Feb. 5, 1963 L. G. SCHOLL 3,076,217

REMOVABLE BRUSH HEAD COVER WITH THREADED HANDLE NUT

Filed May 1, 1959

Fig. 1

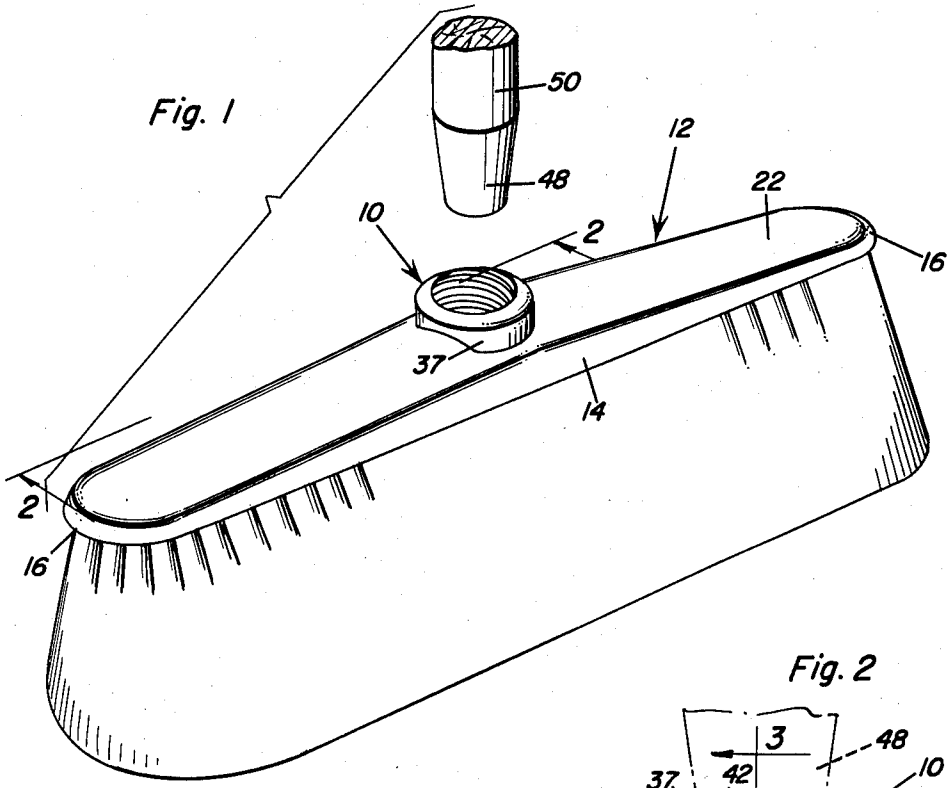


Fig. 2

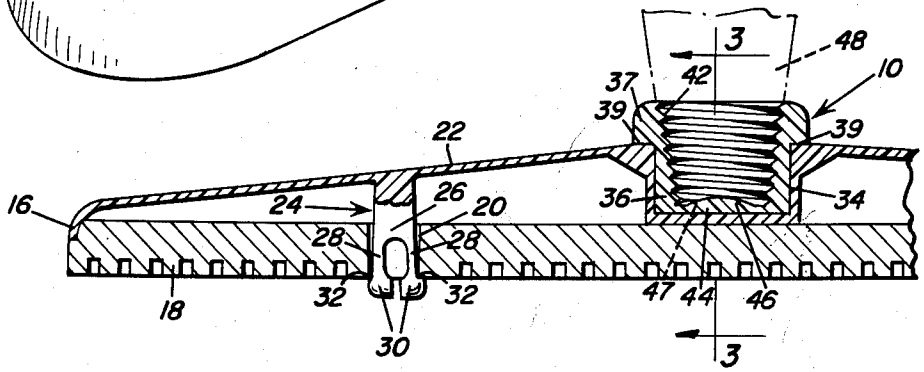
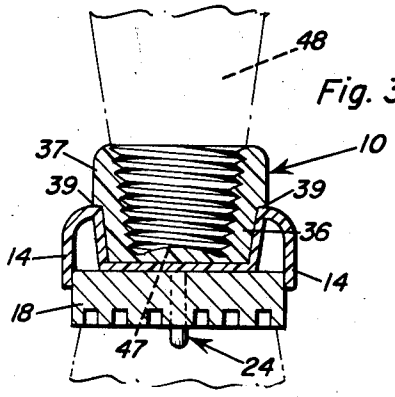


Fig. 3



Leidy G. Scholl

INVENTOR.

BY Clarence A. O'Brien and Harvey B. Jacobson

Attorneys

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REMOVABLE BRUSH HEAD COVER WITH THREADED HANDLE NUT

Leidy G. Scholl, % Perfected Broom Co., North Line St., Lansdale, Pa.

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This invention relates to an improved nut for removable brush handles and more particularly to a nut which will form at least partial threads on a smooth wooden brush handle being screwed thereinto.

Heretofore, it has always presented a problem to people who use push brushes and the like to removably secure a handle to the head of a push brush in such a manner whereby the head of the brush will not be split or otherwise be damaged and rendered useless by either the excessive tightening of the threaded handle in the head of the brush, or by applying lateral pressure to the handle of the brush which in many instances causes the head of the brush to split.

A main object of this invention is to provide a removable brush head cover which may be readily applied to and removed from the head of a push-broom or the like, the cover having secured thereto an improved nut which will be capable of forming at least partial threads upon that portion of a wooden handle being screwed thereinto.

A still further object, in accordance with the preceding object, is to provide a brush head cover which may be removably secured to the head of a push brush and have a handle portion removably secured thereto, the cover itself then absorbing the stresses which would normally be sufficient to cause irreparable damage to the head of a push brush and render it useless.

A final object, in accordance with the preceding objects is to provide an attachment for push brushes and the like that will lend itself to conventional forms of manufacture and is sufficiently inexpensive so as to reduce the usual expense of replacing a broken brush head to a minimum.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

FIGURE 1 is a perspective view of the improved nut comprising the present invention shown fixedly secured to a removable head cover which is mounted upon the head of a push brush with the brush end of the handle therefor being positioned for engagement with the nut.

FIGURE 2 is a longitudinal vertical sectional view taken substantially upon the plane indicated by the section line 2—2 of FIGURE 1 with parts of the brush and cover being broken away, and with the bristles of the brush removed; and

FIGURE 3 is a vertical transverse sectional view taken substantially upon the plane indicated by the section line 3—3 of FIGURE 2 with the handle and the bristles of the brush being shown in phantom lines.

With attention now drawn to FIGURE 1 of the drawings, the numeral **10** generally designates the improved nut comprising the present invention which is fixedly secured to a removable cover generally referred to by the reference numeral **12**. The cover **12** comprises a generally elongated member which is substantially U-shaped in cross-section having depending side walls **14** and depending curved end walls **16**. As can best be seen in FIGURES 2 and 3, depending side walls **14** and end walls **16** are snugly received over the sides and the ends of brush head **18**. The brush head **18** is to be provided with a plurality of apertures **20** throughout its longitudinal

length. Formed integrally with top wall **22** of brush cover **12** and depending therefrom are fasteners which are generally designated by the reference numeral **24**. Each fastener **24** is generally of inverted U-shaped configuration having a bight portion **26** and depending arms **28** which terminate in laterally enlarged end portions **30** that are defined by flange **32** which extend laterally from the remote surfaces of arms **28**.

Formed in the top wall **22** of the cover **12** is a cylindrical pocket **34** in which the nut **10** is secured. Nut **10** has a lower portion **36** and an enlarged upper portion **37** defined by shoulder **39**. The lower portion **36** is fixedly secured in pocket **34** with shoulder **39** abutting against the top wall **22** of the cover **12**. Nut **10** may be secured within cylindrical pocket **34** in any convenient manner such as by cementing.

Formed in nut **10** is an upwardly and outwardly flared threaded bore **42** which has a bottom wall **44**. Formed on bottom wall **44** is a convex projection **46** which is received within the usual concave recess **47** of the tapered smooth end portion **48** of the brush handle **50** as it is threadingly engaged within threaded bore **42**.

It is to be understood that the preferred material for constructing the cover **12** is plastic or a similar material which is somewhat rigid and yet has resilient properties. The nut **10** may also be constructed of a similar material, however, it is not desired to have the nut **10** constructed of a material that is resilient to the point that the nut will be incapable of rigidly securing a handle to the cover **12**.

In operation, the cover **12** is placed over the head **18** of the brush with the enlarged end portions **30** of the fasteners **24** projecting and secured through the lower smaller end of tapered apertures **20** by means of flanges **32**. It will be noted that when the cover **12** is in position upon the brush head **18**, that the lower surface of the cylindrical pocket **34** is resting upon the upper surface of the brush head **18**. The smooth tapered portion **48** of the handle **50** is then threadedly engaged within threaded bore **42** whereby the threads of the threaded bore will form at least partial threads on the handle **50** thereby rigidly securing the latter to the cover **12** which now carries the brush head **18**. In addition, the threaded engagement of the handle **50** with the nut **10** will slightly flex the walls of the nut outwardly into tighter frictional engagement with the confronting faces of the pocket **34**. Thus it may be seen that there is no direct contact between the handle **50** and the brush head **18** and that any lateral stresses applied to the handle **50** will be absorbed by the cover **12** through the nut **10**. If a person while using the assembled brush should strike an object with sufficient force to do damage to the cover **12**, it is then only necessary to remove the handle **50** from the cover **12** and then remove the brush head **18** from the cover **12** and replace the latter which, in comparison to the brush head **18**, is relatively inexpensive.

It is to be understood that the nut **10** is to be constructed of a material which is sufficiently rigid so as to enable a smooth tapered end portion of a handle or a straight end portion of a handle to be screwed thereinto to form at least partial threads upon that end portion of the handle. Further, the use of the handle having a tapered end portion is desirable, although a handle having a straight end portion smaller in diameter than the greatest diameter of tapered threaded bore **42** will be equally effective.

Thus, it may be seen that herein described is a brush head cover and nut assembly which will absorb blows that would normally cause damage to a relatively expensive brush head.

The foregoing is considered as illustrative only of the

principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed as new is as follows:

1. A hollow removable brush head cover constructed of a relatively rigid but resilient material adapted to be removably secured about the upper portion of a brush head and having a cylindrical pocket formed in the upper surface thereof including a bottom whose undersurface is adapted to abut against the upper surface of said brush head, an improved nut to secure a handle to said brush head, said nut having a lower portion and an enlarged upper portion defining an annular shoulder, said lower portion being snugly received and fixedly secured in said pocket with the lower surface of said shoulder abutting against the upper surface of said cover and the bottom of said lower portion abutting against the bottom of said pocket, an upwardly and outwardly flaring threaded blind bore in said nut having a bottom wall defining a closure for the lower end of said bore, said nut being constructed of a relatively rigid but slightly resilient material whereby the threads of said tapered bore will cut at least partial threads in the tapered portion of a brush handle secured thereinto and the securement of a handle in said nut will slightly flex the walls of said nut outwardly into tighter frictional engagement with the confronting surfaces of said pocket.

2. The combination of claim 1 including a convex projection on the upper surface of said bottom wall for engagement by the end of a handle seated in said bore.

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