

(No Model.)

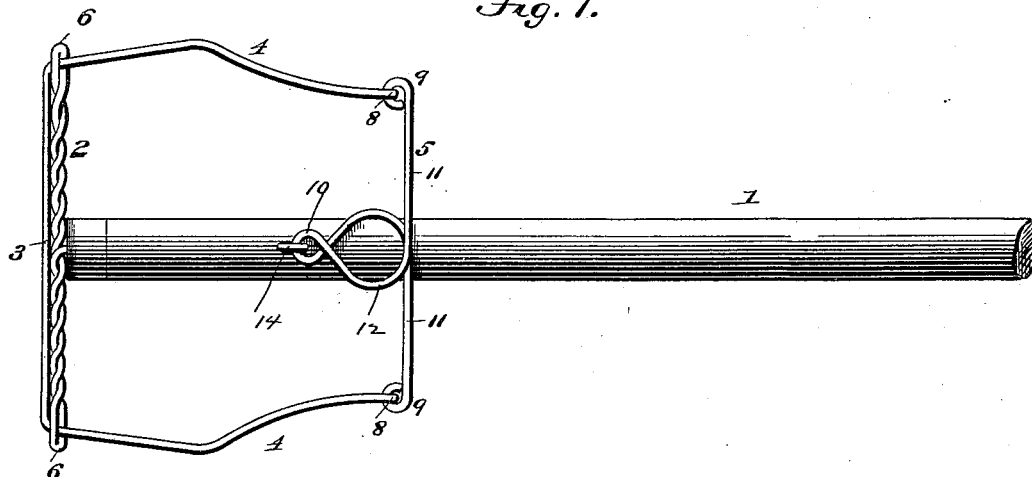
2 Sheets—Sheet 1.

J. M. HOLMES.  
MOP HEAD.

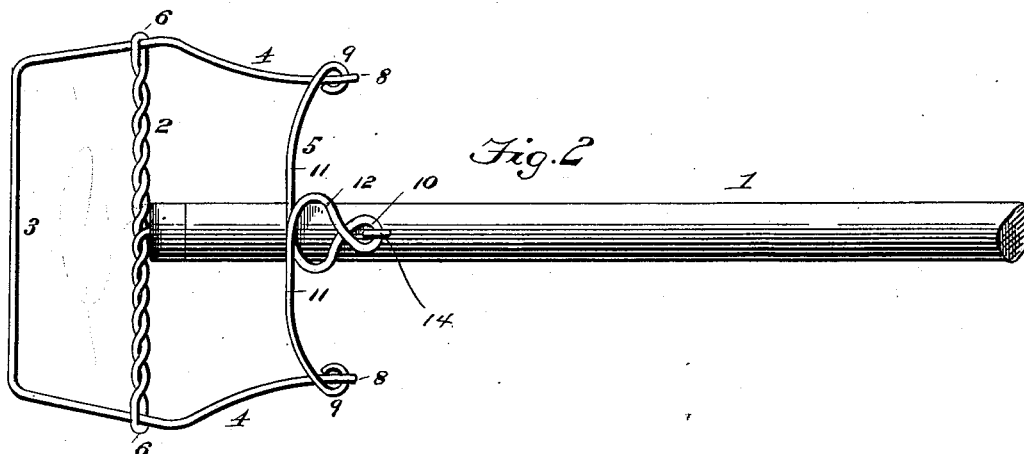
No. 420,798.

Patented Feb. 4, 1890.

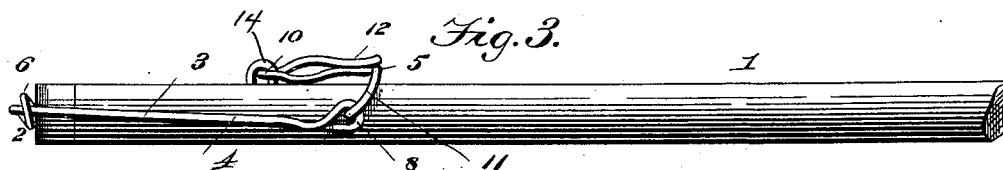
*Fig. 1.*



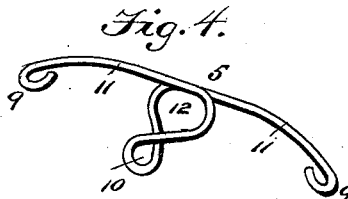
*Fig. 2*



*Fig. 3.*



*Fig. 4.*



*WITNESSES*

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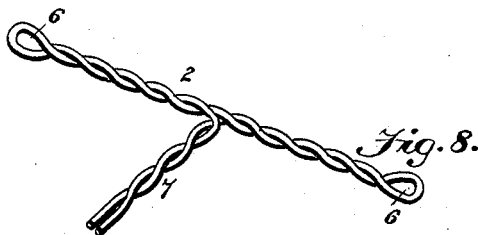
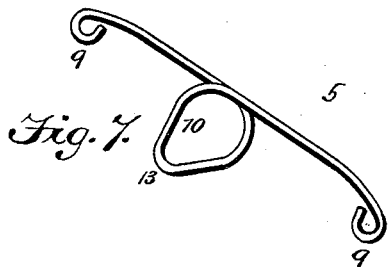
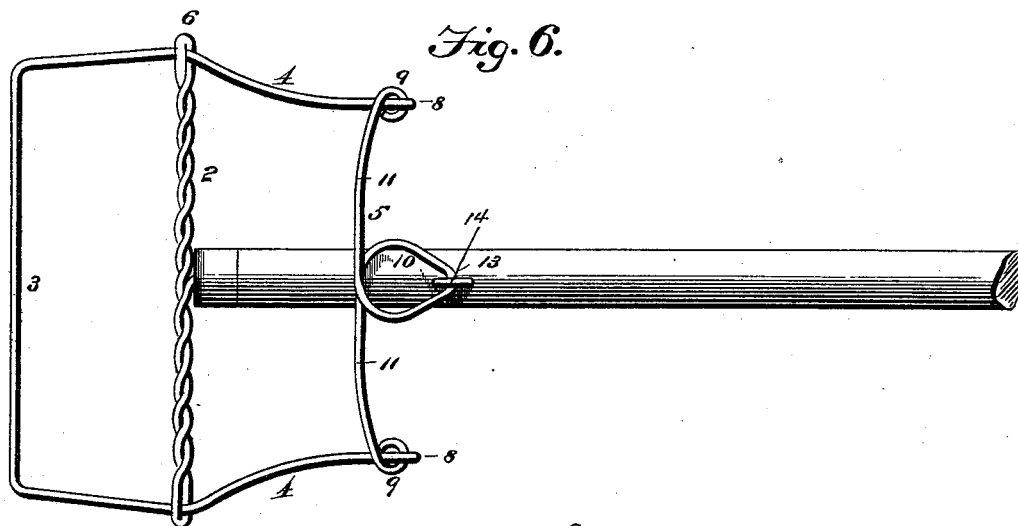
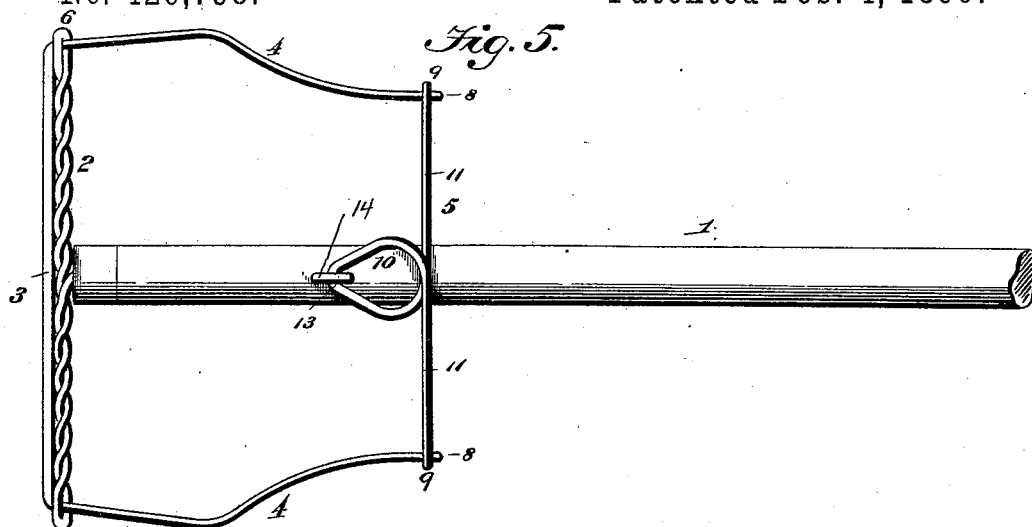
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2 Sheets—Sheet 2.

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WITNESSES

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# UNITED STATES PATENT OFFICE.

JOHN M. HOLMES, OF GLENS FALLS, NEW YORK.

## MOP-HEAD.

SPECIFICATION forming part of Letters Patent No. 420,798, dated February 4, 1890.

Application filed April 29, 1889. Serial No. 309,043. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN M. HOLMES, a citizen of the United States, residing at Glens Falls, in the county of Warren and State of New York, have invented certain new and useful Improvements in Mop-Heads; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in mop-heads, adapted for holding mop-rags, dusting-cloths, and other articles; and it consists of the peculiar construction and arrangements of parts, as will be hereinafter fully described, and particularly pointed out in the claims.

Heretofore a mop-head has been provided with a rigid T-shaped cross-head, a sliding head having arms which are guided by suitable guides on the rigid cross-head, and a spring-bar connected at its ends to the ends of the arms of the sliding head, said spring-bar being circularly coiled upon itself at its middle and connected to the handle of the mop by means of a hinge-joint which receives the circular coil and is firmly secured to the handle, whereby the spring-bar can be raised or depressed to release the clamping-head or force the same against the rigid head to clamp the article between the two heads of the implement. A spring-bar having a circular coil at its middle, which is connected to the handle by a metallic hinge-joint is objectionable, because it slips edgewise on the hinge-joint, owing to the fact that the diameter of the coil is much greater than the width of the staple, and it does not lie close upon the handle when depressed, as the arms of the sliding cross-head are inclined above the center of the coil of the spring-bar, which thus provides a loose connection between the spring-bar and handle, which connection allows the spring-bar to elevate itself when it strikes objects while in use and thus release the mop-rag. I aim to overcome these objections to the device constructed as described, and to provide a clamping-head and spring-bar which are constructed and arranged in such a peculiar manner as to secure a greater leverage from the spring-bar, a close connection between the twist of the spring-bar and

the handle, so as to overcome the endwise movement or play of the spring-bar, and, finally, to improve the parts in minor details to promote efficiency and certainty of operation, insure ease of manipulation, and reduce the cost of manufacture, as well as to increase the simplicity and durability of construction.

As an understanding of my invention can be had to better advantage by a detailed description thereof, I will now proceed to describe the same in connection with the accompanying drawings, which illustrate two embodiments of the device contemplated by me.

Figure 1 is a plan view showing the clamping-head adjusted in contact with the rigid cross-head and the spring-bar depressed, and Fig. 2 is a similar view with the spring-bar raised and the movable cross-head forced away from the rigid cross-head. Fig. 3 is an edge view with the parts in the position shown in Fig. 1, and Fig. 4 is a detail detached perspective view of the spring clamping-bar. Figs. 5 and 6 are plan views of another form of my invention, showing the parts in position corresponding to Figs. 1 and 2; and Fig. 7 is a detail view of the spring-bar shown in Figs. 5 and 6. Fig. 8 is a perspective view of the rigid corrugated cross-head.

Like numerals of reference denote corresponding parts in all the figures of the drawings.

1 designates the handles, 2 the rigid cross-head, 3 the sliding clamping-head having the extended arms 4, and 5 the spring-bar, which are peculiarly constructed and arranged in the manner which I will now proceed to describe. The rigid corrugated cross-head is made of wire or metal rod, preferably of a single piece, although it is obvious that said cross-head may be made of two, three, or more pieces of wire. In my preferred embodiment I take a single piece of wire or a single metal rod of suitable diameter, and double the same upon itself, the two strands thus formed being twisted together, as shown, to provide the corrugated surface, against which the mop-rag or other article is forced by the clamping-head, whereby the mop-rag or article in use is securely held in place. The wire or metal rod of which said cross-head is formed is looped to provide guide-eyes 6 at the ends of the cross-head, through

which are passed the arms 4 of the sliding cross-head, which thus serve to guide the sliding cross-head. The ends of the wire or metal rod of which the head is made are bent at right angles to the head proper and twisted together to form a corrugated or screw-threaded shank 7, which is driven or screwed into the end of the handle 1. By providing this corrugated or threaded shank 7 and driving or screwing it into the handle the rigid corrugated cross-head is very firmly secured to the handle and is not liable to twist or turn therein. The rigid corrugated cross-head can be manufactured very cheaply and economically, as it is composed of a single piece of wire or metal rod. The sliding clamping-head lies parallel with the rigid corrugated or toothed head, and the arms of said clamping-head are parallel with each other, so that the head can move freely through the eyes of rigid corrugated or toothed head. The rear or free ends of the arms 4 are bent or curved inwardly toward the handle and provided with eyes 8, with which interlock loops or eyes 9 on the ends of the spring-bar 5. This spring-bar 5 is also made of a single piece of wire or a metal rod, which is doubled or folded upon itself at its middle to form an elongated narrow eye or loop 10 at its middle and the two yielding arms 11 on opposite sides of and at right angles to a line drawn through the middle of said elongated eye or loop.

In Fig. 4 of the drawings I have shown two eyes or loops 10 and 12, which are made by folding the middle of the wire or metallic rod upon itself in first one direction and then the other, and the eye 10 is considerably smaller than the eye 12; but said eyes are in line with each other. In Fig. 7, however, only a single elongated eye or loop 10 is provided, having its shortest diameter or width at the apex 13 or extreme outer end thereof. This spring-bar is connected to or fulcrumed on the handle by means of a single transverse staple 14, which is firmly secured to the handle and receives the smaller eye or loop 10 of the bar shown in Fig. 4, or the apex 13 of the bar shown in Fig. 7. The arms 12 of the spring-bar are curved or inclined downward from the elongated loop or eye 10 thereof, so as to lie oblique to the axis of said eye or loop 10, and said oblique arms 12 are connected in the manner described to the ends of the arms 4 of the clamping-head, whereby the arms 4 are arranged in line with or below the longitudinal axis of the handle and rigid corrugated cross-head, thus insuring a straight direct pull on the sliding clamping-head to cause it to bind the mop-rag or other article between itself and the rigid, corrugated, or toothed cross-head.

I attach especial importance to the spring-bar having the elongated eye or loop at its middle fulcrumed on the handle by a staple, which receives the eye or loop at its narrower portion, the diameter of which is nearly equal

to the width of the staple, and having the arms on opposite sides of said loop inclined or bent below the center of the loop, whereby an increased leverage is secured for the spring-bar, a greater play or movement of the clamping-head attained to adapt the implement for holding large or small size rags or objects with equal facility, endwise movement or play of the clamping-bar on the handle is entirely avoided, and the arms of the sliding clamping-head are arranged below or in line with the axis of the handle. By this particular construction and arrangement of the spring-bar the latter is adapted to lie close upon the handle to prevent it from springing up when the implement forcibly strikes an object, and thus avoid releasing the rag or object used, which is highly desirable, and the arms of said spring-bar yield or give to adapt the mop-head for securely holding articles of different sizes, whereby the device is adapted for various uses.

The operation of my invention is obvious. When it is desired to place an article in the implement, the spring-bar is turned on its fulcrum away from the handle to force the sliding cross-head some distance from the rigid head, when the article can be placed between the two heads of the mop, after which the spring-bar is depressed upon the handle to fit the latter very closely and draw the sliding clamping-head firmly upon the article.

My improved mop-head is made entirely of wire or metallic rod, which enables me to manufacture and sell the same at a reduced cost, and it is very simple and durable in construction and exceedingly efficient and reliable in operation.

I am also aware of the mop shown in Patent No. 368,486, in which a bail is fulcrumed at its ends to the handle and provided with loops at an intermediate point of its length, which loops receive trunnions on the inner ends of arms of the clamping-head; but such is not my invention.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a mop-head, the combination, with a handle, a rigid cross-head, and a sliding cross-head having the arms which are guided in the rigid cross-head, of a spring-bar having its ends bent or inclined downwardly on opposite sides of the middle thereof, so as to terminate in a line drawn through the middle of the handle and connected to the arms of the sliding cross-head, said spring-bar having at its middle an elongated eye or loop, the shortest diameter of which is at the extreme outer end of said loop, and a staple fixed to the handle and fitted in the outer narrow end of said eye or loop of the spring-bar, whereby endwise play of the spring-bar on the handle is obviated and a direct pull or strain from said spring-bar on the sliding cross-head is secured, substantially as described.

2. A mop having a rigid corrugated cross-

head formed of a piece of wire which is bent and twisted upon itself to form the corrugated head and the screwed shank, said head having guide-eyes at its ends, and the shank being arranged at right angles to the head and inserted into a handle, combined with a sliding clamping-head, and a spring-bar connected to the handle, and arms on the clamping-head, substantially as and for the purpose described.

10 3. A mop consisting of a handle, a rigid corrugated cross-head formed of wire and having the guide-eyes at its ends and a central shank which is driven or screwed into the handle, a sliding cross-head having arms that

15 pass through the eyes on the rigid corrugated cross-head, and a spring-bar consisting of a

central elongated double loop or eye, and the oblique arms which are connected to the arms of the sliding clamping-head, the smaller loop or eye of the spring-bar being located remote 20 from said bar and connected to the handle by a single staple which fits snugly in said small eye to prevent endwise play of the spring-bar, all arranged and combined for service substantially as and for the purpose described. 25

In testimony whereof I affix my signature in presence of two witnesses.

JOHN M. HOLMES.

Witnesses:

CALHOUN S. EUCHES,  
THOS. W. McARTHUR.