

(No Model.)

E. M. HULSE.
SHODDY PURIFIER.

No. 334,776.

Patented Jan. 26, 1886.

Fig. 1.

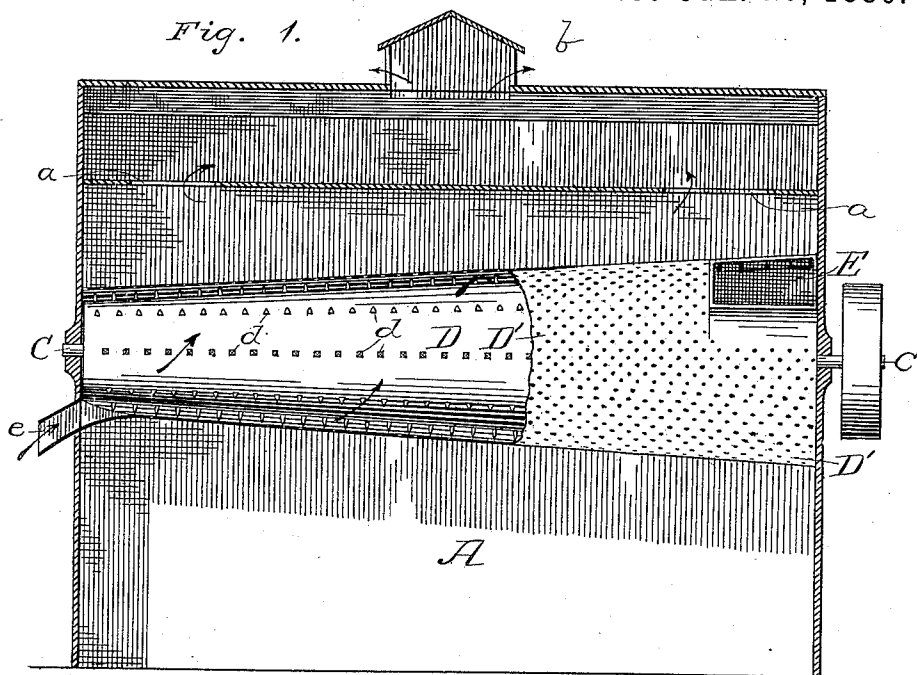


Fig. 2.

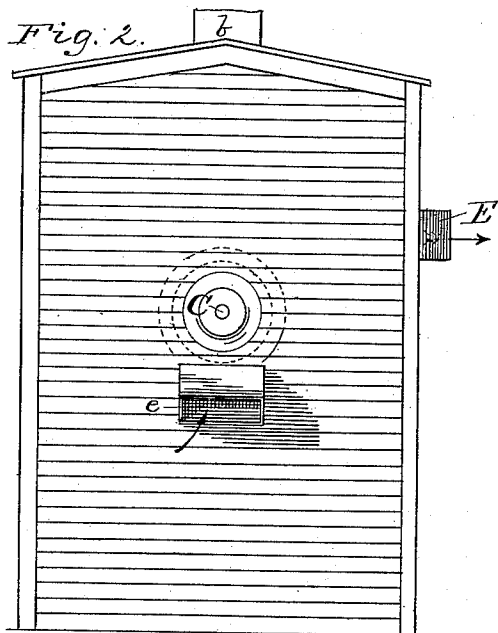
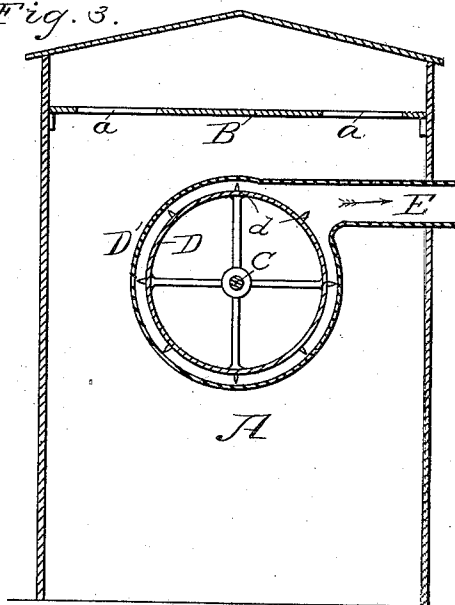


Fig. 3.



WITNESSES:

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EDWIN M. HULSE, OF CHICAGO, ILLINOIS.

SHODDY-PURIFIER.

SPECIFICATION forming part of Letters Patent No. 334,776, dated January 26, 1886.

Application filed December 1, 1883. Renewed July 3, 1885. Serial No. 170,642. (No model.)

To all whom it may concern:

Be it known that I, EDWIN M. HULSE, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Shoddy-Purifiers; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

In the preparation of rag shoddy for bedding and other purposes it is necessary, after the rags have been picked, to remove the dust and dirt from the same. Heretofore this has been done by submitting the shoddy to the action of beaters, which, besides only half doing the work, renders it lumpy, so that before being used it has to be repicked.

The object of my invention is to thoroughly remove the dust without rendering the shoddy lumpy. This I accomplish by a revolving spiked cylinder incased in a correspondingly perforated drum having an inlet at its smallest end, into which the shoddy is forced by a suitable blast, and an outlet at the other end, from which the cleansed shoddy issues. These devices are placed within a suitable chamber having openings in its roof. Thus in the process of cleansing, the dust and dirt from the shoddy escape through the perforations of the drum, the heavier particles falling to the floor and the dust being carried away through the openings in the roof of said chamber.

In the drawings, Figure 1 is a vertical longitudinal section of my machine. Fig. 2 is an end view of the same, and Fig. 3 is a transverse vertical section on the line *xx* in Fig. 1.

In the drawings, A represents the dust-chamber, made into an upper and lower apartment by the partition B, in which are suitable openings, *a a*, leading from one apartment to the other, and having a chimney or flue, *b*, in its roof, from which the dust escapes. The lower apartment is preferably larger than the upper, and has journaled in suitable bearings in its end walls a shaft, C, one end of which extends through the wall and is provided with a pulley, through the medium of which it is operated. On this shaft C, within the lower

apartment and extending from wall to wall of the same, is a cylinder, D, preferably less in diameter at one end, which gradually increases toward the other. This cylinder is provided with several series of spikes, *d*, which are arranged longitudinally and spirally, the whole being incased in a correspondingly shaped perforated shell, D', secured to the end walls of the dust-chamber.

Just below the bearings of the shaft C, in the end wall of the dust-chamber, contiguous to the small end of the cylinder D, is a blast-pipe, *e*, so placed that the blast enters the space between the lowest segment of the periphery of the small end of said cylinder and the shell or drum D'. At the end of the cylinder opposite to that into which the blast enters is a discharge or exit pipe, E, which extends laterally from the upper surface of the large end of the perforated drum D', out through the adjacent side wall of the dust-chamber.

When my machine is in operation, the cylinder revolves and the blast carries the shoddy directly or indirectly from the pickers through the pipe *e* into the shell D', where it is caught up by the spikes *d*, and, partly by the arrangement of the said spikes and partly by the blast, forced the entire length of said shell, being thoroughly beaten in transit and freed from the dirt and dust, which are forced by the blast through the perforations of the drum into the surrounding dust-chamber, the heavier particles falling to the floor of the same, and the lighter particles being carried by the draft created by the said blast up through the openings in the partition, out of the chimney C. The partition B is made in order to catch such heavier particles of dirt, &c., as rise in the first instance, and then, getting out of the upward current of air, or from other causes, fall; but this may be dispensed with, if desired. Moreover, if the draft depended on to remove the dust in the chamber A is found insufficient, I do not deem it beyond the spirit of my invention to increase the same by placing in or near the chimney an exhaust-fan.

If desired, I do not deem it beyond the scope of my invention to substitute for the series of spikes on the cylinder a spiral flange running from end to end to the same, with or without lateral perforations therein; or, if preferred,

the cylinder may be free of either spikes or spiral flange. In this event, however, it is apprehended the shoddy will not be as thoroughly agitated and cleansed.

5 There are many changes which may suggest themselves in the matter of design and construction; but these, if they do not accomplish a departure from the spirit of my invention, I consider as immaterial.

10 What I claim as new, and desire to secure by Letters Patent, is—

1. The combination, with the revolving cylinder D, perforated shell D', surrounding the same, and the exit-pipe E, of the blast-pipe e, supplying picked rags between said cylinder and perforated shell, all arranged substantially as herein set forth.

2. In a shoddy-purifying machine, the combination of a revolving cylinder having spikes, a perforated shell surrounding the same, a blast-pipe supplying picked rags between said cylinder and perforated shell, an exit-pipe leading from the space between the cylinder and shell opposite to the end where said blast enters, and a dust-chamber having suitable outlets, in which the whole is placed.

In testimony that I claim the foregoing as my own I have hereunto affixed my signature in presence of two witnesses.

EDWIN M. HULSE.

Witnesses:

JAMES H. COYNE,

FRANK D. THOMASON.