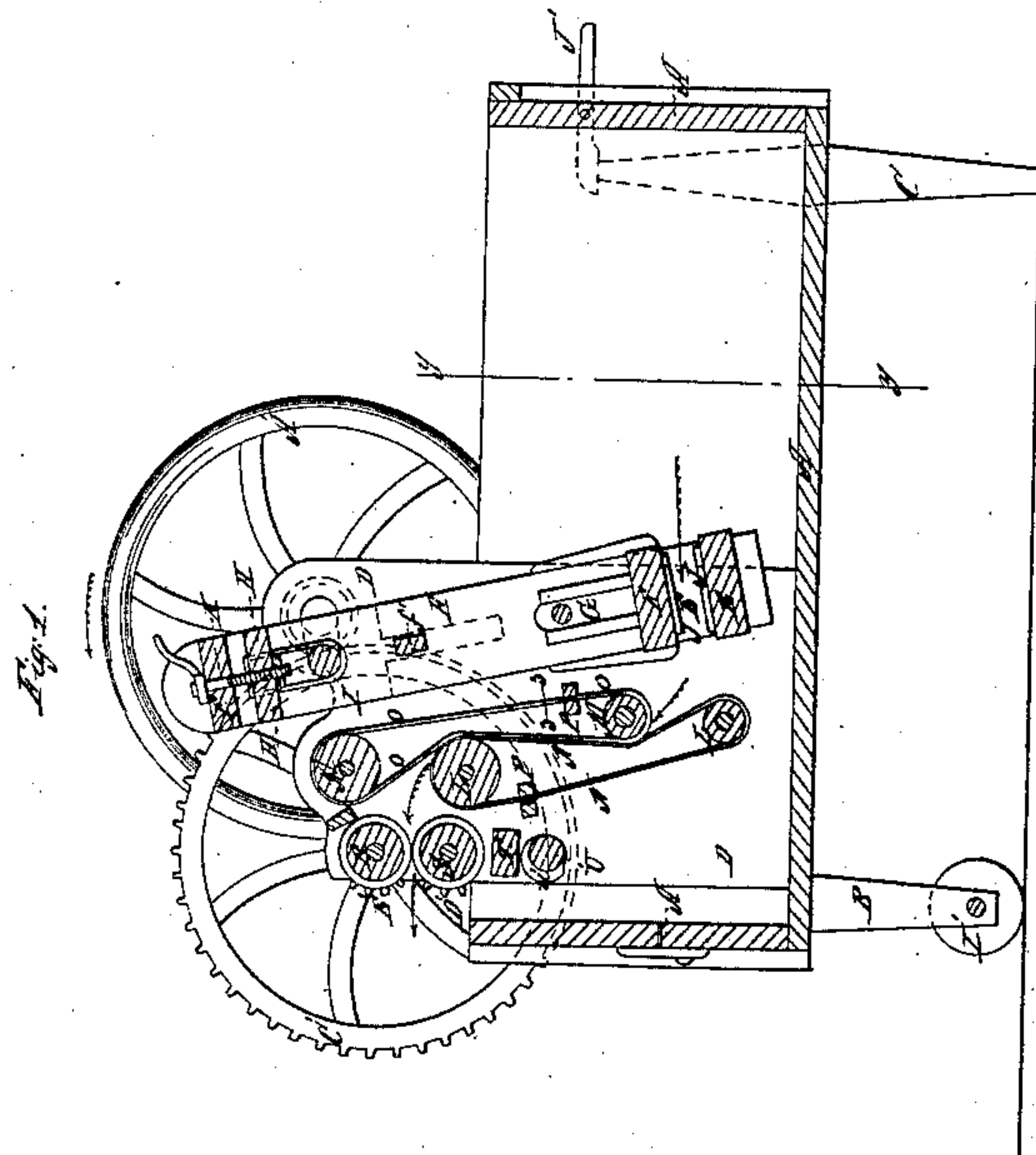
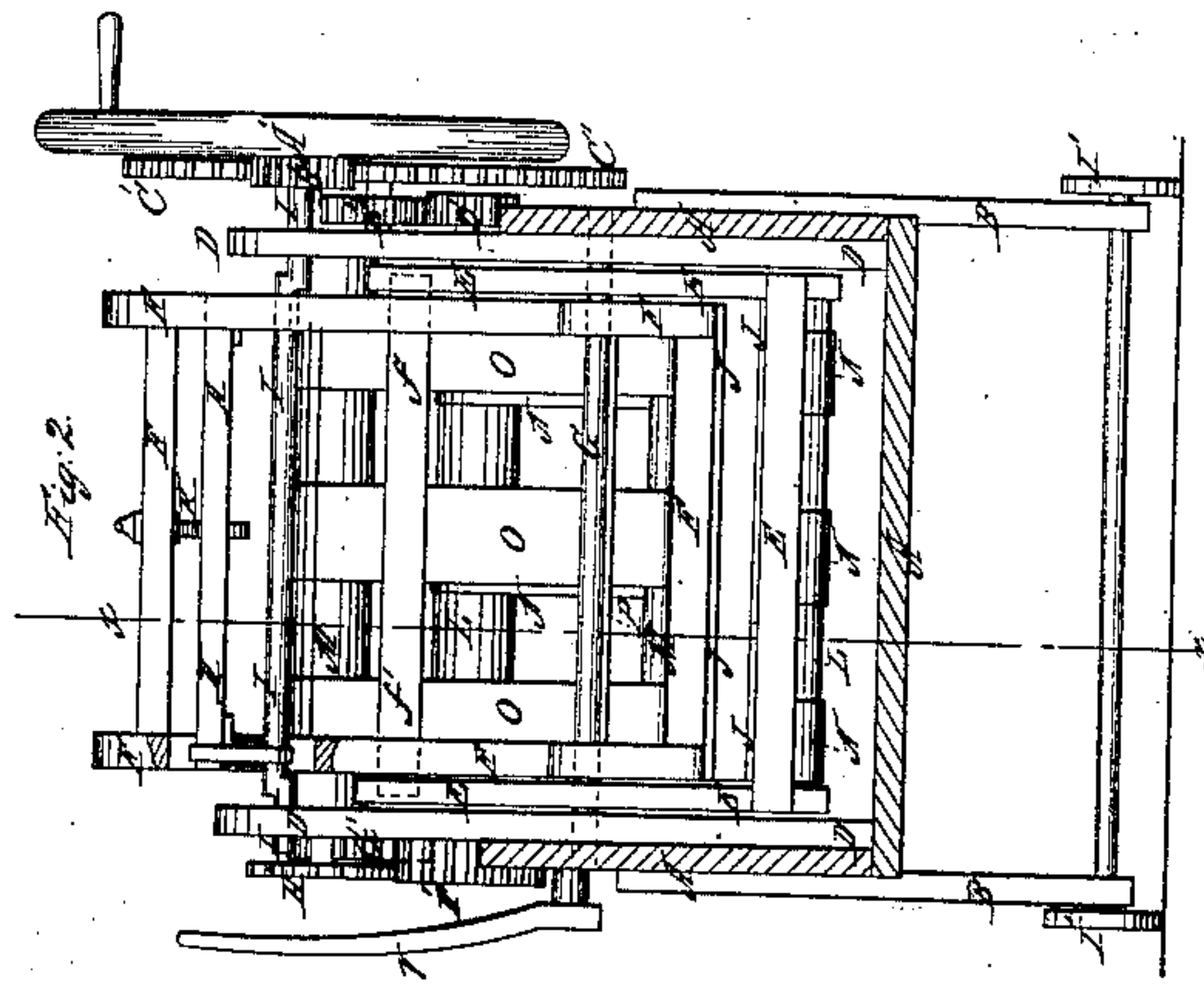


C. A. White,
Washing Machine,

N^o 62,459.

Patented Feb. 26, 1867.



Witnesses:
Thos. Truett
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United States Patent Office.

CASSIUS A. WHITE, OF FAIRFIELD, VERMONT.

Letters Patent No. 62,459, dated February 26, 1867.

IMPROVED WASHING AND WRINGING MACHINE.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, CASSIUS A. WHITE, of Fairfield, in the county of Franklin, and State of Vermont, have invented a new and useful Improvement in Combined Washing and Wringing Machine; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a vertical longitudinal section of my improved machine, taken through the line *x x*, fig. 2.

Figure 2 is a vertical cross-section of the same, taken through the line *y y*, fig. 1.

Figure 3 is a detail sectional view, taken through the line *z z*, fig. 1.

Similar letters of reference indicate like parts.

My invention has for its object to furnish an improved combined washing and wringing machine, so constructed and arranged that the clothes may be washed, conveyed from the washer to the wringer, and wrung by the same operation; and it consists in the construction and arrangement of the washer, which washes the clothes by pressing out the water and dissolved dirt, and at the same time feeds the washed clothes forward to the conveyer; in the construction and arrangement of the conveyer, by which the clothes are conveyed from the washer to the wringer; in the combination of the washer and conveyer with each other and with the wringer; and in the combination of a cam-shaft with the wringer to regulate the pressure.

A is the box or tub in which the machine is placed, and which may be of any desired size, according to the amount and character of the work required to be done by the machine. I usually make the box A about three feet long, fourteen inches wide, and ten inches deep. B and C are the feet which support the machine, and which should be of such a length that the machine may stand at a convenient height to be operated. D are the side boards or frame that supports the operating parts of the machine, and which is securely attached to the sides of the tub or box A. E F is the washer, which consists of two frames working one within the other. The outer frame E is pivoted to the side boards D by the shaft G, which said shaft passes through slots in the side bars of the inner frame F, so that the said frame may move up and down within the outer one. The two frames are made to swing together by the cross-bar *f'* attached to the inner frame F, and the ends of which enter and work in slots in the upper ends of the side bars of the outer frame E. H is a cross-bar, which enters slots in the upper parts of the side bars of the inner frame F, and to the ends of which are attached bearings through which the shaft I passes, and by means of which the frame F rides upon and is operated by the said shaft. The shaft I revolves in bearings in the side boards or frame D, and has two elbows or cranks formed upon it, between the side boards D and the frame F, as shown in fig. 2, so that as it revolves it may move the frame F upward and downward, and also its upper end forward and backward, which, in connection with the pivoting-shaft G, gives a forward and backward movement to the lower parts of the frames E and F. J are rubber blocks let into and secured in the lower cross-bars of the frames E and F, and which, as the frame F is lowered, press the clothes between them, forcing out the water and dissolved dirt, and at the same time carrying the clothes towards the conveyer, so that there can be no strain upon the clothes from being operated upon by the washer at the same time that they are passing through the conveyer. K is a screw, passing through the top bar of the frame F, and screwing into the cross-bar H, by means of which the position of the said frame F is regulated according to the body or amount of cloth passing through the machine. L and M are two pairs of rollers, the upper rollers of the two pairs being in a vertical line, and also the lower ones, and so arranged that the front sides of the lower rollers and the rear sides of the upper rollers shall be in the same vertical line. The rollers of each pair are connected by two or more endless belts, N and O, as shown in fig. 1, said belts being kept in their proper relative positions by passing through slots in the guide-bars P, as shown in figs. 1 and 3. The belts N and O may be made of cloth, webbing, or rubber, as may be desired or convenient. The rollers L and M revolve in bearings in the side boards or frame D. R and S are the wringer rollers, which may be ordinary rubber rollers. The upper roller, R, revolves in stationary bearings in the side boards or frame D, and the lower one, S, in adjustable bearings, which are placed in slots in said frame D, and rest upon or are attached to the ends of the cross-bar T. The bar T is raised or lowered to adjust the pressure of the wringer by the cam-shaft U, which has a cam or eccentric, *u'*, formed upon its middle part, as shown in fig. 1. The shaft U is operated

by a handle, V, attached to its projecting end, as shown in fig. 2. A' is a crank or fly-wheel, attached to the end of the shaft I, by means of which the machine is operated. B' is a small gear-wheel formed upon the hub of the wheel A', or securely attached to the shaft I, into the teeth of which mesh the teeth of the large gear-wheel C', attached to the journal of the upper roller R to revolve it. The lower roller S is revolved by means of the gear-wheel D' attached to the end of its journal, and the teeth of which mesh into the teeth of the gear-wheel E', attached to the journal of the roller R. The teeth of the gear-wheel F', attached to the journal of the upper roller L, mesh into the teeth of the gear-wheel G', attached to the journal of the roller R, from which it receives motion, and also into the teeth of the gear-wheel H', attached to the journal of the upper roller M, to which it communicates motion. The lower rollers L and M are revolved by the friction of the endless belts N and O. I' are wheels or rollers attached to the forward feet B of the machine, upon which it may be moved from place to place. J' are handles, pivoted to the rear ends of the sides of the box or tub A, the forward ends of which, when in use, rest upon the upper ends of the feet C, as shown in dotted lines in fig. 1. When not in use, the handles J' may be turned down out of the way. If desired, the fly-wheel A' may be replaced by a crank, the said fly-wheel being attached to the other end of the shaft I. This construction allows the fly-wheel to be attached to the end of one of the wringer rollers R or S, when it is desired to run the wringer more rapidly or to wring the clothes without operating the washer.

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

1. The washer, formed by the combination of the frames E and F with each other, and with the shafts G and I, substantially as herein shown and described.
2. The roller R, fitted in stationary bearings, and the roller S, mounted on adjustable bearings on the cross-bar T, operated by the eccentric *u'* on the cam-shaft U, in the manner described for the purpose specified.
3. The combination of the washer E F and conveyer L M N O with each other, and with the wringer R S, substantially as herein shown and described.

CASSIUS A. WHITE.

Witnesses:

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