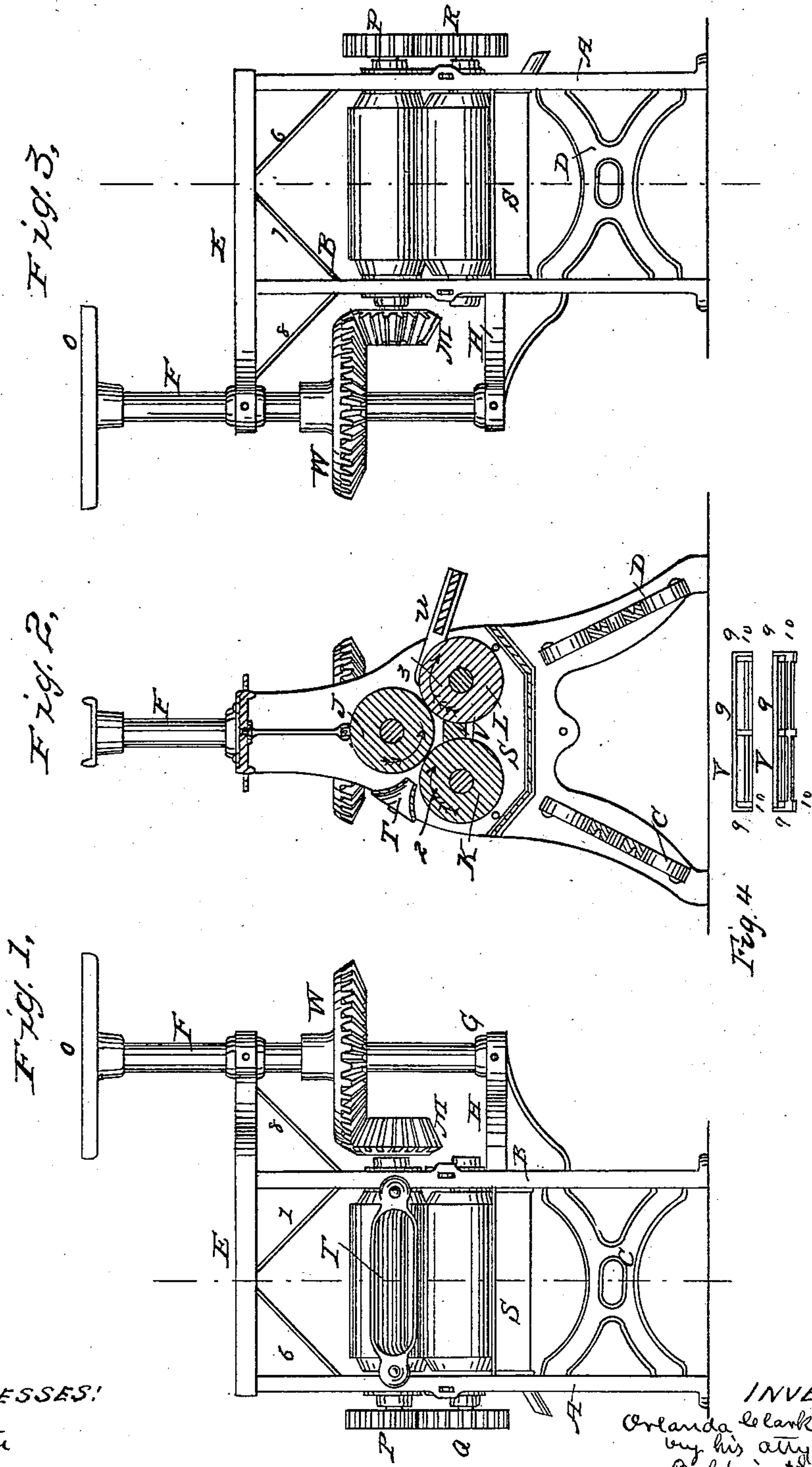


O. CLARKE.  
Cane Mill.

No. 61,516.

Patented Jan. 29, 1867.



WITNESSES:  
J. I. Payton  
Theodore Long -

INVENTOR:  
Orlando Clarke  
by his attys  
Baldwin & Son

# United States Patent Office.

ORLANDO CLARKE, OF ROCKFORD, ILLINOIS, ASSIGNOR TO SELF AND ISAAC UTTER, OF SAME PLACE.

*Letters Patent No. 61,516, dated January 29, 1867; antedated January 18, 1867.*

## IMPROVEMENT IN SUGAR-CANE MILLS.

*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, ORLANDO CLARKE, of Rockford, in the county of Winnebago, and State of Illinois, have invented a new and useful Improvement in Cane-Mills; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 represents a front elevation of my cane-mill.

Figure 2, a vertical section through the same.

Figure 3, a rear elevation thereof; and

Figure 4 is a view of the scraper showing its ribbed sides.

It is the object of my invention to support the rollers and driving-gear in a compact frame, under an arrangement that will prevent the rollers from clogging or the expressed juice from being wasted; and to this end my invention consists, first, in placing the rollers, driving-shaft and gear, and receiving-pan for the juice, in a compact frame that shall constitute the ends of the pan and support the driving-shaft in adjustable bearings; second, in a scraper that shall cleave the roller without obstructing the escape of the expressed juice.

To carry out the objects of my invention I construct a metallic frame of two side pieces, A and B, connected at the bottom by cross-braces C and D, secured by screws on the inner sides of the frame, and at top the sides A and B are connected by a strong plate, E, that projects on one side to give the upper bearing for the driving-shaft F, while this shaft rests in a step, G, at the bottom, supported by a bracket, H, secured to the side of the frame B. Thus arranged, and the bearings of the shaft and its step both being adjustable, it is manifest any slight inequalities in the shaft can be readily adjusted to keep it always truly vertical and the driving-gear in proper coupling with its pinion. Three crushing-rollers, J, K, and L, are journaled in suitable boxes in the frame and arranged in a triangle, and such a distance apart as to crush the cane effectually, the top roller being stationary, while the lower rollers are adjustable to permit a varied feed. The top roller J carries on one journal a mitre pinion, M, that receives motion in the direction of the arrow 1 from a mitre driving-gear, W, on the shaft F, which is driven by a sweep properly secured to the plate O on its top. The opposite end of the top roller J carries a cog-gear, P, that couples with cog gear-wheels Q and R on the projecting journals of rollers K and L, which rotate in the direction of the arrows 2 and 3. Beneath the rollers a pan, S, is situated to receive the expressed juice, of which the sides of the frame constitute the ends, and from which a trough conveys the juice through the side A of the frame to any proper receptacle. The sides of the frame are stayed by screw-bolts 4 and 5 and braces 6, 7, and 8. A mouth-piece or feeding-tube, T, receives the cane to guide it between the rollers, and an apron, U, receives the crushed cane or baggasse as it leaves the rollers. Between the rollers K and L, and directly beneath the roller J, I place a scraper, V, shown in fig. 4, so constructed that one side of the scraper shall rest with a sharp edge against the front roller K and effectually prevent it from clogging, while bars 9, at its back, leave a sufficient space for the juice to flow between the scraper and roller L without interrupting its flow to the pan. The scraper V also carries flanges 10 at its ends, which pass over the ends of the rollers and thus prevent it from becoming displaced while the mill is in operation.

The operation is as follows: Power being applied to the sweep, the rollers rotate in the direction of the arrows, and, receiving the cane to be crushed through the guide-tube, crush it and pass it over the apron to the ground; while the scraper removes all particles that may adhere to the front roller and keeps it from clogging, the juice from the crushed cane escapes from the rollers in a stream to the pan.

Thus constructed and arranged, my cane-mill is compact, strong, and perfectly effective.

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

The arrangement, in a cane-mill, substantially as described, of the frame, the rollers, the feeding-tube, the pan, and the scraper, for the purpose set forth.

In testimony whereof I have hereunto subscribed my name.

ORLANDO CLARKE.

Witnesses:

C. F. MILLER,

THOS. J. RUDD.