Feb. 2, 1943. H. CAVE ET AL 2,310,011

CONNECTOR FOR MOP AND BRUSH HANDLES

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Fig. 1.

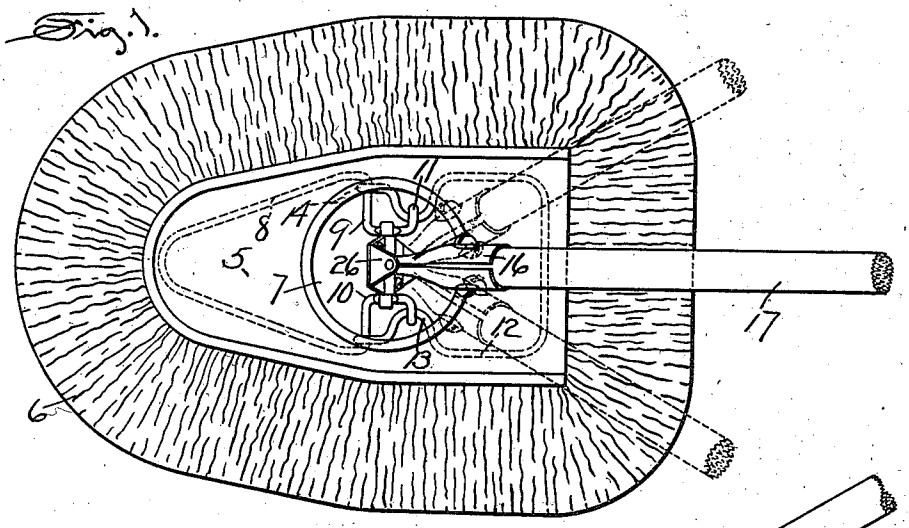


Fig. 2.

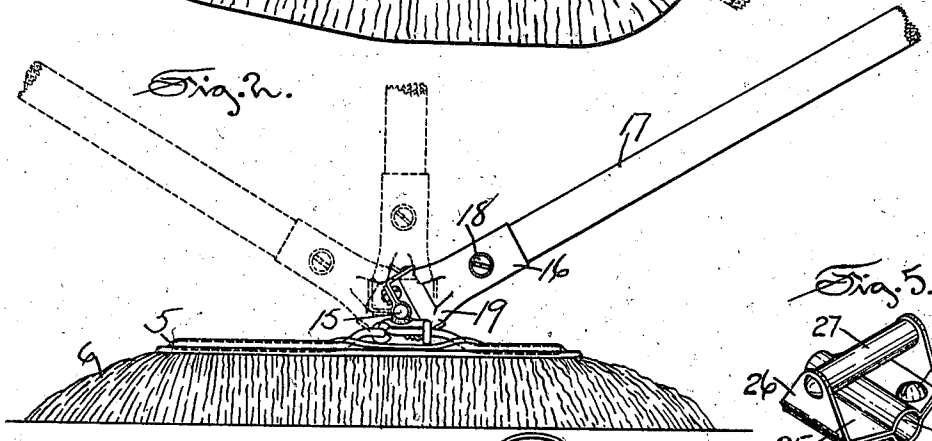


Fig. 5.

Fig. 3.

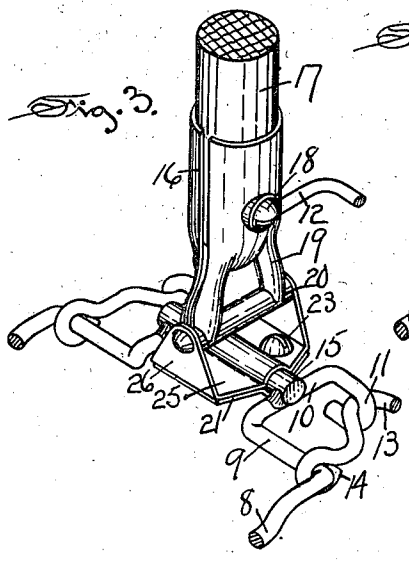
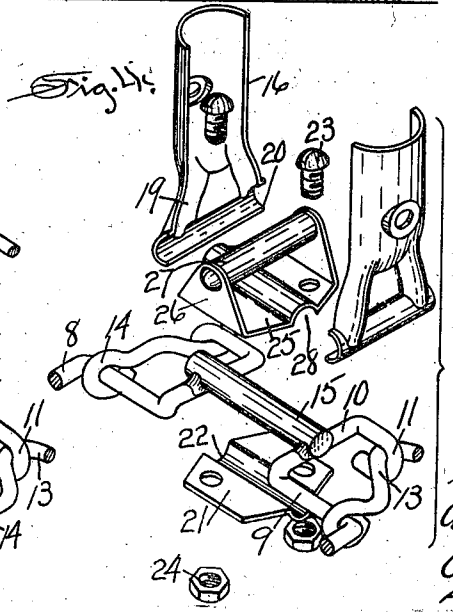


Fig. 4.



INVENTOR
Henry Cave.
Alfred G. Lefebvre.
by
Arthur B. Jenkins.
ATTORNEY

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Fig. 6.

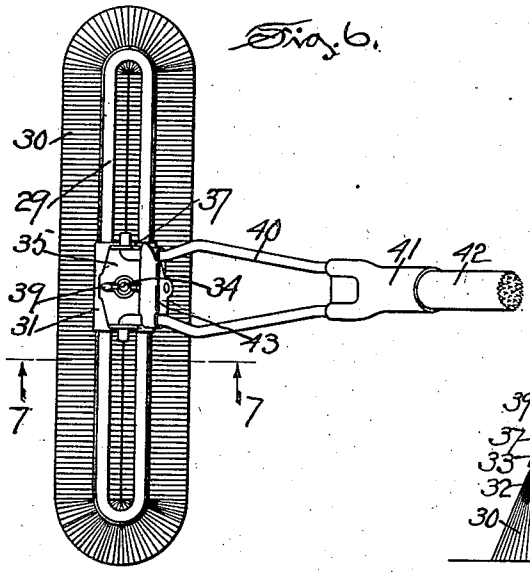


Fig. 7.

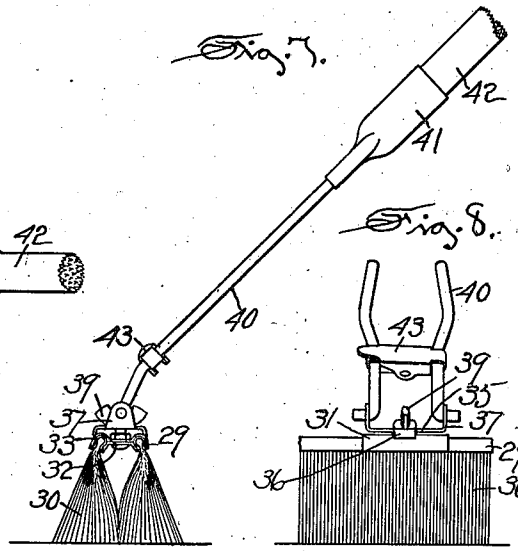


Fig. 8.

Fig. 9.

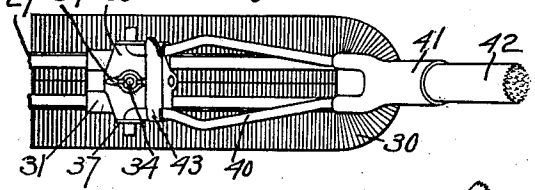


Fig. 12.

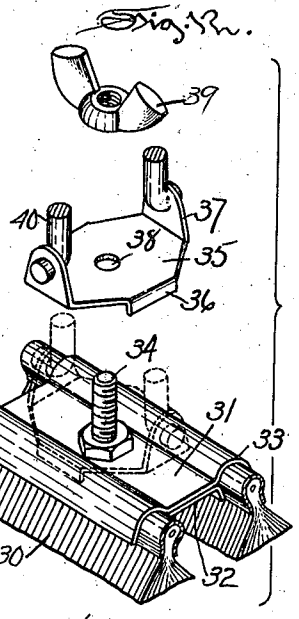


Fig. 10.

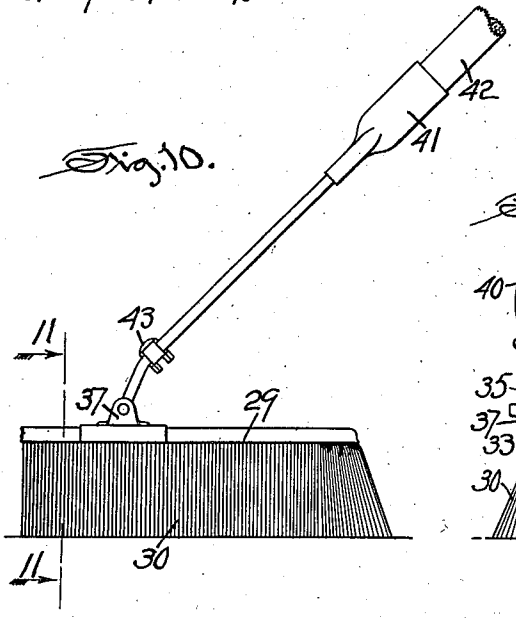
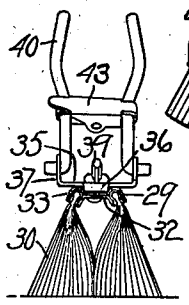


Fig. 11.



INVENTOR
Henry Cave
Alfred T. Lefevre.
By Arthur B. Jenkins
ATTORNEY

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CONNECTOR FOR MOP AND BRUSH HANDLES

Henry Cave and Alfred L. Le Febvre, Hartford, Conn., assignors to The Fuller Brush Company, Hartford, Conn., a corporation of Connecticut

Application February 14, 1940, Serial No. 318,890

2 Claims. (Cl. 306—2)

Our invention relates to the class of devices which are employed for attaching handles to mops, brushes, and similar cleaning utensils, and an object of our invention, among others, is the production of a connector of simple and inexpensive construction which will enable the use of a mop or brush not only in a manner to obtain the benefit of its full capacity, but also to reach comparatively inaccessible areas, as under or behind radiators, desks, or other articles of furniture and the like.

Forms of connectors embodying our invention and in the construction and use of which the objects herein set out, as well as others, may be attained are illustrated in the accompanying drawings, in which—

Figure 1 is a top plan view of a mop and handle united by our improved connector.

Figure 2 is a side view of the same.

Figure 3 is an isometric view of portions of the mop supporting frame and handle with our improved device connecting them.

Figure 4 is a similar view but showing the parts disconnected but in position ready for assembly.

Figure 5 is an isometric view of the connector.

Figure 6 is a top plan view showing a modified form of the device.

Figure 7 is a view in section on a plane denoted by the broken line 7—7 of Fig. 6.

Figure 8 is a front view of that portion of the brush adjacent the handle of the connector.

Figure 9 is a top plan view of a portion of the brush showing the connector employed to attach the handle in a position at right angles to the positions of Figs. 6 to 8.

Figure 10 is a side view of the same.

Figure 11 is a view in section on a plane denoted by the broken line 11—11 of Fig. 10.

Figure 12 is a view on enlarged scale showing the parts separated but in position for assembly in one position, another position of assembly being shown in dotted lines.

In the accompanying drawings there is shown in Figures 1 and 2 a mop of the swab type comprising a pocket 5 of fabricated material, as cotton, with threads 6 attached thereto and projecting therefrom. This pocket has an opening 7 for the insertion of a supporting frame comprising two members hinged together at substantially their lengthwise centers so that they may be folded for insertion into the pocket. These frame members are composed of wire flexible to an extent to permit interengagement one with the other and also insertion into the pocket. The front member has sides 8 of V-shape with cross bars 9 extending laterally toward each other and with bends 10 terminating in hooks 11 as shown in Fig. 1. The other frame member is of generally rectangular shape and includes side bars 12 with bends 13 terminating in eyes 14 through which the cross bars 9 of the other frame member extend, this forming a pivotal connection for the two frame members. The hooks 11 engage the bends 13 to secure the frame members in extended relation, said hooks being disengaged by springing the side members 12 toward each other, the eyes 14 being loose enough to permit this. A pivot bar 15 is rigidly secured at its ends to the bends 10 as shown in Fig. 3. The structure thus far described is of old and well known construction and alone forms no part of the present invention. This old structure embodies also a socket comprising two members 16 formed to fit and receive a handle 17 secured together as by means of a screw 18. Legs 19 terminating in sleeve members 20 are employed for attaching the socket member to a member for supporting a brush or mop. As heretofore employed the handle socket has been pivotally attached to the pivot bar 15 so that the handle swung in a single plane and the use of the mop was therefore somewhat limited, it being difficult in many cases to get access underneath and behind articles of furniture as hereinbefore explained.

It is therefore with the idea of increasing the usefulness of the implement that the present invention has been conceived, this embodying an anchor plate 21 having a pivot recess 22 and holes to receive fastening members as screws 23 that may be secured as by means of nuts 24 which are shown in Fig. 4. A connecting frame forming a part of the connector comprises a base plate 25 having ears 26 at opposite sides connected by a pivot bar 27 secured to the ears in any suitable manner, as by riveting the ends, as shown in Fig. 4. A pivot recess 28 extends across the plate 25, this being a counterpart of the recess 22 in the plate 21. The hole formed by these two recesses when the two plates are secured together receives the bar 15, a pivot joint being thereby formed which permits pivotal action of the frame and consequently of the handle 17 in one direction and the pivot formed by the bar 27 permits pivotal action of said frame and handle in a transverse direction so that the mop may be used by pushing it back and forth endwise or crosswise, thereby enabling access to be had in many places which could not be had with the handle pivoted to swing in one direction only.

In the form of the device shown in Figs. 6 to

12 the connector is arranged for use with a brush of rectangular form comprising a frame with side members 29 and bristles 30 secured thereto and projecting therefrom, as shown in Figs. 6 to 9. An anchor base comprises two plates 31—32 having complemental recesses extending along their opposite edges forming sockets 33 to receive the side bars or members 29, as shown in Fig. 12. The plates are secured together as by means of a bolt 34 and a nut thereon as shown in Fig. 12.

As in the case of the mop structure hereinbefore described this brush structure is also old and is shown simply to illustrate the adaptation of the invention to such. This improved device comprises an anchor plate 35 having lips 36, ears 37, and a hole 38. This anchor plate is secured to the base comprising the plates 31—32 by placing it upon the bolt 34 on top of the nut, and a wing nut 39 for the bolt is employed to secure said anchor plate in place. The ears 37 have holes to receive the outturned ends of the branches 40 of a handle attaching device which includes a socket 41 at its upper end to receive a handle 42, as shown in Fig. 7.

In this construction the anchor plate may be secured in position as shown in Figs. 6 to 8 to permit the handle to swing in one direction and by loosening the wing nut the anchor plate may be turned to the positions shown in Figs. 9 and 10 and by dotted lines in Fig. 12 to permit the handle to swing in a transverse direction as in the structure first described, the principal difference between the two structures being that in the one first described the action of the handle to swing in different planes is automatic while in the second structure the change is effected by a manual act. The outturned ends of the branches 40 are held engaged in their sockets as by means of a spreader 43 which is also of old and well known construction.

In accordance with the provisions of the patent statutes we have described the principles of operation of our invention, together with the device which we now consider to represent the best embodiment thereof; but we desire to have it understood that the device shown is only illustrative and that the invention may be carried out by other means and applied to uses other than those above set out.

We claim:

1. A cleaning utensil comprising a frame having a pivot member as a part thereof, a handle, and a connecting member comprising a complete structure and including a plate having a groove extending across one face thereof to form a portion of a socket and having upturned ears extending from the opposite face thereof with a pivot bar secured at its opposite ends and extending in a direction transverse to said groove to said ears to receive said handle for pivotal attachment of the latter to swing in two planes transverse to each other, said complete connecting member also including a plate having a complemental groove to complete said socket to receive said pivot member for free pivotal action of the connecting member on said pivot member.

2. A connecting element between the handle and frame of a cleaning utensil, said element comprising a plate having a groove extending across one face thereof to serve as a pivotal connection, ears extending from the opposite face thereof, a pivot bar secured at its opposite ends in said ears and extending crosswise of said groove on the opposite face of said plate from said groove, a fastening plate secured to the plate first mentioned and having a groove to register with the groove in the first mentioned plate, and means for securing the two plates together.

HENRY CAVE.
ALFRED L. LE FEBVRE.