

S. J. PARMELE.

Corn Sheller.

No. 34,008.

Patented Dec. 24, 1861.

Fig. 2.

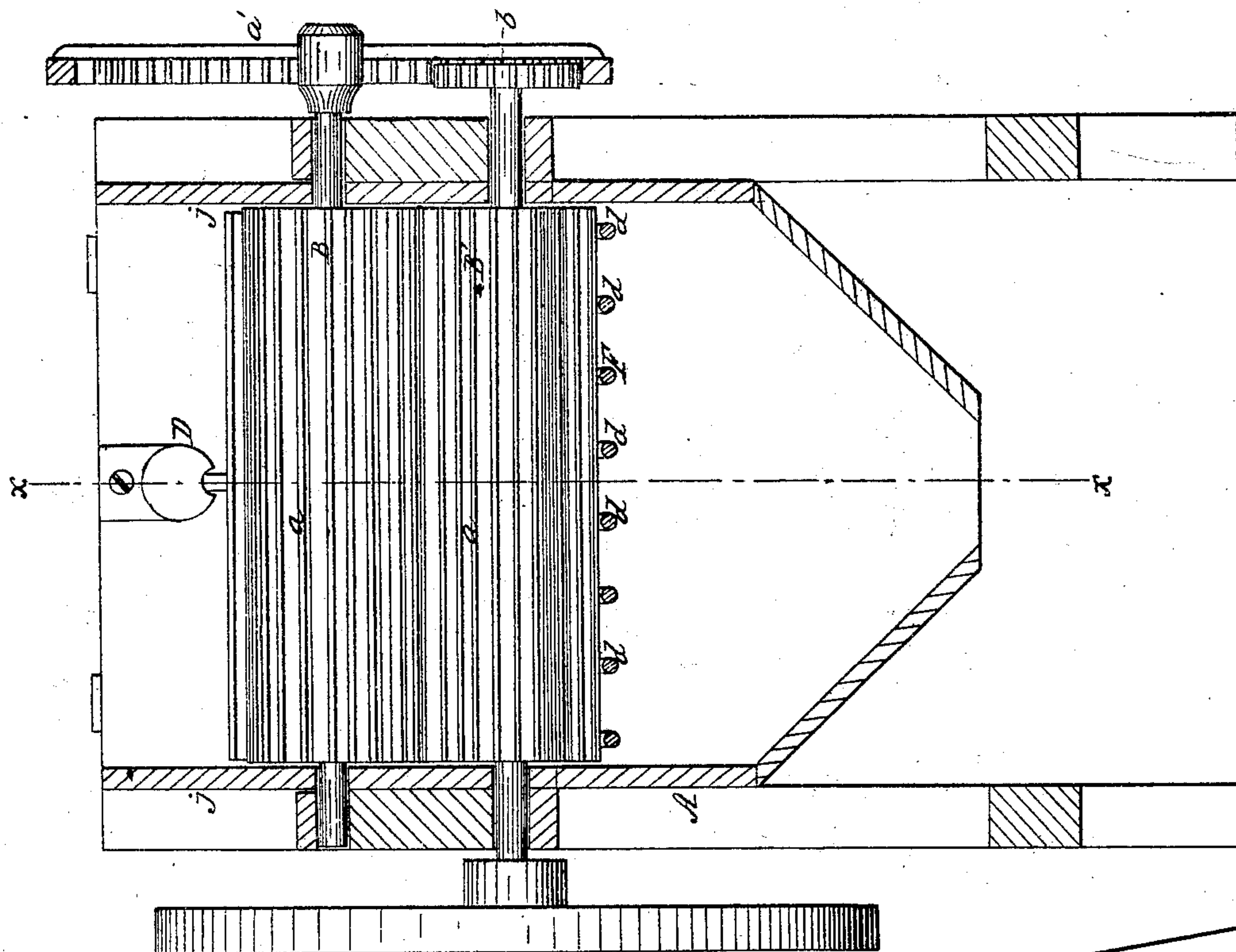
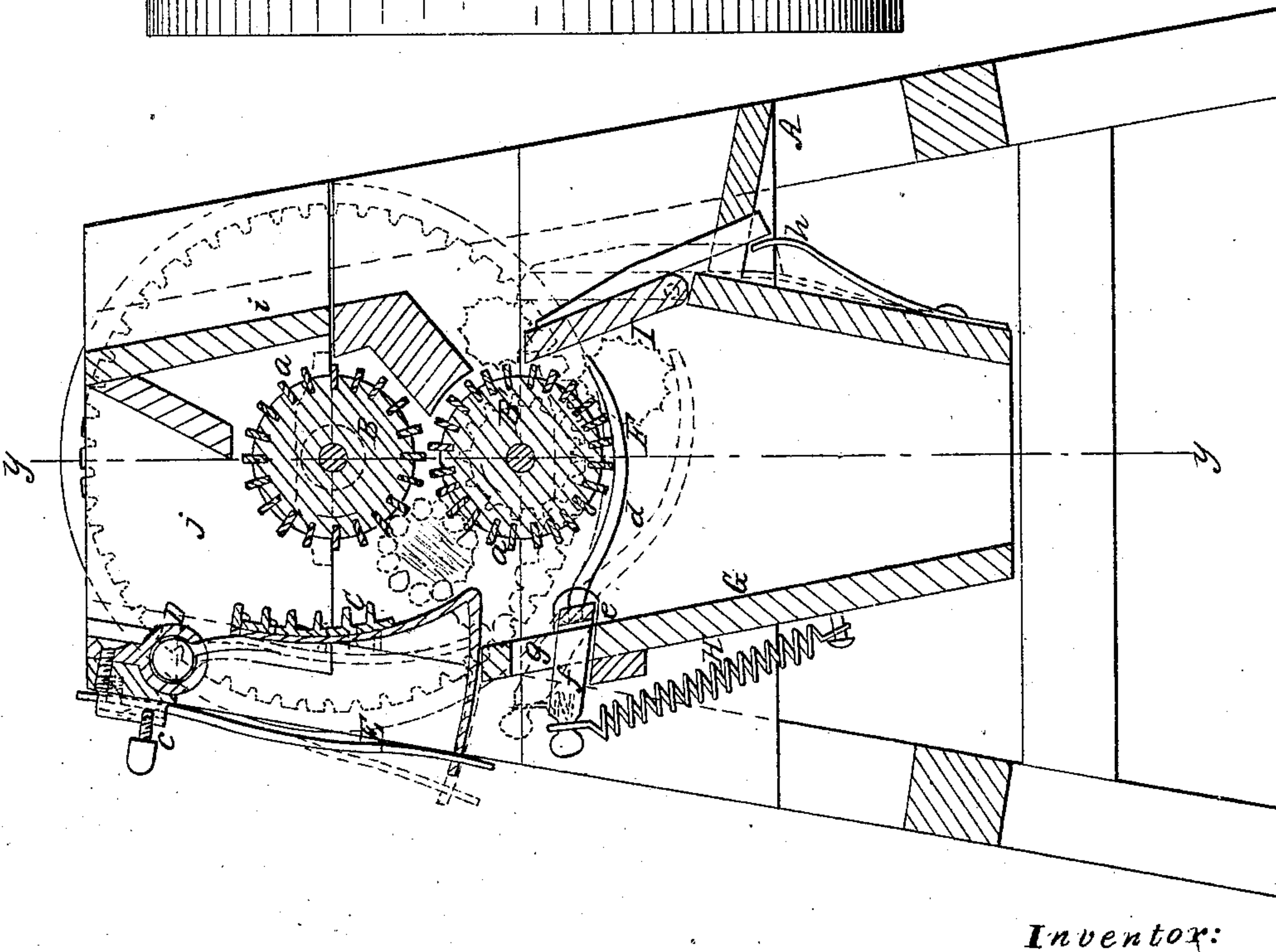


Fig. 1.



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UNITED STATES PATENT OFFICE.

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IMPROVEMENT IN CORN-SHELLERS.

Specification forming part of Letters Patent No. 34,008, dated December 24, 1861.

To all whom it may concern:

Be it known that I, SIMON J. PARMELE, of Killingworth, in the county of Middlesex and State of Connecticut, have invented a new and Improved Corn Sheller and Separator; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a vertical central section of my invention taken in the line *x x*, Fig. 2. Fig. 2 is a vertical central section of the same taken in the line *y y*, Fig. 1.

Similar letters of reference indicate corresponding parts in both figures.

This invention consists in the employment or use of two ribbed cylinders having different rates of speed, in connection with a yielding corrugated concave, yielding screen, and guard-door arranged for joint operation, substantially as hereinafter described, whereby corn may be rapidly shelled from the ear and the shelled corn separated from the cobs.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A represents a frame, in the upper part of which there are two ribbed cylinders B B', said cylinders being placed one over the other in the same axial plane. The cylinders B B' may be of wood; but the ribs *a* are of metal and extend the whole length of the cylinders, the ribs being parallel with each other and placed at equal and suitable distances apart. The cylinders are rotated with different rates of speed, the lower one B' moving about four times quicker than the upper one B. This movement is effected by the spur-wheel *a'*, which is placed on the axis of the upper cylinder B, and has a pinion *b* on the axis of the cylinder B gearing into it. (See Fig. 2.)

C is a corrugated concave plate, which is placed vertically in the frame A at the feed or induction side of the cylinders B B'. The plate C extends the whole width of the frame A, and it is attached at its upper end to the frame A by a ball-and-socket joint D. The concave plate has springs E bearing against its lower part, and the pressure of these springs may be regulated by set-screws *c*, the springs having a tendency to keep the plate C

pressed toward the cylinders B B', as will be fully understood by referring to Fig. 1.

Below the lower cylinder B' there is placed a screen F. This screen is formed of a series of parallel curved rods *d*, connected at their back ends at right angles to a rack-bar *e*, which has an arm *f* projecting from its center and extending through a slot *g* in the back of a discharge-spout G in the frame A. A spring H is attached to the end of arm *f*, said spring having a tendency to keep the screen F in contact with the lower cylinder B', as will be fully understood by referring to Fig. 1.

At the front side and upper part of the discharge-spout G there is a door or flap I, the upper part of which is kept in contact with the cylinder B' by means of a spring *h*. In the upper part of the frame A and at the front side of the upper cylinder B there is placed a board *i*, which in connection with the concave plate C and end pieces *j j* form a hopper, as shown in Fig. 1.

The operation of the machine is as follows: The upper cylinder B is rotated by any convenient power, and the two cylinders are turned in the direction indicated by the arrows upon them in Fig. 1. The ears of corn pass horizontally down between the plate C and cylinder B, and are kept in contact with the cylinders B B' by means of the plate C. The upper ribbed cylinder B rotates the ear with a moderate movement, while the lower ribbed cylinder B' by its comparatively rapid movement effectually shells the corn from the cob. When a succeeding ear of corn is placed in the machine, the cob of the previously-inserted ear falls upon the screen F, and the cob is conveyed around underneath cylinder B' by the rotation of the latter, the cob forcing out the upper part of the door or flap. The shelled corn passes down through the screen F, and the door or flap I prevents any portion of the shelled corn being thrown out with the cob, a contingency which would otherwise occur. Thus it will be seen that the corn will not only be shelled from the cob, but the shelled corn and cobs separated and discharged from the machine at different points. In consequence of having the plate C attached to or suspended in the frame A by a universal joint said plate is allowed to con-

form or adjust itself to the conical shape of the ear of corn (obliquely with cylinders B B') and insure all parts of the same being acted upon and perfectly shelled.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In combination with one or more ribbed or toothed shelling-cylinders B B', a concave pressure-plate C, suspended by a universal joint D, substantially as shown, for the purpose of allowing the plate C to adjust itself

to the ear of corn while being shelled and insure the perfect shelling of the same, as set forth.

2. The ribbed cylinders B B', concave pressure-plate C, yielding screw F, and door or flap I, all combined and arranged for joint operation, as and for the purpose set forth.

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