B. TROSKY.

RAZOR STROPPER.

APPLICATION FILED NOV. 7, 1916.

1,229,826.

Patented June 12, 1917.

2 SHEETS—SHEET 1.

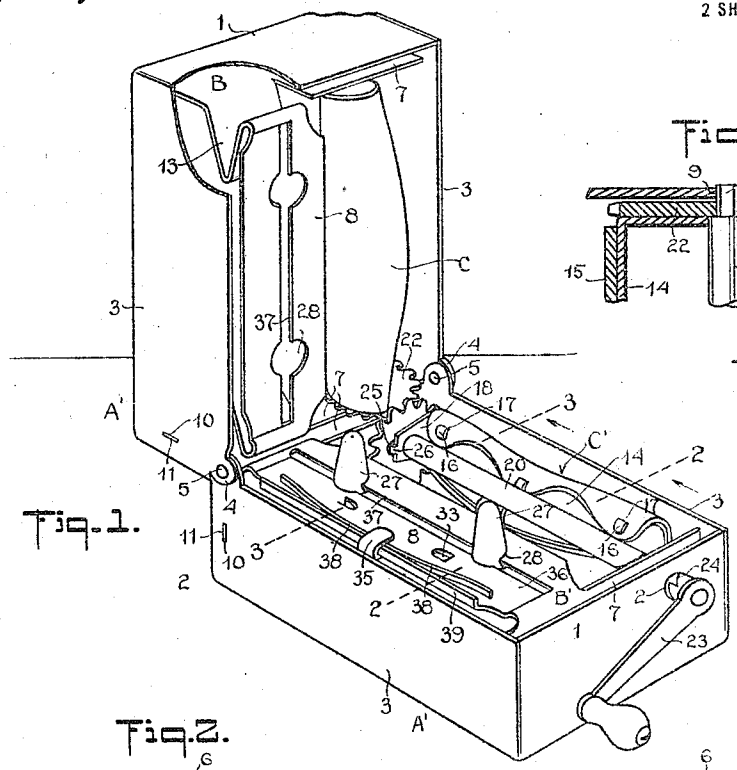


Fig. 1.

Fig. 10.

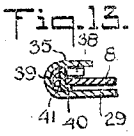


Fig. 13.

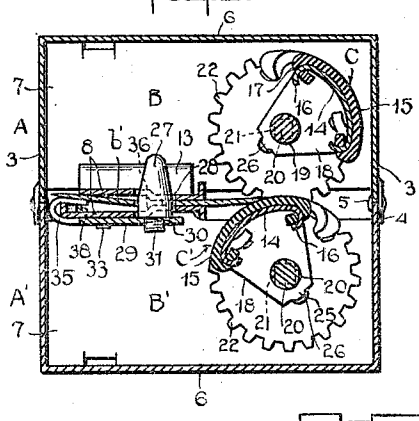


Fig. 2.

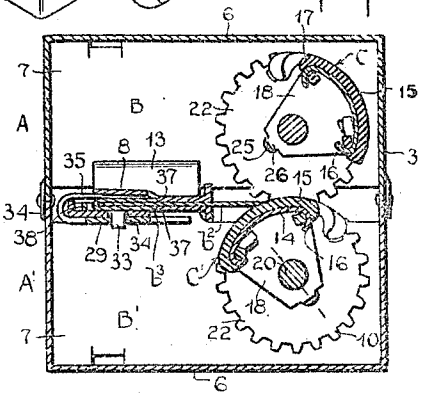


Fig. 3.

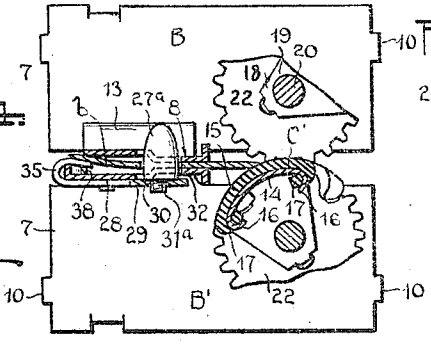


Fig. 4.

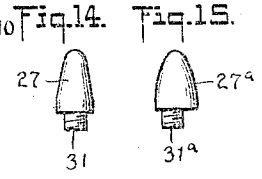


Fig. 14. Fig. 15.

WITNESSES

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2 SHEETS—SHEET 2.

Fig. 5.

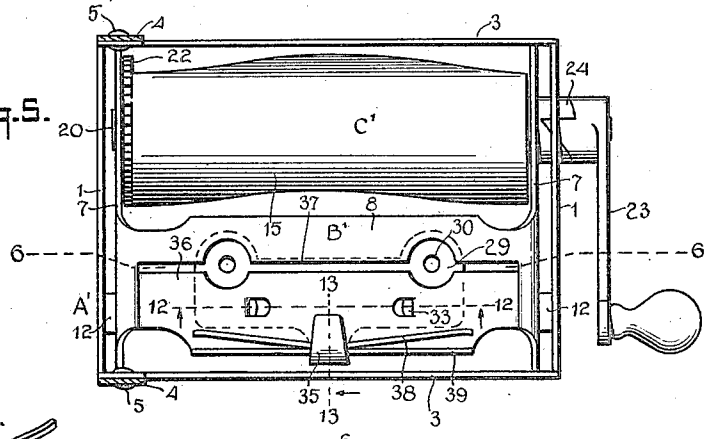


Fig. 11.

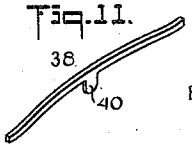


Fig. 6.

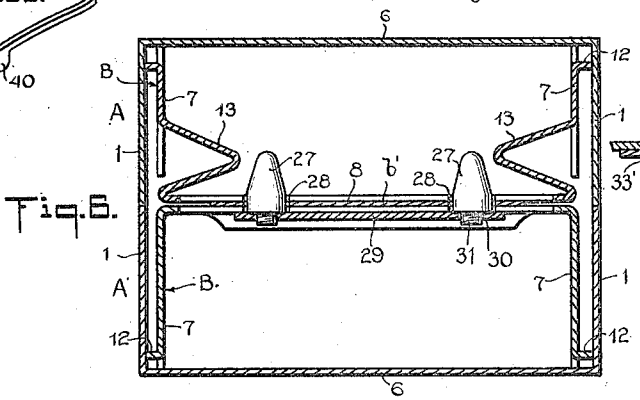


Fig. 12.

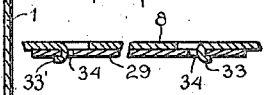


Fig. 8.

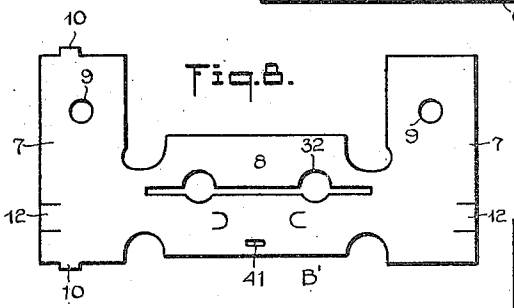


Fig. 9.

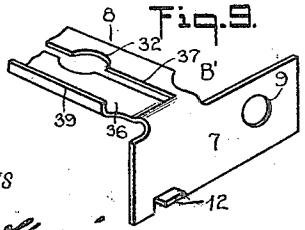
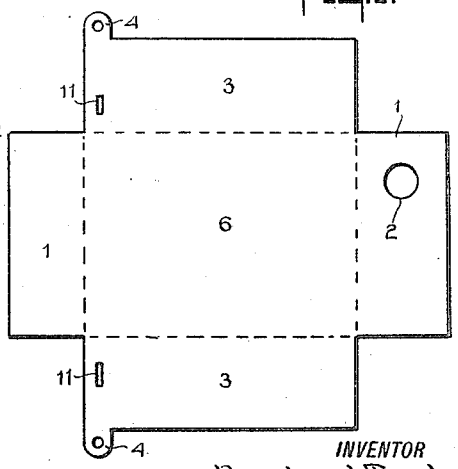


Fig. 2.



WITNESSES

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RAZOR-STROPPER.

1,229,826. Specification of Letters Patent. Patented June 12, 1917.

Application filed November 7, 1916. Serial No. 129,983.

To all whom it may concern:

Be it known that I, BERNHARD TROSKY, a citizen of the United States, and a resident of the city of New York, borough of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Razor-Stropper, of which the following is a full, clear, and exact description.

This invention relates to safety blade stroppers of that type comprising rotary stropping elements coacting to sharpen the edge of a razor blade placed in coöperative relation with the said elements.

The invention has for its general objects to improve the construction of devices of this character so as to be reliable and efficient in use, comparatively simple and inexpensive to manufacture, and so designed that a single stropper is suitable for a variety of blades.

A more specific object of the invention is the provision of a stropper of the type composed of hingedly connected sections with frames novelly arranged therein for supporting the stropping elements and the blade holder.

A further object is to provide a blade holder of novel construction whereby it can be readily adapted for double or single edge blades.

An additional object of the invention is to provide a stropping element having improved means for connecting the same with its operating shaft.

With such objects in view, and others which will appear as the description proceeds, the invention comprises various novel features of construction and arrangement of parts which will be set forth with particularity in the following description and claims appended hereto.

In the accompanying drawing which illustrates one embodiment of the invention and wherein similar characters of reference indicate corresponding parts in all the views,

Figure 1 is a perspective view of the stropper showing the same open to receive a blade of the Gillette type;

Fig. 2 is a transverse section of the stropper closed and a Gillette blade clamped therein, the section being taken on the line 2—2, Fig. 1;

Fig. 3 is a similar section showing a reinforced blade in stropping position, the section being taken on the line 3—3, Fig. 1;

Fig. 4 is a detail sectional view showing a different form of blade-engaging stud in use for holding a narrower blade than the one shown in Fig. 2.

Fig. 5 is a plan view of the bottom half of the stropper;

Fig. 6 is a vertical section on the line 6—6, Fig. 5;

Fig. 7 is a plan view of the blank from which the lower half of the casing is made;

Fig. 8 is a plan view of the blank of the frame mounted in the lower half of the casing;

Fig. 9 is a perspective view of a portion of the finished frame;

Fig. 10 is a detail sectional view on the line 10—10, Fig. 3;

Fig. 11 is a perspective view of the blade thrust spring;

Fig. 12 is a detail sectional view on the line 12—12, Fig. 5;

Fig. 13 is a detail sectional view on the line 13—13, Fig. 5; and

Figs. 14 and 15 are side views of the two forms of blade-holding studs.

Referring to the drawings, A and A′ designate the upper and lower sections of the casing in which are arranged respectively the frames B and B′ and the stropping elements C and C′. The two sections of the casing are each made from sheet metal blanks constructed as shown in Fig. 7, with the exception that in one of the end walls 1 of the lower section of the casing is an opening 2 for the crank shaft to extend out of the casing. The side walls 3 of the casing sections are formed with ears or lugs 4 so arranged that the lugs on one section will overlap those of the other and through the overlapping lugs extend rivets 5 to hingedly connect the sections of the casing together. The end and side walls 1 and 3 are bent upwardly at right-angles to the middle part 6 of the blank to form a box-like section, the end walls 1 fitting between the side walls 3, as clearly shown in Fig. 1.

The frames B and B′ are in general features similar and each is constructed of a blank of sheet metal formed of end plates 7 and a connecting bar 8, the plates 7 being bent at right-angles to the bar 8. The bars 8 coöperate to form a blade holder and they

lie approximately flush with the open sides of the sections A and A′ of the casing. The end plates 7 of the frames have alining apertures 9 which form shaft bearings, and the rear or innermost plate 7 has laterally extending lugs 10 which are adapted to fit in non-circular apertures 11 in the side walls 3 of the casing sections, so that the frames B and B′ are firmly held in position. The apertures 11 are disposed adjacent the hinge connection between the sections so that the rivets 5, by preventing the casing sections from spreading, effectively hold the frames B and B′ in position. The end plates 7 have outwardly-bent ears 12 which engage the end walls of the casing sections so as to assist in holding the frames in place. The upper frame B is so constructed as to provide V-shaped springs 13 between the ends of the bar 8 and the end plates 7, so that the upper bar 8 will yield when the stropper is closed with the blade therein, whereby the two bars 8 will firmly hold the blade during the stropping action. The stropping elements C and C′ are of similar construction and each comprises a segmental member 14 which is covered on its convex side with a leather piece 15, the edges of which overlap the edges of the member 14, and on the edges of the member 14 are lugs 16 which engage through apertures 17 in the leather piece 15. The members 14 have inwardly bent arms 18 at their ends, and these arms are provided with apertures 19 through which extend the shafts 20. The rear ends 21 of the shafts 20 are non-circular, as shown in Figs. 2 and 10, and on these non-circular ends are fastened pinions 22. The pinions are in permanent mesh, since their points of contact are substantially in line with the hinge centers 5. The lower shaft is provided with a crank or operating handle 23 that is operatively connected with the shaft by a ratchet connection 24. By turning the crank handle 23 the stropper elements are rotated so as to alternately engage the edge of the blade to be stropped when the casing is closed, as shown in Figs. 2 and 3. The stropping elements are rigidly connected with the pinions 22 by the latter having openings 25 into which are bent lugs 26 on the adjacent arms 18 of the members 14.

In order to hold double edged blades which are provided with slots or apertures centrally between the edges, a pair of studs 27 is employed in connection with the lower bar 8, and the upper bar 8 has openings 28 into which the studs project. To hold the studs removably in place a stud-carrying plate 29 is disposed under the lower bar 8, and in this plate 29 are threaded apertures 30 for receiving threaded shanks 31 of the studs 27. The lower bar 8 has apertures 32 to permit the studs to screw home against the upper surface of the plate 29. The plate 29 is held in place by lugs 33 stamped out from the lower bar, which lugs extend downwardly through apertures 34 in the plate 29 and are bent backwardly, as clearly shown in Fig. 12. As some blades are wider than others it is desirable to employ interchangeable studs so as to bring the edges of the blades into coöperative relation with the stropping elements. Thus, in Fig. 14, it will be observed that the stud 27 has its threaded shank 31 coaxially disposed, whereas the type of stud 27^a, Fig. 15, has its threaded shank 31^a to one side of the axis of the stud, so as to be used as shown in Fig. 4 for a blade b which is narrower than the blade b' in Fig. 2. For the type of blade b^2, Fig. 3, wherein the blade has a reinforced back b^3, the blade holder is provided with a central clip 35 which engages over the razor blade back to assist in holding the same in place. The bars 8 have longitudinal depressions 36 for accommodating the reinforcement or back b^3 of the blade, so that when the stropper is closed, the blade b^2 will be firmly clamped between the upper and lower bars 8. The front edges of the back b^3 are maintained against the shoulders 37 of the bars 8 by a bowed spring 38 which lies in front of an upwardly extending flange 39 on the lower bar 8. This spring, as shown in Fig. 11, has a depending central lug 40 which extends downwardly through and fits in a non-circular aperture 41 in the lower bar 8, as shown in Figs. 8 and 13, and the lug is bent under the bar so as to be anchored firmly in place. When a blade of the kind shown in Fig. 3 is employed, the studs 27 or 27^a are of course removed.

From the foregoing description taken in connection with the accompanying drawings, the advantages of the construction and method of operation will be readily understood by those skilled in the art to which the invention appertains, and while I have described the principle of operation, together with the article which I now consider to be the best embodiment thereof, I desire to have it understood that the article shown is merely illustrative and that such changes may be made when desired as fall within the scope of the appended claims.

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

1. A stropper comprising a casing composed of hingedly connected sections, blade holding bars on the sections, a plate on one bar and formed with a clip extending over one edge of such bar, a blade thrust spring disposed under the clip, and a shoulder on the bar associated with the clip and against which a blade is held by the spring.

2. A stropper comprising a casing, strop-

ping means in the casing, blade holding bars, one bar having a longitudinal shoulder, a clip on the same bar, and a spring positioned under the clip and having a free resilient end arranged to bear on a blade engaged under the clip for clamping the blade against the shoulder.

3. A stropper comprising a casing composed of hingedly connected sections, a frame in each section and fastened only at one end therein, lugs on the other ends of the frames for engaging the adjacent end walls of the casing sections, a stropping element in each frame, blade-engaging means on the frames, and means for operatively connecting the stropping means with each other.

4. A stropper comprising a casing composed of upper and lower sections formed from sheet metal blanks, with struck-up end and side walls, hinges connecting the side walls of the upper and lower sections together, frames in the sections, the side walls adjacent the hinged ends of the sections being provided with non-circular apertures, lugs on the frames engaging in the said apertures for retaining the frames in the sections, additional lugs on both ends of the frames for engaging the end walls of the casing sections, stropping means on the frames, and blade-holding means on the frames.

5. A stropper comprising hingedly connected sections, frames in the sections and each having a blade-engaging bar, said bars having stud-receiving apertures, a plate fastened to one of the bars and having threaded openings, and studs provided with threaded portions removably engaging the threaded openings.

6. A stropper comprising hingedly connected sections, frames in the sections and each having a blade-engaging bar, said bars having stud-receiving apertures, a plate fastened to one of the bars and having threaded openings, studs provided with threaded portions removably engaging the threaded openings, and a clip member on the said plate and extending inwardly over the adjacent bar.

7. A stropper comprising hingedly connected sections, frames in the sections and each having a blade-engaging bar, said bars having stud-receiving apertures, a plate fastened to one of the bars and having threaded openings, studs provided with threaded portions removably engaging the threaded openings, a clip member on the said plate and extending inwardly over the adjacent bar, and a blade-engaging thrust spring disposed under the clip and fastened to the associated bar.

8. A stropper comprising hingedly connected sections, frames in the sections and each having a blade-engaging bar, said bars having stud-receiving apertures, a plate fastened to one of the bars and having threaded openings, studs provided with threaded portions removably engaging the threaded openings, a clip member on the said plate and extending inwardly over the adjacent bar, a blade-engaging thrust spring disposed under the clip and fastened to the associated bar, and longitudinal shoulders on the bars against which the spring urges a blade.

9. A stropper comprising a casing composed of relatively movable sections, coacting blade clamping bars on the sections, removable studs on one of the bars for engaging a blade, the other bar having apertures to receive the studs, a clip on one of the bars for engaging the blade, a shoulder on the bar having the clip, and spring means on the bar having the clip for engaging a razor blade and pressing the same against the said shoulder.

10. A stropper comprising a casing composed of relatively movable sections, blade-clamping bars on the sections, a clip on one of the bars for holding the blade, and a spring under the clip coöperating therewith for gripping a blade.

BERNHARD TROSKY.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."