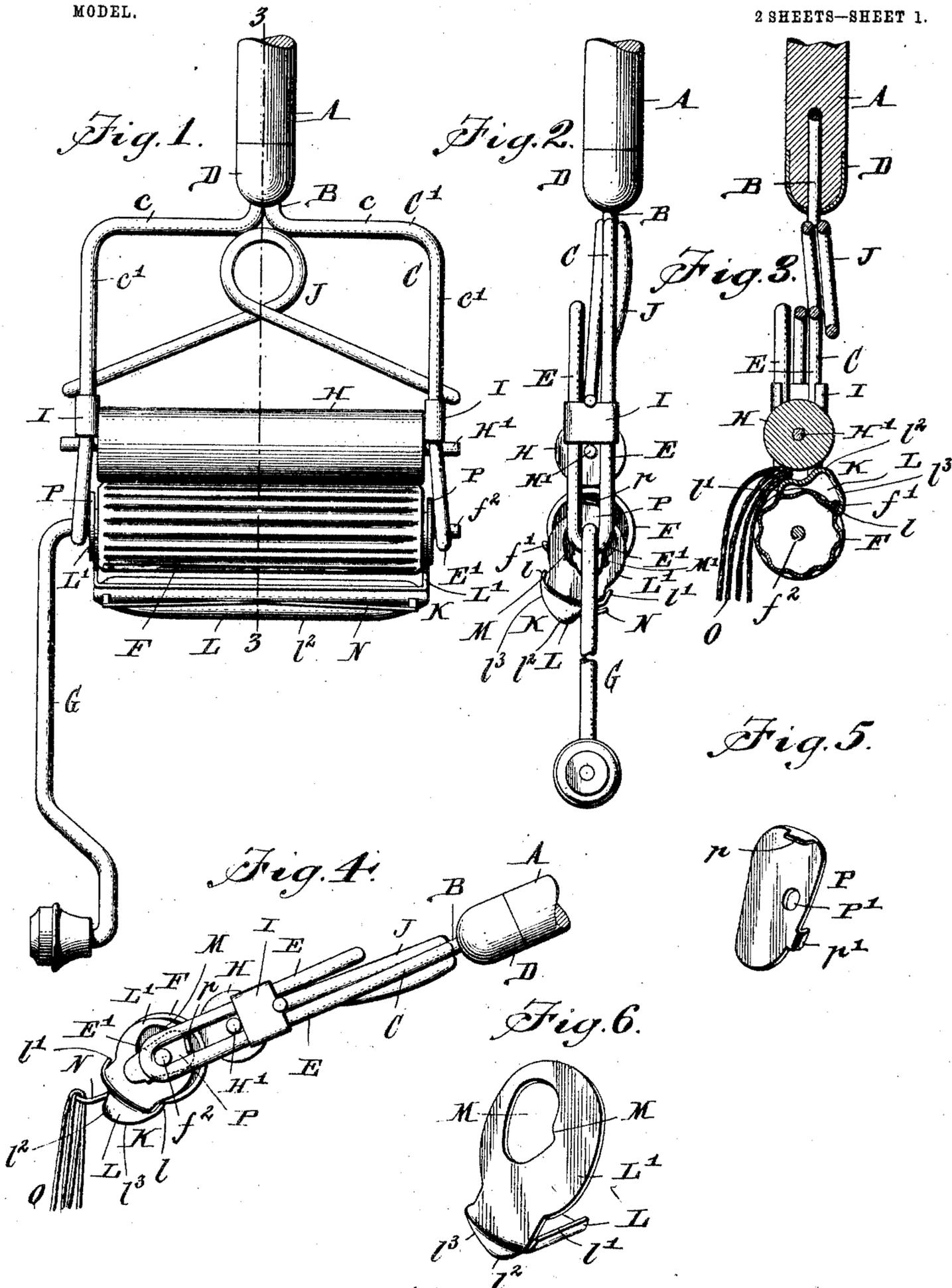


T. G. AMSDEN.
COMBINED MOP AND WRINGER.

APPLICATION FILED DEC. 13, 1902.

MODEL.

2 SHEETS—SHEET 1.



Witnesses:
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MODEL.

2 SHEETS—SHEET 2.

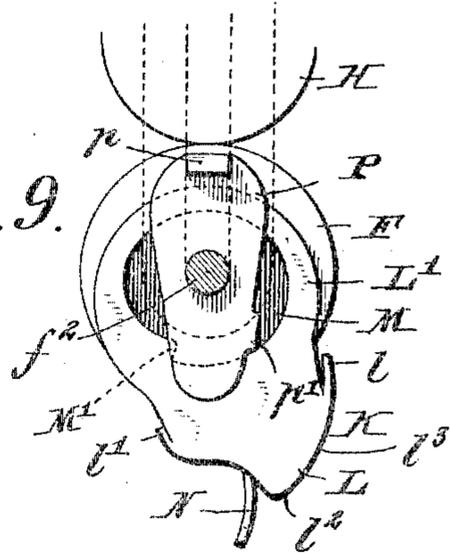
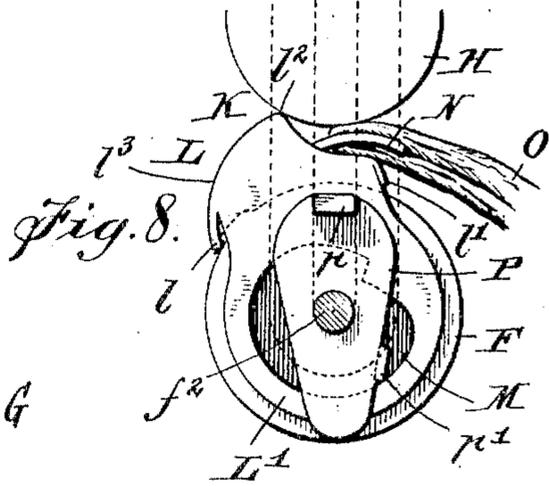
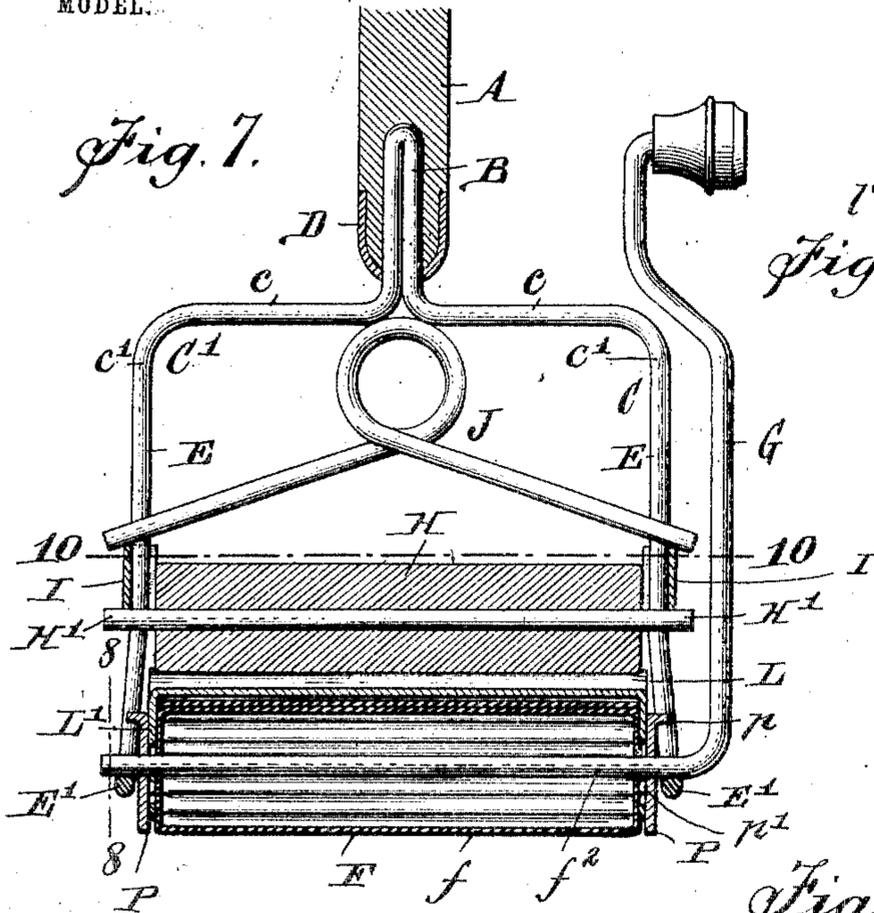


Fig. 10.

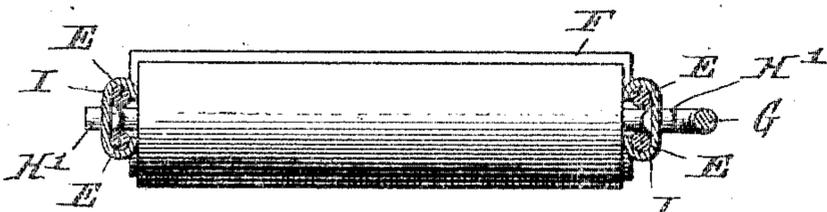


Fig. 11.

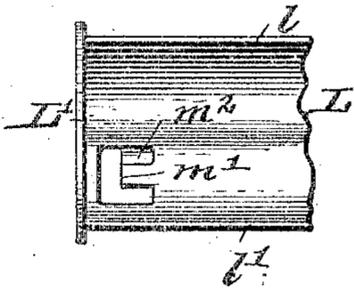


Fig. 13.

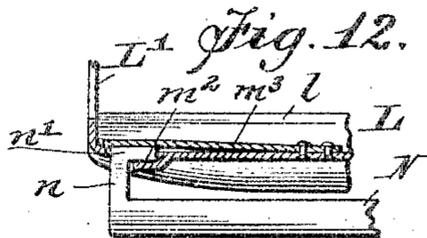
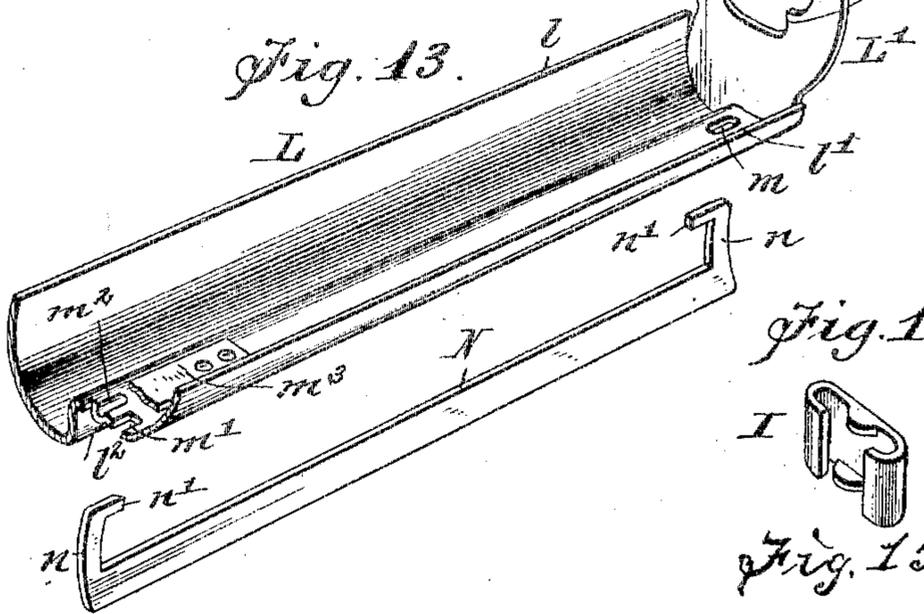


Fig. 14.

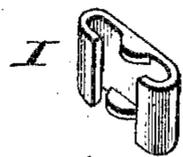


Fig. 15.

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UNITED STATES PATENT OFFICE.

THOMAS GARRETT AMSDEN, OF BUFFALO, NEW YORK, ASSIGNOR OF ONE-HALF TO IRVIN D. FLANDER AND WILLIE J. FLANDER, OF BUFFALO, NEW YORK.

COMBINED MOP AND WRINGER.

SPECIFICATION forming part of Letters Patent No. 776,981, dated December 6, 1904.

Application filed December 13, 1902. Serial No. 135,153. (Model.)

To all whom it may concern:

Be it known that I, THOMAS GARRETT AMSDEN, a citizen of the United States, residing at Buffalo, in the county of Erie and State of New York, have invented new and useful Improvements in a Combined Mop and Wringer, of which the following is a specification.

My invention relates to a combined mop and wringing-machine; and it has for its primary object to provide a device having means for holding the mop and cooperating means for clamping and for wringing the same.

Other objects are to provide means for releasing the affixed end of the mop from the wringing device and holding the same momentarily in a free condition while the mop is being passed between the rolls of the wringing device, to provide means for carrying the affixed end of the mop between the rolls and clamping the same after the entire mop is wrung out, and to construct a simple, durable, and efficient device which will greatly lessen labor and which can be easily and conveniently operated.

To these ends the invention provides for the use of a suitable frame, companion rolls, means for causing the rolls to rotate in unison, a mop-carrier, and means for causing the mop-carrier to be held between the said companion rolls and releasing and detaining the same in a free condition at some point in its line of travel; and it further consists in the new and peculiar arrangement, construction, and combination of parts to be hereinafter described, and particularly pointed out in the subjoined claims.

The several features above referred to, as well as other points of novelty of my invention, will be fully understood by reference to the accompanying drawings, in which—

Figure 1 is a front elevation of my combined mop and wringing-machine. Fig. 2 is a side elevation of the same. Fig. 3 is a central vertical section taken on line 3 3, Fig. 1, showing the mop-carrier clamped between the companion rolls. Fig. 4 is a side elevation of the device looking from the right and showing the position in which it is held when

the mop-carrier is to be clamped between the rolls. Fig. 5 is a detached perspective view of one of the releasers for releasing the mop-carrier from the roll with which it contacts. Fig. 6 is a perspective view of one end of the mop-carrier. Fig. 7 is a central longitudinal section of the device. Fig. 8 is an enlarged section taken on line 8 8, Fig. 7, the supporting-frame being shown in dotted lines and the mop-carrier being clamped between the companion rolls. Fig. 9 is a similar view showing the mop-carrier released, it being held in such position until the mop is passed entirely between the rolls. Fig. 10 is a horizontal section taken on line 10 10, Fig. 7. Fig. 11 is a plan view of one end of the mop-carrier with spring m^3 removed. Fig. 12 is a longitudinal section of a portion of the mop-carrier, showing the holder-bar secured therein and the spring for holding said bar in position. Fig. 13 is a sectional perspective view of part of the mop-carrier. Fig. 14 is a detached perspective view of the holder-bar, by means of which the mop is held on the mop-carrier. Fig. 15 is a detached perspective view of one of the thrust-boxes.

Referring to the drawings in detail, corresponding letters of reference refer to corresponding parts in the several figures.

The reference-letter A designates the handle, into the lower end of which I insert the shank B of a frame C, and to prevent the splitting of the handle at this point, as well as to aid in retaining the shank B therein, a ferrule D is secured thereto. Said frame is preferably constructed of a single piece of wire C', bent mid-length upon itself to form the shank B, and from the lower end of the shank the wire is disposed horizontally in opposite directions, as at c , thence downward a suitable distance, as at c' , whence each end is recurved upon itself to form two parallel side bars E E.

F designates the driving-roll, which is preferably constructed of corrugated or crimped sheet metal f , having its ends overlapped to form a longitudinal projecting seam f' . The ends of the roll are closed, and a shaft f^2 passes

through said roll and extends from opposite ends of the same to form suitable journals. One end of the said shaft extends considerably more from one end of the roll F than the other end thereof, and it is bent at right angles to form a suitable crank-handle G. The journals of said shaft are supported on the curved lower ends E' of the frame C.

H designates the driven roll, which is secured to a shaft H', having its ends projecting therefrom to form journals that are held between the parallel bars E E of the frame.

Bearing against the upper side of the projecting ends of the shaft H' are thrust-boxes I, which embrace the parallel bars E E. A coil-spring J is held with its coil against the horizontal portion of the frame directly beneath the shank, and it has its ends inclined in opposite directions, so that they may bear against the upper ends of the said thrust-boxes and cause the driven roll to bear against the driving-roll or to cause said driven roll to bear against the mop-carrier, to be presently described, when the latter is carried between the two rolls by the revolving of the driving-roll. By the construction above described both the driving-roll and the driven roll are held in their proper places—the driven roll through the action of the spring J directly and the driving-roll by the interposition of the driven roll.

K designates the mop-carrier, which is carried by the driving-roll, or, more particularly, by the projecting ends of the shaft f^2 , forming part of the driving-roll, and it comprises, by preference, a supporting member L, extending from end to end of the driving-roll and having inturned ends L', provided each with an irregular or cam-shaped opening M, through which the ends of the roll-shaft f^2 project, and a detachable mop-holder bar N. The sides of the said supporting member are curved inward at its side edges, as at l' , and it is provided with a longitudinal elevation l^2 , rising gradually from the incurved side l to form a riding-face l^3 , which as the carrier is brought in contact with the driven roll when operating the device causes the said driven roll to be elevated against the action of the spring J. The mop-carrier is provided at one end with an elongated or other suitable aperture m and at its other end with an L-shaped aperture m' and a depression or recess m^2 . The detachable mop-holder bar N has angular end portions n , terminating in opposing extensions n' , serving as pivots on which the bar may swing. The said opposing extensions are passed through the apertures $m m'$, and the extension passed through the L-shaped aperture m' is seated in the recess m^2 and is held therein by a flat spring m^3 , secured to the inner side of the supporting member L.

O designates the mop, which is held between the supporting member L and the holder-bar N, and by reason of the latter being held to

the supporting member as described said mop can be easily removed or attached by simply forcing that end of the holder-bar passed through the L-shaped aperture inwardly against the action of the spring m^3 , then drawing it to one side and in line with the longitudinal portion of said aperture, and finally pulling the end out. Such manipulation will still retain the other end of the bar in operative relation to the supporting member, and it need not be detached unless desired.

P designates releasers, which are fixed relatively to the frame. Each releaser P has an opening P', through which the projecting ends of the roll-shaft f^2 are passed, and an outwardly-projecting lug p at its upper end which is of a size to fit between the parallel bars of the frame, thus preventing movement of the releasers on said frame. Projecting inward from one side edge of each releaser, on a lower level than the shaft f^2 , is a releasing-lug p' , which acts against the bounding-wall of the cam-shaped opening M in the adjacent inturned end of the mop-carrier.

Normally the mop-carrier is held between the companion rolls of the wringing device, as shown in Figs. 3, 7, and 8. In this position the mop is clamped between the supporting member of the carrier and the driven roll and the incurved side l of the supporting member is engaged by the projecting seam f' on the driving-roll. Now on turning the crank-handle the driving-roll F is revolved and by reason of its projecting seam engaging the mop-carrier the latter is carried with the driving-roll and held between the same and the driven roll. During the first half-revolution of the driving-roll the releasing-lugs p' on the releasers P engage the cam edge of the openings M in the ends of the mop-carrier and force the latter out of engagement with the driving-roll, which is revolved until the entire mop has passed between the two rollers. It is apparent from the foregoing that by reason of the driven roll being held with spring-pressure against the mop the said driven roll is caused to revolve when revolving the driving-roll. When the entire mop has passed between the companion rolls, the device is inclined, as shown in Fig. 4, and the mop allowed to hang on the holder-bar, which causes the steps M' of the cam-shaped openings M to engage the releasing-lugs p' of the releasers P and swing on said lugs until the incurved side edge of the carrier bears against the driving-roll F. When the parts are in this position and the driving-roll is revolved, the projecting seam thereon engages the incurved side l of the mop-carrier and causes the latter to travel with the driving-roll. When the mop-carrier is caused to travel with the driving-roll, the inclined riding-face thereof engages the driven roll and elevates the same, and the rolls are revolved until the driven roll rides over the elevated portion l^3 of the mop-

carrier and bears against the mop to clamp the same for use.

I do not wish to confine myself to the exact construction shown, but hold myself at liberty to make changes in the construction and arrangement of parts and to make any other changes that fairly fall within the scope of my invention, such as are only limited by the appended claims, to be construed according to the prior art.

Having thus described my invention, what I claim is—

1. The combination with a suitable frame, of a driving-roll and a yielding driven roll, both rolls being supported to revolve in said frame, a mop-carrier supported on the journal of the driving-roll and being normally held between said rolls, means for causing said carrier to travel with the driving-roll, and a releasing device at each end of the driving-roll to free the said carrier from said driving-roll.

2. The combination with a suitable frame, of two companion rolls journaled in said frame one above the other, a mop-carrier extending lengthwise of the lower roll and having inturned end portions through which the journals of the lower roll extend, means for causing the mop-carrier to travel with said lower roll, and releasing devices acting against said inturned end portions to release the mop-carrier from the lower roll.

3. The combination with a suitable frame, of two companion rolls journaled in said frame, one of said rolls having a peripheral projection, a mop-carrier supported on said last-mentioned roll and adapted to engage said projection and be carried with the roll on which said projection is located, and means for releasing said mop-carrier from said projection on revolving said rolls.

4. The combination with a suitable frame, of two companion rolls journaled to revolve therein, a mop-carrier extending lengthwise of one roll and having inturned ends which lie against the ends of said roll, each inturned end having a cam-shaped opening through which the journals of said roll pass, means for causing said mop-carrier to travel with said roll so as to position said carrier between said rolls, and releasers acting against the walls of said cam-shaped openings to cause the mop-carrier to be released from the roll which it engages when actuating the device.

5. The combination of a frame constructed of wire and having each of its sides formed by doubling the wire upon itself to form two parallel bars, a driving-roll and a driven roll having their journals held between said bars, a mop-carrier extending lengthwise of the driving-roll and having inturned ends lying against the ends of said driving-roll, each inturned end having a cam-shaped opening through which the journals of said driving-roll pass, means for causing said mop-carrier to travel

with said driving-roll so as to position said carrier between said rolls, and releasers between the inturned ends of the mop-carrier and the parallel side bars of the frame, each releaser being held on a journal of the driving-roll and having an outwardly-extending lug held between said parallel side bars and an inwardly-extending lug entering the cam-shaped opening in the adjacent end of the mop-carrier and acting against the cam edges thereof to release the mop-carrier from the driving-roll.

6. The combination with the frame, of a driving-roll constructed of sheet metal having overlapping ends to form a projecting seam, a driven roll held yieldingly against the driving-roll, both rolls being journaled to revolve in said frame, a mop-carrier supported on said driving-roll and being adapted to engage said projecting seam so as to travel with said driving-roll, and means for disengaging said mop-carrier from said projecting seam at a certain point in the revolution of said driving-roll.

7. The combination with the handle, of a frame affixed to the handle, and consisting of a piece of wire suitably bent and having each of its lower ends bent upon itself to form two parallel side bars, a driving-roll and a driven roll journaled between said side bars, thrust-boxes embracing said side bars and bearing with their lower ends against the journals of the driven roll, a spring bearing against the upper ends of said thrust-boxes, and a mop-carrier held in operative relation to said rolls.

8. A mop-carrier comprising a supporting member having an L-shaped aperture at one end and a depression extending inward from said aperture and having also a suitable aperture at its other end, a holder-bar having L-shaped end extensions arranged at right angles to the bar proper and entering said apertures in the supporting member, one of said L-shaped extensions being adapted to enter said depression, and a spring for holding the last-mentioned extension in said depression.

9. The combination with a suitable frame, of two cooperating rolls journaled in said frame, a mop-carrier normally held between said rolls, means for causing said mop-carrier to travel with one of said rolls, and mechanism for releasing the mop-carrier from said last-mentioned roll before the latter makes one complete revolution to permit the entire mop to pass between the cooperating roll without interference of the mop-carrier.

10. The combination of a frame, a driving-roll journaled in said frame, a driven roll also journaled in the frame and held yieldingly against the driving-roll, a mop-carrier operatively supported on said driving-roll and comprising a supporting member having an aperture near each end, one of said apertures being L-shaped, a mop-holder bar having inturned ears passed through said apertures, and a spring secured to the inner side of said sup-

porting member and bearing against the ear of said holder-bar passed through said L-shaped aperture.

11. In a mop and wringing-machine, the
5 combination with a suitable frame, of two companion rolls journaled in said frame, a mop-carrier having a mop secured thereto and being normally engaged with one of said rolls to revolve with the same and be held between
10 both rolls, said mop-carrier having an inclined riding-face adapted to separate the companion

rolls when passing between the same, and means for releasing the mop-carrier from its coacting roll at a certain point in the revolution thereof.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

THOMAS GARRETT AMSDEN.

Witnesses:

JAMES B. WILGUS,
ETTA I. BIDWELL.