Feb. 17, 1925. 1,526,455

E. P. BEAUDET

MOP FRAME

Filed April 4, 1924

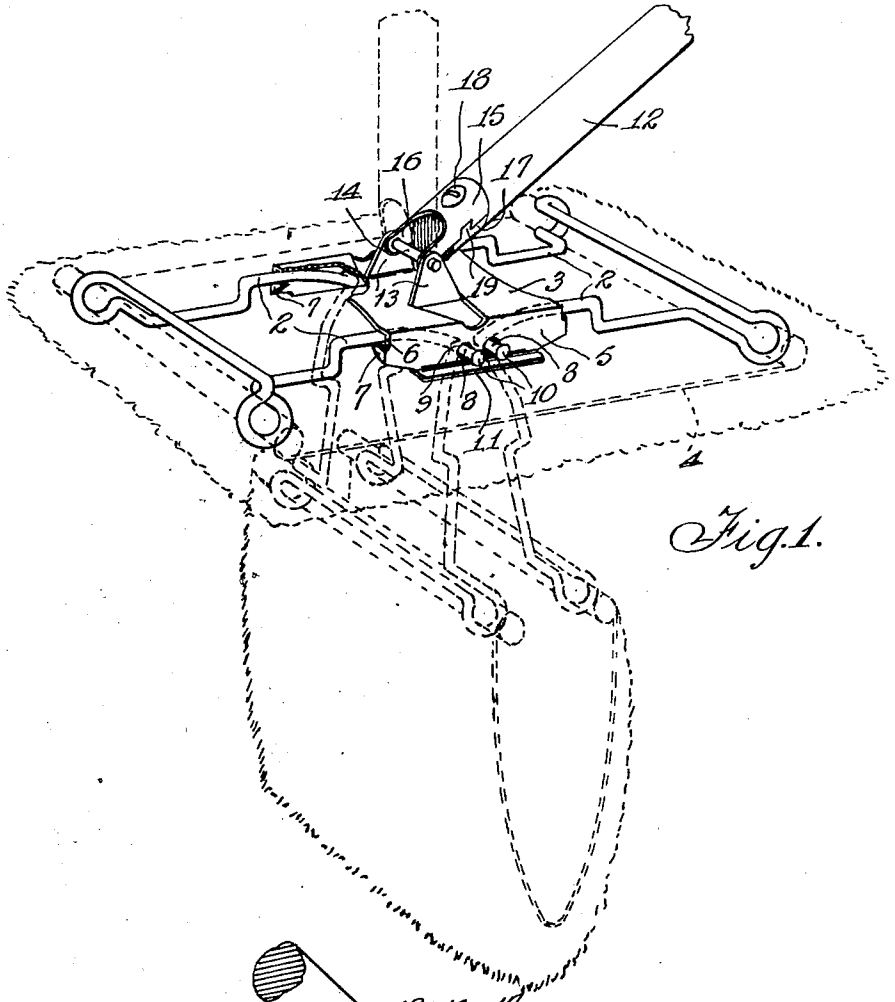


Fig. 1.

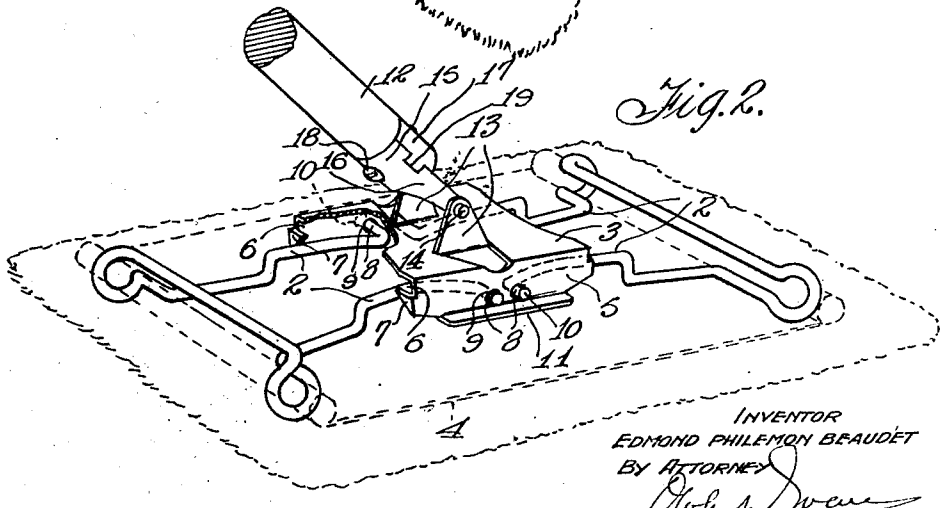


Fig. 2.

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UNITED STATES PATENT OFFICE.

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MOP FRAME.

Application filed April 4, 1924. Serial No. 704,232.

To all whom it may concern:

Be it known that I, EDMOND PHILEMON BEAUDET, a subject of the King of Great Britain, and resident of Montreal, Province of Quebec, Canada, have invented certain new and useful Improvements in Mop Frames, and do hereby declare that the following is a full, clear, and exact description of same.

This invention relates to frames upon which mop cloths, swabs or the like are stretched in operative position, such frames being adapted to fold up or collapse to loosen the cloth preparatory to its being wrung out or replaced by a new cloth.

The ultimate requirement in mop frames is the achievement of a frame which while capable of being readily made effectively rigid in its extended position as to adequately maintain and carry the cloth in its operative distended condition can with facility be collapsed and folded to loosen the cloth, and withal of such simple construction as to ensure economy in construction and assembly.

This invention, therefore, has been conceived with the object of providing a mop frame which my means of a novel assembly of simply formed members reduces the component parts of the frame to a minimum without prejudice to effective co-operation in the securance of its stretching and collapsing functions to the end that a frame is produced which in its economy of manufacture, ease of assembly and operation results in an article of greater utilitarian value than heretofore produced.

The novel constructional features and advantages will be hereinafter more fully described in the specification and particularly pointed out in the appended claims.

For full comprehension, however, of my invention reference should be had to the accompanying drawings forming a part of this specification, in which the same reference numerals indicate the same parts and wherein:

Fig. 1 is a plan view of the frame in extended position, with cloth attached, a portion of the bridge member being broken away to expose the interior, the collapsed position of the frame being indicated in dotted lines; and

Fig. 2 is a perspective view of the frame, while approaching its locked extended position.

As shown in the drawings the mop frame, of general elongated form, consists of a pair of oppositely disposed relatively movable U-shaped frame pieces 2 with their inner ends adjoining through the medium of a bridge piece or mounting 3 which functions to lock the frame pieces 2 together, the bridge piece carrying a handle socket to be hereinafter referred to and the mop cloth 4 being attached to the outer ends of the frame piece 2, in a suitable manner.

The bridge piece comprises a flat plate like top 3 with downturned side margins 5, the inner adjoining ends of the frame pieces 2 being disposed between the side margin and pivotally connected thereto, the pivotal connections between the bridge piece and frame pieces being effected in a loose manner producing a sliding pivotal attachment whereby the pivoted ends of the frame pieces can, in a combined swinging and sliding movement, move transversely with relation to the bridge piece and slip into or out of notches 6 acting to retain the frame pieces 2 in extended position in substantial alignment with the bridge piece.

Either of the frame pieces 2 or both, as shown in dotted lines Fig. 1, when free of the notches 6 are permitted to swing down and fold so that their outer ends approach each other thus loosening the cloth and permitting the latter to be squeezed or wrung out or the cloth replaced by a new one. When adjusting the mop to operative position the outer ends of the frame pieces 2 are spread apart preferably by resting them upon some convenient surface and exerting pressure thereon through the medium of the handle, thus stretching the cloth from the loose condition shown in dotted lines Fig. 1, progressively through the partially spread position illustrated in Fig. 2, to the taut fully spread position shown in full lines Fig. 1, the sliding pivotal connection provided for the inner ends of the frame pieces enabling the latter to be moved into the notches 6 where they are retained in their extended position against accidental displacement.

The above novel combination of parts has

been conceived with the idea of elimination of superfluous parts and simplification of remaining parts promoting ease and econmy of manufacture, assembly and operation and to that end the present preferred construction comprises a bridge piece stamped out from a single piece of metal to present the flat top 3 and sides 5, the latter presenting lugs 7 at their ends, the upper edges of which latter are spaced from the top 3 and when turned inwardly present ledges or shoulders combining with the top 3 to form inwardly facing notches constituting the notches 6 for the restraining accommodation of the frame-pieces 2. The frame pieces 2 are interchangeable and each formed from a single length of metal wire for instance bent into U-form with the closed end formed for attachment to the cloth, the legs of the frame piece being located between the sides 5 of the bridge piece and terminating in bent ends 8 extending outwardly in opposite direction loosely through holes 9 in the sides 5, these ends with the holes 9 forming the sliding pivotal connections of the frame pieces and the bent ends being burred at 10 to prevent them being drawn inwardly through the holes 9 and so freed from the bridge piece. The bent ends 8 are of greater extent than the lugs 7 and therefore are longer than the depth of the notches 6 formed by the lugs thus accommodating the necessary inward movement of the legs of the frame pieces to take over the lugs 7 and enter the notches 6. The inherent resiliency of the material of which the frame pieces are formed yieldingly resists compression of legs of either frame piece inwardly towards each other and therefore in moving said frame pieces to their operative extended position, the inward movement of such frame pieces over the lugs 7 stores up a spring impulse resulting in the frame pieces snapping outwardly into the notches as soon as they pass over the lugs and ensures a snug association of the frame pieces with the bridge piece. To facilitate this action each lug 7 is stamped in triangular form with an inclined edge extending downwardly from the shoulder to the lower corner of the side 5 to form a cam surface which, as shown in the intermediate position illustrated in Fig. 2, is engaged by the frame pieces 2, the extending pressure causing the frame pieces to ride upwardly and inwardly to the notch into the position shown in Fig. 1 where the bridging of the inner ends of frame pieces by the continuous bridge piece promotes comprehensive rigidity to the frame as a whole.

In order to obtain the maximum spacing in a straight line between the outer ends of the frame pieces and ensure the most efficient stretching of the cloth in a flat plane, the bridge piece and frame pieces are associated so that the maximum diametrical extent, with respect to their pivotal connections, is obtained for the frame pieces. In the present instance this spread is obtained by disposing the holes 9 and notches 6 out of alignment longitudinally of the bridge piece, the holes being disposed at a lower level than the notches which latter are near the top 3, thus when in locked extended position the ends of the frame pieces are at a maximum spread aligned with the frame as a whole and the cloth consequently spread taut and flat beneath the frame with the sides 5 of the bridge piece thereover.

In order to avoid the exposure of an abrading edge to the mop cloth, the bottom edge of each side margin is flattened in lateral extension to present a foot 11 having a smooth association with the cloth and backing the cloth at the centre.

The handle 12 of the mop is preferably attached thereto by spaced ears 13 struck up from the top 3 of the bridge piece and carrying a pivot pin 14 therebetween to which is pivoted the handle socket, consisting preferably of a semi-cylindrical portion 15 with extensions 16 pivoted upon the pin 14, such portion 15 with a semicylindrical portion 17 combining to form a socket embracing the lower end of the handle and fastened thereto by a screw 18 passing through the socket portions, fixed relation between the latter being ensured by tenon and recess connection 19 formed in the adjoining edges of the portions.

From the above it will be seen that the described frame consisting as it does of three parts only, is of an ultimate simplicity without sacrifice to the cloth carrying, loosening and stretching functions, such minimum parts, moreover, being of such elementary but uniquely efficient form as to lend themselves to economical manufacture and assembly, especially in quantity production and therefore produce an article of considerably greater utilitarian value than heretofore.

What I claim is as follows:

1. In a mop frame, a mounting plate having means for attaching the mop handle thereto and side portions each of which has a pair of holes between its ends and lugs formed at such ends, the lugs being arranged with relation to the plate to form notches; a pair of mop holding wire frames of U-form each having the ends of its leg portions bent to take into said holes and such leg portions adapted to be sprung over the lugs into and out of said notches.

2. In a mop frame a mounting plate having a top portion, side portions extending downwardly and each having a pair of holes between its ends, bevelled lugs formed at the ends of the side portions and turned inwardly to form, with the top portion, notches at

the ends of the plate, a pair of ears struck up from the top of the plate; a handle socket pivoted to said ears, and a pair of frame pieces formed of resilient material bent into U-form with the free ends of the leg portions terminating in outwardly bent end portions extending loosely through the holes in the side portions of the mounting plate, such leg portions being adapted to be sprung into and out of said notches.

In testimony whereof, I have signed my name to this specification.

EDMOND PHILEMON BEAUDET.