J. CLEGG.

Machine for Washing Wool.

No. 200,509. Patented Feb. 19, 1878.

Fig. 1

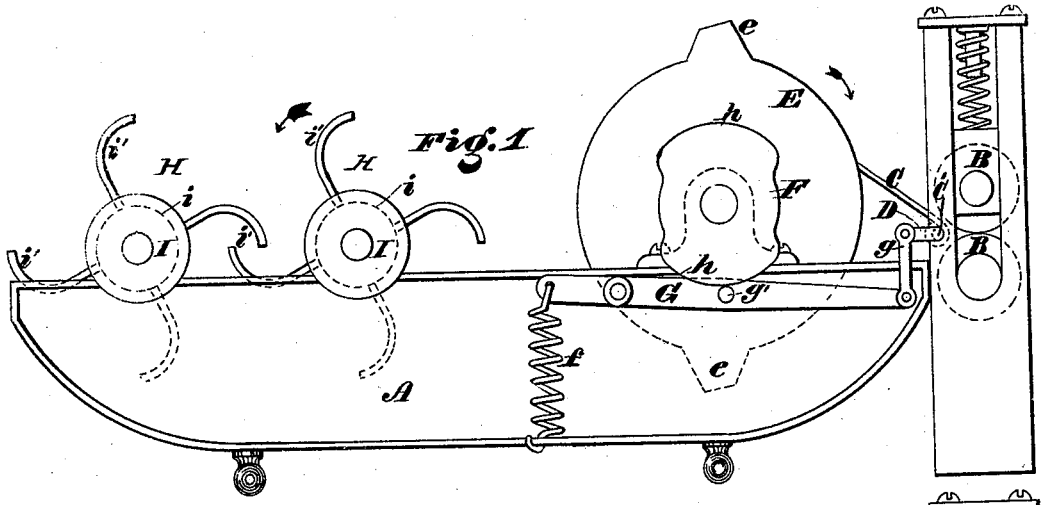
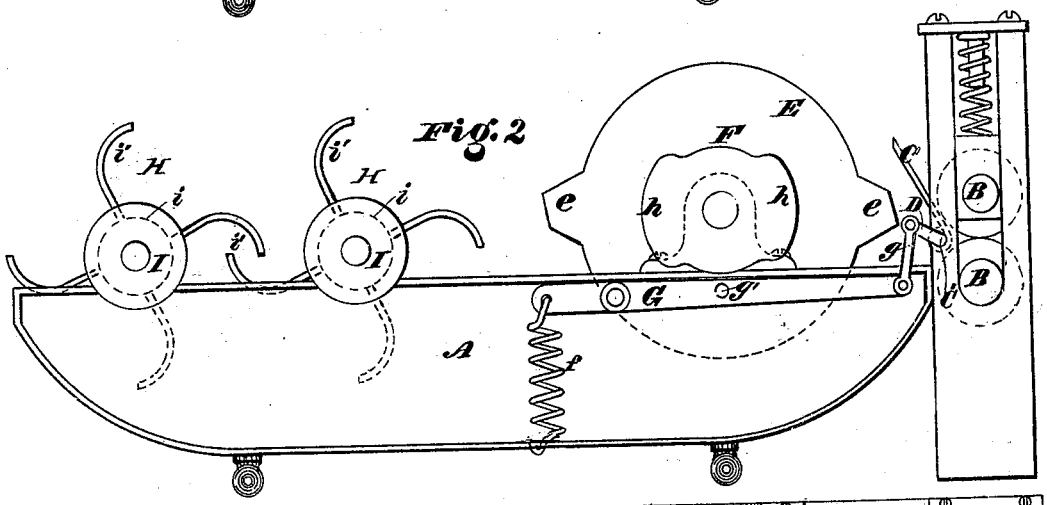


Fig. 2



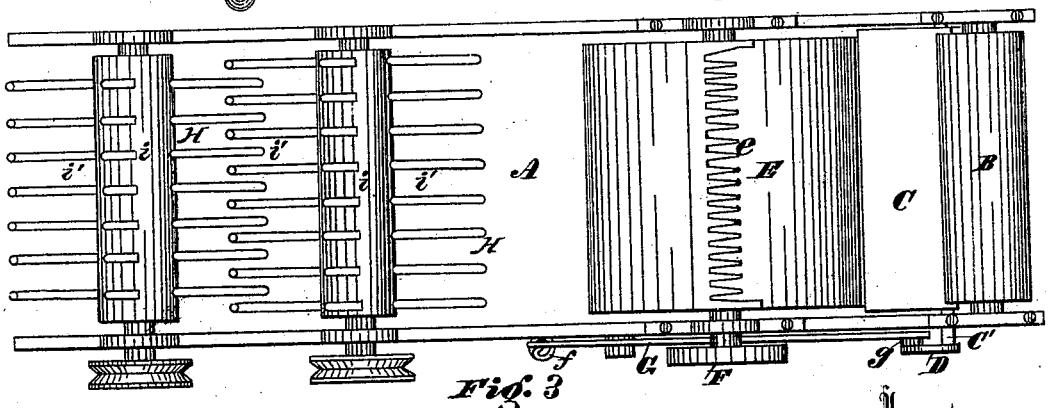


Fig. 3

Witnesses

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UNITED STATES PATENT OFFICE.

JOHN CLEGG, OF PROVIDENCE, RHODE ISLAND.

IMPROVEMENT IN MACHINES FOR WASHING WOOL.

Specification forming part of Letters Patent No. **200,509**, dated February 19, 1878; application filed May 15, 1877.

To all whom it may concern:

Be it known that I, JOHN CLEGG, of Providence, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Wool-Washing Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification, in which—

Figures 1 and 2 are side elevations, and Fig. 3 a plan, of my invention.

The object of this invention is to dispense with the inclines, lifting-carriers, and other devices in use for conveying the wool from the bowl of a wool-washing machine to the squeeze-rolls, and to substitute therefor means whereby the wool may be taken from the bowl and conveyed to the squeeze-rolls in a thoroughly saturated condition, and without allowing any of the wool to fall back into the bowl after being once raised.

This invention accordingly consists in the novel construction of a lifting-cylinder having buckets which take up the wool from the bowl, and, while lifting it, hold it well saturated.

This invention furthermore consists in the provision of a hinged or pivoted chute for receiving the wool from the lifting-cylinder and conducting it to the squeeze-rolls, and in the novel construction, combination, and arrangement of mechanical adjuncts and details, as hereinafter more fully set forth.

Referring to the accompanying drawings, A designates the bowl of a wool-washing machine. B B are the squeeze-rolls. C is a chute, hinged or pivoted to the standards supporting the squeeze-rolls by its shaft C′, to the end of which is attached a crank-arm, D, having suitable connections to be described, whereby said chute is raised and lowered upon its axis by power and motion transmitted through the shaft of the lifting-cylinder. E designates said lifting-cylinder, which consists of a drum of considerable dimensions attached to a transverse shaft having its bearings upon the sides of the bowl. Upon the periphery of said cylinder, and diametrically opposite each other, are arranged two open-mouthed buckets or troughs, *e e*, to receive and convey the wool from the bowl to the chute C, which leads to the squeeze-rolls. These buckets may have either closed sides or open-ribbed or perforated sides—in the one case to take up liquor with the wool, in the other case to allow the surplus liquor to drain off before the squeeze-rolls are reached. The ribbed bucket may be constructed somewhat as a fork, its transverse side being composed of teeth, which tend to strip the toothed cylinders or forks, and to get a good and sufficient purchase on the wool to lift it from the bowl.

The chute C rests upon the surface of the lifting-cylinder, its plane inclined toward the passage between the squeeze-rolls. In operation the lifting-cylinder turns downward and outward from the rolls; hence the wool is raised up and over the cylinder and deposited from each bucket upon the chute, which, after receiving its load, rises from the cylinder and allows the empty bucket to pass.

F is a cam upon one end of the lifting-cylinder shaft, and G is a lever pivoted to the side of the bowl A, and connected by a link, *g*, to the crank-arm D.

A stud, *g′*, projects from the side of said lever, and is acted upon by the segmental reenforcements *h h* of the cam, so as to impart the movement described to the chute, the relative arrangement of the parts *h h* and the buckets *e e* being appropriate.

A spring, *f*, secured to the bowl A and to the rear end of the lever G, holds the latter in position, and through it the chute in contact with the cylinder, until the proper time for the action of the cam arrives.

H H designates the toothed cylinders, consisting of the hubs *i i*, provided with the radial teeth *i′ i′*, arranged in rows at equal intervals and curved at their ends to point in the same circumferential direction. These cylinders move in an opposite direction from that of the lifting-cylinder. The teeth of the one-toothed cylinder project within the radial space of, and break joints with or intersect, those of the other, so that the second cylinder shall serve as a stripper for the first, and take the wool before it can be lifted from the liquor. The teeth are curved so as to not catch and lift the wool, which, in being conveyed along the

bowl, is struck by the outer portions of the bends, pressed downward and along underneath the first cylinder to the next, and by it in a like manner pushed onto the lifting-cylinder, the wool during the whole feeding operation being kept under the liquor.

I I are belt-pulleys on the shafts of the toothed cylinders, for the reception of a belt connecting the two.

The machine receives power in any desirable manner.

I do not limit myself to the precise number of buckets described on the lifting-cylinder, as more or less may be used.

Having described my invention, I claim—

1. The lifting-cylinder provided with buckets or troughs, open only at their tops or mouths, and arranged, substantially as described, so as to lift the wool and at the same time retain it in a thoroughly-saturated condition, for presentation to the squeeze-rolls, as set forth.

2. The combination, with the lifting-cylinder, provided with buckets or troughs, open only at their tops or mouths, substantially as described, and the squeeze-rolls, of the chute C inclining downwardly toward said squeeze-rolls, as set forth.

3. The hinged or pivoted chute C, in combination with the squeeze-rolls and lifting-buckets.

4. The combination of the pivoted or hinged tilting chute, the lifting-cylinder, and suitable intermediate mechanism, substantially as described, for lifting or tilting said chute to allow the buckets to pass, as specified.

5. The combination, with the squeeze-rolls and lifting-cylinder, of the hinged or pivoted chute C, crank D, link *g*, lever G, cam F, and spring *f*, substantially as and for the purpose described.

In testimony that I claim the foregoing I have hereunto set my hand this 5th day of May, 1877.

JOHN CLEGG.

Witnesses:

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BENJ. BAKER.