May 6, 1924. 1,492,608

H. J. SEWOSTER

RAZOR BLADE SHARPENER

Filed Feb. 4, 1920

FIG. 1.

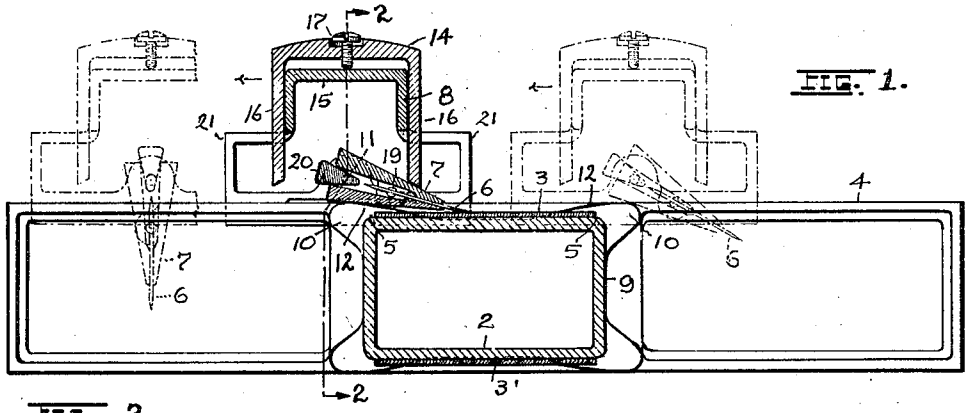


FIG. 2.

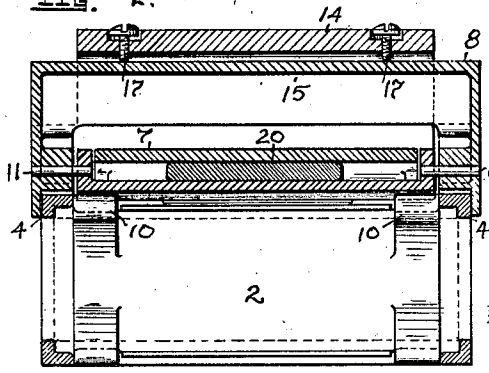


FIG. 3.

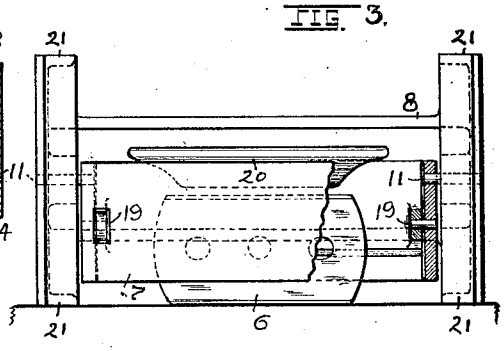
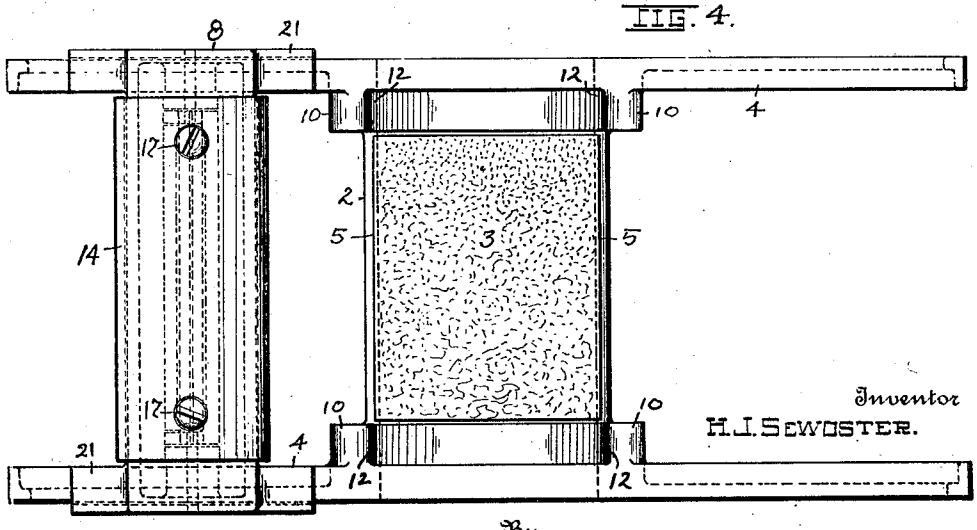


FIG. 4.



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UNITED STATES PATENT OFFICE.

HENRY J. SEWOSTER, OF CLEVELAND, OHIO.

RAZOR-BLADE SHARPENER.

Application filed February 4, 1920. Serial No. 356,288.

To all whom it may concern:

Be it known that I, HENRY J. SEWOSTER, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Razor-Blade Sharpeners, of which the following is a specification.

This invention relates to a razor-blade sharpener, in which the razor blade is pivotally suspended from a reciprocatory support and adapted to be automatically lifted and lowered in respect to the sharpening or honing surface during reciprocatory movement of said support. Reciprocation is imparted by hand and the required pressure to promote sharpening of the cutting edge of the blade is also applied by hand, both operations occurring concurrently under the sensitive feel and touch of the operator. In these operations, the opposite sides of the cutting edge of the blades are stroked alternately, and dulling of the edge is absolutely prevented by positive uplift of the blade at the end of each working stroke. The clamp used to hold the blade is also particularly constructed to hold blades of various makes and kinds, and this clamp and its shifting support is particularly constructed to permit instant setting of the blade in the correct and proper working position therein.

In the drawing accompanying this application, Fig. 1 is a sectional view vertically on the longitudinal center line of the sharpener showing the movable parts in different working positions in full and dotted lines. Fig. 2 is a cross section on line 2—2, Fig. 1. Fig. 3 is a view of the clamp and its sliding support standing on its side in an upright position on a flat surface, and showing a razor blade therein resting on its edge on the same flat surface. Fig. 4 is a plan view of the sharpener with the clamp and its carrier at one end thereof.

Structurally considered, the sharpener comprises a stationary bed or frame 2 having a sharpening or honing surface 3 of rectangular shape centrally situated thereon and bordered on opposite sides by parallel tracks or ways 4 extending beyond each transverse edge 5 of the sharpening surface. The space between the extended portions of the tracks is open to permit a razor blade 6 and a pivoted clamping holder 7 to hang and swing therein from a carrier 8 which is free to slide back and forth on tracks 4, and in this position the exposed edge of blade 6 lies considerably beneath the elevated sharpening surface 3 and consequently would strike the cross wall 9 of the base upon moving the carrier in that direction. However this is prevented by rounded projections 10 on the inside of tracks 4 adjoining walls 9 and which projections are located in a horizontal plane below the pivot 11 of the holder and above the exposed edge of the blade and preferably near said pivot so that as the carrier is moved toward the sharpening surface the holder will ride over the projections 10 and raise the blade to an acute inclination relatively to said surface.

The bearing face 12 of each projection lies above the sharpening surface 3 and inclines downwardly toward said surface and in the approach movement the holder first rides over the rounded corner of projection 10 and lifts the blade above and clear of edge 5 and then as the holder rides down the incline 12 the blade is lowered upon the flat surface back from edge 5. The operator may also apply pressure by hand to the blade holder and blade while these parts travel across the sharpening surface, using the separate hand grip or saddle 14 which is placed astride the cross piece 15 of slidable carrier —8— and has parallel side walls or legs 16 adapted to bear down upon the holder between its pivots 11 and the exposed edge of the blade, see Fig. 1. The movement of this saddle toward the cross piece 15 is definitely fixed by set screws 17 and excess pressure and flexing of the blade thereby prevented, and the pressure applied in this manner is uniformly maintained on the blade in its travel across the sharpening surface until the clamping holder engages and rides up the inclined bearing face 12 of the second projection 10 in the line of travel of said holder. In this interval the blade is lifted away from the sharpening surface before it reaches the corner or transverse edge 5 and is not permitted to swing downwardly again until the exposed blade edge is free to clear the corner 5. This occurs when the holder passes beyond the projection and at that instant the pressure imparted by the saddle causes the holder to gravitate or swing to a vertical hanging position. The parts are then in position for immediate reverse movement of the slidable carrier, see the dotted position of the parts at the left in Fig. 4, and in the

reverse travel the holder again engages the spaced projections and their inclines successively and operates as before except that the blade is now inclined in an opposite direction and the opposite side of the blade stroked over the sharpening surface. Briefly reiterating, in moving the carrier, either to the right or to the left, the blade is first automatically shifted from a vertical position to an inclined position, then pressed downwardly upon the flat sharpening surface, and then positively raised before it is permitted to swing downwardly to a vertical position again.

The clamping holder comprises two tapering jaw members pivotally secured together at their ends by pins 19, see Fig. 3, and a wooden wedge 20 or other suitable means may be used to spread the jaw members apart at their top edges and clamp the blade 6 between the relatively thin bottom edges. The carrier for the blade holder may also be provided with rabbeted extensions or feet 21 of predetermined length to ride on the tracks, and to permit the carrier when removed from the tracks to rest on its side on a flat surface as shown in Fig. 3. In assuming this latter position the clamping holder will turn on its pivot 11 and stand vertically upright with the straight bottom edges of the jaw members spaced apart or raised a slight distance above the flat surface which serves temporarily as a rest, and the razor blade may then be dropped between the jaw members to align its cutting edge with the axis of pivots 11 and to permit the blade to be gripped by the jaws a definite distance back from the cutting edge. Again, razor blades of any width may be set with their cutting edge the same distance from pivots 11, and the angle of inclination of the holder and blade in stropping will always bevel the edge of the blade the same.

The stationary bed or frame 2 may be constructed alike at its top and bottom to permit different stropping or sharpening surfaces 3—3′ to be used, merely in inverting the frame, and its tracks, or a separate body part or block embodying separate sharpening surfaces may be made a reversible part of the frame. The stationary frame, carrier and saddle may be made of wood, or cast or pressed out of metal, and various modifications could be made in the design and structure dependent on the material used or mode of manufacture adopted all without departing from the spirit or scope of my invention.

What I claim is:

A razor-blade sharpener, comprising a frame having a sharpening surface, a movable carrier having a blade holder pivotally suspended therefrom, a hand-hold member seated astride said carrier adapted to engage and apply pressure vertically to said holder, and adjustable means upon said member adapted to limit the downward movement of said member relatively to said holder.

Signed at Cleveland, in the county of Cuyahoga, and State of Ohio, this 30 day of January, 1920.

HENRY J. SEWOSTER.