Jan. 1, 1924

1,479,263

H. M. STURGIS

MOP

Filed May 26, 1922

Fig. 1.

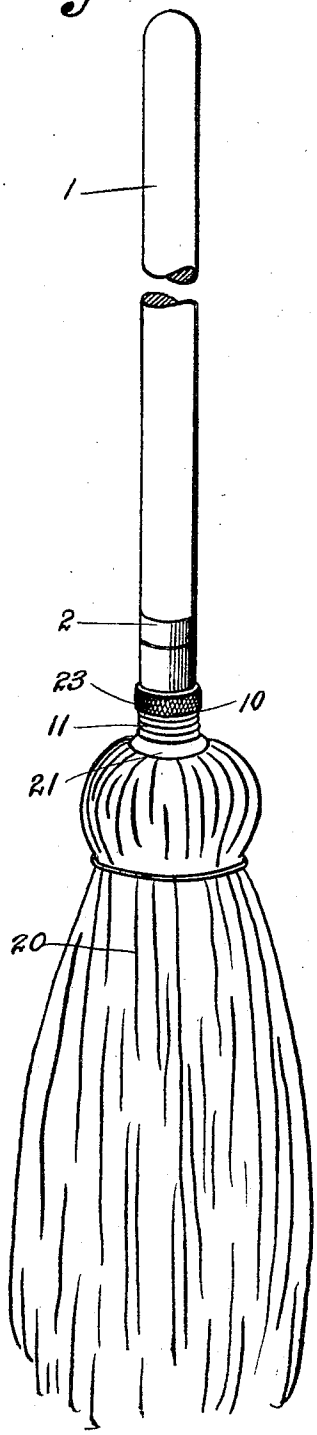


Fig. 2.

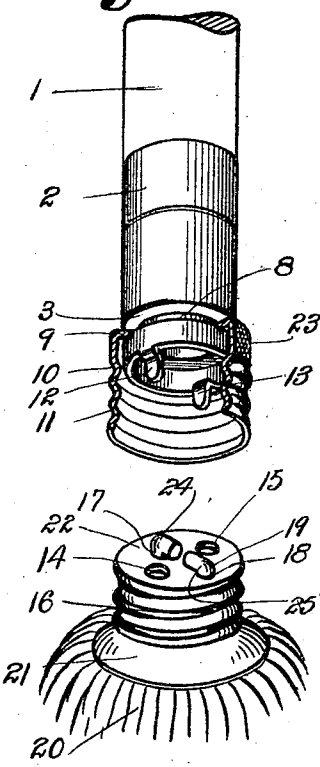


Fig. 3.

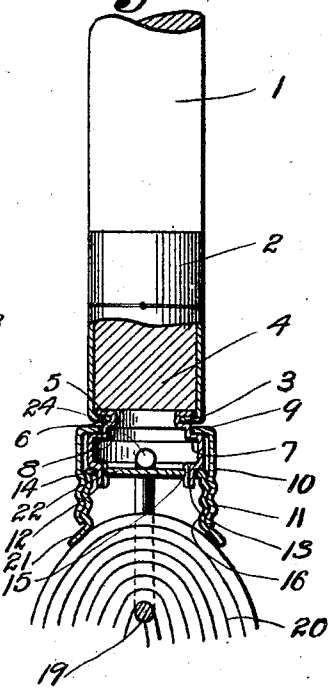


Fig. 4.

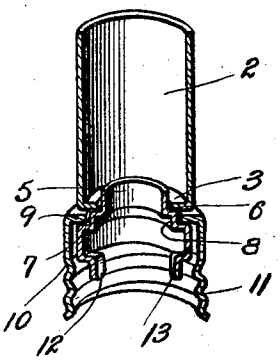
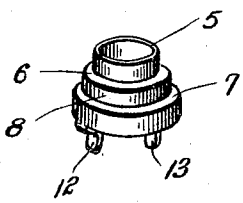


Fig. 5.



INVENTOR

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UNITED STATES PATENT OFFICE.

HERBERT M. STURGIS, OF KANSAS CITY, MISSOURI, ASSIGNOR OF FORTY-NINE ONE-HUNDREDTHS TO FRANK HAMILTON, OF KANSAS CITY, MISSOURI.

MOP.

Application filed May 26, 1922. Serial No. 563,776.

To all whom it may concern:

Be it known that I, HERBERT M. STURGIS, a citizen of the United States, residing at Kansas City, in the county of Jackson and State of Missouri, have invented certain new and useful Improvements in Mops; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

This invention relates to mops and particularly to a novel means for fastening the mop head to the stick, the mop head and mop stick connection being so constructed that the mop head may be held firmly in operative connection with the stick so that liability of its accidental disengagement therewith will be prevented.

It is also an important feature of the invention that means is provided for conveniently attaching and detaching the mop head from the mop head stick, the detachment being desirable when it is necessary to introduce a new mop cloth or fabric to the head as a replacement.

Means is also provided whereby liability of the mop head having relative movement with respect to the mop stick when the connection has been established will be eliminated and the invention consists in certain novel details of construction and combinations of parts, all of which will be referred to hereinafter, reference being had to the accompanying drawings, in which—

Fig. 1 is an elevational view of a mop stick and head connected together.

Fig. 2 is a disassociated view of the mop stick connection and the head, part of the connection being shown in section to better illustrate the interior thereof.

Fig. 3 is a vertical, longitudinal, sectional view through the mop stick connection and head assembled.

Fig. 4 is a vertical, longitudinal, sectional view through the mop stick engaging ferrule, the socket member and the collar, and

Fig. 5 is a detail perspective view of the socket member.

Referring now to the drawings by numerals of reference:

1 designates the mop stick on the end of which is a sleeve or ferrule 2, having an inbent, circumferential flange 3, spaced slightly from the end 4 of the mop stick to provide a space within which is received the out-turned, circumferential flange 5 of the socket member. The socket member is first constructed as shown in Fig. 5. The flange 5 is concentric with the axial center of the socket and it is offset to provide a shoulder 6, adapted to bear against the outer face of the flange 3, the flange 5 being turned outwardly by a suitable die so that it will, in effect, rivet itself between the flange 3 and the end 4 of the mop stick, as shown in Fig. 3.

There is another offset portion or shoulder 7 on the socket member, which is spaced from the shoulder 6 by a tubular web 8 so as to form a space between the outer face of the flange 5 and the shoulder 7 to receive the inturned flange 9 of a rotatable collar 10, which has turning movement with respect to the socket member but which is held against longitudinal movement therewith. The collar 10 has threads 11 to receive the threaded portion of the mop head to be later described.

The outer end of the socket member is provided with two longitudinally extending fingers 12 and 13, which are offset inwardly with respect to the end of the socket member to be received in holes 14 and 15 in the mop head when the screw threaded portion 16 of the head is received by the collar. The engagement of the fingers 12 and 13 prevents rotative movement of the head with respect to the mop stick. The holes 14 and 15 are diametrically opposite and are equidistantly spaced with respect to the holes 17 and 18, through which are received the projecting ends of a staple 19, which secures the mop cloth 20 to the flared cup-shaped flange 21, integral with the mop head structure.

I prefer to arrange the holes 14 and 15 and 16 and 17 equi-distantly apart so that

in assembling it will be immaterial in which set of holes 14 and 15 or 17 and 18 the ends of the staple are received because by arranging the four holes, as shown, irrespective of which holes receive the ends of the staple, there will be two properly spaced holes to receive the fingers 12 and 13 of the socket member. Therefore, the application of the staple will be simplified, it being understood, of course, that when the staple is introduced through the holes, the ends are bent over to lie tightly against the disk 22. The head, as will be apparent, resembles a threaded thimble with a flared open end to receive the mop cloth.

The collar 10 is preferably knurled as at 23 so that it may be easily rotated. It will be noted that the socket member is in the form of a stepped, truncated cone to provide the necessary shoulders and clearances and that the fingers 12 and 13 are offset inwardly so that they may readily enter the openings 14 and 15 to retain the head against rotation.

In assembling the parts, the socket and ferrule are placed upon the mop stick, the flange 15 being peened over or bent over to constitute a hollow, rigid head so that the ferrule and socket member will be fastened together. Therefore, when the ferrule is fastened to the mop stick, there will be a tight connection.

Prior to placing the socket member in cooperative relation with the ferrule, the collar is placed over the small end of the socket so that its inturned flange 9 will rest upon the shoulder 7 and since the outer face of the flange 3 of the ferrule rests upon the shoulder 6, there will be a space between the flange and shoulder 7 so that the collar may freely rotate about the socket. The mop cloth is secured to the head by passing a staple about the threads of the mop cloth and introducing the ends through the holes 17 and 18 and bending over the ends, as shown in Fig. 2. The head may then be secured to the stick by introducing the head into the collar so that the holes 14 and 15 are in line with the fingers 12 and 13. The fingers 12 and 13 are long enough to engage the holes before the threads are encountered. Then the collar is turned so that the screw threads will draw the head longitudinally into engagement with the socket member, the ends 24 and 25 of the staple being received within the socket member, as shown in Fig. 3. The mop head is now secured to the stick so that it will be impossible for it to be accidentally disengaged therefrom, it being necessary to reverse the turning movement of the collar in order to take out the head but this can be easily accomplished for the purpose of renewals, etc.

It will be seen that the device for connecting the mop cloth to the stick may be easily manufactured and may be easily operated when the parts are assembled as illustrated.

What I claim and desire to secure by Letters-Patent is:

1. In combination, a mop stick, a socket member on one end of the mop stick having fingers projecting therefrom, a threaded collar on the socket member, and a threaded mop head receivable within the threaded collar and having openings into which the fingers project.

2. In combination, a mop stick, a socket member on one end of the mop stick having a constricted offset porton forming an annular shoulder, spaced from the end of the stick having fingers projecting therefrom, a threaded collar beyond the outer end of the socket member and having a flange overlapping the shoulder, a mop head in threaded connection with the collar and having openings into which the fingers project, and a connecton between the head and the socket member to prevent relative rotative movement between the head and the socket member.

3. A mop stick, a ferrule on one end thereof having an inbent flange, a socket member having at one end an outbent flange between the flange of the ferrule and the end of the mop stick, longitudinal fingers integral with the socket member, and a threaded collar rotatably supported by the socket member, in combination with a mop head having socket finger-receiving openings and provided with threads to engage similar threads in the collar.

4. A mop stick, a ferrule on one end thereof having an inbent flange, a socket member having at one end an outbent flange between the flange of the ferrule and the end of the mop stick, longitudinal fingers integral with the socket member, and a threaded collar rotatably supported by the socket member, in combination with a mop head having socket finger-receiving openings and provided with threads to engage similar threads in the collar, and a mop-securing staple on the head having a part receivable within the socket.

5. A mop stick, a ferrule on one end thereof, a socket member riveted to the ferrule and comprising a stepped cone having shoulders, a rotatable collar interposed between one of the shoulders and the end of the ferrule and surrounding the socket member with the collar extending beyond the end of the socket member, mop head-engaging means carried by the socket member, a mop head having threads engageable by threads of the collar and having a part to be engaged by the engaging means of the socket member whereby the head will be held against turning, and means for securing the mop cloth to the head.

6. A mop stick engaging ferrule, a socket member carried by the ferrule, a collar rotatable on the socket member, outstanding fingers carried by the socket member, in combination with a mop head consisting of a threaded thimble having holes in the ends thereof equi-distantly spaced apart, and a mop cloth engaging staple having ends extending through opposite holes and bent over the end of the thimble, the remaining holes being spaced to receive the fingers on the socket member, the collar being engageable with the threaded head to draw it toward the socket member.

In testimony whereof I affix my signature.

HERBERT M. STURGIS.