

JAMES MILLER & N. DUBRUL.

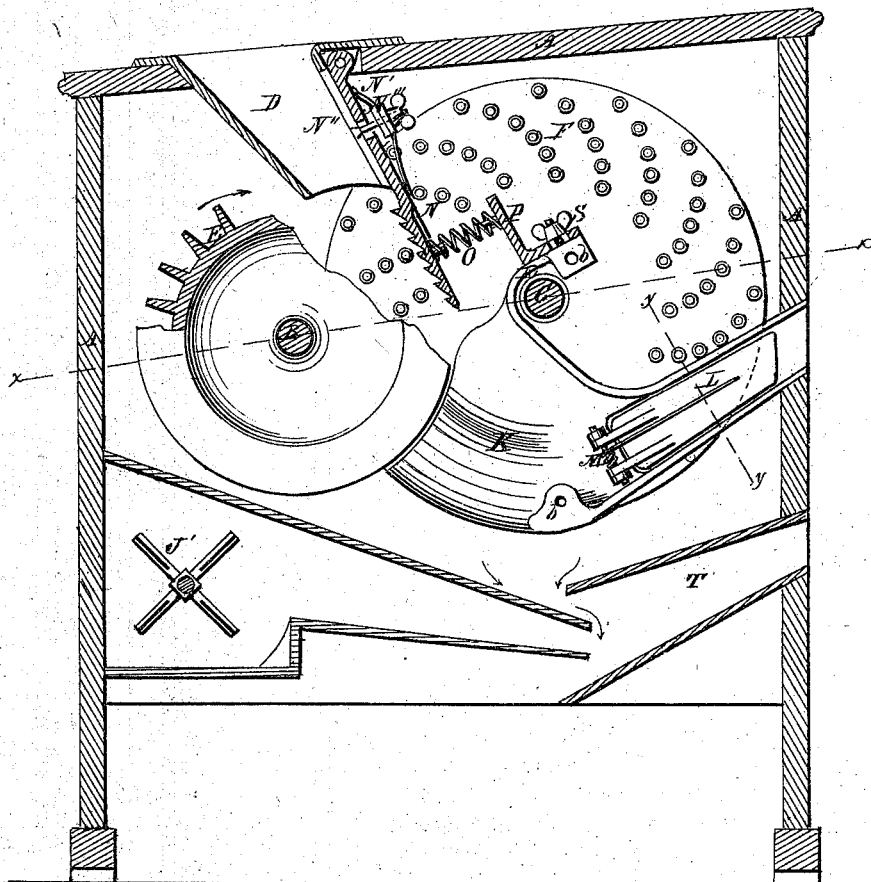
2 Sheets--Sheet 1.

Improvement in Machines for Shelling Corn.

No. 115,227.

Patented May 23, 1871.

Fig. 1.



Witnesses.

John R. Young
W. H. Stevens

Inventors.

James Miller
Napoleon Dubrul
by Pringle & Dyer, Attys.

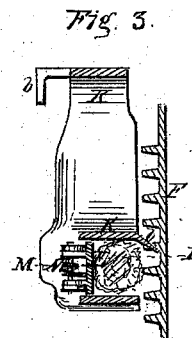
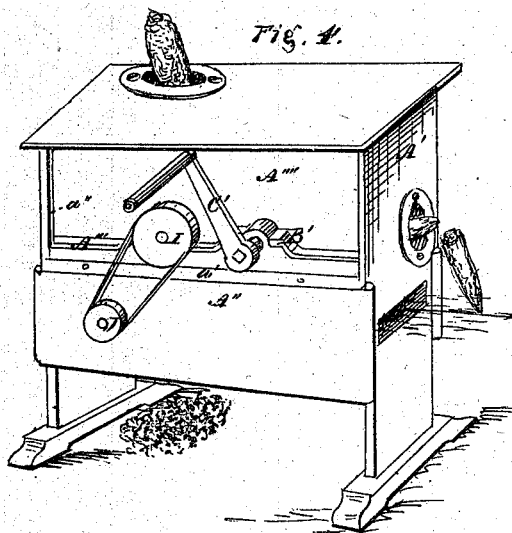
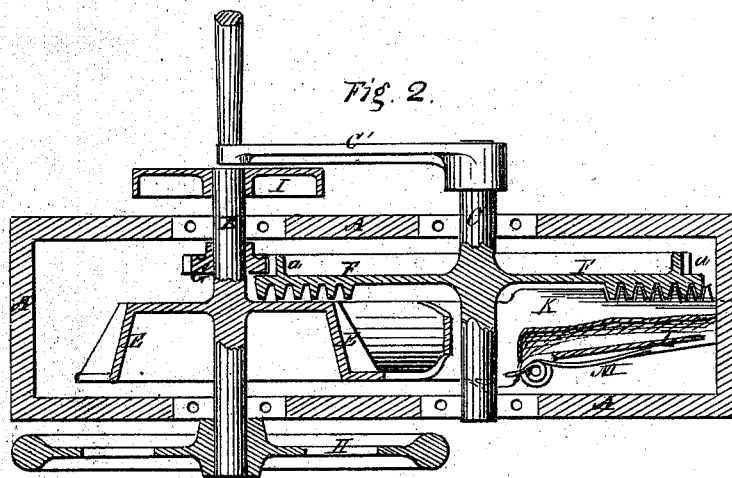
Attys.

JAMES MILLER & N. DUBRUL.

Improvement in Machines for Shelling Corn.

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W. H. Stebbins

Inventors.
James Miller
Napoleon Dubrul
by P. P. H. & Co. Attys.

United States Patent Office.

JAMES MILLER AND NAPOLEON DUBRUL, OF JOLIET, ILLINOIS.

Letters Patent No. 115,227, dated May 23, 1871.

IMPROVEMENT IN MACHINES FOR SHELLING CORN.

The Schedule referred to in these Letters Patent and making part of the same.

To whom it may concern:

Be it known that we, JAMES MILLER and NAPOLEON DUBRUL, of Joliet, in the county of Will and State of Illinois, have invented a new and useful Improvement in Corn-Shellers; and we do declare that the following is a true and accurate description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon and being a part of this specification, in which—

Figure 1, plate 1, is a vertical section of our improved corn-sheller.

Figure 2, plate 2, is a horizontal section taken on the line *x x* in fig. 1.

Figure 3 is a detached sectional view of the carrier-shell taken on the line *y y* in fig. 1; and

Figure 4 is a perspective view of the machine.

Like letters indicate like parts in each figure.

This invention relates to an improvement in machines for shelling corn; and

It consists in the peculiar construction and arrangement of a rag-piece in the hopper for removing a portion of the corn from the cob as it descends; in the peculiar combination and arrangement of the carrier-shell with relation to the picker-wheel; and in the general arrangement of the various parts, as more fully hereinafter set forth.

In the drawing—

A represents the frame and external casing of our machine, which is constructed of end pieces *A'*, lower side pieces *A''*, properly secured to said end pieces, and cast-iron shaft-beds *A'''*, which rest upon and are secured to said side pieces through an overhanging flange, *a'*, resting against the outsides of said side pieces.

The shaft-beds above named are further secured in place by means of wings upon their ends, which fit into corresponding grooves *a''* in said end pieces *A'*.

Resting upon these shaft-beds are the upper side pieces *A'''*, which slide in and are secured by said grooves *a''*.

B and C are shafts transversely journaled in boxes, the lower parts *B'* of which are cast in and with said shaft-beds *A'''*, and the upper parts are of usual construction.

D is a hopper at the top of the case, discharging between the two shafts.

E is a toothed wheel keyed to the shaft B, and resembles a long-tooth bevel-gear.

F is a picker-wheel, being a disk studded with projecting points on one face, in concentric lines.

On the opposite face thereof is a spur-gear, *a*, which engages with a pinion, G, secured to the shaft B.

The shaft C is rotated by a hand-crank, C', and in turn rotates the shaft B, which is provided with a fly-wheel, H, at one end, and at the other with a pulley,

I, which, in turn, rotates the shaft of the blast-fan J' in the fan-case below, through a belt passing round its pulley J.

K is the carrier-shell, in the general form of a hollow segment, secured at *b b'* to the side of the machine-casing, open at each end and the side next the picker-wheel. The discharge end of the shell has its upper portion curved downward as it approaches the picker-wheel, and is provided with serrations to project between the concentric lines of projections on the picker-wheel.

L is a door hinged on the face of the shell near its delivery end, and is pressed inward by a spring, M.

N is a rag-piece hinged to the top flange of the hopper, lying on it and projecting below it, the lower end being serrated, as shown in fig. 1.

An elliptic spring, N', placed upon the upper part of said rag-piece, and adjusted by means of a bolt, N'', provided with a thumb-nut passing through saddles N''' attached to said spring in its center, and through said rag-piece and through the hopper D operates with and in connection with a spring, O, hereafter mentioned.

A spring, O, interposed between it and an arm, P, secured by a screw, S, to the shank R of the shell K, presses it toward the rag-wheel E, which, being revolved in the direction shown by the arrow in fig. 1, catches the cob as it issues from the hopper and draws it down, the serrations of the rag-piece tearing off a considerable portion of the corn from the cob, which is rotated in the triangular space formed by the two wheels and the rag-piece, the kernels falling on a grain-board below, forming the fan-case; falling over the end of which they cross the blast, which blows away the chaff through the spout T, while the grain finally passes down to the floor or into a drawer in the lower part of the frame; the cob passes along, into and through the carrier-shell, until nearly through, when it is pressed, by the door L, against the picker-wheel, which removes any adhering kernels in the rotation of the cob at this point, which rotation is effected by the beveled or curved upper arm *i* of the shell and the forcing of the cob against the picker-wheel, as shown in fig. 3. This is an important function in the machine, as every part of the cob in its rotation is brought forcibly into contact with the picker-wheel, removing every adhering kernel, which, rolling down the shell until reaching the plain part of the picker-wheel, falls through and down past the blast.

We do not wish to confine ourselves to the particular form or arrangement of the door and rag-piece springs shown, as others may be employed.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. In combination with the hopper D and rag-piece N, the springs N' and O, constructed and arranged substantially as described and shown.

2. The combination and arrangement of the spring O, arm P, and rag-piece N, as and for the purpose herein specified.

3. The combination of the carrier-shell K, constructed with the upper beveled portion I and the picker-wheel F, both constructed and arranged substantially as described and shown.

4. The combination of the door L, the carrier-shell K, and the picker-wheel F, when said parts are con-

structed and arranged to operate as described and shown.

5. In a corn-sheller, the cast-iron shaft-beds A'', provided with lower boxes B', constructed, arranged, and secured in place substantially as described and shown.

JAMES MILLER.
NAPOLEON DUBRUL.

Witnesses:

HARRY S. SPRAGUE,
W. S. ROGERS.