I & W. Yewdall,

Wool-Washing Machine

No. 59,788. Patented Nov. 20, 1866.

Fig: 1.

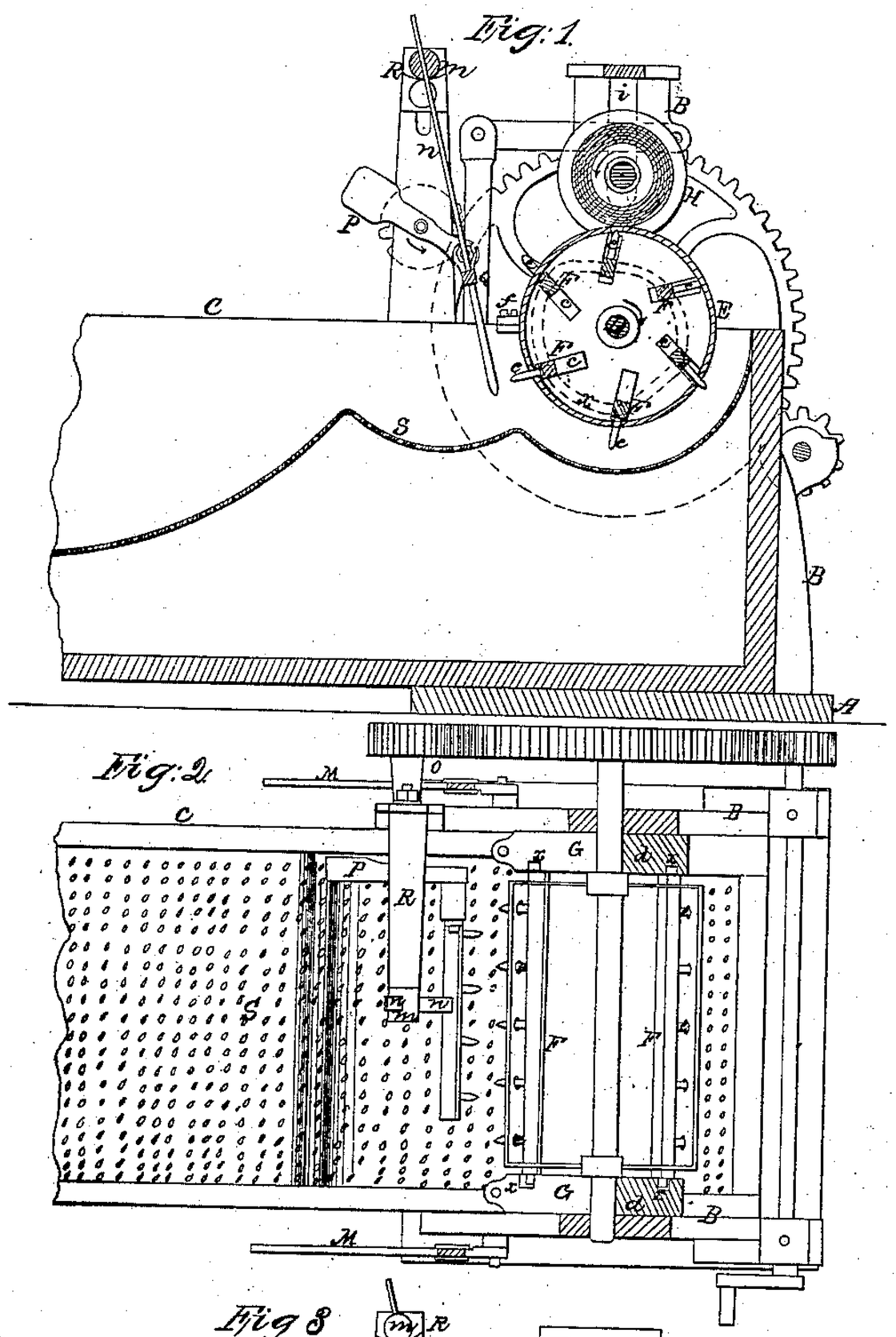


Fig: 4.

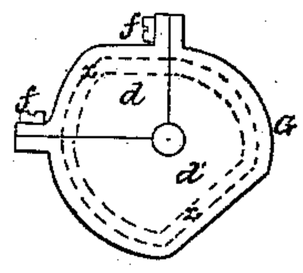
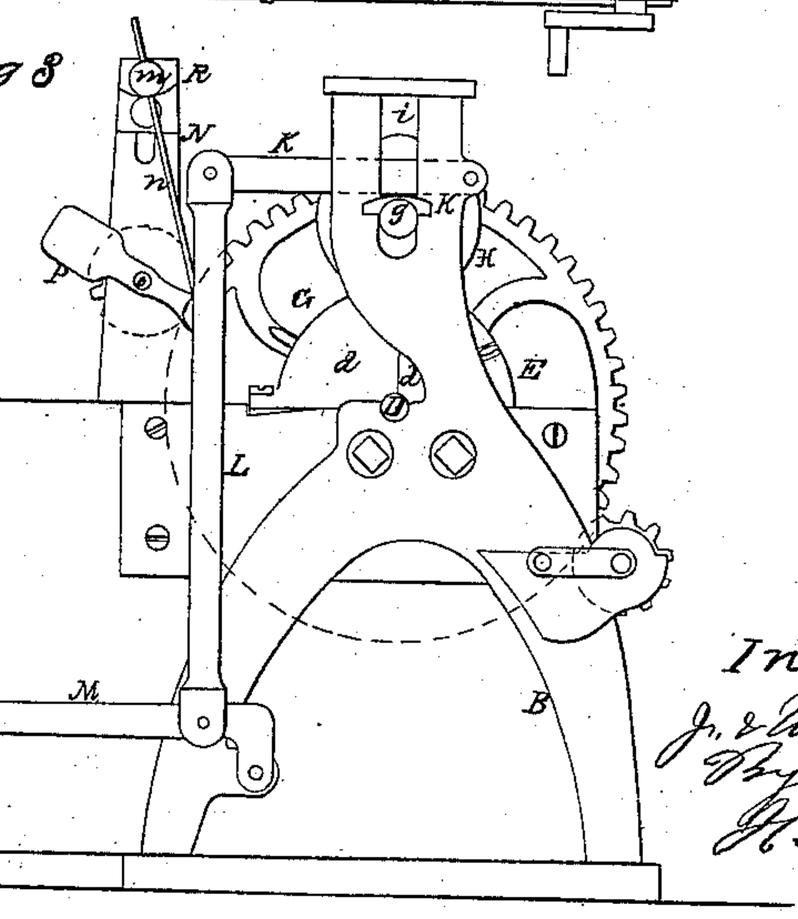


Fig 3



Witnesses
Wm Albert Seul
John Parker

Inventors.
J. & W. Yewdall
By their Atty
H. Howson

United States Patent Office.

IMPROVEMENT IN MACHINES FOR WASHING AND DRYING WOOL.

JOHN AND WILLIAM YEWDALL, OF PHILADELPHIA, PENNSYLVANIA.

Letters Patent No. 59,788, *dated November* 20, 1866.

SPECIFICATION.

TO ALL WHOM IT MAY CONCERN:

Be it known that we, JOHN and WILLIAM YEWDALL, of Philadelphia, Pennsylvania, have invented certain improvements in Machines for Washing and Drying Wool, and we do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawing, and to the letters of reference marked thereon:

Our invention consists of certain mechanism, fully described hereafter, to be applied to a tank containing a liquor in which wool is to be washed, the mechanism being such as to thoroughly agitate and wash the wool, remove it from the tank, and, at the same time, drain the greater portion of the liquor from it.

In order to enable others skilled in the art to make and use our invention, we will now proceed to describe its construction and operation.

On reference to the accompanying drawing which forms a part of this specification—

Figure 1 is a sectional elevation of sufficient of a machine for washing and drying wool to show our improvements.

Figure 2 a plan view partly in section.

Figure 3 a side elevation, and

Figure 4 a detached view of a part of the machine.

Similar letters refer to similar parts throughout the several views.

To the base-plate, A, of the machine are bolted the side-frames B B′, and between the latter is secured a box or tank C, one end only of which is shown in the drawing.

In the frames B B′ turns a shaft D, to which is secured a hollow metal cylinder E, and through the said cylinder and through radial slots *c*, in the opposite ends of the same, extend bars F F—pins *e e* projecting from the said bars and through openings in the cylinder.

The ends of the bars F project into eccentric grooves *x* in plates G G, one of which is secured to the inside of each side-frame, each plate being divided into two sections *d d′*, which are secured together by screws *f f*, so that the smaller section *d* can be readily detached from the large section *d′*, (see fig. 4.)

Against the cylinder E bears a pressure-roller H, which is covered with yarn or other suitable material, the journals, *g*, of this roller projecting through slots, *i*, in the side-frames.

To each journal, *g*, is fitted a cap, *k*, on which bears a lever, K, each of the latter being connected by a rod, L, to a lever, M, hung to the lower portion of each side-frame.

In a standard, N, secured to one side of the tank, C, turns a shaft, O, a pinion on the outer end of which gears into a cog-wheel on the shaft D.

On the inner end of the shaft O is a balance-crank, P, to the pin of which is hung a fork, Q, a rod *n* projecting from the upper edge of the latter, and sliding in a vibrating block *m*, at the end of an arm R, secured to the standard N.

Across the tank C extends a perforated plate S, which is bent to the form illustrated in fig. 1.

The grooves *x* are so formed that as the cylinder E revolves each bar, F, will be drawn inwards as it approaches the pressure-roller H, until the ends of the pins *e* are below the surface of the cylinder, the bars being again projected outwards to their first position before they are brought below the shaft D.

The tank C is partially filled with the washing liquor, the wool is introduced into the same at the end furthest from the cylinder E, and the machine is put in operation, a rotary motion in the direction of their arrows being imparted to the cylinder E, roller H, and shaft O.

As the shaft O and its balance-crank P revolve, the fork Q will be carried towards the cylinder E, raised, moved back, and carried downwards, and then towards the cylinder, as before.

The wool, after being introduced into the tank, is agitated, washed, and moved continuously forward towards the fork Q, which, seizing the wool, carries it towards and presses it against the side of the cylinder E, the water in the interstices of the wool being thus pressed from the same, and carrying with it the particles of dirt, which fall through the perforated plate S to the bottom of the tank.

As the cylinder revolves, the wool in contact with it will be caught by the pins *e*, and carried upwards and beneath the pressure-roller H, the pins being withdrawn, as before described, and the wool passing from between the rollers in a comparatively dry state into any suitable receptacle.

The pressure applied to the wool may be regulated by means of adjustable weights hung to the levers M.

Should it at any time be desired to remove one of the bars F, the section *d* of one of the plates G is first detached, when the bar may be readily withdrawn laterally.

Although we have shown and described a fork, Q, for carrying the wool to the cylinder E, and although we prefer the use of the fork, it may be dispensed with, the pins *e e* catching the wool as it floats towards the cylinder.

We wish it to be understood that we lay no claim to the use of a cylinder, E, with bars and pins operated as described, independently of the roller H, as the same has been heretofore used, but we claim as our invention, and desire to secure by Letters Patent—

1. The hollow cylinder E, with its bars F and pins *e*, in combination with the weighted pressing-roller H, the whole being arranged and operating as and for the purpose described.

2. The sectional grooved plates G, constructed and adapted to the cylinder E, and its bars F, substantially as and for the purpose specified.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

JOHN YEWDALL,
WILLIAM YEWDALL.

Witnesses:
WM. S. BEDFORD,
THOS. H. WOLDEN.

59,788.