T. DOST.

Bristle-Mixer.

No. 196,343. Patented Oct. 23, 1877.

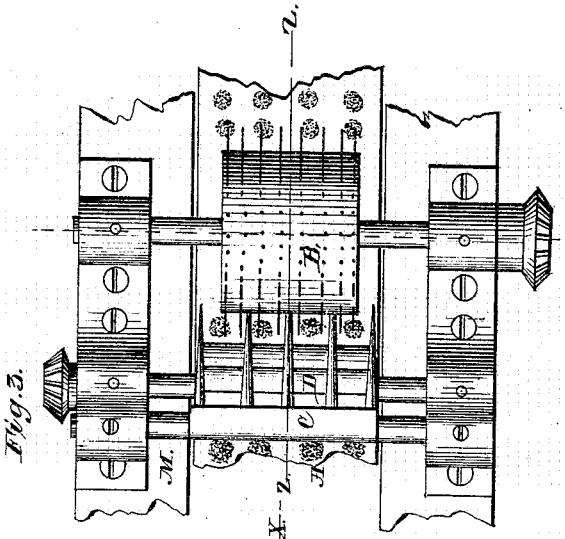

Fig. 3.

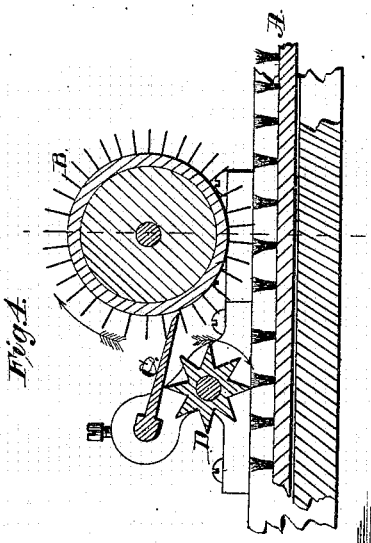

Fig. 4.

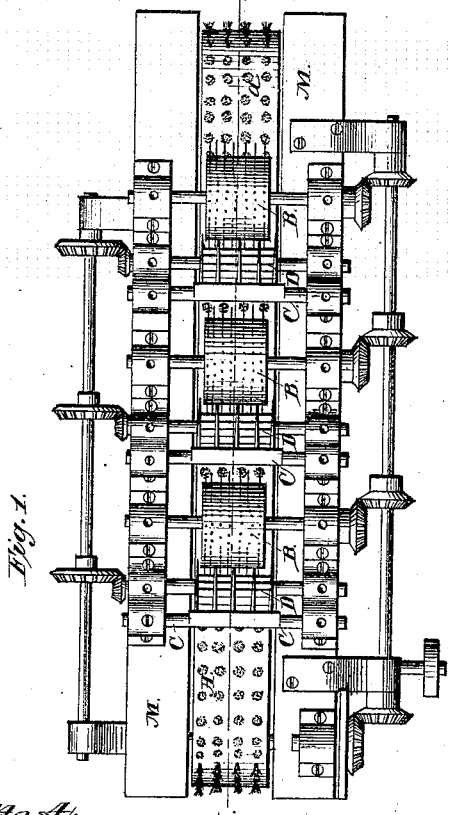

Fig. 1.

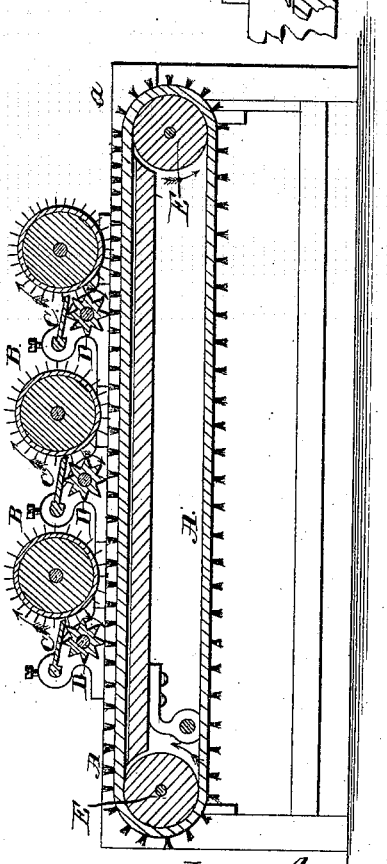

Fig. 2.

Attest:

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THEODOR DOST, OF BALTIMORE, MD., ASSIGNOR TO WILLIAM WILKINS.

IMPROVEMENT IN BRISTLE-MIXERS.

Specification forming part of Letters Patent No. **196,343**, dated October 23, 1877; application filed July 10, 1877.

To all whom it may concern:

Be it known that I, THEODOR DOST, of the city of Baltimore and State of Maryland, have invented a new and useful Improvement for Mixing Bristles, which improvement is fully set forth in the following specification, reference being had to the accompanying drawings, where the same letters represent the same parts in the several figures.

When bristles of different colors are cleaned and prepared for the market, they must be indiscriminately mixed so as to present not only an uniform gray color, but be free from what are called "holes," caused by clusters of short bristles being surrounded by longer ones.

This has heretofore been done by hand, the bristles being spread in a row, the flags all one way, and the eye making the mixing. They are then gathered into a bundle, and again spread out and mixed by the eye, and the process is repeated until the required colors and average of length are obtained.

It is this mixing and remixing that my invention accomplishes, by passing the bristles under a succession of cylinders, doffers, and rollers, or fans, as is presently described.

Figure 1 is a plan of my machine, showing the driving-gear, which I have found sufficient, though this may be changed or modified without affecting the principle of the invention. Fig. 2 is a section through the line X X, showing the operative parts of my invention without the driving-gear. Fig. 3 is a plan of a cylinder and doffer on a larger scale, showing the strips of wire clothing, with the teeth of the doffer operating in the intervals. Fig. 4 is an enlarged section, showing the cylinder, doffer, and fluted roller or fan.

A A is an endless brush-belt, whose surface has the stiffness of a common horse-brush. The belt moves in the direction of the arrows, over the pulleys E E, which are suitably connected with the prime mover.

B B B are cylinders, about six inches in diameter and three inches to five inches in width, clothed with wire, in strips, around them, with intervals between the strips to correspond with the teeth of the doffers or rakes.

C C C are stationary doffers or rakes, whose teeth fall between the strips of wire clothing on the cylinders, and gather any bristles which the cylinders may bring up from the brush-belt in their rotation, letting them fall on the fluted rollers.

D D are fluted rollers or fans of one or more arms, working in the direction of the arrows, and which return the bristles to the brush-belt, which carries them to the next cylinder, where they are treated in the same way, until they leave the machine properly mixed, both as regards their color and length.

M M is the table on which the machine is supported.

The operation of the machine is as follows: A bundle of bristles is spread along the brush-belt at the end *a*, and carried, as the belt moves on, under the cylinder B, which rolls them over and over, mixing them as it does so, and carrying a portion of them upward on its surface, until they come in contact with the doffer or rake, when they fall upon the fluted roller or fan D, when they are carried, along with those that have been left on the brush-belt, to the next cylinder, where the same process takes place, and, being repeated at each cylinder in succession, the bristles are found properly mixed, both as regards color and length, ready to be further prepared for the market.

The cylinders that I have used make from five to eight revolutions a minute, and I have found the result good. The fluted rollers or fans make from three to five hundred revolutions a minute, though the speed of both cylinders and rollers may vary without affecting the principle of my invention.

The machine here described may be applied to other material requiring like manipulation, and is useful and effective in separating bristles when adhering together in masses.

I claim—

1. The combination, in the above-described machine, of the endless brush-belt, cylinder, doffer, and fluted rollers or fan, for the purpose of mixing and separating bristles, substantially in the mode described.

2. The combination of the cylinder, doffer, and brush-belt, substantially as above described.

3. The combination of the cylinder, doffer, and fluted roller, as described.

THEODOR DOST.

Witnesses:

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