

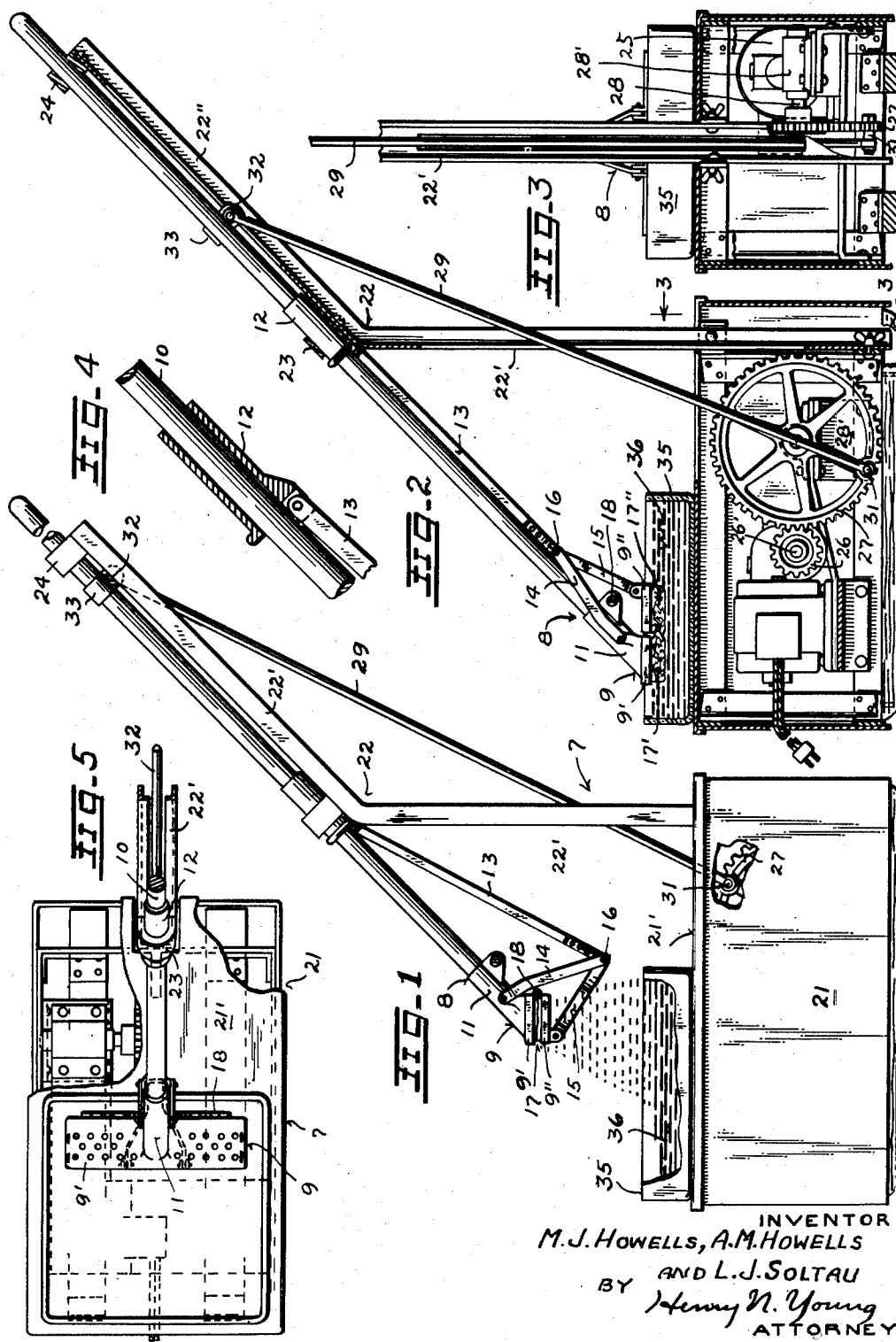
May 6, 1952

M. J. HOWELLS ET AL

2,596,026

MOP DEMONSTRATOR

Filed Oct. 17, 1949



INVENTOR
M. J. HOWELLS, A. M. HOWELLS
AND L. J. SOLTAU
BY *Henry N. Young*
ATTORNEY

UNITED STATES PATENT OFFICE

2,596,026

MOP DEMONSTRATOR

Merriam J. Howells and Alden M. Howells,
Berkeley, and Le Roy J. Soltau, Walnut Creek,
Calif.

Application October 17, 1949, Serial No. 121,686

4 Claims. (Cl. 35—13)

1

The invention relates to a display apparatus for demonstrating the wringing action of a mop unit providing a pad-wringing means.

The primary object of the invention is to provide for an action of the wringing means of the mop in a display unit which disposes the mop in normal use and wringing positions.

Another object is to provide a demonstrator of the character described in which the demonstrated action is fully visible to observers thereof.

The invention possesses other objects and features of advantage, some of which, with the foregoing, will be set forth or be apparent in the following description of a typical embodiment thereof, and in the accompanying drawings, in which,

Figure 1 is a side elevation of a present demonstrator mounting a mop which has its head lifted and in wrung condition.

Figure 2 is a sectional elevation of the demonstrator, the mop head being shown in its applied position.

Figure 3 is a sectional view taken at the line 3—3 in Figure 2.

Figure 4 is an enlarged fragmentary section of a portion of the mop structure.

Figure 5 is a fragmentary plan view of the arrangement of Figure 1.

The present demonstrator 7 comprises a unitary assembly which has been particularly designed and proportioned for demonstrating the action of a mop 8 comprising a pad-carrying head 9 having rectangular sections 9' and 9'' hinged together along abutting edges and having a handle 10 extending rigidly and obliquely rearwardly from a clamp socket 11 provided by the forward head section 9'. A sleeve 12 is manually slidable on the handle 10 intermediately of its length, and links 13 and 14 and 15 extend respectively from the sleeve 12 and socket 11 and the rear head section 9'' to a common connecting pin 16. The arrangement is such, that with the head sections 9' and 9'' in normal coplanar relation for a working application of the head pad 17, a movement of the sleeve 12 toward the mop head will swing the head sections 9' and 9'' into mutual opposition to compressedly engage the sections 17' and 17'' of the mop pad 17 thereof for wringing out the pad. A spring hinge 18 connects the head sections 9' and 9'', said hinge being operative to constantly and yieldingly urge the normal coplanar relation of the sections 9' and 9'' for providing a corresponding relation of the pad sections 17' and 17''.

It will now be noted that the demonstrator unit

2

7 comprises a rectangular hollow base 21 fixedly supporting a rigid standard 22 extending upwardly from a point near its rear end and intermediately between its sides. The standard 22 has vertical and oblique portions 22' and 22'', and the portion 22'' fixedly mounts a clamp sleeve 23 adjacent the top of the standard portion 22' and a guide sleeve 24 at its free end in coaxial relation to the clamp sleeve. The sleeve 23 is arranged to clampedly engage the sleeve 12 of the mop structure while the mop handle 11 is slidably engaged through the sleeve 12 and the guide sleeve 24, the angle of the mounted handle being such that the mop head is obliquely reciprocative with the mop handle between its operative position of Figure 2 in which it is conditioned for its use to the position of Figure 1 in which it is in raised pad-wringing condition. As particularly shown, the standard 22 is of channel section, and has the webs of its portions 22' and 22'' provided with longitudinal slots which respectively receive a link 29 and a clamp ring 33 there-through for their required free movement along the slots as the handle is reciprocated.

Means are provided for reciprocating the mop handle 10 in the guideway provided by the sleeves 12 and 24, said means being provided in the base space and comprising an electric motor 25 which drives a pinion 26 on a shaft 26' through a suitable speed-reducing assembly of the motor. The pinion 26 constantly meshes with a gear 27 carried by a shaft 28 fixedly journaled in a support bearing 28', and the link 29 connects a wrist pin 31 provided on the gear 27 with a hinge pin 32 provided by the clamp ring 33 which is clamped to the portion of the mop handle 10 between the sleeve 12 and the guide 24 at such a point that a rotation of the gear 27 will reciprocate the handle 10 in its mounted position for alternately conditioning the mop head as for its use and for its wringing; it will be noted that the connected link 29 and clamp ring 33 prevent a rotation of the handle. It will be understood that the wrist pin 31 on the gear 27 is operative as a crank pin for effecting a swinging reciprocation of the ring 29 to provide the axial reciprocation of the handle 10. Also, since the link 29 extends diametrically of the gear 27 when the controlled handle is at its stroke ends, the starting and stopping of the handle strokes are effected gradually, as is desired for both operation and display reasons.

To make the present display and demonstration of a present type of mop most realistic, a pan or tray 35 may be placed on the base top 21' beneath the zone of movement of the head 9, said

55

3

pan being so spaced from the position of the lowered head that the latter may extend into the pan space while in horizontal position for charging with liquid 36 therein when it is operatively conditioned, the pan gravitationally receiving the squeezed-out liquid while wringing is being effected. If the reciprocally mounted handle 10 is that of some other mop or other implement provided with a working head lacking relatively movable parts, a purely attention-attracting display of the implement is provided. On the other hand, if the handle 10 is that of an implement having a head with relatively movable parts controlled by a member corresponding to the present slide sleeve 12 or the link 13, it will be understood that such a member may be suitably anchored to the standard 22 for actuating the head parts by reason of the reciprocation of the handle.

From the foregoing description taken in connection with the accompanying drawings, the advantages of the present mop demonstration will be readily understood by those skilled in the art of which the invention appertains. While we have described the principle of operation, together with an arrangement which we now consider to be a preferred embodiment thereof, we desire to have it understood that the showing is primarily illustrative, and that such changes and developments may be made, when desired, as fall within the scope of the following claims:

We claim:

1. In apparatus for demonstrating a unitary mopping implement or the like having an elongated handle for manually applying the implement and terminally carrying a working head having normally coplanar parts providing wettable mop pad sections arranged for their pressing together between the head parts to express liquid therefrom under control of a manually actuatable means comprising a sleeve slidably receiving the handle, a base, a standard extending rigidly upwardly from said base and providing an oblique guideway supportingly mounting the implement handle for its axial reciprocation, a motor means carried by said base for reciprocating the implement handle in said guideway, and means securing the sleeve member to the standard whereby the movement of the handle in the guideway is operative to actuate said manually actuatable control member for the implement head parts.

2. In apparatus for demonstrating a unitary mopping implement or the like having an elongated handle for manually applying the implement to a horizontal working surface and terminally carrying a working head having normally coplanar parts providing wettable mop pad sections of yielding material arranged for their pressing together between the head parts when the head is lifted free of the working surface to express liquid therefrom under control of a manually actuatable implement member, a base, a standard extending rigidly upwardly from said base and providing a guideway reciprocally receiving the implement handle in angular rela-

4

tion to the horizontal with its head end lowermost and arranged for reciprocation between limiting lowered and raised positions thereof, means engaging the control member for the head parts with the standard carried by said base and connected with the implement handle for reciprocating it in said guideway, means whereby the movement of the handle operatively actuates the control member for the implement head, and a basin for liquid mounted on the base in position to receive the head for a wetting of the pad in the liquid therein solely while the head is in lowered position and to receive the liquid expressed from the raised head.

3. In apparatus for effecting a display demonstration of a unitary floor-mopping implement having an elongated handle for manually applying the implement and terminally carrying a working head having normally coplanar parts providing wettable mop pad sections arranged for their pressing together between the head parts to express liquid therefrom by the manual actuation of a normally inoperative control member mounted on the handle, a base, a standard extending rigidly upwardly from said base and providing an oblique guideway supportingly mounting the implement handle for its axial reciprocation between limiting raised and lowered positions thereof, a mechanical means carried by said base for reciprocating the implement handle in said guideway, and means engaging the control member with the standard whereby the movement of the handle in the guideway between its limiting positions is operative to actuate said control member to dispose the head parts in coplanar relation when the handle is lowered to its limit and in mutually opposed relation for a pressing of the pads together when the handle is raised to its limit.

4. A structure in accordance with claim 3 having a liquid-containing basin mounted on the base in position to receive the head for wetting of the pad in the liquid therein solely while the head is in lowered position and to receive the liquid expressed from the raised head.

MERRIAM J. HOWELLS.
ALDEN M. HOWELLS.
LE ROY J. SOLTAU.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
666,715	Tunnichliff	Jan. 29, 1901
727,125	Graham	May 5, 1903
1,381,856	Aston	June 14, 1921
1,538,899	Langley	May 26, 1925
1,638,406	Mowry	Aug. 9, 1927
1,722,659	Clark	July 30, 1929
2,008,634	Aird	July 16, 1935
2,013,643	Bliss	Sept. 10, 1935
2,306,901	Poffet	Dec. 29, 1942