Thomas A. Campbell's Improved Wool Oiler.

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PATENTED
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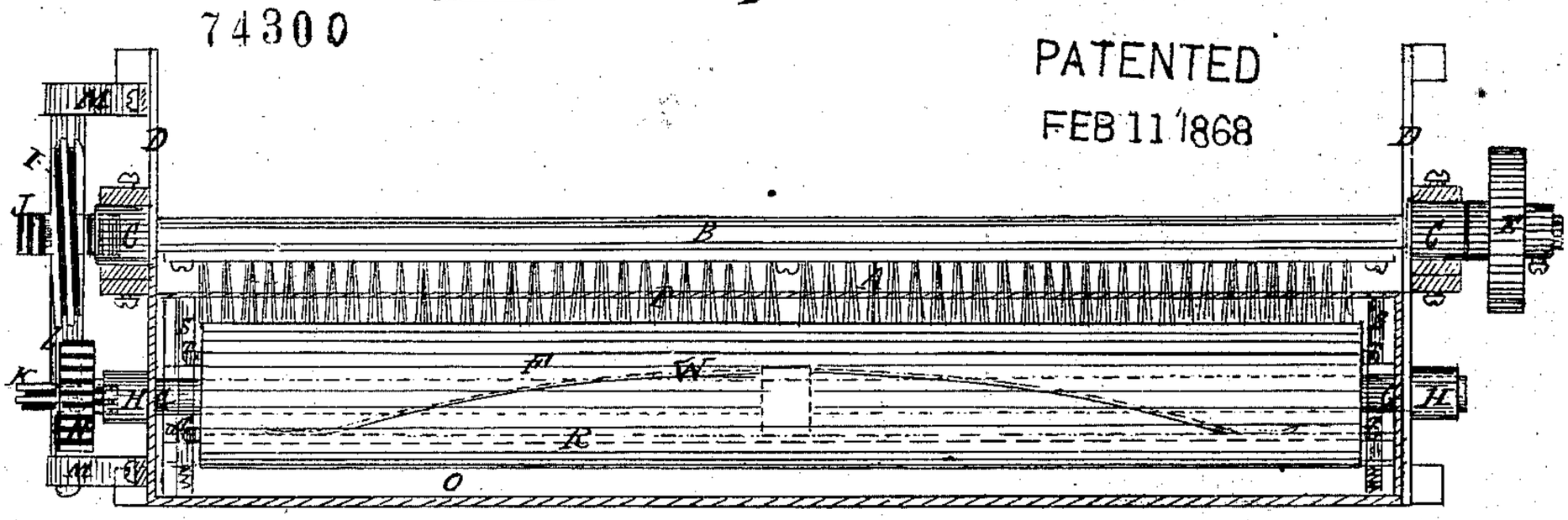

Fig 1st.

Plan of Oiler.

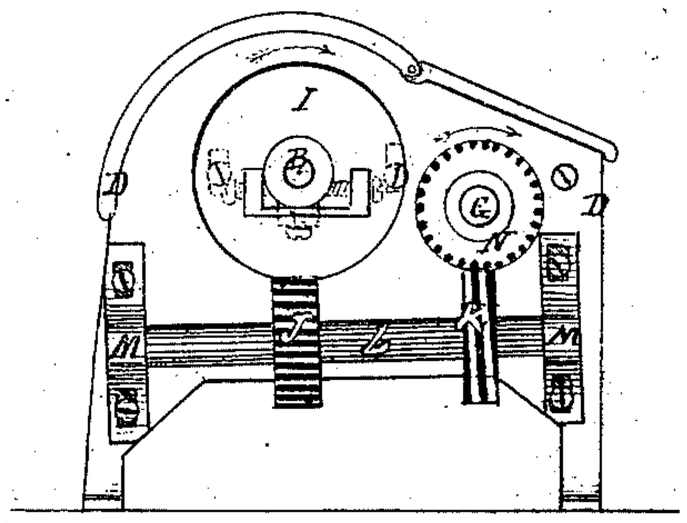

Fig 2nd.

End elevation.

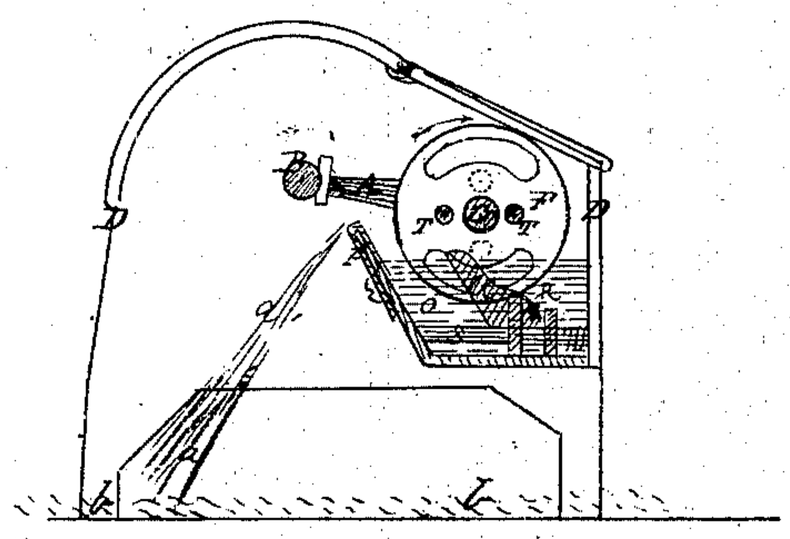

Fig 3d.

Cross section.

Witnesses.

Chas. L. Salmon

Geo. C. Wright.

Inventor

Thomas A Campbell

United States Patent Office.

THOMAS A. CAMPBELL, OF NEW YORK, N. Y.

Letters Patent No. 74,300, *dated February* 11, 1868.

IMPROVEMENT IN MACHINE FOR OILING WOOL.

The Schedule referred to in these Letters Patent and making part of the same.

TO WHOM IT MAY CONCERN:

Be it known that I, THOMAS A. CAMPBELL, of the city, county, and State of New York, have invented an Improvement on a Machine for Applying Oil or other Liquid to Wool or other Material, in the process of manufacture, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification.

Figure 1 is a general plan of the working parts.

Figure 2 is an elevation of the geared end.

Figure 3 is a transverse cross-section.

Similar letters of reference indicate like parts.

A represents a brush secured to the shaft B, which has suitable bearings, C C, in the frame D D. A rapid revolving motion is imparted to the brush A, by means of power applied to the pulley E, which is secured to the shaft B.

In a machine for oiling wool, for which Letters Patent, numbered 51,891, were granted me, January 2, 1866, I make use of a revolving brush for the purpose of distributing the oil, and I make use of the same in this improvement, as above described.

F represents a hollow cylinder, secured to the shaft G G, which has suitable bearings, H H, in the frame D D. The cylinder F is placed in such relation to the shaft B, to which is secured the brush A, that in each revolution of said shaft the ends of the bristles of said brush are brought in contact with a portion of the surface of the cylinder F. The point of contact is shown in figs. 1 and 3. A slow revolving motion is imparted to the cylinder F by means of its connection with the shaft B, through the worm I, secured to said shaft, the gear J and worm K secured to the short shaft L, which has suitable bearings, M M, on the frame D D, and the gear N secured to the shaft G G, which revolves the cylinder F.

O represents a tank containing oil, or such liquid as may be desired, in which the cylinder F is partially immersed, and as said cylinder revolves, a portion of the liquid is carried up on its surface to the point of contact with the brush A.

P represents an adjustable plate, secured to the side of the tank O by means of set-screws, and being provided with slots for said screws, so that the plate may be raised or lowered when desired. The upper edge of the plate P is placed in such relation to the brush A that, in each revolution of the brush, the points of its bristles are brought in contact with said edge, and the liquid held on the brush is thrown off in the form of fine spray, in a direction indicated by *a a* in fig. 3.

For the purpose of agitating the liquid contained in the tank O, and preventing a sediment from collecting, a plate or rod, R, is placed in the bottom of the tank, and is made to slide on the guides S S.

The pins T T are secured to the cylinder F, and, as the cylinder revolves, they successively act upon the studs U U, causing the rod R to move forward until the pins leave the studs, when it is returned to its original position by action of the spring W.

The frame D D is provided with suitable stands or feet, and may be adjusted to the feed-table of a comber or card, the "vent" of a picker, or any other place where it is necessary to moisten wool or other material in the process of manufacture.

b b, in fig. 3, represent the position or line in which the material passes, which is in process of being moistened or oiled.

When the machine is placed in the desired position, and power applied to the pulley E, a rapid revolving motion is imparted to the brush A, the cylinder F revolves slowly in the liquid contained in the tank O. A portion of said liquid is carried up on the surface of the cylinder to the point of contact with the brush A, where it is licked off by the points of the bristles of the brush, and immediately thereafter the bristles strike the edge of the adjustable plate P, and the liquid held by them is thrown off, in the form of fine spray, in the direction indicated by *a a* in fig. 3, upon the material passing beneath, upon the line indicated by *b b* in the same figure. The arrows indicate the direction in which the brush and cylinder revolve.

The quantity of liquid supplied to the brush A by the cylinder F is regulated by the speed at which said cylinder revolves, and by change of gearing on the short shaft L and its connections. The speed of the cylinder may be increased or diminished as circumstances may require.

Claim.

I claim the adjustable plate P and rotary brush B, in combination with each other and with the hollow cylinder F, operating substantially as described and for the purposes set forth.

New York, December 26, 1867.

THOMAS A. CAMPBELL.

Witnesses:

CHAS. H. SALMON,

JOHN MAGEE.