May 31, 1960 G. HOROWITZ 2,938,223

STEEL WOOL PAD WITH HANDLE

Filed May 15, 1957 2 Sheets-Sheet 1

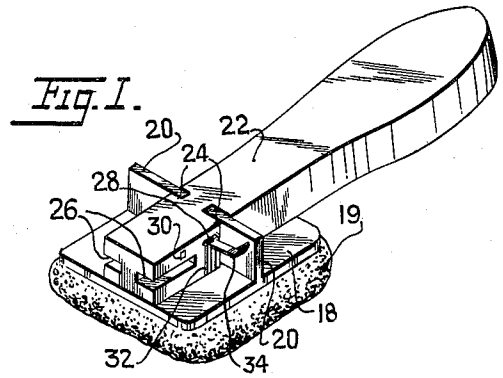


Fig. 1.

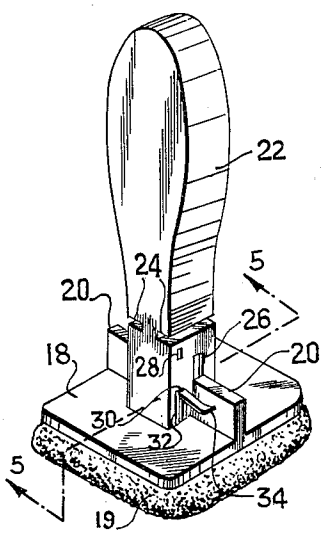


Fig. 2.

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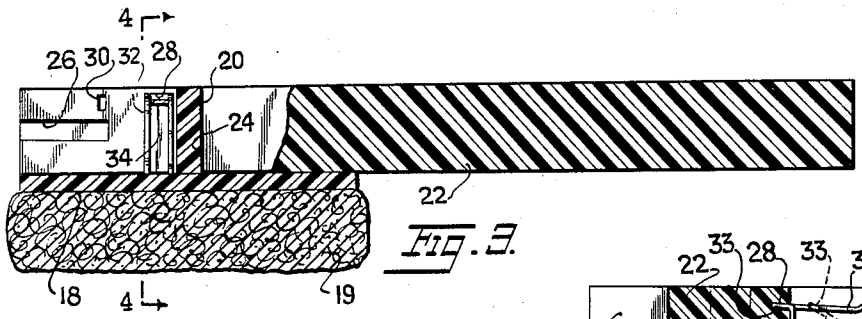


Fig. 3.

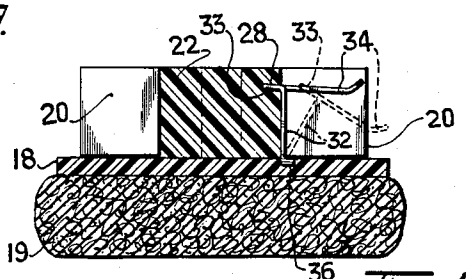


Fig. 4

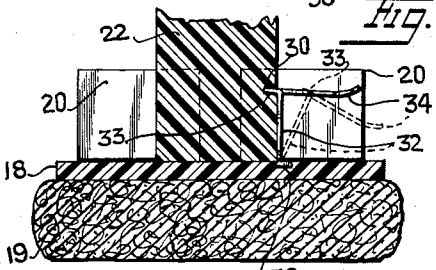


Fig. 6.

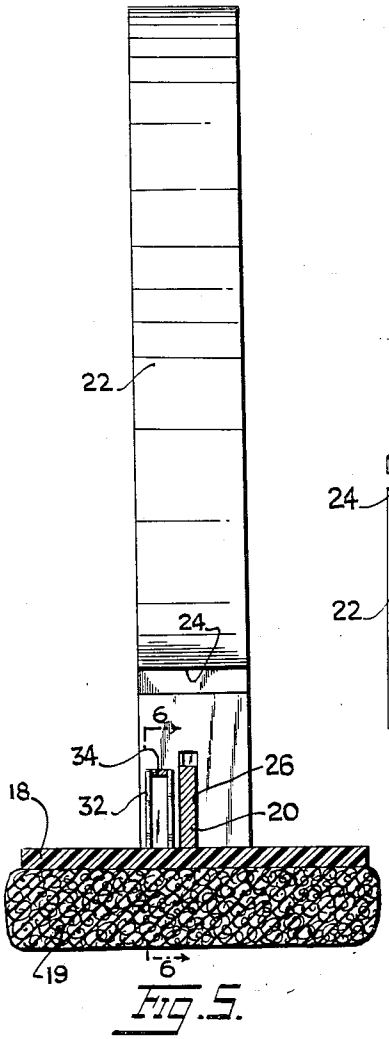


Fig. 5.

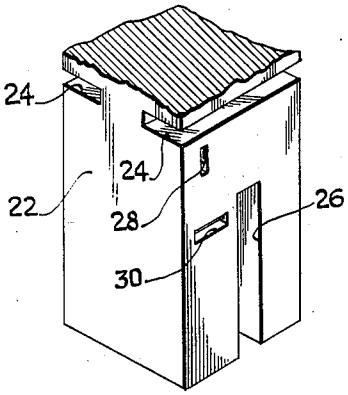


Fig. 8.

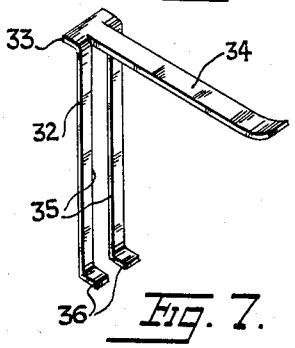


Fig. 7.

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STEEL WOOL PAD WITH HANDLE

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1 Claim. (Cl. 15—209)

This invention relates to pads of steel wool, used for cleaning pans, etc.

Ordinarily, steel wool pads are sold without handles, and without backing plates or other stiffening means. As a result, such pads are rather difficult to handle. In grasping a pad, one brings the fingers too close to the surface being cleaned, tending in many instances to cause injury or discomfort to the user. Further, one is unable to keep the steel wool pad properly flattened out during the reciprocating movement thereof upon the surface being cleaned. Still further, there is the additional difficulty that it is difficult to maintain a proper grip upon the pad. In addition, one's hands tend to become roughened and reddened, by continual grasping of the steel wool and immersion thereof in soapy water.

The main object of the present invention is to provide a steel wool pad and handle means therefor, so designed as to eliminate the several difficulties noted previously herein.

Another object is to provide a steel wool pad and handle, which will be capable of manufacture at so low a cost as to justify commercial production thereof.

Yet another object is to provide a steel wool pad and handle, which can be disposed of after the pad has been used to an extent such as would prevent further efficient use thereof.

Yet another object is to provide a steel wool pad and handle that will be particularly designed to permit the interchange of handles, that is, the steel wool pad and backing plate therefor can be disposed of after efficient use thereof is no longer possible, with the handle being readily attachable to the backing plate and being capable of detachment for use on a new pad and backing plate.

A further object is to so form the above mentioned handle as to permit it to be readily adjusted to either of two angularly spaced extreme positions ninety degrees apart, to permit use of the pad with maximum efficiency in different types of cleaning operations, that is, the handle may be extended straight outwardly from the pad if it is desired to insert the pad in a deep, relatively narrow recess such as would be true when one is cleaning the bottom of a deep, relatively small diameter receptacle. Then again, the handle may be adjusted to another position in which it extends laterally from the pad almost in the plane thereof, to facilitate cleaning of the side walls of a relatively shallow, large diameter receptacle.

For further comprehension of the invention, and of the objects and advantages thereof, reference will be had to the following description and accompanying drawings, and to the appended claim in which the various novel features of the invention are more particularly set forth.

In the accompanying drawings forming a material part of this disclosure:

Fig. 1 is a perspective view of a steel wool pad and handle embodying my invention.

Fig. 2 is a view similar to Fig. 1 with the handle adjusted to a vertical position.

Fig. 3 is an enlarged sectional view taken through the longitudinal center of Fig. 1, parts being shown broken away.

Fig. 4 is an enlarged sectional view substantially on line 4—4 of Fig. 3, a detent being shown in full and dotted lines in locking and unlocking positions respectively.

Fig. 5 is an enlarged sectional view substantially on line 5—5 of Fig. 2.

Fig. 6 is a sectional view on the same scale as Fig. 5, taken substantially on line 6—6 of Fig. 5, the detent being shown in full and dotted lines in locking and unlocking positions respectively.

Fig. 7 is an enlarged perspective view of the detent per se.

Fig. 8 is a fragmentary perspective view of the lower portion of the handle, the scale being enlarged above that of Figs. 3 and 5, only the lower portion of the handle being shown.

Referring in detail to the drawings, in Fig. 1, there is shown a steel wool pad made in accordance with the invention having a flat, approximately rectangular planiform backing plate **18**, with rounded corners and cemented at its underside to a steel wool pad **19** of any desirable thickness, the marginal portion of which projects slightly beyond the periphery of the backing plate. This is for the purpose of preventing the backing plate from striking the surface being cleaned in a manner that would tend to mar or scratch the surface. Integrally molded upon and projecting upwardly from plate **18**, medially between the opposite end edges of the plate, are transversely spaced, coplanar walls **20** of rectangular, plate-like formation, spaced comparatively closely apart at opposite sides of the center point of the plate **18**, as best shown in Fig. 1. The walls **20** lie in a common plane normal to the plane of the plate **18**, and said walls **20**, as will be understood, together constitute handle means which can be used by being grasped directly by the hand of a user, for reciprocating the pad over the surface being cleaned.

Obviously the backing plate and handle means can be made so cheaply of plastic material as to permit the same to be disposed of with the steel wool pad, after the effective life of the pad has ended. If desired, an extension handle **22** can be connected to the handle means **20**. The extension handle **22** is in the form of an elongated, one-piece handle member, which can be of molded plastic or the like, having inwardly from its base end a pair of opposed, parallel slots **24** extending transversely of the handle extension **22** at opposite sides thereof (see Fig. 2). The slots are cut into the handle extension rather deeply, being spaced apart at their bottom walls a distance transversely of the handle equal to the distance between the walls **20**.

Also formed in the handle extension **22** are diametrically opposed longitudinal slots **26**. These terminate at their inner ends short of the transverse slot **24**, and are formed in the same side surfaces of handle extension **22** as the slots **24**.

Adjacent one of the slots or grooves **24**, there is formed in the same side surface of the handle extension a short locking groove **28**, the length of which is normal to the length of the adjacent groove **24** (Fig. 8). Adjacent the inner end of the groove **26** at the same side of the handle extension is a small groove **30**, the length of which is also normal to the length of the groove **26**.

A detent **32** (Fig. 7) is in the form of a single piece of thin, light, leaf spring material, which in blank would constitute merely a small, elongated, rectangular mem-

ber. The detent **32**, at its upper end, has a forwardly projecting locking lug or finger **33**, adapted to complement and engage in the locking groove **28** as shown in Fig. 4, and also adapted to lockably engage in the groove **30**, when the handle is positioned as in Figs. 2, 5 and 6.

As shown in Fig. 7, longitudinal slits **35** are cut in the blank from which the detent is formed, said slits opening at one end of the blank and at their other ends terminating short of the adjacent end of the blank, at the location at which the forwardly projecting locking finger **33** extends angularly from the body portion of the blank. The slits **35** define between the same, a tongue **34**, constituting a handle, and this is bent out of the general plane of the body of the detent, rearwardly at substantially ninety degrees to the length of the body of the detent. As a result, the handle **34** projects outwardly, in a manner to permit it to be conveniently grasped by a user.

At its foot, the detent is formed with lugs **36** at opposite sides of the space defined by striking of the tongue **34** out of the material of the body, and said lugs **36** are adapted to be molded into the material of the backing plate **18** as shown in Figs. 4 and 6, to fixedly attach the detent to the backing plate in a position projecting upwardly from the backing plate in closely spaced relation to one of the walls **20**.

The detent is tensioned to normally cause the finger thereof to engage in the groove **28** or **30**, as the case may be (see the full line positions of Figs. 4 and 6). However, by grasping the handle **34** and pulling rearwardly on the same, the detent is shifted outwardly to its dotted line position. This disengages the finger **33** from its associated locking groove.

In use, and assuming that it is desired to use the pad in cleaning the side wall of a relatively large diameter pan, one might dispose the handle extension **22** as in Fig. 1. In this position of the handle extension, it lies in a plane parallel to and closely spaced upwardly from the plane of the backing plate **18**. The handle extension **22** thus projects laterally from the steel wool pad, and the pad can be conveniently inserted in a pan, into engagement with the side wall thereof, with the handle extension **22** projecting out of the pan so as to permit the steel wool pad to be conveniently manipulated over the surface of the pan.

When the handle **22** is positioned as in Fig. 1, its transverse grooves **24** receive the confronting inner ends of the walls **20**, thus guiding the handle to its proper position and preventing its lateral displacement from said position.

To prevent the handle **22** from moving upwardly from the backing plate, the detent **32** is permitted to enter the locking groove **28**, which will be disposed in position registering with the finger **33** of the detent whenever the handle **22** is horizontally positioned as in Fig. 1.

To detach the handle, one merely pulls outwardly on the tongue **34**, shifting the detent to its dotted line position of Fig. 4. The handle **22** is thus detached and can be moved upwardly to become disengaged from the walls **20**.

In Figs. 2, 5 and 6, the handle is extended in a position angularly related to the plane of the backing plate, at ninety degrees to said plane. The handle **22** extends upwardly from the center portion of the backing plate, and in this instance the longitudinal grooves **26** receive the confronting inner ends of the walls **20**. This will dispose the locking groove **30** in position to receive the finger **33**, and again, the handle extension will be releasably locked against accidental detachment from the backing plate.

It will be seen that the handle extension can be positioned either in its Fig. 1 or in its Fig. 2 position, with maximum ease and in each position, the detent will be disposed to lockably engage the handle extension. Further, the handle extension can be readily detached from the backing plate.

It will be noted the steel wool pad is backed by a rigid, low cost plate, with a handle means projecting outwardly from said plate in a position to be conveniently grasped by a user. Further, the handle means and backing plate are of low cost construction, so as to be disposed of after the steel wool pad has lost its efficiency. The handle extension **22**, of course, would be permanently kept, so as to be used on different steel wool pads.

While I have illustrated and described the preferred embodiment of my invention, it is to be understood that I do not limit myself to the precise constructions herein disclosed and that various changes and modifications may be made within the scope of the invention as defined in the appended claim.

Having thus described my invention, what I claim as new, and desire to secure by United States Letters Patent is:

A cleaning device comprising a rectangular backing plate having upstanding spaced walls, a steel wool pad secured to the plate, and handle means extending outwardly from the backing plate, said backing plate being of flat formation, said handle means being disposed intermediate opposite ends of the backing plate, said handle means including a handle extension having in opposite side surfaces thereof a first pair of grooves adapted to receive said walls with the handle extension fitting into the space between the walls, the handle extension having a second pair of grooves, the grooves of the first pair extending transversely of the handle extension so as to arrange the handle extension with its length parallel to the plane of the backing plate when the grooves of the first pair receive said walls, the grooves of the second pair extending longitudinally of the handle extension, to receive the walls in a second position of the handle extension in which said extension projects outwardly and perpendicularly from the backing plate and detent means carried by the backing plate adapted to releasably engage the handle extension in each of said positions of the handle extension, said detent means comprising a leaf spring anchored at one end to the backing plate with its other end being adapted for engagement with the handle extension, the handle extension having spaced locking grooves one of which is disposed to receive said other end of the leaf spring in one position of the handle extension, and the other of which is adapted to receive said other end of the leaf spring in the other position of the handle extension, said locking grooves being perpendicularly related to each other and being disposed adjacent the transverse and longitudinal grooves provided at one side of the handle extension, the locking groove adjacent the transverse groove being extended perpendicularly to said transverse groove and the locking groove adjacent the longitudinal groove being extended perpendicularly to the longitudinal groove, said other end of the leaf spring being formed as a flat, wide finger engaging in the respective locking grooves in the respectively opposite positions of the handle extension to hold the handle extension releasably against detachment from said walls.

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