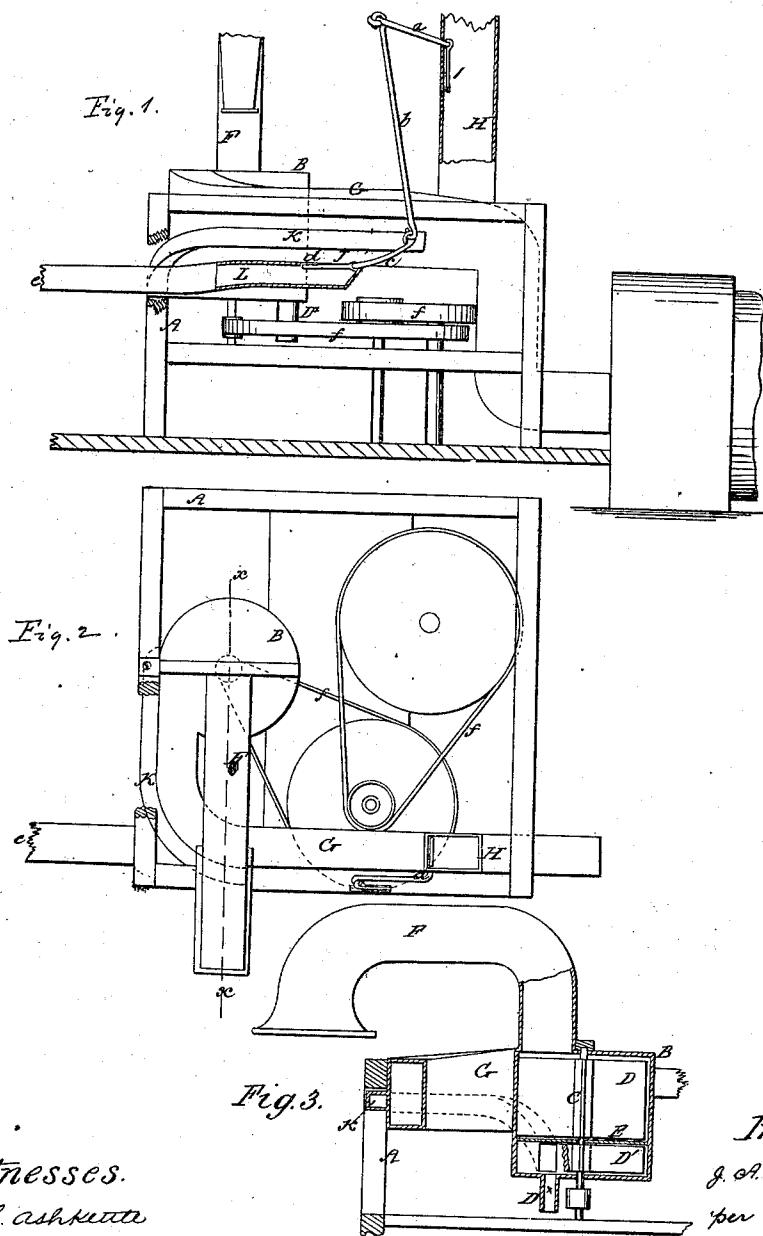


J. A. McCLELLAND.
 DEVICE FOR FEEDING SAWDUST, &c., TO FURNACES.
 No. 80,647. Patented Aug. 4, 1868.



Witnesses.

*W. B. Ashkettle
 Wm A Morgan*

Inventor.

*J. A. McClelland
 per Messrs
 Attorneys*

Keagle

United States Patent Office.

JAMES A. McCLELLAND, OF VERNON, INDIANA.

Letters Patent No. 80,647, dated August 4, 1868.

IMPROVEMENT IN DEVICE FOR FEEDING SAW-DUST, ETC., TO FURNACES.

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, JAMES A. McCLELLAND, of Vernon, in the county of Jennings, and State of Indiana, have invented a new and useful Device for Conveying Shavings and Dust from Planers and other Wood-Working Machines to Furnaces, or any other desired place; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side view of my invention, partly in section.

Figure 2, a plan or top view of the same.

Figure 3, a vertical section of the same, taken in the line *x x*, fig. 2.

Similar letters of reference indicate corresponding parts.

This invention relates to a new and useful device for conveying shavings, dust, &c., to furnaces, or any other desired place, and is designed more especially to be applied to wood-working machines, &c., for the purpose of effectually removing all dust and shavings from the same, and forces them into the furnace, if desired.

A represents a frame, which may be constructed in any proper manner to support the working parts, and B represents a cylindrical case, within which, on the same shaft C, there are placed two fans, D D', one above the other, and divided by a horizontal partition, E, as shown clearly in fig. 3.

The upper fan D is considerably larger than the lower one, D'. The latter is supplied with air through a tube, D^x.

F represents a curved spout, one end of which communicates with the upper part of the fan-case B, in which the fan D is enclosed, the other end of F extending down so as to be capable of being placed in such position with the machine to which it is applied as to suck up therefrom the shavings and dust as rapidly as they are made.

G is a spout, one end of which communicates with the upper part of the fan-case B. The spout G is curved, and its opposite end extends down and communicates with a furnace, as shown in red in fig. 1.

H is an air-escape pipe, which communicates with the spout G, and has a valve, I, in its upper part. The shaft or axis of this valve has a crank, *a*, at one end, to which a rod, *b*, is attached, the lower end of the rod *b* being connected to a crank, *c*, on the axis, a valve, J, in spout G.

K is a spout, one end of which communicates with the lower part of the fan-case B, which encloses the fan D', and the opposite end communicates with the spout G, back of the valve J, between it and the escape-pipe H, (see fig. 1.)

L is a spout, one end of which communicates with G, at *d*, when the valve J is open, the opposite end, *e*, of said spout being open.

The operation is as follows, viz:

Motion is given the fan-shaft C by belts or gearing arranged in any suitable way, and when it is designed to feed the shavings or saw-dust to the furnace, the valve J is closed over the opening *d*, and the valves I, in H, opened, as shown in fig. 1, both valves being adjusted simultaneously by actuating the rod *b*.

The fan D causes a suction-blast in F, and draws up from the planing or other machines the shavings and saw-dust into the upper part of case B, the fan expelling them through the spout G, direct into the furnace, the pipe H admitting of the escape of some of the air, so as not to obstruct or interfere with the draught of furnace.

When it is not desired to feed the furnace with the shavings or saw-dust, the valve J is opened and the valve I closed, and the shavings or saw-dust will be expelled through the spout L, at *e*, outside the building or shop.

During the time the shavings or saw-dust are expelled from spout L, the small fan D' forces a blast through the spout K, into G, and prevents any sparks being drawn up into G from the furnace.

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

1. The application of a suction and blast-fan to planing, circular saw, sand-belt, or other wood-working machinery, when arranged in the manner shown, or in an equivalent way, to draw the shavings or saw-dust from the machine and feed them to a furnace or discharge them from the building or shop, substantially as set forth.

2. The arrangement of the two fans D D', spouts G K L F, and the valves I J, to operate substantially as and for the purpose specified.

3. The air-escape pipe H, in combination with the spouts G K L F, and valves J I, all arranged for joint operation, substantially as and for the purpose set forth.

JAS. A. McCLELLAND.

Witnesses:

C. W. MONTGOMERY,

J. E. McCLELLAND.