

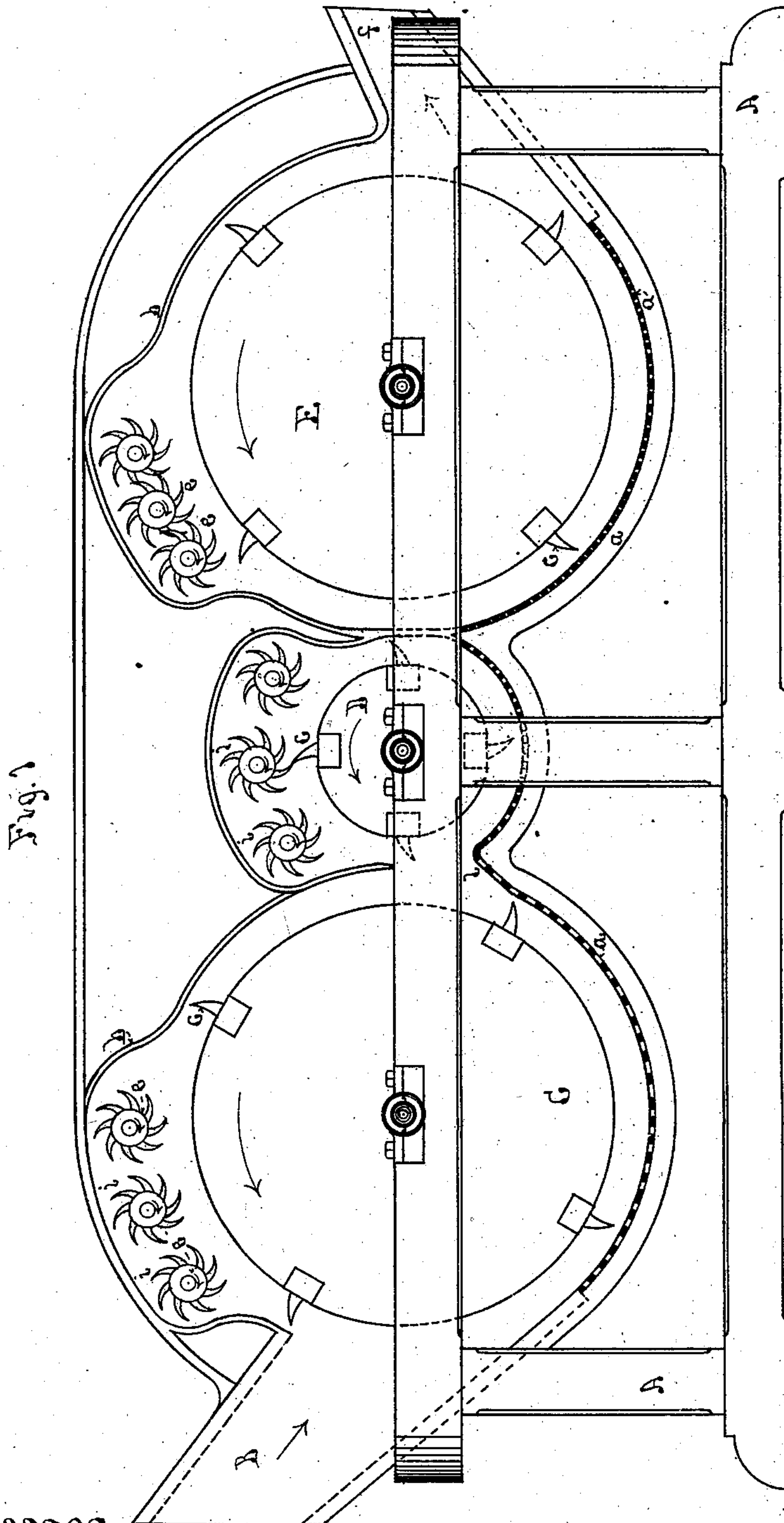
(No Model.)

2 Sheets—Sheet 1.

F. G. & A. C. SARGENT.  
MACHINE FOR CLEANING WOOL.

No. 293,788.

Patented Feb. 19, 1884.



Witnesses

N. P. Ockington.  
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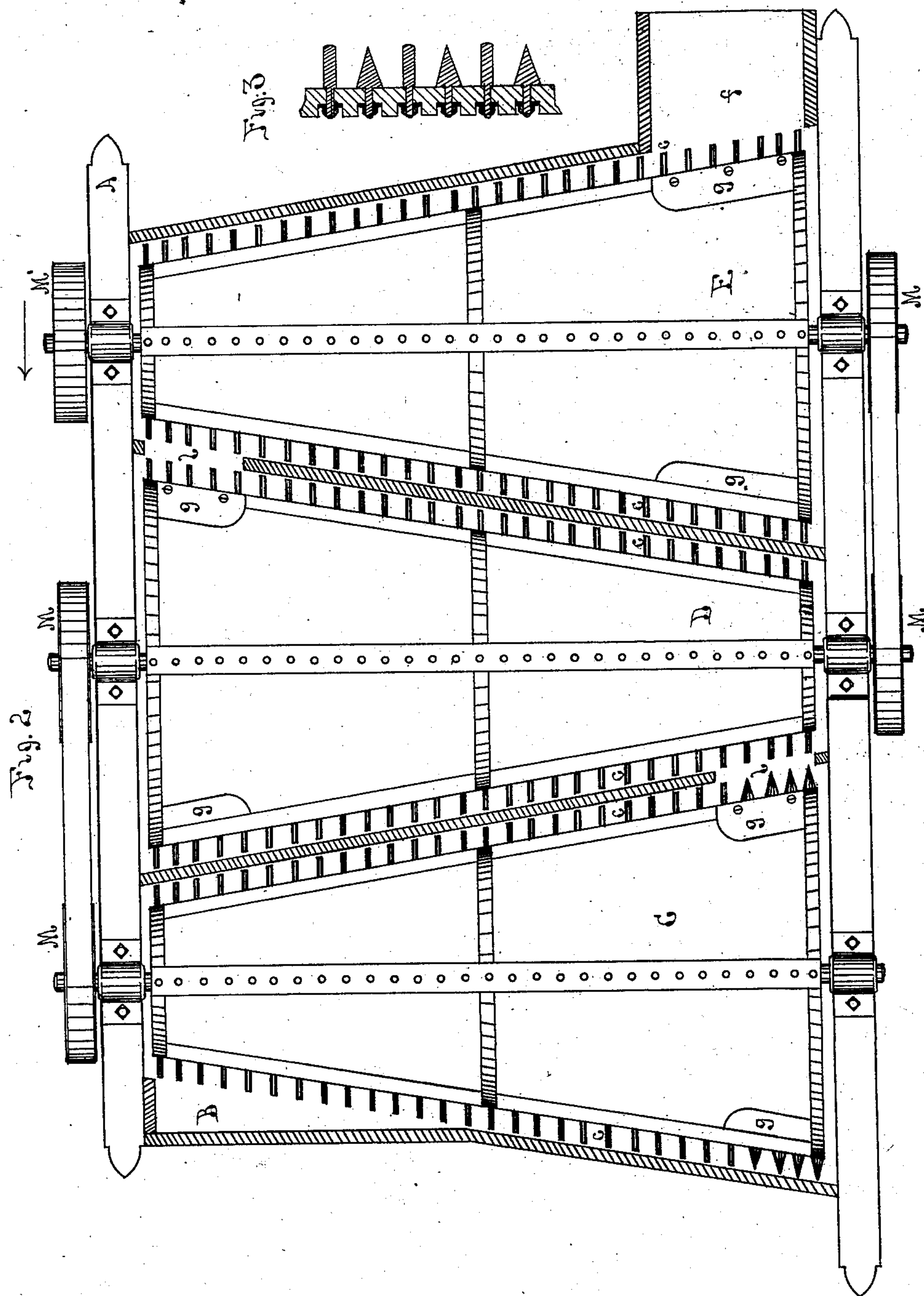
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# UNITED STATES PATENT OFFICE.

FREDERICK GRANDISON SARGENT AND ALLAN C. SARGENT, OF GRANITEVILLE, MASSACHUSETTS.

## MACHINE FOR CLEANING WOOL.

SPECIFICATION forming part of Letters Patent No. 293,788, dated February 19, 1884.

Application filed October 21, 1881. (No model.)

*To all whom it may concern:*

Be it known that we, FREDERICK G. SARGENT and ALLAN C. SARGENT, of Graniteville, county of Middlesex, and State of Massachusetts, have invented a new and useful Machine for Cleaning Wool, of which the following is a specification.

Our invention relates to machines used to separate dirt from wool without washing; and its objects are to more thoroughly open up the fiber and loosen the dirt and other foreign matter, so that the said fiber will be more thoroughly cleansed than heretofore, and to so operate upon the wool that while loosening the dirt the wool will be so combed out as to require less preparation after working than heretofore. We accomplish these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is an end elevation, with the casing removed, of a cone-duster with our improved attachments. Fig. 2 is a plan of the same with the top casing and workers removed. Fig. 3 shows a detail of a variation in the form and placing of the teeth of the cone-duster.

A is the frame. B is the trough through which the wool is fed to the machine. C D E are cones provided with teeth *c*. *e e e* are workers placed just without the path of the teeth *c c*. *a* is a screen placed under the cones, through which dirt and dust loosened from the fibers or from among them may fall into a dead-air chamber beneath. *b* is the top casing, which is not perforated. *l* is the passage from one cone to another through the intervening casing. The cones C D E are driven by belts running upon pulleys *m' m m*, as shown, placed on their shafts in the usual and ordinary manner for driving machinery. The pulley *m'* is driven in any usual and well-known way. The arrows show the direction of rotation of the several moving parts. The workers will operate by the action of the cone-dusters in carrying the fiber past them.

The operation of the device may be thus described: The wool being fed to the cone C through the feed-conduit B, which delivers it near the small end of the cone-cylinder, by the

teeth of which it is taken, is carried around in the direction indicated by the arrow, and whatever dirt may be loose in it will drop out through the openings in the bottom casing, *a*, into the dead-air chamber beneath. As the wool is carried around, that which is most in masses flies out by centrifugal force, so that it is caught by the teeth of the workers, and by their action, combined with that of the teeth of the cone, the masses are torn up, and the dirt which may be among or adherent to the fibers is loosened, and as the wool fibers are drawn out and pass again around the cylinder the dirt falls into the dead-air chamber. The wool will by its repeated passages under the workers have all its masses separated, and all the dirt which can be separated without washing removed, instead of, as is sometimes the case with cone-dusters having no workers, passing out in masses, which retain the dirt they carried into the machine. As the taper of the cones is very considerable, the movement of the wool through the machine is not prevented by the workers, but only retarded; but such delay can be overcome by the use of the fans *g*, which create a draft in the direction which will forward the wool. When the wool has passed to the larger end of the cone C, it is thrown off, and, passing through the opening *l*, is taken by the teeth on the smaller end of the next cone, D, and when it reaches the larger end of that cone passes through an opening to the cone E, after traversing which it is discharged through the spout *f*. By such repeated working during the passage of the wool in different directions the cone-duster is made to perform much more work than an equal cone-surface on a single cone would be capable of accomplishing, and by the use of the workers the cone-duster is made to do a considerable amount of the work of straightening out the fibers, and thus the amount of carding afterward required is greatly diminished.

What we claim as new and useful is—

1. The combination, with a cone-duster cylinder, of one or more toothed worker-rolls and a bonnet, the said rolls having their surfaces substantially parallel to and working with the

conical face of the cylinder and inclosed within said bonnet, substantially as described.

2. The combination of the cone-duster C with the cone-duster D, and the fiber-delivery  
5 passage 7, leading from the larger end of the former to the smaller end of the latter, substantially as described.

3. The combination of two cone-dusters in one machine having their axes placed parallel  
10 to each other, and the larger end of one along-

side the smaller end of the other, with a fiber-passage, 7, connecting said ends and adapted to conduct the fiber from the one of said cone-dusters to the other, substantially as described.

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Witnesses:

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