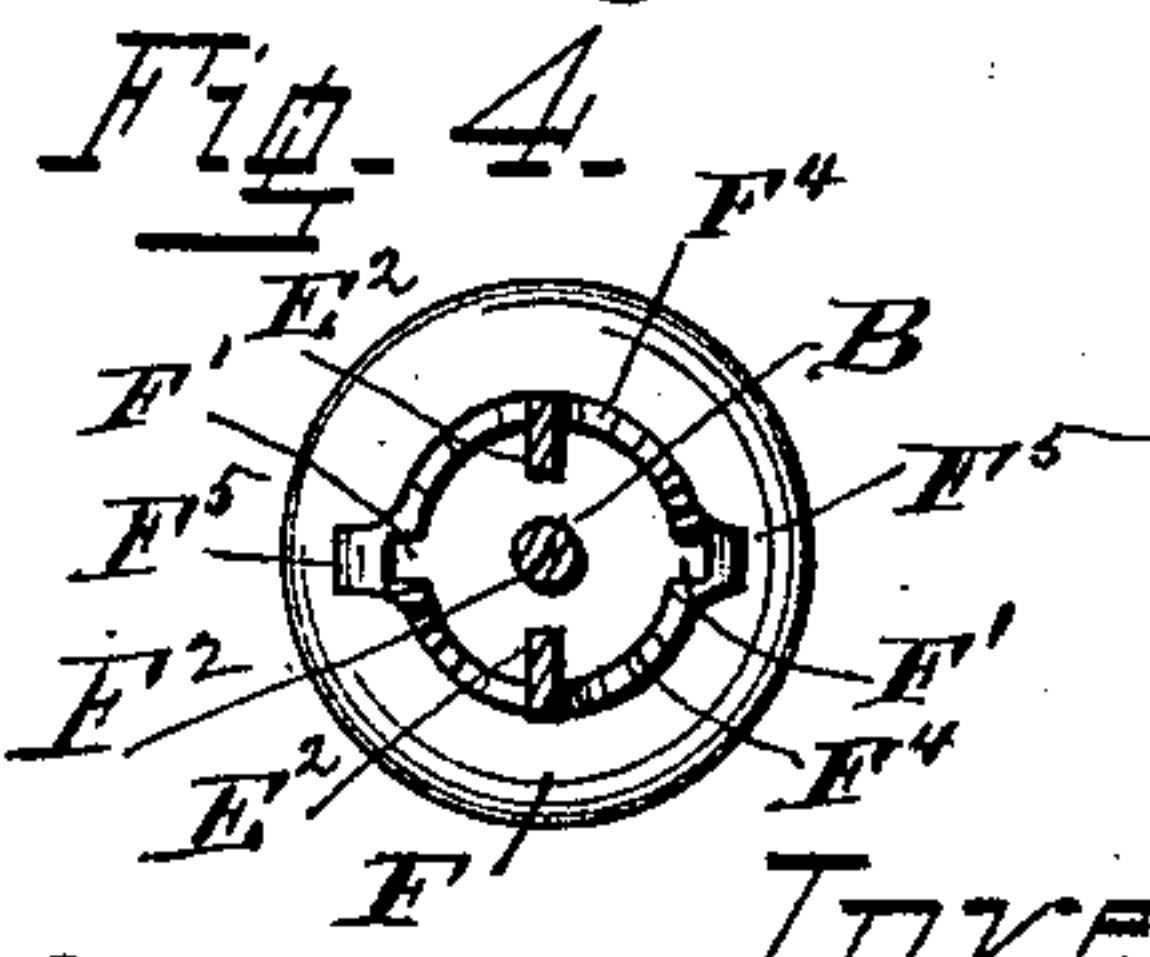
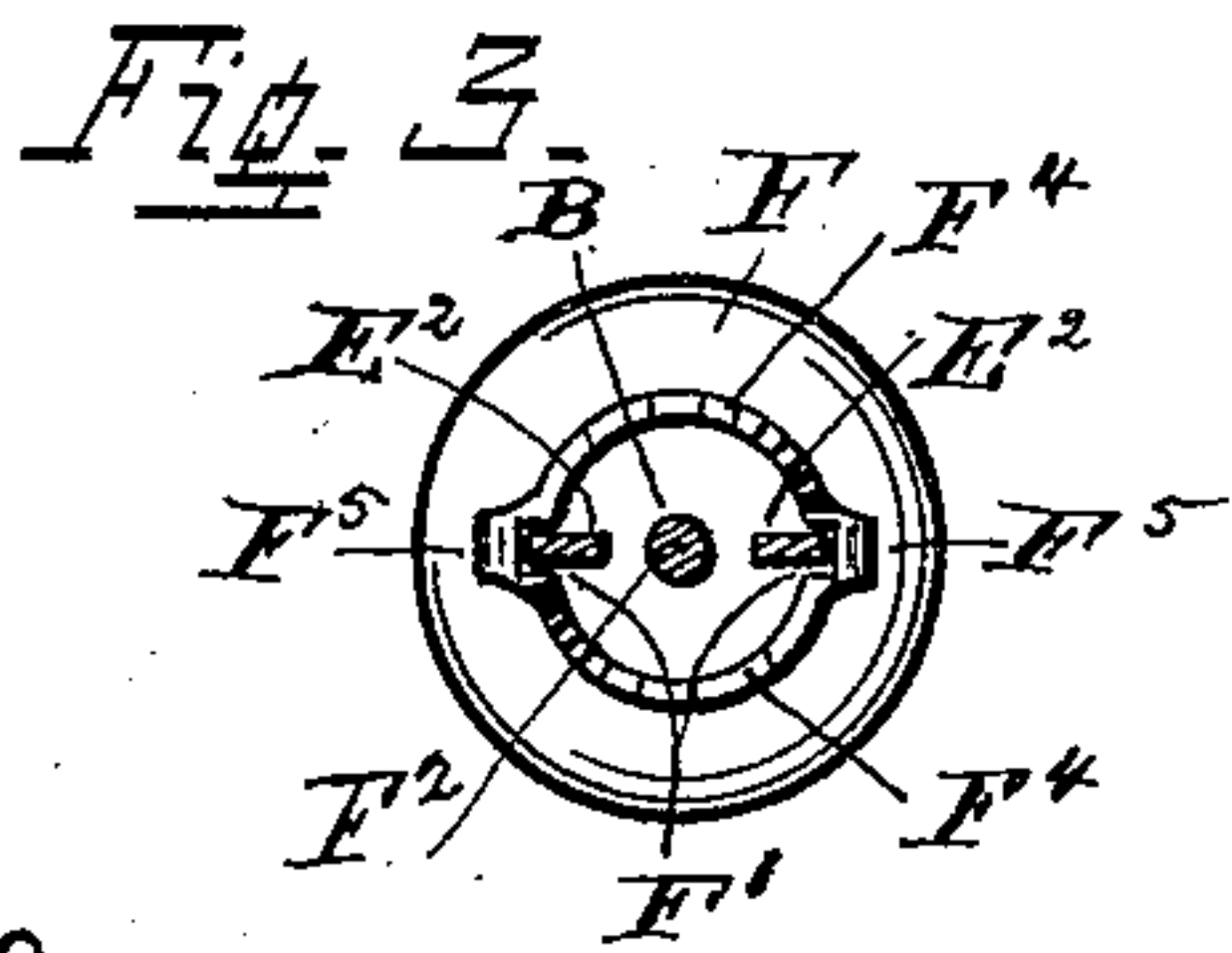
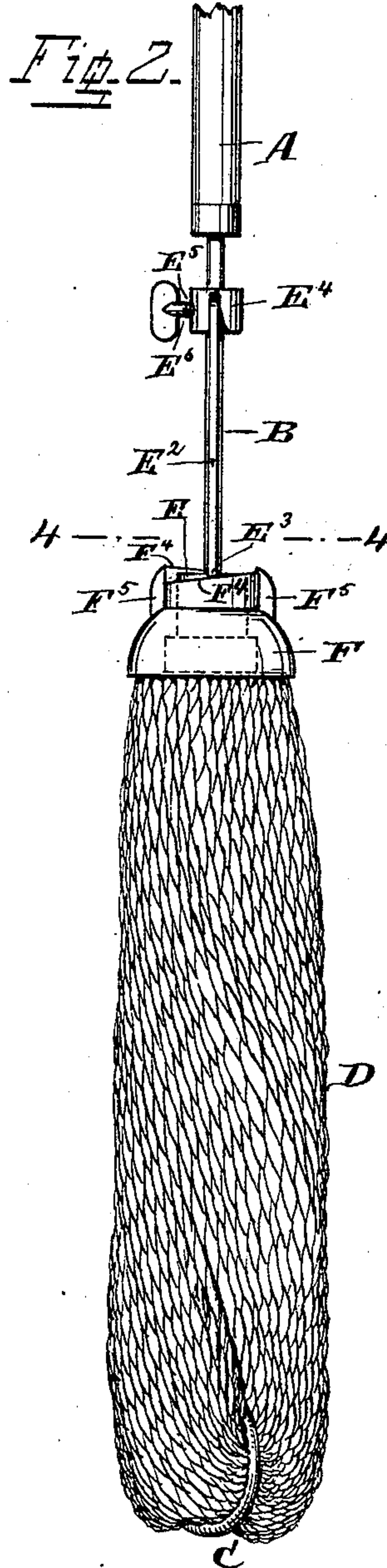
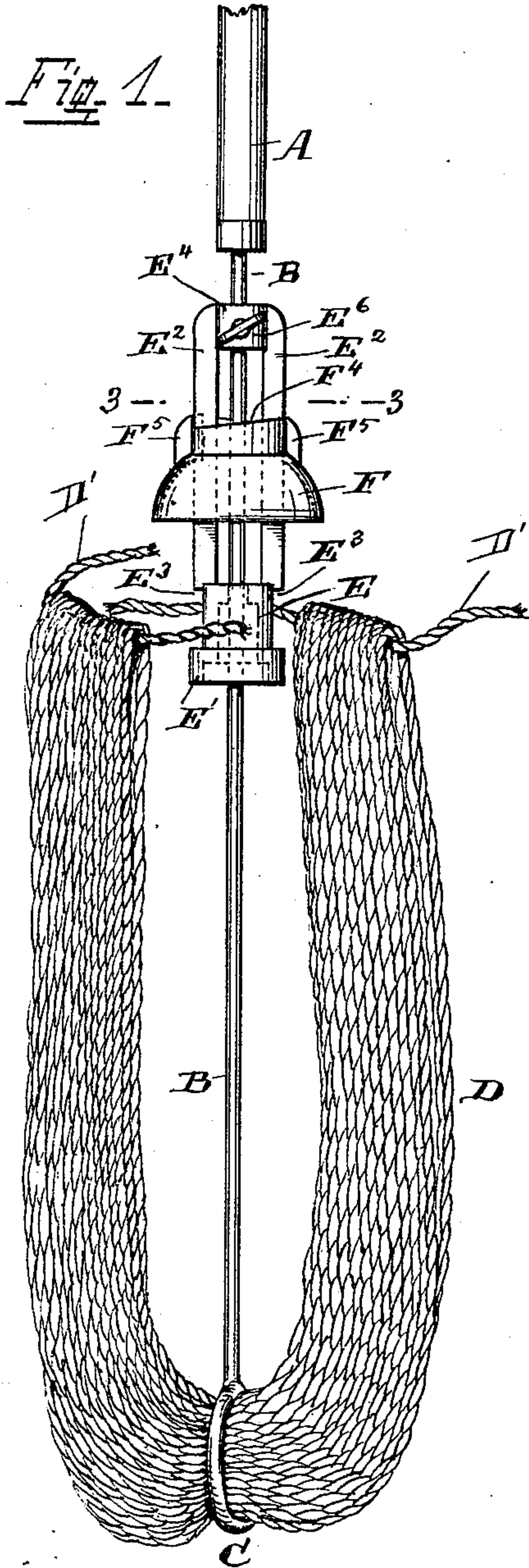


(No Model.)

R. H. MULLEN.  
DEVICE FOR WRINGING MOPS.

No. 435,976

Patented Sept. 9, 1890.



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# UNITED STATES PATENT OFFICE.

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## DEVICE FOR WRINGING MOPS.

SPECIFICATION forming part of Letters Patent No. 435,976, dated September 9, 1890.

Application filed March 3, 1890. Serial No. 342,530. (No model.)

*To all whom it may concern:*

Be it known that I, ROBERT H. MULLEN, a citizen of the United States of America, and a resident of the city of Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Devices for Wringing Mops, of which the following is a specification.

The several features of my invention and the various advantages resulting from their use, conjointly or otherwise, will be apparent from the following description and claims.

In the accompanying drawings, making a part of this specification, and to which reference is hereby made, Figure 1 is a vertical elevation of a mop-wringing device embodying my invention, showing the parts of the device in position for applying the ends of the mop yarn or fabric to the frame which upholds said yarn or fabric. In this figure the upper portion of the handle is broken off for economy of space. Fig. 2 is a vertical side elevation of the same, the parts thereof being closed together as in use, with the exception that the strands of the yarn or fabric run down in a spiral direction, which is the position they assume when the mop is being wrung. In this figure the handle is broken off for lack of room to show it. Fig. 3 is a transverse section of the device, said section being taken in the plane of the dotted line 3 3 of Fig. 1, that face of the section being seen which faces toward the top of the sheet of drawings. Fig. 4 is a transverse section of the device, said section being taken in the plane of the dotted line 4 4 of Fig. 2, that face of the section being seen which faces toward the top of the sheet of drawings.

A indicates the mop-handle, of any suitable length, form, and material. A rod B is present. One end of this rod is provided with the handle. The other end of this rod is provided with a ring C of sufficient size to allow all of the yarn or fabric D, hereinafter more particularly specified, and constituting the flexible portion of the mop, to pass through it. On this rod B, between handle A and ring C, slides a sleeve E, being at its lower portion provided with an annular shoulder or flange E', concentric therewith. The radius of the flange is greater than the radius of the

sleeve. This shoulder E' affords an abutment for preventing the mop-yarn, when tied about the sleeve, as hereinafter described, from slipping down off from the sleeve. To the upper portion of the said sleeve are attached the guide-rods E<sup>2</sup> E<sup>2</sup>, extending upward parallel to the rod B. These rods E<sup>2</sup> E<sup>2</sup> are preferably located, as shown—viz., the one on one side of the rod B and the other on the other side of said rod. The lower ends of these rods extend out in the direction of the radius of the sleeve E, and form abutments E<sup>3</sup> E<sup>3</sup>, against which the cap F, hereinafter described, bears when advanced toward the annular shoulder E'. The upper ends of these guide-rods are connected to a sleeve E<sup>4</sup>, sliding on rod B, and concentric therewith. In this sleeve is a radial screw-threaded perforation E<sup>5</sup>, and the latter receives a set-screw E<sup>6</sup>. This screw E<sup>6</sup> has at its outer end a handle or thumb-piece for rotating it.

The cap F is annular and concentric with sleeve E. The lower portion of this cap is provided with a recess, whose outline is shown in dotted lines in Fig. 1, large enough to receive the annular shoulder E' and leave a small space between the periphery of the said shoulder and the interior of the cap, in which that portion of the yarn D which is located around the sleeve E and over the shoulder E' is crowded. In the upper portion of this cap F are two slots F' F', respectively, located at opposite sides of the opening F<sup>2</sup> through the cap. These slots are of such a size as to conveniently receive in a close-fitting manner the guide-rods E<sup>2</sup> E<sup>2</sup>. The top edge of this cap is provided with two inclines F<sup>4</sup> F<sup>4</sup>, respectively, located on opposite sides of the rod B and between the slots F' F', and preferably extend from one slot to the other.

For the purpose of affording a hold for the hand of the operator in attempting to turn the cap F, the latter is provided with wings F<sup>5</sup> F<sup>5</sup>. These wings extend out from the periphery of the cap, substantially as shown. Preferably one wing F<sup>5</sup> is adjacent to and just outside of one of the slots F', and the other wing F<sup>5</sup> is similarly located with reference to the other slot F'.

The projection of the guide-rods E<sup>2</sup> E<sup>2</sup> ra-



dially out beyond the sleeve enables these rods to perform the additional function of abutments, against which the cap F can bear when advanced against the shoulder E'. If it were not for this novel arrangement of the rods separate abutments would have to be provided.

My invention allows me to use either woven fabric or skeins or hanks of yarn; also to easily and quickly apply the same to the frame-work herein described, and readily and quickly remove the same when worn out and replace the worn-out fabric with a new and good fabric.

The invention also enables the mop D to be quickly wrung without wetting the hands or the person of the one wringing it.

The manner in which my invention is used is, in general, as follows: The cap F is rotated until the slots F' thereof are respectively in line with the adjacent guide-rods E<sup>2</sup> E<sup>2</sup>. The cap F is then elevated, one guide-rod E<sup>2</sup> entering one of the slots F' of the cap and the other guide-rod E<sup>2</sup> entering the other slot F' of the cap. The cap F thus is slid on the rods E<sup>2</sup> toward the handle until there is plenty of room between the cap F and the shoulder E' for manipulating the upper end of the mop D in applying the end of the latter to the sleeve E above the shoulder E'. The upper end of the fabric D is located around the sleeve E above the shoulder, and is preferably secured tightly thereto by a string or other cord. When skeins or hanks of yarn are employed a string is necessary. In such event a cord D' is passed through each upper loop of the strands of yarn. One cord will do, but two are preferable, one of said cords for one end of the skein and the other cord for the other end of the skein, substantially as shown in Fig. 1. The ends of the skein are securely tied to the sleeve E. The set-screw E<sup>6</sup> is now rotated and retracted from contact with the rod B, and the cap F is lowered until it rests upon that portion of the mop D which is on the sleeve E and the shoulder E' of the latter. If the bottoms of the inclines F<sup>4</sup> of the cap F are not already in a line with the lower ends of the guide-rods E<sup>2</sup> E<sup>2</sup>, the cap F is pressed toward the shoulder E' until the said bottoms of said inclines are in a position to pass beneath said rods. The cap F is then rotated by means of the wings F<sup>5</sup> F<sup>5</sup>, or by frictional contact with the periphery of the cap, and the respective inclines F<sup>4</sup>, being advanced under the respective abutting ends of the guide-rods E<sup>2</sup>, press forward the cap F and cause the latter to tightly compress the upper end of mop D between the cap F and the shoulder E' and sleeve E. The cap F and sleeve, and guide-rods, and set-screw, and upper end of mop D thus secured together are then moved such a distance from the ring C as shall cause the mop D to hang in a position the most desirable for use, and then set at that point upon the rod B by means of the set-screw E<sup>6</sup>. The mop D is thus secured in

position. The mop is now ready for operation. When it is desired to wring the mop, the set-screw E<sup>6</sup> is loosened and the handle A and rod B, carrying ring C, rotated while the cap F and sleeve E are stationary, or vice versa, or while the handle and rod B and the ring are rotated in one direction the cap and sleeve are rotated in an opposite direction. Either of these operations causes the mop D to be twisted and wrung. After the mop has been wrung a reversal of the above-named rotation or rotations straightens the mop and puts it into position for use.

In the old-fashioned mop yarn in the hank or skein was employed. In the wringing devices for mops since devised yarn in the hank or skein cannot be used; but a woven fabric especially made for the particular description of mop is necessarily employed.

Among the many advantages connected with my invention is this one—viz., that yarn in the hank or skein can be employed therein. In fact, the invention is well adapted to make use of yarn. As yarn is very cheap and very effective in a mop, the advantage of a device for wringing a mop wherein said yarn can be placed and as readily removed therefrom will be apparent. When the yarn or fabric D of the mop has been worn out, or for any other reason is in a condition which renders its removal from the frame-work desirable, the cap F is rotated under the guide-rods E<sup>2</sup>, so as to bring the latter toward the bottoms of the inclines and the slots F' in the cap directly under the respective adjacent ends of the guide-rods E<sup>2</sup>. The cap F is now raised on said guide-rods, leaving the upper end of the mop fabric D free to be removed from the sleeve E and the shoulder E' and drawn from ring C, and the ends of a new fabric, after the latter has been passed through the ring C, to be fastened to said sleeve and shoulder.

The round form in transverse section, assumed by the mop D, as shown, is a great advantage, as it enables the corners of a room or hallway, &c., to be reached and thoroughly cleaned.

While the various features of my invention are preferably employed together, one or more of said features may be used without the remainder, and in so far as applicable one or more of said features may be employed in connection with mops of a description other than that herein specifically set forth.

What I claim as new and of my invention, and desire to secure by Letters Patent, is—

1. In a mop, the sleeve E and shoulder E', cap F, having inclined top, and abutments F<sup>4</sup> F<sup>4</sup>, and rod B and device at its end for upholding the lower end of the mop, substantially as and for the purposes specified.

2. In a mop, the sleeve E, having shoulder or flange E', guide-rods E<sup>2</sup>, attached to the sleeve, and cap F, having slots F' and inclines F<sup>4</sup> F<sup>4</sup>, and rod B, having at its outer end a device for holding the mop fabric D, substantially as and for the purposes specified.



3. In a mop-wringer, the sleeve E, having a shoulder or flange E', guide-rods E<sup>2</sup>, attached to the sleeve, carrying the sleeve E<sup>4</sup>, having set-screw E<sup>6</sup>, cap F, having slots F' and inclines F<sup>4</sup> F<sup>4</sup>, and rod B, having at its outer end a device for holding the mop fabric D, substantially as and for the purposes specified.

4. In a mop, the cap F, having inclines F<sup>4</sup> at its top and slots F', sleeve E and its shoulder E', concentric with said cap and having guide-rods E<sup>2</sup> capable of respectively entering said slots, the cap having wings or lugs F<sup>5</sup>, substantially as and for the purposes specified.

5. In a mop, the combination of the annular sleeve E, annular flange E', annular cap F concentric therewith and fitting down upon said sleeve and shoulder, abutments F<sup>4</sup> F<sup>4</sup>, the cap having inclines working against said abutments, and the rod B sliding through said

sleeve and cap, and means, substantially as described, for setting (when desired) the cap and sleeve stationary on the rod B at a given point on the latter, substantially as and for the purposes specified.

6. As a new article of manufacture, a cylindrical mop having a rod B provided at its free or outer end with the ring C, and carrying an annular sleeve having an annular shoulder or flange, and an annular cap fitting thereon and located on said rod, and yarn passed through said ring and having its ends disposed between said sleeve and cap in an annular manner, the body of the yarn being of a cylindrical shape, substantially as and for the purposes specified.

ROBERT H. MULLEN.

Attest:

A. S. LUDLOW,  
H. PEARCE, Jr.