for said gears, a tubular frame-back adapted to receive a thin sheet steel razor blade and the tubular part adapted to be passed over the intermediate fixed arbor in mounting the same thereon, a forked arm secured to the intermediate gear and adapted to receive the end of the thin razor blade for swinging the same and means for turning the gears.

4. In a stropping device for safety razors and in combination, a handle, a main frame, a series of gears, a series of three fixed arbors for said gears, means for removably connecting a thin razor blade on the intermediate arbor, a forked arm secured to the intermediate gear and adapted to receive the end of the thin razor blade for swinging the same, and tubular rollers mounted on the other fixed arbors and secured to the other gears of the series for turning the gears.

5. In a stropping device for safety razors and in combination, a handle, a main frame, a series of gears, a series of three fixed arbors for said gears, a tubular frame-back adapted to receive a thin sheet steel razor blade and the tubular part adapted to be passed over the intermediate fixed arbor in mounting the same thereon, a bent arm secured to the intermediate gear and forked at the free end and adapted to receive the end of the thin razor blade for swinging the same, and tubular rollers mounted on the other fixed arbors and secured to the other gears of the series for turning the gears.

6. In a stropping device for safety razors the combination with a handle, of a main frame of L-form secured to the handle and having a prolongation in the form of a guide for the strop, tubular rollers, a second frame secured to the main frame and at the same time forming a bearing for the tubular rollers and a guide for the strop.

Signed by me this 14th day of October 1910.

OTTO KAMPFE.

Witnesses:

GEO. T. PINCKNEY,
E. ZACHARIASEN.