

W. GILMAN.
Corn Sheller.

2 Sheets—Sheet 1.

No. 55,485.

Patented June 12, 1866.

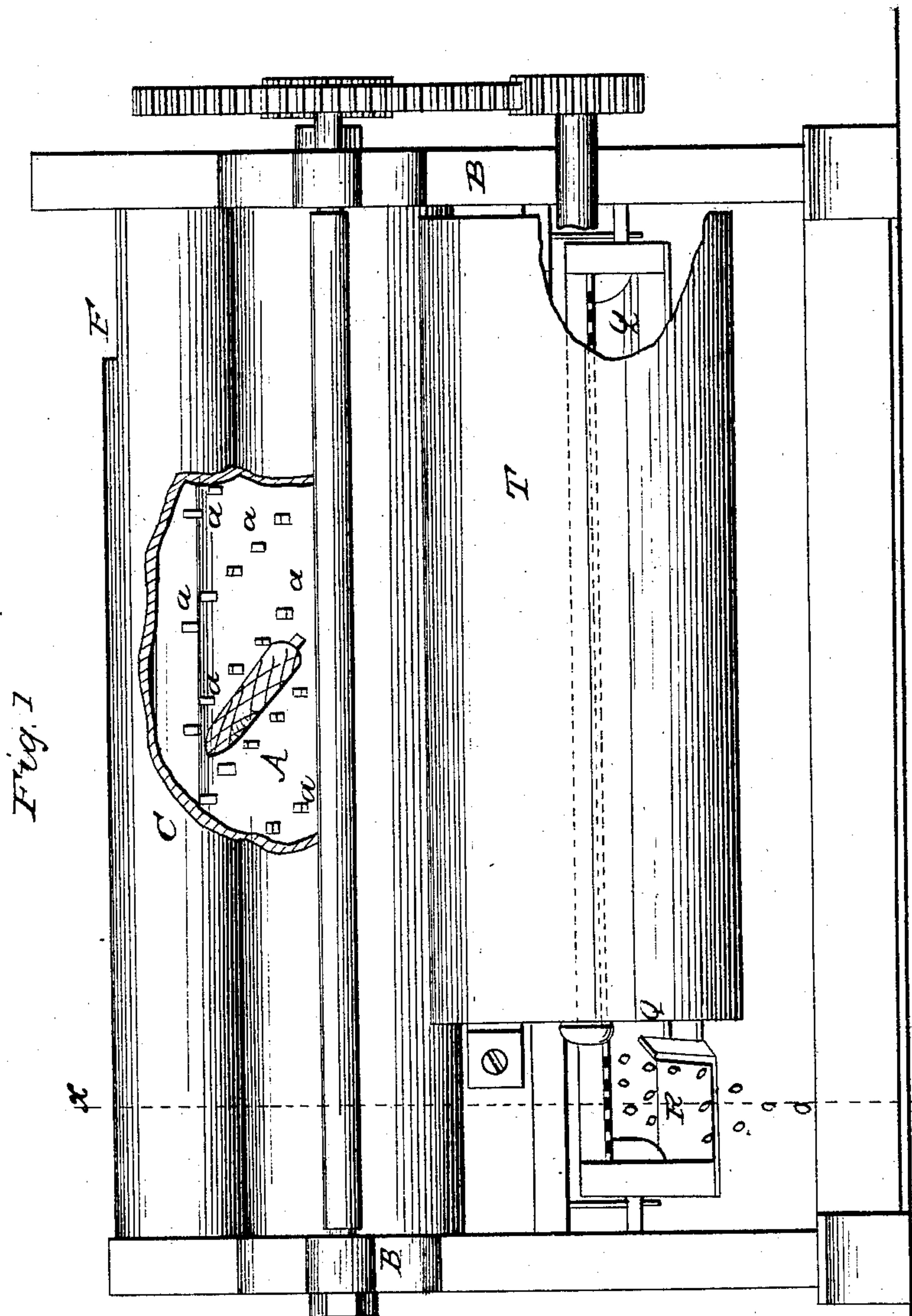


Fig. 1

Witnesses
J. M. B. Covington
Wm. Frewin

Inventor
Wm. Gilman
per Munn & Co
attys

Corn Sheller.

2 Sheets—Sheet 2.

No. 55,485.

Patented June 12, 1866.



Witnesses

J. W. B. Covington
Wm^r Frewin

Wm^r Frewin

Inventor
Jm Gilman
per Mann & Co
attys

per Munn & Co
attys

UNITED STATES PATENT OFFICE.

WILLIAM GILMAN, OF OTTAWA, ILLINOIS.

IMPROVEMENT IN CORN-SHELLERS.

Specification forming part of Letters Patent No. 55,485, dated June 12, 1866.

To all whom it may concern:

Be it known that I, WILLIAM GILMAN, of Ottawa, La Salle county, State of Illinois, have invented new and useful Improvements in Corn-Shellers; 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, forming part of this specification.

The improvements embraced by the present invention relate to a corn-sheller invented and patented by F. N. Smith, of Kinderhook, New York, on the 1st day of June, A. D. 1843, and extended by the Commissioner of Patents on June 1, A. D. 1857, whereby the efficiency of the sheller is greatly increased and many important advantages are secured, as will be apparent from the following detail description thereof, reference being had to the accompanying plate of drawings, in which—

Figure 1 is an elevation of the rear side of the corn-sheller with a portion of the concave or casing surrounding its toothed cylinder broken out; and Fig. 2 is a transverse vertical section taken in the plane of the line *xx*, Fig. 1.

Similar letters of reference indicate like parts.

A in the drawings represents the toothed cylinder, hung at each end in bearings of the two parallel end uprights, B B, of the framework of the machine. The teeth *aa* of this cylinder are arranged in parallel rows upon it, but in a spiral direction. C is a concave or casing surrounding the upper portion of the cylinder B, extending from the horizontal transverse rail D, fixed at each end to the uprights B B, and, upon the front side of the sheller, to the back transverse rail, E, under the cylinder F, an opening in cylinder-concave C, through which the ears of corn to be shelled are placed upon the cylinder, in and between its rows of teeth, when the cylinder, being revolved in the direction indicated by the arrow in the drawings, such ears are brought in contact with the edge G of the concave, by which the corn is caused to be shelled from the same, passing down through the channel H of the concave, through the open end I of which it issues, falling upon the horizontal screen or riddle J, to which it is intended to impart a vibrating movement

in any proper manner, the cob passing out of the cylinder-concave at the opposite end to that at which it was placed therein.

The toothed cylinder is intended to revolve with great rapidity, and, consequently, in order to prevent the corn shelled by it, as explained, from striking the riddle or screen J with such force and in such an angle that in rebounding therefrom it will fly out of the sheller through the opening M, between the front rail, D, of the concave and the top surface of the riddle, I have arranged just in front of the open end I of the concave, but at a short distance therefrom, leaving a space, N, between the two, a fixed horizontal rail, O, extending across the width of the sheller, which rail serves as a barrier or stop to the passage of the corn as it escapes from the concave-channel, breaking its force, and so deflecting it as to cause it to fall through the space N to the riddle or screen J with very little force or momentum. Such particles of the corn as are carried over this deflector-rail O by the revolution of the cylinder striking against the rail D of the front portion of the concave, from which they are deflected to the riddle.

By means of the two deflector-rails D and O, arranged as above explained, with reference to the open end of the concave-channel, through which the corn escapes to the screen, it is plain to be seen that there is no possibility of the corn being thrown out of the sheller by the momentum or force imparted to it from the revolution of the toothed cylinder, it being all made thereby to fall upon the screen or riddle, through the openings or perforations of which it passes to the inclined plane Q below, having a delivery-spout, R, for discharging it into any suitable vessel or other article to receive and hold it, the corn while upon such screen being agitated by the vibrating of the same, and also subjected to currents or blasts of air produced by the rapid revolution of a suitable fan-blower, S, arranged within the casing T, upon the back side of the sheller, which currents of air, passing through the opening *ii* just above the rear edge of the riddle, traverse its surface, blowing all refuse matter mixed with the corn out through the opening M below the concave-rail D, as is obvious without further explanation.

The fan-blower may be revolved by connecting it with the toothed cylinder, through any

suitable arrangement of gearing or pulleys and belts, or it may be connected directly with the driving power used, independently of the toothed cylinder.

I claim as new and desire to secure by Letters Patent—

1. The rail O, placed just in front of the open end of the cylinder-concave I, for throwing or deflecting the corn escaping from the said concave to the screen or riddle J, arranged substantially as described.

2. The front rail, D, in combination with the

rail O, substantially as and for the purpose specified.

3. The combination of the deflector-rail O, screen J, and fan or other suitable blower, when arranged together and so as to operate substantially as described, and for the purpose set forth.

WILLIAM GILMAN.

Witnesses:

DANL. LASSING,

JUSTUS HARRIS.