

(No Model.)

W. J. McGALL.
FUR SEPARATING DEVICE.

No. 550,130.

Patented Nov. 19, 1895.

Fig. 1.

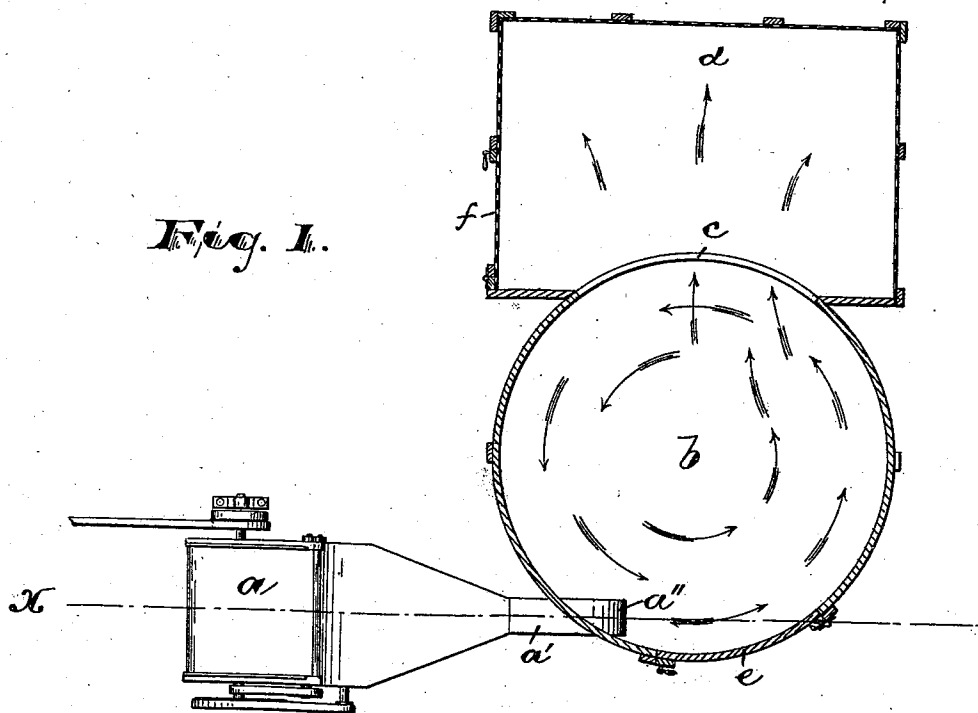
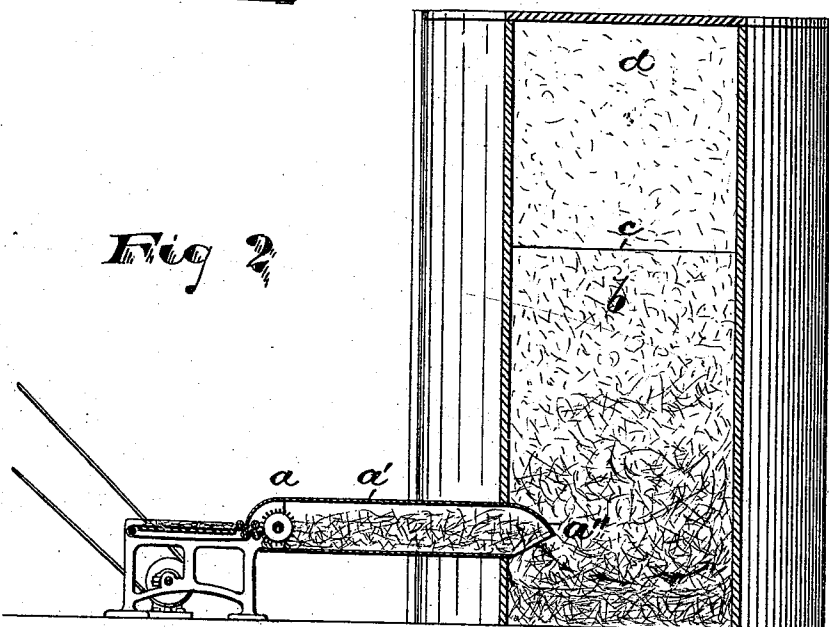


Fig. 2.



Witnesses

Inventor

Robert Sollberger,
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By Drake & Co. Attys.

UNITED STATES PATENT OFFICE.

WILLIAM J. MCGALL, OF ORANGE, ASSIGNOR TO LUDOVIC MCGALL, OF WEST ORANGE, NEW JERSEY.

FUR-SEPARATING DEVICE.

SPECIFICATION forming part of Letters Patent No. 550,130, dated November 19, 1895.

Application filed September 18, 1894. Serial No. 523,336. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM J. MCGALL, a citizen of the United States, residing at Orange, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Fur-Separating Devices; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as 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.

This invention relates to certain improvements in that class of devices for separating coarse furry fibers, technically known in the art of felt-making as "hair," from the finer fibers, known as "fur," represented by the machine shown in my cotemporaneous application of even date of filing herewith, serially numbered 523,335, the object of the present features of improvement being to treat a lighter grade of mixture and to obtain specific advantages, some of which may be referred to hereinafter in connection with the description of the working parts.

The invention consists in the improved device for separating fur from hair in the art of felt-making and in the arrangements and combinations of parts, substantially as will be hereinafter set forth, and finally embraced in the clauses of the claim.

Referring to the accompanying drawings, in which like letters indicate corresponding parts in each of the figures, Figure 1 is a plan, parts being in horizontal section, of the separating device; and Fig. 2 is a section of the same taken at line *x*.

In said drawings, *a* indicates a suitable picker of any ordinary construction adapted to take the mixture as it is received in bales and fed to said picker by the attendant and to loosen up the fibers or so separate them as that they are blown by the rotary picker-cylinder as individual fibers into a circulating-chamber, the rear duct or passage *a*, where it enters the said circulating-chamber, being bent down or provided with a downwardly-inclined hood *a''*, by means of which the air is turned toward the floor. The said circu-

lating-chamber *b* is round in plan, so as to impart rotary motion to the air-currents entering from the picker, the duct *a'* being tangentially disposed, as shown in Fig. 1, so that the walls of the chamber will produce the desired circuitous motion. The loose mixture of hair and fur entering the circulating-chamber and circulating therein with a slow movement gives opportunity for the heavier particles or fibers of the mixture to gravitate to the floor, while the lighter particles, still floating in mid-air, are carried by the slow current over the partition *c*, separating the lower part of said chamber *b* from the settling-chamber *d*, the upper parts of the two said chambers *b* and *d* being in open communication. The settling-chamber is partly inclosed with wire-netting, so that the air forced first into the circulating-chamber and from thence into the settling-chamber is allowed to escape without carrying the fur out of said settling-chamber. The heavier hair and lighter fur after gravitating to the floors of their respective chambers may be removed therefrom through doors *e* and *f*.

In operating the device the mixture, heretofore a very cheap and, so far as the felt-making art is concerned, a waste product, is taken from the bales and fed to the picker *a*, where the fibers are loosened or picked apart and blown by the gentle air-current produced by the rotary picking-cylinder through the duct *a'* into the circulating-chamber, the air-current containing the floating fibers being bent down toward the floor and beginning a rotary course, because of the shape of the chamber *b* and the tangential relation of the supply-duct. The circulating-chamber being closed, so that there can be no escape of air therefrom except over the partition *c* into the settling-chamber, the air is forced upward, carrying with it the light fur, which finally is carried into said settling-chamber, where it gravitates and can be removed from time to time. The heavier hair, however, remains at the bottom of the circulating-chamber, where it is more or less agitated by the inflowing air, so that what may be termed a "sifting process" is carried on and the fur blown outward therefrom and upward to the opening into the settling-chamber.

Having thus described the invention, what I claim as new is—

1. The combination with the picker, of a duct, *a'*, connecting with said picker and conveying the fur therefrom, a round circulating chamber, the duct, *a'*, being tangential thereto and a settling chamber partly partitioned off from said circulating chamber, the walls of which settling chamber are of netting, substantially as set forth.
2. The combination with the picker, of a duct, *a'*, a round circulating chamber disposed tangentially with relation to said duct and having a door by which the settled hair is removed, and a settling chamber, a low partition serving to partly separate said chambers, said settling chamber having a netted inclosure to allow a free outflow of air and having doors by which the settled fur is removed, substantially as set forth.
3. The combination with the picker and a duct, *a'*, of a circulating chamber receiving said duct, the end of said duct being turned

downward toward the floor of the circulating chamber at the entrance thereto and directed toward one side of said chamber to occasion a circuitous flow of air horizontally, and a settling chamber partly separated from the circulating chamber by a low partition and inclosed by means admitting an outflow of air but retaining the fur, and said low partition, substantially as set forth.

4. The combination with the picker having a tangential duct, with a downwardly turned end, of a round circulating chamber and a settling chamber in communication therewith, said settling chamber being partly inclosed with netting, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 13th day of September, 1894.

WILLIAM J. MCGALL.

Witnesses:

CHARLES H. PELL,
LOUISE L. BROWNE.