Feb. 15, 1927. 1,617,329

J. GLOVER

MOP

Filed Sept. 2, 1925

Fig. 1

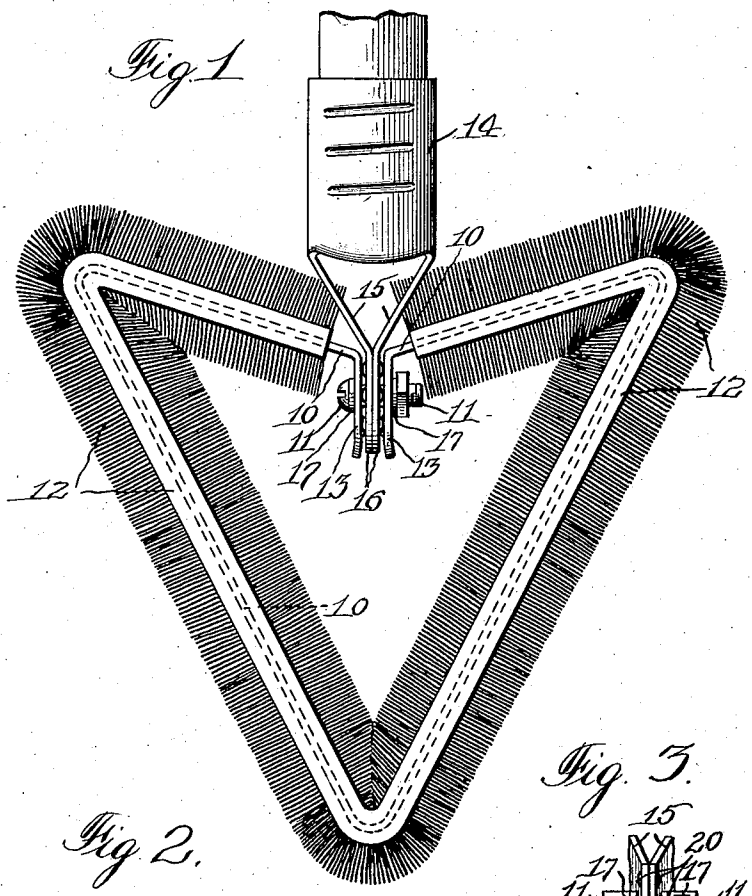


Fig. 2.

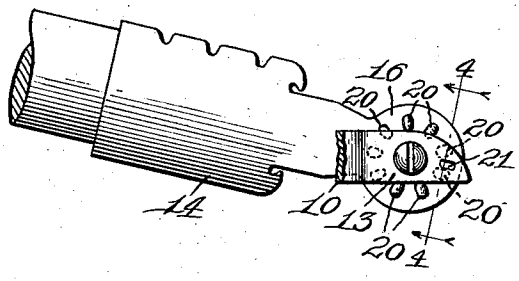


Fig. 3.

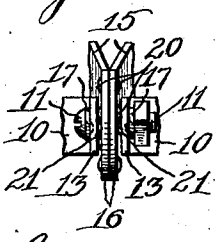
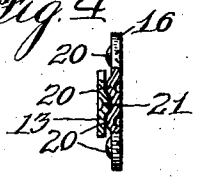


Fig. 4



Inventor:
By: John Glover
Luther Johns Atty.

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JOHN GLOVER, OF CHICAGO, ILLINOIS.

MOP.

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These improvements relate to devices ordinarily known as mops, dusters, cleaners, etc., and, although the appended claims recite mops, it is to be understood that I contemplate as their full equivalent all such swabbing or cleaning devices mounted on a handle. The improvements are more specifically in the connection means between the handle-holder and the mop body or frame.

It is old to provide a mop body or frame having a handle-holder, with connection means between the two comprising a yoke on the mop body and an interfitting part on the handle-holder, with bolt means for clamping the yoke upon the handle-holder whereby the handle-holder may swing into various angular relations with the frame.

The user of the mop constantly desires to vary the angular relation of the handle to the floor or wall surface for particular purposes, for instance, to clean under low parts such as sofas, back of radiators, etc.; but does not desire the angular relation of the handle to the mop body to be changing automatically during the cleaning operation. The binding action of the bolt in ordinary constructions may be great enough to hold the handle in any given angular relation, but in such case without the desired flexibility when the frequent changes in angular relation are desired to be made, for it is too inconvenient to be continually loosening the bolt and tightening it again, and, unless such bolt be made quite tight the mop body will flop about and turn on the pivotal connection and deprive the operator of the command of the device necessary for satisfactory use.

It has been suggested heretofore to overcome the objections to the ordinary construction by means for holding the handle-holder substantially locked in various angular relations while yet providing the desired flexibility at the joint, but such attempts in this direction as have come to my notice have various objections both with respect to operation and cost of manufacture.

The chief objects of the present improvements are to provide a simple, relatively cheap, strong and durable mop construction having the advantage of flexibility at the handle and frame connection while holding the parts together in any suitable angular relation and with the proper degree of locking force, and to provide a simple, relatively cheap and highly advantageous and reliable form of flexible locking connection suitable for use in a large variety of mop and duster constructions.

In the accompanying drawings Figure 1 is a top view of a simple form of mop according to these improvements with the handle fragmentarily shown; Fig. 2 is a side view of the handle-holder and connection parts with the fabric mop element and most of the mop frame removed; Fig. 3 is a front view of the connection members; and Fig. 4 is a sectional view as on the line 4—4 of Fig. 2 and showing sectionally and enlarged parts of the left-hand half of Fig. 3.

The mop frame 10 is shown as being formed in substantially triangular shape and of thin strip metal. The mop frame may have any suitable form and be of any other suitable construction. The particular construction shown is advantageous in its simplicity and low cost and also in the fact that when the bolt 11 is removed the mop proper 12 comprising well known flexible fabric elements and a hollow body part may be slipped upon the frame 10 and as readily be removed from time to time.

The free ends 13 of the frame 10 are turned in a common direction and in parallel arrangement and lie spaced apart facing each other and provide substantially a yoke construction.

The handle-holder 14 is formed of sheet metal and has forwardly-extending arms 15 terminating in a pair of circular plates 16 lying face to face and constituting a part or member which interfits with the yoke. The bolt 11 passes through aligning apertures in the yoke members 13 and the plates 16 and I preferably provide lock washers 17 on the bolt as shown to maintain the bolt from working loose.

On the circular plates 16 constituting a connection member carried by the handle-holder I provide a plurality of spaced-apart projections 20 in arcuate arrangement with respect to the bolt. As shown in Fig. 4 they are formed by pressing the metal outward, and they provide what is effectively a recess between the adjacent ones thereof.

Toward the free end of the yoke members 13 respectively I form another projection 21 pressed inward and into the path of arcuate movement of the projections 20 and adapted to interfit with the adjacent ones thereof as shown in Fig. 4, whereby a lock is provided for holding the handle in any one

of various angular relations to the mop body or frame. The projection 21 being spaced materially from the bolt, although the connection member 16 is held by the bolt very closely in face-to-face arrangement with the yoke member 13 there is sufficient resiliency in the metal to permit the opposing projections 20 and 21 to spring past each other and provide for slippage between the connection member carried by the body and the connection member carried by the handle-holder, so that while the lock between the parts is substantially positive with respect to all such strains tending to move the handle into another angular relation to the mop body and as are encountered in the normal use of the device it is still possible, by holding the mop body in one hand and the handle in the other, or by putting a foot upon the mop body on the floor while holding the handle, or by pressing the body upon the floor with the handle and then moving the handle, to swing the handle and the handle-holder into some other angular relation with respect to the mop body or frame. These various angular relations are defined by the spaced-apart arrangement of the recesses between the projections 20 or as they may otherwise be formed. The handle-holder moved into any such angular relation automatically becomes locked therein, yet always subject to change by a force not very much greater than that normally encountered in the use of the device.

The amount of force required to change from one locked position to another may be varied by means of the bolt 10, but it is not desirable to tighten the bolt to such an extent as to produce a typically frictional engagement as distinguished from a merely locked condition. In other words, the mop body will suitably be held in its desired angular relation to the handle when the bolt is tightened only enough to bring about an overlapping or interengagement of the locking elements, and thus the desired changes from time to time may readily be made by merely overcoming the force of a springy detent which slips out of one pocket and into another to lock the parts in other predetermined relations.

In the construction illustrated the mop handle can swing from its position illustrated in Fig. 1 through one hundred eighty degrees, and thus only half of the projections 20 may be put into use. I prefer to form such projections through three hundred sixty degrees, however, to simplify the assemblage of the parts.

I have also shown the projections 20 providing recesses between them on both of the disc-like parts 16, and a projection 21 on both of the yoke members 13. The double construction in this respect is advantageous since it provides a better lock, prevents a typically frictional contact at one side, facilitates assembling, and provides the same somewhat decorative effect on both sides of the disc-like connection member.

The construction thus illustrated and described is exceedingly simple, is notably cheap to manufacture, and is peculiarly effective to produce the desired locking effect between the parts while permitting the change of locked relationship of parts in a notably rapid, simple and easy way.

I contemplate as being included in the invention such variations, changes and departures from what is specifically herein illustrated and described as fall within the scope of the appended claims.

I claim:

1. Mop construction comprising a mop-carrying frame having a pair of substantially flat free and resilient end portions face to face, a handle-holder having a pair of substantially flat free end portions face to face and adapted to have interfitting face-to-face relation with said free end portions of the frame respectively, the free end portions of the frame and of the handle-holder having opposed interfitting projections and recesses adapted to interfit with each other for releasably locking said end portions together, there being aligned openings through all of said end portions at a place materially spaced from said projections and recesses respectively, and a bolt or the like extending through said openings to hold said end portions for pivotal movement relative to each other and in locked relation when the opposed projections and recesses are in interfitting relation to each other.

2. In mop construction, a looped mop-carrying frame having free, resilient end portions arranged in spaced opposition, there being registering openings in said end portions, a handle holder having a perforated extension arranged between said end portions of the frame, means extending through said end portions and said extension for retaining them in clamped relation, and a plurality of opposed projections and recesses formed on said extension and said resilient end portions adapted to be brought into registration for holding the parts yieldingly in given angular relations.

JOHN GLOVER.