

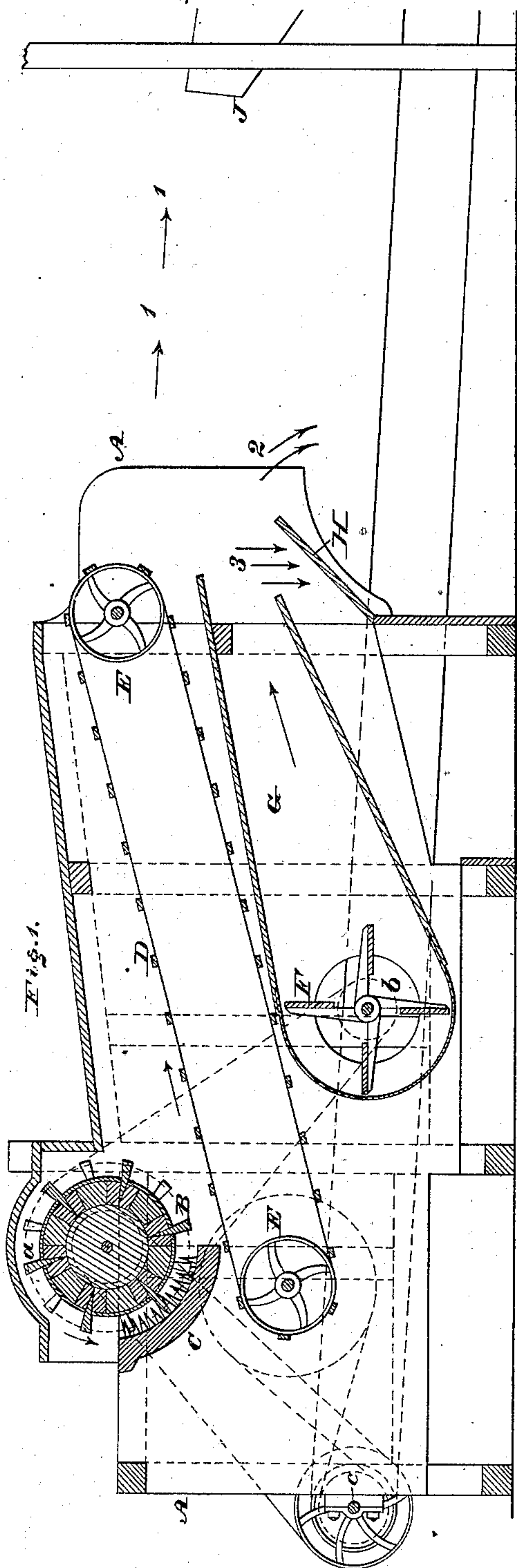
(No Model.)

J. B. DE YOUNG.

MACHINE FOR DISINTEGRATING CORN HUSKS, &c.

No. 254,807.

Patented Mar. 14, 1882.



WITNESSES:

W. P. Grant,
W. F. Kircher

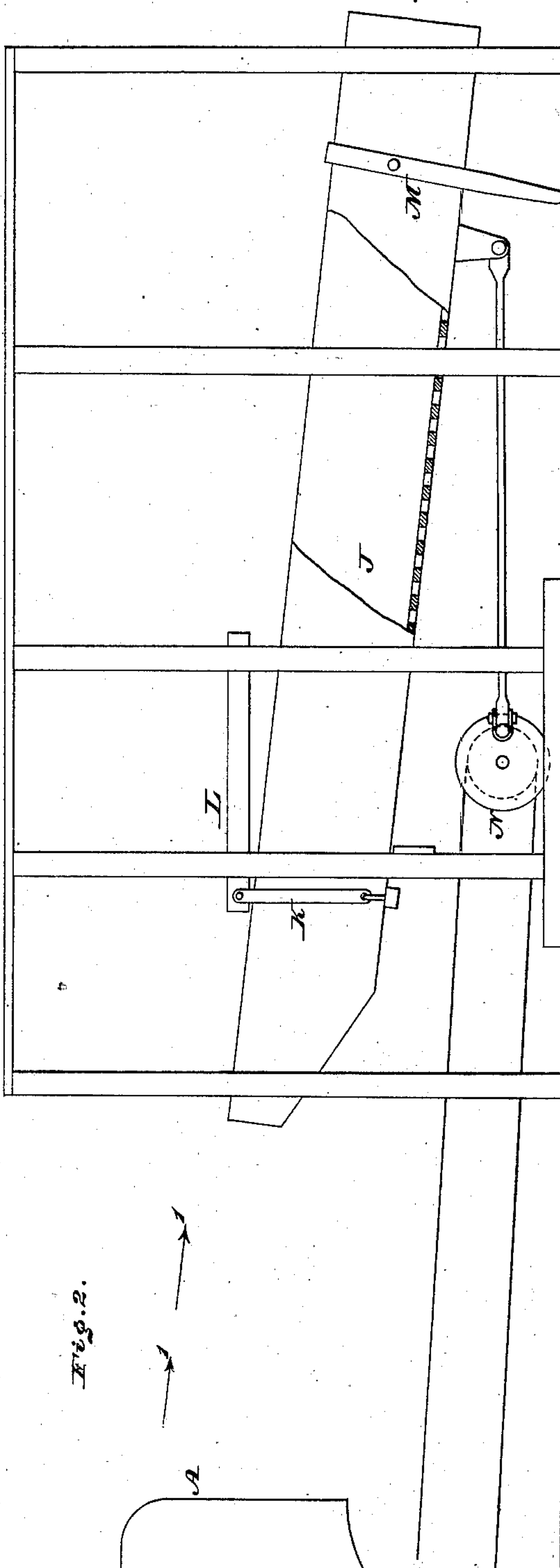


Fig. 2.

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JOSEPH B. DE YOUNG, OF PHILADELPHIA, PENNSYLVANIA.

MACHINE FOR DISINTEGRATING CORN-HUSKS, &c.

SPECIFICATION forming part of Letters Patent No. 254,807, dated March 14, 1882.

Application filed February 8, 1882. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH B. DE YOUNG, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Machines for Disintegrating Corn-Husks, &c., which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 is a vertical section of a portion of the machine embodying my invention. Fig. 2 is a side elevation, partly broken away, of another portion thereof.

Similar letters of reference indicate corresponding parts in the two figures.

My invention consists of a machine for disintegrating corn-husks, formed of a toothed cylinder, a toothed concave, a conveyer, and a fan or blower, whereby the husk is easily, quickly, and thoroughly disintegrated, and the disintegrated material is conveyed from the cylinder and concave and subjected to a blast of air, so that the valuable fiber, the stubs, and the grains of corn and other refuse are directed to different localities or places of collection.

It also consists of a shaker of peculiar construction.

Referring to the drawings, A represents the casing of the machine, near one end of which is mounted a cylinder, B, the periphery of which is studded or toothed, as at *a*.

C represents a toothed concave, which is secured to the casing A and located beneath the cylinder B, the teeth of the cylinder alternating with those of the concave.

D represents an endless conveyer, which is passed around and supported on drums or pulleys E E, which are mounted on the casing A, and so located that the conveyer is beneath the cylinder and concave.

On the casing A is mounted a fan or blower, F, which is located below the conveyer D and inclosed in an air-chest, G, which is secured to the casing, the sides of which have openings or an inlet, *b*, which communicate with said chest. The end of the chest opposite to the fan is open, and forms an air-outlet, which is below the conveyer D at the back of the machine. To the casing, below the end outlet of the chest G, is secured an inclined chute, H, which is located

back of said outlet end of the chest, and is separated therefrom.

J represents a shaker, consisting of a box or case having a reticulated or slotted bottom, one end being suspended from and pivoted to swinging arms K, which depend from a frame, L. The other end of the shaker is sustained on and pivoted to legs M, which are adapted to rest on the ground or floor of the apartment in which the machine is located. Reciprocating motions are imparted to the shaker by means of a crank-wheel, N, to which is connected one end of a pitman or rod, P, the other end of which is pivoted to the body of the shaker.

The cylinder B, pulleys E, fan F, and crank-wheel N are driven by suitable belting or gearing from the main shaft, which, in the present case, is shown at *c*, at the front of the machine.

It will be seen that when the machine is set in motion and the husks are fed to the cylinder B the teeth of the latter draw the husks in between the cylinder and concave, the teeth of the latter then serving to hold the husks as the teeth of the former tear through the same, the effect of which is to cause a thorough disintegration of the husks. The husks, grain, (if any,) refuse, and resultant fiber then leave the concave and drop on the conveyer D, by which they are carried to the back of the machine, where, as they leave the conveyer, they are subjected to a powerful blast of air from the chest G, the effect of which is to blow the fiber the greatest distance from the casing A, as shown by the arrow 1. Stubs, sticks, &c., drop at or about the point shown by the arrows 2, and grains of corn and other refuse fall on the chute H, (see arrows 3,) and are thus directed to a space or receptacle below said chute, it being noticed that the fiber, stubs, and grain or refuse are collected in different places separate from each other. As the fiber is blown from the casing it reaches the shaker and falls on the bottom thereof, where it is subjected to the motion of the shaker, the effect whereof is to separate broken pieces of the fiber, dust, &c., from the valuable fiber itself, the latter flowing from the lower end of the shaker, and the former dropping through the open bottom, so that each part may be removed independently of the other.

It will be seen that I produce a simple, in-

expensive, compact, and serviceable machine for the purpose intended. The wind from the chest cannot reach the disintegrated husks and scatter them within the casing or return
5 them to the concave, since the top wall of the chest is closed and extends under the conveyer, the open end of the chest being at the back of the conveyer and casing, as has been stated. Furthermore, should any husks be accidentally
10 held by the conveyer and carried back, they cannot clog the fan, owing to the protection afforded the latter by the inclosing walls of the chest. The shaker receives the fiber or disintegrated husk without being the recipient
15 of the stubs or refuse, the latter falling on the ground or floor, or adapted to be collected in suitable boxes, bags, &c., in either case in front of the shaker, while the cleaned fiber or disintegrated husk is discharged at the oppo-
20 site end or rear of the shaker, whereby there is no intermingling of the cleaned husk and refuse.

Having thus described my invention, what I claim as new, and desire to secure by Letters
25 Patent, is—

1. In a disintegrating-machine, the toothed cylinder, toothed concave, endless conveyer, fan, and wind-chest, combined and operating substantially as and for the purpose set forth.

2. The disintegrating-machine formed of a 30 toothed cylinder, toothed concave, endless conveyer, a fan, and a wind-chest, which latter extends under the conveyer and has its outlet adjacent to the back of said conveyer and below the same, substantially as and for the pur- 35 pose set forth.

3. The disintegrating-machine having a conveyer, D, and wind-chest G, and a chute, H, which is secured to the casing at the back of the machine below the outlet of said chest, sub- 40 stantially as and for the purpose set forth.

4. The disintegrating-machine consisting of the toothed cylinder, toothed concave, endless conveyer, fan, wind-chest, and shaker, the lat- 45 ter being separated from the casing of the other parts, whereby the fiber or disintegrated husk is directed to the shaker and discharged clean at one end thereof, and the stubs and refuse are collected at places in advance of the other end of said shaker, substantially as set 50 forth.

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Witnesses:

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