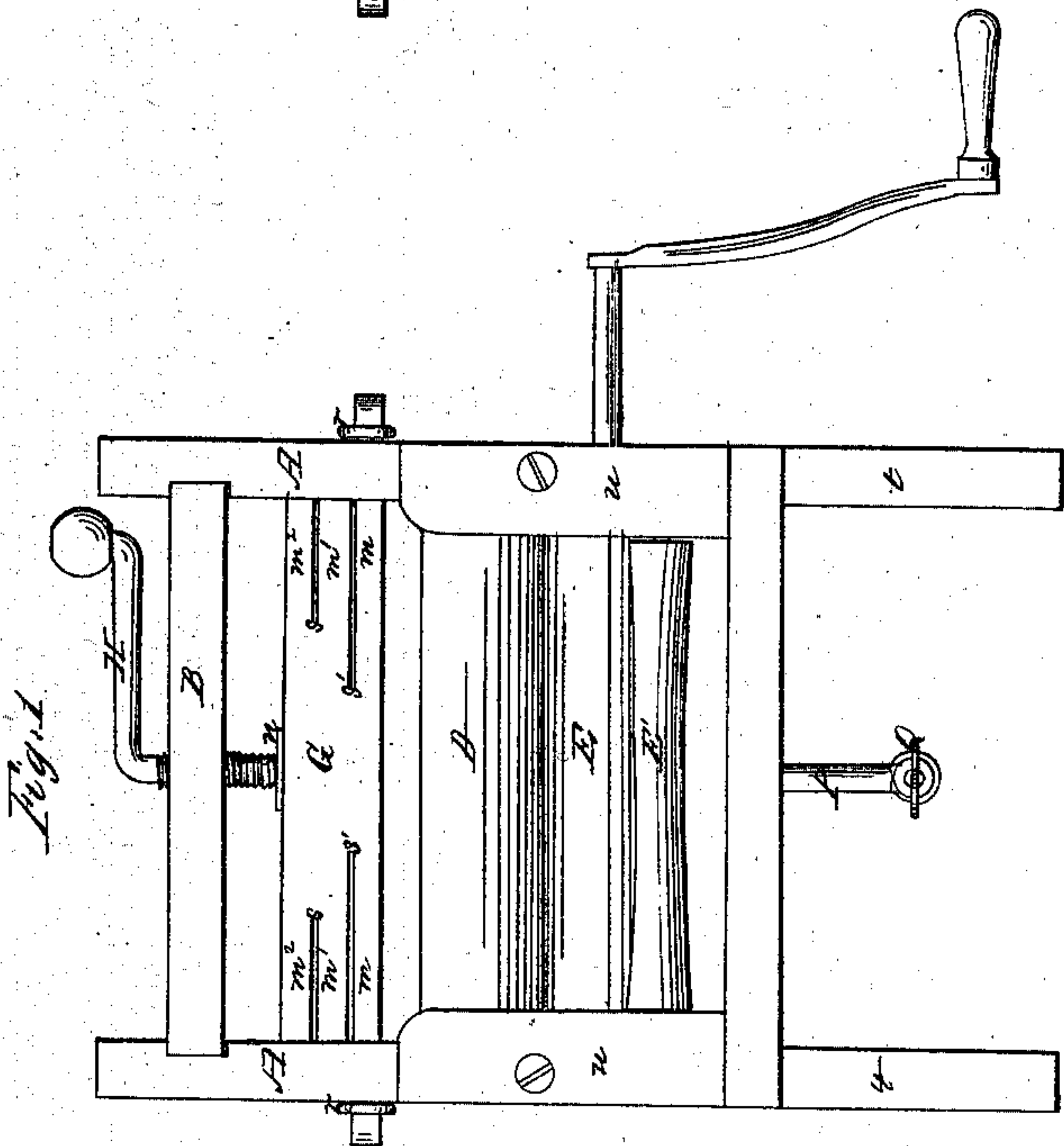
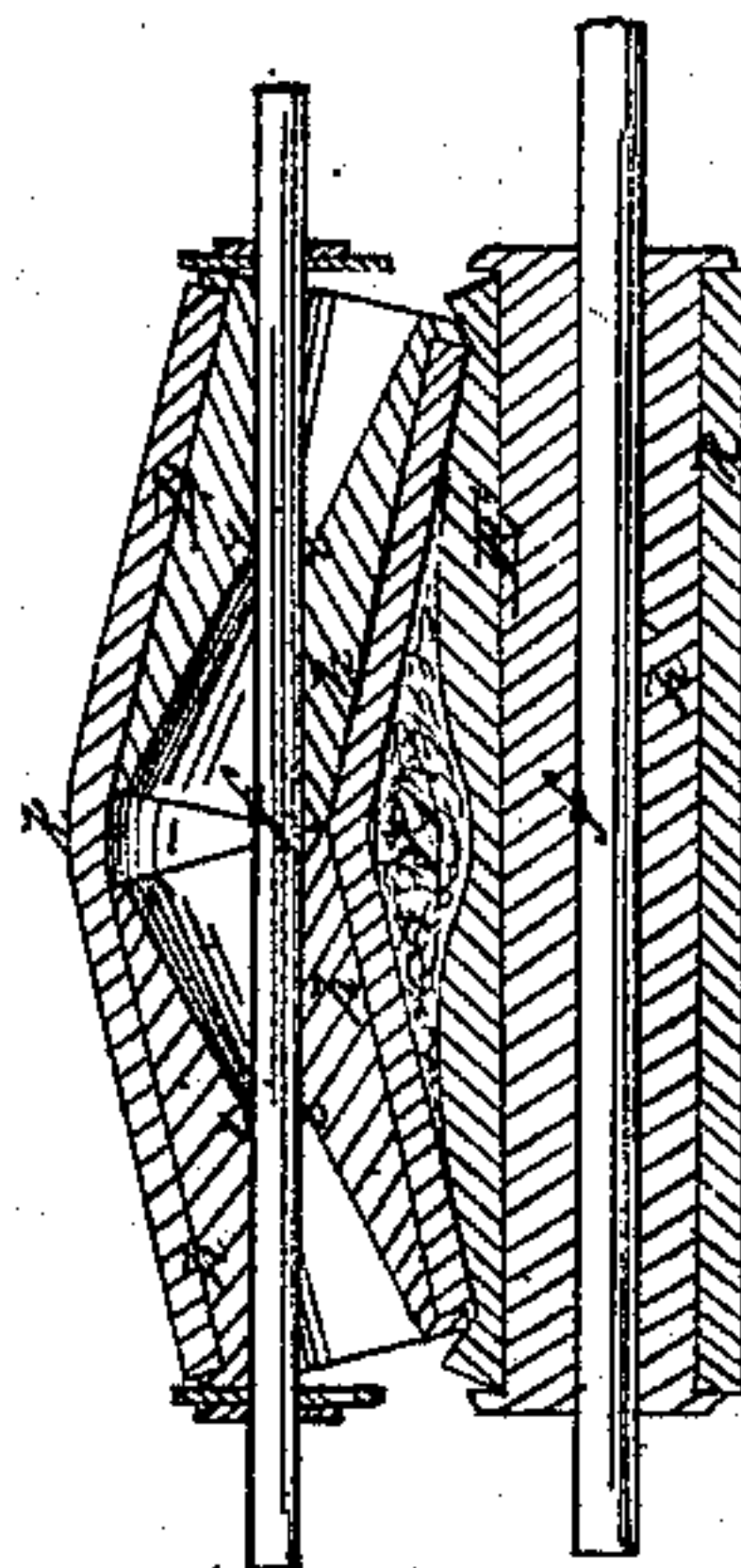
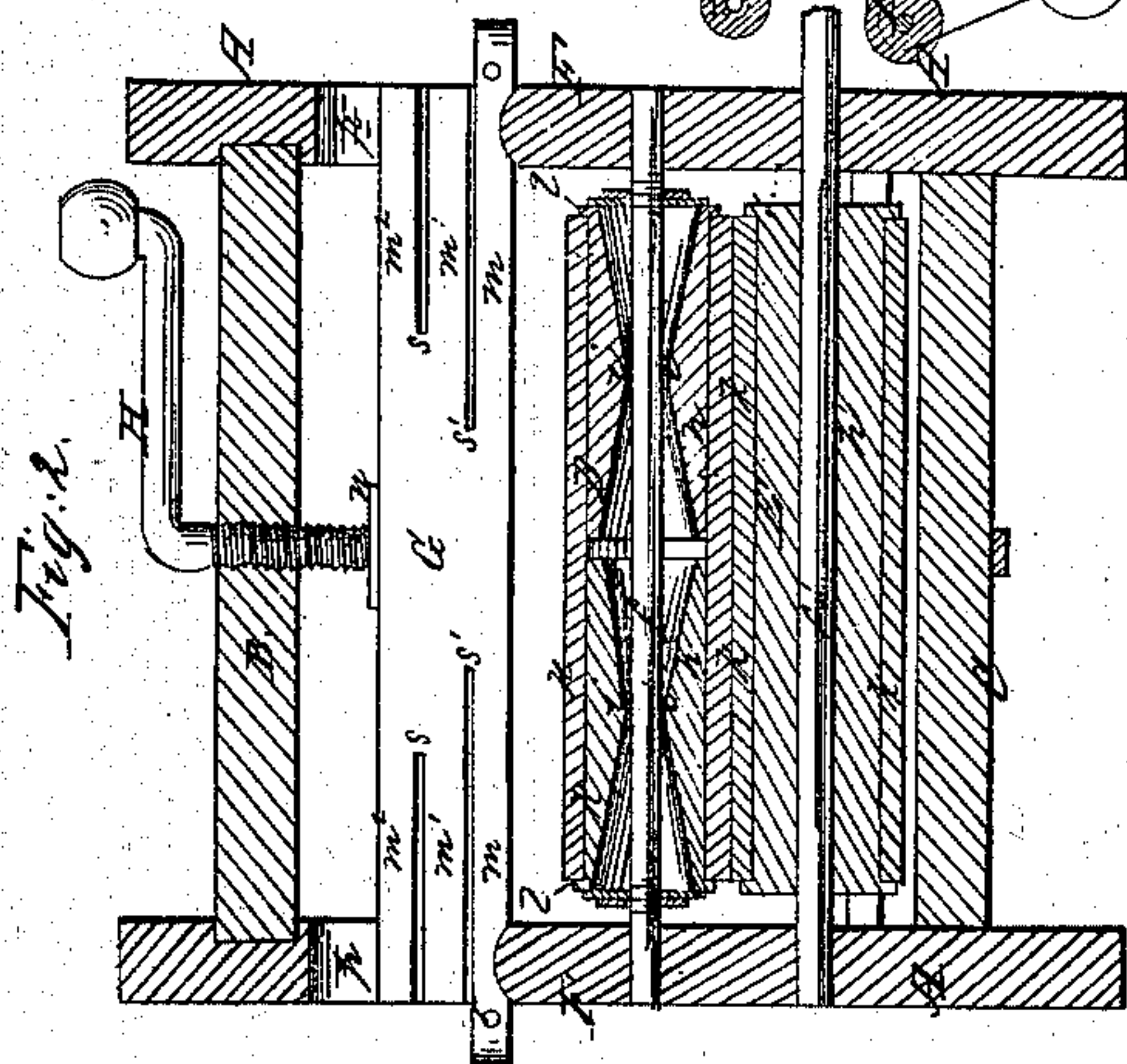
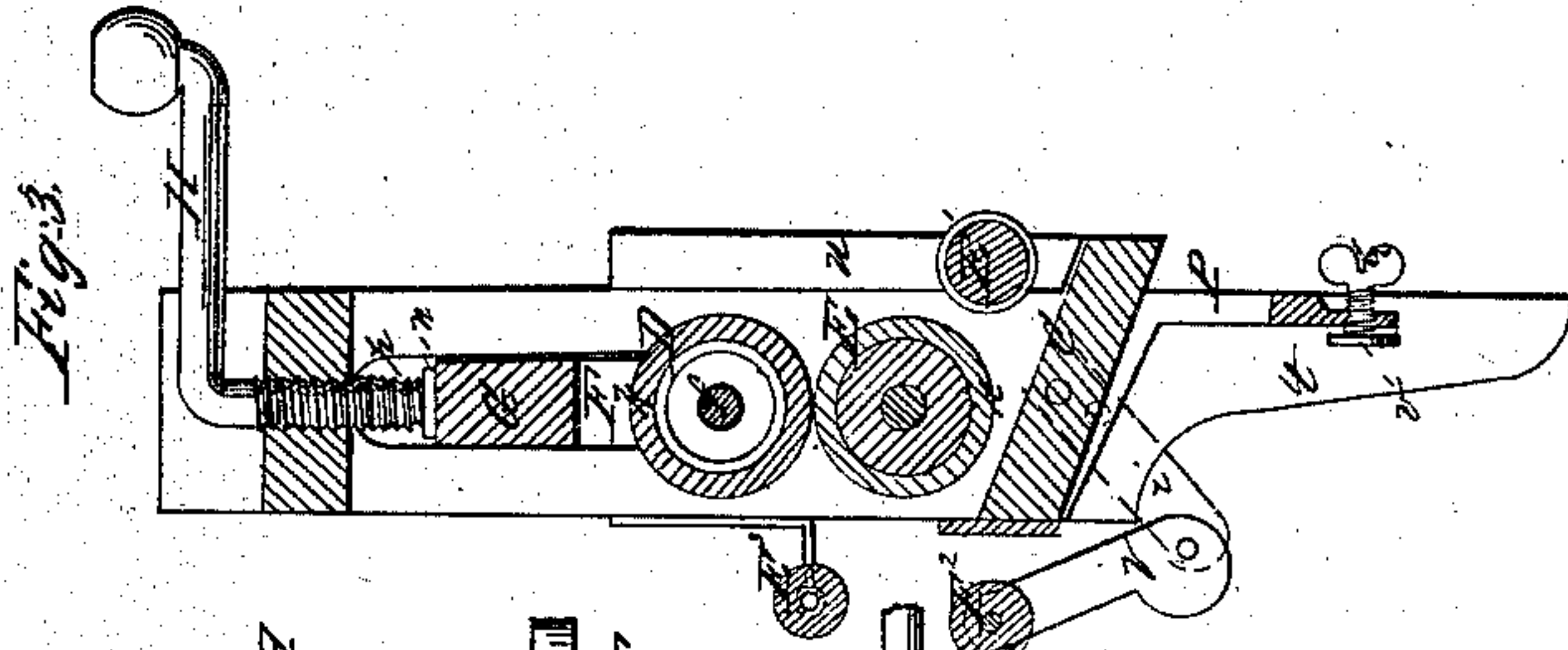


*M. Van Auken,*

*Wringer,*

*N<sup>o</sup> 35,335.*

*Patented May 20, 1862.*



*Witnesses.*

*Gustav Dittus  
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# UNITED STATES PATENT OFFICE.

MINER VAN AUKEN, OF AMSTERDAM, NEW YORK.

## IMPROVED CLOTHES-WRINGER.

Specification forming part of Letters Patent No. 35,335, dated May 20, 1862.

*To all whom it may concern:*

Be it known that I, MINER VAN AUKEN, of Amsterdam, in the county of Montgomery and State of New York, have invented a new and Improved Clothes-Wringer; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, forming a part of this my specification, and to the letters of reference marked thereon, like letters in the several figures indicating the same parts, and in which drawings—

Figure 1 is a front elevation of my improved clothes-wringer; Fig. 2, a longitudinal vertical section; Fig. 3, a transverse section; and Fig. 4, a longitudinal section of the upper pressure-roller detached from the machine and showing its action under a heavy pressure when a large compact mass of clothes is passing between it and the lower pressure-roller, the view being somewhat exaggerated in order to show clearly the operation of the machine.

In the drawings, A indicates the standards held together by an upper girt, B, (which to give greater ease to the operation of wringing the clothes may be made elastic,) and a lower girt, C, which is so constructed as also to serve the purpose of returning the water to the wash-tub to which the "wringer" may be attached.

D and E indicate the upper and lower pressure-rollers, supported upon shafts *f* and *f'*, as shown, the latter extending through one of the standards and terminating in a crank, *g*, by means of which the machine is operated. The upper pressure-roller is in the main composed of two lever-cores, *h h*, their interior being bored out in the form of cones, the bases of which are at the extremities of the cores, and the point at which the cones meet, as at *i*, being just of sufficient diameter to allow of the passing of the shaft *f* through them. These conical-formed cores are held in position upon the shaft *f* by means of washers and nuts, as represented, and are clothed with a cylinder of rubber, *k*, held in place by the flanges *l* at the outer extremities of the cores. Thus formed and applied to the shaft *f*, the cores *h* in the operation of the machine oscillate, as it were, upon the points *i*, which only

are in contact with the shaft, thus, in fact, forming levers having their fulcra at *i*.

F F are boxes having their lower ends fitted to the shaft *f* and their upper ends rounded to fit in a corresponding concavity in the lower limbs, *m*, of the spring G, as shown in section in Fig. 2. They are thus held in contact with the said spring at fixed points, while at the same time they are allowed to rise and fall within the longitudinal opening or slot *p* in the standards. The spring G, having pins or screws *r* passing through its lower limbs, *m*, just outside of the standards, is not only confined in proper position and prevented from having a lateral movement within the slots or openings *p*, but also prevents the upsetting of the boxes F when the spring for any cause is subjected to torsion.

For practical purposes and economy of structure the spring G may be made of wood and still answer all the requirements of the machine. I construct it of a single piece of material, with kerfs of varying length, as at *s* and *s'*, thus forming spring leaves or limbs *m*, *m'*, and *m''* of varying capacities, the power of each being capable of addition to that of the other, according to the amount of pressure upon the clothes, the whole together giving a great volume of power within a restricted compass. In other words, if light articles are passed through the wringer the pressure exercised by the limbs *m* will be sufficient; if heavier are wrung, then the additional power of the limbs *m'* will be brought into action; and, finally, if a large compact mass of clothes, as indicated in Fig. 4, is passed through, the entire power of the spring G will be brought to bear upon them. The power of the spring is regulated by a crank-screw, H, applied as represented in the figures, said screw H passing through the center of the upper girt, B, and abutting against a plate, *n*, situated centrally on top of the spring G. By thus centrally applying the screw H, the spring G is permitted to rock, and so relieve the machine from any tendency to bind under varying thicknesses of clothes passing between the rollers, while at the same time, the spring being made solid or unbroken in its central portion, with lateral limbs of varying power at its ends, as before described, the



yielding of the spring is confined to its limbs rather than at its central portion, and so, more directly and properly, transmits its power to the rollers, the proper curve and pressure of the limbs under the action of the screw II being, in part, due to the varying lengths of the kerfs  $s$  and  $s'$ .

The lower roller, E, may be constructed with a cylindric core,  $h'$ , and clothed with india-rubber, the same as roller D, or it may be made in all respects the same as the upper roller.

The operation of the machine may be clearly understood by reference to Fig. 4. The clothes L, in a large compact mass, being drawn between the rollers in a position central of their length, force the inner ends of the lever-cores  $h$  up toward their shaft  $f$ , while at the same time their outer ends are correspondingly depressed, coming in contact with the roller below, and compress the clothes with a lever-power having its fulcrum at  $i$  against the shaft  $f$ , and this same lever-pressure will be exerted upon the clothes whether they be thickest at the ends of the rolls or thick at one end and thin in the middle, with no clothes whatever between the opposite ends of the rollers.

Centrally beneath the girt C, I attach a knee, P, having a button set-screw, Q, for the purpose of securing the wringer to the wash-tub. The wall of the tub being passed in rear of the knee and in front of the legs  $t$  of the standards, and the button  $v$  screwed up against the tub, securely adjusts the wringer in position for operation. The tub and wringer are thus held in juxtaposition by means of a leverage which holds the parts together with great firmness and in a manner far superior to the ordinary mode of applying two set-screws.

Immediately in front and a little below the axis of the roller E, I suspend a guide-roller, E', in uprights  $u u$ , attached to the standards A, as shown. The roller E', having its periphery or face concave, serves to guide the clothes to the center of the rollers D and E. At the

same time it also delivers the clothes over its surface with but slight frictional contact. I also apply an arm, as at  $i'$  in Fig. 3, to receive the eccentric-levers  $v$ , near the end of which is applied a relief-roller, E<sup>2</sup>, to guide the clothes as they are delivered from between the pressure-rollers into the center of a basket or other receptacle, and thus prevent their being soiled by contact with the outside of the wash-tub. The eccentric arms or levers  $v$  are so applied that when the wringer is secured to the wash-tub the eccentric portion of the levers will come in contact with the outside of the tub and so support the relief-roller in proper position. I also attach a supplemental relief-roll, E<sup>3</sup>, as shown, which may be used with or without the relief-roll E<sup>2</sup>, for the purpose of delivering the clothes from the wringer into a basket or other receptacle.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. The application and use of one or more lever-cores,  $h$ , or their equivalent, substantially in the manner and for the purpose set forth.

2. The spring G, or its equivalent, constructed and applied substantially in the manner and for the purpose set forth.

3. In combination with the boxes F and crank-screw H, extending the lower limb,  $m$ , of the spring G outside the standards A, or, in an equivalent manner, supplying the means whereby the lateral movement of the spring may be prevented, as described.

4. The application of the lever-screw II, or its equivalent, in such manner as to permit of the oscillation of the spring G, substantially as described.

5. The application of a single lever-knee, P, or its equivalent, to the girt C, substantially in the manner and for the purpose set forth.

MINER VAN AUKEN.

Witnesses:

P. CREIGHTON,  
JAS. FINLAYSON.