

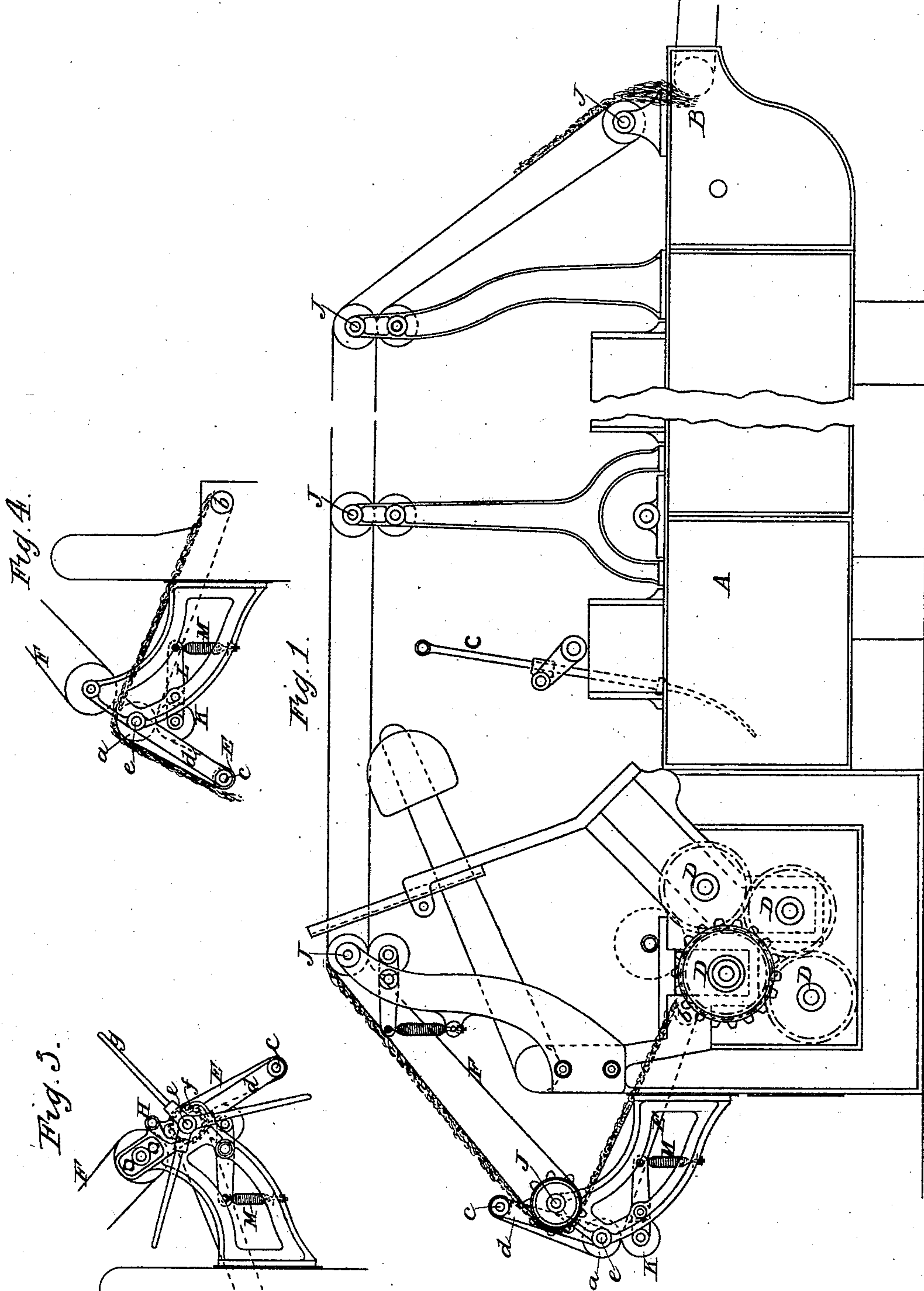
(No Model.)

2 Sheets—Sheet 1.

T. J. MULLINGS.  
WOOL WASHING MACHINE.

No. 285,831.

Patented Oct. 2, 1883.



Witnesses.  
Chas. R. Abell  
W. C. Chappin

Inventor  
Thomas John Mullings.  
By John J. Halsted & Co.  
Solicitors.

(No Model.)

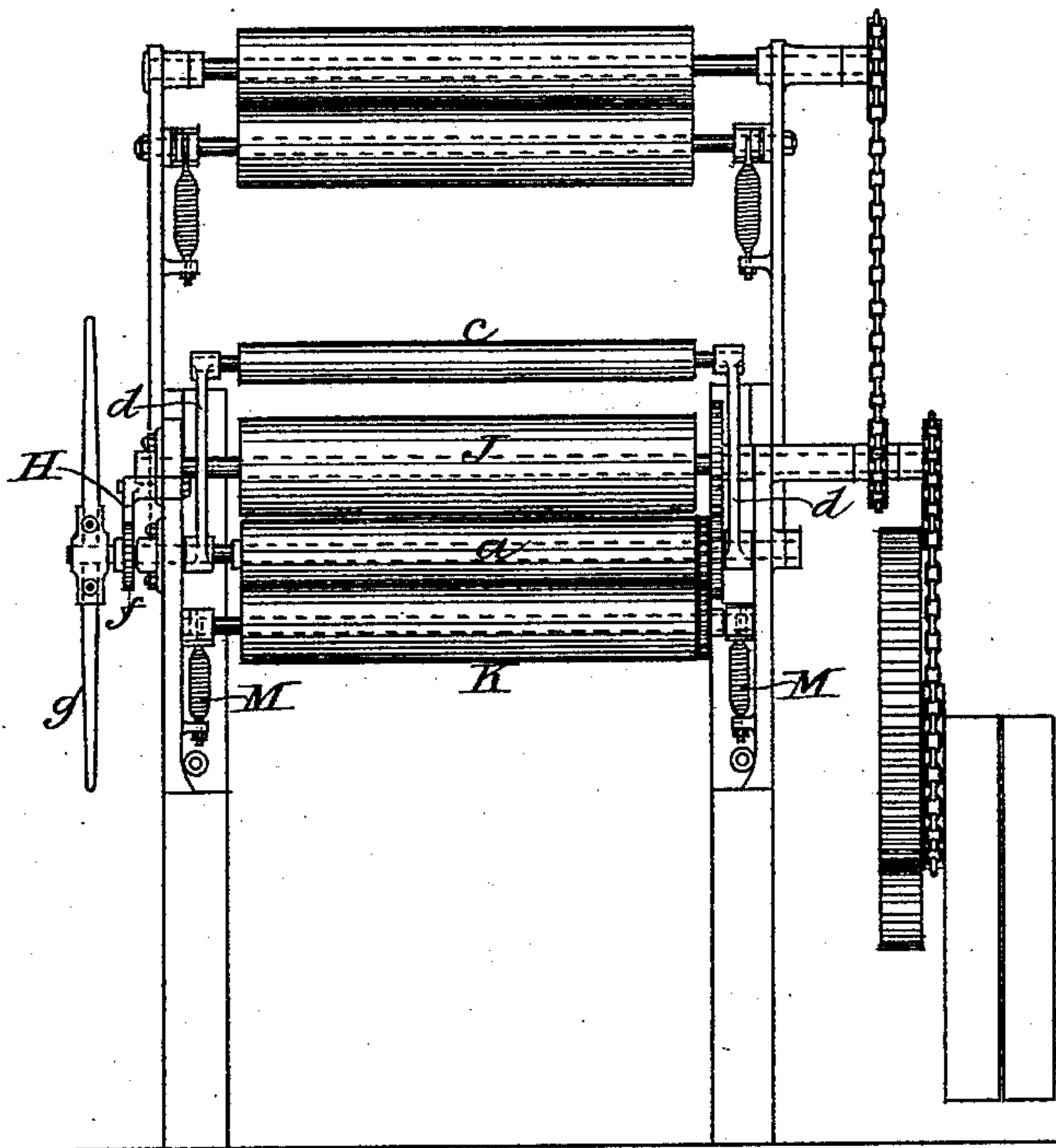
2 Sheets—Sheet 2.

T. J. MULLINGS.  
WOOL WASHING MACHINE.

No. 285,831.

Patented Oct. 2, 1883.

*Fig. 2.*



Witnesses.

Chas. R. Abell  
M. C. Chaffer

Thomas John Mullings. Inventor  
By John J. Halstead & Son  
his Atty.



# UNITED STATES PATENT OFFICE.

THOMAS J. MULLINGS, OF LONDON, ENGLAND.

## WOOL-WASHING MACHINE.

SPECIFICATION forming part of Letters Patent No. 285,831, dated October 2, 1883.

Application filed January 26, 1883. (No model.) Patented in England May 1, 1882, No. 2,051; in Germany December 5, 1882, No. 22,392; in Belgium December 6, 1882, No. 59,760, and in France December 7, 1882, No. 152,485.

*To all whom it may concern:*

Be it known that I, THOMAS JOHN MULLINGS, a subject of the Queen of Great Britain, residing at London, England, have invented  
5 new and useful Improvements in or Applicable to Machinery Employed in Washing Wool and other Fibers, (for which Letters Patent have been granted to myself and William Whiteley in Great Britain, No. 2,051, bearing date May 1, 1882, and sealed October 31, 1882,) of which the following is a specification.

This invention has reference to machinery employed in washing wool and other fibers. In this class of machines reciprocating forks are  
15 employed for feeding or working the wool forward from the feeding end to the delivery end; and in practice it is found that as some kinds of wool require more washing than others, two or more machines are required to be placed  
20 end to end, so that the fiber is fed forward by a traveling apron from the delivery end of the first machine into the feeding end of the second machine, and from the second to the third machine, by which time, if the wool be not  
25 cleansed of its impurities, it has to be carried back to the feeding end of the first machine, and the operation repeated.

The object of my invention is to construct and arrange apparatus which shall receive the  
30 wool from the delivery end of the machine and carry it back to the feeding end of the same as many times as is required to wash the wool, and this it shall do without disturbing or crossing the fibers thereof.

My improvements consist in the employment of two traveling endless aprons working in contact with each other for receiving the fiber from the nipping or delivery rollers of wool-washing machines, which carry it back-  
40 ward over the machine and drop it into the feeding end, where it is again worked forward by the reciprocating forks to the other end of the machine, and this is done as many times as is required to cleanse the wool. When the  
45 wool is sufficiently clean and ready to leave the machine, one of the traveling aprons is lowered from contact with the other one, so that instead of the wool being carried backward to the feeding end again, it is allowed to

leave the machine. By these means only one  
50 machine is required to cleanse the wool, instead of two or more. Consequently cost, room, and power are considerably reduced, while the fiber is better preserved by being allowed to leave the machine immediately the proper  
55 condition is attained.

In order that my invention may be more distinctly understood, I herein give reference to the accompanying sheets of drawings, illustrative thereof.

Figure 1 is a side elevation of a wool-washing machine, and Fig. 2 is a front end elevation thereof. Figs. 3 and 4 are details.

A is the ordinary cistern or trough wherein the wool is first washed, being introduced at  
65 the end B and carried forward by the usual reciprocating series of forks, C, until it reaches the delivery or squeezing rollers D. Instead of passing forward to a second machine, the wool on reaching the delivery-rollers travels  
70 up the endless sheet E, from which it is transferred to the sheet F, which carries it back to the feeding end of the machine, and this operation may be repeated any number of times without disturbing, entangling, or felting the  
75 fibers. When the wool has been sufficiently washed, the roller *c* is lowered to the position shown in Figs. 3 and 4, and the wool, instead of being transferred to the sheet F, is removed from the machine.

The endless sheets E and F are mounted as follows: The sheet E passes round the rollers  
80 *a*, *b*, and *c*, which are mounted in parallel bearings, the roller *c* being carried in arms *d*, which are fixed upon the shaft *e*, the roller *a*  
85 running loose thereon. On the shaft *e* is also fixed a catch-wheel, *f*, and a handle or spider, *g*, by means of which the sheet E may be raised into contact with the sheet F, or lowered therefrom, as may be required, being retained in  
90 either position by the catch H. The sheet F passes over the series of rollers J, all of which are mounted in stationary bearings. K is a roller mounted in lever-arms L, for preserving the tension of the sheet E when the wool  
95 is leaving the machine, the pressure being regulated by the springs M. When, as above stated, the endless sheet E is lowered away

from the sheet F, (see Fig. 4,) the wool is by this change of position of the sheets prevented, as it passes from the squeezing-rolls, from being pressed between the sheets E and F, but 5 is left free to be carried away and discharged by the sheet E alone; but when, as previously stated, the arms *d* are swung up to the position shown in Fig. 1, the two sheets or belts are brought into closer proximity, holding the 10 wool between them.

Having thus described the nature of my invention, I would have it understood that what I claim is—

In a machine for washing wool and other fibers, the combination of the two endless belts 15 E and F, arranged substantially as shown, and means whereby the power may be swung into or out of co-operative action with the latter, the combination permitting the material to be, at option, either ejected from the delivery end 20 of the machine or to be carried back to its receiving end.

THOS. J. MULLINGS.

Witnesses:

S. F. REDFERN,  
F. PRICE.