

No. 626,636.

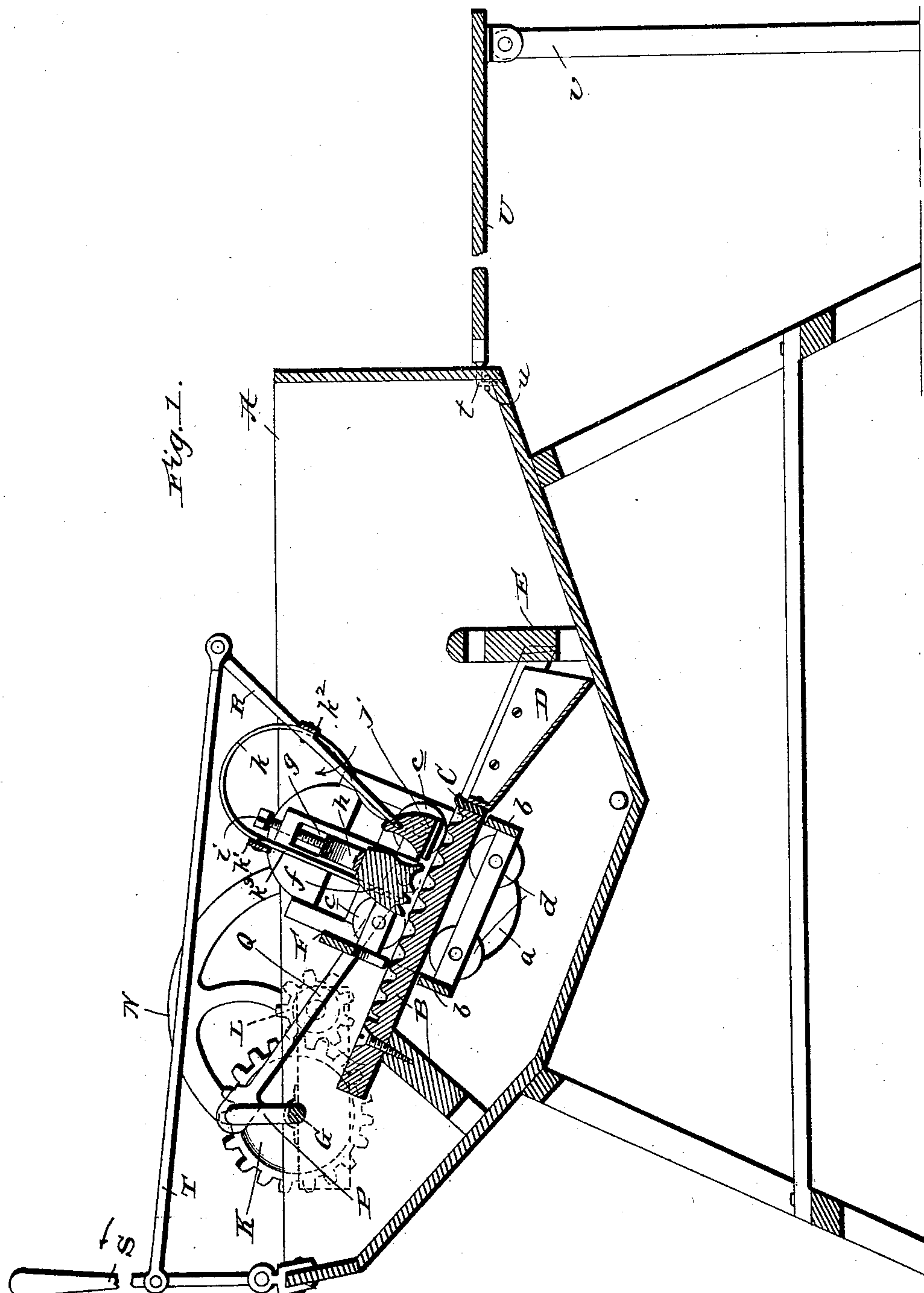
Patented June 6, 1899.

R. H. SCROGGINS.  
WASHING MACHINE.

(Application filed Mar. 16, 1899.)

(No Model.)

3 Sheets—Sheet 1.



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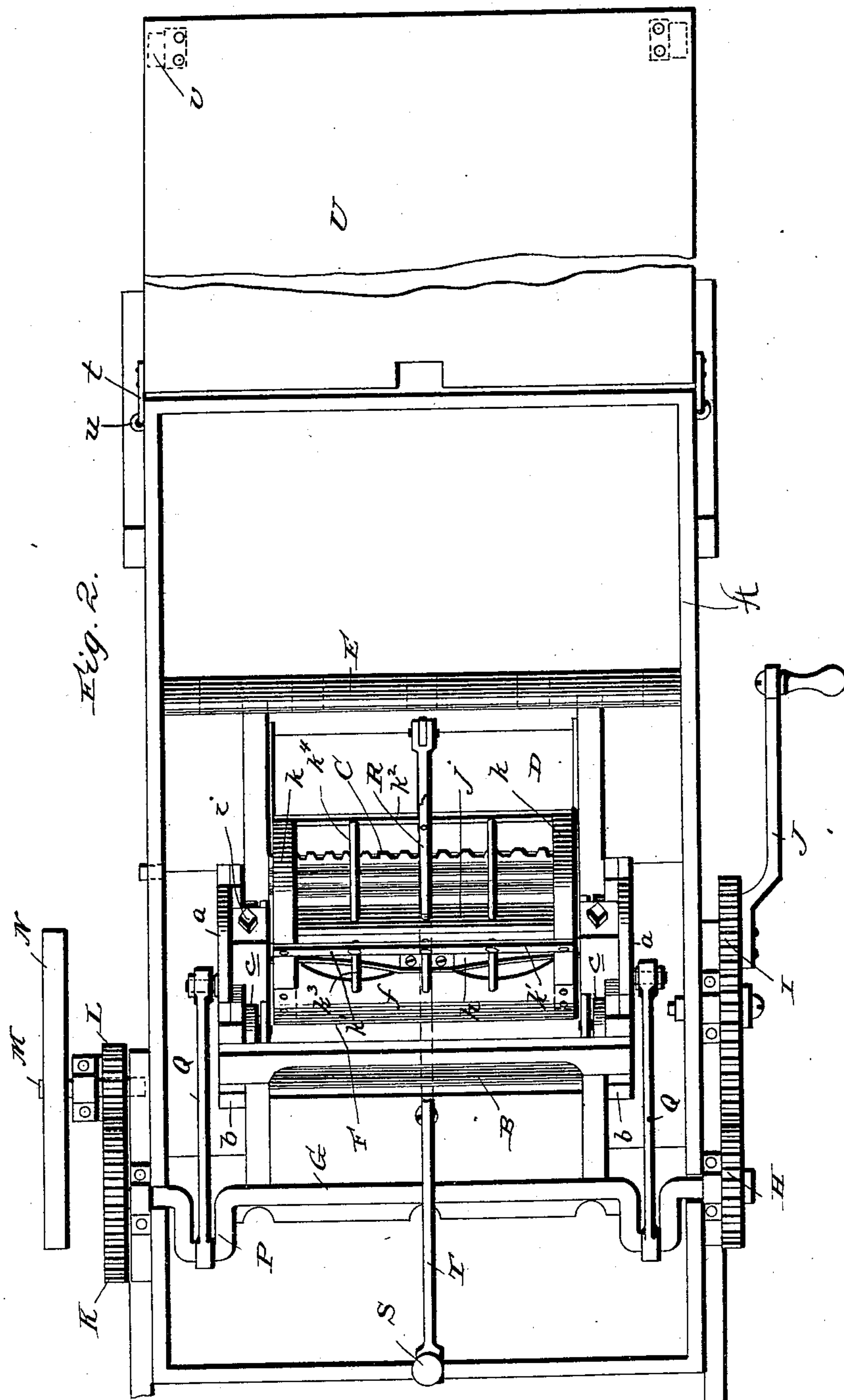
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3 Sheets—Sheet 2.



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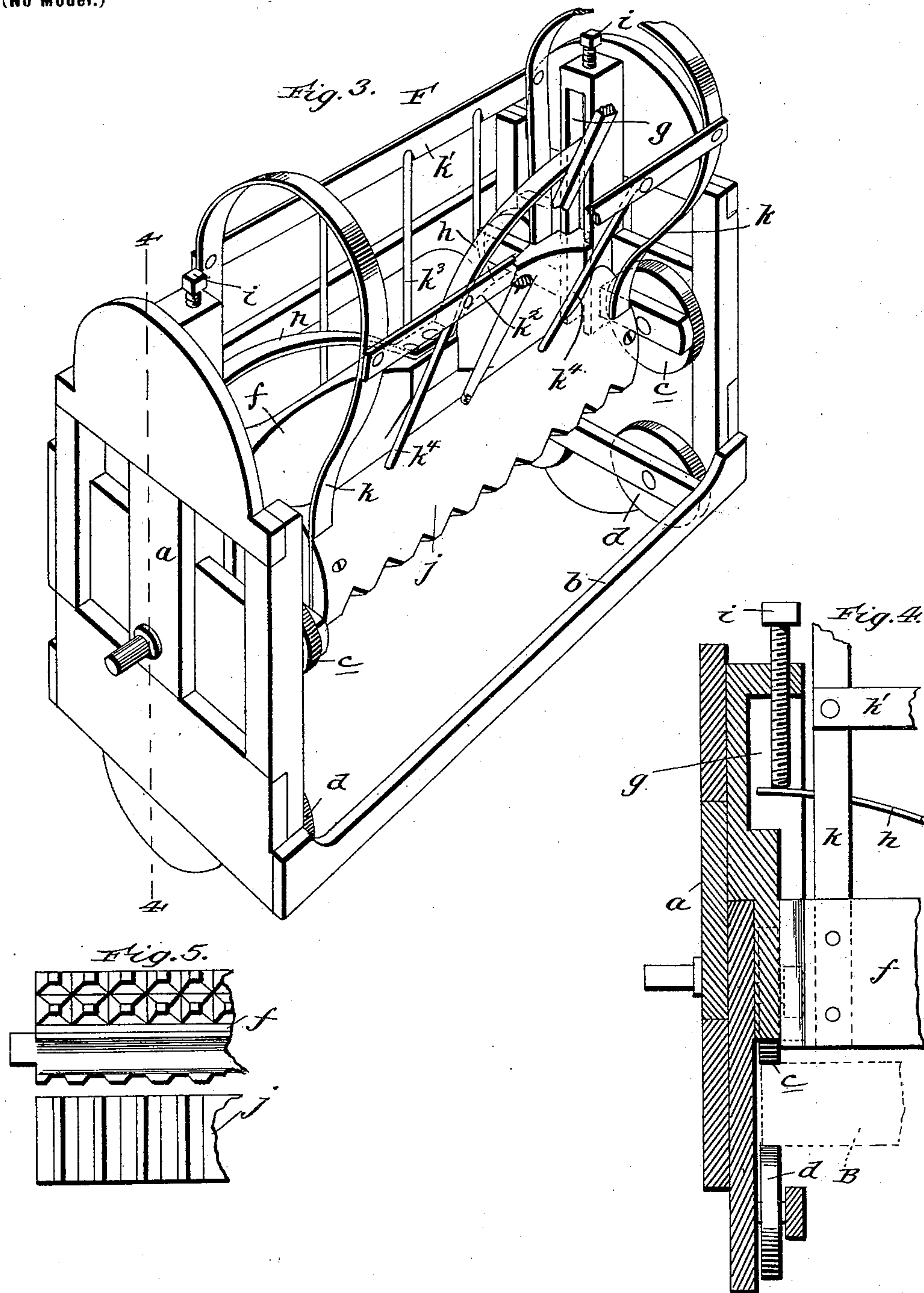
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3 Sheets—Sheet 3.



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# UNITED STATES PATENT OFFICE.

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TO OSCAR F. BRESEE, JR.

## WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 626,636, dated June 6, 1899.

Application filed March 16, 1899. Serial No. 709,283. (No model.)

*To all whom it may concern:*

Be it known that I, ROBERT H. SCROGGINS, a citizen of the United States, residing at Leesburg, in the county of Loudoun and State of Virginia, have invented new and useful Improvements in Washing-Machines, of which the following is a specification.

My invention relates to the class of washing-machines which embrace reciprocating rubbers; and it has for its general object to improve such machines by providing a reciprocating rubber constructed with a view of holding and rubbing clothes against a board and gradually feeding the clothes forwardly as rubbed in substantially the same manner as is done by the hands of a washwoman and with the result that dirt is expeditiously worked out of the clothes without injury thereto.

The invention also contemplates improving the general structure of machines of the class mentioned.

With the foregoing ends in view the invention will be fully understood from the following description and claims, when taken in conjunction with the annexed drawings, in which—

Figure 1 is a longitudinal vertical section of a washing-machine embodying my invention. Fig. 2 is a plan view of the same. Fig. 3 is an enlarged perspective view of the rubber. Fig. 4 is an enlarged detail section taken in the plane of line 4 4 of Fig. 3. Fig. 5 is an inverted plan view illustrating the faces of the clothes-engaging pieces of the rubber.

In the said drawings similar letters designate corresponding parts in all of the several views, referring to which—

A is the body of the machine, which is suitably supported and is designed to receive clothes and the water for washing same.

B is a washboard, of hard wood or other suitable material, fixed in an inclined position within the body A and provided at its lower end with a transverse rubber-strip C, the upper edge of which is roughened or serrated for a purpose presently described.

D is a trough or receptacle fixed in the body A and adapted to receive the clothes as the same are delivered from the board B, and E

is a transverse apertured partition which is arranged adjacent to the receptacle D and has for its purpose to hold the rubbed clothes therein.

The washboard B is of a less width than the body A and is so supported therein as to enable it to serve as a support and track for the reciprocating rubber F. This rubber in the preferred embodiment of the invention comprises a main frame made up of end walls *a* and one or more cross-bars *b*, connecting the same; antifriction-wheels *c d*, carried by the end walls *a* of the frame and disposed above and below the board B, respectively; a clothes-engaging piece *f*, of hard wood or other suitable material, movable toward and from the board B in guideways *g* in the end walls and having a roughened face, as shown in Fig. 5; a spring *h*, connected to and disposed above the clothes-engaging piece and having its ends arranged in the guideways *g*; screws *i*, mounted in the upper end walls of the guideways *g* and bearing on the ends of the spring *h*, so that the pressure exerted by said spring may be regulated at pleasure; a clothes-engaging piece *j*, of hard wood or other suitable material, disposed in front of the piece *f* and having a roughened face, as shown in Fig. 5, and bow-springs *k*, which are connected to the main frame of the rubber and the clothes-engaging piece *j* and have for their function to yieldingly hold the said piece *j* in the position shown in Fig. 1 and return it to said position when it has been moved forwardly from the same for a purpose presently described. The rear portions of the springs *k* are connected by a transverse bar *k'*, and the forward portions thereof are connected by a transverse bar *k''*. These bars *k' k''* are connected in turn by upright bars *k''' k''''* with the clothes-engaging pieces *f j*, respectively, whereby it will be seen that a receptacle or holder for clothes is formed in the rubber.

Journaled in the side walls of the body A at the point shown is a transverse crank-shaft G. This shaft G is provided at one end with a gear-wheel H, which meshes with a gear-wheel I, having a suitable handle J. At its opposite end said shaft G is provided with a gear-wheel K, which meshes with a gear-wheel L, fixed on the same shaft M with a



balance-wheel N. Said balance-wheel is designed to gain momentum when the shaft G is rotated, and thereby render the operation of the machine smooth, even, and easy. The  
 5 cranks P of shaft G are arranged between the side walls of the body A and are connected by pitmen Q with the end walls  $\alpha$  of the rubber-frame, whereby it will be seen that when the shaft is rotated the rubber will be recip-  
 10 roated.

R is an arm fixedly connected to the clothes-engaging piece  $j$  and also to the cross-bar  $k^2$ , interposed between the curved springs  $k$ .

S is a hand-lever which is fulcrumed at one  
 15 end of the body and may, if desired, be detachably connected thereto, and T is a pitman interposed between and connecting the arm R and the lever S.

In using my improved machine a sufficient  
 20 quantity of water is placed in the body A, and the clothes to be washed are placed in the rubber, after which the rubber is reciprocated until the clothes are fed therefrom. Precedent to the clothes being placed in the rubber the  
 25 lever S is moved in the direction of the arrow in Fig. 1, this being done in order to move the clothes-engaging piece  $j$  away from the piece  $f$ , and thereby permit of the clothes being pushed down between the pieces  $fj$  and into  
 30 contact with the board B. When the clothes are thus placed in the rubber, the lever S is released, when the springs  $k$  will return the piece  $j$  to its normal position, and the clothes will be clamped between said piece  $j$  and the  
 35 piece  $f$ . When the rubber is reciprocated with the clothes therein, the clothes are rubbed between the pieces  $fj$  and the board B, and the dirt is expeditiously and thoroughly worked out of the same. The piece  $j$  also operates at  
 40 the commencement of each forward stroke of the rubber to take a fresh hold on the clothes, and thereby feeds the clothes forwardly, so that a fresh portion of the same is presented to the board B incident to each forward stroke  
 45 of the rubber. In this way every part of a piece of clothes is subjected to a rubbing action, which by reason of the pieces  $fj$  being yieldingly held in position is very similar to hand-rubbing and is therefore not liable to  
 50 injure the clothes. At the commencement of each upward stroke of the rubber F the clothes which are fed forward from the rubber by the piece  $j$  are engaged by the serrated edge of the rubber-strip C. This retards the  
 55 upward or rearward movement of the clothes with the rubber, and hence assists the piece  $j$  in feeding the clothes out of the rubber and forward of the same. When it is desired to accelerate the discharge of clothes from the  
 60 rubber, it is simply necessary for the operator to rock the lever S in the direction indicated by arrow while the rubber is over the trough or receptacle D. When the first charge of clothes is almost discharged from the rubber  
 65 F, a fresh supply of clothes is placed in said rubber, and the described operation is continued.

U is a table which has hooks  $t$  at one end, removably placed in eyes  $u$  on the body A, and also has a hinged leg  $v$ . This table U in  
 70 the position shown is designed to support a clothes-wringer or the like and is also designed to be readily disconnected from the body and folded for the sake of compactness in shipping or storing the machine.  
 75

I have entered into a specific description of the construction and relative arrangement of the parts of my improved machine in order to impart a full, clear, and exact understanding  
 80 of the same. I do not desire, however, to be understood as confining myself to such specific construction and arrangement of parts, as such changes or modifications may be made in practice as fairly fall within the scope of  
 85 my invention.

Having thus described my invention, what I claim is—

1. In a washing-machine, the combination of a board, and a reciprocatory rubber, comprising a main frame, a spring-pressed clothes-  
 90 engaging piece movable to and from the board, a yielding clothes-engaging piece movable with respect to the remainder of the rubber in the direction in which said rubber is arranged to reciprocate, and suitable means for  
 95 holding clothes above the clothes-engaging piece, substantially as specified.

2. In a washing-machine, the combination of a board, and a reciprocatory rubber comprising a main frame, a spring-pressed clothes-  
 100 engaging piece movable toward and from the board, bowed springs connected to the frame, and having their lower ends disposed in front of the clothes-engaging piece, a second clothes-engaging piece connected to the lower ends of  
 105 said springs, cross-bars connecting the bowed springs, and bars connecting said cross-bars and the clothes-engaging pieces, substantially as specified.

3. In a washing-machine, the combination  
 110 of a board, and a reciprocatory rubber comprising a main frame, wheels carried by said frame and disposed above and below the board at the opposite longitudinal edges thereof, a spring-pressed, clothes-engaging piece mov-  
 115 able to and from the board, a yielding clothes-engaging piece movable with respect to the remainder of the rubber in the direction in which said rubber is arranged to reciprocate, and suitable means for holding clothes above  
 120 the clothes-engaging pieces, substantially as specified.

4. In a washing-machine, the combination of a body, a board arranged therein, a hand-  
 125 lever fulcrumed on the body, a reciprocatory rubber comprising a main frame, a spring-pressed, clothes-engaging piece movable toward and from the board, a yielding clothes-engaging piece movable with respect to the  
 130 remainder of the rubber in the direction in which said rubber is arranged to reciprocate, and suitable means for holding clothes above the clothes-engaging piece, and connections between the hand-lever and the yielding



clothes-engaging piece whereby, when the lever is rocked, said yielding piece will be moved away from the other clothes-engaging piece, substantially as specified.

5 5. In a washing-machine, the combination of a board, a clothes-engaging piece arranged at the forward end of said board, a clothes-receptacle disposed in advance of the board, and a reciprocatory rubber having a spring-pressed, clothes-engaging piece movable to-  
10 ward and from the board, and also having a

yielding clothes-engaging piece movable with respect to the remainder of the rubber in the direction in which said rubber is arranged to reciprocate, substantially as specified.

15

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

ROBERT H. SCROGGINS.

Witnesses:

J. E. CARRUTHERS,

EDWIN E. GARRETT.