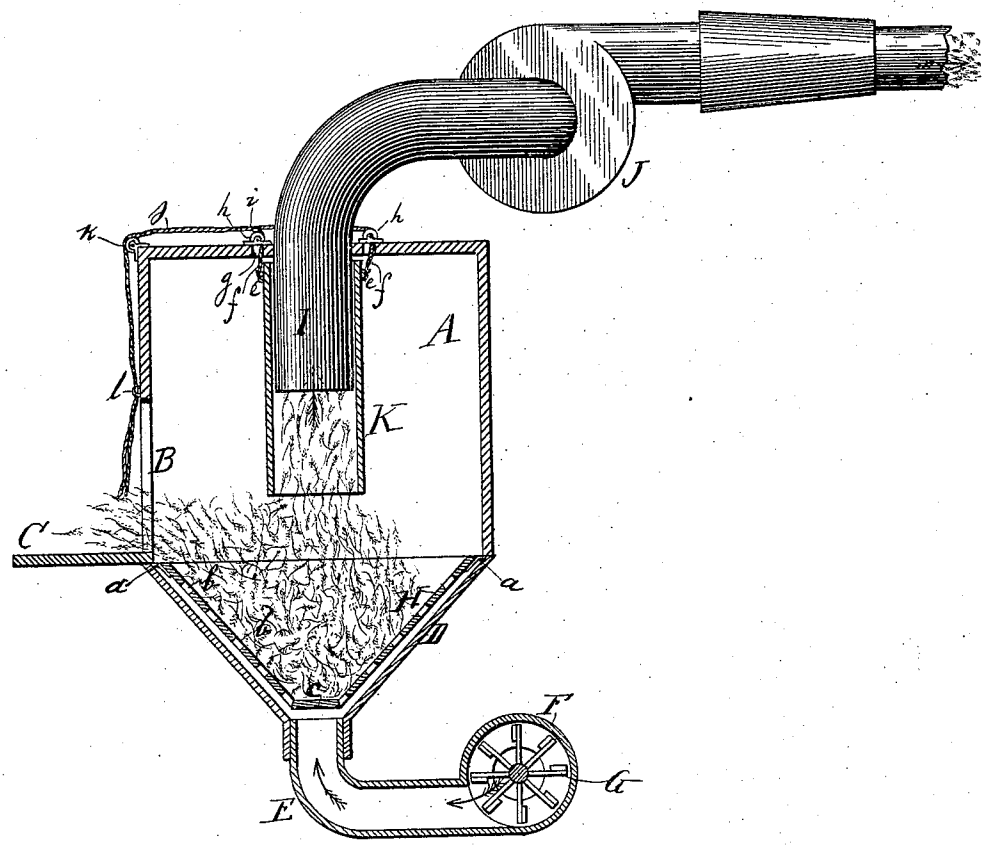
(No Model.)

J. BAUR.

FEATHER RENOVATOR.

No. 287,496. Patented Oct. 30, 1883.



Witnesses.
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UNITED STATES PATENT OFFICE.

JOHN BAUR, OF CHICAGO, ILLINOIS.

FEATHER-RENOVATOR.

SPECIFICATION forming part of Letters Patent No. 287,496, dated October 30, 1883.

Application filed July 24, 1883. (No model.)

To all whom it may concern:

Be it known that I, JOHN BAUR, a citizen of the United States of America, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Feather Cleaning and Separating Apparatus, of which the following is a specification, reference being had therein to the accompanying drawing.

My invention relates to an improved feather separator and cleaner. The object it has in view is to so construct and arrange such an apparatus that feathers fed therein will be thoroughly agitated by the action of a suitable wind-fan, which, in conjunction with an exhaust or suction fan, serves to separate such feathers according to their size and weight, and at the same time free them from all impurities.

To the accomplishment of the above the invention consists of the novel construction and arrangement of certain of the parts employed, and in certain novel ccombinations of such parts, all as will be hereinafter fully described and claimed.

Reference will be made to the accompanying drawing, which forms part of this specification, and in which is represented a sectional view of the apparatus, with certain parts of the same shown in full.

A represents a box or receptacle of any desired size and form. At one side it is provided with an opening, B, through which the feathers are fed to its interior, and also with a suitable feeding-table, C.

Receptacle A is provided with a hopper or funnel shaped bottom, D, provided at its lower extremity with an opening, into which one end of a pipe, E, is inserted, said pipe being connected to a fan-casing, F, and serving as a channel for conducting air from a fan, G, to the interior of receptacle A. Fan G is mounted on a suitable shaft, and is driven by any suitable means.

Formed upon the interior of receptacle A, and at or about the upper edge of bottom D, is a flange, *a*, upon which the upper end of a hopper or funnel shaped disk, H, rests, said flange being so situated that there will be an open space, *b*, left between disk H and bottom D. At its lower extremity disk H is made solid, as at *c*, and upon its sides is provided with perforations *d*, through which air from fan G is forced into the interior of receptacle A.

In the top of receptacle A there is formed an opening, through which one end of a pipe, I, is inserted, said pipe being provided at the point shown with a suction or exhaust fan, J, and having connection at its opposite end with any suitable chamber, into which the lighter feathers are discharged, as will be explained.

That end of pipe I which is inserted through the top of receptacle A extends down a short distance within said receptacle, and is inclosed within a pipe, K, now to be described.

Pipe K has formed near its upper edge suitable eyes or hooks, *e*, to which are secured the ends of cords *f f*, said cords passing through openings *g g* in top of receptacle A, and over pulleys *h h* to a point, *i*, where they are joined, and form a single cord, *j*, which in turn is passed over a pulley, *k*, and through an eye, *l*, the end of said cord being thus brought within easy reach of the operator. Pipe K is thus suspended at or about the center of the interior of receptacle A, and is capable of being raised or lowered, so as to bring its lower end nearer to or farther from the feathers fed into said receptacle.

The operation of the apparatus is as follows: Feathers of different sizes and in their unpurified condition are fed into receptacle A and fall upon the perforated hopper-shaped disk H. Motion is then imparted to fan G, and the air from said fan is carried through the perforations in disk H and brought into contact with the feathers on said disk. By the action of the air thus brought in contact with the feathers they are thoroughly shaken up, and the smaller and lighter ones forced up, and by the action of suction-fan J are drawn through pipes K and I and past said fan J into a suitable chamber, where they are collected. The larger and heavier feathers drop upon the disk H and settle on the solid portion *c* of said disk, as also do any foreign substances.

The position of pipe K, which is suspended as described, may be regulated by the operator. The object of having this pipe thus suspended and capable of vertical adjustment is to regulate the size of feathers to be drawn therethrough by suction-fan J. The nearer the

lower end of said pipe is brought to disk H the larger the feathers that will be drawn therethrough, and vice versa.

Any suitable covering or door may be provided for opening B during the operation of the apparatus, to prevent the escape of feathers therethrough.

I am aware that an apparatus has been used for drying grain in which a powerful steam-blast has been used for drawing air through the apparatus; but I disclaim any such construction.

Having described my invention, what I claim as new therein, and that for which I desire to secure Letters Patent, is—

1. Receptacle A, provided with hopper-shaped bottom D and perforated hopper-shaped disk H, in combination with fan G, pipe I, and suction-fan J, said fan arranged to draw the lighter feathers through the pipe I and discharge them, as described and shown.

2. The receptacle A, constructed as described, in combination with fan G, adjustable pipe K, pipe I, and suction-fan J, as described and shown.

3. The pipe K, provided with means for adjusting it, in combination with pipe I, suction-fan J, and casing A, as described and shown.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN BAUR.

Witnesses:
M. J. CLAGETT,
R. G. SCHMID.