F. G. SARGENT.

Burring-Machine.

No. 210,565. Patented Dec. 3, 1878.

Fig. 1.

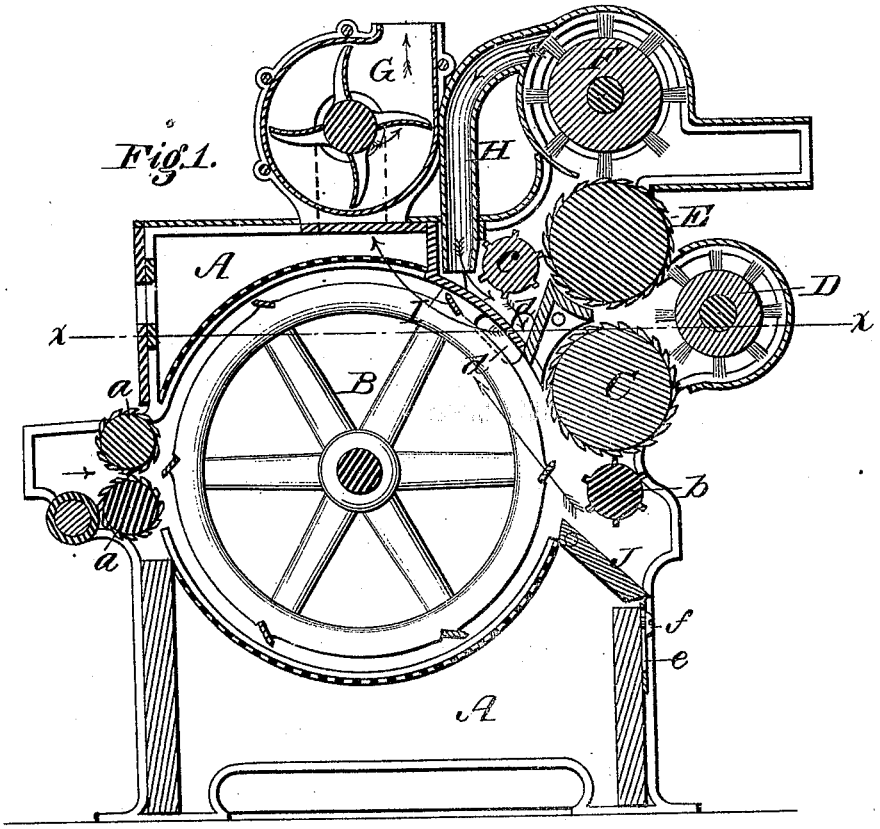
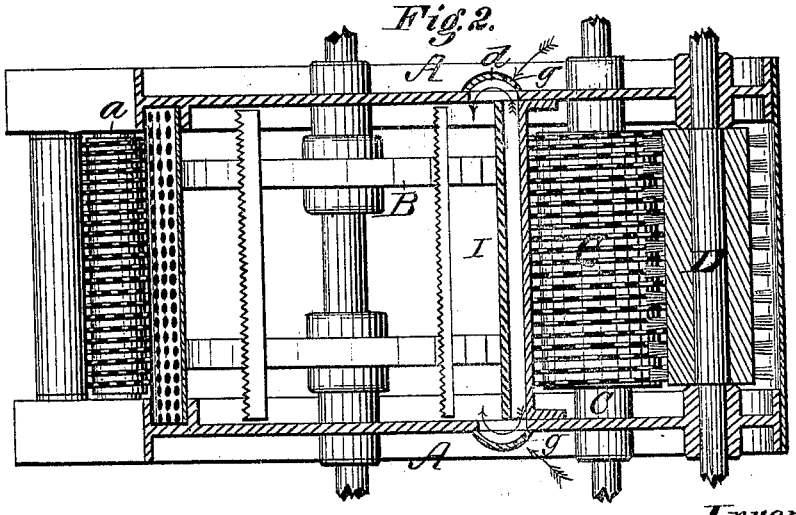


Fig. 2.



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FREDERICK G. SARGENT, OF GRANITEVILLE, MASSACHUSETTS.

IMPROVEMENT IN BURRING-MACHINES.

Specification forming part of Letters Patent No. **210,565**, dated December 3, 1878; application filed June 13, 1878.

To all whom it may concern:

Be it known that I, FREDERICK G. SARGENT, of Graniteville, in the county of Middlesex and State of Massachusetts, have invented certain Improvements in Machines for Burring Wool, &c., of which the following is a specification:

My invention relates to wool-burring machines; and the improvements consist in means for conducting the burrs and wool which are thrown from the upper burring-cylinder by its guard out from above the girt through passages formed in the sides of the machine, and back into the machine below the girt; in the employment, in combination with the side passages, of a tube or pipe passing from the case, in which is mounted one of the brushes, into the top of the machine above the girt, whereby the blast of said brush is caused to assist in forcing the burrs and wool through the side passages, as mentioned; and in the use of a swinging or adjustable gate below the lower guard or knocker, to regulate the draft of the fan, all as hereinafter explained.

In the accompanying drawings, Figure 1 represents a longitudinal vertical section of my improved machine, and Fig. 2 a horizontal section of the same on the line *x x* of Fig. 1.

In its general construction and mode of operation the machine is similar to those in common use, as will be seen by reference to the accompanying drawing, in which—

A represents the frame of the machine, and B the beater or picker cylinder, which takes the wool from the feed-rolls *a* and delivers it to the burring-cylinder C, from which it is swept by the brush D and delivered to the burring-cylinder E. From the cylinder E the wool is swept by the brush F and delivered from the machine in the usual manner, guard-cylinders *b* and *c* being employed to knock the burrs from the wool on the cylinders C and E, as usual. The burrs and bits of wool which are thrown from the cylinder E by the guard or knocker *c* fall upon the transverse girt or partition I, which is closed or made solid across its entire face. From the upper side of the girt or partition I the burrs are conducted out through the side or sides of the machine, and carried through pipes or passages *d* back into the machine below the girt, as represented in Figs. 1 and 2.

In order to force the burrs and bits of wool through the passages *d*, I employ, in addition to the usual suction-fan G, mounted on the top of the machine, the blast produced by the brush F, which blast is carried through a spout or pipe, H, extending from the case in which the fan is mounted down through the top of the machine, its mouth opening directly over the girt I, as shown in Fig. 1. The blast from the brush F greatly assists the fan G in forcing the burrs from the girt or partition I, and through the passages *d*, while by thus carrying the burrs around instead of through the girt, they are caused to interfere less with the picker-cylinder, and the action of the machine is otherwise improved.

In some cases I find it desirable to form small openings *g* in the side passages, *d*, for the admission of air from the outside of the machine; but these may be omitted, if desired, or they may be furnished with covers, by which they may be opened or closed at pleasure.

In practice I prefer to form the side passages, *d*, by means of a hood or cap extending over and joining one or more openings in the side of the machine, both above and below the girt, though any other construction may be employed, if desired.

In order that the draft of the fan G may be regulated for operating upon light or heavy wool, and also for the purpose of more perfectly separating the burrs and bits of wool which are thrown from the burring-cylinder C, a swinging or adjustable gate, J, is mounted transversely in the frame of the machine, below the lower guard-cylinder, *b*. By changing the inclination of this gate J, the size of the opening in the end of the machine is regulated and the draft of the fan G controlled. The burrs which are thrown off by the guard-cylinder *b*, or a portion of them, fall upon the inclined gate J, which, when placed at a proper inclination, causes them to roll down and fall outside of the machine, their weight overcoming the draft of the fan G, while the bits of wool, being lighter, are drawn into the machine thereby.

A slotted plate or slide, *e*, clamped to the frame of the machine by a screw, *f*, is arranged to support the free edge of the gate J and sustain it at the desired inclination; but it is

apparent that this, together with other details, may be modified, the essential features being the carrying of the burrs, &c., around instead of through the girt, and the regulation of the draft.

Having thus described my invention, what I claim is—

1. In a burring-machine, the combination of a girt or partition located between the picking and burring cylinders, a passage, *d*, at one or both ends of the girt, and a fan arranged to produce a current of air through said passage or passages, substantially as shown, whereby the burrs and particles of fiber are carried outward at the ends of the girt and returned into the machine on the opposite side of the girt.

2. In a burring-machine, the combination of the side passage or passages, *d*, located substantially as shown and described, a passage, H, and brush F, said passage H extending from the brush into the machine, for the purpose of conducting the blast from said brush inward, to assist in delivering the burrs through the side openings.

3. In a burring-machine, the combination of the cylinders E *c*, brush F, girt I, side passage or passages, *d*, and exhaust-fan G, substantially as shown and described.

4. The combination, in a burring-machine, of a transverse girt or partition, located in front of a burring or guard cylinder, with side passage or passages, *d*, to return the burrs from said cylinder into the machine in advance of the girt.

5. The combination, in a burring-machine, of a suction-fan, G, a girt, I, arranged substantially as shown and described, and a passage, *d*, around the end of the girt, and provided with an air-inlet, *g*, substantially as set forth.

6. The combination, in a burring-machine, of a suction-fan, applied substantially as shown and set forth, with the adjustable board or gate J, located as shown and described, to control the admission of air.

7. The combination, in a burring-machine, of an inclined board, J, adjustable as to its degree of inclination, with the guard-cylinder and fan, all operating to assist in effecting a separation of the burrs from the fiber, as set forth.

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