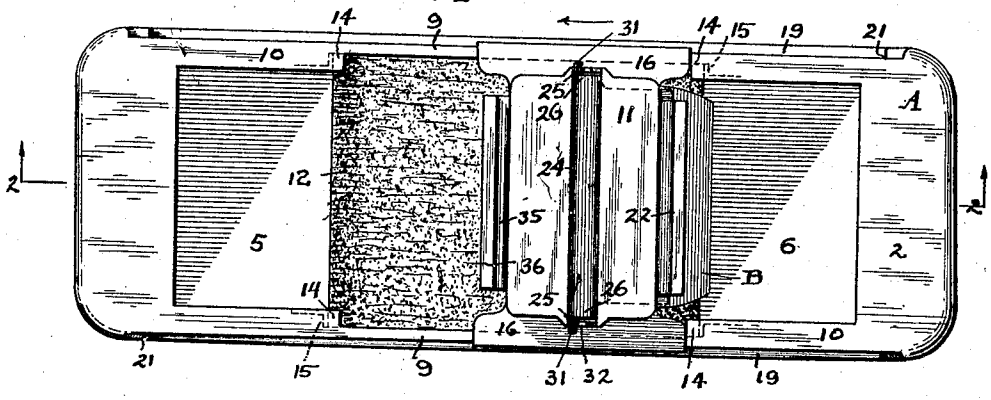
Feb. 1, 1927. 1,616,004

H. J. SEWOSTER

RAZOR BLADE SHARPENING DEVICE

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FIG. 1



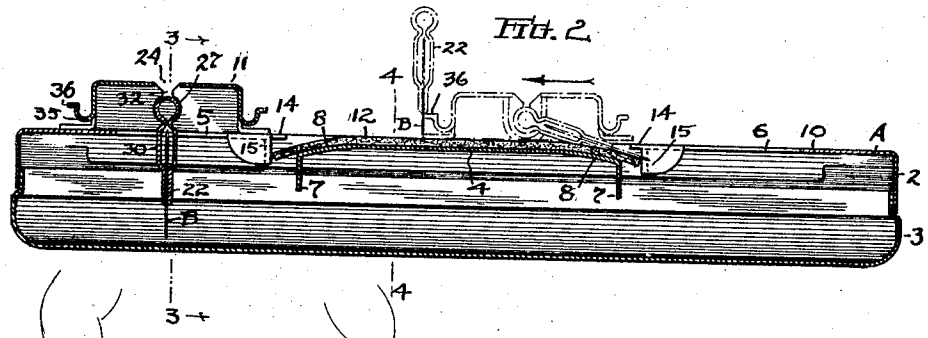


FIG. 2

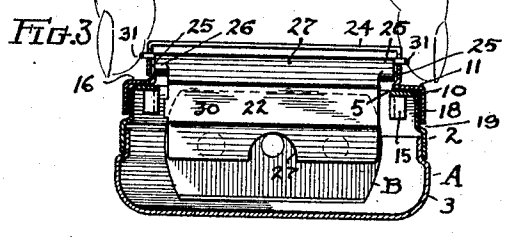


FIG. 3

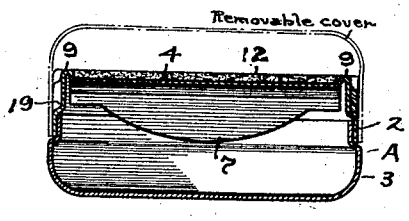


FIG. 4

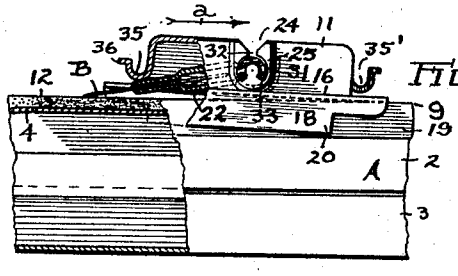


FIG. 5

Inventor
H. J. Sewoster.

By Fisher, Mason & Moore
Attorney

Feb. 1, 1927. 1,616,004

H. J. SEWOSTER

RAZOR BLADE SHARPENING DEVICE

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FIG. 6

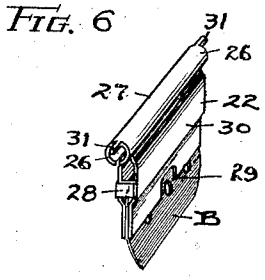


FIG. 7

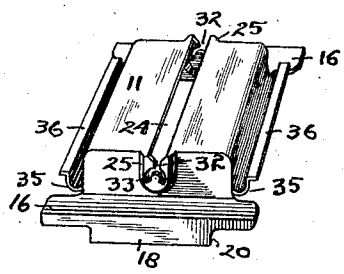


FIG. 8

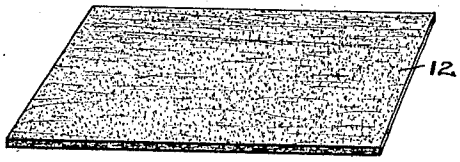
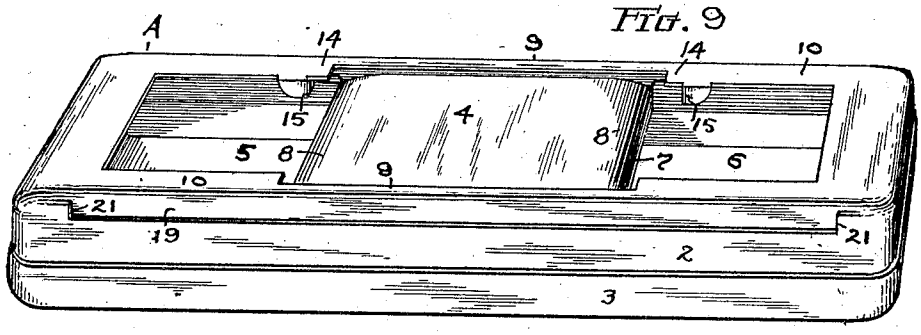


FIG. 9



Inventor
H. J. Sewoster.

By Fisher Moser & Cook
Attorney

Patented Feb. 1, 1927. 1,616,004

UNITED STATES PATENT OFFICE.

HENRY J. SEWOSTER, OF CLEVELAND, OHIO, ASSIGNOR TO ZOWIE MANUFACTURING COMPANY, A PARTNERSHIP COMPOSED OF HENRY J. SEWOSTER AND FORD W. SEWOSTER, OF CLEVELAND, OHIO.

RAZOR-BLADE-SHARPENING DEVICE.

Application filed May 9, 1924. Serial No. 711,986.

My invention relates to an improvement in a razor blade sharpening device, my general object being to provide a simple structure adapted to facilitate the honing and stropping of various forms of flexible razor blades. Thus, the main body of the device is particularly constructed to permit a flexible strop to be reversibly and detachably affixed thereto, and the razor blades are adapted to be removably secured within a spring holder which is in turn removably and pivotally mounted within a slide or carrier adapted to be grasped by the hand and reciprocated lengthwise of said main body and said strop. The strop is also supported in a way to provide free flexing ends adapted to permit the razor blade to engage and disengage itself without dulling effect. The blade holder and its reciprocable carrier are also constructed to permit a locking effect to be obtained between these parts while the blade is being stropped and to be freely disengaged when the moving parts are idle and shifted free from the strop. The reciprocable carrier is also constructed with finger guards which are placed at a suitable elevation above the strop to permit them to be also used in setting the blade within the holder to obtain the best stropping effects. Other objects and advantages reside in other details of construction as will be hereinafter more fully explained.

In the accompanying drawings, Fig. 1 is a top view of the device with a razor blade lying in stropping position as occurs when the blade holder and its carrier are caused to move toward the left.

Fig. 2 is a vertical section longitudinally of the device, on line 2—2 of Fig. 1, showing the blade holder and carrier shifted to the extreme left end of the device in full lines, and also showing a wiping or stropping position of the movable parts in dotted lines, and the blade holder is also shown upright in dotted lines at one edge of the slide as practiced in setting the blade to its proper depth within the holder before stropping operations. Fig. 3 is a vertical section transversely of the device on line 3—3 of Fig. 2, showing the projecting trunions for the blade holder engaged and held by a thumb and forefinger as in removing or depositing the holder. Fig. 4 is a cross sectional view on line 4—4 of Fig. 2. Fig. 5 is an enlarged side and sectional view of the reciprocable carrier and blade holder seated in an inclined or tilted position upon a portion of the main body with the edge of the flexible blade in stropping engagement with the leather strop. Fig. 6 is a perspective view of the spring holder with a razor blade clamped therein. Fig. 7 is a perspective view of the slide member for the holder. Fig. 8 is a perspective view of the leather strop, looking at its abrasive side. Fig. 9 is a perspective view of the main body of the device with all the other parts removed.

The invention comprises a hollow elongated body A made of two sheet-metal stampings which provide separable top and bottom sections 2 and 3, respectively, adapted to be sleeved snugly together at their border edges. Upper section 2 is depressed slightly at its middle to provide a flat horizontal table or cross wall 4, and separate rectangular openings 5 and 6 are formed within each end portion of this top section adjacent said cross wall. Downwardly-extending end flanges 7—7 stiffen wall 4, and the top surface of wall 4 is flat at its middle and curved or rounded downwardly at its ends toward the flanges. The longitudinal border portions 9 of top section 2 opposite wall 4 are rounded and continuous with the flanged top surface 10 at opposite ends of the section to provide a smooth riding surface for a reciprocable slide 11 which is used to carry the razor blade back and forth over a short flat strop 12 of leather or equivalent stropping and honing material seated removably upon wall 4 between the rounded ledges or borders 9. The ends of this flexible strop rest upon and conform to the rounded surfaces 8 and also project a short distance into space beyond the corners above the stiffening flanges 7, thereby providing free flexing end portions which slope downwardly from the main stropping surface of the strop. The angular corners of the rectangular strop extend underneath horizontal projecting flanges 14 which form part of top 10 at opposite sides of openings 5 and 6, and a portion of the stock of top 10 is also bent downwardly a short distance from the end edge of each

flange 14 to provide stops or shoulders 15 adapted to prevent longitudinal movement of the strop in stropping operations while permitting the flexible overhanging end portions of the strop to move freely downward under pressure from above. The overhanging ends of the strop also permit the strop to be engaged and flexed by the thumb and forefinger and bodily lifted from its seat and to be replaced in the same way, and in this operation the strop is buckled or arched to permit the angular corners of the strop to be freely disengaged from the projecting flanges 14. One face of the strop may be smoothly finished and the other face may be surfaced with an abrasive, and as the strop is flexible it may be readily removed and inverted at will and still curve downwardly at its opposite ends when in use in either of its inverted positions.

The slide or carrier 11 is a rectangular recessed member pressed from sheet metal and formed with lateral flanges 16 adapted to rest and slide upon the top border portions of section 2, and each flange 16 has a depending skirt 18 adapted to overlap the side walls of section 2 and to hold and guide the carrier in a straight line in its travel lengthwise of section 2. Border recesses 19 extend substantially the full length of section 2 to receive the skirt portions 18 and to permit the vertical end edges 20 of the skirt to engage shouldered portions 21 at the opposite ends of the recesses, and thereby limit the reciprocable movements of carrier 11 and the razor blade B which is suspended from the carrier by a spring clamping holder 22. Thus carrier 11 has an elongated opening 24 centrally within its top through which holder 22 may be inserted and removed, and the vertical walls of the holder at the opposite ends of opening 24 are offset or pressed outwardly to form rounded receiving sockets 25 for the round trunnion portions 26 of holder 22 which is made of spring sheet-metal bent or doubled upon itself to provide a round spring loop portion 27 at the bend and two flat clamping walls adapted to be spread apart in inserting a thin flexible razor blade between them. This blade may be introduced either into one end or into the bottom of the holder, and a lug 28 extends across the widened space at one end of the holder to facilitate placing the razor blade in a centered position within the holder. Notches 29 may also be made in the base part of the spring clamping walls of the holder to expose the middle portion of the razor blade so that a firm finger grip may be had on the blade in inserting or removing it from the holder. The offset portions 30 in the holder walls provide sufficient space within the holder to permit other types of razor blades than as shown to be inserted and held in the holder, for example, a razor blade which is enlarged or thicker at its back.

When the round trunnion portions 26 of the holder are dropped into the end sockets 25 of carrier 11 the holder is free to swing or turn from a perpendicular position to an inclined horizontal position beneath the carrier. Means are provided to prevent the trunnions from being dislodged from the sockets during stropping operations, but not from being removed from the carrier when the holder hangs by gravity in a perpendicular position. Thus, each trunnion has a short projection 31 extending therefrom which is adapted to pass through a vertical passage 32 into a semi-circular slot 33 in the end wall of socket 25, and the semi-circular slot is concentric with the round socket seat and the round bearing surface of the trunnion so that when the holder is rotated in either direction from a perpendicular position to an inclined position the projection 31 will occupy the circular slot and lock the holder within the carrier. When the blade is in an inclined stropping position and riding over the strop as shown in Fig. 5, the rounded bottom portion 35 of one side wall of carrier 11 is adapted to rest upon the blade clamping walls of holder 22, and the carrier is tilted slightly. This permits a light pressure to be applied to the carrier by the hand which grasps it and in so doing the razor blade is flexed and a good stropping contact at the cutting edge is obtained, but excessive flexing and too much pressure on the blade is prevented because the clamping parts of the holder are interposed between the strop and the bearing portion 35 of the carrier. That is to say, the movement of the carrier and the amount of pressure which may be applied is limited by the slight vertical play between the clamping holder and the strop immediately beneath the bearing portion 35. When the carrier and blade holder are moved in an opposite direction to that indicated by the arrow —*a*— in Fig. 5, the blade trails under the opposite bearing edge 35′ and the same setting and stropping result is obtained. To permit the razor blade to be always placed within the holder so that its cutting edge will be parallel with and also a predetermined distance beyond the clamping portions of the holder, the rounded bearing portion 35 on the carrier 11 is curled upward and thence bent laterally to provide a horizontal shoulder or lip 36 adapted to serve as a gauge in setting the razor blade within the holder. In this setting operation the carrier is placed horizontally at rest above the strop as indicated in dotted lines in Fig. 2, and the holder containing the razor blade is held upright against lip 36 with the cutting edge of the blade resting on the strop. The blade is

only held by friction within the clamping portions of the holder so that the holder will slip on the blade when the holder is pressed downwardly until arrested by lip 36, thus aligning and setting the blade as desired within the holder. Following this setting operation or when the blade is in proper position within the holder the operator may grasp and lift the holder between his thumb and forefinger by means of projections 31 which extend from trunnions 26, and deposit the holder in a gravity swinging position within the end sockets 25 in the carrier as delineated in Fig. 3, and the holder may be removed from the carrier in the same way. However, when the holder and blade are suspended within the carrier with the carrier at rest above either opening 5 or 6 in the main body of the device, the operator may grasp the carrier between the thumb and fingers of one hand and slide the movable parts back and forth over the top section. In so doing the cutting edge of the blade is first stropped on one side and then on the other side of the blade, each movement of the carrier causing the holder to first ride over the flexible overhanging end of the strop and upwardly over the curved incline until the blade is brought to the inclined stropping position shown in Fig. 5 where the pressure of the operator's hand may be more or less applied to press the blade down upon the strop until the carrier in its onward movement trails the blade to the other downwardly-curved end of the strop, at which point the pressure upon the flexible blade is automatically relieved as the cutting edge rides down the incline and permits the holder to free itself from contact with the bearing portion 35 of the carrier. The holder and blade then rest loosely upon the incline and finally drop freely from the flexible overhanging portion of the strop into a perpendiclar position within the hollow body so that the carrier may be reversed and the same stropping operation repeated on the other side of the blade.

What I regard as my invention or discovery and desire to claim, is:

1. A razor blade sharpening device, comprising a razor blade holder, a slidable carrier movable in a horizontal plane adapted to support said holder in a swinging position thereon, an open support for said carrier having a flat depressed seat at its middle, and a short flexible stropping element reversibly mounted horizontally in a flat position within said depressed seat and projecting beyond the ends thereof to provide free flexing end portions, said open support extending sufficiently beyond the strop and said holder being mounted for free swinging movement so that the edge of the blade drops below the ends of the flexible stropping element, when moved beyond an end thereof.

2. A razor blade sharpening device, comprising a razor blade holder, a reciprocable carrier movable in a horizontal plane adapted to pivotally support said holder, a chambered body having a flat table with downwardly inclined end portions, and a flexible strop of greater length than said table mounted horizontally thereon and having the flexible ends of the strop extending downwardly beyond said inclined end portions, said chambered body extending sufficiently beyond the strop and said holder being mounted for free swinging movement so that the edge of the blade drops below said flexible ends of the strop, when moved beyond an end thereof.

3. A razor blade sharpening device, comprising a reciprocable carrier, a razor blade holder pivotally suspended within said carrier, an elongated body having a flat depressed seat in its top and openings at opposite ends of said depression, a flexible strop removably seated within said depression, said strop being of greater length than said top to extend at its opposite ends into said openings, said body having projecting portions extending horizontally over border portions of said strop, and said holder being mounted for free swinging movement so that the edge of the blade drops below the ends of the strop in said opening, when moved beyond an end thereof.

4. A razor blade sharpening device, comprising a reciprocable carrier, a razor blade holder pivotally suspended within said carrier, a hollow supporting body for said carrier having a short stop centrally thereon, said body having longitudinal shoulders and recesses at its opposite sides and stop shoulders at the opposite ends of said recesses, and said carrier having a lateral flange and a depending skirting adapted to travel upon said shoulders in said recesses.

5. A razor blade sharpening device, comprising a sheet-metal body having a flat top depression with rounded end portions and provided with openings opposite each end portion and formed with inwardly extending flanges at each side terminating opposite said rounded end portions and lying in a higher horizontal plane in respect thereto, and a flexible strop of greater length than said top depression adapted to rest thereon with its opposite ends extending beyond said end portions underneath said flanges, in combination with a carrier movable horizontally upon said body, and a blade holder pivotally suspended from said carrier adapted to engage said strop.

6. A razor blade sharpening device, comprising a sheet-metal body having a flat cross wall bordered by longitudinal side wall portions extending to a higher plane, the end portions of said cross wall being rounded adn flanged downwardly, the top of said

body being open opposite each end portion of the cross wall, and the side walls of said body being formed with inturned and downwardly-turned portions adapted to confine a flexible stropping element upon said cross wall, a flexible stropping element upon said cross wall, a sliding carrier upon said longitudinal side wall portions, and a blade holder pivotally suspended from said carrier.

7. A razor blade sharpening device, comprising a clamping holder for a razor blade, said holder having rounded trunnions, and a reciprocable carrier having an opening in its top and rounded sockets at the opposite ends of said opening adapted to seat said trunnion, the end walls of said sockets having circular slots, and means extending into said slots adapted to effect a detachable interlocking connection between said blade holder and carrier in combination with a supporting body for said carrier having a strop adapted to be engaged by said razor blade.

8. A razor blade sharpening device, comprising a body having a strop, in combination with a clamping holder for a razor blade, a reciprocable carrier having sockets, adapted to rotatably suspend said holder therein, and said holder and carrier having pins and circular slots providing interlocking connections adapted to permit free separability in an inactive position of the holder and to effect interlocking between the parts when the holder is rotated into an active position.

9. A razor blade sharpening device, comprising a supporting body and a strop thereon, a razor blade clamping holder having round trunnions and projections extending from a segmental part of said trunnions, and a reciprocable carrier having sockets for said trunnions and arcuate openings for said projections.

10. A razor blade sharpening device, comprising a strop and a support therefor, a razor blade clamping holder having trunnions and projections extending from said trunnions, and a reciprocable carrier having sockets adapted to receive said trunnions and semi-circular openings in the wall of said sockets adapted to receive said projections to effect a rotatable interlocking union between said parts.

11. A razor blade sharpening device, comprising a main body having a stropping member across its top, a reciprocable carrier having flanges adapted to ride upon said body, said carrier having a top opening and end walls formed with sockets at the opposite end of said opening, said carrier also having side walls formed with rounded bearing portions adapted to extend across said stropping member, and a razor blade holder having trunnions adapted to be rotatably seated within said sockets and said holder being formed with blade clamping walls adapted to swing into engaging position with said rounded bearing portions of said carrier and to hold a razor blade in an inclined flexing position upon said stropping member.

12. A razor blade sharpening device, comprising a strop and a support therefor, a blade clamping holder made of spring sheet metal and doubled upon itself to provide opposed clamping walls and formed with a rounded spring loop portion having trunnions, the opposed clamping walls being offset in part to provide a receiving space for an enlarged portion of a razor blade and being formed with a stop lug across one end of said space to fix the position of the blade within the holder, a slotted carrier for said holder, and said trunnions having projecting portions adapted to interlock with said slotted carrier.

13. A razor blade sharpening device, comprising a frictional clamping holder for a razor blade, a reciprocable carrier for said holder, a supporting body for said carrier having a leather stropping element mounted thereon, and said carrier having a laterally-extending lip adapted to project over said stropping element to permit adjustable settings of the blade within the holder.

In testimony whereof I affix my signature.

HENRY J. SEWOSTER.