Aug. 11, 1959 R. C. BECK 2,898,619

HANDLE CONNECTION FOR A MOP

Filed Dec. 17, 1956

FIG. 1

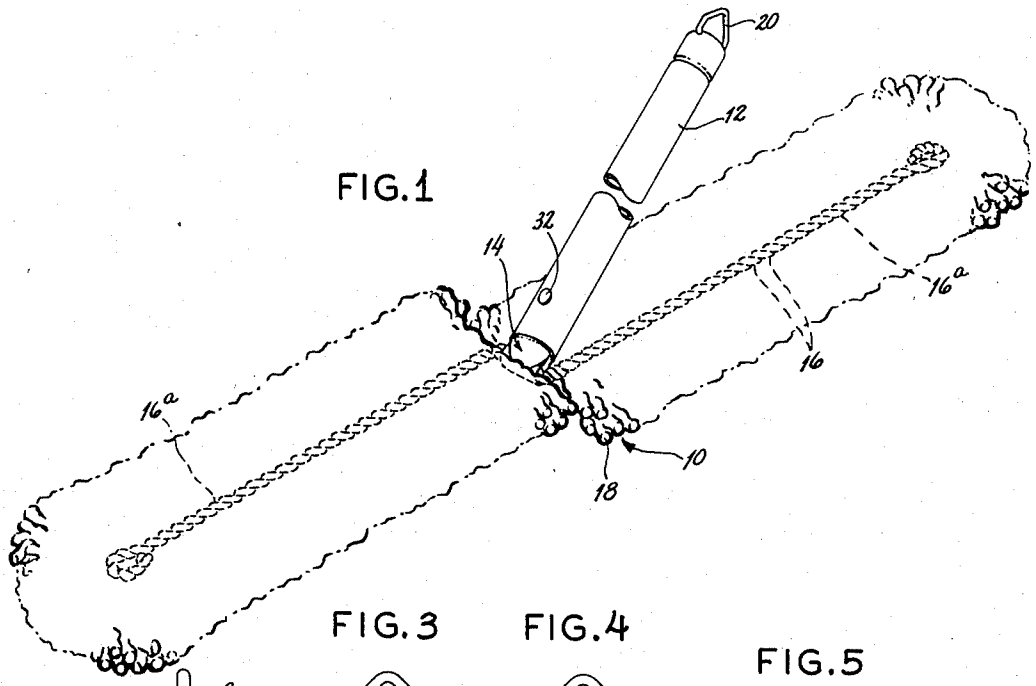


FIG. 2

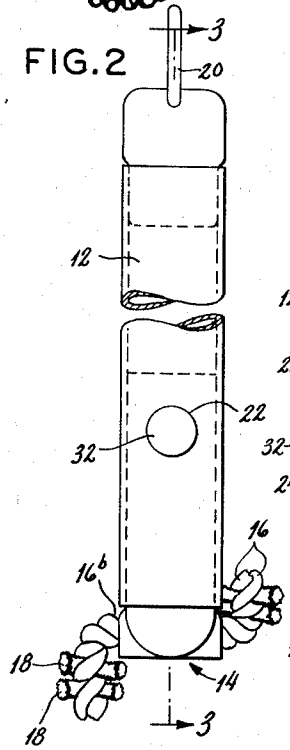


FIG. 3

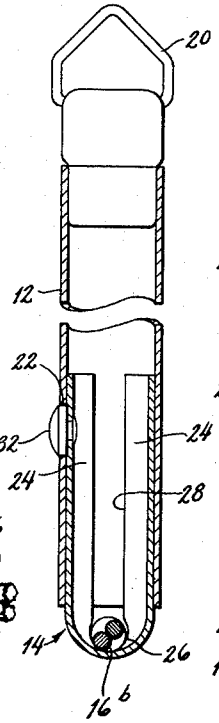


FIG. 4

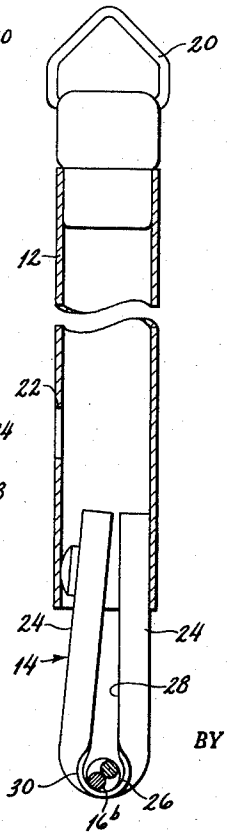


FIG. 5

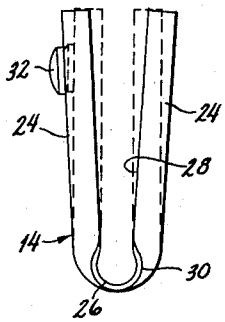
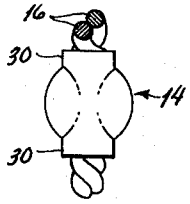


FIG. 6



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United States Patent Office 2,898,619 Patented Aug. 11, 1959

2,898,619

HANDLE CONNECTION FOR A MOP

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Application December 17, 1956, Serial No. 628,729

2 Claims. (Cl. 15—144)

The invention relates to a mop, more particularly a dry mop, wherein a mop unit is pivotally connected with a handle, such as a tubular handle. Stated more specifically, the invention relates to a mop which may be of the type disclosed in the Barr Patent No. 2,725,586, dated December 6, 1955.

The general object of the invention is to provide a mop, more particularly a mop of the type disclosed in said patent, having a simple and inexpensive one-piece connector between the mop handle and the pivotal portion of the mop unit, said connector permitting relative pivotal movement of the mop unit about the axis of its said pivotal portion but positively preventing any relative movement of said pivotal portion either longitudinally of the handle or about the axis thereof.

A more specific object of the invention is to provide a mop having a connector as described which is further adapted for ready disengagement to permit disassembly.

The drawing shows in detail a preferred embodiment of the invention, but it will be understood that various changes may be made from the construction shown, and that the drawing is not to be construed as defining or limiting the scope of the invention, the claims forming a part of this specification being relied upon for that purpose.

Of the drawing:

Fig. 1 is a perspective view of a mop embodying the invention.

Fig. 2 is an enlarged combined sectional and side view showing certain parts of the mop.

Fig. 3 is a longitudinal sectional view taken along the line 3—3 of Fig. 2.

Fig. 4 is a view similar to Fig. 3 but showing the parts in partly assembled relationship.

Fig. 5 is a side view of the connector separate from the other parts of the mop.

Fig. 6 is a bottom view of the connector as shown in Fig. 4.

Referring to the drawing, a mop embodying the invention comprises three major parts which are: a mop unit **10**, a handle **12**, and a connector **14** between said mop unit and said handle.

The mop unit **10** may be widely varied as to details, but as shown it includes a frame which comprises two wires **16**, **16** twisted upon each other with strands **18**, **18** of yarn between them. The pairs of twisted wires have two normally horizontal portions **16a**, **16a** which are parallel with each other but which are transversely offset by means of a transverse pivotal portion **16b**. The yarn strands **18**, **18** are omitted at said pivot portion.

The handle **12** is ordinarily formed of metal and is tubular and open at the bottom. It may be provided with a wire loop **20** by which the entire mop may be suspended. Preferably and for a reason to be set forth, the handle **12** has a hole **22** at one side thereof near the bottom.

The connector **14** is formed of one piece of metal and it is U-shaped in longitudinal section and it has similar transversely spaced upright prongs **24**, **24** with a unitary bearing socket **26** between them at the bottom. The prongs **24**, **24** are adapted to enter and fit the lower portion of the tubular handle **12** and the socket **26** is adapted to receive the transverse pivotal portion **16b** of the mop unit frame. A slot **28** is provided between the prongs **24**, **24** so that the connector can be readily engaged with the frame at said pivotal portion **16b** thereof.

The connector **14** is preferably resilient and the prongs **24**, **24** thereof are preferably biased for movement of their upper ends outwardly to relative positions, as shown in Fig. 5, which are so spaced as to prevent entry of said prongs in the handle. In the relative positions shown, the outer faces of the prongs diverge. Preferably the outer faces of said prongs, when moved into parallel relationship, conform to portions of a common cylinder having the same diameter as the interior of the handle **12**. The socket **26** of the connector is shaped to provide semi-cylindrical walls **30**, **30** which are concentric with a transverse axis and which have a radius substantially less than the radius of said common cylinder. The radius of said walls **30**, **30** is such as to enable them to receive and approximately fit the pivot portion **16b** of the mop unit frame.

The prongs of the connector, if initially diverging as shown, can be pressed toward each other to permit them to be entered in the lower portion of the handle. When said prongs are biased for movement away from each other, a means is provided which is dependent upon the outward bias and which serves to hold the connector in a fixed position with respect to the handle. Preferably the last said means is a button **32** on the exterior of one prong of the connector and adapted to enter said hole **22** in the wall of the tubular handle.

In the assembly of the mop, the connector **14** is engaged with the pivot portion **16b** of the frame as shown in Fig. 4, said pivot portion being entered in said socket **26**. When the connector is resilient and when the prongs **24**, **24** thereof initially diverge, said prongs are pressed toward each other to permit entry thereof in the handle. When a button such as **32** is provided, said prongs are further pressed toward each other to enable the button to also enter the handle. When entry has been effected, the connector and the mop unit are moved relatively upwardly until the button **32** snaps into the hole **22**. The button then retains all of the parts in assembled relationship.

It will be observed that, in the assembled relationship, the lower end of the handle is closely adjacent the pivotal portion **16b** of the frame. Thus the socket of the connector and the lower end of the handle cooperate to retain said pivotal portion of the frame and to permit pivotal movement of said mop unit relatively to said handle.

When the connector **14** is constructed in the manner preferred, the mop can be readily disassembled for the replacement of a worn or soiled mop unit by a new mop unit.

When the mop is fully assembled as shown in Fig. 1, the connector **14** positively retains the pivotal portion **16b** of the mop unit in fixed relationship with the handle **12** and said connector permits relative pivotal movement of said mop unit as previously described. In the use of a mop of the type disclosed in said Barr patent, a turning movement of the entire mop unit is effected by a partial rotative movement of the handle about its own axis. It is therefore necessary to provide means, such as the button **32**, for positively connecting the mop handle with said pivotal portion of the mop unit to insure rotative movement of said mop unit in accordance with rotative movement of the handle.

The invention claimed is:

1. The combination in a mop, of a mop unit including a frame having a pivotal portion, a tubular handle open at its lower end and having a hole therein near its lower end, a one-piece U-shaped connector having two similar transversely spaced prongs with a unitary bearing socket between them at the bottom, said prongs of the connector being resilient and being outwardly biased for movement of their upper ends to relative positions so spaced as to prevent entry of said prongs in said handle but said prongs having been relatively moved in opposition to the bias so that they enter and fit the lower portion of the tubular handle and said socket between the prongs receiving and approximately fitting said pivotal portion of the mop frame to provide a bearing for the relative pivotal movement of said mop unit about a transverse axis, a button on the exterior of one of said prongs entered in the hole in said handle as a result of said bias and positively preventing relative movement of said connector either longitudinally of said handle or rotatively about the axis thereof.

2. The combination in a mop, of a mop unit including a frame having a pivotal portion, a tubular handle open at its lower end and having a hole therein near its lower end and having the entire inner face of its lower portion smooth and cylindrical, a one-piece U-shaped connector having two similar transversely spaced prongs having between them and at the bottom a unitary bearing socket for receiving and approximately fitting said pivotal portion of the mop frame to provide

a bearing for the relative pivotal movement of said mop unit about a transverse axis, said prongs of the connector having opposite smooth partly cylindrical outer faces and being resilient and being outwardly biased for movement of their upper ends to relative positions so spaced as to prevent entry of said prongs in said handle but said prongs having been relatively moved in opposition to the bias so that they enter the lower portion of the tubular handle with the partly cylindrical outer faces thereof engaging and closely fitting said smooth inner face of the handle, and a button on the exterior of one of said prongs entered in the hole in said handle as a result of said bias and positively preventing relative movement of said connector either longitudinally of said handle or rotatively about the axis thereof.

References Cited in the file of this patent

UNITED STATES PATENTS

1,236,678	Crawford	Aug. 14, 1917
1,508,995	Silver	Sept. 16, 1924
1,786,037	Sturgis	Dec. 23, 1930
1,832,536	Dunn	Nov. 17, 1931
1,907,284	West	May 2, 1933
2,116,375	Aubitz	May 3, 1938
2,581,141	Raptis	Jan. 1, 1952
2,736,915	Le Febvre et al.	Mar. 6, 1956
2,797,968	Le Febvre et al.	July 2, 1957

FOREIGN PATENTS

161,396	Great Britain	Apr. 14, 1921