T. WOLF.

SCRAPER AND POLISHER.

APPLICATION FILED MAY 9, 1912.

1,118,989. Patented Dec. 1, 1914.

Fig. 1.

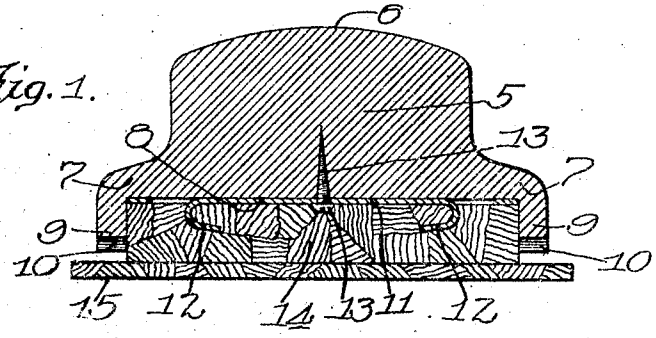


Fig. 2.

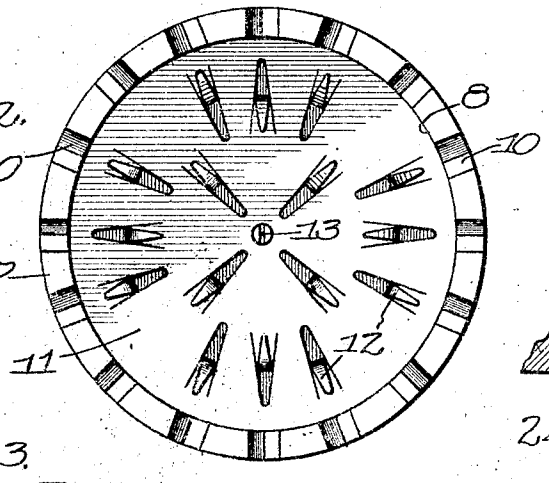


Fig. 5.

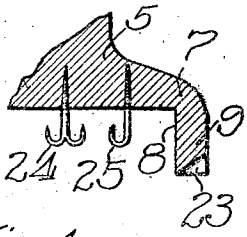


Fig. 3.

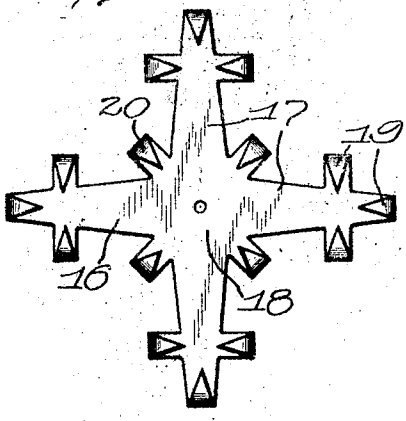
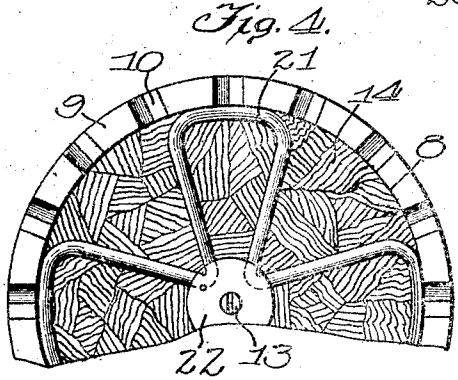


Fig. 4.



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UNITED STATES PATENT OFFICE.

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SCRAPER AND POLISHER.

1,118,989. Specification of Letters Patent. Patented Dec. 1, 1914.

Application filed May 9, 1912. Serial No. 696,093.

To all whom it may concern:

Be it known that I, THEODORE WOLF, 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 Scrapers and Polishers, of which the following is a specification.

This invention relates to devices for holding an abrasive or polishing material, such, for example, as fibrous material, of any suitable kind, which is used for cleaning, scraping or polishing.

The principal object of the invention is to provide an improved, simple and inexpensive device of this class, which will be effective and efficient in operation.

For the attainment of these ends and the accomplishment of other new and useful objects, as will appear, the invention consists in the features of novelty in the construction, combination and arrangement of the several parts generally shown in the drawing and described in the specification, but more particularly pointed out in the appended claims.

In the drawing Figure 1 is a cross sectional view of a device of this class, constructed in accordance with the principles of my invention; Fig. 2 is a view of the bottom of one of these devices, with the fibrous material omitted; Fig. 3 is a modified form of gripping plate which may be secured to the holder or block; Fig. 4 is a view looking at the bottom of a modified form of holder, part of the fibrous material being removed for clearness and part of the said material being retained in position in the recess of the block; Fig. 5 is a view of a block with triangular notches and removable hooks.

In cleaning, scraping or polishing a surface, and particularly in performing this operation upon some surfaces, it is customary to form a pad of the cleaning or polishing material, to grasp the same in the hand, and to apply it with pressure to the surface as desired. The material so employed frequently is of such a nature as to injure the hand when pressure is applied, and the constant pressure and rubbing may seriously injure the hand. Particularly is this true when the scraping or polishing material is of a metallic character, such, for example, as fibrous metal or metallic shavings, and the like. Furthermore, when pressure is applied to a small surface it is necessary to use the tips of the fingers, and it is not only difficult to retain the material in this position, but also is injurious to the end of the fingers. This invention contemplates the provision of a holder for such material which may be firmly grasped in the hand of an operator and pressure applied to a large or small area as desired.

Referring now more particularly to the drawing, a block 5 of any suitable material, such, for example, as wood or the like, is formed with a rounded top portion 6 and an extending portion 7 integral therewith, and preferably slightly larger in diameter than the rounded portion 6. This rounded portion 6 is also preferably circular in form, and of a diameter to be grasped by the hand of an operator, so that the rounded portion of the block constitutes a hand-hold therefor. The extending portion 7 is formed with a recess 8 which leaves a rim 9 at the outer edge of the extending portion 7. This edge or rim portion is formed with notches 10, in the surface thereof, extending through or partially through the rim and constituting additional means for retaining the abrasive material.

Disposed within recess 8 is a plate 11 of any desired or suitable material, but preferably formed of metallic substance and suitable in shape to be contained within the recess. This plate is provided with a plurality of projections or hooks 12, and in the present exemplification of the invention the hooks are formed by slitting the plate to form a tongue of metal, which is bent outwardly from the plate on one side thereof until it forms the hook 12. These hooks are preferably bent in different directions, so that the hooks will engage fibrous material in any direction of motion. This plate 11 may be secured to the block 5 in any desired or suitable manner, as, for example, by means of a screw 13 and the hooks 12 do not extend from the face of the plate a sufficient distance to extend beyond the rim or edge 9 of the block 5. Fibrous material 14 of any desired or suitable kind is disposed in the recess and held therein by the engagement of the hooks 12 with the material, and it will be evident that since the hooks are disposed or bent in all directions, that the material will be engaged thereby no matter what is the direction of movement of the block with respect to the fibrous material.

This fibrous material 14 which is positively held by the engaging hooks 12 may be employed to effect the polishing and scraping of a surface or a separate pad 15 of the same or a different material may be employed, which is positioned below the holder or scraper so that the fibrous material 14 will engage therewith and hold the material 15 in position, the material 15 being also held in position when the pressure is applied to the block 5 by the notched edges 9 of the block. With this construction it is possible to polish or scrape as large or as small a surface as desired, limited only by the size of the device itself, a small surface being treated by tipping the block upwardly upon one edge, whereupon the material, as 15, will be engaged and held by the notches in the edge without danger of displacing the material with respect thereto.

If desired, a plate 16, similar to that shown in Fig. 3, may be employed with the same block 5, and in this construction it will be noted that a plurality of arms 17 extend from a central perforated portion 18, having hooks 19, differently disposed with respect to each other upon each arm and with still other hooks 20 adjacent the central portion 18 thereof. Various other designs may be employed, but their function is the same, viz., to hold the abrasive material in position in the recess of the block.

Another modification is shown in Fig 4, in which the abrasive or fibrous material 14 is first disposed in the recess 8 of the member, and a looped wire or retaining member 21 is positioned over the material, the inner ends of the loop being disposed adjacent the center of the recess at which point a plate 22 is provided with a fastening device or a screw 13 which is adapted to hold the looped wire 21 and the fibrous material 14 in position in the recess. The fibrous material 14 projects through the loops sufficiently to engage the other fibrous material on the outside thereof, whereby it is positively held and the surface may be cleaned with the other described construction.

In using this device it is contemplated that any desired or suitable material may be used for the abrasive or polishing element, such, for example, as material known as mineral wool or steel wool, formed of fine steel shavings, also the material which fills the recess and the pad 15 may be of the same material or the pad only may be composed of the polishing or cleaning substance. By having the pad 15 separate from the pad 14, different pads may be employed and placed in the same position as the pad 15, without changing the material positively engaged by hooks 12. It will be observed that the bent hooks 12 do not extend below the edge of the rim 9, so that even if the material contained in the recess becomes worn or is removed or drops out, the surface which is being polished or cleaned will not be engaged by the hooks.

If desired, the notches in the rim may be formed as shown at 23 in Fig. 5, in which it will be seen that they are triangular in shape and beveled in depth, being of greatest depth on the outside and tapering inwardly. It is obvious that they may be tapered from the inside and may extend through or only partially through the rim. Instead of a toothed plate double pointed hooks 24 and single pointed hooks 25 may be inserted in the recess of the block by screwing them into the block or otherwise fastening them in position.

Pressure may be applied either to the whole block or to any portion of the periphery thereof, the notched edges being adapted to hold the polishing material under the block while pressure is applied to any part thereof, so that a large or small surface may be treated.

While I have thus described the preferred embodiment of my invention, it is evident that others may make various changes in the construction, combination and arrangement of the several parts without departing from the spirit and scope of the invention.

I claim—

1. A scraper and polisher comprising a recessed holder having a notched edge, a plate fastened to the holder against the inner surface of the recess, and grappling members upon the plate.

2. A scraper and polisher comprising a block formed with a hand-hold portion and a recess with notches in the edge thereof, and a plate with teeth projecting from one side thereof disposed in the recess and secured to the block against the inner surface of the recess.

3. The combination with a block formed with a recessed surface having a notched edge and a hand-hold portion on the side opposite from the recessed surface, of a plate with teeth projecting from one side thereof, disposed in the said recess with the teeth extending outwardly and means to secure the plate in the recess and against the inner surface thereof.

4. The combination with a block formed with a recess in one face thereof having a notched edge, of a plate formed with teeth on one side thereof extending less than the depths of the recess, and means to secure the plate in the recess and against the inner surface thereof.

5. A holder for mineral wool and the like, comprising a circular block with a rounded hand-hold portion on one side and an enlarged portion with a recess on the other side, the recess being surrounded by a notched rim, a metallic plate provided with hooked teeth projecting from one side there-

of and formed by pressing tongues of metal from the plate and bending them in different directions to form curved hooks, and means to secure the plate to the block in the recess, the plate and the teeth being less in thickness than the depth of the recess, and the teeth being disposed in different directions to engage the mineral wool or other material when the block is moved in any direction.

6. In a device of the class described, the combination of a circular block with a rounded hand-hold portion on one side and an enlarged portion with a recess opening from the other side, the recess being surrounded by a notched rim, a metallic plate provided with hooked teeth projecting from one side thereof and formed by pressing tongues of metal from the plate and bending them in different directions to form curved hooks, means to secure the plate to the block in the recess, the plate and the teeth being less in thickness than the depth of the recess, and fibrous material disposed in the recess and engaged by the teeth, and an independent pad of polishing material retained in position by contact with the fibrous material and the notched rim.

7. In a device of the class described, the combination of a circular block with a rounded hand-hold portion on one side and an enlarged portion with a recess opening from the other side, the recess being surrounded by a notched rim, a metallic plate provided with hooked teeth projecting from one side thereof and formed by pressing tongues of metal from the plate and bending them in different directions to form curved hooks, means to secure the plate to the block in the recess, the plate and the teeth being less in thickness than the depth of the recess, fibrous material disposed in the recess engaged by the teeth of the plate and held thereby in the recess regardless of the direction of movement of the block, the said material projecting without the recess, and a pad of material for scraping or polishing disposed below the block upon the surface to be treated and engaged by the material held in the recess of the block, the said pad of material being larger than the enlarged portion of the block so that the notches in the rim thereof may be pressed downwardly to engage the said pad around the edges thereof.

8. A scraper and polisher having a recessed holder, and a notched rim about the recess, said notches being of greater depth at the exterior of the rim than at the interior thereof.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 6th day of May A. D. 1912.

THEODORE WOLF.

Witnesses:
ESMEE WALTON,
KENT M. MONNELL.