D. E. WASHINGTON.

RAZOR STROPPING DEVICE.

APPLICATION FILED SEPT. 16, 1909.

**972,958.** **Patented Oct. 18, 1910.**

Fig. 1.

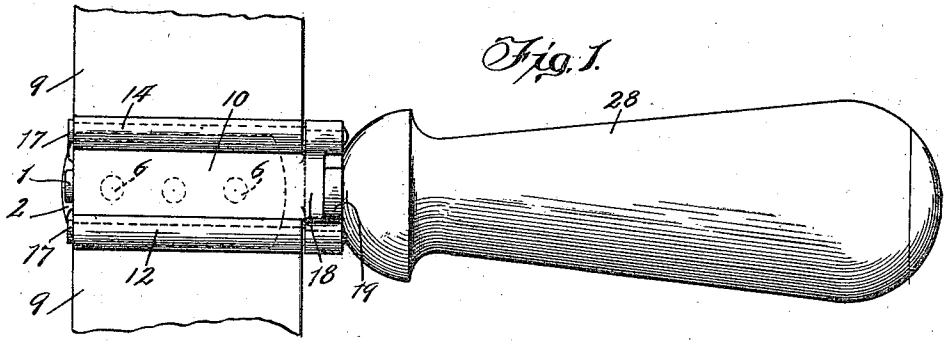


Fig. 2.

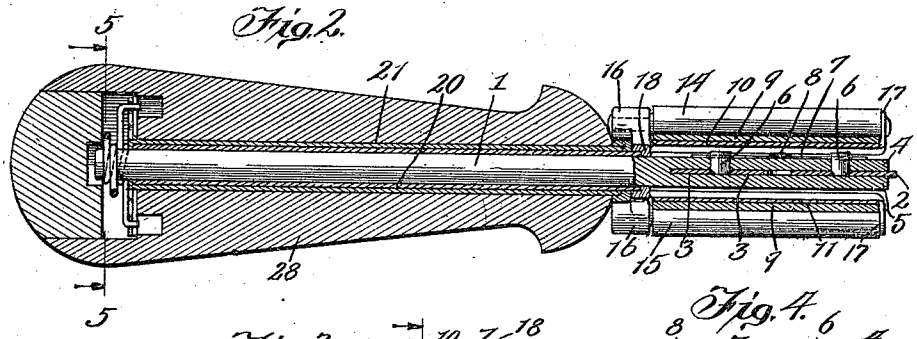


Fig. 3.

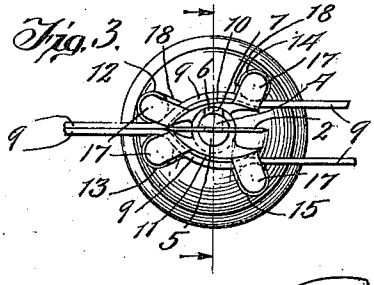


Fig. 4.

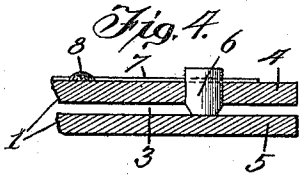


Fig. 5.

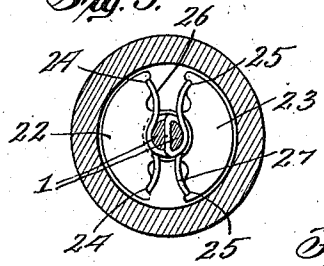


Fig. 6.

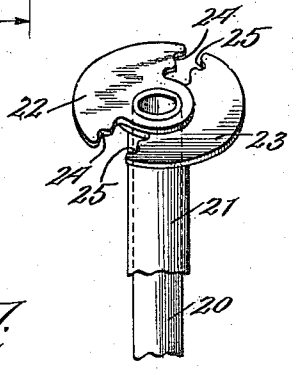


Fig. 7.


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# UNITED STATES PATENT OFFICE.

DIXON E. WASHINGTON, OF CHICAGO, ILLINOIS, ASSIGNOR OF ONE-HALF TO J. C. MORGAN, OF CHICAGO, ILLINOIS.

## RAZOR-STROPPING DEVICE.

972,958. Specification of Letters Patent. **Patented Oct. 18, 1910.**

Application filed September 16, 1909. Serial No. 517,987.

*To all whom it may concern:*

Be it known that I, DIXON E. WASHINGTON, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Razor-Stropping Devices, of which the following is a specification.

This invention relates to stropping devices and has for its primary object to provide an improved construction, combination and arrangement of parts in a device of this nature.

More specifically, the object of this invention is to provide an improved device of this nature whereby both faces of the same edge of a razor blade may be simultaneously stropped.

Another object is to provide improved blade holding means permitting the endwise introduction and withdrawal of the blade.

Other and further objects will appear in the specification and be more specifically pointed out in the claims, reference being had to the accompanying drawings exemplifying the invention, and in which—

Figure 1 is a side elevation of the stropping device constructed in accordance with the principles of this invention. Fig. 2 is a longitudinal section of the same on the line 2—2 of Fig. 3. Fig. 3 is an end view taken from the left end of Fig. 1. Fig. 4 is an enlarged detail view of the blade holder. Fig. 5 is a section on the line 5—5 of Fig. 2. Fig. 6 is a perspective view of portions of the sleeves employed in the present embodiment of the invention. Fig. 7 is a detail end view of one of the locking pins.

The present invention consists in the construction, combination and arrangement of parts shown in the drawings and in the features of novelty exemplified therein.

According to the preferred embodiment shown and described, the device is more especially adapted for stropping safety razor blades, particularly those blades provided with perforations for securely mounting them in a handle, but with modifications in the holder, said device may be adapted for use in connection with many other articles of similar construction.

Referring more particularly to the drawings, the features of invention are embodied in or connected with a combination of a blade holder, a strop-guiding device between which and the holder relative movement is permitted, said guiding device being provided with means for pressing two sections of a strop against opposite faces of the same edge of a blade, and means for clamping said edge during the stropping operation.

Preferably, the blade holder consists of a rod 1 adapted to releasably engage a blade 2 by being provided with a slot 3, preferably in one end of the rod 1, and by mounting in one of the segments 4, 5 into which said rod end is divided by the slot 3 one or more pins or tumblers 6, 6, for detachably engaging in the perforations commonly provided in well known types of blades. In order to provide means for resiliently pressing the pins 6, 6 against the other segment 5, a spring 7, preferably of wire, is passed through perforations in the outer ends of the pins 6, 6, and fastened in any suitable manner, as at 8, to the segment 4. The inner ends of said pins are beveled on the sides facing longitudinally of the slot 3, while the sides facing laterally of said slot extend perpendicularly down to the flat surface of the segment 5. In this way said holder is adapted to permit the endwise introduction and withdrawal of a blade while said blade, after it has been inserted into position, is rigidly maintained against lateral movement by reason of the perforations therein being locked against the sharp corners of pins 6, 6.

A suitable strop-guiding device for the sections 9, 9 of a strop, which sections may be portions of a single strop or the parallelly disposed portions of two strops, is preferably provided by movably mounting a pair of plates 10, 11 on opposite sides of the slotted end of the holder 1, said plates being preferably curved as shown to permit the strop sections to slide easily thereover. Contiguously to the lateral edges of the plates 10, 11 are mounted strop supports, which may be of any suitable form. Preferably, however, said supports are provided in the form of rollers 12, 13, 14 and 15, suitably journaled between bosses 16 and

ears or lugs 17, said bosses and ears being integrally formed on said plates 10 and 11 respectively. Preferably integrally formed with the plate 10 and the bosses 16 thereon, is a hub or collar 18, by means of which said plate is rotatably mounted, preferably upon the blade holder 1. In a similar manner, the plate 11 is also rotatably mounted by means of a hub portion 19. Referring now more especially to Figs. 2, 5 and 6, means for resiliently mounting said plates 10 and 11 out of engagement with the blade carried by the blade holder 1 may be provided in any suitable manner, but according to the present embodiment shown on the drawing, said means comprises a sleeve 20 rigidly connected to the hub 18 of the plate 10, and a sleeve 21 rigidly connected with the hub 19 of the plate 11, said sleeves being concentrically mounted to rotate relatively to the blade holder 1, and to each other about the axis of said holder. Rigidly mounted on the outer extremity of the inner sleeve in any suitable manner is a disk segment 22 (see Fig. 6), while upon the outer extremity of the outer sleeve 21 which is rotatably mounted in a handle 28 and terminates short of the sleeve 20, is a disk segment 23. Said disk segments are provided respectively with notches 24, 24, and 25, 25, wherein engage the ends of springs 26, 27, preferably made of wire and mounted in the manner shown in Fig. 5. Intermediately of their ends said wire springs are rigidly connected with the outer extremity of the blade holder 1, preferably by being passed through a slot or hole extending therethrough. Said springs are suitably fashioned and disposed to normally maintain the rollers 12, 13, 14 and 15 equally distant from the plane of the blade 2.

It will now be readily understood that upon producing relative movement between the strops and blade holder, such as by moving the holder from left to right, as indicated in Fig. 3, the taut portions of the strop sections will force the blades 10 and 11 into clamping engagement with both faces of the left hand edge of the blade, while at the same time the rollers 12 and 13 will force the strop sections simultaneously against both faces of said edge. As soon, however, as the movement is reversed the strop portions on the left becoming slack permit the blades 10 and 11 to return to normal position under the action of the springs 26, 27, while the portions of the strop to the right becoming in turn taut, will throw the blades 10 and 11 into clamping engagement with the other edge of the blade and also press the strop sections simultaneously against both faces of that edge. It will thus be seen that in whichever direction the blade is moved with respect to the strop, the sections of said strop will be drawn outwardly over both faces of one edge at the same time, thus preventing a turned or wire drawn edge.

What I claim is:

1. The combination of a strop having two sections, means for holding a double-edged blade therebetween, said means being movable successively in opposite directions relatively to said sections, and means for causing simultaneous engagement between the strop sections and both faces of one edge of the blade when said holding means is moved in one direction and for causing a simultaneous engagement between said strop sections and both faces of the other edge when the holding means is moved in the opposite direction.

2. In a device for the purpose described, the combination of guides adapted to receive a double strop, a holder for double-edged blades, and means operatively related to said guides and blade holder for simultaneously bringing both faces of either edge of a blade into contact with the folds or sections of the strop.

3. In a device for the purpose described, the combination of a blade holder, a double strop, means for mounting said strop and blade holder, said means being adapted to permit relative movement therebetween, and means actuated by said relative movement for simultaneously bringing said strop into simultaneous engagement with both faces of the same edge of a blade mounted in said holder.

4. In a device for the purpose described, the combination with a strop comprising contiguously disposed sections, of a blade holder movable between said sections, and means movable into and out of clamping engagement with a blade in said blade holder, said means being slidably engaged by the sections of said strop and adapted to force said sections simultaneously against both faces of the same edge of said blade.

5. In a device for the purpose described, a blade holder, a double strop, guides for said strop movable relatively to said blade holder, said guides being mounted on opposite sides of the blade holder and adapted to be moved simultaneously into and out of engagement with both faces of one edge of a blade carried by the blade holder.

6. In a device for the purpose described, a blade holder, a double strop, guides for said strop movable relatively to said blade holder, said guides being mounted on opposite sides of the blade holder and adapted to be moved into and out of engagement with both faces of one edge of a blade carried by the blade holder, and means tending to hold said guides out of engagement with the blade holder.

7. In a device for the purpose described, a blade holder, a double strop, said strop and blade holder being reciprocable relatively to each other, guides for said strop oscillatable relatively to said blade holder, said guides being mounted on opposite sides of the blade holder and adapted to be moved into and out of clamping engagement with one edge of the blade while at the same time forcing the strops against both faces of that edge, and resilient means normally holding said guides out of engagement with said blade.

8. In a device for the purpose described, the combination with a blade holder, of a pair of plates movable simultaneously into and out of clamping engagement with both faces of one edge of the razor blade mounted in said holder, a strop comprising two sections slidably mounted on said plates, and means movable with said plates for forcing said sections of the strop simultaneously against the opposite faces of the same edge of the razor.

9. In a device for the purpose described, the combination with a blade holder, of plates movable into and out of clamping engagement with both faces of either edge of a razor blade mounted in said holder, a strop comprising two sections slidably engaging said plates, and means carried by said plates for forcing the sections of said strop simultaneously against the opposite faces of the edge of the razor.

10. In a device for the purpose described, the combination of a blade holder, of plates movable into and out of clamping engagement with both faces of either edge of a razor blade mounted in said holder, a strop comprising two sections slidably engaging said plates, and rollers mounted on said plates for guiding said sections of the strop and forcing them simultaneously against the opposite faces of the same edge of the razor when said plates are moved into clamping engagement therewith.

11. In a device for the purpose described, the combination with a blade holder, of pivotally mounted plates on opposite sides of said holder, the opposite edges of each of said plates being oscillatable into and out of engagement with the respective edges of a double edged blade carried by said blade holder to adapt the corresponding edges of opposite plates to be moved into and out of clamping engagement with the same edge of the blade, a strop comprising two sections, and means coöperating with said plates for forcing said sections simultaneously against both faces of the clamped edge of the blade.

12. In a device for the purpose described, the combination with a blade holder, of a strop comprising two sections, means movably mounted on opposite sides of the holder for guiding said sections of the strop, said means being normally out of engagement with a blade in said blade holder, and adapted to be forced together with said strop sections simultaneously into engagement with opposite faces of the same edge of the blade by a relative movement between said strop and holder.

13. In a device for the purpose described, the combination with a holder adapted to carry a double edged blade, of a plate on each side of the holder, each plate being oscillatable about an axis to bring its edges alternately into clamping engagement with said blade, strop guides carried by said plates and adapted to slidably engage two sections of a strop moving therethrough, said plates being thereby adapted to have corresponding edges of the opposite plates simultaneously moved into clamping engagement with both faces of the same edge of the razor blade, and to force said sections of the strop thereagainst.

14. In a device for the purpose described, the combination with a rod adapted to releasably engage a razor blade, of a pair of concentrically mounted sleeves journaled coaxially with said rod and rotatable relatively to each other, a clamping plate rigidly connected with each sleeve, said plates being contiguously disposed to said rod on opposite sides thereof, strop guides mounted on said clamping plates, and a strop comprising two sections adapted to be passed through said guides, said plates being thus adapted to be simultaneously moved into clamping engagement with both faces of the same edge of the razor and to force the sections of the strop together over said edge.

15. In a device for the purpose described, the combination with a rod adapted to releasably engage a razor blade, a pair of concentrically mounted sleeves journaled coaxially with said rod and rotatable relatively to each other, a clamping plate rigidly connected with each sleeve, said plates being contiguously disposed to said rod on opposite sides thereof, strop guides mounted on said clamping plates, a strop comprising two sections adapted to be passed through said guides, said plates being thus adapted to be simultaneously moved into clamping engagement with both faces of the same edge of the razor and to force the sections of the strop together over said edge, and means tending to hold said blades out of engagement with the blade.

16. In a device for the purpose described, the combination with a rod adapted to releasably engage a razor blade, a pair of concentrically mounted sleeves journaled on said rod and rotatable relatively to each other, a clamping plate rigidly connected with each sleeve, said plates being contigu-

ously disposed to said rod on opposite sides thereof, rollers mounted on each plate to provide stropping guides, a strop comprising two sections adapted to be passed through said guides, said plates being thus adapted to be simultaneously moved into clamping engagement with both faces of the same edge of the razor blade and to force the sections of the strop together over said edge, and resilient means tending to hold said plates out of engagement with the blade.

17. In a device for the purpose described, the combination with a rod adapted to releasably engage a razor blade, a pair of concentrically mounted sleeves journaled on said rod and rotatable relatively to each other, a clamping plate rigidly connected with one end of each sleeve, said plates being contiguously disposed to said rod on opposite sides thereof, rollers mounted on said plates to provide stropping guides, a strop comprising two sections adapted to be passed through said guides, said plates being thus adapted to be simultaneously moved into and out of clamping engagement with both faces of the same edge of the razor and to force the sections of the razor strop together over said edge, disk segments mounted on the other end of each sleeve, and resilient means interengaging between the rod and each of said segments to maintain said plates normally out of engagement with the razor blade.

18. In a device for the purpose described, the combination with a rod adapted to releasably engage a razor blade, a pair of concentrically mounted sleeves journaled on said rod and rotatable relatively to each other, a clamping plate rigidly connected with one end of each sleeve, said plates being contiguously disposed to said rod on opposite sides thereof, rollers mounted on each plate to provide stropping guides, a strop comprising two sections adapted to be passed through said guides, said plates being thus adapted to be simultaneously moved into and out of clamping engagement with both faces of the same edge of the razor, and to force the sections of the razor strop together over said edge, and resilient means interengaging between the rod and a portion rigid with each sleeve for maintaining said plates normally out of engagement with the razor blade.

19. In a device for the purpose described, the combination with a rod provided with a slotted end, pins resiliently mounted in one segment formed by the slot, said pins being provided with beveled edges on the sides facing along the slot to permit the endwise insertion of a razor blade, and means for simultaneously stropping both faces of the same edge of the blade.

20. In a device for the purpose described, the combination with a rod provided with a slotted end, pins slidably mounted in one segment formed by the slot and extending transversely across said slot to impinge the other segment, said pins being provided with beveled edges facing the slot to permit endwise insertion of the razor blade, and means for forcing said pins resiliently against said other segment.

21. In a device for the purpose described, a blade holder, a double strop, and guides for said strop movable relatively to said blade holder, said guides being adapted to be moved into and out of simultaneous engagement with opposite faces of the same edge of a blade in the blade holder.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 14th day of September A. D. 1909.

DIXON E. WASHINGTON.

Witnesses:

CHARLES H. SEEM,

FRANCIS A. HOPKINS.