W. S. Colwell,

Sawdust Conveyor.

No. 98,037. Patented Dec. 21. 1869.

Fig 1.

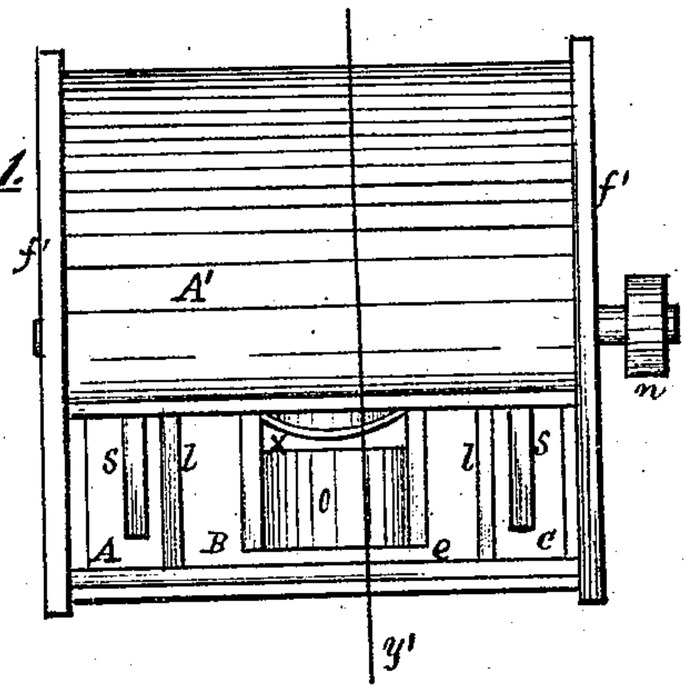


Fig 2.

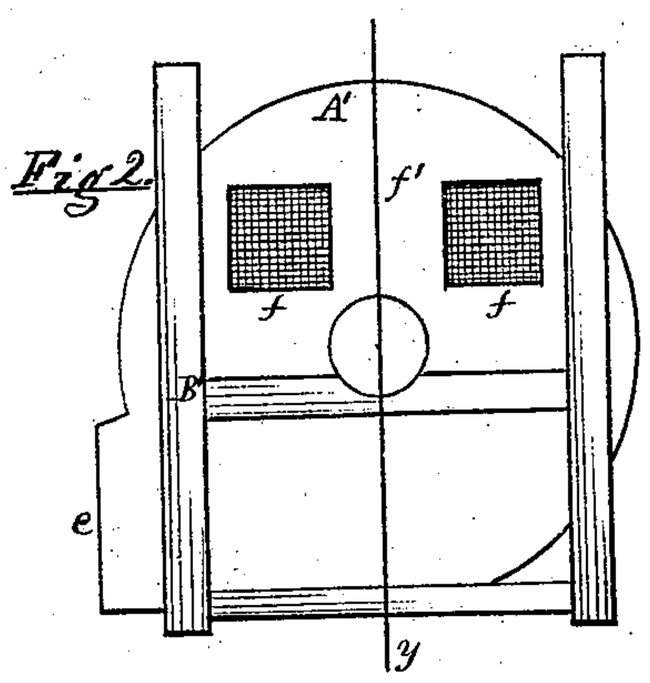


Fig 3.

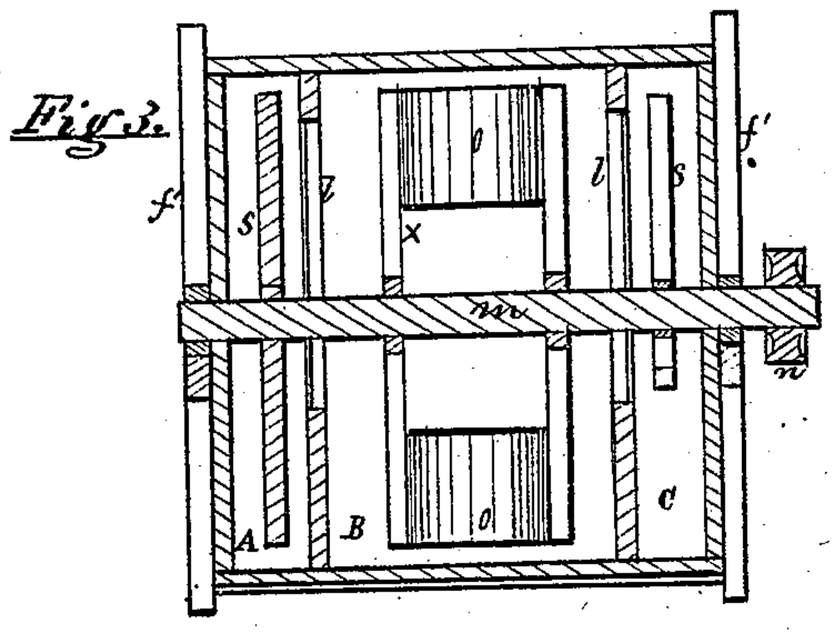
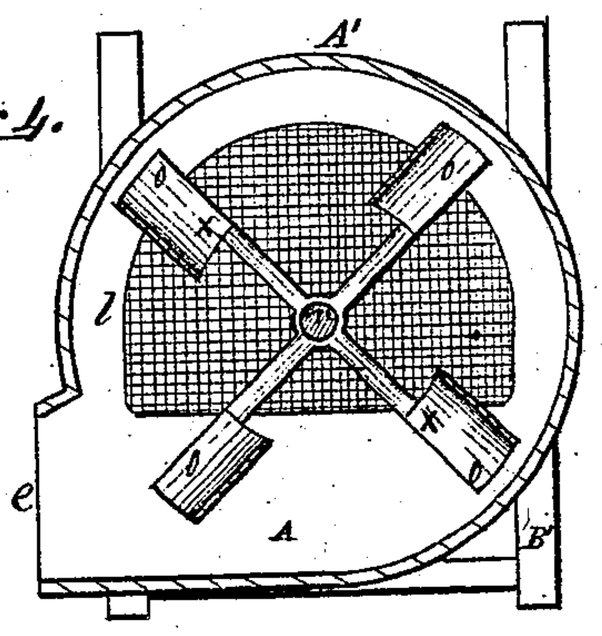


Fig 4.



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WILLIAM S. COLWELL, OF PITTSBURG, PENNSYLVANIA.

Letters Patent No. 98,037, *dated December* 21, 1869.

IMPROVEMENT IN DEVICE FOR CONVEYING SAWDUST FROM SAWS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, WILLIAM S. COLWELL, of Pittsburg, in the county of Allegheny, and State of Pennsylvania, have invented a certain new and useful Device for Conveying Sawdust, &c., from Saws, &c.; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The nature of my invention consists in constructing a suction and forcing-fan or blower, with two or more chambers, which are separated by means of a perforated partition or partitions, and providing one or more of said chambers with a clearing-arm or arms, which are secured on and revolve with the fan-shaft, the whole being so arranged with relation to the fan, that sawdust and other refuse may be conveyed from the saw or other machinery into one of the chambers, and forced from it through a suitable channel to the place desired, without coming in contact with the wings of the fan or blower.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

In the accompanying drawings, which form part of my specification—

Figure 1 is a front elevation of my improvement in device for conveying sawdust, &c., from saws, &c.

Figure 2 is an end elevation of the same.

Figure 3 is a transverse section of the same, when cut through at line *y* of fig. 2.

Figure 4 is a transverse section of the same, when cut through at line *y'* of fig. 1.

In the accompanying drawings—

A' represents the case of the fan or blower.

B' represents the frame for the case.

m represents the fan-shaft, on which are secured the fan *x* and clearing-arms *s*.

The wings *o* of the fan *x* are curved, as shown in figs. 1, 3, and 4

By thus curving the wings *o*, the suction and forcing power of the fan or blower are greatly increased over the ordinary fan or blower.

The fan-chamber B is separated from the side or receiving-chambers A and C, by means of perforated partitions *l*, which may be made of heavy sheet-iron, provided with a large number of small perforations, or they may be made of net-work of small iron rods, or heavy wire.

The ends of the case A' are provided with openings, to which is connected a suitable conductor, for conveying the sawdust or other refuse from the saw or other machinery, into the chamber A, or into chambers A and C.

To the discharging-aperture *e* should be attached a suitable conductor, for conveying the sawdust or other refuse from the chambers A and C to the place desired.

As the construction and arrangement of my improvement in device for conveying sawdust, &c., from saws, &c., will readily be understood from the foregoing description, and by reference to the accompanying drawings, I will therefore proceed to describe its operation, which is as follows:

The sawdust or other refuse is drawn by the action of the fan *x*, through a suitable conductor, into the chambers A and C, and the action of the clearing-arms *s* will force the sawdust or other matter from the chambers A and C, into the conductor attached to the discharge-aperture *e*, and the fan *x* will, by its forcing-action, drive the sawdust through the conductor to the place desired.

The advantage of constructing a fan or blower with side chambers, and separating said chambers from the fan or blowing and conducting-chamber, by means of perforated partitions, consists in the protection of the fan or blower from being brought in contact with chips, blocks, and other heavy matter, which would "strip" the fan-wings, and endanger the persons or lives of those who may be working about or near the fan or blower.

I wish it clearly understood that I am aware that fans and blowers have been used for conveying sawdust from saws, and refuse from cotton-machinery, &c., therefore, I do not claim, broadly, a fan or blower for the purposes herein specified.

Having thus described the nature, construction, and operation of my improvement,

What I claim as of my invention, is—

1. A conducting, forcing, or ventilating-fan or blower, provided with chambers A, B, and C, fan *x*, and clearing-arms *s*, as herein described.

2. The openings *f*, in the ends *f''* of the casing A', and partitions *l*, arranged with relation to the fan *x* and discharging-aperture *e*, substantially as herein described, and for the purpose set forth.

3. The fan *x*, provided with wings, curved, substantially as herein described and for the purpose set forth.

4. A fan or blower, provided with a chamber or chambers, separated by means of a perforated partition or partitions from the fan or blower, or apparatus used as the suction and forcing-medium, substantially as hereinbefore described and for the purpose set forth.

W. S. COLWELL.

Witnesses:

J. J. JOHNSTON,

I. H. PHILLIPS.