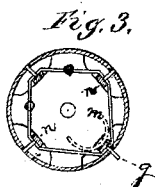
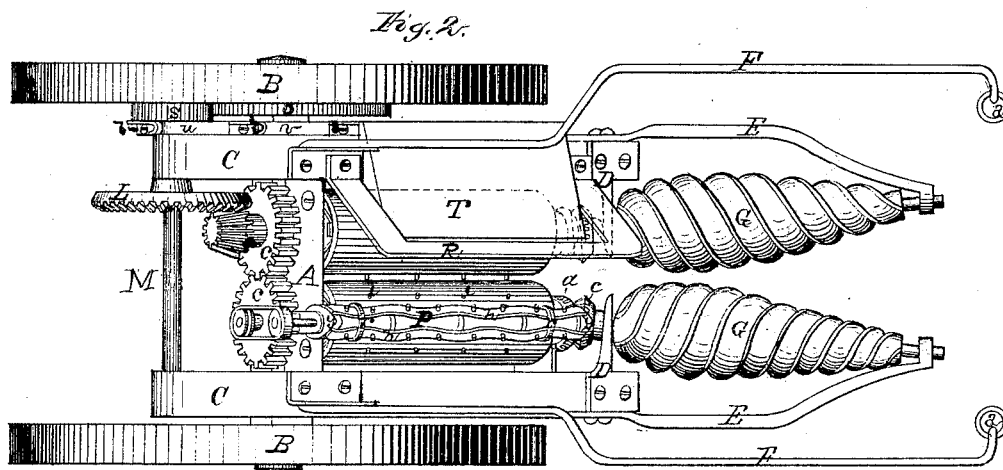
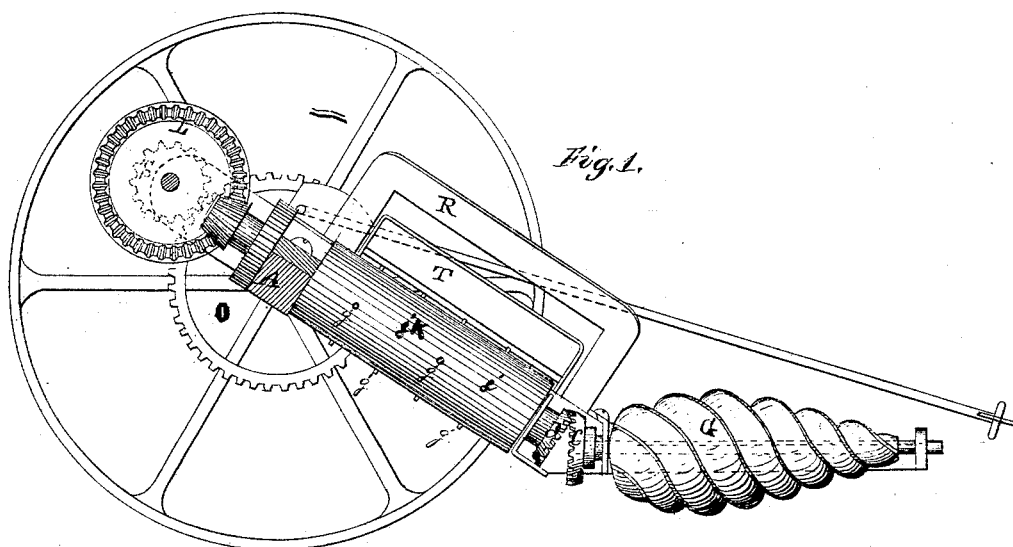


A. SMITH.

Corn Harvester and Husker.

No. 108,197.

Patented Oct. 11, 1870.



Witnesses
 Corb P. Maci.
 D. D. Kimer

Inventor
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United States Patent Office.

AUGUSTUS SMITH, OF PONTIAC, ILLINOIS.

Letters Patent No. 108,197, dated October 11, 1870.

IMPROVEMENT IN COMBINED CORN-HARVESTERS AND HUSKERS.

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

To all whom it may concern:

Be it known that I, AUGUSTUS SMITH, of Pontiac, in the county of Livingston and State of Illinois, have invented a new and valuable Improvement in Corn-Huskers; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawing, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawing is a representation of a vertical section of my invention.

Figure 2 is a plan view of the same.

Figure 3 is a detail.

Figure 4 is a section of the axle, showing the cam unattached to said axle.

My invention relates to corn-huskers and pickers, and consists in improvements hereinafter particularly described, intended to serve as efficient means for picking and husking the ears of standing corn automatically.

A of the drawing represents a sulky-carriage axle, of which B B are the wheels, while C C are the side pieces that form the frame or body.

The front ends of these side pieces respectively are formed of strong metallic bars, D, and with projecting arms, E, for the purpose of holding and operating the worms G, as hereinafter mentioned.

The letters F represent the shafts of my carriage, respectively bent outward and inward, as shown, and having rings, *a*, upon their front ends. The office of these shafts is to provide means for attaching two horses to the carriage, the rings serving as staples for holding the neck-straps of the harness.

G G represent two worms, arranged in the front end of the carriage-frame in the manner shown on the drawing, and operated by pinions, *c*, made fast to their respective shafts, which mesh and work with pinions, *d*, on the front ends of cylinders, K, of the husking apparatus.

It will be observed that inasmuch as the position of the worms upon the carriage is arranged at a different angle from the cylinders with which they are connected, the gearing, both of the worms and of the cylinders, must be properly beveled.

The cylinders K are arranged in the frame horizontally, as shown, and each has a beveled pinion on its front end, and another pinion on its rear end, not beveled, in the rear of the axle.

The left-hand cylinder K has also a band-pulley in the rear of its rear pinion, while the right-hand cylinder K has attached to its shaft in the rear of its rear pinion, a beveled pinion, that engages with the cogged wheel L upon the transverse shaft M; all of which operate as mentioned hereafter.

The cylinders K are hollow, and have horizontal slats inside, which extend from end to end.

Upon these slats I arrange a series of spurs, marked *g*, the office of which is to aid in husking the corn.

In the cylinder proper I make apertures, I, corresponding in number to the number of spurs on the slats, and I arrange the slats inside the cylinders in such manner that the spurs *g* shall be forced outward and inward through said apertures automatically.

I accomplish this result in the manner following; that is to say:

By examining the sectional view of one of these cylinders K, as represented on fig. 3, it will be observed that, as the cylinder is rotated, each of the slots *n* must pass over the cam *m*, thereby forcing the spurs outward, while after passing said cam, the rubber springs *o*, which surround the slots, serve to draw the spurs inward. These spurs are forced outward through the cylinders that they may aid in husking the corn, and they are drawn inward for the purpose of freeing themselves from the husks.

The letter M represents a shaft arranged in the rear ends of the side pieces C C, and has a cogged wheel, L, that works with the beveled pinion of the right-hand cylinder K, in the manner shown on fig. 2. This shaft M has also arranged upon it the pinion *s*, and belt-drum *u*. Said pinion *s* engages with the cogged wheel O, made fast to the right-hand carriage-wheel, as shown, while the belt-drum *u* serves as a means for actuating the endless belt *v*, as hereinafter mentioned.

The letter P represents a husking-cylinder, arranged in suitable bearings above the cylinders K. It has a cord-pulley upon its rear end, corresponding with the pulley upon the rear end of the left-hand cylinder K, and is operated therewith by means of a suitable cord.

This cylinder P is constructed in an escalated form, as shown, and has four slats with spurs thereon, as shown, which slats rest loosely upon its surface. These slats are marked *h* on the drawing, and are held in position by means of rubber springs, *r*, that surround the cylinder and inclose the slats. These slats are raised respectively, at each revolution of the cylinder, by means of cams, *y*, arranged at each end of the cylinder-shaft, and, after being so raised, are returned to their respective places by the rubber bands above mentioned.

On the right-hand outer side of the frame I arrange the endless belt *v*. This belt passes over the pulley or drum *u* upon the shaft M, while its opposite end passes over a similar drum on the side of the right-hand side piece C. I attach buckets, *l*, upon this belt, to aid in carrying the husked corn rearward.

R is a guide or support for the ears of corn, which operates in conjunction with the cylinder P, as hereinafter mentioned.

T represents a guard, intended to aid in passing the corn from the husking apparatus to the endless belt.

My device operates as follows:

The team is attached to the carriage by any suitable means, the necks respectively united with the rings of the shafts, and the worms G are passed each on one side of a row of standing corn.

As the carriage is drawn forward, the whole machinery is put in motion by means of the gearing connected with the right-hand carriage-wheel. The corn-stalks are gradually reached by the cylinders K, and by them the ears are snapped off from their stalks, while at the same time the cylinder P strips the husks from the ears as they stand between the guide R and said cylinder. By the force of the rotation of cylinder P the husked ears are thrown under the guard T, and upon the endless belt *v*, by which they are conveyed to the rear of the carriage.

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

1. The cylinders K, when constructed with slats *n*, spurs *g*, springs *o*, cams *m*, and apertures *i*, and arranged to operate substantially as described.

2. The cylinder P, when constructed with slats *n*, springs *r*, and cams *y*, and arranged in a husking-machine substantially as set forth.

3. In a husking-machine, the combination of the cylinders P and K, guide R, guard T, and endless belt *v*, substantially as specified.

In testimony that I claim the above, I have hereunto subscribed my name in the presence of two witnesses.

AUGUSTUS SMITH.

Witnesses:

JOSEPH F. CULVER,
CHARLES P. CULVER.