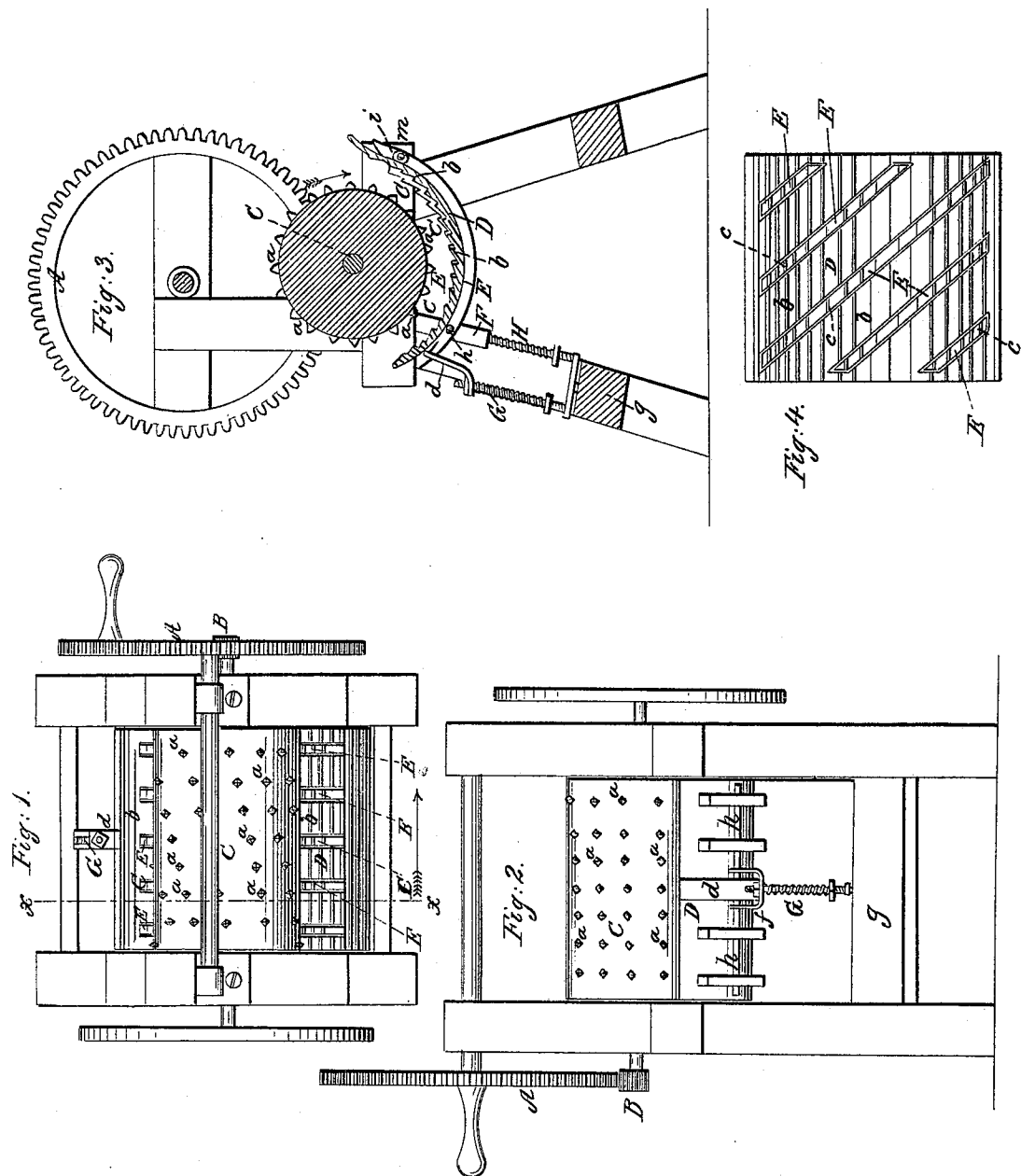


J. P. SMITH.

Corn Sheller.

No. 19,160.

Patented Jan. 19, 1858.



UNITED STATES PATENT OFFICE.

JEREMIAH P. SMITH, OF HUMMELSTOWN, PENNSYLVANIA.

CORN-SHELLER.

Specification of Letters Patent No. 19,160, dated January 19, 1858.

To all whom it may concern:

Be it known that I, JEREMIAH P. SMITH, of Hummelstown, in the county of Dauphin and State of Pennsylvania, have invented a new and Improved Corn-Sheller; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making part of this specification, Figure 1 being a plan of the corn-sheller; Fig. 2, a rear elevation thereof; Fig. 3, a vertical section of the same in the plane indicated by the line *x x*, Fig. 1; Fig. 4, a view indicating a modification of the mode of applying the improvement.

Like letters designate corresponding parts in all the figures.

I employ a shelling cylinder C, of ordinary construction, and driven by any convenient power communicated thereto, through the wheel A, and pinion B, or in any other suitable manner. Teeth *a, a*, of ordinary construction, project from the periphery of this cylinder. Beneath this cylinder is situated a concave D, provided with teeth, or ridges *b, b*, on its inner surface, and not differing essentially, in itself, from ordinary concaves for similar purposes. Its front edge is pivoted to the frame by means of ears *i, i*, and pivot rod *m*, (Fig. 3,) or in any equivalent manner. The rear edge of the concave is supported by means of a foot *d*, upon a spring G, which rests on a beam *g*, of the frame.

In the concave are formed a number of oblong slots, or apertures as represented, in which are respectively situated a set of curved ribs E, E, in the manner shown; the curvature of said ribs nearly corresponding with the concavity of the concave, above the inner surface of which their front portions project, say a quarter, or a third, of an inch; but near their middle portions they recede to an even height with the concave, and continue thus the whole extent back to their rear end, substantially as shown in Fig. 3. Their inner edges are provided with teeth, or notches, *c, c*, as represented; and their front ends are pivoted on the pivot rod *m*, while their rear ends

are all pierced with a rod *h*, (Fig. 3,) and supported by a foot *f*, resting on a spring H. When thus arranged, they yield or spring upward freely, and independently of the concave, which is also left free to act in the usual manner. At the rear side of the sheller the ribs and the concave are both allowed to spring closely enough to the cylinder C, to remove the grain from the smallest ears of corn.

The sheller, being thus constructed, acts in the following manner:—The ears of corn, in passing beneath the cylinder C, are first acted upon by the forward or projecting portions of the ribs E, E, which shell or start off the grains at intervals, and thus render the remaining grains more easily to be removed by the teeth or ridges of the concave and of the rear portions of the ribs acting together. Both the ribs and the concave yielding separately, they respectively adapt themselves to different sizes of ears without disturbing the action of each other.

In Figs. 1, 2, and 3, the ribs E, E, are represented as situated in positions at right angles to the axis of the concave; but they may be arranged obliquely thereto, as indicated in Fig. 4, and to any degree of obliquity practicable. If the degree of obliquity should be considerable, a sufficient number of rods similar to the rod *h*, shown in Figs. 2, and 3, should pass through the ribs in different places, to allow the spring to act upon them all, and to keep them in their proper positions. This arrangement would not obstruct their free action in the manner described above.

What I claim as my invention and desire to secure by Letters Patent, is—

The ribs E, E, arranged and operating in combination with the concave D, substantially in the manner and for the purpose herein specified.

In witness that the above is a true specification of my improved corn sheller, I hereunto set my hand this 26th day of June 1857.

JEREMIAH P. SMITH.

Witnesses:

W. B. HENDERSON,
JESSE B. HUMMEL.