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H. L. BRADLEY

1,920,351

MOP CONNECTER

Filed May 8, 1931

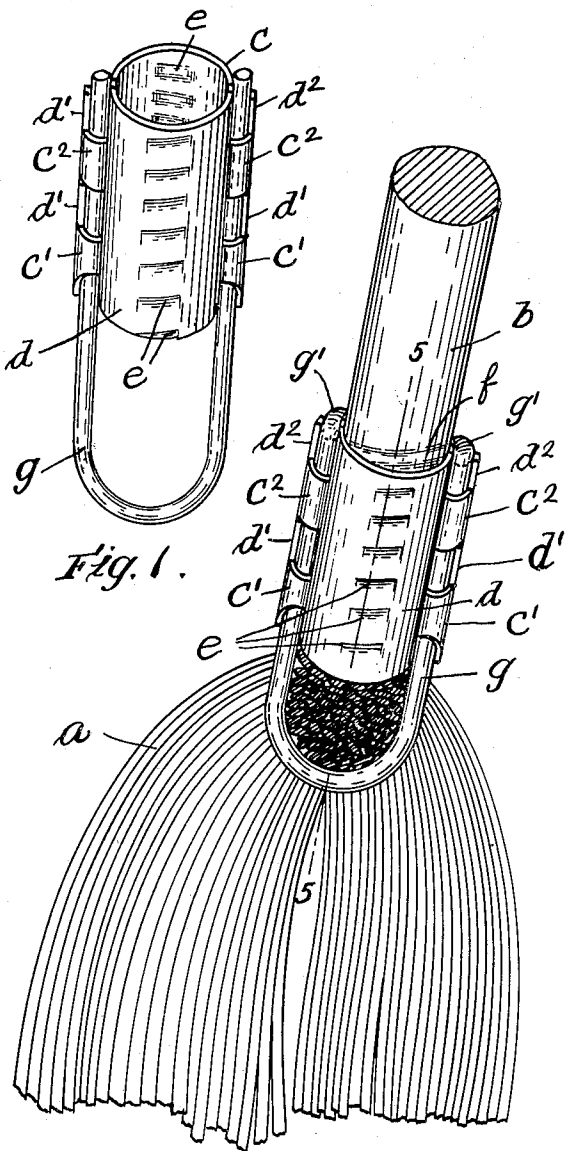


Fig. 1.

Fig. 2.

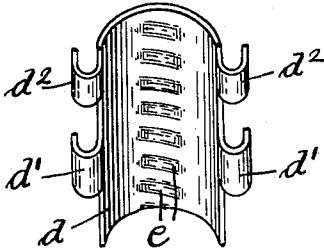


Fig. 3.

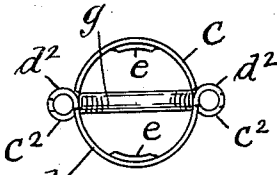


Fig. 4.

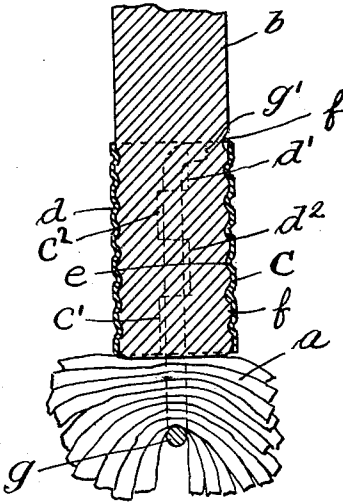


Fig. 5.

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UNITED STATES PATENT OFFICE

1,920,351

MOP CONNECTER

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7 Claims. (Cl. 15—147.)

This invention primarily relates to mops of the so-called yacht, or round type, in which a bundle of strands of fabric, or yarn is connected to a handle and is adapted for use either when wet or dry.

As mops of this type are frequently used as a duster about furniture, it is particularly desirable that all metal parts, which may be employed in connecting the fabric to the handle, be shielded, so that damage will not be caused by striking these metal parts against surfaces which are easily marred. For this reason it has been customary to bind a bundle of fabric about the handle in a manner to avoid the use of metal attaching means.

Some of the objections to this method are that the manufacturing cost is objectionably high, the connection is often unreliable, and the fabric cannot be easily renewed when it becomes deteriorated.

The objects of my invention are to provide a simple and effective device for detachably connecting a bundle of mop fabric, such as yarn, to a handle in a manner to produce a mop of type above referred to, in which all metal parts used in connection therewith will be effectively covered or shielded, and which will enable the fabric to be readily connected to the handle at small expense and will enable the fabric and its connecting means to readily be connected to, and disconnected from the handle, so that these parts may be sold separately and the fabric may be easily renewed when it becomes deteriorated without providing a new handle.

I accomplish these objects by means of the construction hereinafter described and as illustrated in the accompanying drawing in which:

Fig. 1 is a perspective view of a mop connector embodying my invention.

Fig. 2 is a view, partly in perspective and partly in section, of a complete mop in which the connector is employed.

Fig. 3 is a detail view of one of the connecting members.

Fig. 4 is an end view of the connector.

Fig. 5 is a sectional view at line 5—5 of Fig. 2.

As shown in the drawing, the means for connecting the bundle of strands of yarn *a* to the handle *b*, comprises a pair of semi-cylindrical members *c* and *d* which, when placed in position with their edges in engagement, form a tubular socket, which may be uniform, or tapering in diameter, and is adapted to receive one end portion of the handle. Each member is

preferably provided with internal projections, *e* which are helically arranged to form an internal screw thread, the portion of the handle which is to be inserted therein being provided with a corresponding external screw thread *f*.

Two pairs of lugs *c'* and *c''* are formed integrally with the members *c*, the lugs of each pair being arranged to project from the edges of the member at points which are directly opposite each other, each lug being curved reversely with relation to the side of the member from which it extends, to form a concave face on one side which faces oppositely to the concave side of the member.

Two pairs of lugs *d'*, *d''* are also formed integrally with the member *d* and extend from the edges thereof similarly to the lugs *c'*, *c''*, to provide concave faces which are disposed oppositely to the concave side of the member *d*.

Said lugs are also spaced apart and arranged so that, when the edges of the members are engaged, the lugs *d* will fit closely between the lugs *c'* and *c''* and the lugs *d''* will occupy the space between the lug *c''* and the adjacent end of the socket, so that the socket members will be locked against relative longitudinal movement by said lugs. The lugs are also arranged so that the concave faces formed on the lugs at either side of the socket provide, in effect, the sides of a cylindrical passage, the faces of the lugs on one member being disposed oppositely to those on the other member, and the lugs on one member crossing the lugs on the other member as they extend from the edges of the members, as shown in Fig. 4.

A yoke *g* is provided, which is preferably formed from a stiff round wire bent in U-form, to provide parallel end portions and a connecting semi-circular middle portion, the diameter of the wire being sufficiently less than the diameter of the cylindrical passage included by the concave sides of the lugs *c'*, *c''*, *d'*, *d''* to permit the same to be slid into said passage when the members *c*, *d* are held in assembled position, so that the wire will act as a key to lock both edge portions of the members together.

The strands from which the mop is to be formed are cut to approximately the same length, and a bundle thereof, of suitable size, is provided and arranged with their corresponding ends adjacent and then the middle portion of the bundle is pressed into the yoke *g*, after which the end portions of the yoke are inserted in the passages between the lugs of the members at one end thereof, and forced therethru

until their ends emerge at the opposite ends of the members or socket formed thereby. The yoke and the socket are forced together until the strands of the fabric are tightly clamped between the end of the socket and the middle portion of the yoke and then the extreme end portions of the wire are upset, or bent laterally into engagement with the adjacent ends of the lugs c^2 or d^2 , so as to lock them to the socket, against withdrawal.

The preferable arrangement for locking the yoke in clamping position which is shown consists in providing each end lug d^2 with a recess in the side edges thereof next the end of the member, into which the portions g' , at the ends of the wire of which the yoke is formed are bent, as shown in Fig. 1 and in dotted lines in Fig. 5.

The members c , d will thus be locked together by the end portions of the yoke in a position in which they form a tubular socket, in which position the internal projections e therein form segments of an internal screw thread therefor, so that, by providing the handle with a corresponding external screw thread, the mop and handle may be securely connected by merely screwing the handle into the socket.

A further clamping effect may be secured by forcing the end of the handle against the fabric held by the yoke, but the clamping action between the yoke and the end of the socket will usually be sufficient to hold the fabric securely.

With the above described construction the metal parts of the connecting means are so thoroughly embedded in the yarn or fabric of which the mop is composed, that all danger that they will be engaged with surfaces which they might otherwise damage is avoided. The connecting means, comprising the two semi-cylindrical members and the wire yoke, may all be made at small expense, as the members c , d may be entirely formed by stamping them from sheet metal, and the yoke merely consists of a length of stiff wire bent into U-form.

While the wire yoke might be removed by merely bending back the end portions, so that the yarn forming the mop might be replaced, it is not the intention that this shall be done, as the yarn or fabric already attached to the connector may be supplied for renewal at but a slight increase over the cost of the fabric, and it is the purpose to supply the trade with the fabric attached to the connector separate from the handles.

It will be understood that the members forming the socket may be made in frusto-conical form, as well as in cylindrical form, without departing from the invention as claimed, although the form shown is considered preferable.

I claim:

1. A mop connector comprising a tubular socket composed of a pair of segmental members having oppositely disposed longitudinal edges, each member having a lug extending from each edge towards the adjacent edge of the other member in lapped relation with the lug thereof, each lug having its end portion out-turned, to provide adjacent lugs with oppositely disposed faces, a U-form yoke having its middle portion adapted to receive the mop fabric and having its longitudinal portions extended over the adjacent lugs, between and in engagement with the faces thereof, to hold the members in position, and means for locking the yoke in position to clamp the mop fabric against the adjacent end of the socket.

2. A mop connector comprising a tubular socket composed of a pair of segmental members having oppositely disposed longitudinal edges, each member having a pair of lugs extending from each of its edges towards the adjacent edge of the other member in lapped relation with the lugs thereof and having the end portions thereof out-turned, to provide the corresponding pairs of lugs with oppositely disposed faces, a U-form yoke having its middle portion adapted to receive the mop fabric and having its longitudinal portions extended over the adjacent pairs of lugs and between and in engagement with the faces thereof, and means to lock the yoke in position to clamp the fabric against the adjacent end of the socket.

3. A mop connector comprising a pair of curved segmental members arranged to form a tubular socket when their corresponding edge portions are engaged, each member having lugs projecting from the opposite edge portions thereof, the lugs of each member being arranged to extend reversely with relation to the curvature of the member, to provide oppositely disposed recessed faces at each side of the socket, and a U-form yoke having its middle portion adapted to receive the mop fabric and having its end portions slidable between the faces of said lugs to connect the members in tubular relation and to clamp the mop fabric between the yoke and the adjacent end of the socket.

4. A mop connector comprising a pair of curved, segmental members arranged to form a tubular socket when their corresponding edge portions are engaged, each member having lugs projecting from the opposite edge portions thereof, the lugs of each member being arranged to extend reversely with relation to the curvature of its member, to provide oppositely disposed engaging faces at each side of the socket, and a U-form yoke having its middle portion adapted to receive the mop fabric and having its end portions slidable between the faces of said lugs, to connect the members in tubular relation and to clamp the mop fabric between the yoke and the adjacent end of the socket, said socket and yoke having portions arranged for engagement, to lock the yoke in its clamping position with relation to the socket.

5. A mop connector comprising a tubular socket composed of a pair of curved segmental members having engaging edge portions, lugs formed with each member and arranged to project from the opposite edge portions thereof, each curved in reverse relation to the curvature of the member with which it is formed, to provide oppositely disposed concavely curved faces, the lugs on each member being spaced apart and overlapping the lugs of the other member to permit interlocking engagement at their ends, to hold the members against relative longitudinal movement, a yoke having its middle portions adapted to receive the mop fabric and its end portions slidable between the opposite faces of said lugs, to lock said members together and to clamp the fabric between its middle portion and the adjacent ends of the members.

6. A mop connector comprising a tubular socket composed of a pair of semi-cylindrical members having meeting edge portions, lugs formed with each member and arranged to project from the opposite edge portions thereof, each lug being extended reversely with relation to the adjacent portion of its member, to provide oppositely disposed faces at diametrically

- opposite sides of the socket, a U-form yoke having its middle portion adapted to receive the mop fabric and having each of its end portions slidably engageable with the corresponding faces of said lugs, to lock said members together, and means on said yoke for engaging said socket, to lock the same thereto when in position to clamp the mop fabric between its middle portion and the adjacent end of the socket.
7. A mop connector comprising a U-form yoke having its middle portion adapted to receive the mop fabric, a tubular socket composed of a pair of semi-cylindrically formed members, each member having a pair of lugs projecting outwardly and extended reversely with relation to the curvature of the member, each in opposite relation to the other from each longitudinal edge portion thereof and spaced apart in alternate relation, and arranged to permit a pair of lugs of one member to the interposed between the lugs of the other members in the normal position thereof, the adjacent sides of the lugs at each side of the socket being arranged for slidable engagement with the opposite sides of the corresponding end portion of the yoke, to lock said members together and clamp the fabric between the middle portion of the yoke and the adjacent end of the socket, the end portions of the yoke being deformable to engage the socket and prevent withdrawal of the yoke therefrom.

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25	100
30	105
35	110
40	115
45	120
50	125
55	130
60	135
65	140
70	145
75	150