I. C. IMBODEN.

COMBINED MOP HEAD AND WRINGER.

APPLICATION FILED APR. 16, 1910.

1,045,032.

Patented Nov. 19, 1912.

2 SHEETS—SHEET 1.

FIG. 6.

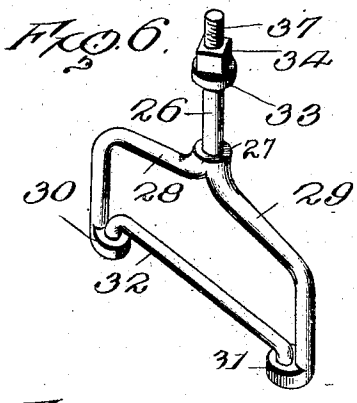


FIG. 7.

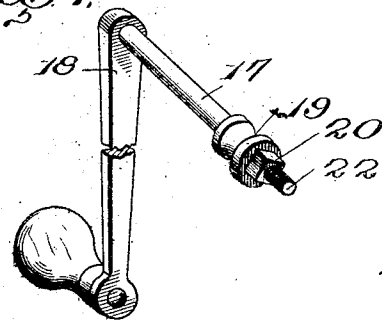


FIG. 1.

Witnesses

C. P. Wright, Jr.

L. L. Bunker.

Inventor

I. C. Imboden,

By A. S. Pattison,

Attorney

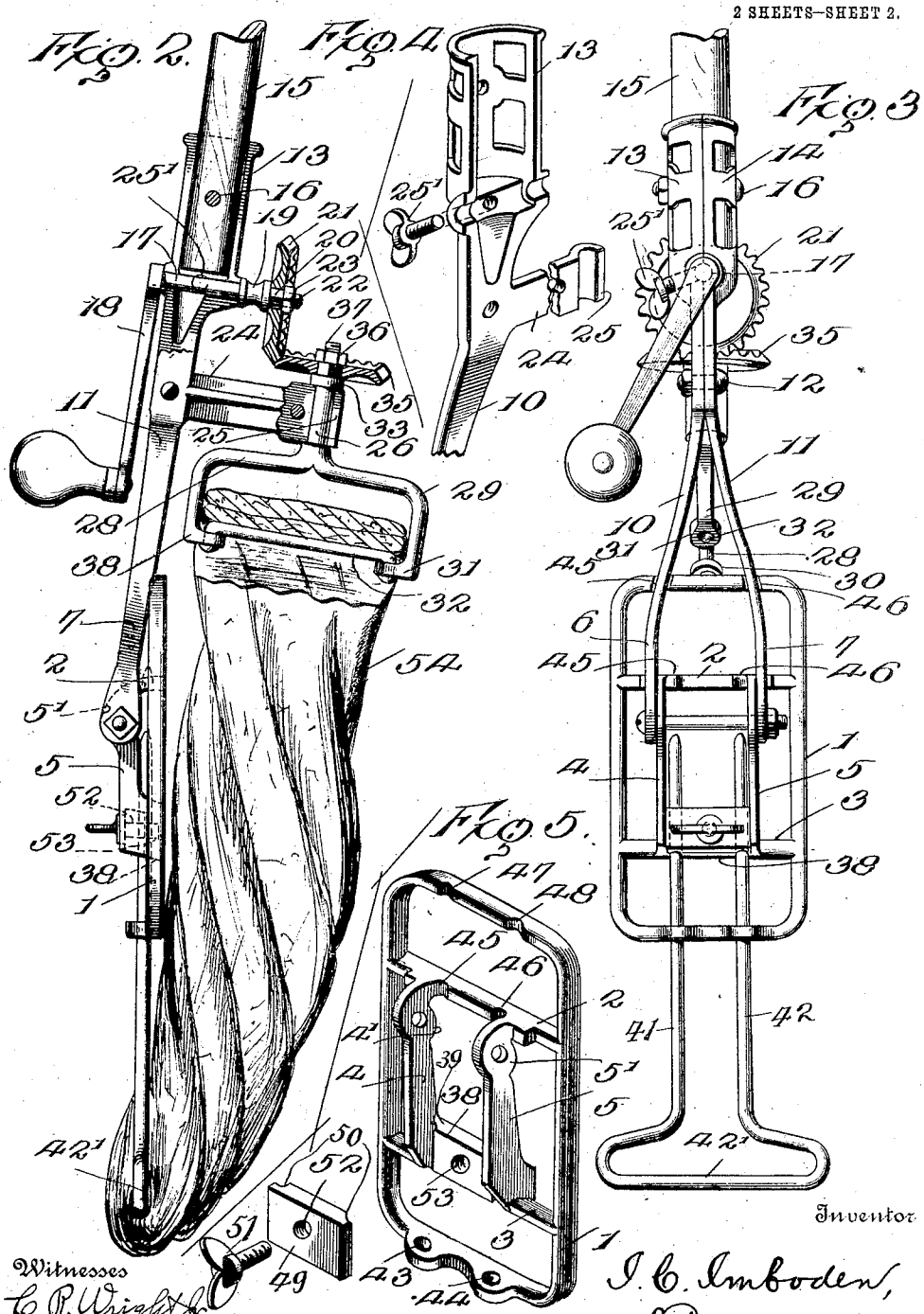
I. C. IMBODEN.

COMBINED MOP HEAD AND WRINGER.

APPLICATION FILED APR. 16, 1910.

1,045,032. **Patented Nov. 19, 1912.**

2 SHEETS—SHEET 2.



Witnesses
C. R. Wright.
L. L. Burket.

Inventor
I. C. Imboden,
By A. Pattison,
Attorney

UNITED STATES PATENT OFFICE.

ISAAC C. IMBODEN, OF CLEONA, PENNSYLVANIA.

COMBINED MOP HEAD AND WRINGER.

1,045,032. Specification of Letters Patent. Patented Nov. 19, 1912.

Application filed April 16, 1910. Serial No. 555,838.

To all whom it may concern:

Be it known that I, ISAAC C. IMBODEN, a citizen of the United States, residing at Cleona, in the county of Lebanon and State of Pennsylvania, have invented certain new and useful Improvements in Combined Mop Heads and Wringers, of which the following is a specification, reference being had therein to the accompanying drawing.

My invention relates to improvements in combined mop heads and wringers.

The object of my invention is to provide a mop-holder having a wringer attachment whereby the mop can be effectively wrung without removing it from the holder.

Another object of my invention is to provide a mop holder which can be readily adjusted to hold mops of different sizes and certain details of structure, whereby each and all of the parts are removable for replacing the same should they become broken.

In the accompanying drawings—Figure 1 is a perspective view of my improved mop-holder showing the mop applied and in a position to scrub with. Fig. 2 is a side elevation showing the mop being wrung. Fig. 3 is a top plan view of the holder with the mop removed. Fig. 4 is an enlarged perspective view partly broken away of one of the plates forming the handle socket. Fig. 5 is a perspective view of the mop pressure frame. Fig. 6 is a perspective view of the rear mop holding link or ring. Fig. 7 is a perspective view of the wringing operating crank.

Referring now to the drawings, 1 represents the main frame of my improved mop-holder and which is provided with the transverse bars 2 and 3 intermediate the ends thereof. Connecting said bars are the vertically disposed plates 4 and 5, which extend above the bars and their rear ends are provided with circular bearing portions 4′ and 5′ upon which arms 6 and 7 bear. These arms are pivoted to said bearings 4′ and 5′ by means of a bolt 8, and the friction of the bearing portion with the arms being regulated by means of a nut 9 on the end of the bolt.

The arms 6 and 7 extend rearwardly parallel with each other for a slight distance, and they then have the converging portions 10 and 11, which meet and the arms are secured together by means of the bolt 12. The said arms terminate in enlarged semi-cylindrical portions 13 and 14, which together, form an elongated socket in which the handle 15 fits and is secured by means of a bolt 16. At the inner end of the socket, the portions 13 and 14 are provided with thickened portions provided with semi-circular recesses which form a bearing for the shaft 17.

The upper end of the shaft 17 is provided with a crank 18 by means of which the shaft is rotated. The shaft 17 is provided with an enlarged portion 19, which prevents the shaft from having any longitudinal movement. The shaft below the enlarged portion is squared at 20, and upon which the gear 21 snugly fits. The squared portion is provided with a screw-threaded extension 22, upon which a lock nut 23 is screwed for holding the gear 21 on the shaft. The shaft 11 is only removable when the two sections or arms are separated which is clearly illustrated in Fig. 4.

The arms 6 and 7 directly below the bolt 12 are provided with downwardly extending portions 24, which are provided with outwardly bulged portions 25, forming bearings for the shaft 26. The shaft 26 has at its inner end the shoulder 27, bearing against the portion 25, which limits the movement in one direction. The shaft is forked as shown, the outwardly extending arms 28 and 29 having inwardly turned ends 30 and 31, through which the turned ends of the bar 32 passes. The bar is preferably slightly riveted in the arms although any desired means could be employed.

The inner end of the shaft 26 is provided with a collar 33, which limits the inward movement of the shaft and thus this shaft like shaft 17 can only be removed when the arms are separated. This shaft beyond the collar 13 has a squared portion 34 upon which the gear 35 tightly fits and is held by means of a lock nut 36 screwed upon the threaded portion 37.

The forward ends of the plates 4 and 5 are connected by the thickened portion 38 having grooves 39 and 40, in which rest the arms 41 and 42, of the outer mop loop 42′. These arms 41 and 42 pass through openings 43 and 44 in the ears carried by the ends of the frame 1. The cross-bar 2 is provided with recesses 45 and 46, and the rear end of the frame 1 is provided with recesses 47 and 48 in which the arms rest.

The portion 38 has resting thereon a block 49 provided with curved faces 50 engaging the arms 41 and 42 and clamping them in

the grooves in the thickened portion 38. This block 40 is clamped upon the thickened portion 38 by a setscrew 51, which screws through the opening 52 in the block 49 and are screwed into the thickened portion 38. By this arrangement it will be seen that the loop can be extended to accommodate mops of different lengths and also for tightening the mop.

The mop 54 is made of any desired material and of an endless form and adapted to interlock with the loop 42′ and the loop 29, as shown in Figs. 1 and 2, of the drawings. The loop 42′, as shown, is carried by the frame 1, while the loop 29 is carried by the handle. As shown in Fig. 2, the mop is normally parallel with the frame 1, but when in operation the handle tilts or rocks upon the pivot or bolt 8 and the mop engages the rear end of the frame and is tightened, as shown in Fig. 1. The mop assumes this position, as shown in Fig. 1, when in operation and thus the mop is tightly held against the lower face of the frame 1.

When it is desired to wring the mop, the handle is rocked upon the bolt 8 until the handle assumes a position shown in Fig. 2. This loosens the mop and at the same time brings it away from the frame 1. By turning the crank it will be seen that the gear 21 drives the gear 35, which is carried by the loop 29, and thus said loop is rotated and the mop wrung as shown. The set screw 25′ can be tightened so that the mop can be held in its wringing position, or so set that it will also hold the gear 21 in a desired position, as shown in Fig. 1.

In adjusting the mop the set-screw 51 is loosened and the mop placed upon the surface to be scrubbed. The handle is then moved outwardly or upwardly to bring it to the desired angle, which through the medium of the loop 29 and the mop, the outer loop 42′ is moved inwardly, whereby it is self-adjusting and the mop will be at the proper angle in respect to the handle to suit the operator or the surface to be scrubbed.

By my structure it will be seen that I have made a combined mop-holder and wringer in which any of the parts can be readily removed and replaced should they become broken. I also produce a mop holder having certain advantages heretofore set forth, and while I have shown certain details of structure it will be understood that the same could be changed without departing from my invention.

Having thus described my invention, what I claim and desire to secure by Letters Patent is:

A mop-holder comprising a frame, a handle pivoted to one end of the frame, a loop rotatably mounted in said handle and adapted to receive one end of the mop, means for rotating said loop, a loop longitudinally movable on the frame and adapted to receive the opposite end of the mop, and adapted to be moved on the frame by the tension of the mop and means for holding the loop in its self-adjusted position.

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

ISAAC C. IMBODEN.

Witnesses:

CAULDER C. STEWART,

THOMAS J. SHAAK.