A. SMILOVETZ.

SCOURING AND FINISHING TOOL.

APPLICATION FILED JAN. 19, 1912.

1,067,280.

Patented July 15, 1913.

2 SHEETS—SHEET 1.

Fig. 1.

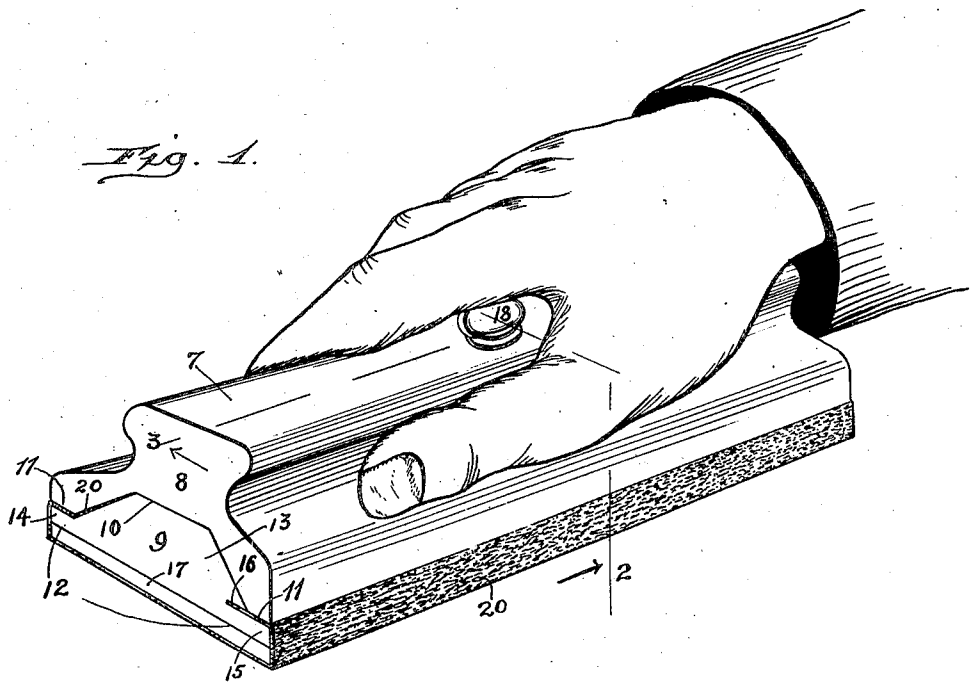


Fig. 2.

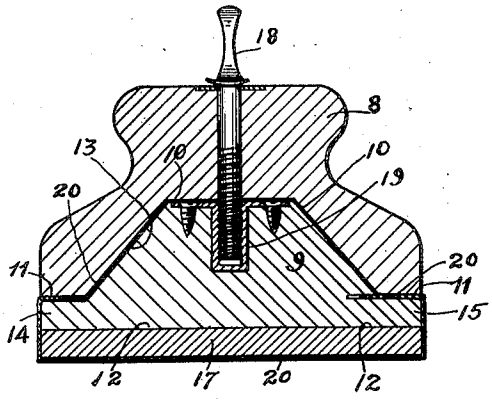
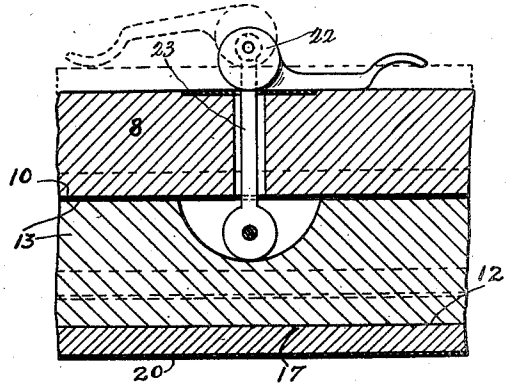


Fig. 3.



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2 SHEETS—SHEET 2.

Fig. 4.

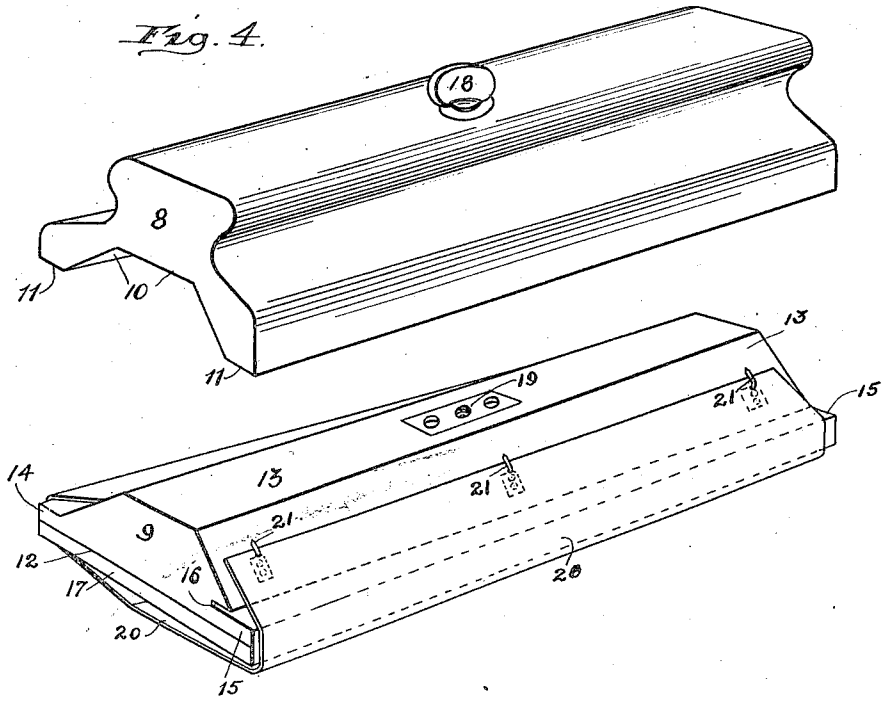


Fig. 5.

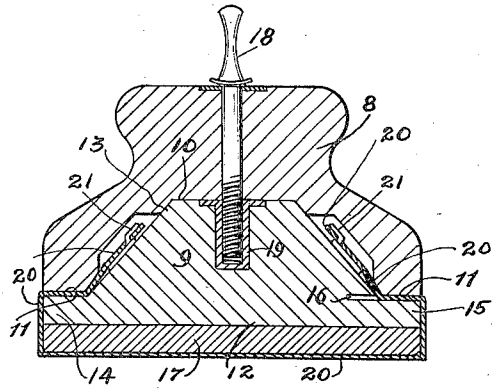
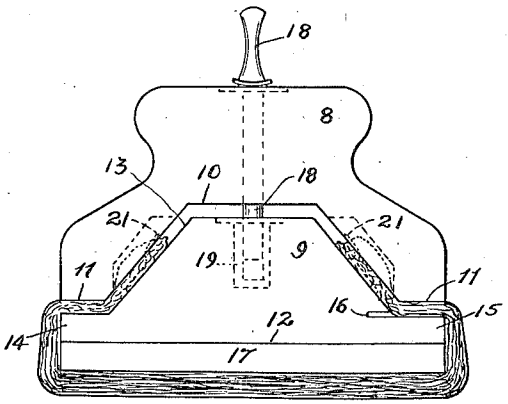


Fig 6.



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UNITED STATES PATENT OFFICE.

ABRAHAM SMILOVETZ, OF CHICAGO, ILLINOIS.

SCOURING AND FINISHING TOOL.

1,067,280. Specification of Letters Patent. Patented July 15, 1913.

Application filed January 19, 1912. Serial No. 672,250.

To all whom it may concern:

Be it known that I, ABRAHAM SMILOVETZ, a subject of the King of Roumania, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Scouring and Finishing Tools, of which the following is a specification.

My invention relates primarily to a tool for reducing or smoothing and finishing surfaces of wood, metal, stone and the like, but is capable of more extended application, and with slight changes may be used as a burnishing or dusting device, and it consists in certain novel features of construction, combination, and arrangement of elements thereof, as will be hereafter fully described and particularly set forth in the claim.

The objects of the invention, in part, are, first, to provide a tool of the above named general character, which shall be simple and inexpensive in construction, durable, and efficient in operation, second; to provide a quickly interchangeable combination of friction surfaces thereby enhancing its value as a general utility tool.

Other objects and advantages of the invention will be disclosed in the subjoined description and explanation.

In the accompanying drawings which serve to illustrate an embodiment of the invention: Figure 1, is a perspective view of a tool embodying my invention in the best manner now known to me. Fig. 2, is a cross section on the correspondingly numbered line of Fig. 1. Fig. 3, is a central sectional view taken on line 3, of Fig. 1, of a portion of the device showing a modification in the manner of locking the parts of the tool in position. Fig. 4, is a perspective view showing the upper or clamping member detached and a sheet of abrasive material hooked in place. Fig. 5, is a central cross sectional view showing the abrasive material clamped and locked in position for use, and Fig. 6, is an end view illustrating the device when used as a duster or cleanser.

Like numerals of reference refer to corresponding parts throughout the different views of the drawings.

The completely assembled tool 7 (Fig. 1) consists of a lower, operative member 9, an upper, locking member or handle 8, a sheet of cleansing, polishing or abrading material 20, clamped between said members 9 and 8, and of locking means 18, 19, which draw the locking handle to the operative member, causing the interposed sheet 20 to be firmly gripped between them.

The operative member 9, preferably made of wood, has a lower or outer body-portion of the shape of a parallelepiped, from the upper face of which there rises integral with the body portion a longitudinal, central rib 13, the vertical cross-section of which is a trapezium. Each side of the upper or inner face of the body-portion, that is not occupied by the base of the central rib forms a broad ledge or bearing surface 14, 15 parallel to the lower or outer face of the operative member, and extending throughout its length. On one side of the operative member a groove 16, is cut inwardly from the line of junction of the slant side of the central rib with the corresponding ledge 11, and in the same plane with the face of said ledge. Preferably a strip of felt or other suitable, yielding material 17 is fastened to the under or outer face 12 of the operative member, acting as a cushion or pad for the sheet of abrasive or cleansing material which is stretched thereover.

The upper locking member or handle 8, likewise preferably made of wood, has its top portion shaped so as to form a handle or grip, below which its sides slope downward and outward until their width apart is equal to that of the sides of the operative member, so that the lower part of the sides of the locking handle are in the same plane with the sides of the operative member. The lower or outer side of the locking handle is made precisely the obverse of the upper or inner side of the operative member, a recess 10, which runs longitudinally and centrally throughout the upper member and has a cross-section of the shape of a trapezium, corresponding to and snugly fitting over the central rib 13, while the bottom edges 11 of the handle, correspond to and fit precisely over the ledges 14 and 15.

An internally threaded socket 19 sunk in the flat top of the central rib 13 at the middle of its longitudinal extension, coöperates with thumbscrew 18, which extends through a perforation in the locking handle and has a shoulder that brings up on a metal plate let into the flat top of the handle, to draw the handle member closely against the operative member.

To stretch a sheet of cleaning or finishing material in position for operating, it is cut

to the right size; one of its edges is inserted in slot 16, which is preferably made sufficiently narrow to enable it to offer some slight resistance to pulling the sheet from out of it, which resistance may be increased, if need be, by the insertion of shims or wedge-pieces of paper or card-board, though such expedient does not form a part of this invention, and is here mentioned solely to show the possibilities and actual practical value of the slot or groove 16. Then the sheet 20 is laid over the ledge 15, is bent over the rectangular edge or corner forming the junction between the surface of the ledge and the side of the operative member, is kept closely pressed against the surface of the lower member and of its padding strip 17, and stretched as much as may be, while being passed over the pad, up along the side of the operative member, and over ledge 14, the end being carried up to about half the slant-height of the side of the central rib 13. Throughout this operation the slight hold of the slot 16 on the standing part or fixed edge of the sheet 20 has been sufficient to enable the surface to be drawn tight, especially after the first corner was turned, when the tension on the sheet operated at right angles to the slot, this resistance increasing with each turning. At the same time the retention of the one edge by the slot enabled the operator or workman to use both hands to keep the sheet smooth and well stretched over the surfaces. When the free or terminal edge of the sheet has been lodged in place along the slant side of the central rib, the handle portion is clapped down over the upper surfaces of the operative member, this movement being preferably commenced by gripping with the outer corner or edge of the bearing surface 11 the sheet 20 against the outer edge of ledge 14, while the fingers of the disengaged hand hold the free edge against its sloping bearing surface. Being thus prevented from slacking up, the sheet is crowded against its bearing surfaces by the handle bearing surfaces which are folded over, toward ledge 15, ledge 14 acting as a pivotal line, while the other ledge sits fast in its slot. Finally the thumbscrew 18 is set home, and as its pressure comes on the sheet, the effect of the flat ledge 14, in combination with the slant side of the central rib running directly up from that ledge, and with the fact that the free or terminal edge of the sheet is led only halfway up the slant side, so that it is free to move farther up, causes all the slack remaining in the sheet to be taken up by the urging upward of said free end, the other edge being fast in its slot. Another feature of value in this disposition is that owing to the turn or corner provided in the gripping surfaces at the inner edge of ledge 14, the cleansing strip is held against being pulled loose by friction against the surface being finished, the grip being much firmer than would be the case were the bearing surfaces unbroken parallel planes.

In Fig. 4 of the drawings I have shown a modified form of attaching the edges of the surfacing sheets 20 to the operative member. To each side of the walls of the central rib 13, a row of spaced hooks or pins 21 is secured. A portion of the slant side of the recess 10 in the locking handle is cut away to make clearance for these hooks or pins, but in so doing a part of the upper surface that is parallel to the corresponding surface of the central rib is retained, to act as guide and steadying means. At the lower part of the slant side of the recess a portion of the parallel surface is similarly retained, for the express purpose of tightening the abrading sheet. This construction is carried out symmetrically on both sides of the recess 10. One end of the sheet 20 is secured to the hooks 21 on one side of the central rib by eyelets or the like, and being firmly retained there enables the sheet to be stretched tightly by hand in passing it over and around the supporting surfaces of the operating member, as was done before, the terminal edge being, in this case hooked or clipped to the row of hooks or other suitable fasteners 21, protruding from the second slant side of the central rib. When, now, the locking handle is set home by the thumb screw or other suitable clamping means, the coöperation of the flat ledges on each side of the operative member, with the slant sides running up therefrom, and the similar but obverse bearing surfaces of the locking handle, pressing down on the stretched fabric, will cause all the ridges, folds, wrinkles and slack pockets of that sheet to be taken up. The fastening means 21 prevent each edge of the sheet from being pulled downward, toward the lower or working face of the operative member, but they do not prevent the two wings from being pushed upward into the clearance spaces provided on each side of the recess in the under side of the locking handle, above the coöperating parallel surfaces adjoining the inner edges of the two ledges 14, 15.

Fig. 6 shows a loose or absorbent sheet 20, to be spread on the frame above described, when the tool is to be used for dusting and cleaning.

Fig. 3 illustrates a modification of the device, in which the locking handle 8 is clamped to the operative member 9, by a cam and link, 22, 23, instead of the thumbscrew and threaded socket 18, 19.

Having thus described my invention and ascertained the manner of putting it into practice, what I claim as new, and desire to have protected by Letters Patent is the following:

A scouring and finishing tool, comprising an operative member and a handle member, said operative member having a bearing face and on the opposite side, a longitudinal, central rib with slant sides, and a ledge at each side of said rib, said rib fitting into a longitudinal groove in said handle member, while said ledges are adapted to fit and bear against corresponding strips or shoulders extending along the sides of said groove; means for releasably securing said two members together, and means carried by said operative member for retaining one edge of a strip of operative material adapted to be stretched over said bearing face and clamped between said two members.

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