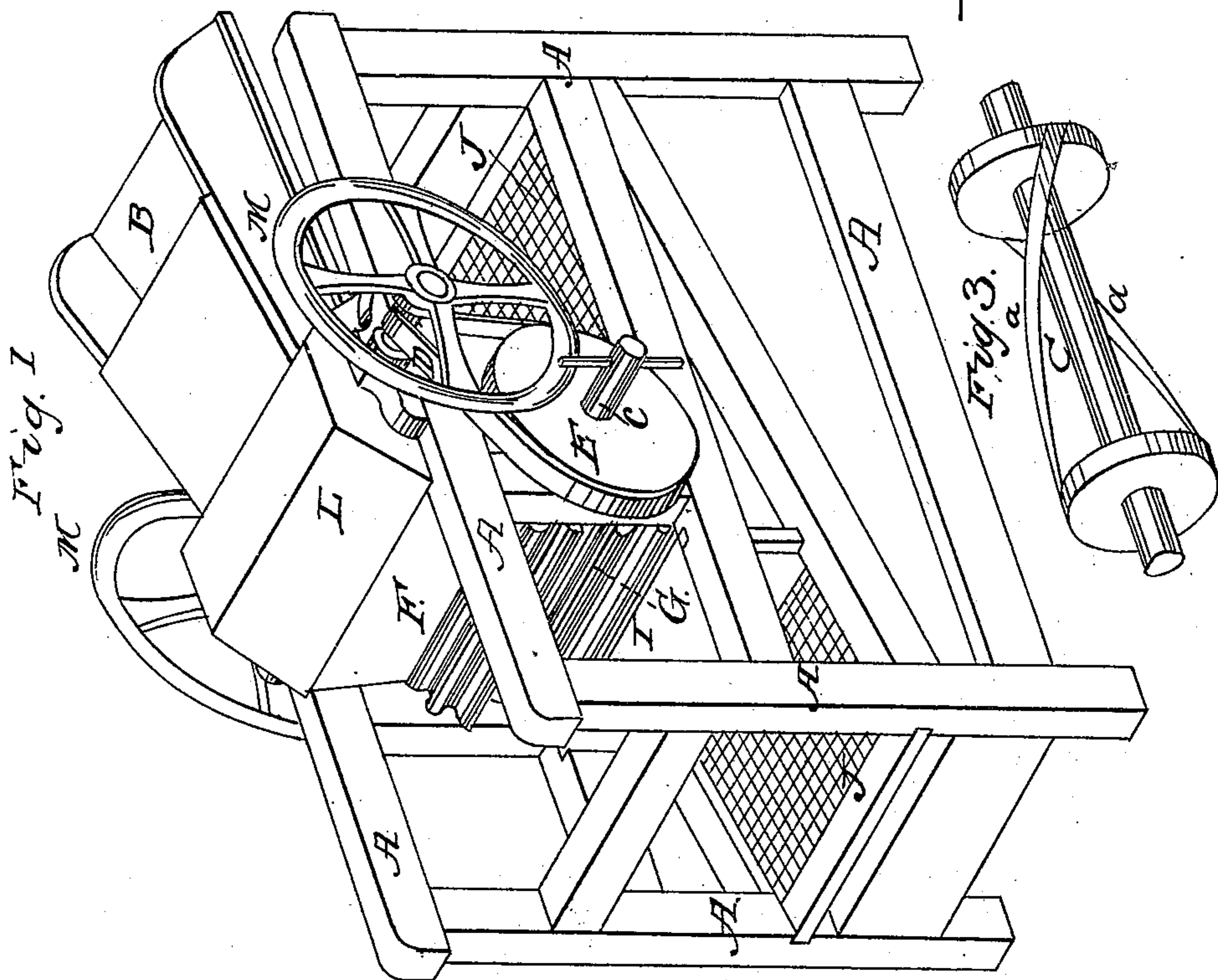
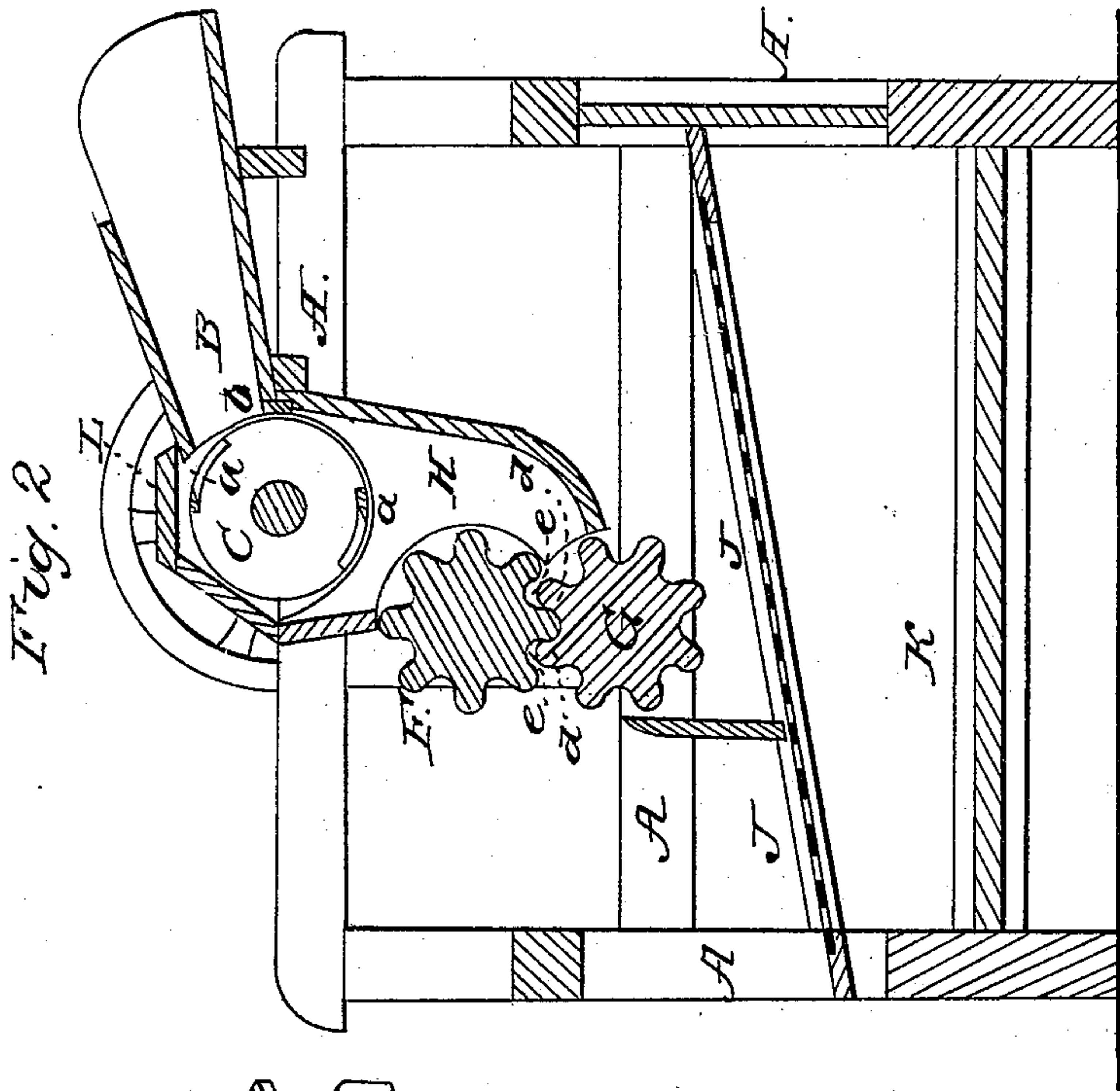


J. J. FEARINGTON.

Cane Mill.

No. 20,784.

Patented July 6, 1858.



UNITED STATES PATENT OFFICE.

J. J. FEARRINGTON, OF PITTSBOROUGH, NORTH CAROLINA.

IMPROVEMENT IN MILLS FOR CUTTING, CRUSHING, AND EXPRESSING THE JUICE FROM SUGAR-CANE.

Specification forming part of Letters Patent No. 20,784, dated July 6, 1858.

To all whom it may concern:

Be it known that I, JOHN J. FEARRINGTON, of Pittsborough, in the county of Chatham and State of North Carolina, have invented certain new and useful Improvements in Sugar-Cane Mills; and I do hereby declare the following to be a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 represents a perspective view of the machine. Fig. 2 represents a vertical longitudinal section through the same, and Fig. 3 represents the cutter-wheel detached.

Similar letters of reference, where they occur in the separate figures, denote like parts of the machine in all of them.

I am aware that cutters and pressing-rollers have heretofore been used for a purpose similar to that which mine are intended for; but I make no claim to these things independent of the manner in which I arrange and use them, my invention relating to the manner in which I arrange the several appliances, so that one operation shall follow the other; and my invention consists in the arrangement of the cutter over the pressing-rollers, which also stand one over the other, and a conducting-trunk to direct the cut material from the cutter to the presser-rolls, and so that the expressed juice and the spent cane shall be separated from each other and each pass to its proper receptacle, as will be explained.

A represents a frame, upon the top of which is arranged a hopper-box, B, into and through which the cane is fed up to the cutter-wheel C, the cutters *a a* of which pass close to the breast *b* of said hopper-box. The cutter-wheel is rotated by a belt or band, D, passing around a pulley on its shaft, and also around a pulley, E, on the shaft *c* of the upper one, F, of the crushing or squeezing rollers, to which motion is given by any first-moving power. Underneath the crushing-roller F there is placed another similar roller, G, both these rollers, F G, being fluted, and the under one of the pair being driven by its projections *d* taking into the grooves *e* of its mate or fellow.

H is a conducting-trunk, which extends from the cutter-wheel *c* downward, and, curving toward the point of impact of the two crushing-rolls, delivers the cut material to said rolls, which take it and express the juice from it. In front of the rolls there is a board, I, beveled off to an edge next the rolls, which guides the spent cane away from the rolls, so that it shall drop onto the screen J, in front of said board, while the expressed juices run down on the other side of said board onto the screen, and from thence into a receiver or vat, K, below the screen. The screen J slides out, so that it may be readily cleaned, and if found desirable two or more screens may be used.

The cutter-wheel is shown in full in Fig. 3, the knives *a a* being spirally arranged on its heads. A cap or cover, L, is placed over or around the cutter-wheel, to prevent the cut pieces from flying off.

The operation of the machine will be readily understood from the drawings. The cane is placed in the hopper-box B and fed up to the cutters *a a*. The cut pieces are carried down by the trunk H, and delivered to the rollers just where their "bite" commences, and in passing through between the roll they are crushed and the juice squeezed out. The juice flows from the bottom of the rolls, while the spent cane is separated from it by the board I, and falls on the screen J, from whence it is readily removed.

Having thus fully described the nature and object of my invention, what I claim therein as new, and desire to secure by Letters Patent, is—

In combination with the cutter C and the pressing-rollers F G, the guiding-trunk H, and dividing-board I, the whole being arranged for cutting, conducting to the pressers, pressing, and separating the spent cane from the juices, as herein described and represented.

JOHN J. FEARRINGTON.

Witnesses:

A. B. STOUGHTON,
THOS. H. UPPERMAN.