Jan. 27, 1959 H. H. SCHWARTZ 2,870,473

CLAMP-TYPE MOP FOR ENGAGING MULTIPLE STRAND ELEMENTS

Filed June 25, 1956

FIG. 1.

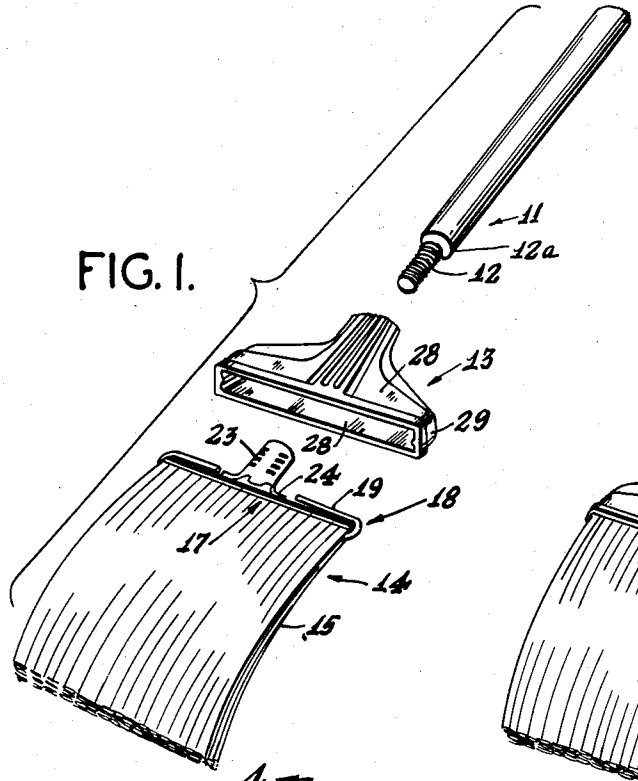


FIG. 2.

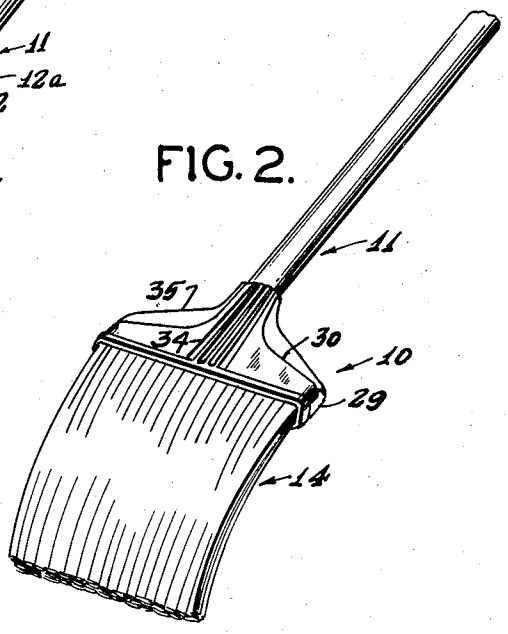


FIG. 3.

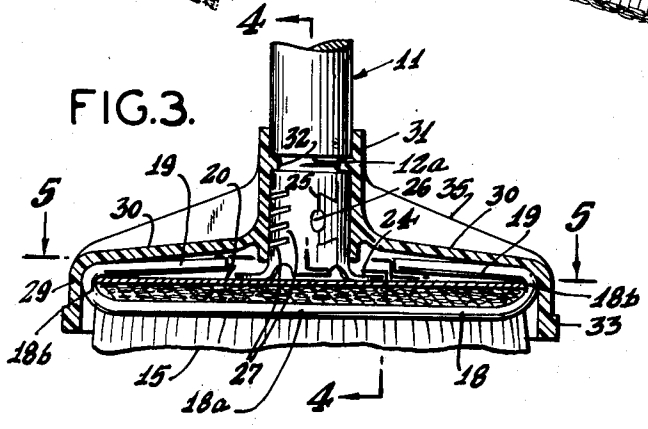


FIG. 4.

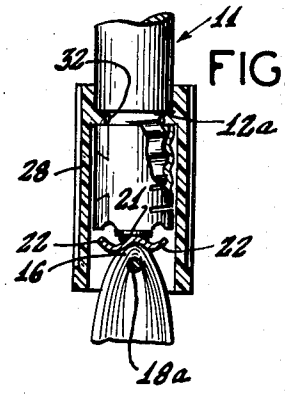
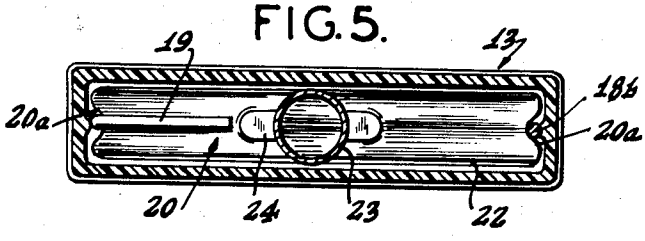


FIG. 5.



INVENTOR.
HAROLD H. SCHWARTZ

BY

J. B. Felshin

ATTORNEY.

United States Patent Office 2,870,473 Patented Jan. 27, 1959

2,870,473

CLAMP-TYPE MOP FOR ENGAGING MULTIPLE STRAND ELEMENTS

Harold H. Schwartz, Port Chester, N. Y., assignor to Empire Brushes, Inc., Port Chester, N. Y., a corporation of New York

Application June 25, 1956, Serial No. 593,546

6 Claims. (Cl. 15—229)

This application relates to spaghetti or yarn type mops and is particularly directed to improvements in the construction thereof.

The art of mop making has long been directed to the development of a handle and retainer means for handling multiple strand mop elements, which are made up of cotton or cellulose yarns. It has been the object of this art to devise a mop which will employ a minimum of parts, a minimum number of operations in assembling said parts, and a minimum expense in fabrication and assembly of all parts in the mop construction, combined with a finished product which will be strong, sturdy, lasting, efficient, attractive and convenient.

It is therefore an object of this invention to provide a yarn type mop which will fulfill the aforestated objects of this particular art and disclose a new, improved and simplified construction for a yarn type of mop element retainer.

Other objects of this invention will in part be obvious and in part hereinafter pointed out.

The invention accordingly consists of the features of construction, combinations of elements, and arrangement of parts, which will be exemplified in the construction hereinafter described, and of which the scope of invention will be indicated in the appended claims.

In the acompanying drawings in which is shown various illustrative embodiments of this invention:

Fig. 1 is an exploded perspective view of a mop in accordance with the present invention;

Fig. 2 is a perspective view of the assembled mop;

Fig. 3 is a cross-sectional view taken through the width of the mop head;

Fig. 4 is a cross-sectional view taken on the line 4—4 of Fig. 3; and

Fig. 5 is a cross-sectional view taken through line 5—5 of Fig. 3.

Referring now in detail to the drawings, **10** designates a mop embodying the present invention. The mop **10** is comprised of three main parts; the handle **11** having a reduced screw thread portion **12** formed at the lower end thereof (thereby forming shoulder **12***a*), a plastic case **13**, and a mop unit **14**.

The mop unit **14** is comprised of the mop strands **15** which are doubled over at the center **16** and a strand holder **17**. The strand holder **17** grips the mop strands by means of a wire rod **18** which has a central portion **18***a* that passes under the fold **16** in the mop strands. At the ends of central portion **18***a* are bent back portions **18***b*. The outer ends **19** of the wire retainer rod extend from bent back portion **18***b* which are bent around the sides of the mop strands **15** and over the top of the fold line **16**. Between the retainer rod ends **19** and the folded portions **16** of the mop strands **15** is a channel-shaped bar **20**, formed with notches **20***a* at its ends. Wire portions **18***b* pass through notches **20***a*.

The channel bar is formed with a longitudinal curve **21** which fits over the fold **16** in the mop strands and is curved upwardly at the sides **22**. Since the ends **19** of

retainer rod **18** are bent over channel bar **20**, a firm grip is established on the mop strands **15** between rod **18** and bar **20**.

A metal socket **23** which is formed with a pair of opposite, outwardly extending tab feet **24** is located at the top center of channel bar **20**. The tab feet **24** are spot welded where they contact the channel bar **20**. The channel bar **20** may have flat portions embossed therein to receive the feet **24** of the socket **23**.

Socket **23** is formed of a single sheet of flat metal which is rolled to a circular socket shape. The seam **25** is formed in the shape of a locking tab and is spot welded at the center **26** of the tab. A number of elongated angled crimps **27** are formed inwardly at several locations about socket **23**. Crimps **27** serve as screw threads to receive the threaded end **12** of wooden handle **11**. Before the handle **11** is screwed into the socket **23** the case **13** is fitted over the strand holder **17**.

Case **13** is formed with a pair of broad skirt side walls **28**. A pair of short skirt end walls **29** and a pair of top walls or shoulders **30** which taper inwardly from the ends **29** form a central tubular neck portion **31** in conjunction with the side walls **28**. An internal annular flange **32** is formed within neck **31** of the case. Flange **32** secures the case **13** when the handle **11** is tightened in socket **23** of the strand holder **17**. Shoulder **12***a* of the handle contacts the top of flange **32** while the upper end of socket **23** contacts the underside of said flange. Thus the three main units of the mop **10** may be assembled securely together.

The lower edge of case member **13** may be embellished and reinforced by means of a built up rib **33**. About the lower end of the case member is a number of vertical ribs **34** at either side of the central neck portion of the case member, and a pair of wing members **35** extending upwardly from the top wall **30**. Thus a mop is formed which is sturdy, secure, attractive and efficient.

It will be noted that the portions **19** of the wire retainer or strand holder **17** which are folded over the top of the bar **20** contact the underside of shoulder portion **30** of the case **13**.

It will thus be seen that there is provided a device in which the several objects of this invention are achieved and which is well adapted to meet the conditions of practical use.

As various possible embodiments might be made of the above invention, and as various changes might be made in the embodiment above set forth, it is to be understood that all matter herein set forth or shown in the accompanying drawings is to be interpreted as illustrative and not in a limiting sense.

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

1. A mop comprising a bar, a plurality of folded mop strands, a wire retainer having a central portion received within the folds of the strands, said folds passing between said central wire portion and said bar, said wire retainer having bent-back portions at the ends of the bar and end portions folded over the top of the bar, a socket attached to the center of the bar, said socket being formed with internal screw thread means, a case having a central tubular portion receiving the socket, opposed shoulder portions and a skirted portion enclosing the bar and the wire retainer and the folded portions of the strands, a handle having a reduced screw threaded portion at one end forming a shoulder, said tubular portion of said case being formed with an internal annular flange, said reduced screw threaded portion of said handle passing through said flange and being screwed to the internal screw thread means of said socket, said shoulder of the handle contacting one side of said flange, and one end of said socket contacting the opposite side of said flange, the portions of

the wire retainer folded over the top of the bar contacting the underside of the shoulder portions of the case.

2. The combination of claim 1, said bar being formed with notches at one end to receive the bent-back portions of the wire retainer.

3. The combination of claim 1, said case being made of synthetic plastic material.

4. The combination of claim 1, the attachment of said socket to said channel comprising integral tab extensions on the socket welded to the top of said bar.

5. A mop comprising a transverse bar, a retainer comprising a portion spaced below the bar, mop strands having fold portions received between said retainer portion and bar, said retainer having bent-back portions and terminal portions folded over the top of the bar, a socket attached to the central portion of the bar, said socket having internal screw thread means, a casing having a tubular portion receiving the socket, said casing having a top wall, side walls and end walls and being open at the bottom, an elongated handle having a reduced screw threaded portion forming a shoulder, said tubular portion having an internal annular flange, said screw threaded portion of the handle passing through said flange and being screwed to said screw thread means of the socket, said shoulder contacting the upper side of said flange, and said

flange contacting the upper end of said socket, and said top wall of said casing contacting the terminal portions of said retainer.

6. The combination of claim 5, said bar being of transverse curved cross-section and being formed with notches in the ends thereof to receive the bent-back portions of the retainer.

References Cited in the file of this patent

UNITED STATES PATENTS

1,284,576	Bond	Nov. 12, 1918
1,408,488	Toplitz	Mar. 7, 1922
1,633,830	Sturgis	June 28, 1927
1,841,228	Veeder	Jan. 12, 1932
1,899,845	Benedict	Feb. 28, 1933
2,203,189	Casinello	June 4, 1940
2,738,534	Frie	Mar. 20, 1956
2,832,089	Schwartz et al.	Apr. 29, 1958

FOREIGN PATENTS

122,891	Great Britain	Feb. 5, 1918
292,760	Great Britain	June 28, 1928
304,185	Great Britain	Jan. 16, 1903
690,029	Great Britain	Apr. 8, 1953
916,405	Germany	Aug. 9, 1954