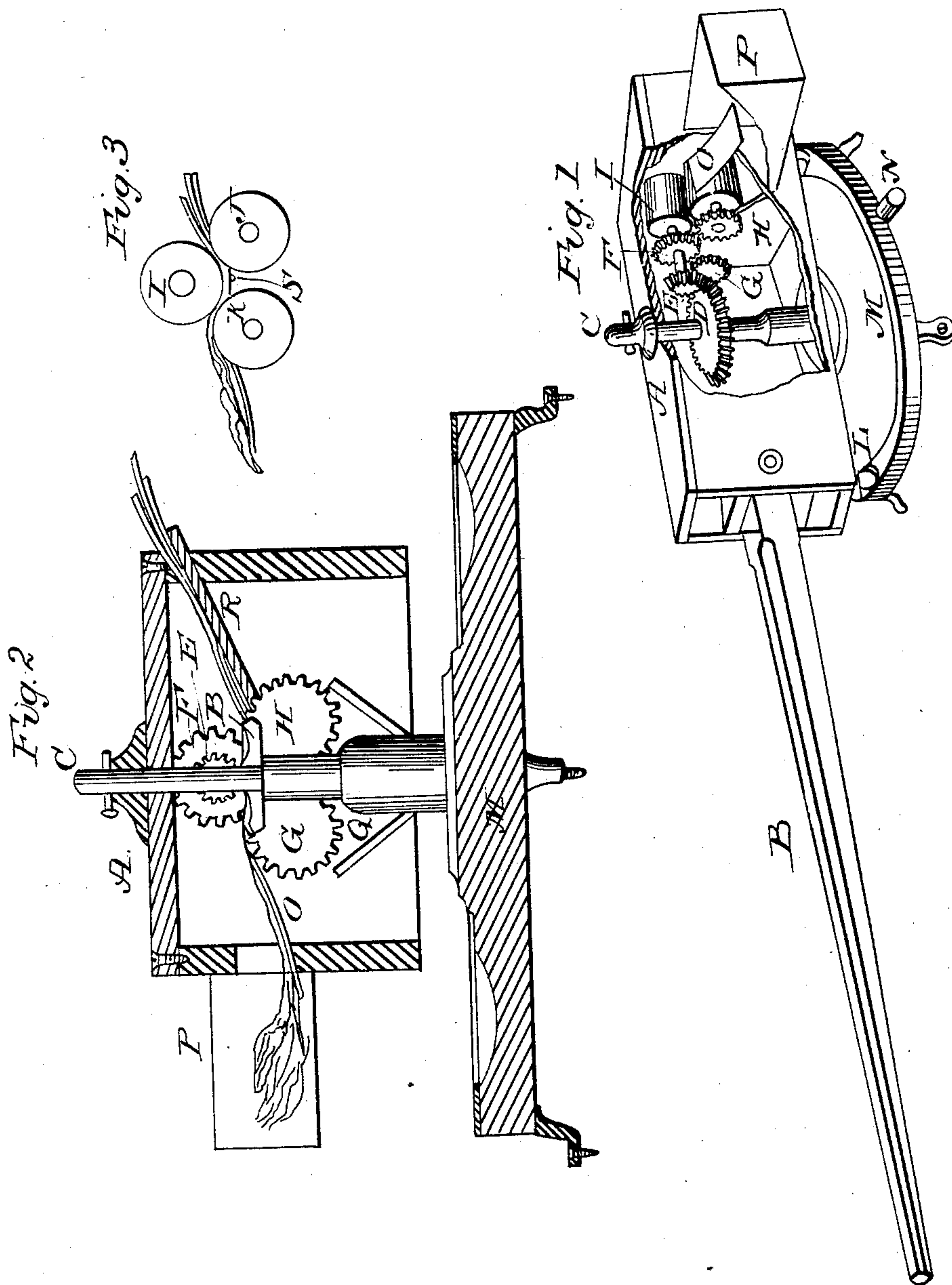


J. PAYNTER.  
Sugar Mill.

No. 24,781.

Patented July 12, 1859.



# UNITED STATES PATENT OFFICE.

JOHN PAYNTER, OF SHELBYVILLE, INDIANA, ASSIGNOR TO HIMSELF AND  
JOHN McCORKLE, OF SAME PLACE.

## IMPROVEMENT IN SUGAR-MILLS.

Specification forming part of Letters Patent No. 24,781, dated July 12, 1859.

*To all whom it may concern:*

Be it known that I, JOHN PAYNTER, of Shelbyville, in the county of Shelby and State of Indiana, have invented a new and useful Improvement in Sugar-Mills, of which the following is a full and exact description, reference being had to the accompanying drawings, making a part of this specification and the letters of reference marked thereon.

Figure 1 is a perspective with a section of the frame A cut out for the purpose of showing the arrangement of the rollers, gearing, &c. Fig. 2 is a section showing the operation of the machine in crushing cane, and the passage of the cane through the machine into the box P. Fig. 3 section showing the passage of the cane through the rollers I, J, and K.

The following is a description of the construction and operation of the machine:

A is a frame, which is revolved by the lever B, and turns upon the upright journal or pivot C. The beveled wheel D gears with the pinion E, which is upon the same shaft with and gives motion to the wheel F and crushing-roller I. The wheel F gears with the wheels G and H, which, being upon the same shaft with, revolve the rollers J and K.

O is a scraper which clears the roller J of the crushed cane, passing or guiding the same into the box or receiver P.

Q is a hopper or receiver for the juice as it passes from the rollers I J K, from which it runs into the bed-plate M.

N is a spout through which the juice is discharged from the machine.

As the frame A is revolved, the pinion E travels around upon the beveled wheel D, giving motion to the gearing F G H and rollers I J K. The cane, being fed into the machine

over the guide-plate R, passes between the rollers I and K, where the juice is partially expressed. It is then passed between the rollers I and J over the guide or knife S, where the operation of crushing and expressing the juice is completed.

The advantages of this arrangement may be seen in the fact that while the weight of the machine is great, as is the case where a large amount of cane is to be crushed, the friction is felt at the center, upon which it revolves. The gearing is also operated in such a manner that the power required to operate the rollers is always in a line with the lever B, by which the machine is revolved. The advantages are further seen in the fact that as the mill is revolved the weight of the same imparts steadiness of motion, thereby retaining the momentum gained by the power applied, while the mill is lightly or irregularly fed, and securing the effect of the balance or fly wheel. In the operation of this mill the feed has been varied from five to thirty-five stalks without materially affecting the operation of the mill. No mill that has been used in this section of the country has been able to crush one-half the number of gallons in the same time with a single horse.

What I claim is—

The combination and arrangement of the journal C, wheel D, gearing E, F, G, and H, and rollers I, J, and K, the whole being suspended in the frame A, and constructed and operated substantially as described.

JOHN PAYNTER.

Witnesses:

SPENCER HIATT,  
JOHN H. REDSTONE.