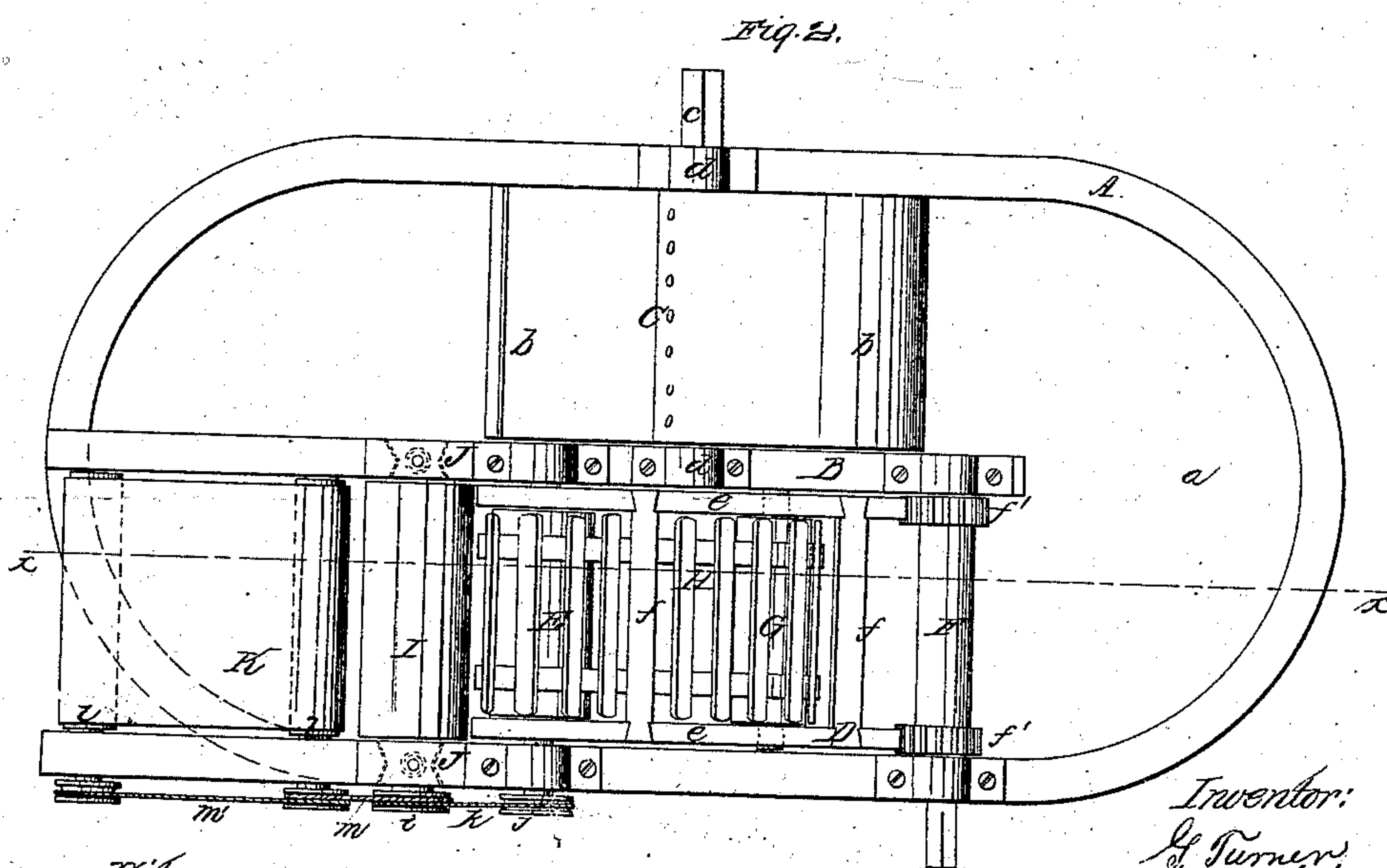
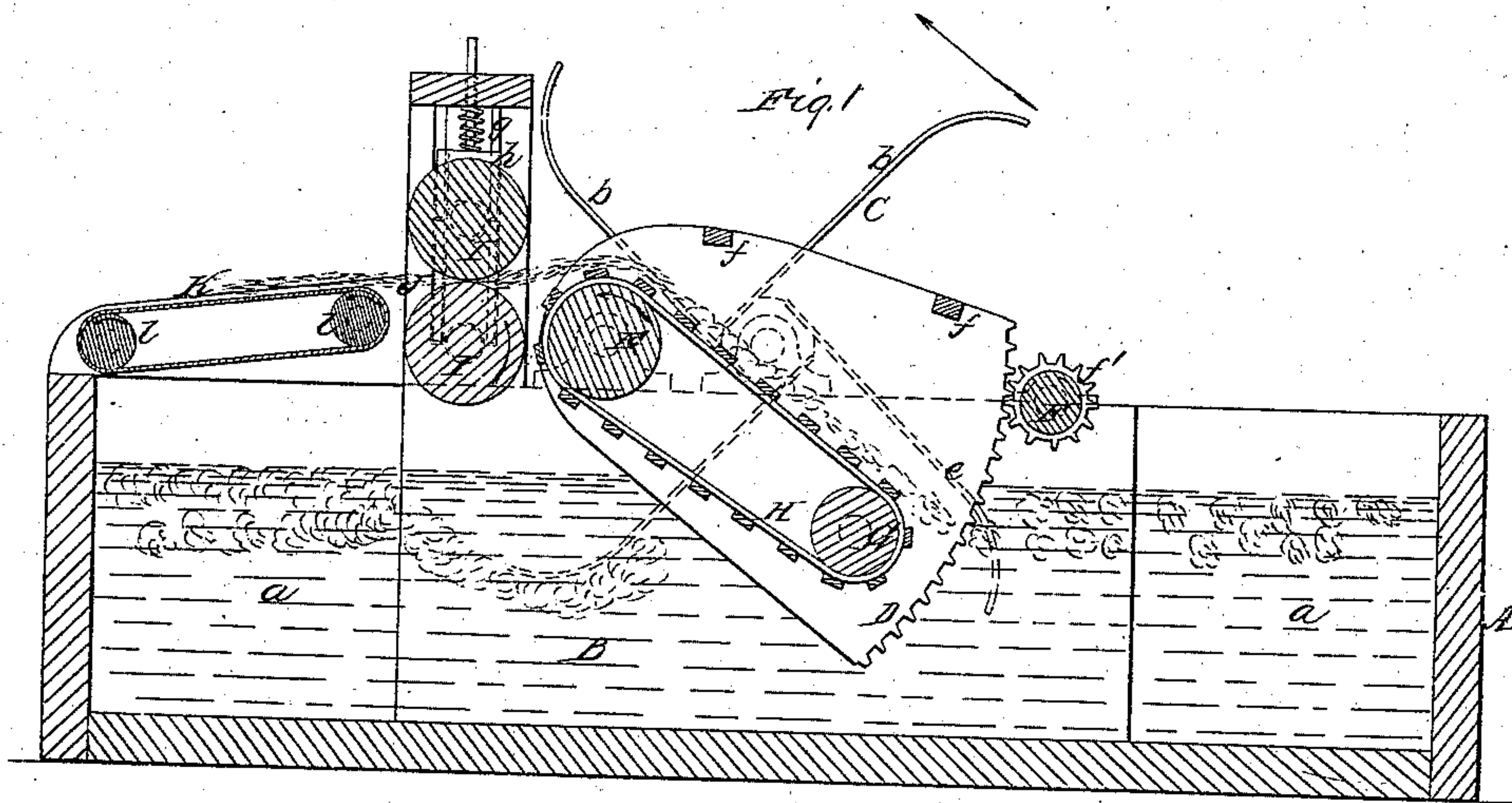


Turner & Robinson,
Wool-Washing Machine,
N^o 33,408. Patented Oct. 1, 1861.



Witness:
J. W. Breeds

Inventor:
J. Turner,
S. B. Robinson,
per Maus & Co.
Attorneys

UNITED STATES PATENT OFFICE.

R. G. TURNER AND S. B. ROBINSON, OF EAST DEDHAM, MASSACHUSETTS.

IMPROVEMENT IN MACHINERY FOR WASHING WOOL.

Specification forming part of Letters Patent No. 33,108, dated October 1, 1861.

To all whom it may concern:

Be it known that we, R. G. TURNER and S. B. ROBINSON, both of East Dedham, in the county of Norfolk and State of Massachusetts, have invented a new and Improved Machine for Washing Wool; and we do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a longitudinal vertical section of our invention, taken in the line *xx* of Fig. 2; and Fig. 2, a plan or top view of the same.

Similar letters of reference indicate corresponding parts in the two figures.

The object of this invention is to obtain a simple and efficient machine to supersede the manual process of washing wool, one that will not only expedite the process, but also perform the work more thoroughly than can be done by hand.

The invention consists in the employment or use of an oval wash-tub provided with a longitudinal central partition, a rotary paddle, endless conveyer, and pressure-rollers, all arranged to operate as hereinafter described to effect the desired end.

To enable those skilled in the art to fully understand and construct our invention, we will proceed to describe it.

A represents an oval or elliptical tub of any suitable dimensions and provided with a central partition B, which does not extend the whole length of the tub, spaces *a a* being allowed at the ends, said spaces *a* being equal in width to the spaces between the partition B and the sides of the tub.

C is a rotary paddle, which is formed of a proper number of blades *b*, attached to a shaft *c*, said blades being straight a great portion of their length, and their ends slightly curved, as shown clearly in Fig. 1. The paddle C is placed at one side of the partition B at about its center, the shaft *c* having its bearings *d*, one on the top of the partition B and the other on the top of the tub A at one side. (See Fig. 2.)

D is a frame which is formed of two segment sides *e e*, connected by cross-bars *f*. The segment sides *e e* are hung loosely on a shaft E, which is placed on the tub A at the side of the partition B, opposite to paddle C.

The outer edges of the sides *e e* are toothed and gear into pinions *f' f'* on a shaft F, which is placed on the tub parallel with shaft E.

Between the outer parts of the sides *e e* of frame D there is placed a cylinder G, around which and the shaft E an endless apron H of slats is placed.

I I are two pressure-rollers, which are placed one over the other, the upper roller having springs *g* pressing upon its bearings *h*, the lower roller having its journals in stationary bearings. The bearings of these rollers are placed in uprights J J, one being on the partition B and the other on the edge of the tub A. The lower roller I has a pulley *i* on one of its journals, around which and a pulley *j* on the shaft E a belt *k* passes.

K is an endless apron, which passes around rollers *ll* at the upper part of the tub A. The upper surface of this apron K is in line with the "bite" of the rollers I I, and said apron is slightly inclined, as shown in Fig. 1. The endless apron K is driven by a band *m* from the pulley *i* of the lower pressure-roller I, the two rollers *ll* being connected by a band *m'*.

The operation is as follows: The wool to be washed is placed in the tub A, which is supplied with a requisite quantity of water, and the paddle C is rotated in the direction indicated by arrow 1, Fig. 1. The rotation of paddle C causes the water and wool to circulate around within the tub A, the curved ends of the blades *b* preventing the wool being lifted out of the water by their rotation. By this circulation of the water and wool within the tub A the wool is thoroughly cleansed in a short time, and during this cleansing operation the segment sides *e e*, and consequently the endless apron of slats H, are elevated by turning the shaft E so that the apron will be above the water and wool. After the wool is thoroughly washed the frame D and apron H are lowered, and motion being given said apron by the application of power to shaft E the apron H carries up the washed wool to the pressure-rollers I I, through which it passes, and has the water expressed from it, the wool being discharged from the top of the tub by the apron K.

The whole device is extremely simple and efficient, and one person can attend to several machines.

We do not claim separately any of the within-described parts; but

We do claim as new and desire to secure by Letters Patent—

The combination of the oval or elliptical tub A, provided with the partition B, the rotating paddle C, adjustable endless carrying-apron H, pressure-rollers I I, and endless dis-

charging-apron K, all arranged substantially as and for the purpose set forth.

R. G. TURNER.
S. B. ROBINSON.

Witnesses:

E. BENTON,
JAMES GRIFNY.