Oct. 23, 1951 R. P. HOOD ET AL 2,572,150

STEEL WOOL PAD

Filed Oct. 4, 1949

FIG. 1.

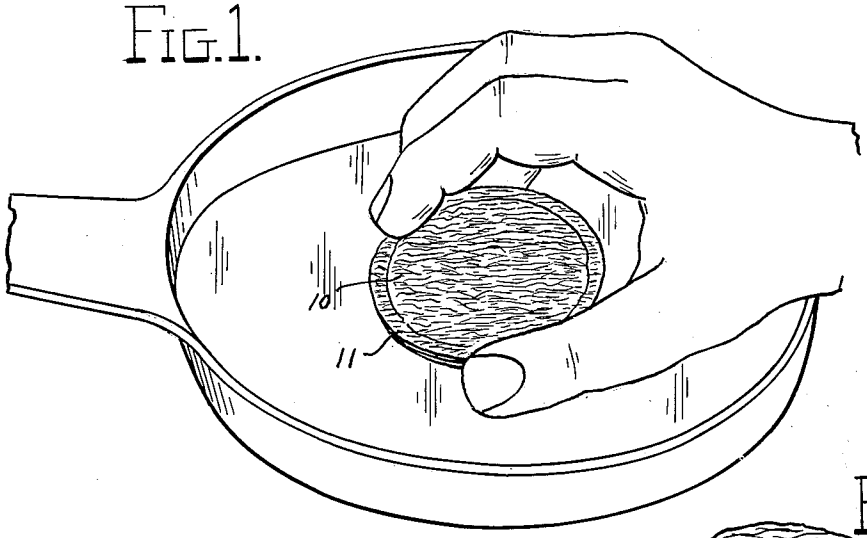


FIG. 3.

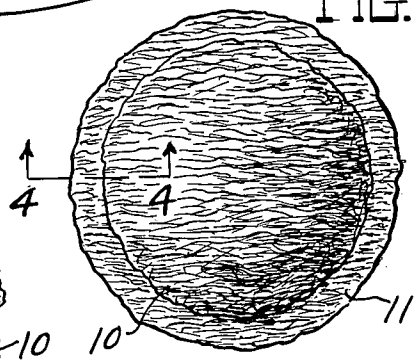
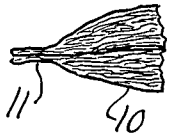


FIG. 4.



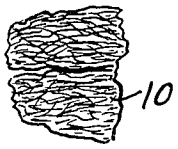


FIG. 6.

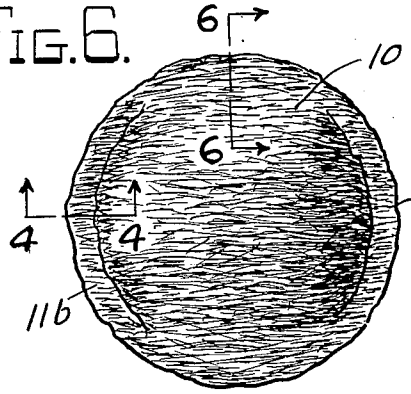


FIG. 5.

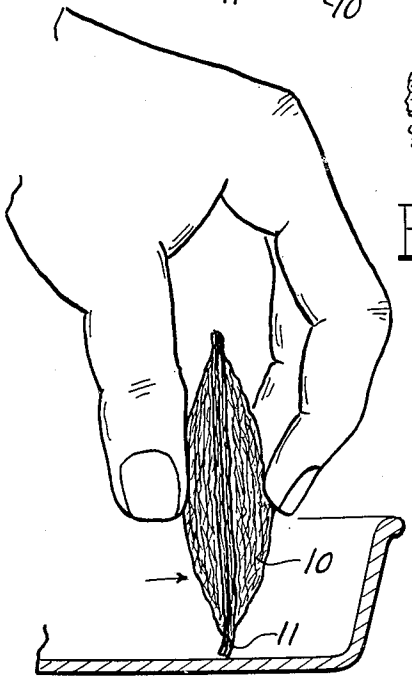


FIG. 2.

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Patented Oct. 23, 1951

2,572,150

UNITED STATES PATENT OFFICE

2,572,150

STEEL WOOL PAD

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Application October 4, 1949, Serial No. 119,452

1 Claim. (Cl. 15—209)

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This invention relates to steel wool pads but more particularly of the type used manually for scouring or the like, and an object is to produce a homogeneous pad of this character, the body of which can be used for general abrasive work but the edge portion of which has increased abrasive properties.

Another object is to produce a steel wool pad, an edge portion of which is stiffened not only to afford increased abrasive properties but also to assist in retaining the shape of the pad.

Other objects and advantages of the invention will hereinafter appear, and for purposes of illustration but not of limitation, embodiments of the invention are shown on the accompanying drawings, in which

Figure 1 is a perspective view of a steel wool pad showing it being used to scour a skillet;

Figure 2 is an edge elevation of the steel wool pad showing the stiffened edge portion being used for abrasive purposes, a portion of the skillet being shown in section;

Figure 3 is a top plan view of the steel wool pad;

Figure 4 is a sectional view substantially on the line 4—4 of Figure 3;

Figure 5 is a plan view of an alternate form of steel wool pad in which a pair of stiffened edge portions are provided instead of a single peripheral edge portion as in Figure 3; and

Figure 6 is a sectional view on the line 6—6 of Figure 5.

The illustrated embodiment of the invention comprises a steel wool pad 10 which, in this instance, is round in one dimension although the shape may be varied as will be readily apparent. The pad is made up of relatively fine steel wool strands or fibers which generally extend in one direction, although if desired, they may be arranged haphazardly. The body of the pad is relatively loose or springy, a characteristic inherent in steel wool pads of this general character.

Particularly in the case of relatively small pads which are manually worked, the body of the pad does not retain its self-sustaining shape and appearance after it has been used a relatively short period of time. In order to overcome this objection and also to afford increased abrasive properties to the pad, the edge or rim portion 11 of the pad is subjected to relatively heavy pressure which operates not only to flatten the pad at that point as shown on Figure 4, but to so compress and compact the fibers in that region as greatly to stiffen the edge portion of the pad. Rim portion 11 is thus maintained in a highly compressed state solely by the deformation of the metallic wool under compression. Preferably, a substantial portion of the edge is subjected to this heavy pressure so as to stiffen the pad a considerable distance inward from its periphery. Not only does the stiffened edge portion 11 aid substantially in retaining the shape of the pad while it is being used for abrasive work, but also

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affords an increased abrasive edge portion enabling the pad to be used as illustrated in Figure 2, in which it will be seen that rim portion 11 is essentially a hard, relatively thin blade capable of use for scraping. Due to the fact that the fibers or strands are compressed together greatly reducing the cross sectional dimension of the pad in that region, the edge portion of the pad has much greater abrasive properties than the body of the pad when the latter is used flatwise as illustrated in Figure 1. Thus it will be apparent that by subjecting the edge of the pad to very high pressure, sufficient to compact and stiffen that region of the pad, not only is the shape of the pad retained over a much longer period but also an additional abrasive portion is provided which is firmer and stiffer than the body of the pad in regions where increased abrasive properties are required.

In the alternate form shown in Figures 5 and 6, the entire rim or periphery of the pad is not subjected to the heavy pressures but only diametrically opposed portions 11*a* and 11*b*, thus leaving the remaining edge portions uncompressed and in the state of the body of the pad. The shape of this pad is retained by the two stiffened edge portions which also serve for increased abrasive work.

If desired, particularly for household use, the pads may be impregnated with soap to assist in the cleaning of utensils as will be readily understood by those skilled in this art.

It is to be understood that the size of the strands or fibers of steel wool may be varied as desired according to the degree of abrasion required. It is also to be understood that other changes in details of form and arrangement may be varied without departing from the spirit of the invention especially as defined in the appended claim.

What we claim is:

An abrading device comprising a self-sustaining mass of metallic wool, the central portion of which is relatively free and yielding, and a highly compressed flattened, essentially hard thin blade at the rim portion and providing a stiffened region to afford greater abrasive properties and to retain the shape of the mass, said rim portion being retained in its highly compressed state solely by deformation of the wool under compression.

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CHARLES W. GEBHARDT.

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The following references are of record in the file of this patent:

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