

A. INGALLS.

Cane Mill.

No. 36,156.

Patented Aug. 12, 1862.

Fig. 2.

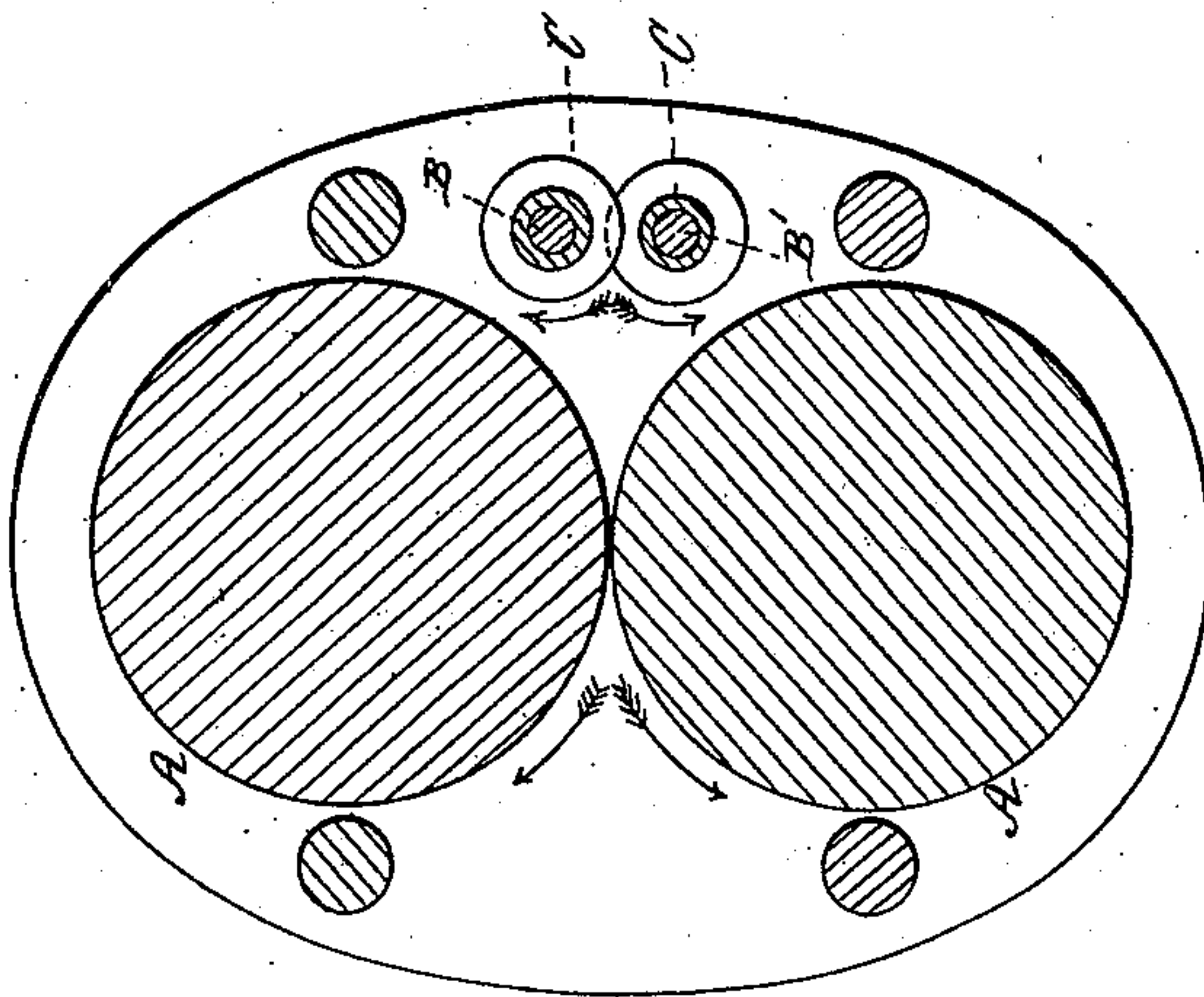
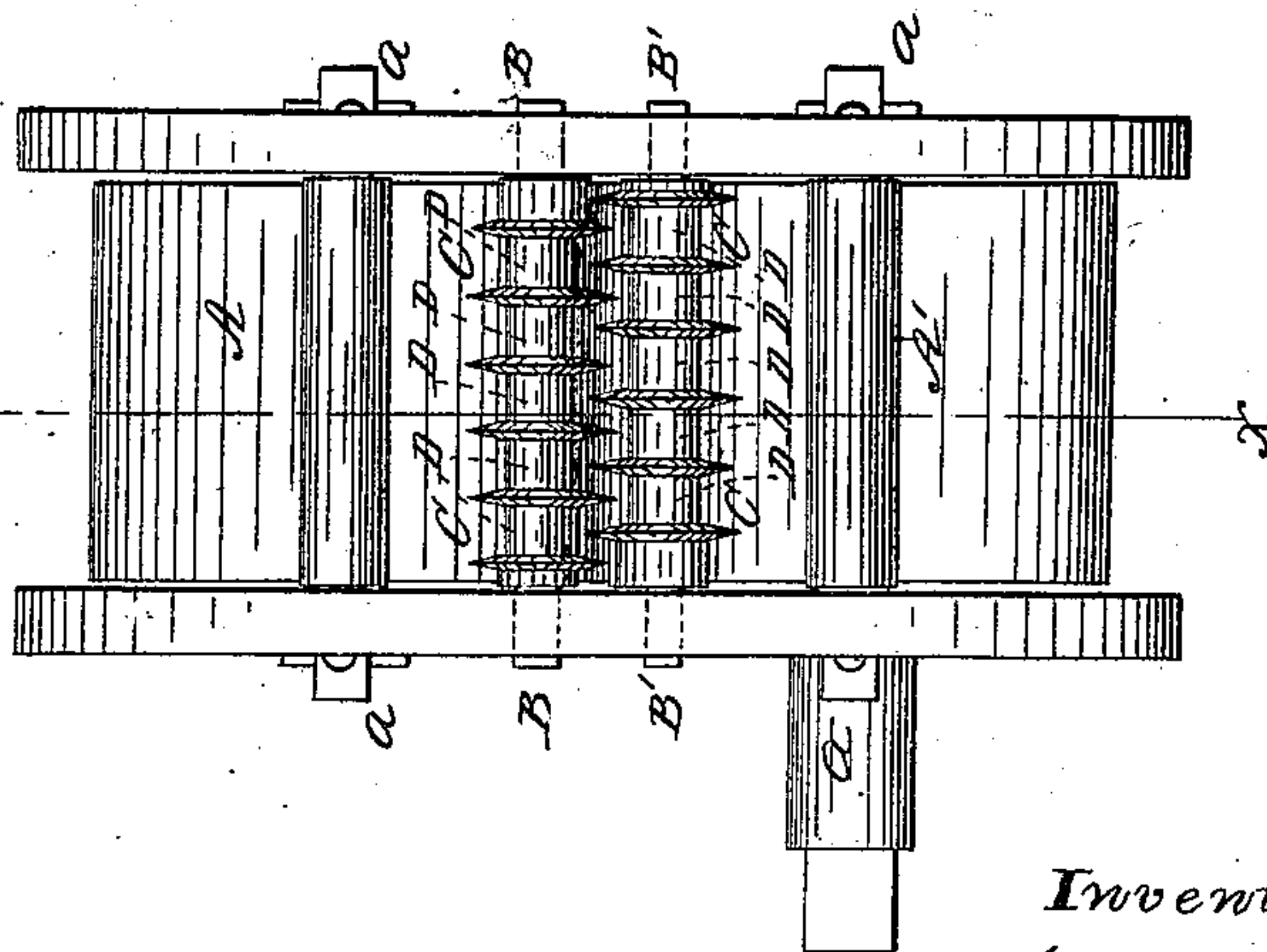


Fig. 1.



Witnesses:

W. Chandler
M. M. Daniel

Inventor:

Alfred Ingalls

UNITED STATES PATENT OFFICE.

ALFRED INGALLS, OF INDEPENDENCE, IOWA.

IMPROVEMENT IN SUGAR-CANE-CRUSHING MILLS.

Specification forming part of Letters Patent No. 36,156, dated August 12, 1862.

To all whom it may concern:

Be it known that I, ALFRED INGALLS, of Independence, in the county of Buchanan and State of Iowa, have invented certain new and useful Improvements in Sugar-Cane Crushers; and I do hereby declare that the following is a full and complete 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 is a front view, and Fig. 2 is a transverse vertical section.

Like letters refer to like parts in the different views.

The nature of my improvement relates to revolving cutters operated in connection with crushing-rollers, by means of which the stalks of cane are slit or cut into strips previous to entering between the crushing-rollers, thereby allowing the slitted cane to spread over a greater space between the rollers than would be the case with whole stalks, thus giving a more perfect pressure than could otherwise be obtained.

A A' represent the crushing-rollers, and *a* their shafts or journals. These are made in the usual form, and connected with suitable gears, and placed in a proper frame-work either horizontally or vertically. These rollers are intended to rotate in the direction of the arrows in Fig. 2.

The revolving cutters consist each of a shaft, B B', about two inches in diameter, and of the length of the crushing-rollers A A', and provided with journals and boxes set in the frame of the machine. The space between the shafts B B' is about one inch, and each shaft is provided with a series of thin circular cutting-blades or cutters, C C, &c., which are placed

upon the shafts B B', and may be separated by collars D D, or by other means which will keep the blades C C about half an inch apart, the cutters being so secured to the shafts that they must rotate with them. The cutters on the shafts B' are so placed and secured as to be alternate with the cutters on the shaft B, and all the cutters are of sufficient diameter to reach nearly to the collar D on the opposite cutter-shaft. Thus the space between the cylinders or shafts B B' is divided into sections of about one-fourth of an inch by the alternate revolving cutters C C. The shafts B B' are furnished with gear-wheels or pulleys and belts, which cause them to revolve in the direction of the arrows in Fig. 2, and with the same surface velocity and in a corresponding direction with the rollers A A'. Now, if cane-stalks are fed into the machine and caused to pass between the cutters before they enter between the rolls A A', they will be divided lengthwise into narrow strips by the circular blades C C, and consequently the action of the crushing-rollers will be much more efficient, for these rollers can be set closer together and the slitted cane-stalks will naturally spread out, and the juice will be more perfectly expressed from the cane than in the ordinary manner.

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

The revolving cutters C C, arranged and operated in combination with the pressing-rollers A A', as specified.

ALFRED INGALLS.

Witnesses:

W. CHANDLER,
M. M. DANIEL.