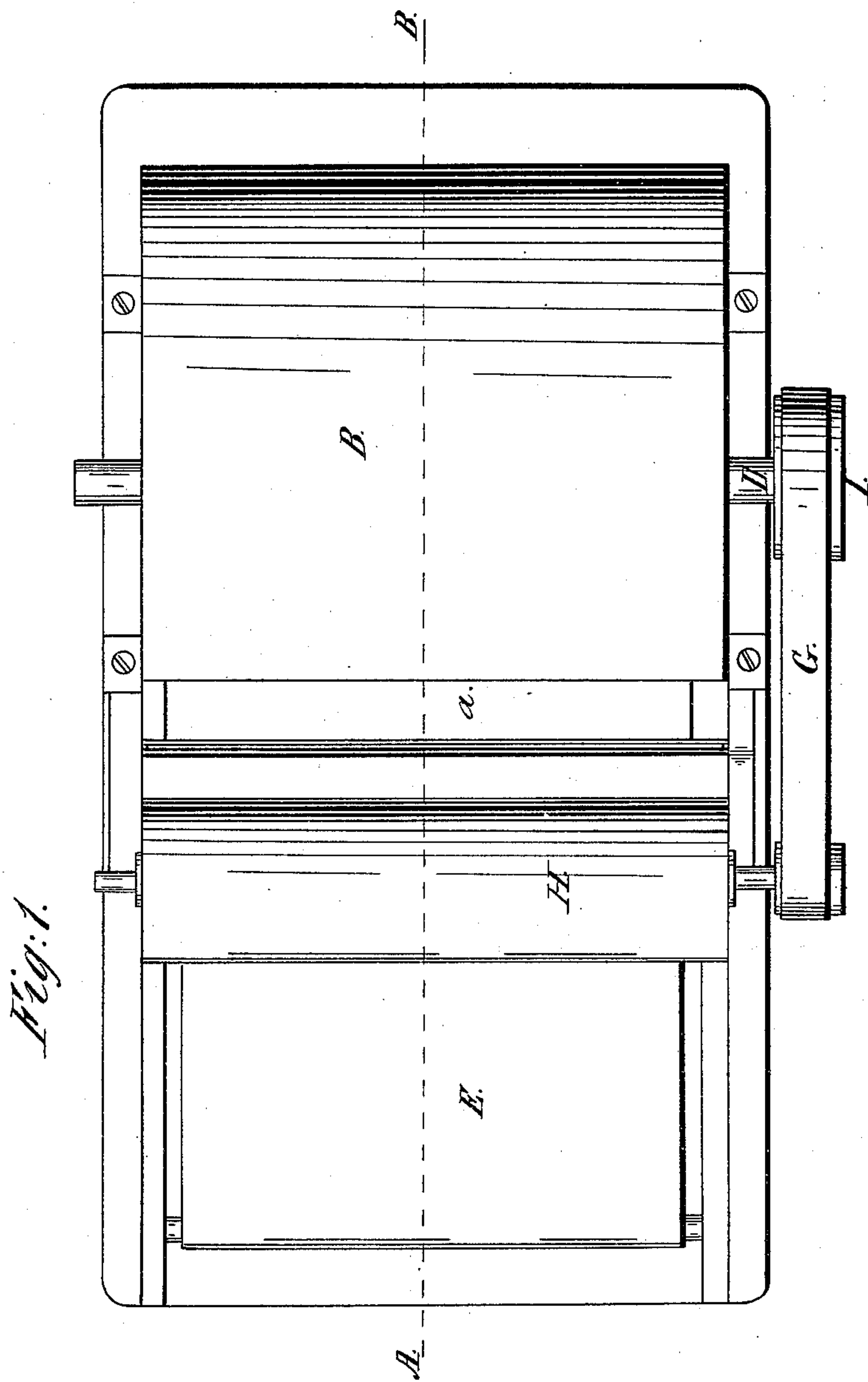


A.W. Johnson. Sheet 1. 3 Sheets.
Pulp Grinder

N^o 86,409. Patented Feb. 2, 1869.



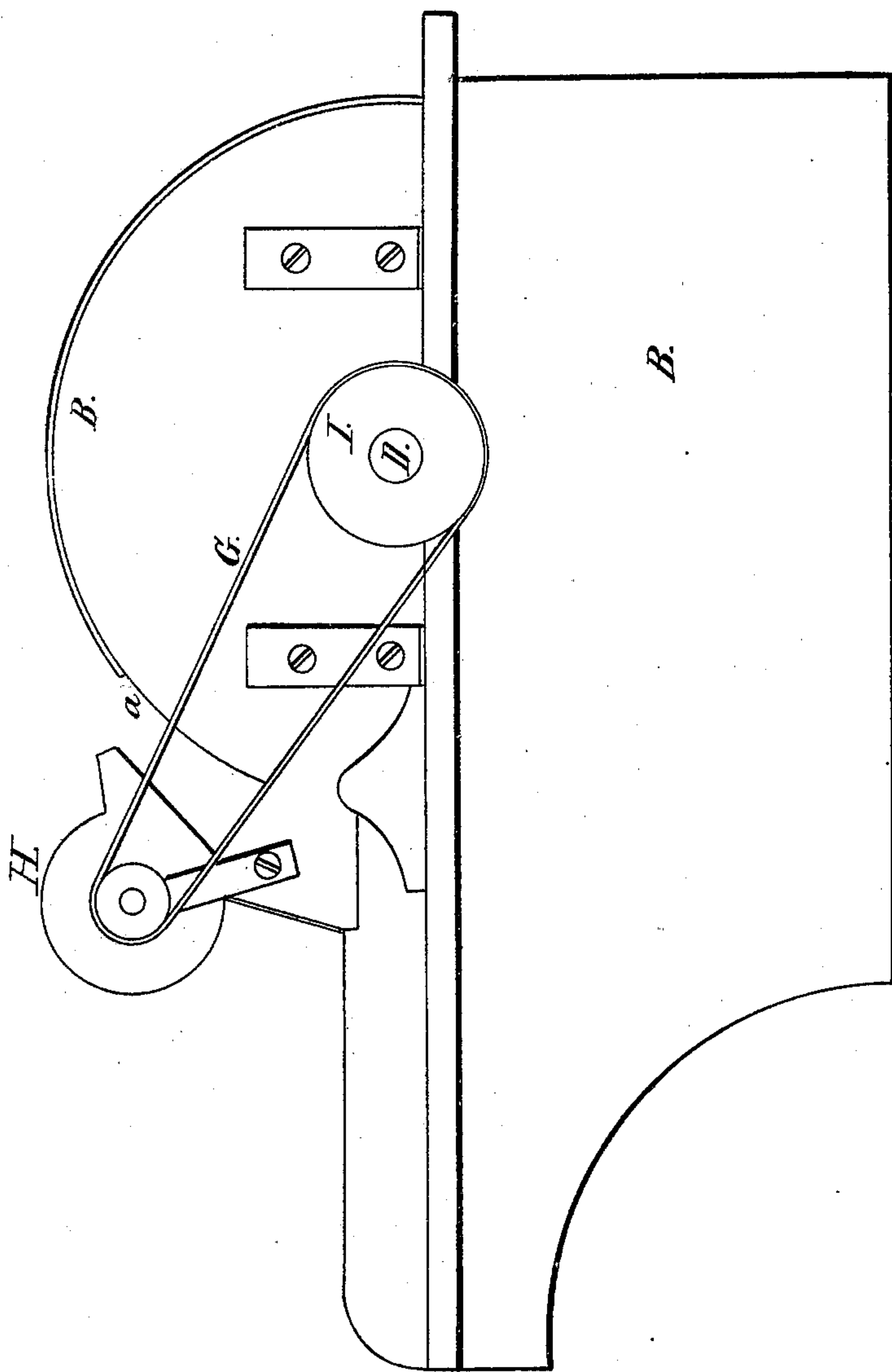
Witnesses.
Thos. H. Dodge.
D. L. Miller.

Inventor.
A. W. Johnson.

A. W. Johnson. Sheet 2, 3 Sheets.
Pulp Grinder.

N^o 86,409 Patented Feb. 2, 1869.

Fig. 2



Witnesses.

Thos. H. Dodge.

D. L. Miller.

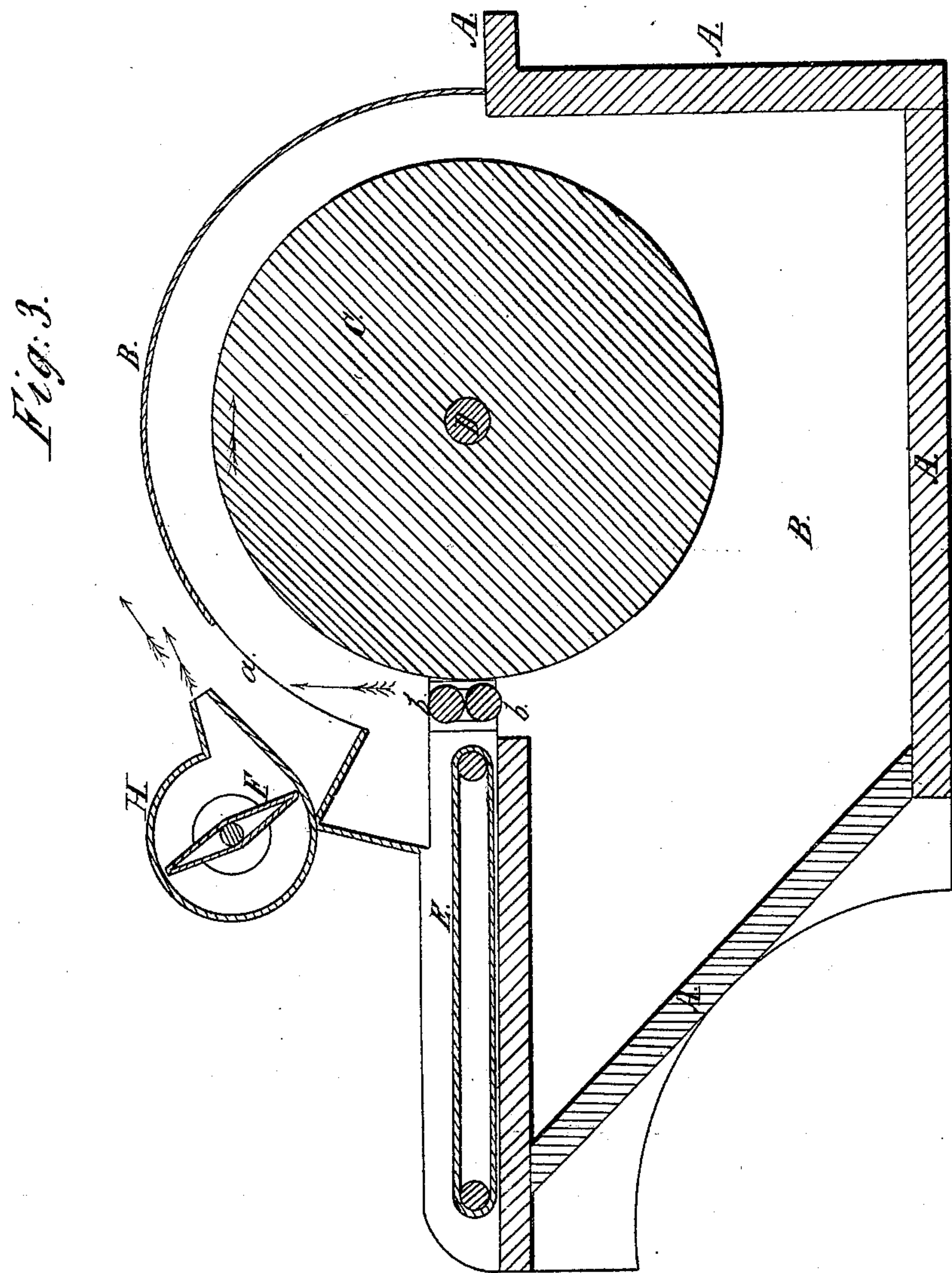
Inventor.

A. W. Johnson.

A. W. Johnson. Sheet 3. 3 Sheets.
Pulp Grinder.

N^o 86,409.

Patented Feb. 2, 1869.



Witnesses.

Thos. W. Dodge
D. L. Miller.

Inventor.

A. W. Johnson



A. W. JOHNSON, OF WORCESTER, MASSACHUSETTS.

Letters Patent No. 86,409, dated February 2, 1869.

IMPROVED MACHINE FOR WORKING WASTE FIBROUS STOCK

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

Know all men by these presents:

That I, A. W. JOHNSON, of the city of Worcester, county of Worcester, and Commonwealth of Massachusetts, have invented a certain new and useful Improvement in Machines for Working Waste Fibrous Stock; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 represents a top or plan view of so much of a machine for working waste fibrous stock as is necessary to illustrate my invention;

Figure 2 represents an end view of the same; and

Figure 3 represents a section on line A B, fig. 1.

To enable those skilled in the art to which my invention belongs, to make and use the same, I will proceed to describe it more in detail.

As heretofore constructed, machines for working waste fibrous stock, which results in the manufacture of paper, textile fabrics, and like materials, have been defective, for the reason that the hard ends and bunches thrown out by the working-cylinders were liable to fall or slide back into the machine, and be deposited with the finished stock.

The nature of my invention consists in combining a fan with the working-cylinder, in such a manner that the hard ends and bunches which lodge or fall upon the top of the case of the working-cylinder, will be blown off, and thus be prevented from falling or sliding back into the machine.

In the drawings—

A A A A are the frame-pieces, and B, the casing.

C is the working-cylinder, which is to be filled with spikes or teeth, in the usual manner, its shaft or journal, D, being properly supported in bearings on the side-pieces A of the main frame.

As the machines have been made heretofore, the upper part of the case B has been left open, as shown at *a*, to allow of the escape of hard ends, bunches, and sticks.

The stock, being fed to the endless apron E, is carried forward to the feed-rollers *b b*, which feed it slowly and uniformly to the working-cylinder C, the teeth of

which tear and work the stock up very finely, as fast as it is fed in by the rolls *b b*.

As cylinder C moves in the direction indicated by the red arrow, the hard ends, bunches of threads, lumps, and other hard substances, will be thrown up through the opening *a* of case B, and should they fall back upon the top of case B, they will be blown back, and prevented from falling or being drawn in upon the working-cylinder C, by the wind from fan F, which is arranged forward of the opening *a* in case B, substantially as shown in the drawings.

I prefer to run fan F by a straight belt, G, owing to the great rapidity at which it is run. It would probably deliver the wind with less friction in the fan-case H if the belt were crossed, but I have found from practice that it is better to run the belt straight. By cutting a hole in the lower part of the case B, the stock can be blown through a box, into a room prepared for the purpose, as fast as it leaves the cylinder C.

Those skilled in the art to which my invention belongs, will readily appreciate the advantage gained by my improvements.

The stock, when blown from the case B, is free from all hard ends, bunches, and other similar substances, and can be carded without injury to the teeth of the cards.

Belt G may be driven by a pulley, I, on the end of shaft D. The feed-rolls *b b* are to be driven in the usual manner; therefore the mechanism has not been shown.

Having described my improved machine for working waste stock,

What I claim therein as new, and of my own invention, and desire to secure by Letters Patent, is—

The combination and relative arrangement, with the feed-rolls *b b*, cylinder C, and case B, having an opening, *a*, of the fan F, substantially as and for the purpose set forth.

A. W. JOHNSON.

Witnesses:

THOS. H. DODGE,
D. L. MILLER.