(No Model.)

W. MALICK.

COMBINED MOP AND WRINGER.

No. 290,187. Patented Dec. 11, 1883.

Fig. 1

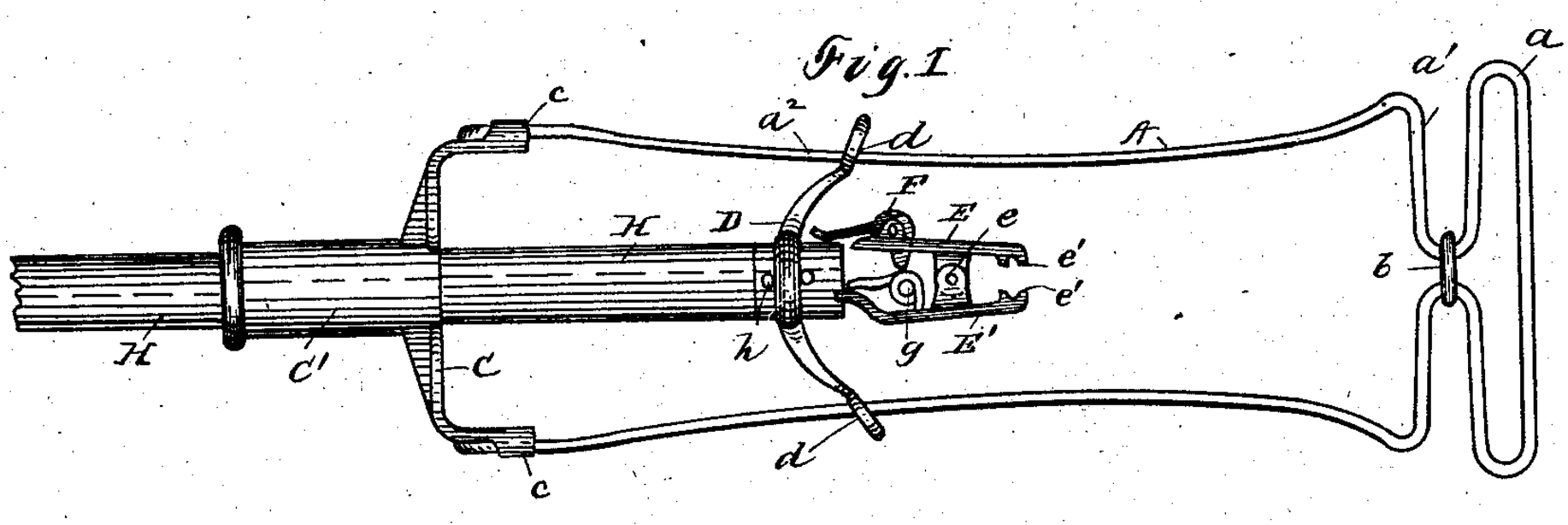


Fig. 2.

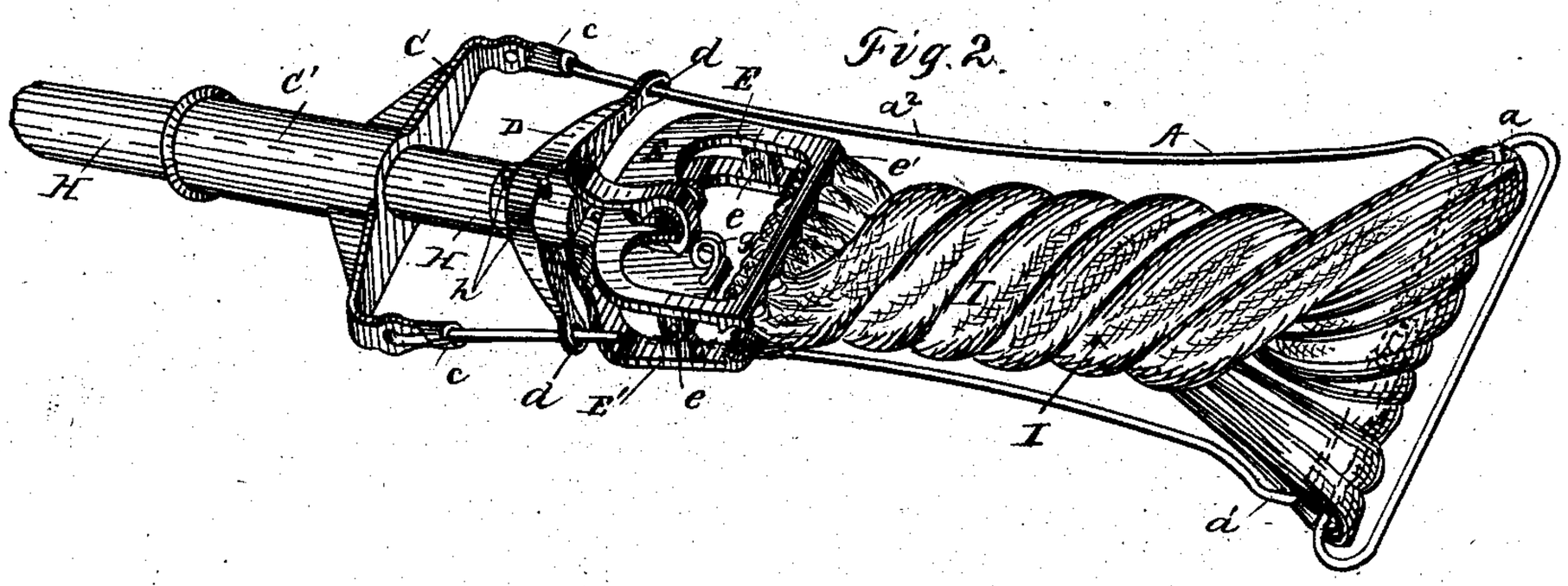


Fig. 3

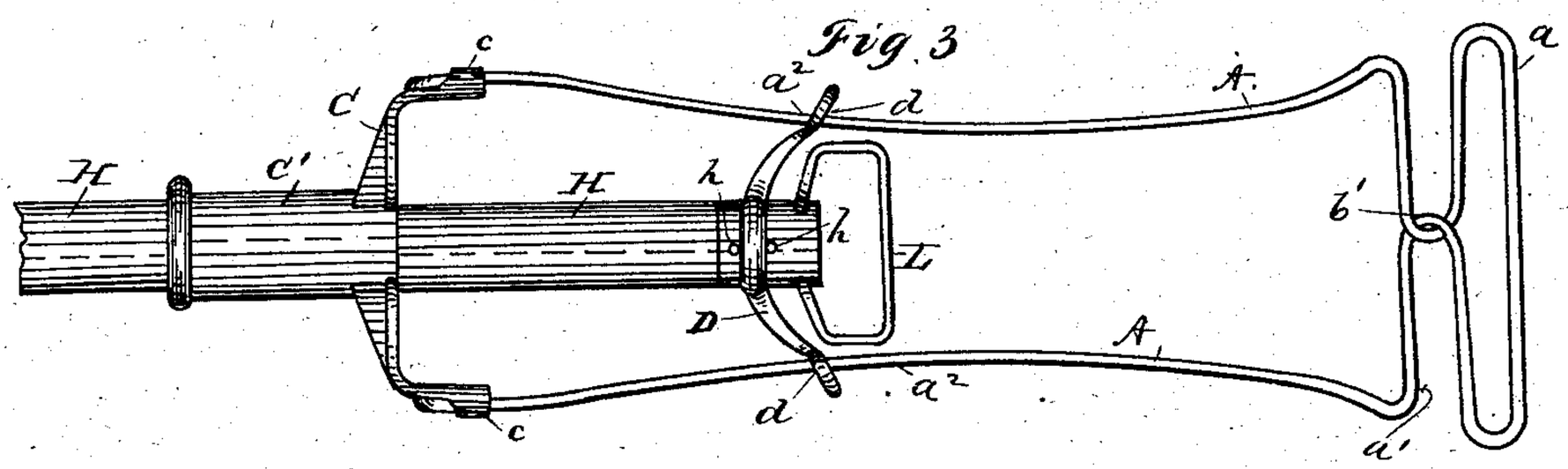
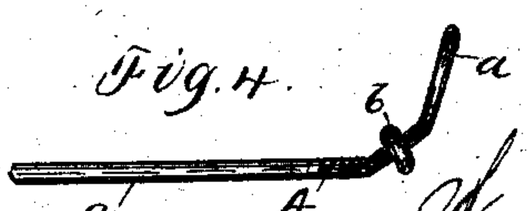


Fig. 4.



Witnesses
W. R. Edelin
A. M. Long.

Inventor
Wesley Malick
Per
Fulwider & Fulwider
Attys

UNITED STATES PATENT OFFICE.

WESLEY MALICK, OF GIRARD, ASSIGNOR OF ONE-THIRD TO JOSEPH M. FORCE AND HENRY C. YARD, BOTH OF ERIE, PENNSYLVANIA.

COMBINED MOP AND WRINGER.

SPECIFICATION forming part of Letters Patent No. 290,187, dated December 11, 1883.

Application filed December 4, 1882. (No model.)

To all whom it may concern:

Be it known that I, WESLEY MALICK, a citizen of the United States, residing at Girard, in the county of Erie and State of Pennsylvania, have invented certain new and useful Improvements in Mop Heads and Wringers; 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.

This invention relates to the construction of mop-heads; and it consists in providing a new and improved combined mop head and wringer, together with improvements in the head or clamp of the mop.

My device is illustrated in the accompanying drawings, as follows:

Figure 1 is a plan view of the head and wringer combined, the head being turned so as to afford a side view of it. Fig. 2 is a perspective view, showing the device in use. Fig. 3 is a plan view similar to Fig. 1, but shows an alternative construction of the head, and also of the outer end of the wringer-frame. Fig. 4 is a side or edge view of the outer end of the wringer-frame, and shows its form.

The object and nature of my invention will more fully appear from the subjoined description and claims.

In most wringer mop-heads the cloth is connected with both the head and the wringer-frame, and as the length of the frame and its traverse on the handle must be limited to about twenty-four inches, (more or less,) and never more than about thirty inches, and as the mop is doubled when the frame is drawn up on the handle the amount of mop for use is very limited, generally about a foot in length, and often less, while a mop for good effect should be nearly two feet long. To avoid the above defect I have provided means for allowing the wringer-frame to slip up in the loop of cloth and not double it, thus leaving the mop full length when the frame is drawn up on the handle. This construction is as follows: The frame A, which is made of wire, as commonly, has at its outer end a second loop, *a*, which is effected by bending the side wire in and out again, and securing it by a link, *b*, or by interlocking the wire, as at *b'* in Fig. 3. This loop *a* is not in the same plane as the side wires, but is turned up to one side, as seen in Figs. 2 and 4, so that it lies on one side of the cloth-loop, as seen in Fig. 2, and permits the cloth to slip easily through it. It has been attempted to effect the above result by having a cross-head on the end of the handle slip down the loop of cloth to the end, and, by being held there during the twisting, effect the result desired; but the trouble is that the cloth cannot be kept on the cross-head during the wringing, for it will work along and slip over one end of the cross-head to the side of the frame, and thus prevent the cloth from being twisted tight. I am aware that loops have been formed upon the cross-frame for the same purpose; but am not aware that the loop has been formed by twisting the wire of the frame, nor that the loop has been placed at an angle to the frame, so that when the mop is in use it will serve as an additional means for holding the cloth on the floor. Furthermore, by making the loop angular it can be used to scratch dirt out of cracks without holding the mop in a vertical position. Therefore it is necessary that the end of the loop of cloth be encircled by a loop of wire, *a*, or other clasp, and this should be turned up to one side, so as to allow the cloth to slip easily through it.

When the wringer-frame is drawn up or pushed out, it should remain as placed, especially when it is drawn up on the handle. To effect this, various devices have been employed—such as a clamp in the ferrule C' on the upper end of the wringer-frame, or a spring-catch formed by a wire let into the handle at the point where the ferrule is when drawn up, or a kink or offset in the wire forming the frame at the proper point. I effect the above result very simply, as follows: The sides of the wire frame A are bent in from end to end, giving an inward bow or deflection, a^2, and so a constant pressure of the wire A is kept upon the inside of the eyes *d* of the yoke D, and the frame will stay put at any point, and especially when drawn up.

I am unaware of any mop of this class in which it is not necessary to sew the ends of the cloth forming the loop together. This is often inconvenient, and when the mop is made of strands it is impossible, and many prefer

such a kind of mop. To overcome this defect I provide the head on the mop-handle with a clamp, which will clamp and hold the two ends of the cloth as firmly as if they were sewed together. This construction is as follows: The clamp is composed of the two parts E E′, pivoted together at *e*, and having jaws *e′ e′*. The clamping is effected by the cam F, which acts upon a spring, *g*, as clearly shown in Fig. 1. Owing to the fact that the parts of the clamp, due to their smallness, are more or less frail, spring *g* is used to give the clamp a bearing-surface, which will give to some extent if the cloth clamped between the jaws should happen to be greater than the cam-lever can lock in place. Of course for the purposes sought to be accomplished any form of clamp can be used at that point. It will be noticed in Fig. 2 that I make the jaws E E′ open or loop-shaped, so that where it is desired to sew the cloth together the clamp will serve as a common loop-head, like L, for instance, in Fig. 3. There are several minor points of construction which I have improved. One of these is the manner of attaching the wires A to the cross-head C, which is as follows: This cross-head is made of malleable iron, and as it comes from the foundry the clips *c* are open, so that the wire can be laid in between the two ears forming the clip, which are afterward pounded together upon the wire. Above these clips are holes through the arm, into which the bent end of the wire enters. This is all shown clearly in Fig. 2. The fastening, therefore, consists of the clips *c* and the bent ends of the wire entered in the holes in the arm.

If desired, the loop *a* may be made of a separate piece of wire, or of cast metal, and attached to the frame. The side of this loop, which is turned up, as described, will often serve as a scraper to remove dirt from the floor, and if it should be made of cast-iron it could be so formed as to be better adapted to the work of scraping than a simple wire.

I am aware that frames of mops have been formed with U-shaped bends, but am not aware that they have been bent to a parabolic form, so that the cross-head can have a free motion between the end and be clamped at either end by the widening of the space between the sides of the frame.

What I claim as new is—

1. In a mop head and wringer, substantially as shown, a wringer-frame having a secondary loop at its outer end, as shown, which loop lies in a plane at an angle to the plane of the remainder of the said frame, substantially as shown.

2. The herein-described mop-head clamp, consisting of the jaws E E′, pivoted together at *e*, and the cam-lever F and spring *g*, said parts being arranged to operate together, substantially as and for the purposes set forth.

3. In a mop head and wringer, substantially as shown, the wires A of the wringer-frame, formed with their ends turned in, in combination with a cross-arm, C, to which said ends attach by hooking the said bent ends into holes in said arm and securing them below said holes by clips *c*, substantially as set forth.

4. In a mop head and wringer, the combination, substantially as shown, of the following elements: the handle H and mop device thereon, the ferrule C′, with cross-head C, and wire wringer-frame A, with outer loop, *a*, secured on said cross-head, and the yoke D, with eyes *d*, surrounding the wires A, deflected to a parabolic form, with convex sides facing each other, as shown, and secured to revolve upon the ferrule of the handle-head.

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

WESLEY MALICK.

Witnesses:
JNO. K. HALLOCK,
ROBT. H. PORTER.