No. 820,329. PATENTED MAY 8, 1906.

O. ALLEN.

CORN HUSKING MACHINE.

APPLICATION FILED NOV. 17, 1905.

2 SHEETS—SHEET 1.

Fig. 1.

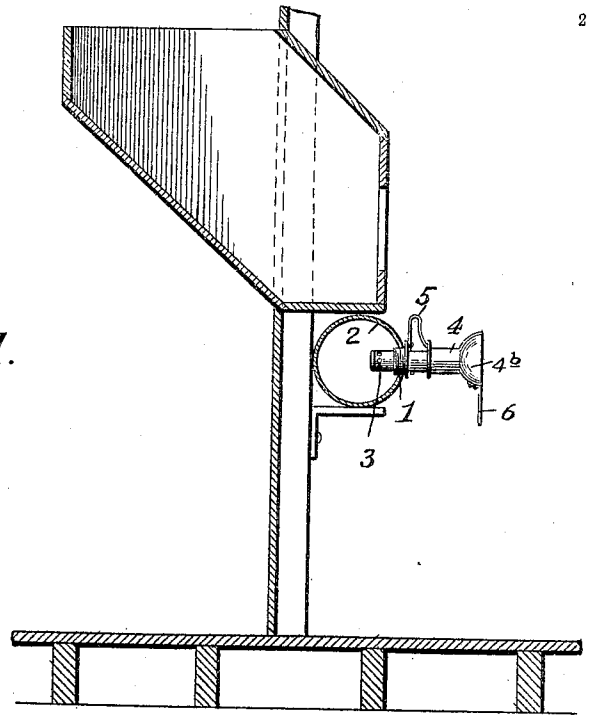
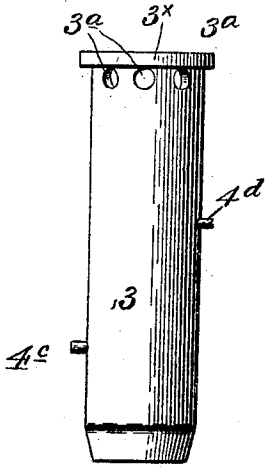


Fig. 4.



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2 SHEETS—SHEET 2.

Fig. 2

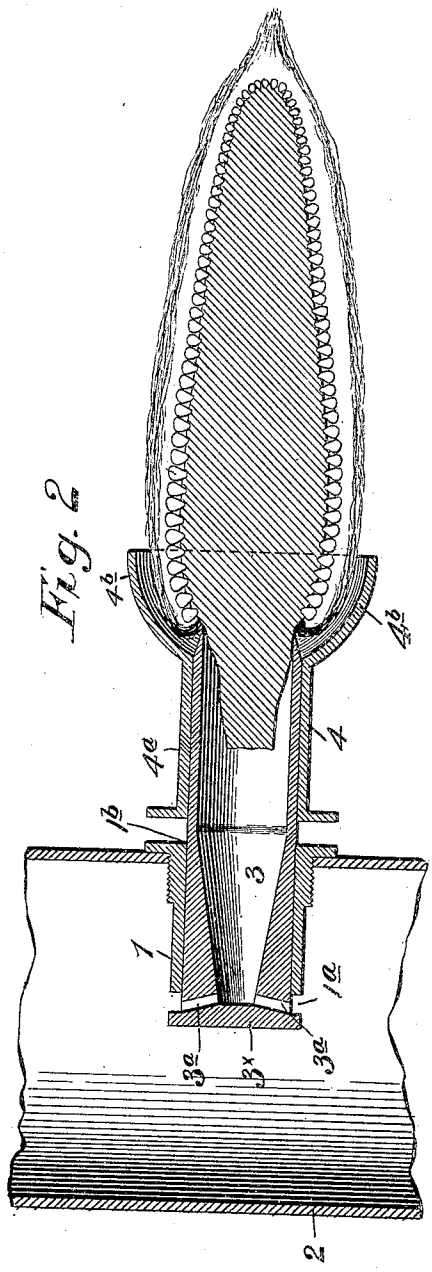
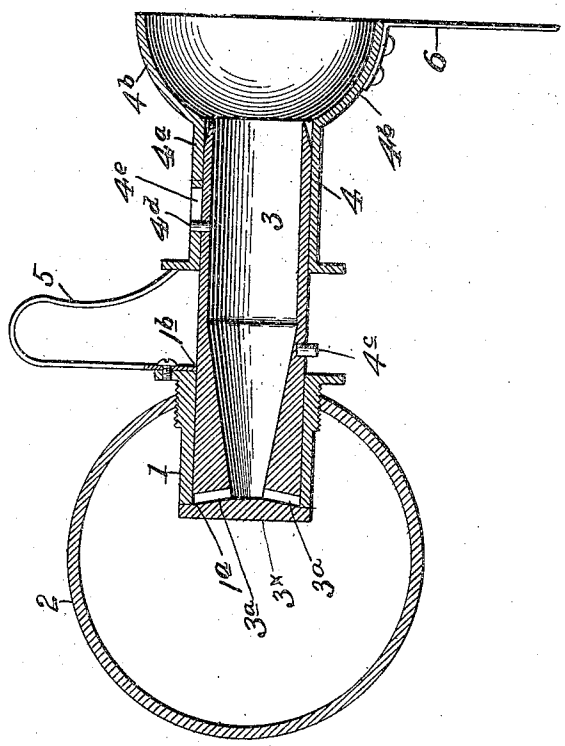


Fig. 3.



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UNITED STATES PATENT OFFICE.

OSCAR ALLEN, OF MOUNT MORRIS, NEW YORK.

CORN-HUSKING MACHINE.

No. 820,329. Specification of Letters Patent. Patented May 8, 1906.

Application filed November 17, 1905. Serial No. 287,886.

To all whom it may concern:

Be it known that I, OSCAR ALLEN, a citizen of the United States, residing at Mount Morris, in the county of Livingston and State of New York, have invented new and useful Improvements in Corn-Husking Machines, of which the following is a specification.

My invention relates to improvements in corn-husking machines.

It has for its object mainly to provide for the ready elimination or removal of the husks from the corn-ear and to accomplish the same in a simple, economic, and effective manner and without the interposition of the hand for that purpose.

Said invention consists in utilizing the action of compressed air for aiding the removal of the husks, the latter being initially severed at the base or stem end of the corn-ear, and of certain structural features, substantially as hereinafter more fully disclosed, and specifically pointed out by the claims.

In the accompanying drawings, illustrating the preferred embodiment of my invention, Figure 1 is a sectional elevation thereof. Fig. 2 is a practically central horizontal section of the same with a corn-ear in position therein as when operated upon for husking. Fig. 3 is a longitudinal vertical section thereof. Fig. 4 is a detached side view of the husk-severing knife or cutter.

In the organization of my invention I provide a fixed tubular or nozzle-like member 1, open at both ends, as at 1^a 1^b, and which nozzle or member is screwed or otherwise secured to and arranged almost wholly within a chamber or receptacle 2. The compressed-air-inlet end 1^a of the nozzle member 1 is thus adapted to communicate with the interior of the chamber or receptacle 2, while the latter in practice has pipe connection (not shown) with an air-compressor (also not shown) located at some distance from said chamber or receptacle.

A tubular or hollow cylindric cutter or knife 3, having close to its headed end $3^\times$ inlets or ports 3^a, effective to communicate with the open end 1^a of the nozzle member 1 when the knife is in a certain position, as presently disclosed, is seated within the nozzle member 1, although projecting considerably beyond its outer end. The interior of the cylinder or knife 3 is tapered or contracted toward its headed or ported end, as shown, the purpose of which will be apparent later. Said knife or cylinder has its outer or forward portion arranged within the tubular or sleeve-like portion 4^a of a second sliding member 4, whose inner end stands normally distant from the opposed outer end of the nozzle member 1. The outer or forward end of the sliding member 4 has formed therewith a hemispherical or cup-like extension or flange 4^b, the office of which is obvious from the drawings, especially Fig. 2. Said sleeve or member 4, as intimated, is adapted to slide upon the extended or forward end portion of the cutter or cylinder 3, being held in its normal forwardly-projected position by a spring 5, with one end suitably secured to an end flange of the nozzle member 1 and its other end bearing or exerting pressure upon an end flange of the cup-ended sleeve or member 4. Said cylinder or cutter is equipped upon its outer surface with two studs or projections 4^c 4^d, one so arranged as to restrict the inward movement of the sleeve or member 4 sliding thereon, and the other, passing through an elongated slot 4^e in said sleeve, being effective to limit the opposite movement of said sleeve or member. A blade or cutter 6 is suitably fixed to the outer end of the cup portion 4^b of the sleeve 4 for convenience in severing the stem end of the corn-ear should it be too long to properly position the latter in said cup portion.

As shown in Fig. 2, the corn-ear, after suitably cutting off the stem thereof, if too long, by striking said stem upon the blade or cutter 6 is so disposed as to cause its butt-end to rest in the cup portion 4^b of the sleeve or member 4, the corn-ear still being held at its opposite end by the hand. By forcing the corn-ear inward the sleeve 4, with its cup portion 4^b, will be correspondingly moved inward, its spring 5 yielding under such pressure, accordingly permitting the cutting edge of the knife or cutter 3 to engage the base of the ear and sever the husks, as is apparent from said figure, the air-pressure previously introduced into the chamber or receptacle 2 holding the knife 3 stationary or in a forwardly-projected position. This movement of the sleeve 3 will be restricted by the stud or stop 4^d, when the continued pressure upon the corn-ear will force the knife inward and its head $3^\times$ away from the inner open end of the nozzle 1, thus providing for establishing communication between the interior of the chamber or receptacle 2 and the interior of the knife or cylinder 3 via the ports 3^a, accordingly admitting air-pres-

sure into said cylinder. Said air-pressure, escaping past the forward end of the latter or therebetween and the butt-end of the corn-ear, will engage and lift the detached or severed husks back over and off the corn-ear, thus resulting in effectively removing said husks, which will accordingly drop to the floor or surface below.

I claim—

1. A device of the character described, comprising a hollow cylindric knife effective to receive the stem portion of a corn-ear, means for incasing said knife, means arranged in connection with said knife, adapted to receive the butt-end of a corn-ear and means for delivering fluid under pressure into said cylinder or knife against the cut end of the corn-ear and against the knife-head for removing the husks, detached or severed by said knife.

2. A device of the character described, comprising a hollow cylindric knife or cutter adapted to receive the stem portion of a corn-ear, means for incasing said knife or cutter, and means for delivering fluid under pressure against the head of said knife for the retention thereof in its effective position and against the cut end of the corn-ear.

3. A device of the character described, comprising a hollow cylindric knife or cutter adapted to receive the stem portion of a corn-ear, means for incasing said knife or cutter, a yielding sleeve or cuff arranged in connection with said cylindric knife and adapted to be engaged by the butt-end of a corn-ear, and means for delivering liquid under pressure against the head of said knife for the retention thereof in its effective position and against the cut end of the corn-ear.

4. A device of the character described, comprising a hollow cylindric knife or cutter adapted to receive the stem portion of a corn-ear and having ports near its headed end, means for incasing said cutter, a yielding sleeve or cuff arranged in connection with said knife or cutter and adapted to receive the butt-end of a corn-ear, and means for delivering liquid under pressure against the head end of said knife, or through said ports into the interior of the latter and against the cut end of the corn-ear.

5. A device of the character described, comprising a fixed nozzle, a hollow cylindric knife or cutter for receiving the stem portion of a corn-ear, having a headed end and arranged within said nozzle and equipped with ports just inward from its headed end, a yielding cuff or sleeve arranged in connection with said cutter or knife and adapted to receive the butt-end of a corn-ear, and means for delivering liquid under pressure against said headed end of the knife, or through said ports thereof and against the cut end of the corn-ear.

6. A device of the character described, comprising a fixed nozzle, a hollow cylindric knife having a headed end and ports near said headed end and arranged within said nozzle, a yielding cuff or sleeve arranged upon said nozzle and having forward end cup-shaped terminal adapted to receive the butt-end of a corn-ear, a spring interposed between said nozzle and cuff or sleeve to hold said cuff or sleeve upon said knife or cylinder, normally in a forwardly-projected position, and means for delivering liquid under pressure against the headed end of said knife or cylinder or through its ports into the interior of the latter and against the cut end of the corn-ear.

7. A device of the character described, comprising a knife adapted to sever the corn-ear husks, and a compressed-air-pressure-delivering chamber or receptacle having an adjunctive part effective as a guide for said knife, said knife also being adapted to deliver the liquid under pressure to the corn-ear for the removal of the severed husks and against the cut end of the corn-ear.

In testimony whereof I affix my signature in presence of two subscribing witnesses.

OSCAR ALLEN.

Witnesses:
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