No. 737,572. PATENTED SEPT. 1, 1903.

W. G. BROWNE.

MOP.

APPLICATION FILED DEC. 3, 1902.

NO MODEL.

Fig. 1.

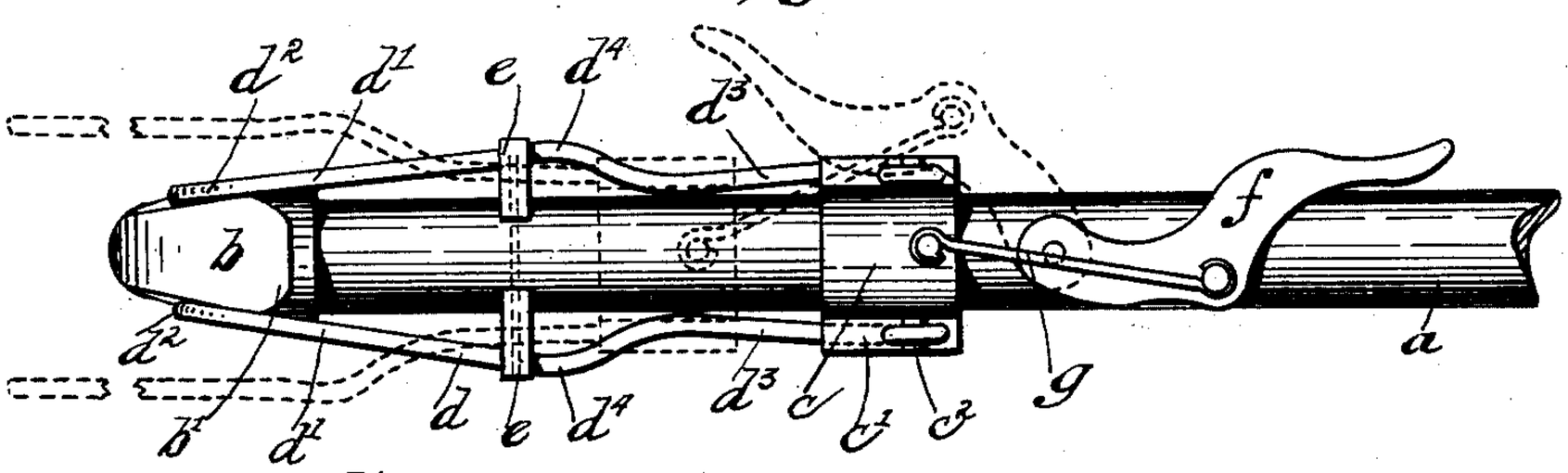


Fig. 2.

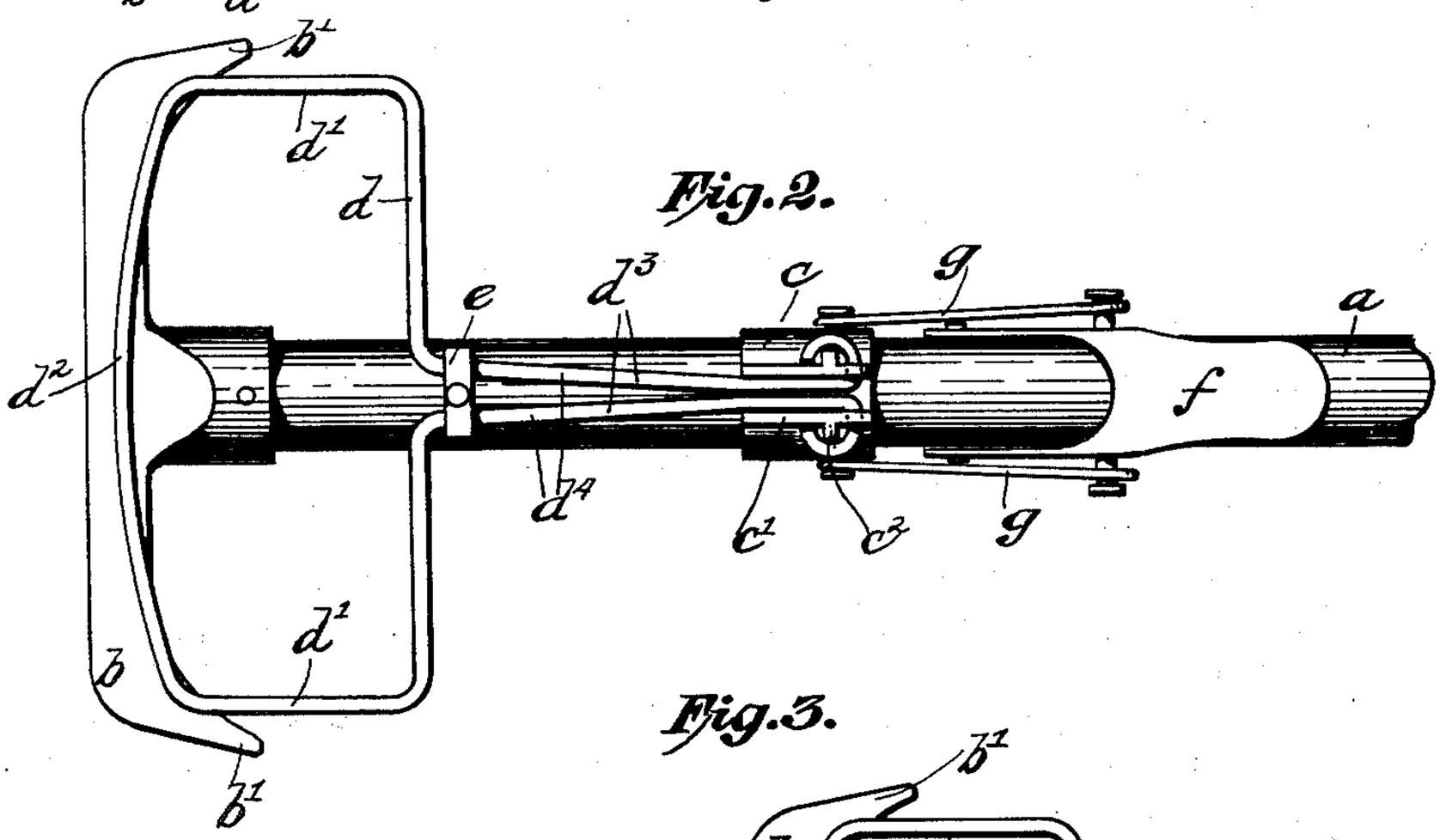
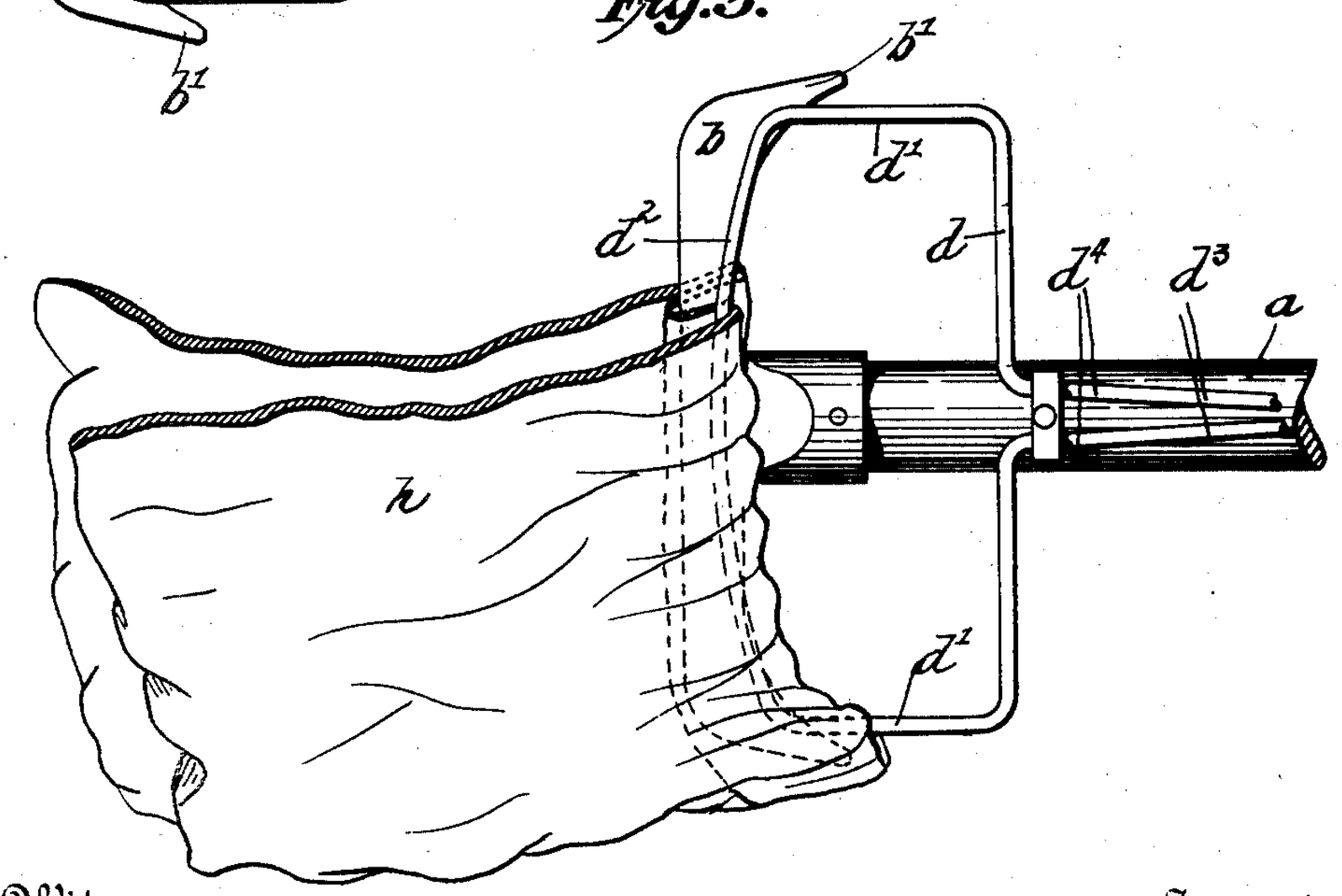


Fig. 3.



Witnesses
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No. 737,572. Patented September 1, 1903.

UNITED STATES PATENT OFFICE.

WILLIAM G. BROWNE, OF KINGSTON, NEW YORK, ASSIGNOR TO THE W. G. BROWNE MANUFACTURING COMPANY, OF KINGSTON, NEW YORK, A CORPORATION OF NEW YORK.

MOP.

SPECIFICATION forming part of Letters Patent No. 737,572, dated September 1, 1903.

Application filed December 3, 1902. Serial No. 133,730. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM G. BROWNE, a citizen of the United States, residing at Kingston, in the county of Ulster and State of New York, have invented certain new and useful Improvements in Mops, of which the following is a specification, reference being had therein to the accompanying drawings, which form a part thereof.

My invention relates to mops, and more particularly to a class thereof employing a removable swab.

The object of the invention is to provide a mop of this type wherein the swab will be firmly secured to the head in a manner to envelop all exposed portions thereof, as well as the securing means, and thus prevent injury to the floor, surbase, or side walls through said parts contacting therewith.

A further object is to provide simple and convenient means for so securing said swab to the head of the handle and for releasing said securing means in such manner as to permit a convenient and expeditious attachment or removal of the said swab; and a still further object is to provide a mop which will be simple in construction, composed of few parts, and operated in what may be termed a "single" motion.

The invention consists in providing a mop comprising a handle, a head therefor adapted to be enveloped by the swab, reciprocating jaws disposed on opposite sides of said handle, said jaws being adapted to engage a swab and draw it about and secure it to said head, and means for reciprocating said jaws, and in such other novel features of construction and arrangement of parts as are hereinafter set forth and described, and more particularly pointed out in the claims hereto appended.

Referring to the drawings, Figure 1 is a side elevation of the mop, showing the jaws in engagement with the head (the swab not being included) and indicating in dotted lines the operation of the reciprocating mechanism and the position of the said jaws when the swab is to be attached or removed. Fig. 2 is a front elevation of the structure shown in full lines in Fig. 1; and Fig. 3 is a view of the head and lower end or loop of the jaws, as shown in Fig. 2, showing the swab in place, said swab being broken away on one side to more fully disclose the complete envelopment of the head and the retaining-jaws.

Like letters refer to like parts throughout the several views.

In each of the views one end only of the handle is shown, such alone being necessary to illustrate the invention.

In the application of my invention, as shown in the accompanying drawings, I employ a handle *a*, of wood or other desired material, and securely attach thereto a cross-head *b*, the lower face of which is preferably rounded to avoid sharp edges, and the ends of which are overhung to provide guide-surfaces, as *b' b'*. Mounted upon the handle *a* is a sliding collar *c*, which carries the clamping-jaws *d d*, disposed on opposite sides of said handle. Said collar is adapted to be moved longitudinally of said handle and reciprocate said jaws *d*, so as to alternately project them beyond said head *b*, as indicated in dotted lines, Fig. 1, and to withdraw them in a manner to engage the swab, draw it about, and secure it to said head *b*, as illustrated in Fig. 3. These jaws *d* are preferably made of continuous spring-metal rods bent to shape and adapted to be normally separated in a manner to release the clamping action on the swab and give sufficient clearance of the head *b* in passing same. The ends of said jaws adjacent to said head are formed into a loop, having extended sides *d' d'* and a top d^2, connecting said sides, which is preferably so arched as to engage the sides of the swab first, and thus draw the same somewhat away from the center, and thus insure a more complete envelopment of the entire head. The sides *d'* of the jaws *d* are adapted to engage the guide-surfaces *b'*, respectively, and are distant from each other less than the width of the head *b*, thus insuring against the contact thereof with the surbase or walls above said head.

The shanks d^3 d^3 of the rods forming the jaws *d d* may be secured to the collar *c* in any desired manner. As shown in the accompanying drawings, the securing means comprises a recess between flanges *c' c'* on oppo-

site sides of the said collar, said recess being open exteriorly. The said flanges are drilled to permit the passage of the ends of the said shanks therethrough, and forward of said drill-holes I provide projections, as c^2 c^2, about which said ends are secured by bending. This construction insures a permanent joinder and one that will not be liable to work loose through the repeated strains thereon.

On opposite sides of the handle *a* are bridges *e e*, secured thereto preferably by a rivet passing through both bridges and the handle. The shanks d^3 d^3 of the clamping-jaws are confined and guided by these bridges, and to supplement the action thereof upon the jaws *d d* and provide a positive means for clamping the swab against the head *b* I provide inclined surfaces d^4 d^4 thereon adjacent to each bridge. The engagement of said inclined surfaces d^4 d^4 with said bridges *e e* causes a positive pressure through the tops d^2 against the portion of the swab between them and the head *b*. Other equivalent means may be employed for opening and closing these jaws *d;* but that heretofore described has been found to be extremely simple in construction and efficient in operation.

The collar *c* and the clamping-jaws *d d* are reciprocated by means of a lever *f*, fulcrumed to the handle *a*, and pitmen *g g*, pivoted, respectively, to opposite sides of said lever and said collar. To insure against the accidental action of said lever, said pitmen are preferably pivoted thereto at a point slightly beyond the dead-center, thus effectually locking the lever when in the closed position.

The swab, and in this connection this word is employed to designate the absorbent material carried by the mop and not the entire structure, is indicated by the letter *h* and is shown in Fig. 3 of the drawings only.

Assuming the various parts to be in the relation shown in full lines, Fig. 1 and Fig. 2, and it be desired to attach a swab thereto, the lever *f* is swung upon its pivot away from the handle *a*. This movement, through the pitmen *g g*, forces the collar *c* and the jaws *d d* carried thereby longitudinally of the handle in a direction toward the head *b*, the various parts assuming the position indicated in dotted lines, Fig. 1. As the inclined surfaces d^4 d^4 on the shanks d^3 d^3 of said jaws pass from the control of the bridges *e e* the jaws are permitted to open to a slight extent through their own spring tension. When a swab is already attached to the mop, this action serves to release the pressure thereon, and thus permit a proper clearance of the head *b* during the forward movement of said jaws. The jaws *d d* are simultaneously projected by this movement to a point beyond the head *b* sufficient to permit the passage of the swab freely through the loop in said jaws between the top d^2 thereof and said head. The swab *h* is then passed through the loop of each jaw, the opposite ends thereof being permitted to hang downward outside of each jaw. Thereafter the lever *f* is swung back to its former position, reversing the action heretofore described and restoring the parts to their former position. As the jaws *d* are withdrawn from beyond the head *b* the swab, being within the loop of each jaw, is engaged thereby and drawn back with said jaws about the head *b*, upon which it is clamped by said jaws. The sides of the arched top d^2 of each jaw when such construction is used cuts the plane of the lower face of the head *b* before the central portion thereof, thus tending to draw the slack in the swab away from the center and about the ends of said head. The portion of the swab between the tops d^2 is thus forced to closely envelop the entire exposed portion of the head *b* and the ends thereof the outside of the tops d^2 of each jaw. These tops d^2 are drawn above the lower surface of the head *b* to a slight extent, so that no metallic or abrasive portion of the mop is in a position to contact with the floor through the separation of the ends of the swab while in use. In the use of the ordinary mop the ends of the swab must be interposed between the head and the floor, and if one end is pushed before and the other dragged after the head, which is commonly the case, the head contacts directly with the floor. In another common type of mop the swab is clamped between two jaws, which constitute the head, thus avoiding the exposure of the lower side thereof, but occasioning a similar effect from the clamping-jaws themselves. In the structure herein described a covered head prevents the former condition, and the clamping-jaws are so positioned as to render the latter impossible. As the shanks d^3 d^3 pass through the bridges *e e* the inclined surfaces d^4 d^4 thereon engage said bridges and positively compress the said jaws, clamping them against the portion of the swab between them and the head *b*. It will be readily observed that the bridges *e e* serve also to confine and guide the shanks d^3 d^3 during the entire reciprocation of said jaws. The guide-surfaces *b' b'* serve through the contact therewith of the sides *d' d'* to prevent torsional movement of the entire jaws *d d*. These ends of the head *b* project beyond said sides *d' d'* and being protected by the sides of the swab will contact with surbases or side walls and prevent the jaws *d d* from coming into injurious contact therewith.

It is not my intention to limit the invention to the precise construction herein shown and described. The precise means for reciprocating the collar *c* and arms *d d* is immaterial, and various expedients may be employed to open and close said jaws either during the reciprocation thereof or immediately preceding or succeeding such movement.

Many minor variations in construction may be made without departing from the spirit and scope of my invention.

Having described the invention, what I claim as new, and desire to have protected by Letters Patent, is—

1. In a mop, the combination with a handle and a head therefor of jaws disposed on opposite sides of said handle and means whereby said jaws are reciprocated, said jaws being adapted to engage a swab and draw it about and secure it to said head.

2. In a mop, the combination with a handle and a head therefor, of jaws disposed on opposite sides of said handle and having a loop adjacent to said head, and means whereby said jaws are reciprocated, said loops being adapted to engage a swab and draw it about and secure it to said head.

3. In a mop, the combination with a handle and a head therefor, of jaws disposed on opposite sides of said handle and having a loop adjacent to said head, means whereby said jaws are reciprocated, said loops being adapted to engage a swab and draw it about and secure it to said head, and means whereby said jaws are opened and closed during such reciprocation.

4. In a mop, the combination with a handle and a head therefor, of jaws disposed on opposite sides of said handle comprising respectively a shank, and a loop adjacent to said head, means whereby said jaws are reciprocated, said loop being adapted to engage a swab and draw it about and secure it to said head and means whereby said jaws are opened and closed during such reciprocation comprising an inclined surface on said shanks respectively and a bridge secured to each side of the handle adapted to confine and guide said shanks respectively.

5. In a mop, the combination with a handle and a head therefor having guide-surfaces thereon, of jaws disposed on opposite sides of said handle comprising respectively a loop adjacent to said head, extended sides adapted to engage said guide-surfaces and a shank, and means whereby said jaws are reciprocated, said loops being adapted to engage a swab and draw it about and secure it to said head.

6. In a mop, the combination with a handle and a head therefor, of jaws disposed on opposite sides of said handle comprising respectively a shank and a loop adjacent to said head, the top of said loop being arched, means in conjunction with said shank whereby said jaws are reciprocated, said loops being adapted to engage a swab and draw it about and secure it to said head, and means whereby said jaws are opened and closed during such reciprocation.

7. In a mop, the combination with a handle and a head therefor, of a sliding collar mounted on said handle, jaws carried thereby and disposed on opposite sides of said handle comprising respectively a shank and a loop adjacent to said head, means whereby said collar is reciprocated, said loops being adapted to engage a swab and draw it about and secure it to said head and means whereby said jaws are opened and closed during such reciprocation comprising an inclined surface on said shanks respectively and a bridge secured to each side of the handle adapted to confine and guide said shanks respectively.

In witness whereof I have hereunto affixed my signature, this 29th day of November, 1902, in the presence of two witnesses.

WILLIAM G. BROWNE.

Witnesses:
GRACE NEWKIRK,
CHARLES W. WALTON.