

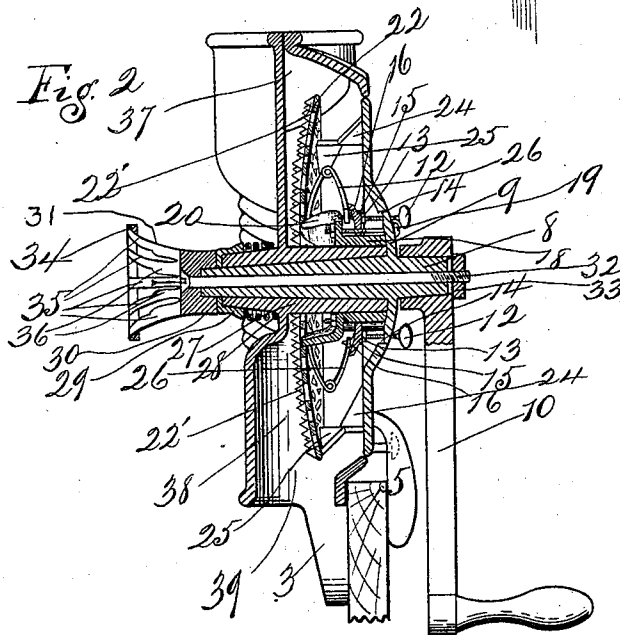
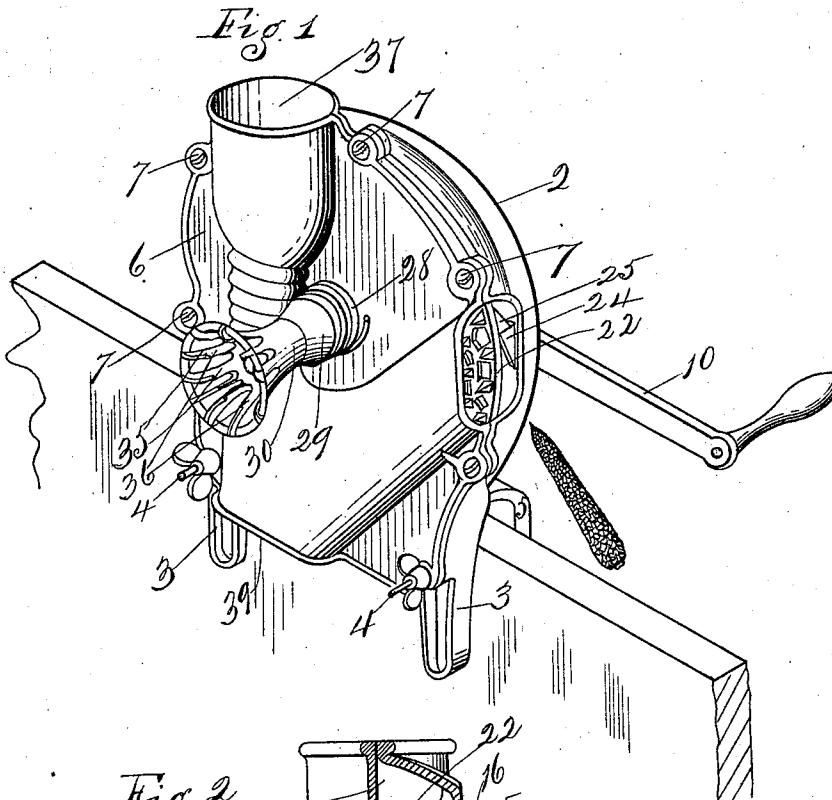
(No Model.)

2 Sheets—Sheet 1.

I. P. CADMAN.
CORN SHELLER.

No. 576,754.

Patented Feb. 9, 1897.



Witnesses

E. E. Overholt
A. G. Smith

Inventor

Isaac P. Cadman

By H. B. Willson
Attorney

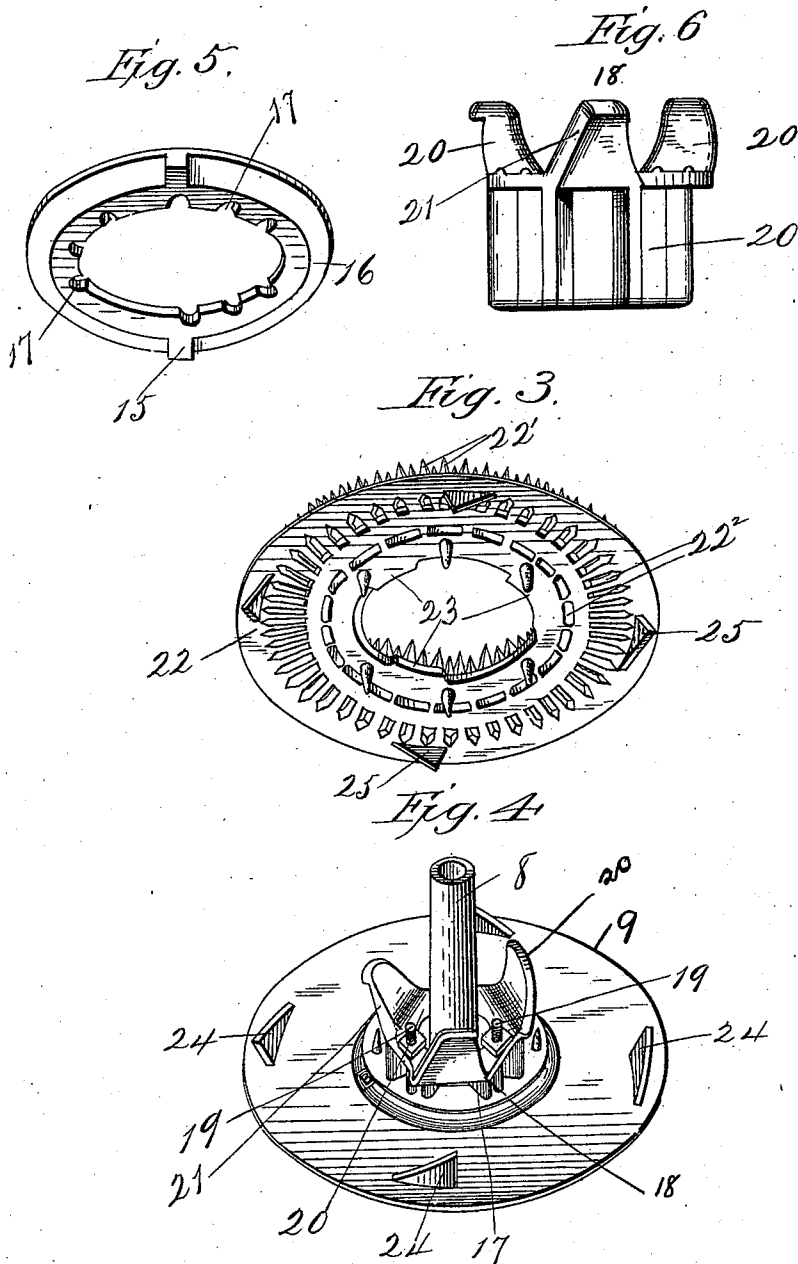
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J. L. Ourand.
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Isaac P. Cadman
By *A. B. Willcox*
Attorney

UNITED STATES PATENT OFFICE.

ISAAC P. CADMAN, OF BELOIT, WISCONSIN.

CORN-SHELLER.

SPECIFICATION forming part of Letters Patent No. 576,754, dated February 9, 1897.

Application filed May 27, 1896. Serial No. 593,321. (No model.)

To all whom it may concern:

Be it known that I, ISAAC P. CADMAN, a citizen of the United States, residing at Beloit, in the county of Rock and State of Wisconsin, have invented certain new and useful Improvements in Corn-Shellers; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention has relation to corn-shellers, and more particularly to that class of rotary-disk corn-shellers in which the ear is fed perpendicularly to the side of a rotary toothed disk; and the object is to provide a simple, cheap, and convenient device of this kind that will rapidly and effectively remove the grains from the cob and deliver the shelled corn in a receptacle separate from that containing the cobs; and to this end the novelty consists in the construction, combination, and arrangement of the same, as will be hereinafter more fully described, and particularly pointed out in the claims.

In the accompanying drawings the same figures of reference indicate like parts of the invention.

Figure 1 is a perspective view of my improved rotary-disk corn-sheller as it appears in operation. Fig. 2 is a vertical transverse section of the same. Fig. 3 is a perspective view of the rotary disk removed from the frame. Fig. 4 is a similar view of the carrying-disk. Fig. 5 is a perspective view of the collar 16, and Fig. 6 is a similar view of the spider 18.

One side 2 of the casing is provided with brackets 3, to which are removably secured by bolts 4 the detachable clamps 5, by means of which the casing is secured to the bin or other receptacle for containing the shelled corn. The opposite side 6 of the casing is secured to the former by bolts 7, and extending centrally through both sides 2 and 6 is a hollow rotating shaft 8, which is formed integral with a carrying-disk 9. The outer end of this hollow shaft 8 is provided with a crank 10 for operating the machine.

12 12 are thumb-screws, the nuts 13 13 of which are located in radial rectangular recesses 14 on the inside of the disk 9, and the inner ends of said screws 12 are in contact

with lugs 15 on the collar 16, having radial recesses 17, by means of which it slides to and from said disk 9 on a spider 18, secured to the disk by bolts 19. This spider 18 is provided with longitudinally-projecting lugs 20, having inclined faces 21, on which is spirally mounted the annular rotary shelling-disk 22, the lugs 23 of which engage and are driven by the inclined faces 21 of the lugs 20 of the spider 18. A series of spirally-inclined lugs 24 on the inside of the disk 9 come in contact with a series of similarly-inclined lugs 25 on the back of the annular toothed disk 22, and by means of which said annular disk may be adjusted with reference to the carrying-disk 9. The annular toothed disk 22 is formed with a series of shelling-teeth 22' and a series of orifices or openings 22², the teeth removing the grains from the cob and the orifices or openings allowing a portion of the grain to pass through them and prevent congesting the machine, and thus very materially lessening the power required to operate it.

The disk 9, its collar 16, spider 18, and annular toothed disk 22 are secured together by the bolts 19 and of course all revolve together when the hollow shaft 8 and handle 10 are operated, and a pair of springs 26 26, secured between the back of the toothed disk 22 and the inside of the collar 16, in connection with the thumb-screws 12 12, serve to adjust the tension of toothed disk 22 with reference to the work of shelling according to condition of grain, the dry corn requiring rather less pressure to shell it from the cob than fresh or damp corn, and these springs 26 26 also allow the annular disk to automatically adjust itself to large or small ears of corn when passing through the machine.

27 is a hollow sleeve cast integral on the inner face of the casing 6, and it forms a bearing for the hollow shaft 8, and on the outer end of said hollow shaft is mounted a spiral spring 28, over the end of which is secured a cap 29, against which rests the hub 30 of a cone-shaped hopper 31, secured to and revolving with said hollow shaft 8 by a bolt 32, passing longitudinally through the same and provided with a nut 33, which secures the hub of the handle 10 in place on the outer end of said shaft 8.

The cone-shaped hopper 31 is formed with

an outer ring 34, which is connected to the hub 30 by a series of longitudinally-radial ribs 35, the angular faces 36 of which serve to remove the grains of corn from the tip and butt of the ear when said hopper is rotated by its shaft. This operation is usually performed first, and then the ear is dropped in the mouth 37 of the machine, where the annular toothed disk rotates it and at the same time removes all the grains from the cob, and, as before stated, a portion of the grain passes through the perforations in the disk 22 and a portion passes down the face of it and prevents the machine congesting or clogging. When the butt-end of the cob has reached the lower end of the disk 22, which will be about in a line below the center of the shaft after all the corn has been removed, the continued rotary action of the toothed disk carries the butt-end around with it and enters it into the mouth 38 of the outlet 39 and discharges it butt first from the machine, as shown in Fig. 1.

Although I have specifically described the construction and relative arrangement of the several elements of my invention, I do not desire to be confined to the same, as such

changes or modifications may be made as clearly fall within the scope of my invention without departing from the spirit thereof. 30

Having thus described my invention, what I claim as new and useful, and desire to secure by Letters Patent of the United States, is—

1. The casing provided with an integral bearing, the hollow shaft and carrying-disk having inclined lugs, in combination with the adjustable collar and thumb-screws and the spider 18 carrying the perforated annular shelling-disk having the inclined lugs, substantially as and for the purpose set forth. 35 40

2. The casing 2 6, provided with the bearing-sleeve 27, and the carrying-disk 9, its hollow shaft 8, and inclined lugs 24, in combination with the annular toothed disk 22, its inclined lugs 25, the springs 26, and the thumb-screws 12 12, substantially as and for the purpose set forth. 45

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

ISAAC P. CADMAN.

Witnesses:

J. B. Dow,

J. S. Dow.