J. LIPPINCOTT, Jr.

CORN SHELLING MACHINE.

No. 190,344. Patented May 1, 1877.

Fig. 1.

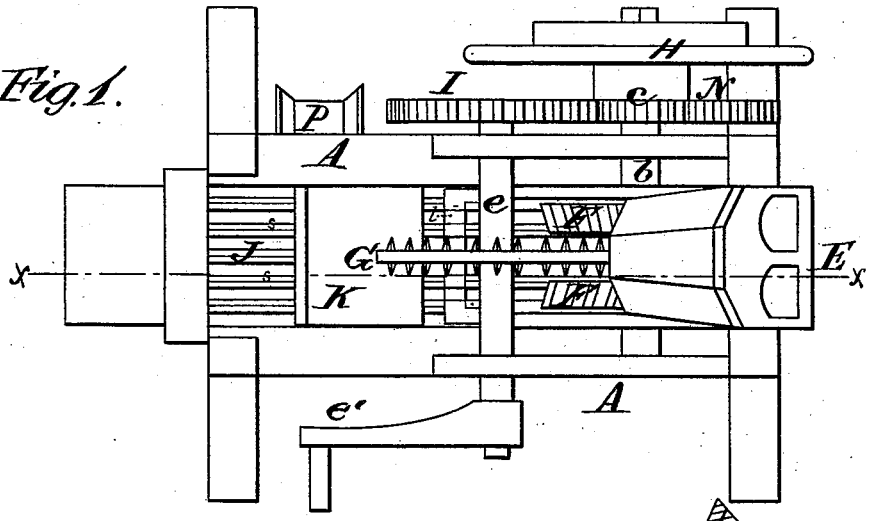

Fig. 2.

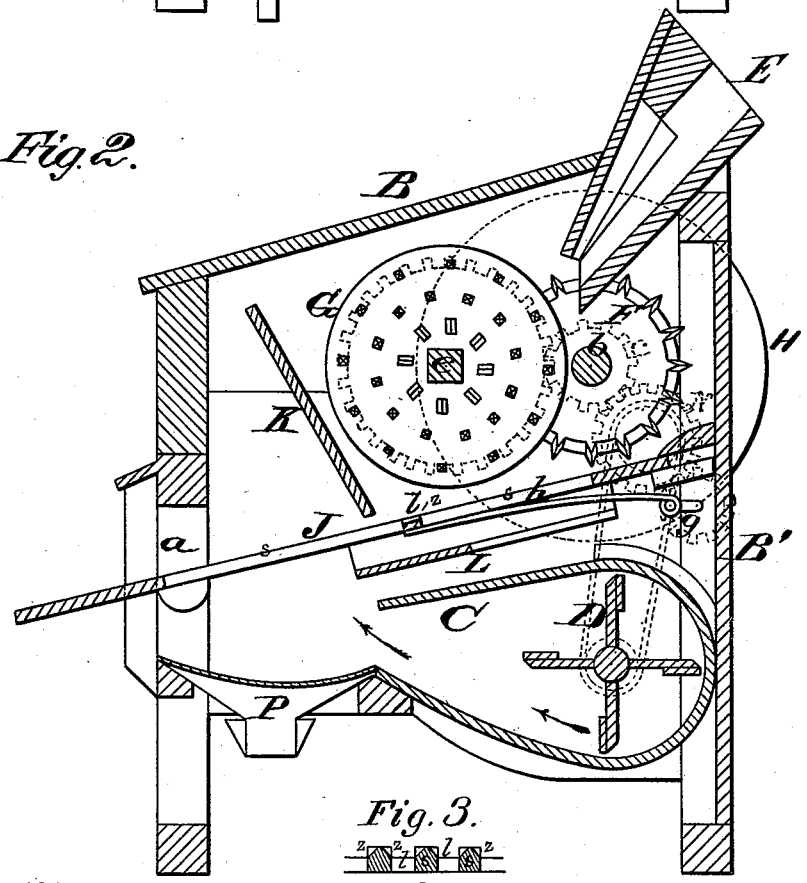

Fig. 3.

WITNESSES

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JAMES LIPPINCOTT, JR., OF MOUNT HOLLY, NEW JERSEY.

IMPROVEMENT IN CORN-SHELLING MACHINES.

Specification forming part of Letters Patent No. **190,344**, dated May 1, 1877; application filed August 5, 1876.

To all whom it may concern:

Be it known that I, JAMES LIPPINCOTT, Jr., of Mount Holly, in the county of Burlington and State of New Jersey, have invented a new and valuable Improvement in Combined Corn Sheller and Cleaner; 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 drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a top view of this invention. Fig. 2 is a vertical central section of the same. Fig. 3 represents a partial transverse section of the riddle.

This invention has relation to corn-shelling machines; and it consists in the construction and novel arrangement of the picker-wheel, the longitudinal inclined riddle, its transverse stop, the conveyer, guide, hopper, and fan case, having an open discharge across said hopper, as hereinafter shown and described.

In the accompanying drawings, the letter A designates the frame of the machine, which is rectangular in form, being supported on suitable corner-posts V V′, whereof the latter are extended upward, to support the feeding-hopper. The case is provided with a removable top or cover, B, and with a removable end board, B′, and ready access is thereby afforded to the interior working parts. The case or frame A is provided with side walls W, which are secured to stout longitudinal beams connecting the end posts.

Near the base of the machine is a case, C, containing a fan, D, the open mouth of which is located under the end of the conveyer and at about the beginning of the discharging-hopper P. From the mouth of the fan-case the blast is discharged, in an open manner, over the hopper P and through the open rear *a* of the frame, as indicated by the arrows in the drawings, driving out the chaff and dust.

E represents a double-throated inclined feeding-hopper, leading down to two feeding-wheels, F, the peripheries of which are beveled inward and toothed, to carry the ears of corn toward the studded picker wheel G, which works in the opposite direction between them, serving, in connection therewith, to shell the grain from the cobs. The inclined peripheries of the wheels F cause the ears to hug the surfaces of the picker-wheel closely. The wheels F are keyed on a shaft, *b*, bearing on one end a pinion, *c*, and a balance-wheel, H, which may also be a belt-wheel. The pinion *c* engages with a large spur-wheel, I, on the squared shaft *e* of the studded shelling-wheel G. A crank, *e′*, on the shaft *e* is used for operating the machine by hand.

The top of the hopper is formed by attaching to a transverse head-block, *v*, the ends of spring-boards *u*, which are concave on their under sides. The hopper is divided by a partial partition, *w*, extending upward from its floor, which is extended with said partition downward and obliquely between the feeding-wheels, in the form of a tongue, *z*. The sides *s* of the hopper are extended on each side of the feeding-wheels to form guards, between which and the exterior guards *s′* the cover B is placed in position. The picker-wheel G is provided with broad radial-edged teeth *t*, near its center, working opposite, or nearly so, to the teeth of the feed-wheels. Exterior to these broad teeth are circular series of pointed picking-teeth *t′*. Extending nearly the entire length of the machine below the picker-wheel is the inclined riddle J, upon which the cobs and shelled corn fall from the shelling-wheel.

The bars of the riddle are arranged lengthwise of the machine, and are angular in cross-section, to prevent lodgment and facilitate the traveling of the cobs lengthwise toward its discharging end. Under the riddle is the conveyer-shoe L, which is connected thereto, and extends under the same as far as the beginning of the discharging-hopper P. This riddle and conveyer receives its trembling reciprocating motion through the medium of a spring-pitman, *h*, and a crank, *g*, on a shaft having a spur-wheel, which is rotated by the pinion *c*, acting through the medium of the spur-wheel N. This riddle is designed to extend from a point in front of the feeding-hopper the entire length of the machine, and projects at the rear, forming a tail, *m*, over which the cobs are discharged. At *l* the riddle is superficially divided by a transverse bar or connection between the ribs, above the

shoe L, and under the rear portion of the picker-wheel, said bar serving to turn the grain down into said shoe. It is provided with squared shoulders or corners *z*, which extend laterally on each side of the beveled bars *s* of the riddle, and serve to hold the cobs slightly at this point, knocking off such grains as may adhere thereto, and preventing the cobs from carrying loose grain in any quantity over the tail. Being a part of the riddle, the stop partakes of the motion thereof, and therefore the cobs will easily move over the obstruction, and any jamming or wedging at this point will be avoided. It also serves to strengthen the riddle at this point when much of the corn and cobs descend upon it, being guided by the inclined board K.

The operation of this machine is briefly as follows: Corn in the cob is fed into the double-throated chute or feeder E, and is conducted thereby to the feeding-wheels, which forward the corn to the picker-wheel, by which, in conjunction with said feeding-wheels, it is shelled. The cleaned cobs and grain are discharged upon the riddle, which carries the former out of the machine at the rear. The grain passes through the bars of the riddle and along the shoe L to the discharging hopper and spout. The chaff and dust from the cobs and grain are blown directly out of the machine to the rear, through the opening *a*.

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

1. The longitudinally-reciprocating riddle J, having longitudinal bars *s*, beveled upward on each side, and the transverse stop or connection *l*, having shoulders or corners *z* on each side of said beveled bars, substantially as specified.

2. The inclined longitudinally-reciprocating riddle J, having longitudinal bars beveled on each side, and the transverse stop or connection *l*, in combination with the guide-board K, terminating near said stop, and the shelling mechanism, substantially as specified.

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

JAMES LIPPINCOTT, JR.

Witnesses:
ALLEN H. GANGEWER,
GEO. C. SHELMERDINE.