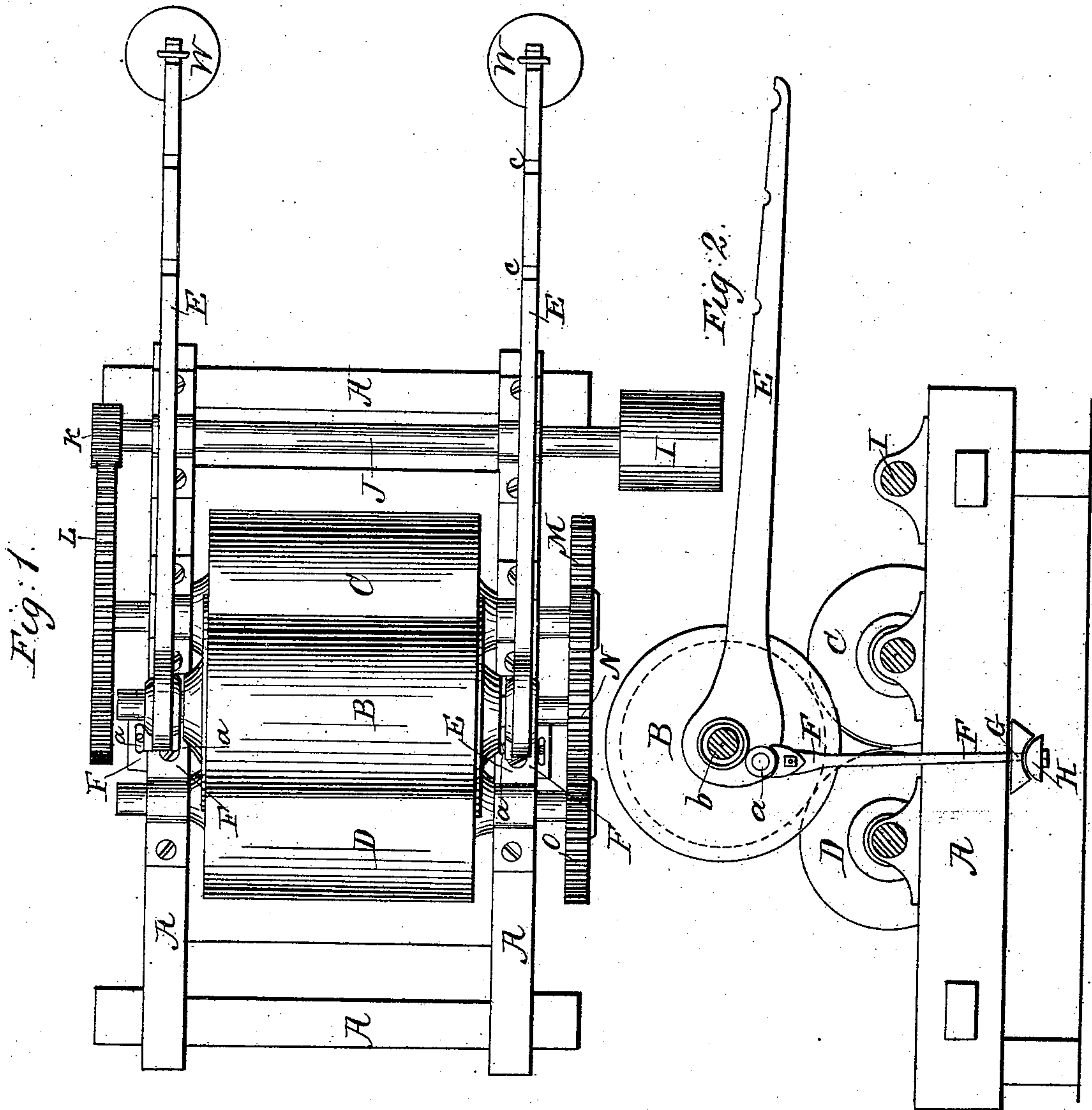


N. B. CARR.  
Sugar Cane Mill.

No. 54,293.

Patented May 1, 1866.



Witnesses.

E. P. Wheeler  
Geo. Scott

Inventor.

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# UNITED STATES PATENT OFFICE.

NATHAN B. CARR, OF MADISON, WISCONSIN.

## IMPROVEMENT IN SUGAR-CANE MILLS.

Specification forming part of Letters Patent No. 54,293, dated May 1, 1866.

*To all whom it may concern:*

Be it known that I, NATHAN B. CARR, of Madison, in the county of Dane and State of Wisconsin, have invented a new and useful Improvement in Sugar-Cane Mills; 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, and the letters and figures marked thereon, which form part of this specification.

My said invention relates to that class of cane-crushing mills in which the rollers are arranged horizontally; and it consists in a novel mode of securing the adjustability of the upper roller, to adapt the mill to the varying size of the canes by arranging the bearings of said upper roller in suitable boxes in one end of weighted levers whose fulcrums are so arranged that the weights upon the levers press the upper roller down upon the lower rollers, while at the same time it readily yields to the passage of the canes and adapts the mill to the varying size of the same.

To enable those skilled in the art to understand how to construct and use the same, I will proceed to describe the same with particularity, making reference in so doing to the aforesaid drawings, in which—

Figure 1 represents a plan or top view of my invention; and Fig. 2 a side elevation thereof, with the gear-wheels removed.

Similar letters of reference in the different figures denote the same parts of my invention.

A represents the frame of the mill, supporting in suitable bearings the two lower rollers, C D, as shown. The upper roller rests upon the lower rollers, and has its bearings in one end of the levers E E, which are provided at *a a* with lugs or projections, whereunto are attached, as shown, the rods or bars F F, which pass down upon each side of the frame, timbers, as shown, being secured, by the nuts indicated, to the curved-faced blocks G H,

through which they pass, passing through a slot in G, so as to allow the upper end of said arms F to have a slight oscillating movement, which is facilitated by the curved faces of the aforesaid blocks G H, which permit a corresponding motion to the block H. It is obvious that this oscillating movement would be permitted without the employment of the blocks G and H, as the ends of F might be fastened by a single rod passing transversely beneath the frame A, which would allow an oscillating motion as desired; but in practical machines I prefer to have some such provision as that herein shown to facilitate such movement.

The weights W may be suspended from the levers at any point *c*, according as a greater or less degree of pressure is desired.

From the relative positions of the bearings *b* of the upper roller and the point at which the lugs *a a* are attached to the lever it is obvious that the effect of the weights is to bring the upper roller down upon the roller C, while from the provision to allow an oscillating movement to the arms F F, as aforesaid, the pressure is also brought upon the roller D.

Having described my invention, I will now specify what I claim and desire to secure by Letters Patent:

1. Providing the levers E, which have suitable boxes for the journals of the roller B, with an oscillating fulcrum, substantially as and for the purposes herein specified.

2. The arrangement of the roller B, the levers E, the oscillating fulcrums F, and frame A, when constructed and operating substantially in the manner and for the purposes described.

NATHAN B. CARR.

Witnesses:

STEPHEN YOUNG,  
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WALTER B. DAVIS.