

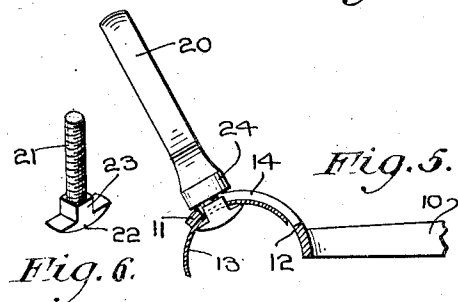
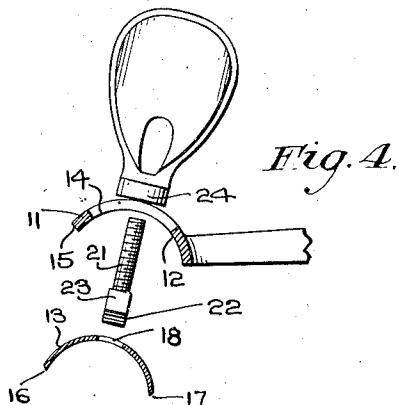
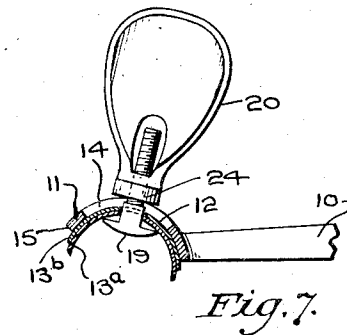
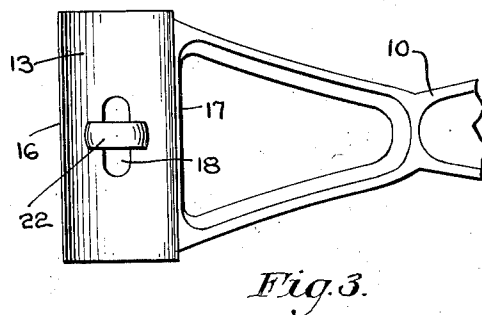
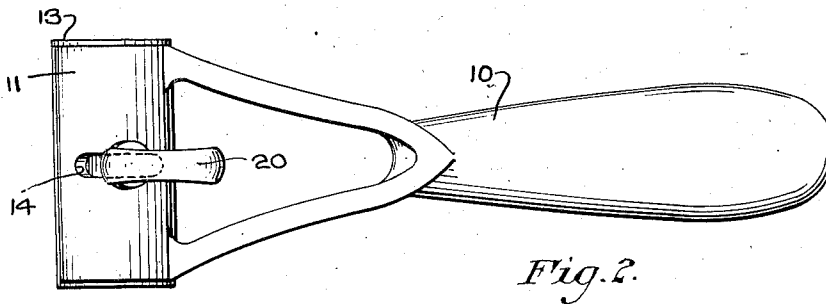
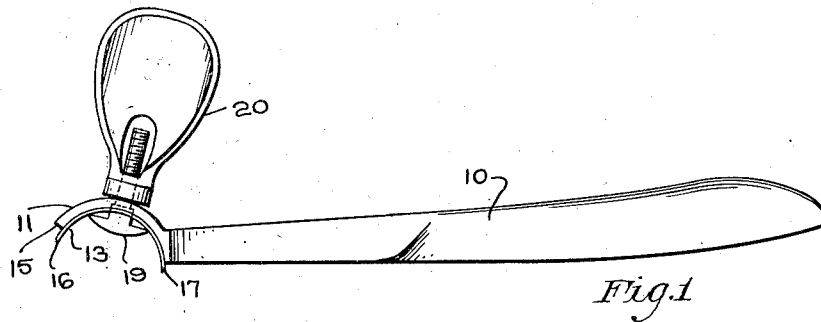
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SCRAPER

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SCRAPER

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5 Claims. (Cl. 145-47)

This invention relates generally to scrapers for smoothing and finishing surfaces of floors and the like, the principal objects of the present invention being to provide a scraper tool which is not only efficient in operation and durable in use but which is inexpensive to manufacture.

Further important objects of the invention are to provide a scraper which is characterised by the provision of a quick-detachably secured scraping blade; to provide a scraper having a blade mounting of such design as to permit the blade to be angularly adjusted relatively to the scraper handle to vary the depth of the cut and to provide a scraper the blade mounting of which is adapted to accommodate a plurality of blades so that there is immediately available in the tool a blade to replace that which may have become dulled through use.

Other advantages of the invention, such as result from the mode of quick-detachably securing the blade in operative position and from the shape and construction of the double-edge blade, will be apparent more fully hereinafter.

The invention consists substantially in the combination, construction, location and relative arrangement of parts, all as will be described more fully hereinafter, as shown in the drawing and as finally pointed out in the appended claims.

In the said accompanying drawing:—

Figure 1 is a side elevational view of the scraper constructed in accordance with and embodying the principles of the present invention;

Figure 2 is a top view thereof;

Figure 3 is a bottom view of the blade-equipped end of the tool;

Figure 4 is a view showing the several parts of the tool in separated relation;

Figure 5 is a sectional view showing the blade shifted into a position other than that of Figure 1;

Figure 6 is a perspective view of the locking bolt; and

Figure 7 is a sectional view showing a plurality of blades secured within the blade mounting.

Referring now to the drawing, and more particularly to Figures 1 to 6 thereof, it will be observed that the scraper is provided with a handle or supporting member 10 of metal, wood or any other suitable material. This handle 10 is provided at its forward end with a transversely extending blade mount or support 11 the inner surface 12 of which is of arcuate formation to provide a curved seat for the blade 13. Provided in the blade support 11, preferably midway between the opposite ends thereof, is an elongated slot

14, this slot being preferably arranged such that it extends substantially at right angles to the free edge 15 of the blade mount.

The blade 13 which is adapted for accommodation within the arcuately formed blade mount 11 is of curvilinear form in cross-section, its radius of curvature being slightly greater than that of the curvilinear surface 12 of the blade mount. The opposite edges 16 and 17 of the blade are of rectilinear form and are sharpened to provide a pair of cutting or scraping edges. Provided centrally in the blade 13 is an elongated slot 18 which extends in a direction paralleling the cutting edges of the blade, the arrangement being such that when the blade is properly seated within the support 11 thereof, the slots 14 and 18 intersect each other.

For securing the blade 13 in operative position within its support 11, the securing elements 19 and 20 are employed. The element 19 is in effect a bolt having a threaded shank 21 and an enlarged head 22, the latter being of a width and length sufficient to permit its free passage through the slot 18 of the blade when said head is brought into proper registry with said blade slot. Provided immediately adjacent the elongated head 22 of the bolt is a squared portion 23 which when projected through the slot 18 of the blade serves to prevent relative rotation between the bolt 19 and the blade. The element 20 serves as a knob to be grasped by one hand of the operator and is in effect a winged nut having an interiorly threaded boss 24 at its inner end for threadedly engaging the shank 21 of the bolt.

Ordinarily, the elements 19 and 20 are always in threaded engagement with the blade support 12 intervening the head 22 of the bolt and the boss 24 of the nut. To clamp the blade 13 in operative position, the bolt is backed out somewhat from its nut so as to space the bolt head 22 from the curved surface 12 of the blade support. The bolt head is then disposed at right angles to the slot 14 so as to permit it to be projected freely through the blade slot 18 whereupon the bolt head is rotated through 90 degrees so as to position it at right angles to the blade slot. The nut 20 is then tightened in consequence of which the blade is firmly clamped in position against its curved seat 12. Due to the fact that the blade is of somewhat less curvature than its seat, the blade is flexed while in clamped position to such extent that the resulting spring pressure exerted by the blade against the bolt head is amply sufficient to maintain the parts firmly secured together.

With the parts secured in position as shown in Figure 1, it will be observed that both of the cutting edges 16 and 17 of the blade are available for use so that, depending upon which edge is employed, the tool may be either pushed or pulled as conditions may require. Should it be desired to adjust the blade angularly with respect to its seat so as to provide a different leverage and to vary the depth of the cut, this may be readily accomplished by the simple expedient of loosening the knob or nut 20 sufficiently to permit the same to be shifted in the direction of the slot 14 in consequence of which the blade may be angularly shifted into any desired position, as for example into the extreme position shown in Figure 5. When the desired adjustment is secured, the parts may again be clamped securely together by tightening the knob or nut 20 upon the bolt 19.

The arcuately shaped blade mounting or support 11 is adapted to hold a plurality of blades if desired, two such blades 13a and 13b being shown in Figure 7. The blades are arranged in nested relation and are secured in position in the manner described hereinbefore. When two or more of the blades are so clamped in position, only the edges of the outermost blade 13a are exposed for the cutting or scraping operations. Should the edges of said outermost blade become dull through use, it may be readily removed upon loosening the nut 20 whereupon there is immediately available a fresh blade 13b.

It will be understood, of course, that the invention is susceptible of various changes and modifications without departing from the real spirit and general principles thereof and it is accordingly intended to claim the same broadly, as well as specifically, as indicated by the appended claims.

What is claimed as new and useful is:—

1. A scraper comprising an operating handle for a blade mounting formed at one end thereof, a blade adapted to be secured upon said mounting, said mounting and said blade being respectively provided with elongated slots and arranged in intersecting relation, a stud having an enlarged head and a threaded shank adapted to be projected upwardly through said slots, said stud head being adapted to engage the concave surface of the blade upon opposite sides of the slot therein, and an enlarged nut adapted to threadedly engage the shank of the stud whereby to clamp said blade firmly against said mounting, the intersecting slots aforesaid being so arranged as to permit the blade to be shifted angularly with respect to its mounting.

2. A scraper comprising an operating handle having a blade mounting formed at one end thereof, said blade mounting being of arcuate cross-section and having an elongated slot extending in the direction of its curvature, an arcuately shaped blade adapted to be seated against the concave surface of said mounting, said blade being provided with an elongated slot extending substantially at right angles to the mounting slot and adapted for registry with the latter, and quick-detachable securing means for clamping said blade in position within said mounting, said

securing means comprising a stud having an elongated head adapted for projection freely through the blade slot so that upon rotation of the stud the head thereof extends at right angles to the blade slot, and means for clamping the blade between said concave surface of the mounting and said stud head.

3. A scraper comprising an operating handle having a blade mounting formed at one end thereof, said blade mounting being of arcuate cross-section and having an elongated slot extending in the direction of its curvature, an arcuately shaped blade adapted to be seated against the concave surface of said mounting, said blade being provided with an elongated slot extending substantially at right angles to the mounting slot and adapted for registry with the latter, and quick-detachable securing means for clamping said blade in position within said mounting, said securing means comprising a stud having an elongated head adapted for projection freely through the blade slot so that upon rotation of the stud the head thereof extends at right angles to the blade slot, and means for clamping the blade between said concave surface of the mounting and said stud head, the shank of said stud being projected through the mounting slot so that upon shifting the same angularly of the slot the blade is angularly adjusted relatively to its mounting.

4. A scraper of the character described comprising an operating handle having a blade mounting formed at one end thereof, said blade mounting being of arcuate cross-section and having an elongated slot therein extending in the direction of its curvature, a headed stud operatively associated with the mounting with the headed end thereof projected through said slot, said stud being adapted to be rotated whereby the head thereof extends transversely of the slot, means coaxing with the stud for drawing the said head toward the concave surface of the mounting whereby to secure one or more curved blades against said concave surface of the mounting, said blades being provided with slots therein extending at right angles to the mounting slot and through which said stud head is projected while the latter is arranged in the transversely extending position aforesaid, the stud being adapted to be rotated further, prior to the clamping operation, to position the said head at right angles to the blade slots.

5. In a scraper of the character described, in combination, a blade mounting of arcuated cross-section, an arcuately shaped blade adapted to be seated within said mounting, said blade being provided with a slot therein, and a clamping member carried by the mounting for clamping the blade in position, said clamping member being provided with a head which is adapted to be projected through a blade slot and thereafter rotated to engage the inner surface of the blade upon opposite sides of said slot, said mounting being provided with an elongated slot through which said clamping means projects and along which the latter is shiftable to correspondingly shift the blade angularly with respect to said mounting.

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