W. H. THAYER.

Mop-Head.

No. 217,832. Patented July 22, 1879.

Fig. 1.

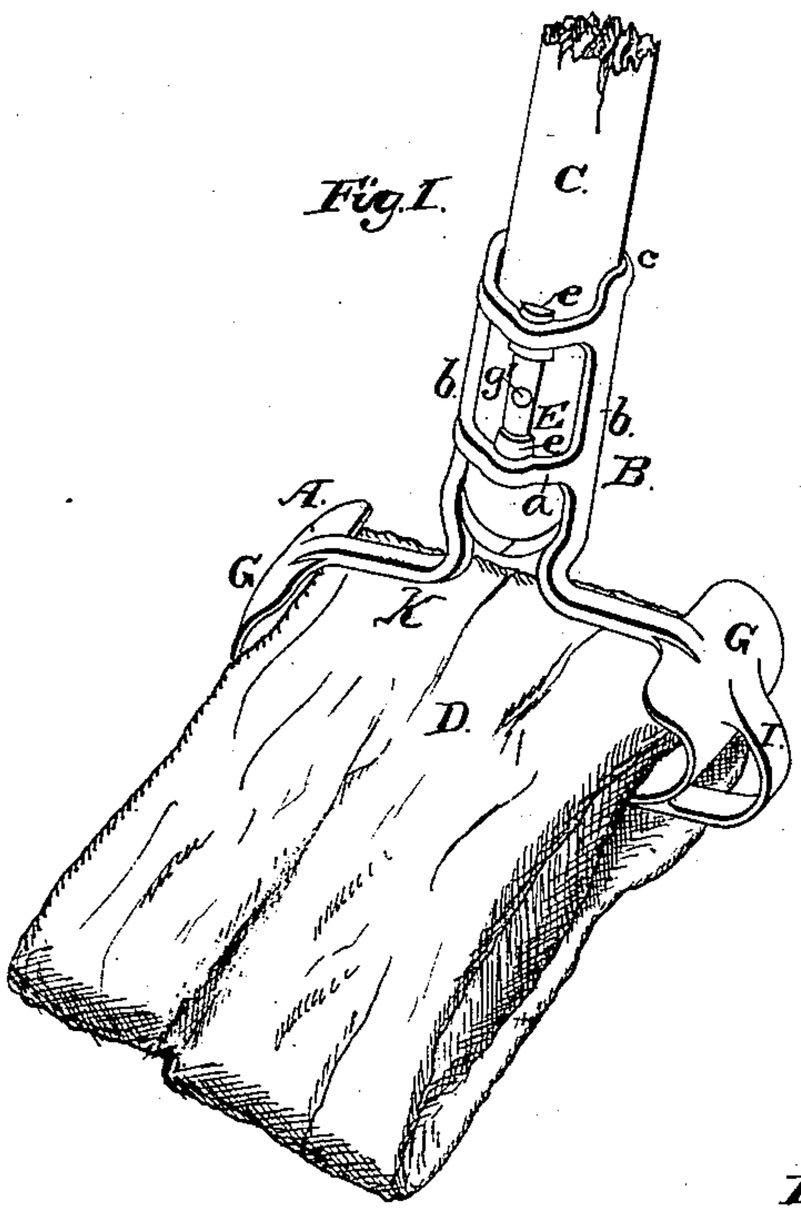

Fig. 2.

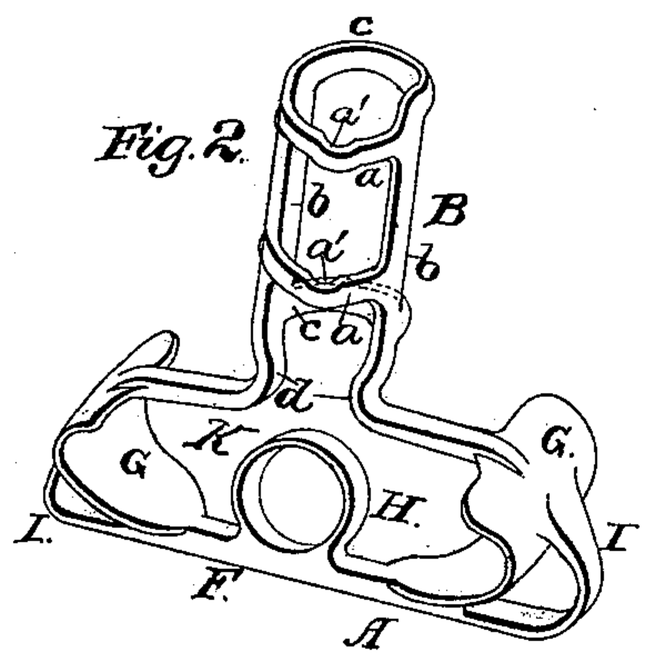

Fig. 3.

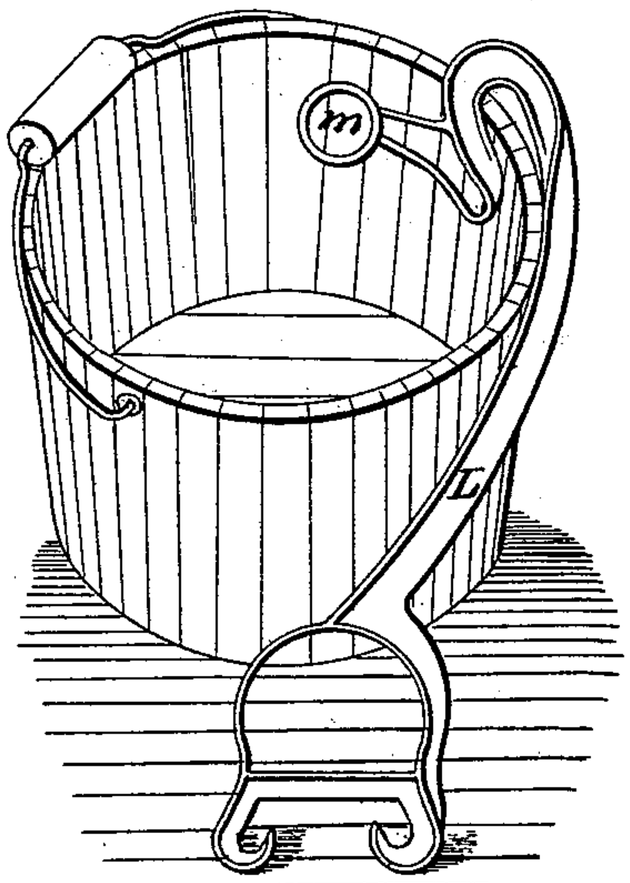

Fig. 6.

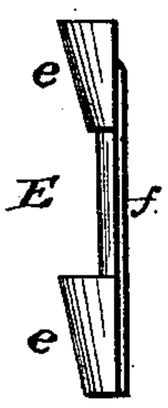

Fig. 4.

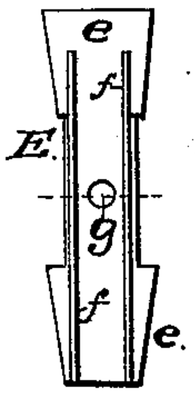

Fig 5.

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IMPROVEMENT IN MOP-HEADS.

Specification forming part of Letters Patent No. **217,832,** dated July 22, 1879; application filed January 23, 1879.

To all whom it may concern:

Be it known that I, WILLIAM H. THAYER, of Nashua, in the county of Hillsborough and State of New Hampshire, have invented certain new and useful Improvements in Mop-Heads; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification, in which—

Figure 1 represents a perspective view of the mop and mop-head with the handle inserted and secured therein. Fig. 2 represents a perspective view of the mop-head and socket for the reception of the handle with the mop removed. Fig. 3 represents a perspective view of the wringing device applied to a bucket, pail, or other vessel. Fig. 4 represents a rear-side view of the key for securing the handle when inserted into the socket of the mop-head. Fig. 5 represents a transverse section of the same, and Fig. 6 a side elevation of the same.

My invention relates, first, to a new and improved mode of fastening the mop-head to the handle; secondly, to a new and improved mode of constructing the mop-head for the reception of the web of cloth that forms the mop; and, thirdly, to a new and improved mode of combining a mop with the mop-head, whereby the former is allowed to turn round in the latter, and thus wear more evenly and endure longer than when rigidly secured to the mop-head.

The invention consists, first, in forming the end of the mop-head to which the handle is attached of two or more longitudinal bars, connected together on each side by curved bands, so as to form an open-work socket for the reception of the handle, and using in connection therewith a double-headed key or wedge in order to secure the two together; secondly, in constructing that portion of the mop-head which receives the mop with curved flanges at its sides, so made as to converge toward each other at their lower ends, for a purpose hereinafter to be described: thirdly, in constructing that portion of the mop-head which receives the mop with a rounded or curved projection arranged immediately between the flanges above referred to and for use in connection with the latter, for a purpose to be hereinafter described; fourthly, in the combination of a movable mop formed of an endless web with a mop-head constructed in the manner hereinafter to be described, whereby the web or mop is made to wear more evenly, and thereby last longer, by being permitted to turn freely in the mop-head instead of being rigidly confined thereto.

Referring to the drawings, in which the same letters indicate the same parts in all the figures, A represents the mop-head, and B the socket for the reception of the handle C, and which I prefer to cast in one piece.

The socket B is constructed of two or more longitudinal bars, *b*, extending upward from the mop-head.

To the standards *b*, and projecting at right angles therefrom, are two or more curved bands, *a a* and *c c*, arranged with respect to lightness and strength, and constituting what I call an "open-work socket."

The handle C is inserted into the socket and pushed forward until the end of the handle abuts against the lower portion of the standards *b*, where they converge slightly, as shown at *d*, to form a shoulder, and whence they again diverge to form the mop-head A proper, thus arresting further progress in that direction; or the standards *b* may be continued in a straight line to the point of union with the mop-head and shoulders cast or formed thereon for an abutment for the handle.

The key E on its outer side is formed with two conically or convexly wedge-shaped projections, *e*, and is made of such length as to allow each of the wedge-shaped projections *e* to come opposite one of the bands *a*.

The key E has one or more longitudinal ribbed projections, *f*, on the inner side, or that next the handle, as clearly shown in Figs. 4, 5, and 6 of the drawings.

The inner or ribbed side of the key is made concave, so as to conform to the shape of the handle.

A pin-hole, *g*, passes through the key at or near its mid-length for the reception of a pin to secure it to the handle.

In the bands *a a* are formed circular recesses *a'*, beveled on their inner surfaces, so as to conform to the inclined surfaces of the wedges *e* and form bearings therefor.

When the handle C is inserted into the socket B the smaller portions *e* of the key E are placed in the recesses *a'* of the bands *a* until the end of the handle rests against the abutment *d*. The key E is then driven forward and upward until it has a firm bearing against the socket and handle. This will have caused the ribs *f* to embed themselves in the handle C, and thus prevent the handle from turning round in the socket.

When the key E is driven forward sufficiently to securely bind the handle in the socket a pin, *g'*, is inserted into the pin-hole *g*, the office of which is to prevent the key from working loose.

The inward or downward tendency of the handle is counteracted by the shoulders *d*, and its outward or upward movement by the wedges *e*, and lateral movement by the ribs *f* and recesses *a'*.

The mop-head proper, which receives the mop or web, is formed of a continuation of the bars *b b* of the socket B, which are bent outwardly, and afterward bent downwardly, thence inwardly and until they meet and coalesce to form the concave converging flanges G, whereby an elongated opening for the reception of the mop or web D is formed.

A rounded or curved projection, H, is formed on the upper side of the lower or scrubbing bar, F, of the mop-head, and extends upward into the opening thus formed, the purpose of which and of the converging flanges G will be hereinafter described.

The lower or under surface of the scrubbing-bar F is straight or horizontal, and in connection with the arms I, which constitute a continuation thereof, form the bearing against which the web is pressed when in use. The arms I curve upwardly, and are at their upper ends connected to the outer side of the flanges G.

The mop or web D is made of suitable material for scrubbing purposes, and of convenient size and length, the opposite ends of which are sewed or otherwise secured together after being passed through the opening K of the mop-head. This arrangement of the web in an endless or belt form enables it to be rotated or pulled around through the opening K in the mop-head, and thus constructed serves to equalize the wear of the web throughout its entire surface, thus enabling it to last much longer than a web clamped into the head in the ordinary way.

In rinsing and wringing out the mop the rounded projection H serves to take up the middle portion of the mop or web, gives a tension at that point, and allows the sides of the web to conform to the projection H, which materially facilitates the wringing process.

The concave flanges and converging sides, either one or both, tend to the same purpose, carrying and crowding the sides of the mop or web toward the center of the opening in the mop-head when wringing it out.

The wringing device L is shown at Fig. 3 of the drawings applied to a pail or other vessel. It is provided with a projection, *m*, somewhat similar to that found on the mop-head, and has a depression or slot, into which the rim or edge of the pail is received, and at the other end of which is formed a foot-rest or stirrup, into which the operator's foot is placed to give stability when wringing. This device is made the subject-matter of an application now pending before the Office.

In wringing, the web is placed over the projection *m* of the wringing device. Said projection and the projection H formed in the opening in the mop-head take up the middle portion of the web and give a tension at that point. The concave converging flanges co-operate toward the crowding of the web toward the center, so as to give it a cylindrical shape in order to equalize the strain and discharge the water throughout the entire web.

The key E is entered into the recesses *a'* from the side next the mop-head, and is driven in upward until firmly secured, when a pin is driven in through the opening *g* into the handle. The handle thus secured to the key cannot be withdrawn because of the wedges *e* and beveled recesses *a'*.

Having described my invention, I claim—

1. A mop-head, A, provided with a socket, B, consisting of bars *b* and curved arms *a a* and *c c*, in combination with a key, E, constructed and operating in the manner substantially as shown and described, and for the purpose set forth.

2. A mop-head, A, provided with concave and converging flanges G, constructed in the manner substantially as shown and described, and for the purpose set forth.

3. A mop-head, A, constructed with a rounded or curved projection, H, in the manner substantially as shown and described, and for the purpose set forth.

4. A mop-head, A, provided with flanges G and projection H, substantially as shown and described, and for the purpose set forth.

5. A mop consisting of a loose endless web of cloth or other suitable material, in combination with a mop-head having an elongated opening, K, and projection H, substantially as and for the purposes set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

WILLIAM H. THAYER.

Witnesses:
CHAS. HOWE,
D. B. MACTAVISH.