

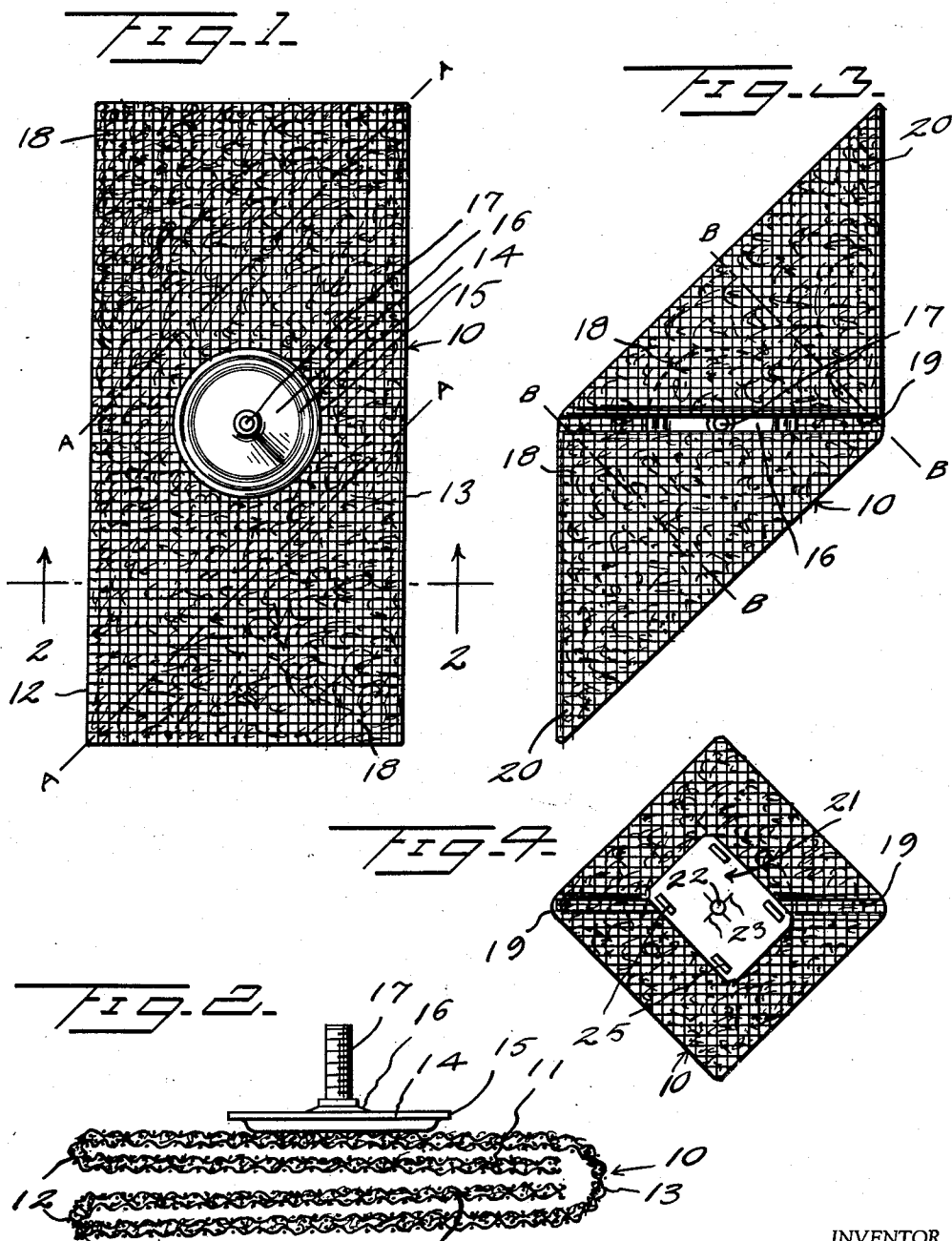
Nov. 3, 1953

O. L. MURDOCK
CLEANING DEVICE

2,657,413

Filed July 6, 1950

2 Sheets-Sheet 1



INVENTOR

Orrice L. Murdock

BY

Kimmel & Crowell
ATTORNEYS

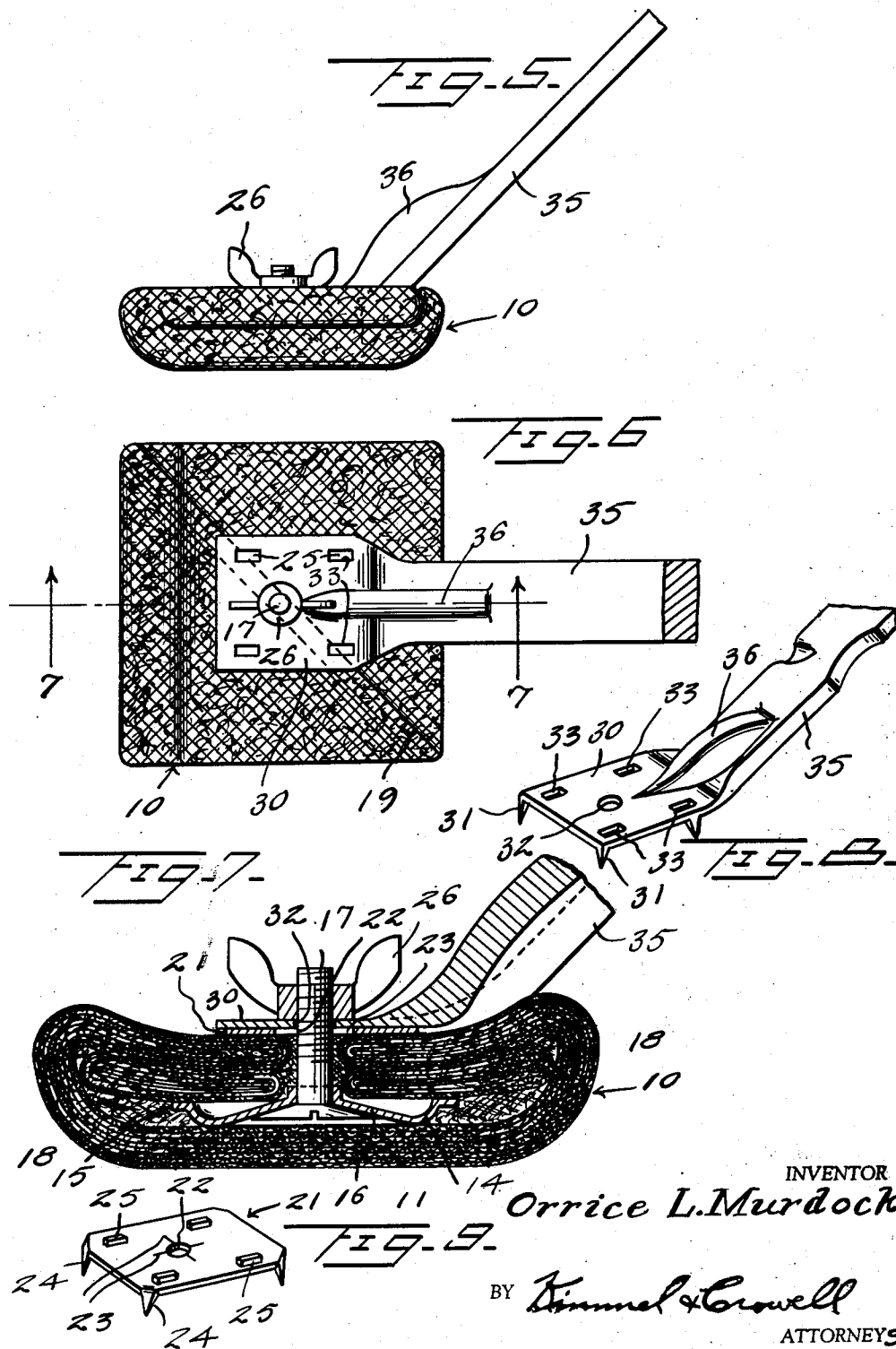
Nov. 3, 1953

O. L. MURDOCK
CLEANING DEVICE

2,657,413

Filed July 6, 1950

2 Sheets-Sheet 2



UNITED STATES PATENT OFFICE

2,657,413

CLEANING DEVICE

Orrice L. Murdock, Kensington, Md.

Application July 6, 1950, Serial No. 172,300

2 Claims. (Cl. 15—209)

1

This invention relates to a cleaning device and, more particularly, to a metallic mesh scouring device, or the like.

A primary object of this invention is the provision of an improved metallic mesh scouring device adapted to be dispensed as a replacement unit to be applied to a suitable handle.

A further important object of the invention is the provision of an improved metallic mesh pad of folded metal mesh material provided with means insuring the retention of the shape of the device.

An additional object of the invention is the provision of securing means for retaining the shape of such a folded pad including an upright, the pad being so folded that the upright does not penetrate the material of the mesh.

Still another object of the invention is the provision of a pair of clamping plates, one positioned interiorly of the folded mesh member, and the other exteriorly, with a direct connection between the two plates to enable clamping thereof which connection does not penetrate the fabric of the pad.

A further and more specific object of the invention resides in the provision of an improved exterior clamping plate which will preclude turning of the pad about the clamping means and which readily lends itself to association with a handle member.

Still other objects reside in the combination of elements, arrangements of parts, features of construction, all as will be more fully pointed out hereinafter, and shown in the accompanying drawings wherein there is disclosed a preferred embodiment of this inventive concept.

In the drawings:

Figure 1 is a top plan view of one form of pad embodying features of the instant invention after the first folding operation showing the interiorly clamping plate centrally positioned thereon.

Figure 2 is an enlarged sectional view taken along the line 2—2 of Figure 1 showing the details of the first folding operation.

Figure 3 is a top plan view of the pad after the second folding operation.

Figure 4 is a top plan view of the pad after the third folding operation and showing the exterior clamping plate in position.

Figure 5 is a side elevational view of the finished pad showing the handle in place thereon.

Figure 6 is a top plan view of the structure of Figure 5.

Figure 7 is an enlarged sectional view taken substantially along the line 7—7 of Figure 6.

Figure 8 is a perspective view partly broken

2

away of one form of handle adapted for use with the pad of the instant invention; and

Figure 9 is a perspective view of the outer clamping plate.

Similar reference characters refer to similar parts throughout the several views of the drawings.

Referring now to the drawings in detail and, more particularly, to Figures 1 and 2, there is disclosed at 10 a sheet of metallic woven mesh material as shown after the first folding operation. This first folding operation as disclosed in Figure 2 comprises taking the end portions 11 of a substantially rectangular sheet of metallic mesh and folding inwardly along fold lines 12 to a substantially central point of the device and then reverting the entire assembly along a fold line 13 to provide a four fold metal mesh rectangular sheet as shown in Figure 1. In substantially the center of this sheet there is positioned an inner clamping plate which comprises a circular disc like member 14 having a flange, or rim 15 and an interior conical portion 16 from which projects a screw threaded stud 17. The second step in the assembly of the device consists in folding the triangular end portions 18 of the pad of Figure 1 along the fold lines A—A of Figure 1 interiorly toward the center of the device until the construction assumes the configuration of Figure 3, it being noted that there is thus left a central slot or aperture 19 between the folded over end portions 18 through which the stud 17 projects.

The next folding operation is made along the fold lines B—B of Figure 3, the triangular end portions 20 then being folded over to the position disclosed in Figure 4, it being noted that these portions are so folded as to leave the slot 19 substantially open in such manner that the stud 17 may project upwardly through the second and third folds of the device without the necessity of any penetration of the metal mesh fabric.

The top or outer clamping plate, generally indicated at 21, is then positioned over the stud 17 and clamped downwardly to hold the pad in the folded position to Figure 4.

Referring now to the outer clamping plate 21 in detail it will be seen that, as best shown in Figure 9, the plate is of rectangular configuration and includes a central aperture 22 from which extend radial slots 23 in order that the plate may be quickly slipped over the threaded stud 17 and retained thereon by the relatively resilient action of the fingers formed by the slots 23 in a known manner. At each corner the plate 21 is provided with a tang 24 adapted to engage in the upper-

3

most fold of the pad assembly, while the outer surface of the plate 21 is provided adjacent its corners with a plurality of spaced upwardly extending lugs 25, the purpose of which will be more fully pointed out hereinafter.

The assembly above described which may or may not be provided with a conventional wing nut 26 as desired, may thus be sold or otherwise dispensed as a replacement unit comprising an integral unitary scouring pad for use with any desired handle.

A particularly suitable handle for the device, however, is best disclosed in Figures 6 and 8 which handle comprises a rectangular plate 30 of slightly greater dimensions than the plate 21, provided at its corners with tangs 31 adapted to engage in the material of the top of the pad and having a centrally positioned aperture 32 through which stud 17 is adapted to pass for securing the handle to the pad. Rectangular openings 33 adjacent the corners of the plate are adapted to overlie the lugs 25 to prevent turning of the pad relative to the handle.

From the plate 30 a suitable offset angularly inclined handle portion 35 may extend upwardly at any desired angle and be of any desired length. A raised reinforcing lug 36 may, if desired, connect the handle 35 to the plate 30.

Obviously when it is desired to replace a pad on the handle, the same may be effected merely by unscrewing the wing nut 26 and replacing the used or worn pad with a new one.

From the foregoing it will now be seen that there is herein provided an improved cleaning device which accomplishes all the objects of this invention and others, including many advantages of great practical utility and commercial importance.

As many embodiments may be made of this inventive concept and as many modifications may be made in the embodiments hereinbefore

4

shown and described, it is to be understood that all matter herein is to be interpreted merely as illustrative and not in a limiting sense.

I claim:

1. A cleaning device comprising a rectangular abrasive sheet formed of loosely woven metallic strands, the diagonally opposite end portions of which are folded diagonally to leave a center slot between adjacent edges of said folded end portions, and then again folded oppositely and diagonally to leave a center slot aligned with said first-mentioned slot, a clamping plate under said folded portions, and a fastening member secured to said clamping plate and extending through said slots for attaching a handle to the device.

2. A cleaning device comprising a rectangular abrasive sheet formed of loosely woven metallic strands, the diagonally opposite end portions of which are folded diagonally to leave a center slot between adjacent edges of said folded end portions, and then again folded oppositely and diagonally to leave a center slot aligned with said first-mentioned slot, a clamping plate under said folded portions, a stud secured to said clamping plate extending through said slots, a second clamping plate secured to said stud exteriorly of said folded portions, and tangs on the underside of said second clamping plate.

ORRICE L. MURDOCK.

References Cited in the file of this patent

UNITED STATES PATENTS

Number	Name	Date
1,098,813	Mahringer	June 2, 1914
1,899,552	Bookman	Feb. 28, 1933
1,912,685	Bookman	June 6, 1933
2,273,033	Goodloe et al.	Feb. 17, 1942
2,472,403	Burwen	June 7, 1949