

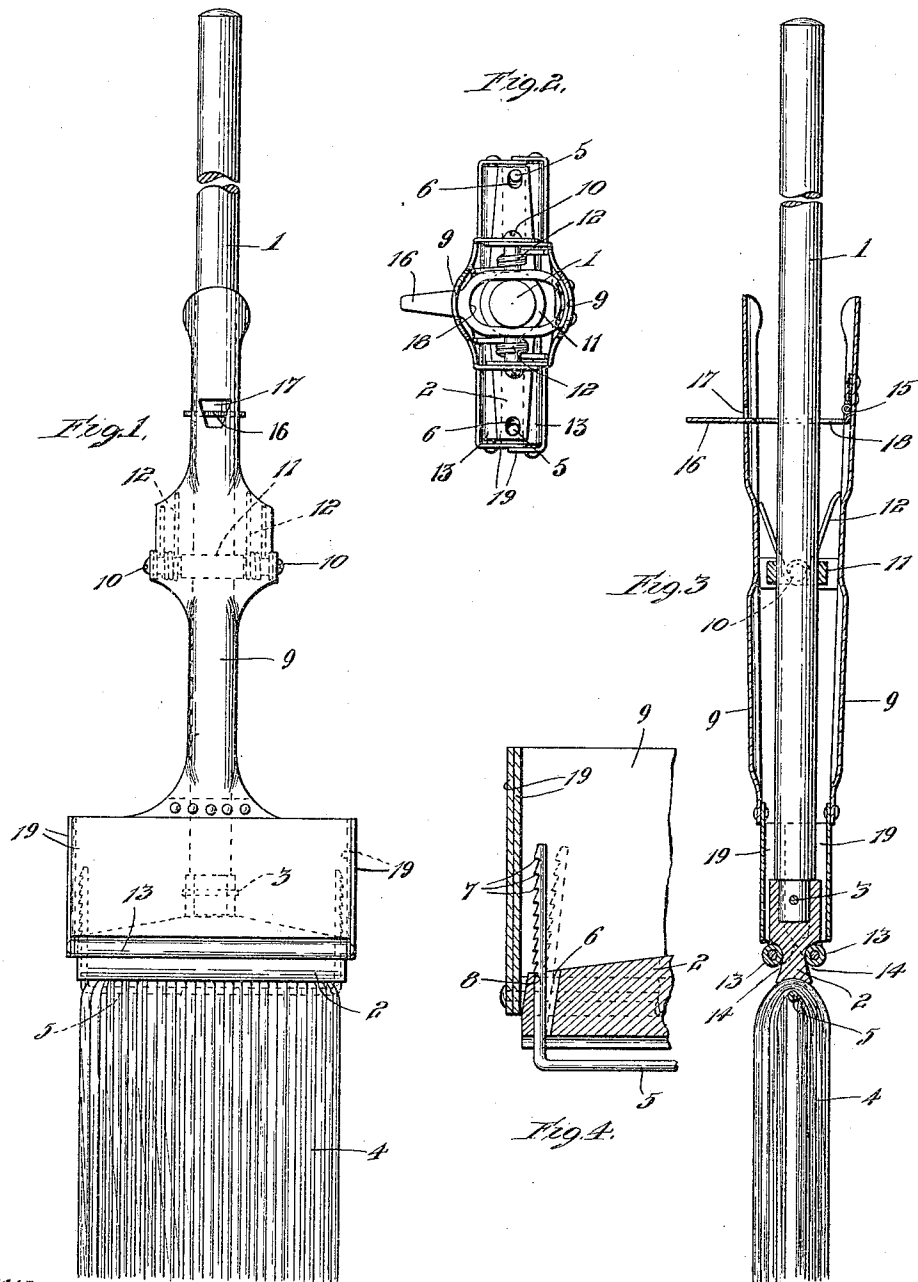
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MOP.

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1,137,760.

Patented May 4, 1915.



Witnesses:

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# UNITED STATES PATENT OFFICE.

GORO KAWASAKI, OF CHICAGO, ILLINOIS.

MOP.

1,137,760.

Specification of Letters Patent.

Patented May 4, 1915.

Application filed June 26, 1914. Serial No. 847,434.

*To all whom it may concern:*

Be it known that I, GORO KAWASAKI, a subject of the Emperor of Japan, and a resident of the city of Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Mops, of which the following is a specification.

My invention relates to improvements in mops, and has for its object, the production of a device of this character which will be of improved construction and efficient in operation.

Other objects will appear hereinafter.

The invention consists in the combinations and arrangements of parts hereinafter described and claimed.

The invention will be best understood by reference to the accompanying drawing forming a part of this specification, and in which,

Figure 1 is a front elevation of a mop embodying my invention, Fig. 2 is a top plan view thereof, Fig. 3 is a central longitudinal section of the mop, and Fig. 4 is an enlarged sectional detail of one side of the mop head holder.

The preferred form of construction as illustrated in the drawing comprises an elongated handle 1 at the lower end of which is arranged a cross piece 2 rigidly secured thereto by means of a pin 3. Positioned at the outer edge of the cross piece 2 is the mop head 4, said mop head being clamped in position by means of a U-shaped member 5, the parallel ends of which slidably engage with openings 6 provided in the ends of cross piece 2. Said ends of member 5 are provided at their outer sides with ratchet teeth 7 adapted for engagement with a tooth or inwardly extending flange 8 provided at the inner end of each opening 6 in order to lock the member 5 in clamping relation with the mop head, as will be readily understood. The arrangement is such, that the resiliency of the member 5 serves to hold the teeth 7 thereof in engagement with the members 8, so that in releasing the member 5, it is only necessary to flex the ends thereof inwardly, as shown in dotted lines in Fig. 4. Further, it will be seen, that with this arrangement, in clamping the mop head in position, the member 5 will automatically be locked in the position to which the same is moved in pressing said member into engagement with the mop head.

Arranged at the lower end of the handle 1 above the mop head 4 is a pair of levers 9 pivotally connected at 10 intermediate their ends. At the pivotal connection between said levers, a ring 11 is provided for slidably engaging with the handle 1 which extends between the levers 9, as clearly shown in Fig. 3. Torsional springs 12 cooperate with the levers 9 to normally press the lower ends thereof toward each other. Provided at the lower ends of said levers are rollers 13, said rollers being of a width corresponding with that of the mop head, so that when the levers 9 are moved downwardly, said rollers will contact with opposite sides of the mop head and thereby cause the water contained therein to be pressed therefrom. The cross piece 2 is provided at its opposite sides with recesses 14 for the reception of the rollers 13 when not in use, or when the levers 9 are at their upper terminal of movement upon the handle 1.

Pivoted at 15 to the inner side of the upper end of one of the levers 9 is a finger 16 the free end of which projects through a slot 17 formed in the corresponding end of the other of said levers, said finger being provided with an elongated opening 18 to accommodate the handle, as clearly shown in Figs. 2 and 3. The finger 16 is tapering in form, as clearly shown in Fig. 2 and the slot 17 is also of tapering form, as shown in Fig. 1, so that when said finger is rocked downwardly or forwardly, the tapering edges thereof will engage with the tapering edges of said slot. By reason of this disposition of the opposite edges of said finger, when the same are in engagement with the opposite edges of slot 17, the adjacent ends of lever 9 will be locked against inward rocking and hence the rollers 13 against relative outward movement. This is of advantage in pressing the water from the mop head since, with this arrangement, the resiliency of springs 12 need not be relied upon in holding the rollers 13 in engagement with the opposite sides of the mop head, said rollers, with the arrangement set forth, being locked against relative outward movement or in compressing position relative to the mop head when the finger 16 is rocked forwardly or downwardly into engagement with the tapering edges of slot 17. The springs 12 will, however, serve as a means of constantly holding the rollers 13 in engagement with the opposite sides of cross

piece 2 or the mop head, as the case may be, serving, when said rollers are in engagement with the recesses 14 of the cross piece to press said rollers so securely into engagement with said recesses, that said rollers will hold the levers 9 in elevated position when the mop is in use. The upper ends of levers 9 are formed to constitute handles whereby said levers may be readily reciprocated in the pressing of the water from the mop head. The opposite lateral edges of the outer ends of levers 9 are provided with inwardly extending overlapping flanges 19 which serve to confine the strands of the mop head in position between the rollers 13 in the movement of the latter over the mop head.

While I have illustrated and described the preferred form of construction for carrying my invention into effect, this is capable of variation and modification without departing from the spirit of the invention. I, therefore, do not wish to be limited to the precise details of construction set forth, but desire to avail myself of such variations and modifications as come within the scope of the appended claims.

Having described my invention what I claim as new and desire to secure by Letters Patent is:

1. The combination of a mop head; a pair of levers pivotally connected together intermediate their extremities; contact members carried at corresponding ends of said levers adapted for engagement with opposite sides of said mop head; resilient means cooperating with said levers for normally pressing said contact members toward each other; and means cooperating with said levers for locking said contact members against relative outward movement, said levers being movably mounted whereby said contact members may be moved relatively to said mop head, substantially as described.

2. The combination of a mop head; a pair of levers pivotally connected together intermediate their extremities; contact members carried at corresponding ends of said levers adapted for engagement with opposite sides of said mop head; resilient means cooperating with said levers for normally pressing said contact members toward each other; and means cooperating with the opposite ends of said levers for locking said contact members against relative outward movement, said levers being movably mounted whereby said contact members may be moved relatively to said mop head, substantially as described.

3. The combination of a mop head; a pair of levers pivotally connected together intermediate their extremities; contact members carried at corresponding ends of said levers adapted for engagement with opposite sides of said mop head; resilient means

cooperating with said levers for normally pressing said contact members toward each other; and a transversely extending finger on the opposite end of one of said levers adapted to engage with the corresponding end of the other of said levers to lock said contact members against relative outward movement, said levers being movably mounted whereby said contact members may be moved relatively to said mop head, substantially as described.

4. The combination of a mop head; a pair of levers pivotally connected together intermediate their extremities; contact members carried at corresponding ends of said levers adapted for engagement with opposite sides of said mop head; resilient means cooperating with said levers for normally pressing said contact members toward each other; and a transversely extending tapering finger on the opposite end of one of said levers adapted to engage with a tapering socket in the corresponding end of the other of said levers to lock said contact members against relative outward movement, said levers being movably mounted whereby said contact members may be moved relatively to said mop head, substantially as described.

5. The combination of a handle; a cross piece at one end of said handle; a mop head arranged at said cross piece; a pair of levers pivotally connected together intermediate their extremities, said levers being mounted upon said handle for longitudinal sliding relative thereto; contact members at corresponding ends of said levers adapted for engagement with opposite sides of the mop head; there being recesses provided in opposite sides of said cross piece for the reception of said contact members when not in use; and resilient means normally pressing said contact members toward each other, substantially as described.

6. The combination of a handle; a cross piece at one end of said handle; a mop head arranged at said cross piece; a pair of levers pivotally connected together intermediate their extremities, said levers being mounted upon said handle for longitudinal sliding relative thereto; contact members at corresponding ends of said levers adapted for engagement with opposite sides of the mop head; there being recesses provided in opposite sides of said cross piece for the reception of said contact members when not in use; resilient means normally pressing said contact members toward each other; and means cooperating with said levers for locking said contact members against relative outward movement, substantially as described.

7. The combination of a handle; a cross piece at one end of said handle; a mop head arranged at said cross piece; a pair of levers

pivotally connected together intermediate their extremities, said levers being mounted upon said handle for longitudinal sliding relative thereto; contact members at corresponding ends of said levers adapted for engagement with opposite sides of the mop head; there being recesses provided in opposite sides of said cross piece for the reception of said contact members when not in use; resilient means normally pressing said contact members toward each other; and overlapping flanges at the respective ends of said contact members adapted to confine a mop head to position between said contact members, substantially as described.

8. The combination of a mop head; a pair of contact members adapted for engagement with opposite sides of said mop head; means for moving said contact members relative said mop head; and overlapping flanges at the respective ends of contact members adapted to confine the mop head positioned

between said contact members, substantially as described.

9. The combination of a mop head; a pair of levers pivotally connected together intermediate their extremities; contact members carried at corresponding ends of said levers adapted for engagement with opposite sides of said mop head, said levers being movably mounted whereby said contact members may be moved relative to said mop head; and overlapping flanges carried by said levers and arranged at the respective ends of said contact members for confining the mop head positioned between said contact members, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

GORO KAWASAKI.

Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."