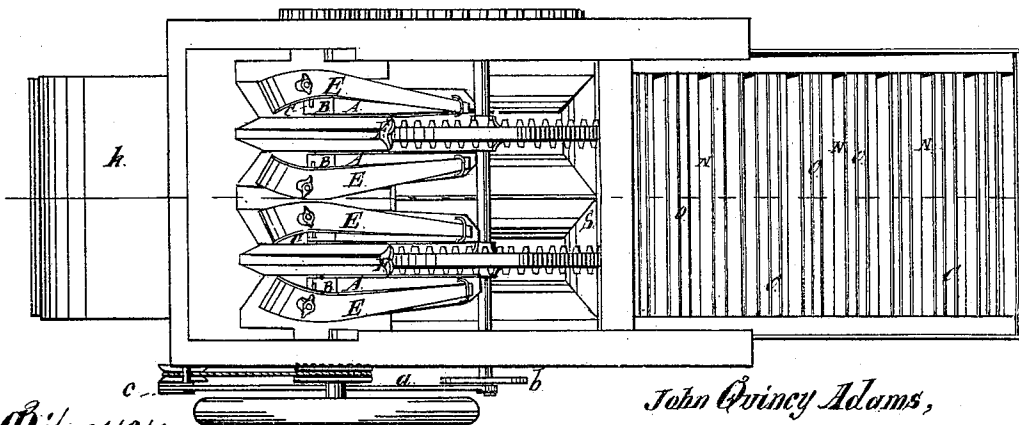
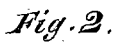
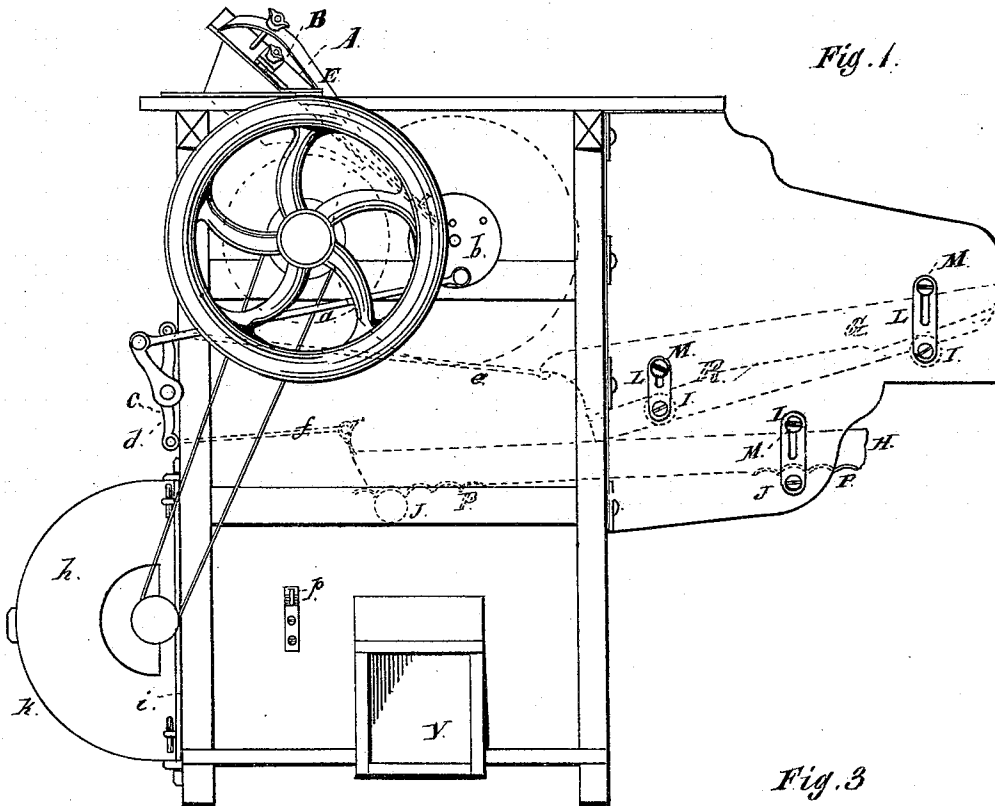


J. Q. ADAMS.
CORN-SHELLER.

No. 179,250.

Patented June 27, 1876.



Witnesses:

Heinrich J. Bruns.
L. M. Harris.

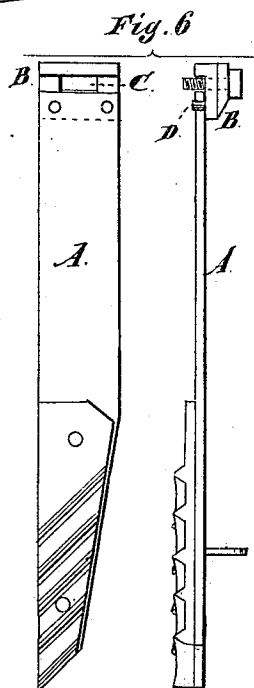
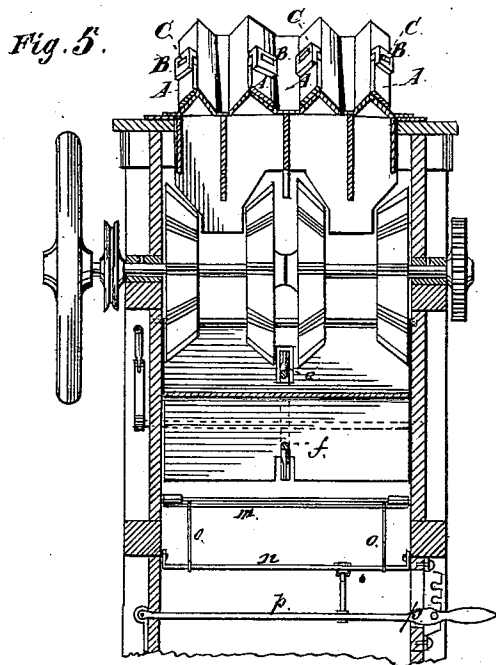
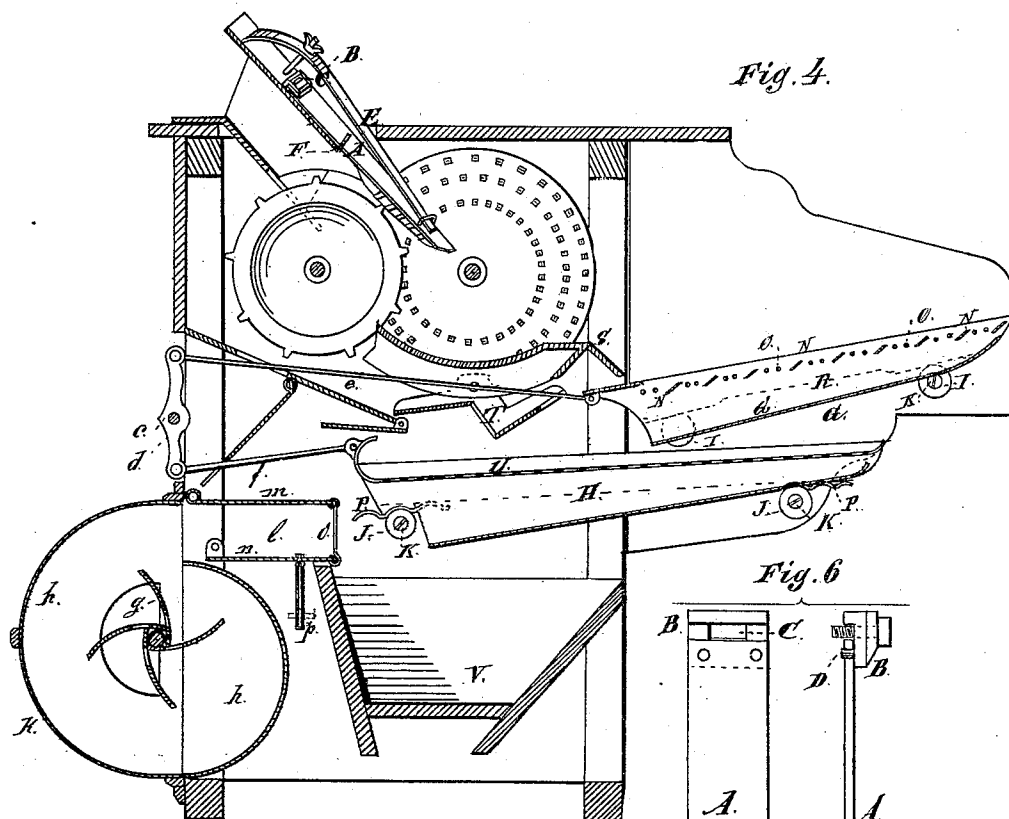
Inventor.

By Coburn & Thacher
Atty's.

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Inventor.
By Coburn & Thacher
Attys.

Witnesses:
 Amos J. Bruns
 L. M. Harris

UNITED STATES PATENT OFFICE

JOHN QUINCY ADAMS, OF MARSEILLES, ILLINOIS.

IMPROVEMENT IN CORN-SHELLERS.

Specification forming part of Letters Patent No. **179,250**, dated June 27, 1876; application filed February 19, 1876.

To all whom it may concern:

Be it known that I, JOHN QUINCY ADAMS, of Marseilles, in the county of La Salle and State of Illinois, have invented a new and useful Improvement in Corn-Shellers, which is fully described in the following specification, reference being had to the accompanying drawings, in which—

Figure 1 represents a side elevation of my corn-sheller; Fig. 2, a top or plan view of the same with the top board removed. Fig. 3 is a side view of the cob-shoe ledge. Fig. 4 represents a longitudinal vertical sectional view. Fig. 5 is a transverse section through the throat of the corn-sheller; and Fig. 6 shows a detached view of the under strap which carries the rag-iron which holds the ear of corn against the picker-wheel.

The nature of my invention consists in the improved mode and means of attaching the under strap above referred to to the corn-sheller, whereby it has a certain degree of play, so that breakage is avoided to a great extent; and in the devices by which said plate is kept in place.

My invention also consists in the construction of the cob-carrier, it being constructed of inclined slats and rods, which tend to separate the corn from the cob that may not be previously separated, and permit the corn to fall through the carrier, as hereinafter specified; and it further consists in the devices upon which the grain-shoe as well as the cob-carrier is suspended, and the corrugated plate attached to the grain-shoe to produce a shaking motion, as hereinafter described; and it further consists in the special construction of the fan-chamber and the method of attaching it to the corn-sheller, in such a manner that the fan and case can be readily removed from the machine.

A represents what is called the "under spring" in corn-shellors, to which is attached the corrugated piece of metal called a "rag-bar." As the corn passes into the throat of the machine it passes under this under spring and rag-bar, and is held by them against the picker-wheel as the shelling takes place. It is necessary for this spring or plate A to yield to adapt itself to ears of corn of different sizes; and when it is attached rigidly at its upper

end to the machine it necessarily must spring to allow ears of corn of different sizes to pass under it, and the difficulty heretofore has been that it would frequently break. To overcome this difficulty I attach it to the top piece of the feeding-throat by means of a block, B, which is bolted to the machine by a bolt passing through a slot, C. There are projecting pins D on this block B, which pass through holes in the end of this under plate A, the end of said plate fitting in the recess in the block, as clearly shown in Fig. 5. E is a spring pressing upon the lower end of this under plate to hold it down with sufficient force to keep the ear of corn pressed against the picker-wheel. It is constructed in the usual manner of constructing the spring in common use for that purpose. F are projections or lugs on the lower end of the covering-plate, to which also the presser-plates A are attached, that serve as stops against which the under plates A strike, to prevent too much lateral motion. The picker-wheels and feeding devices which I use in my corn-sheller are of the usual and well-known construction, and I, therefore, do not think it necessary to describe them with particularity.

G represents the cob carrier or shoe, and H the corn-shoe. They both vibrate horizontally. The cob shoe or carrier rests upon the suspended rollers I, and the corn-shoe upon the suspended rollers J. These rollers have spindles K secured to the adjustable plates L that are fastened to the corn-sheller by bolts M. These rollers may be raised or lowered by means of adjusting the plates L, and the upper ones may be arranged in different planes, to give an inclination to the cob-shoe.

The corn-cob shoe or carrier is composed of slats N and rods O. The slats are set at an angle, and there are preferably two rods between the slats, with sufficient space between the rods and slats for the shelled corn to pass. This construction of the carrier is adapted to cause the cob to move forward to be delivered to the front of the machine, and also to remove any kernels that, by chance, still remain on the cobs, and thoroughly separate the shelled corn from the cobs.

P are corrugated plates attached to the corn-shoe, and resting on its supporting-rollers to

give the shoe an irregular shaking motion as it is vibrated back and forth on its supporting-rollers, as hereinafter described.

The cob-shoe has a close sheet-metal bottom, Q, and has a side piece or ledge, shown by dotted line R, which rests on its supporting-rollers, the bearing-surfaces being inclined planes, so that when the shoe is pushed out it will be raised bodily, and the movement being sudden, the cobs will be tossed forward.

The corn-shoe is similarly constructed, excepting that the ledge has a corrugated piece, P, to give it the irregular shaking motion, and it is not raised and lowered bodily as it moves out and in.

S is a rib or raised piece extending across the sheller over the rear of the corn-cob shoe in front of the picker-wheels, to prevent the cobs from falling back of the shoe. It may be of any suitable form and construction.

T are the ordinary plates now in use beneath the picker-wheels. The shelled corn passes through the screen U and out from the hopper at V.

a is a pitman attached to the wheel b, and vibrates the crank-shaft c. d is a rod, securely attached at its center to this crank-shaft c. e is a rod connecting one end of the vibrating rod d to the rear of the cob-shoe G. f is a rod connecting the other end of the vibrating rod d to the rear end of the corn-shoe H.

It will be observed that the pitman a is operated from the drive-shaft, and by vibrating the crank-shaft c the rod d is vibrated, and the corn-cob shoe, as well as the corn-shoe, is vibrated back and forth upon the suspended rollers J.

The cobs are thrown out at the front of the picker-wheel over the raised rib or ledge S upon the slats and rods in the shoe, and are thrown forward to the front of the machine.

The shelled corn falls upon the corn-shoe H, passing through its screen and out of the hopper, as above described.

g is an ordinary fan, but it has bearings in the fan-case h, which has a flange, i, by which it is secured to the frame of the machine by a staple and pin. k forms the front part of the fan-case, but is firmly secured to the front of the machine.

The main case is made detachable for the purpose of more readily reaching the fan to repair it, and it also admits of the machine being packed in a considerably smaller space for transportation.

l is the wind-throat, which directs the blast

of air from the fan upon the corn to clean it. This wind-throat is composed of two pivoted plates, m and n, which are connected by the rod o. They are supported upon a cross-lever, p, which projects to one side of the machine, where it is accessible to be operated to raise and lower the front end of the wind-throat l, to regulate the direction of the air-blast from the fan.

I find that, all of these improvements combined, make a machine which has great advantages in durability, in convenience of operating, and certainty of doing its work, as well as doing its work thoroughly.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination of the yielding under presser-plate A, attached to the machine, as set forth, and having a loop at its lower end, with the holding-spring E, substantially as described.

2. The combination of the presser-plates A, attached to the covering-plate, substantially as described, and lugs F, on the lower end of said covering-plate, which serve as stops to limit the lateral motion of the presser-plates, as specified.

3. The combination of the cob-shoe G, and the raised transverse rib S, arranged at the rear of the shoe, substantially as and for the purpose set forth.

4. The screen for a cob-shoe, composed of inclined slats N and intermediate rods O, the slats being arranged to project above the rods, substantially as described.

5. The fan-case h, provided with bearings for the fan, and the flange, by means of which it is secured to the frame of the machine and made detachable, substantially as shown and described.

6. The wind-throat l, having an upper and lower pivoted plate, m and n, connected by a rod, o, in combination with the supporting-lever p, by which its direction is adjusted, substantially as described.

7. The combination of the cob-shoe G, the ledges R, having inclines upon them which rest on the supporting-rollers, and the rollers I, substantially as and for the purpose set forth.

JOHN QUINCY ADAMS.

Witnesses:

O. R. ADAMS,
JOHN DAVISON.