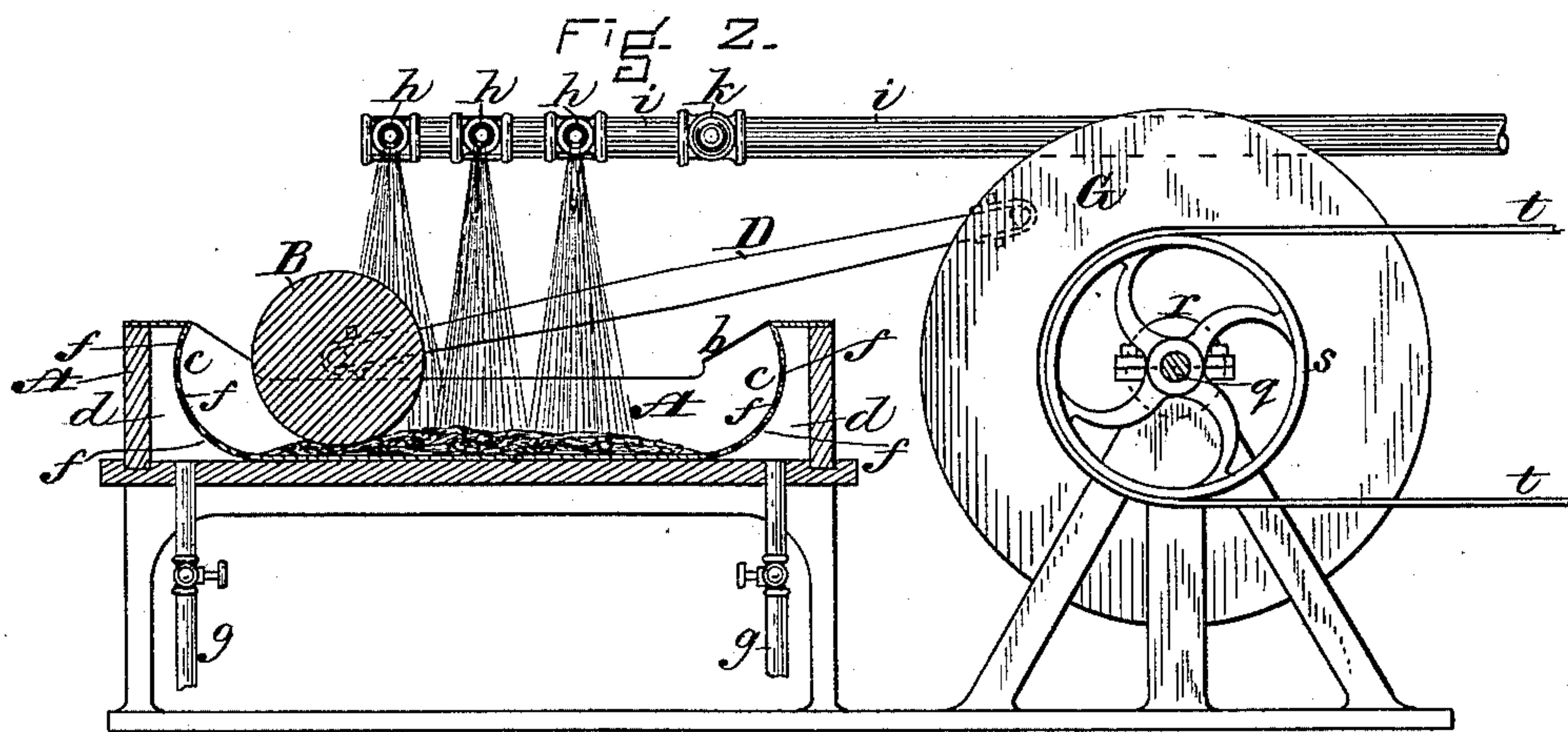
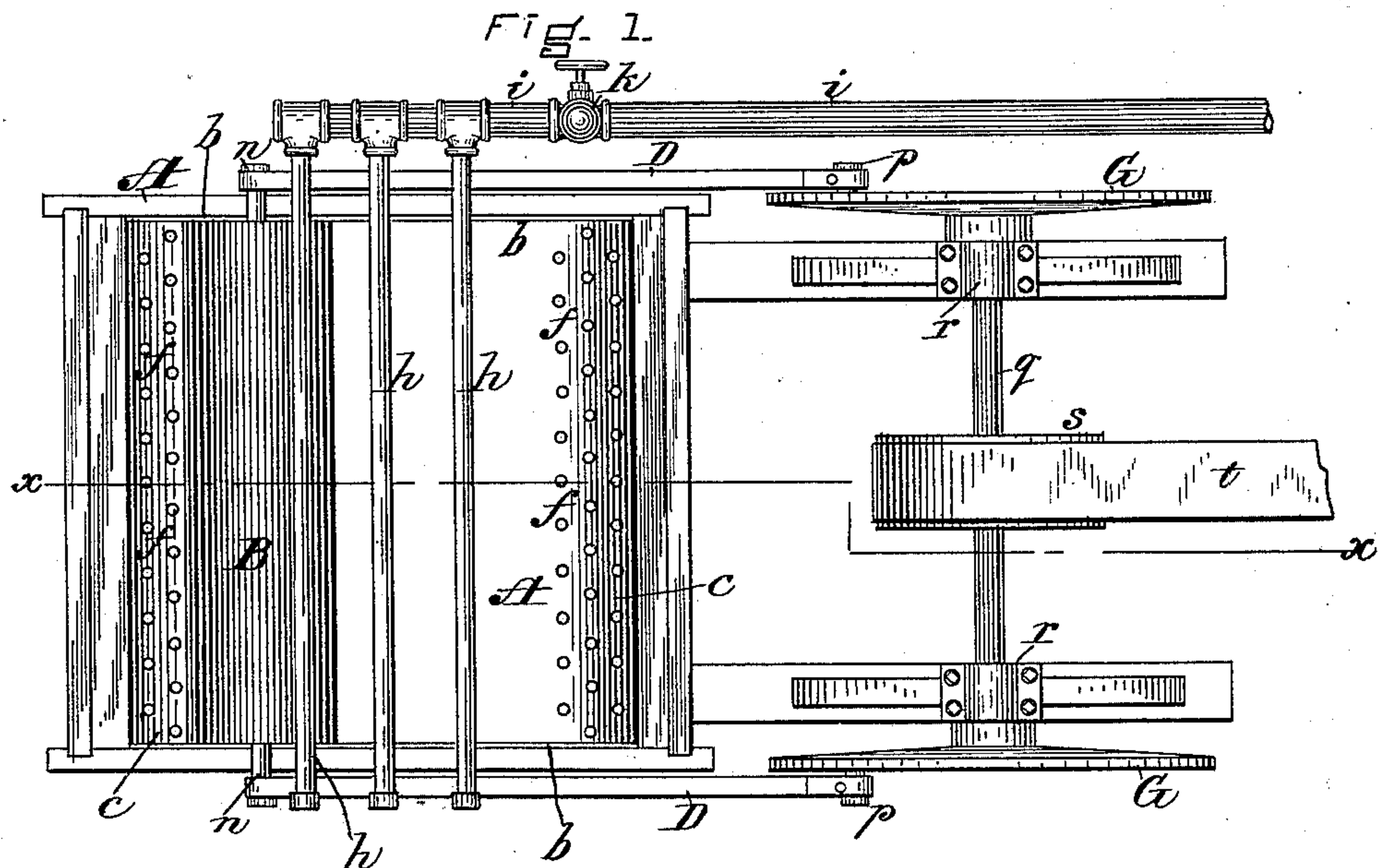


(No Model.)

S. C. TAFT.
WOOL WASHING MACHINE.

No. 405,619.

Patented June 18, 1889.



WITNESSES.

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UNITED STATES PATENT OFFICE.

STEPHEN C. TAFT, OF FRANKLIN, MASSACHUSETTS, ASSIGNOR OF ONE-HALF
TO JOSEPH E. CLARK, OF SAME PLACE.

WOOL-WASHING MACHINE.

SPECIFICATION forming part of Letters Patent No. 405,619, dated June 18, 1889.

Application filed January 17, 1889. Serial No. 296,633. (No model.)

To all whom it may concern:

Be it known that I, STEPHEN C. TAFT, a citizen of the United States, residing at Franklin, in the county of Norfolk and State of Massachusetts, have invented certain Improvements in Wool-Washing Machines, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a plan of a wool-washing machine constructed in accordance with my invention. Fig. 2 is a longitudinal vertical section through the same on the line xx of Fig. 1.

My invention has for its object to provide a wool-washing machine of simple construction, which will perform its work in a rapid and effective manner with a very small quantity of water, and which will also squeeze or wring out all the water from the wool after the dirt and grease have been extracted therefrom, thus leaving it in a comparatively dry state.

To this end my invention consists in the combination, with a tank or washing-receptacle having its ends perforated for the escape of the water, of a heavy roller extending transversely across the tank from one side to the other and reciprocated by suitable mechanism, whereby it is rolled backward and forward over the wool at the bottom of the tank for the purpose of squeezing out the water, dirt, and grease therefrom, and forcibly expelling the same through the perforated ends of the tank, the water for washing the wool being introduced into the tank by means of a perforated pipe or pipes or in any other suitable manner, as hereinafter more particularly set forth; and my invention also consists in certain novel combinations of parts and details of construction, as hereinafter set forth, and specifically claimed.

In the said drawings, A represents the tank or receptacle for containing the wool to be washed. This tank consists of a wooden box provided with a sheet-metal lining b , the opposite ends c of which are curved in the arc of a circle, as seen in Fig. 2, for a purpose to be hereinafter described, and are so placed as to leave spaces or chambers d between them

and the adjacent ends of the outer box or casing. These ends c are provided with perforations f , through which the water used for washing the wool passes into the chambers d , from which it is allowed to escape in any suitable manner, preferably through waste or discharge pipes g , by which it is conducted to any desired point, said pipes being provided with stop-cocks, which may be opened and closed, as desired.

The water used for washing the wool is preferably introduced into the tank by means of one or more pipes h , which extend transversely across the tank, as seen in Fig. 1, and are connected with a main supply-pipe i , provided with a stop-cock or valve k . These pipes h are provided on their under side with slots or perforations, through which the water is ejected and sprayed in suitable quantities onto the wool in the tank A, the valve k affording a convenient means for regulating the supply of water or cutting it off after the wool has been sufficiently washed.

Within the tank A is placed a heavy metal roller B, which extends transversely across the tank from one side to the other and fits closely up against the sides of the lining b , as seen in Fig. 1. This roller is reciprocated within the tank B to cause it to roll backward and forward over the wool to be washed by means of pitmen D D, connected with its journals n and with crank-pins p on wheels G, secured immovably to the opposite ends of a horizontal shaft q , supported in suitable bearings r , and provided with a driving-pulley s , to which power is communicated from any suitable source by means of a belt t .

The ends c of the lining b of the tank are curved in the arc of a circle, having a diameter the same as that of the roller B, which is brought into or nearly into contact with one of the said curved ends c of the tank at the termination of its stroke in either direction, thus causing all of the dirty water which has been squeezed out of the wool by the passage thereof of the roller to be forced out through perforations f into one of the chambers d , whence it escapes by the waste or discharge pipe g , connected therewith.

As the roller B is moved in either direction,

it rolls over the wool placed in the bottom of the tank, and by its weight squeezes out the water, dirt, and grease, and as this roll fits snugly between the sides of the tank all of the water squeezed out of the wool, mixed with the dirt and grease thus extracted, is forcibly carried in front of the roll up to the curved end *c* of the tank, where it is forcibly driven through the perforations into one of the chambers *d*, as previously stated, the roll as it alternately passes over the wool in opposite directions acting thereon in the same manner as the hand would wash a sponge by alternately squeezing the same to eject the water and releasing it to allow it to again become filled. As the roll passes over the wool in one direction, the portion over which it has passed receives a fresh supply of water from the spraying-pipes *h*, whereby it is wetted or saturated, the water thus absorbed by the wool being squeezed out, together with the dirt and grease, on the return stroke of the roller, the alternate reciprocations of which thus rapidly and effectively wash the wool, while a much smaller quantity of water is required than in ordinary wool-washing machines, which is an important advantage in many wool-growing localities, where water is often very scarce and difficult to obtain.

When the water in the tank begins to run clear, indicating that the wool has been thoroughly washed, the supply is shut off by turning the valve *k* in the main supply-pipe *i*, when the subsequent passages of the roller B over the wool will squeeze out the water remaining therein and expel it through the perforated ends of the tank, thus wringing the wool and leaving it in a comparatively dry state, no subsequent wringing between rollers being necessary, thereby simplifying the

operation of washing the wool and enabling it to be performed in much less time than heretofore, thus effecting a considerable saving in time and labor, as well as in the water used in the operation.

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

1. In a wool-washing machine, the combination of a tank having perforated ends, a heavy roller extending transversely across the same from side to side, mechanism for reciprocating the roller to cause it to travel backward and forward over the wool at the bottom of the tank, and a device for ejecting or spraying water onto the wool while being washed by the action of the roller, all operating substantially in the manner and for the purpose described.

2. In a wool-washing machine, the combination of the tank A, provided with a lining *b*, having its ends *c* curved in the arc of a circle and provided with perforations *f*, as described, the chambers *d*, between the said ends *c* and the ends of the outer casing of the tank, provided with means for discharging water therefrom, and a reciprocating roller B, extending transversely across the tank from one side to the other and adapted to alternately pass over the wool and forcibly expel the water squeezed therefrom through the perforated ends *c* of the tank into the chambers *d*, all constructed and arranged to operate substantially in the manner and for the purpose set forth.

Witness my hand this 14th day of January, A. D. 1889.

STEPHEN C. TAFT.

In presence of—

P. E. TESCHEMACHER,
HARRY W. AIKEN.