R. PORTER.

Corn Sheller.

No. 912. Patented Sept. 12, 1838.

Fig. 1.

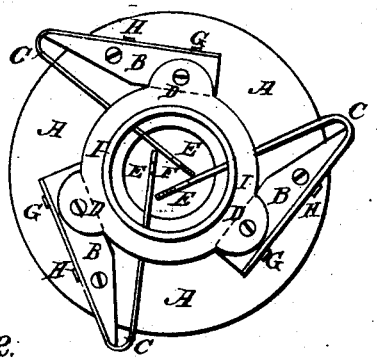


Fig. 2.

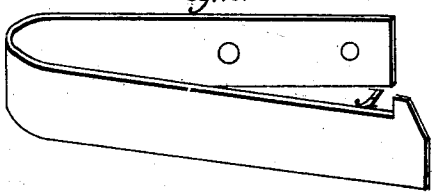


Fig. 3.

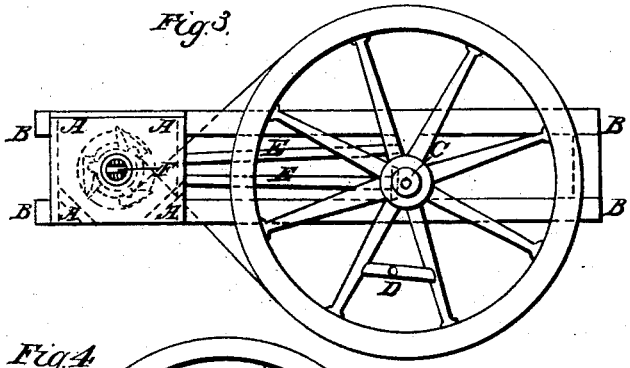
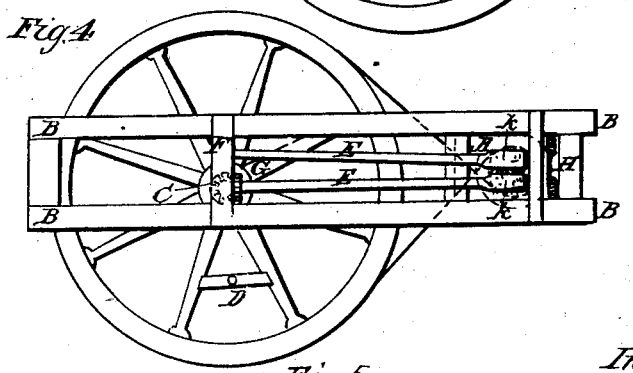
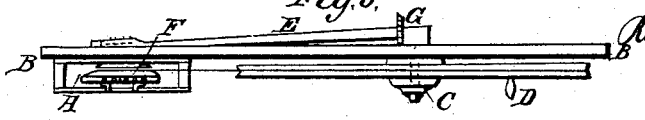


Fig. 4.



Witnesses.
Rufus Dorr
Stephen T. Porter

Fig. 5.



Inventor.
Rufus Porter

UNITED STATES PATENT OFFICE.

RUFUS PORTER, OF BILLERICA, MASSACHUSETTS.

MACHINE FOR SHELLING CORN.

Specification of Letters Patent No. 912, dated September 12, 1838.

To all whom it may concern:

Be it known that I, RUFUS PORTER, of Billerica, in the county of Middlesex and State of Massachusetts, have invented a new and useful Machine for Shelling Corn, and that the following is an exact description of said machine.

A wheel or pulley (A A A Figure 1) six inches in diameter and one inch thick, is made of wood, and has a deep groove in its periphery to receive a round band, by which it is put in motion; the diameter of the back of the pulley is reduced to four inches, and through the center is a round hole, two inches in diameter. Three blocks (B B B Fig. 1) four inches long, and one inch thick, are attached to the front of the pulley by screws. A circular plate of brass, having three semicircular projections, (D D D) is attached by screws to the fronts of the blocks: this plate is hollow, and has a tubular projection (I I) three inches in diameter, extending half an inch to the front from the centerward edge of the plate. Another circular plate, with a tubular projection two inches in diameter, is attached to the backside of the pulley. These tubular projections serve as axles or journals on which the pulley revolves. Three springs, consisting of pieces of steel plate, nine inches long and three fourths of an inch wide, are attached by screws (G, H, Fig. 1) to the blocks B; these springs are bent over the outward ends of the blocks at C C C, and the extreme ends of the springs are brought to a position (E E E) near the center of the pulley, forming a triangle (F); and are prevented from springing out, by three pins fixed in the pulley near the center. From the front edge of each spring at E, is a hook or projection in the form of a sawtooth, (see A, Fig. 2, which is a full size representation of one of these springs.) It is by means of these projections that the shelling is effected; for when the pulley is made to revolve, and the end of an ear of corn is made to enter the triangle, these projections or hooks, passing around the cob, detach the corn therefrom; and each spring being free to bend toward its respective block, the triangle may be enlarged according to the size of the cob in its passage through it. This pulley (which with blocks, springs and axles combined, as represented in Fig. 1 constitutes what is termed the shelling wheel,) is inclosed in a box twelve inches long, three inches wide and nine inches deep, (A A A A, Fig. 3) through the front and back of which, are holes which serve as bearings for the hollow journals, through the front of which may be seen (at F, Fig. 3,) the shelling triangle. This box is attached to the front of a frame (B B B B, Figs. 3, and 4.) to the back of which, also is attached, about twenty inches from the box, a vertical cross-bar, (F, Fig. 4) from the front of which a pin projects horizontally to the front, and serves as an axle on which a band-wheel (C, Fig. 3,) is mounted. The band-wheel has a groove in its periphery, and a band passes over the wheel and the pulley, crossing itself within the box, (through the end of which it passes) whereby the pulley receives a motion reverse to that of the wheel. Two horizontal shafts (E E, Figs. 3, and 4) extend from the cross-bar F to a smaller cross-bar (I, Fig. 4,) near the end of the frame; each shaft has a pivot at each end; two of which are stepped in holes made in the side of the first cross-bar, and the others pass through a slot or mortise in the other cross-bar; these last pivots having liberty to move up or down within the mortise; and from the end of each, a small pin projects half an inch; and two spiral springs (H H Fig. 4,) extend from these small pins, to opposite sides of the frame in a manner to draw the two shafts toward each other. Each shaft is larger at the part K K, (Fig. 4) that passes near the rear center of the pulley than elsewhere, and this part is set with small teeth or spikes for the purpose of taking, holding, and drawing through the sheller, the cob of the corn that is being shelled; hence also the utility of the spiral springs.

A bevel-gear wheel, three inches in diameter, (G, Figs. 4 and 5) is mounted on the end of one of the shafts, and takes to the teeth of another gear-wheel, two inches in diameter, which is attached to the rear of the hub C of the band-wheel, and by which the shaft is put in motion.

This machine is to be attached to a permanent post, or otherwise secured in its proper position, (the side bars of the frame B, being horizontal, and the cross-bars vertical) and the band-wheel is turned by the handle D, and with the right hand; while with the left hand, the ears of corn are entered at the front hollow journal, and passed through the triangle (F, Figs. 1 and

3) formed by the hook springs, which readily separate the corn, which falls through an aperture in the bottom of the box, while the cobs pass between the shafts, and are thrown back from the machine.

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

The construction of the shelling wheel as above described, and in combination therewith the shaft, having spikes on their surfaces in manner and for the purpose above described.

RUFUS PORTER.

Witnesses:
STEPHEN T. PORTER,
JOHN BALDWIN.