

(No Model.)

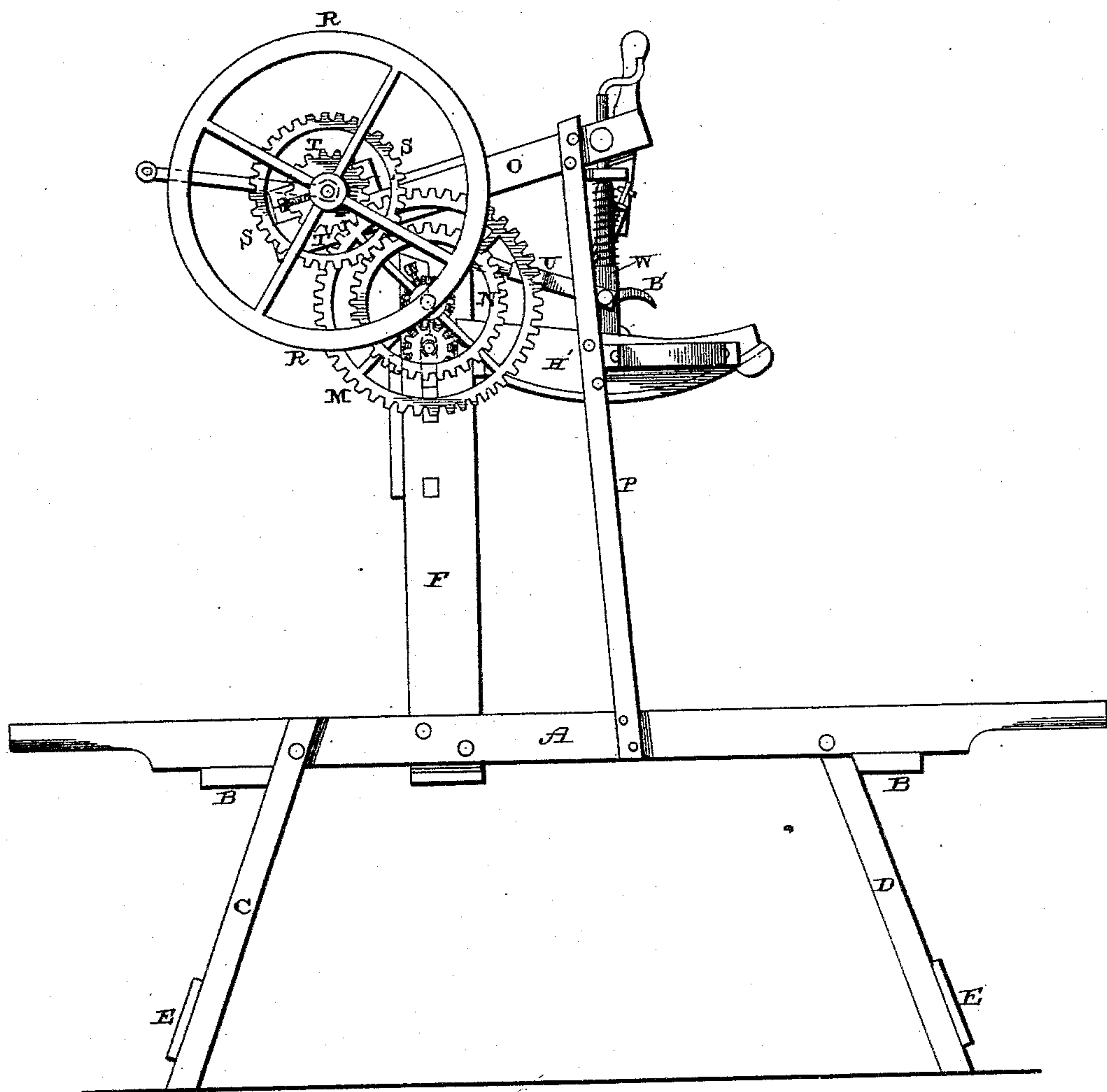
2 Sheets—Sheet 1.

C. A. WHITE.
COMBINED WASHER AND WRINGER.

No. 414,620.

Patented Nov. 5, 1889.

Fig. 1.



Witnesses:

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Inventor:
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per
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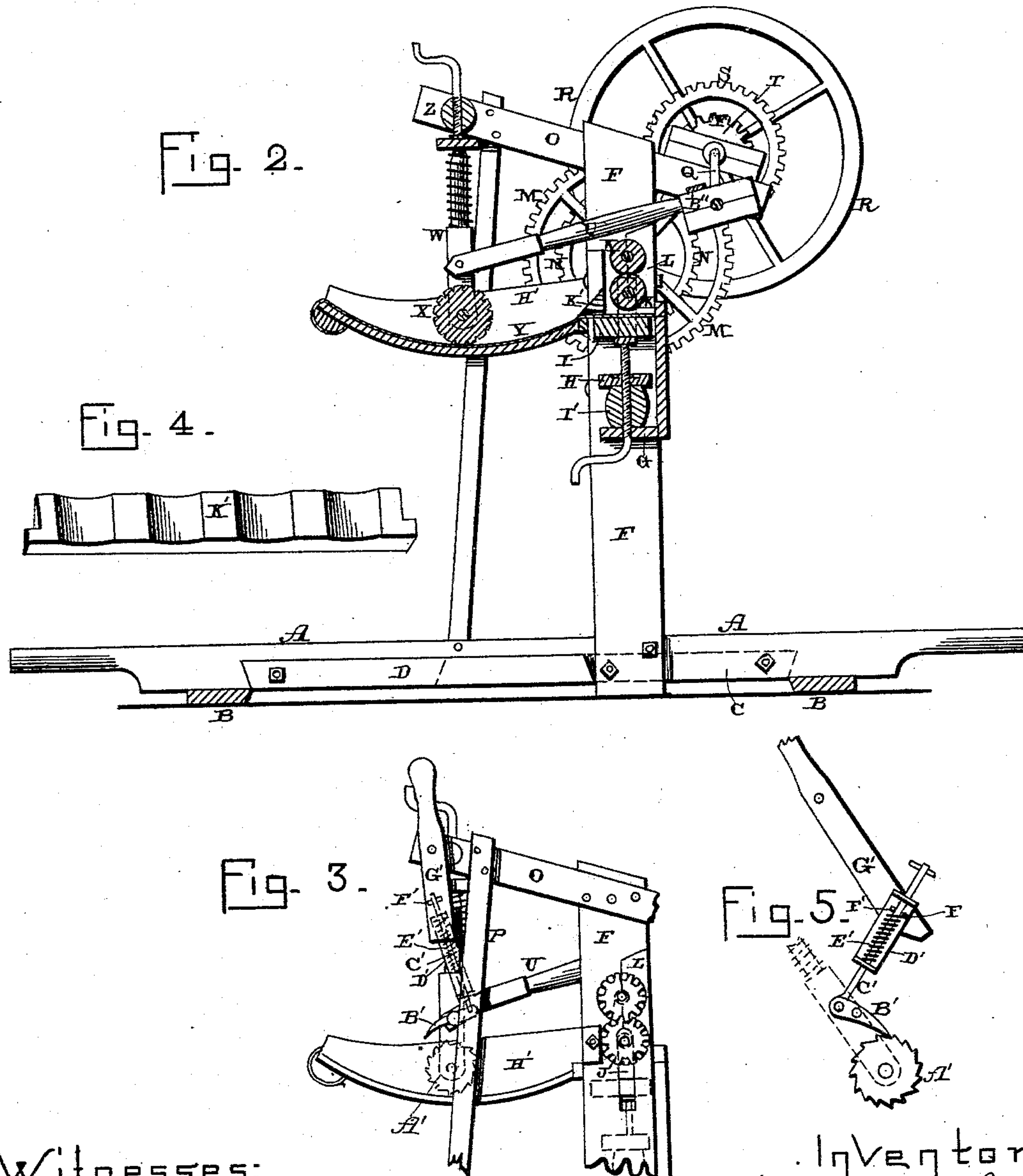
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UNITED STATES PATENT OFFICE.

CASSIUS A. WHITE, OF JAMAICA, VERMONT.

COMBINED WASHER AND WRINGER.

SPECIFICATION forming part of Letters Patent No. 414,620, dated November 5, 1889.

Application filed February 21, 1889. Serial No. 800,674. (No model.)

To all whom it may concern:

Be it known that I, CASSIUS A. WHITE, a citizen of the United States, residing at Jamaica, in the county of Rutland and State of Vermont, have invented certain new and useful Improvements in a Combined Washer and Wringer, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to an improvement in combined washers and wringers; and the objects of my invention are to provide a reciprocating roller and a mechanism by which the roller can be prevented from revolving as it is moved forward for the purpose of moving the clothes forward over the board.

Figure 1 is a side elevation of a machine which embodies my invention complete. Fig. 2 is a vertical section of the same. Fig. 3 is a side elevation of a portion of the washing-machine, taken from the opposite side from Fig. 1. Fig. 4 is a detached perspective of the board K'. Fig. 5 is a detached view of the lever G' and its attachments used in connection with the fluted roller X.

A represents two horizontal parallel supporting-bars, which have their ends shaped so as to form handles, and which are secured rigidly together near their ends by the cross-pieces B. These cross-pieces serve both to hold the supporting-bars in their relative positions to each other and to act as stops in the outward movement of the pivoted legs C D. The legs D are pivoted at their upper ends inside of the supporting-bars A and are connected together near their lower ends by a cross-bar E. The legs C are pivoted upon the outer sides of the supporting-bar A, and both extend outwardly and at an angle, so as to brace and steady the machine in position while in operation. The lower ends of the legs C are also secured rigidly together by a cross-piece E.

Rising from the two supporting-bars A are the two standards F, which rise upward to any desired height, and which are rigidly secured together by the cross-pieces G H I. Just above the cross-piece I recesses are formed in the outer edges of the standards F, so as to form bearings for the wringer-rollers K. After the rolls K have been placed in posi-

tion they are held by means of the blocks L, which are bolted to the standards, as shown. By making these recesses in the edge of the standard any desired form or make of wringer-rolls can be used that the operator may prefer, instead of being limited to one construction or form of rolls, as is generally the case in other machines.

If persons have a wringer of their own, they can take the rolls out and place them in this machine and use them as well and freely in this connection as though they were intended for this particular machine. The pressure of the rolls upon the clothes being wrung out is controlled by a screw which passes up through the rubber washer I' and has its lower end to bear against the under side of the cross-piece I. From the cross-piece I, which has its ends to move in slots in the standards, the pressure is transferred to the rollers through the bearings J'.

Secured to one end of the shaft of the upper roller are the two wheels M N, of unequal size, and which are preferably formed in a single casting, and through these two wheels M N a slow or rapid motion is given to the rollers K, according to the character of the work which is being done. If the rollers are used for wringing the articles as rapidly as they are washed, the larger wheel M is brought into play; but if a more rapid motion is to be given, as when the clothes are being rinsed, then the wheel N is brought into play. Journaled near the outer ends of the inclined top pieces O, which are secured to standards F and the supports P, is the operating crank-shaft Q, which has a handle secured to one end and the fly-wheel R and the two smaller wheels S T secured to its other end. The fly-wheel R and the two wheels S T are formed in a single casting, and this casting is adapted to have a lateral movement upon the shaft Q, so as to move the small wheel T out of gear with the large wheel M and bring the wheel S into gear with the wheel N. The small wheel T meshes with the large wheel M on the wringer-shaft when the slow movement is desired; but when a more rapid movement is required the wheel S is brought into gear with the wheel N. By thus shifting these wheels upon the shaft Q the movement

of the rollers can be controlled by the operator at will.

Journalled upon the crank-shaft Q are the two pitman-rods U, which are connected together by the cross-piece B'' at their upper ends, and which pitmen are pivoted at their lower ends to the two rods W, in which the washer-roller X is journalled. This roller is round, so as to roll freely back and forth upon the smooth wash-board Y, and is grooved longitudinally. The rods W have their upper ends to pass through a partially-rotating rod or shaft Z, so that they can be moved freely back and forth at their lower ends by the pitmen U through a portion of a circle. Upon these rods W are placed spiral springs, which have their tension regulated by the cross-bar and screw in the usual manner. These springs regulate the amount of pressure the roller shall have upon the clothes being washed as it is rolled back and forth over them.

Secured to one end of the roller-shaft is a ratchet A', and pivoted upon one of the rods W is a pawl B', which is made to engage with the ratchet only when it is desired to prevent the roller X from revolving as it is moved forward over the wash-board Y. Loosely connected at the upper end of the pawl B' is a spring-actuated rod C', which passes through the metallic plate D', which has its ends perforated and bent at right angles, so as to hold the spring E' between them. Through the rod C' is passed a stop F', against which one end of the spring E' rests, the other end of the spring being made to bear against one end of the plate D', which is pivoted to the lever G'. This spring serves to keep the pawl out of contact with the ratchet at all times except when it is desired that the roller shall be prevented from revolving. The lever G' is pivoted upon the top pieces O, and is in position to be readily grasped by the hand at any time that it is desired to feed the clothes forward. The moment this lever G' is released the spring causes the dog to instantly detach from the ratchet, so as to leave the roller free to revolve.

The side pieces H' of the wash-board Y are secured to the rods P and the uprights F, and the wash-board Y is formed upon a circle of which the center is the partially-turning rod or shaft Z. At the inner upper end of the board is placed a beveled guiding-board K', which is recessed out on its rear and under sides, so as to allow enough of the water and soap which is pressed from the clothes to run back upon the board to wet the article to be washed, and thus prevent the soap from being wasted, as is always the case where the clothes are washed in a tub or in water deep enough to cover them.

The article to be washed is first placed upon the board, and then the shaft Q is revolved by means of its handle, so that the pitmen U are made to move the roller back and forth over that part of the article which

has been properly soaped and rests upon the board. The rolling movement of the roller serves to loosen the dirt in this soiled portion, and as soon as the roller has acted sufficiently upon this part the lever G' is moved so as to bring the dog in contact with the ratchet, and then the forward movement of the rollers serves to feed the garment forward over the top of the board K' directly to the rollers. If the shaft Q is only made to partially revolve, the roller X can be moved back and forth over the garment any desired number of times without bringing the rollers K into operation, so as to draw the garment from the wash-board; but if the shaft Z is made to continuously revolve after the rollers K have once gotten hold of the article it will be drawn on through. In case it is desired to rinse the articles after they have been once washed by being passed through the machine, the rollers K are given a rapid movement, as above described, and then when the article passes over the board the roller X is made to roll back and forth over their tops as the articles are drawn rapidly through the rollers.

By means of my invention it will be seen that the clothes can be washed and wrung out at the same time by turning only a single crank, and that by properly manipulating the feed-lever the garment can be fed in the entire length of the wash-board at one forward motion of the wash-roll and the soiled parts operated upon as long as desired and then fed gradually at each forward motion of the wash-roller to the wringers. The quantity of water used is so small that a very strong lather is created, and which the wash-roller works into and through the garment, and thereby renders the operation of the cleansing more effectual than where the work is done under water, because the soap, instead of being taken up by a large quantity of water, is all taken up and worked into the saturated garment, thereby effecting a great saving in the use of soap. By changing the rollers to a fast feed the clothes can be run through sudsing and rinsing water very rapidly.

A fluted wash-roller is used in connection with the smooth wash-board, so that the roller rolls and not slides on the soapy smooth zinc.

No claim is made in this application to any parts of the wringing-machine, for these parts will be embodied in a separate and distinct application. The wringer and roller are shown together for the purpose of showing them combined together in a single machine.

Having thus described my invention, I claim—

1. The combination of the operating crank-shaft, the pitmen, the roller, the rods in which the roller is journalled, the partially-revolving shaft through which the upper ends of the rods pass, the ratchet attached to one end of the roller, a spring-actuated dog,

and a lever for throwing the dog into contact with the ratchet, substantially as specified.

2. The combination of the rods W, the shaft Z, through which their upper ends pass, the
5 roller X, the ratchet A', the dog, the rod connected to the dog and provided with a stop, the spring placed upon the rod, the plate through which the rod passes, and the lever

G', for operating the dog, substantially as shown.

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

CASSIUS A. WHITE.

Witnesses:

GILBERT A. DOW,
CHARLES E. ALLEN.