June 29, 1943. N. B. GREENLEAF 2,323,031

MOP CONSTRUCTION

Filed Aug. 4, 1941

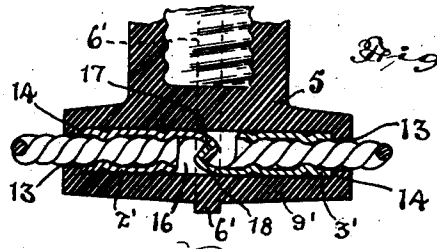


Fig. 4.

Fig. 1.

Fig. 5.

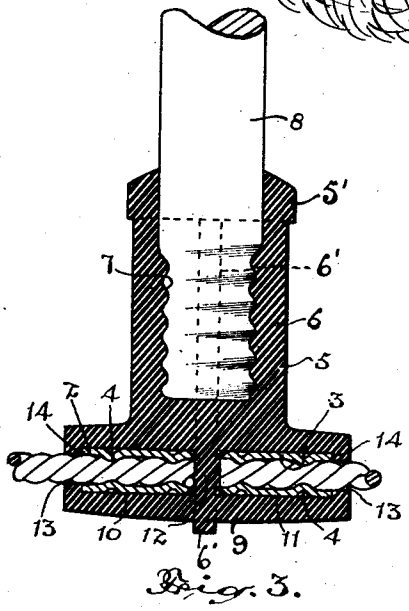
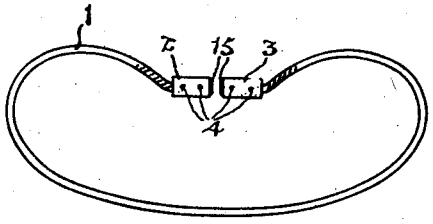


Fig. 3.

Fig. 2.



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Patented June 29, 1943 2,323,031

UNITED STATES PATENT OFFICE

2,323,031

MOP CONSTRUCTION

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Application August 4, 1941, Serial No. 405,305

4 Claims. (Cl. 15—147)

The principal objects of this invention are to provide an improved form of handle anchorage for mops and the like which will be of a rugged construction, economical to manufacture and capable of easy assembly and which will provide a desirable resilient as well as swivel connection between the mop head and handle.

The principal features of the invention reside in the novel construction and arrangement of parts whereby a connecting member between the handle and mop frame is formed of rubber or other resilient material having cylindrical recesses therein provided with restricted or shouldered openings, the ends of the mop frame being provided with cylindrical sleeves adapted to be inserted through the restricted openings into the cylindrical recesses and to interlock with the shoulder formations on the inward sides of the restricted openings.

In the drawing

Figure 1 is a perspective view of a mop embodying the present invention.

Figure 2 is a reduced plan view of the resilient mop frame showing the cylindrical sleeves in place ready for insertion in the resilient connecting member.

Figure 3 is an enlarged transverse section broken away in part showing the cylindrically sleeved ends of the mop frame in assembled relation to the resilient connecting member.

Figures 4 and 5 are sectional details of modified forms of the invention.

In the construction of mops it has been customary to form a looped frame from a length of double twisted wire, the mop strings being either clamped between the twisted wires or otherwise secured to the looped frame. According to such construction the ends of the looped wire frame were inserted within a common sleeve which rigidly connected the same and which formed a bearing about which a metal handle-attaching member was rotatably clamped.

It is desirable to eliminate the use of a metal connecting and clamping element between the handle and frame due to the objectionable tendency of such metal member to mar the furniture or woodwork with which it frequently comes in contact and according to the present invention the connecting member is of a one-piece resilient moulded construction.

According to the preferred form of the invention a looped frame member 1, which may be formed in the usual way from inter-twisted wires, is provided with a pair of short cylindrical sleeves 2 and 3 rigidly secured to the respective axially aligned ends of the wire frame, preferably by indenting the sleeves as represented at 4, or by spot welding.

The connecting member 5 is moulded from resilient rubber with a main sleeve portion 6 which is interiorly threaded at 7 to receive the threaded end of a handle 8. The lower end of the sleeve portion 6 is merged into a transverse sleeve portion 9 having axially aligned cylindrical orifices 10 and 11 moulded therein, preferably separated by a narrow central wall portion 12 and having restricted inlet openings 13 at the outer ends which provides an annular shoulder 14 at the outer end of each of the cylindrical orifices.

In assembling the holder and frame it is simply necessary to press the sleeve 2 through the restricted opening 13 into the cylindrical recess 10 and to then press the cylindrical sleeve 3 through the orifice 13 into the cylindrical recess 11, the looped wire frame being resilient and easily distorted for this purpose, and preferably the inward extremities of the sleeves 2 and 3 are bevelled as shown at 15 to facilitate their insertion into the cylindrical recess.

When the sleeve members have been received within the recesses it will be noted that the outer ends thereof provide annular shoulders which engage the annular shoulders 14 on the inward side of the respective openings 13. It will thus be seen that the adjacent ends of the wire frame will be effectively anchored against accidental disconnection from the holding member but at the same time the holding member will be capable of oscillation relative to the frame.

It will be noted that the internal thread extends well down to the junction of the main sleeve portion 6 with the transverse sleeve-like portion 9 and that the upper end provides a non-threaded portion of substantial length so that the flexing strain will be effectively distributed and a secure anchorage achieved.

In Figure 4 the separating wall 12 of Figure 3 has been eliminated and a single elongated cylindrical orifice 16 provided in the resilient sleeve portion 9' and the sleeves 2' and 3' are provided with hooked extremities 17 and 18 which when the sleeved end portions of the wire frame are pressed into the cylindrical orifice 16 from opposite ends snap into interlocking relation or may be readily manipulated into interlocked relation by bodily distorting the resilient flexible sleeve 9'.

In the more economical form of construction shown in Figure 5 the annular shoulder recesses may be eliminated as well as the sleeves and the

ends of the twisted wire frame are hooked as shown at 19 to engage in interlocking contact as they are inserted in the cylindrical recess 20 from opposite ends.

The unthreaded upper end of the main sleeve portion is preferably formed with an annular thickening bead 5' and a reinforcing rib 6' leads from the bead 5' down one side of the main sleeve 6 and around the sleeve-like portion 9 and back up the opposite side. One or more of such ribs may be provided and they will not only serve to protect the lower sleeve-like portion from wear but they will impart added strength thereto and to the main sleeve and form a resilient bond between the sleeve elements.

The entire assembly will have a very desirable flexibility and the resilient connecting member will not mar furniture or wall surfaces with which it comes in contact, and while I have shown and described preferred embodiments of the present invention, I may resort to further structural modifications within the essential spirit of the invention.

What I claim as my invention is:

1. A mop or the like having a looped wire frame presenting axially aligned but separated inturned end extremities, means forming shoulders on said extremities, and a handle-mounting member having an integral resilient sleeve-like portion rotatably embracing the end extremities of said wire frame and having inwardly turned flanges at the ends engaging in interlocking contact with said shoulder formations.

2. A mop or the like having a looped wire frame presenting axially aligned but separated end extremities, sleeve members rigidly mounted respectively on said end extremities and presenting annular shoulder formations, and an integral handle-mounting member having a resilient transversely extending sleeve-like portion formed with cylindrical recesses open at the outer ends to receive said sleeve members from opposite ends and having axially disposed entry openings for said sleeve members of restricted form through which the sleeve members are inserted and whereby annular shoulders are formed to interlock with the annular shoulders presented by said sleeve members.

3. The combination claimed in claim 2, in which said sleeve members are tapered at their adjacent ends to facilitate insertion of the sleeve members through said restricted openings.

4. A mop or the like having a handle-mounting member of resilient flexible material such as rubber and having a transverse orifice, a frame member having free end portions inserted into said orifice from opposite ends, sleeve members rigidly mounted on the free ends of said frame, said sleeve members having hooked extremities adapted to meet and interlock within said orifice, the outer ends interlocking with the handle-mounting member.

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