

(No Model.)

F. G. & A. C. SARGENT.

WOOL WASHING MACHINE.

No. 263,727.

Patented Sept. 5, 1882.

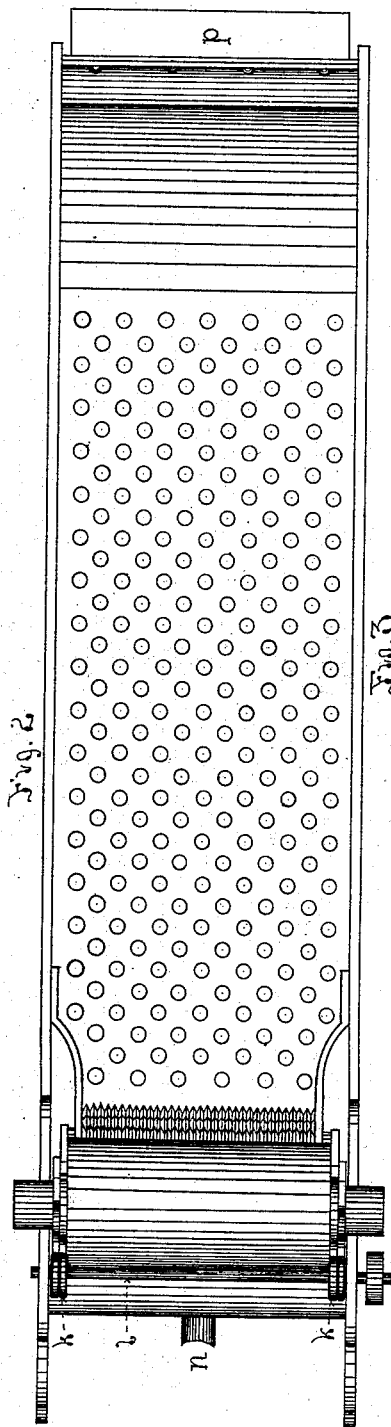


Fig. 2

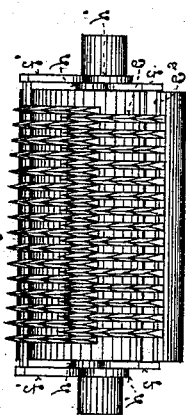
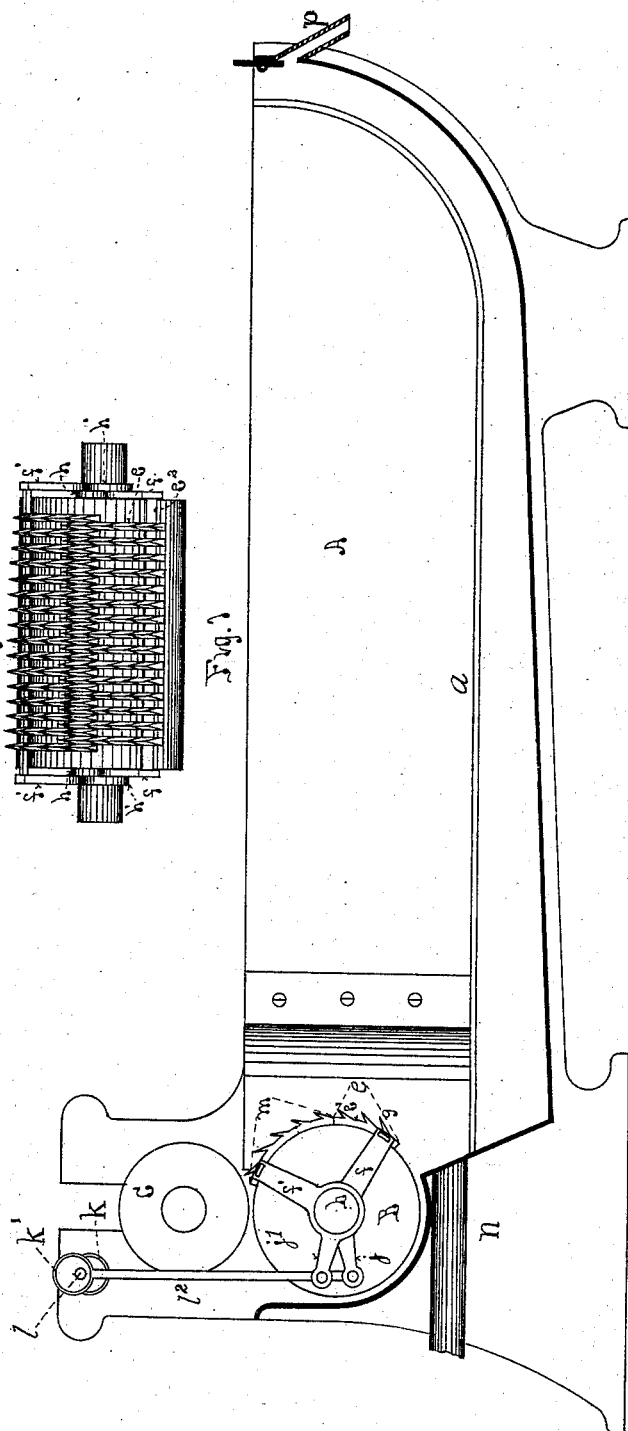


Fig. 3

Fig. 4



Witnesses
F. V. Bentiford
E. L. Rice

Inventor,
Frederick A. Sargent,
Allen C. Sargent,
by their Attys
Depine & Rice

UNITED STATES PATENT OFFICE.

FREDERICK G. SARGENT AND ALLEN C. SARGENT, OF GRANITEVILLE, MASS.

WOOL-WASHING MACHINE.

SPECIFICATION forming part of Letters Patent No. 263,727, dated September 5, 1882.

Application filed May 23, 1882. (No model.)

To all whom it may concern:

Be it known that we, FREDERICK G. SARGENT and ALLEN C. SARGENT, of Graniteville, in the county of Middlesex and State of Massachusetts, have invented a new and useful Wool-Washing Machine, of which the following is a specification.

Our invention relates to machines provided with a bowl into which a scouring-fluid is placed, into which the wool is put, and from which it is taken and passed between squeeze-rolls; and its objects are to provide a mechanism which will take the wool from the bowl and deliver it to the nip of the squeeze-rolls, which shall occupy very little of the bowl, and obviate the necessity of using an inclined apron over which to convey the wool to the squeeze-rolls, and which shall permit of the entire length of the bowl, from the feed end to the squeeze-rolls, being made available to agitate and wash the wool in. We accomplish these objects by the mechanism shown in the accompanying drawings, in which—

Figure 1 is a side elevation with the side of the bowl removed. Fig. 2 is a plan; Fig. 3, an elevation of the lower squeeze-roll and carrier mechanism attached removed from the machine.

A is the bowl into which the scouring-fluid is placed.

a is the false bottom.

B is the lower squeeze-roll.

C is the upper squeeze-roll.

e is a frame, consisting of parallel curved arms e' , attached to the connecting-bar e^2 , which is carried by radius-arms f , which are attached to the straps h , which encircle the shaft b of the roll B.

Attached to the straps h are the arms j , which are given a movement of oscillation about the shaft by the eccentrics $k k'$, placed upon shaft l .

l^2 is the eccentric-rod. By this the frame e is oscillated over the face of the roll without coming into contact with it or interfering with its rotation. The arms e'' are provided with teeth or spurs $g g$, which project forward and upward, so that they will readily catch into the wool as the arms move upward and as readily disengage themselves as the arms move downward when the frame is oscillated around the shaft b .

m is a frame, made and supported exactly as

is frame e' , carried upon arms f' , straps h' , and moved by arms j' by eccentrics on shaft l , all constructed and operated like the similar parts of frame e' and its driving mechanism. The arms of the frame m overlie the roll B between the arms of the frame e' , and move at each part of their time of oscillation in an opposite direction, the eccentrics $k k'$ being placed on the shaft l , so as to give opposite throws to the arms j and j' . By this means one set of toothed bars is engaged in elevating the wool which may have come into contact with their teeth, while the other is returning to engage such fibers, and then upward toward the nip of the roll by their return movement, while the first set are making their backward movement. By this construction the entire length of the bowl up to the squeeze-roll, excepting only the thickness of the toothed bars of the frame e , is made available for washing and scouring the wool in, and much space heretofore lost is made available for such purpose. The wool may be fed forward in the bowl in any desired manner, either by hand or mechanical means, and this carrier used.

In the machine shown in the drawings, specially adapted to rinse wool after being washed, we feed the wool forward by forcing a strong stream of water into the bowl through the pipe n , entering below the rolls and given a line of direction parallel with the bottom, so that the water rushes toward the feed end of the bowl, and, striking against the curved unperforated part of the false bottom, is deflected upward under the wool as it is fed into the machine, when it flows back toward the squeeze-rolls, carrying the wool with it, after which it settles down and passes through the perforations in the false bottom and flows under it toward the overflow p , which we put in near the water-line at the feed end of the bowl, in front of the unperforated part of the false bottom a , which extends up to the top of the bowl in this machine.

What we claim as new and of our invention is—

1. The combination of the bowl A and the roll B, adapted to operate as a squeeze-roll, with the oscillating frames e and m , adapted to oscillate about the axis of the roll, substantially as described.

2. The combination of the roll D, rotating

on the shaft *b*, with the frames *e* and *m*, provided with toothed arms carried by arms supported on such shaft, and the eccentrics *k* and *k'*, arms *j j'*, and straps *h* and *h'*, substantially
5 as described.

3. The combination of the bowl A, squeeze-rolls B and C, and reciprocating toothed feeding-frames *e* and *m*, oscillating alternately in opposite directions around and substantially
10 parallel to the surface of the lower feed-roll, substantially as described.

4. The combination of the bowl A, provided with the induct-pipe *n*, entering below the water-line at the discharge end of the bowl, and
15 having a line of direction parallel with the bottom of the bowl, with the false bottom *a*,

extending up with a curved unperforated part to a point above the level of the fluid, in the bowl at the feed end thereof, and the overflow
20 *p*, substantially as described.

5. The combination of the bowl A, the feed-rolls B C, the pipe *n*, directed to throw its stream under the feed-rolls and toward the opposite end of the bowl, the false bottom *a*, and
25 the overflow-pipe *p*, substantially as described.

F. G. SARGENT.
A. C. SARGENT.

Witnesses:

W. H. A. EVANS,
H. W. CHURCH.