E. KNAPP.

Corn Sheller.

No. 44,433. Patented Sept. 27, 1864.

Fig. 2.

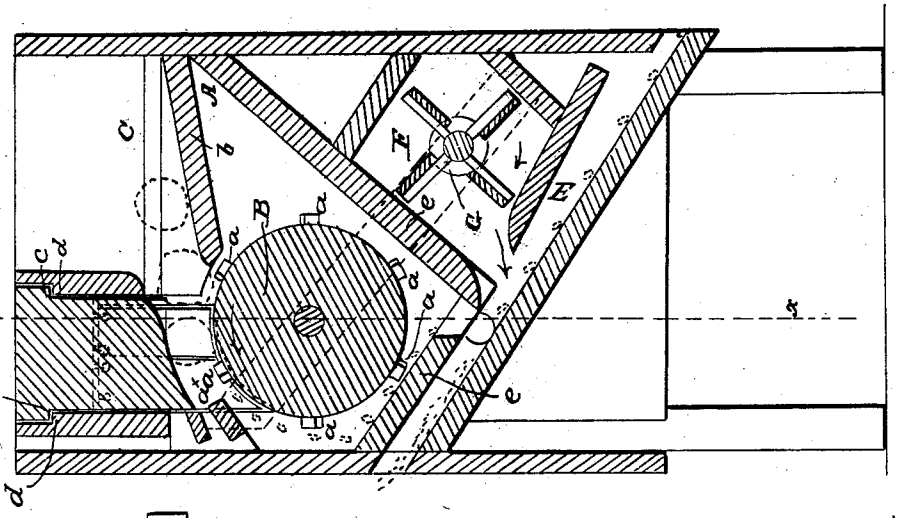
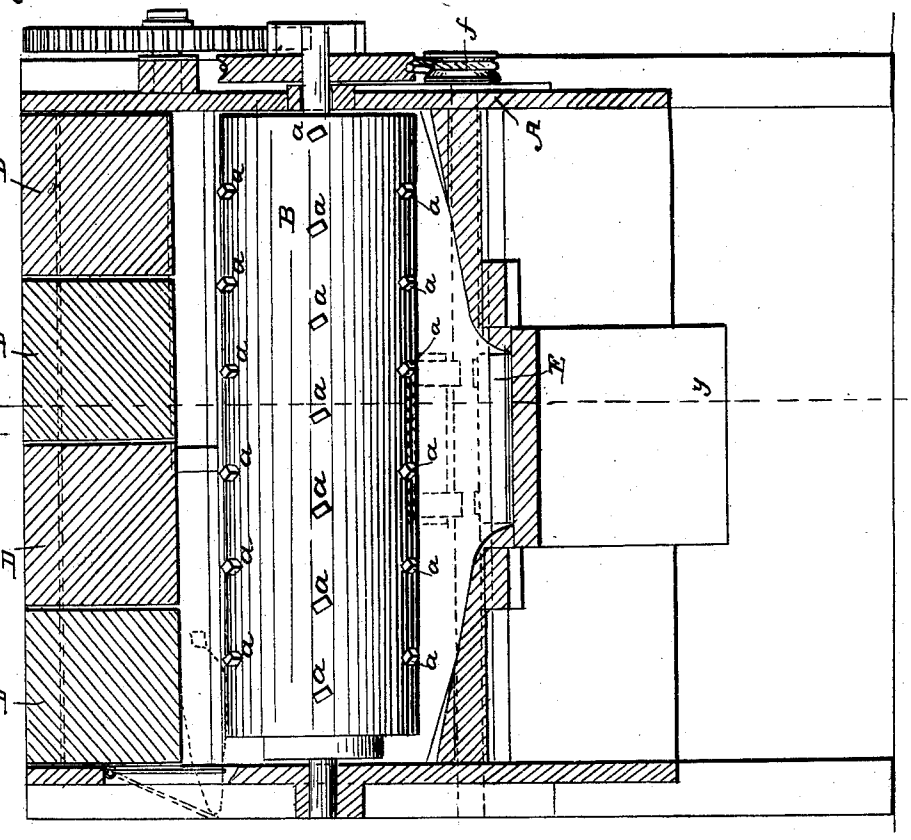


Fig. 1.



Witnesses:

Inventor:
Elijah Knapp
per Munn & Co
Attorneys

UNITED STATES PATENT OFFICE.

ELIJAH KNAPP, OF JAMESTOWN, NEW YORK.

CORN SHELLER AND SEPARATOR.

Specification forming part of Letters Patent No. **44,133**, dated September 27, 1864.

To all whom it may concern:

Be it known that I, ELIJAH KNAPP, of Jamestown, in the county of Chautauqua and State of New York, 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 thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, making a part of this specification, in which—

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

Similar letters of reference indicate like parts.

This invention consists in the employment or use of a shelling-cylinder, weights, a chute, and fan-blower, constructed and arranged in such a manner that the corn may be shelled from the cob rapidly and thoroughly, and the corn separated from the cobs, and all light foreign substances—such as dust, chaff, &c.—separated from the corn.

A represents a rectangular case or box, in which the working parts of the device are placed; and B is a cylinder, which is fitted horizontally in the upper part of A, extending the whole length of the latter, and provided with teeth *a*, arranged in spiral form, as shown in Fig. 1.

C is the hopper in which the ears of corn are placed, the bottom *b* of said hopper being slightly inclined and extending nearly to the periphery of the cylinder B, a sufficient space being allowed for the teeth *a* to pass the bottom *b*.

Directly back of the hopper C there is a chamber, in which a series of weights, D, are placed side by side. These weights are directly over the cylinder B, but do not extend down to it, each weight being provided with shoulders *c* at their front and rear sides, which rest on shoulders *d* at the inner sides of the chamber, and retain the weights at a given height, as shown clearly in Fig 2.

Below the cylinder B there are placed four inclined boards, *e e*, which form channels or chutes leading to a spout, E, from which the shelled corn is discharged; and below the front board *e* there is a chamber, F, in which a blast-fan, G, is placed, the chamber F communicating with the spout E, and the latter being open at both ends, as shown clearly in Fig. 2.

The fan-blower is driven by a belt, *f*, from the shaft of the cylinder B. (See Fig. 1.)

The operation is as follows: The cylinder B is driven by any convenient power in the direction indicated by arrow 1, (see Fig. 2,) and the ears of corn pass between the cylinder B and the weights D, and the corn shelled from the cobs, the weights D serving to keep the ears in contact with the cylinder, and the ears prevented from passing around with the cylinder by means of a stop, a^x. The shelled corn passes down the inclined boards *e e* into the spout E, where it is subjected to a blast from the fan G, the dust and light impurities being blown out at the upper end of spout E, while the cleansed grain falls from the lower end of said spout. The cobs, owing to the spiral position of the teeth *a*, are fed along by the same to one end of the cylinder and discharged through an opening at the end of the case or box A.

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

1. The weights D, in combination with the thrashing-cylinder B, to operate substantially as and for the purpose herein set forth.

2. The fan-blower G, in combination with the spout E, shelling-cylinder B, and weights D, all arranged substantially as and for the purpose specified.

ELIJAH KNAPP.

Witnesses:

ORSINO E. JONES,
DEWITT C. BOND.