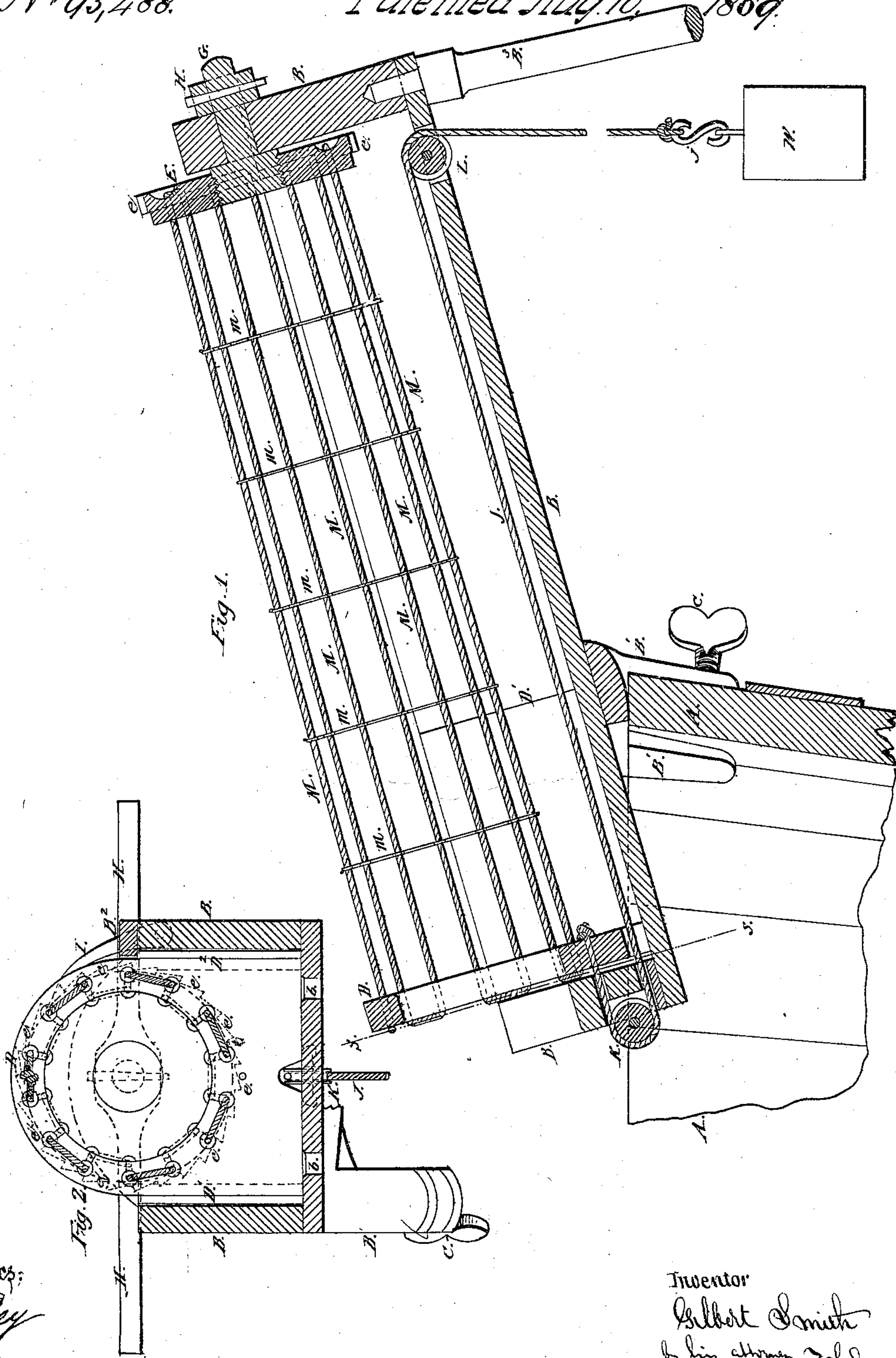


G. Smith
Clothes Wringer

No. 93,488.

Patented Aug. 10, 1869.



Witnesses:
W. C. Day
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United States Patent Office.

GILBERT SMITH, OF HIGHLAND FALLS, NEW YORK.

Letters Patent No. 93,488, dated August 10, 1869.

IMPROVEMENT IN CLOTHES-WRINGER.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, GILBERT SMITH, of Highland Falls, in Orange county, in the State of New York, have invented certain new and useful Improvements in Clothes-Wringers; and I do hereby declare that the following is a full and exact description thereof.

Of late, inventors have given attention mainly to wringers operating by the aid of rollers, compressing only a small portion of the goods at one time. The extent of the compression induced by roller-wringers, and its concentration on a small portion of the surface, and especially the rapid movement of the compressed point by the passage of the clothes through the wringing-machine, is likely to tear delicate fabrics. Furthermore, the expense of roller-wringers is a serious objection to their introduction into many families.

My improved machine is a twisting wringer, acting like the earlier machines for this purpose, by the gradual and uniform compression of the whole articles being wrung. A net, or open fibrous casing, receives the goods, and a twisting action applied thereto expresses the water, which is led back into the tub by the inclined trough in which it is mounted.

My machine is adapted to be placed on the edge of an ordinary tub.

There are several novel features of my invention, as will be enumerated at the close of the description. One conspicuous novelty lies in the capacity to introduce the goods through a ring, or hollow rigid frame, at the lower end of the net-work.

The accompanying drawings form a part of this specification.

Figure 1 is a longitudinal section through the machine, represented as clamped upon the edge of a tub. A portion of the supporting-leg is represented, which aids in supporting the outer end of the machine. It will be understood that this leg is of a length adapted to properly support the machine on a tub of average height. If the tub is a little higher or a little lower, the leg will still contribute to steady and support the work.

Figure 2 is a cross-section on the line *s s* in fig. 1.

Similar letters of reference indicate like parts in both figures.

A is an ordinary wash-tub.

B is a trough, of rectangular section, and provided with jaws *B*¹, of which there are two, one each side of the trough, as will be readily understood.

There are binding-screws *C* set in the jaws *B*¹, by which the machine may be firmly set on the edge of the tub, in the position represented in fig. 1.

*B*² is a top piece, which overhangs enough on the interior of the trough to efficiently guide and prevent any twisting action on the sliding ring.

D is what I term the sliding ring, which is made, by

preference, of hard wood, with two wing-pieces *D*¹ *D*², which fit loosely within the interior of the trough, and sustain it in proper position as it slides backward and forward therein.

The top piece, or strip *B*², acts against the upper edge of the wing *D*².

E is a stout disk, of hard wood or other suitable material, mounted on the shaft *G*, and adapted to be turned by a handle or lever *H*, arranged as represented.

The pawl *I*, mounted in the edge of the trough *B*, acts on teeth *e* in the periphery of the revolving disk *E*, to hold it in any position in which it may be left.

M m is a net-work, extending from the periphery of the ring *D* to the periphery of the disk *E*.

It is made by extending a cord, *M*, back and forward through holes, and tying them together at short intervals by smaller cords *m*, which extend nearly around, but are disconnected at the top. In other words, the net-work may be opened along its upper side to remove the clothing after being wrung.

Wet clothing may be introduced through this top-opening when necessary, but I prefer to introduce it, in all ordinary cases, through the ring *D*.

To the ring *D* is attached a stout cord, *J*, which extends downward around a pulley, *K*, then backward along the interior of the trough under and over a pulley, *L*. It terminates in the hook *j*, which is adapted to carry a weight, *W*. This weight may be ordinarily one or more common flat-irons.

The action of my machine will now be readily understood.

The clothes having been washed, lie in the tub. The wringing-machine is applied and made fast by turning the screws *C*. The supporting-leg *B*³ is introduced, either before or after the turning of the screws *C*, and a suitable weight, say two flat-irons, is hung upon the hook *j*.

Now, the clothing is lifted by one hand, and introduced through the ring *D*.

In many cases an entire washing may be introduced at once into the ordinary small and cheap machine, in which case it may be allowed to drain as long as may be desired, after the compressive force is applied.

In other cases a part only of the clothing will be introduced, and the remainder left for a subsequent operation.

A quantity of clothing having been thus introduced into the net-work, and the pawl *I* being allowed to drop upon the teeth *e*, the two hands are applied to the handle *H*, and it is gradually and forcibly turned.

The turning twists the net and compresses the clothing, and in doing so shortens the net, and the sliding ring *D* travels upward in the inclined trough.

This motion is resisted uniformly by the weight dependent on the hook *j*.

The water is discharged at first plentifully, and afterward more slowly, into the trough B, and is by it conducted back into the tub.

Holes *b* are provided in the lower end of the trough, to discharge the water.

After a time the net is untwisted by a reversed motion, and the clothing is removed through the top, while fresh wet material is introduced again through the ring.

Some of the advantages due to certain features of my invention may be separately enumerated, as follows:

First, by reason of my hollow ring D, as arranged, I am able to introduce the clothing more easily, and with less risk of wetting the floor and other adjacent objects, than with any previously-known construction.

Second, by providing the jaws B¹ and set-screws C, under my inclined trough B, as represented, I support the net-work, and its operating means, in position, and receive and dispose of the water with more convenience and less cumbrous machinery than has been heretofore employed with this class of wringer.

Third, by reason of the cord J, pulleys K L, and weight W, arranged as represented relatively to the trough B, sliding ring D, and twisting means E, and its connections, I am able to offer a constant and easily-

graduated resistance to the contracting as the wringer progresses.

The springs heretofore employed to perform this function have been more expensive, more subject to derangement and failure, are less easily repaired or new ones substituted, and particularly are certain to increase the resistance as the work progresses, offering either too little resistance at the commencement, or too much near the end of their motion.

What I claim as new, and as my invention, is as follows:

1. I claim, in a twisting wringer, the hollow sliding ring D, adapted to receive the clothing through its interior into the net-work M *m*, as herein specified.

2. I claim, in combination with a twisting wringer, the inclined trough B, jaws B¹, and set-screws C, adapted to support the parts B B¹ B², M *m*, and twisting means E G H, all combined and arranged as and for the purposes herein set forth.

In testimony whereof, I have hereunto set my name, in presence of two subscribing witnesses.

GILBERT SMITH.

Witnesses:

W. C. DEY,

M. A. DOWD.