

(No Model.)

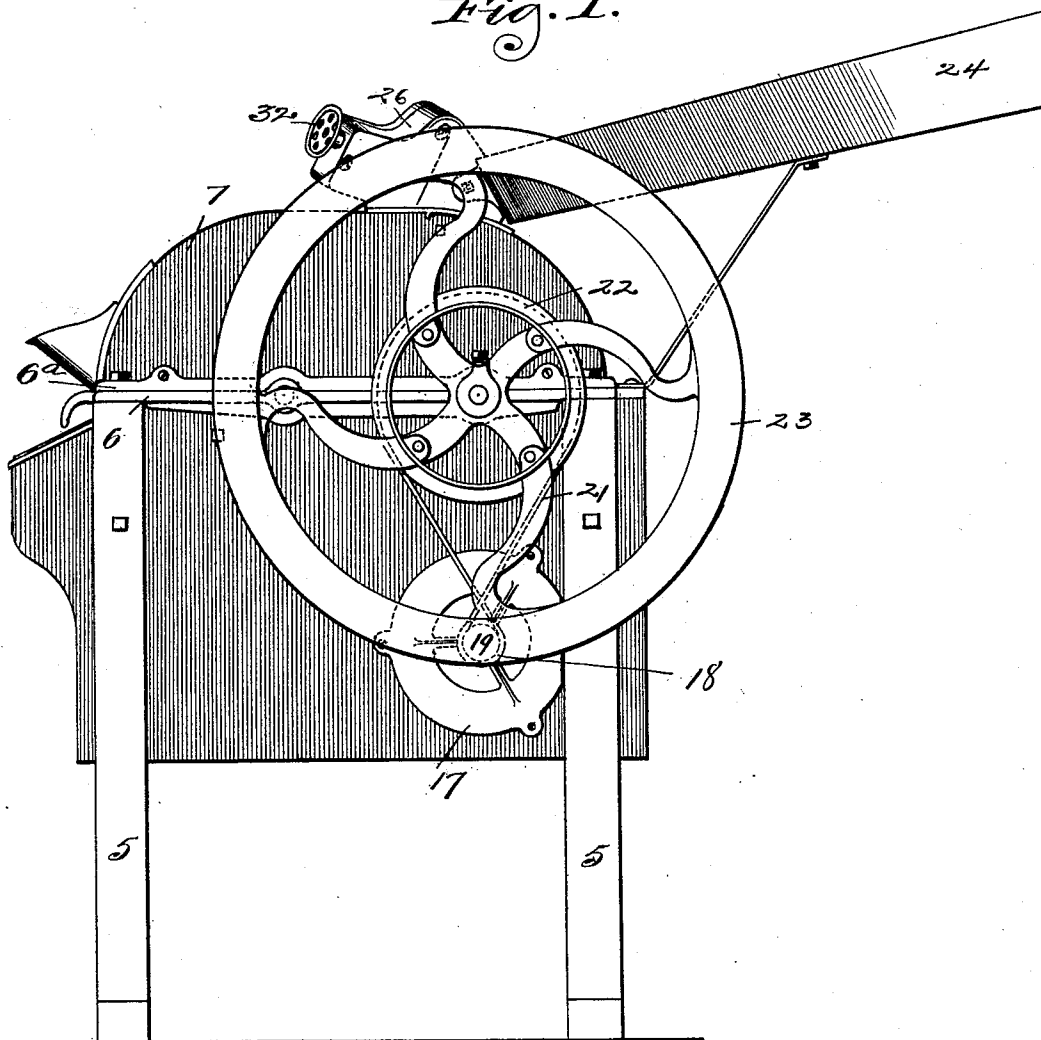
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C. F. SEARCH.
CORN SHELLER.

No. 500,159.

Patented June 27, 1893.

Fig. 1.



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(No Model.)

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Fig. 2.

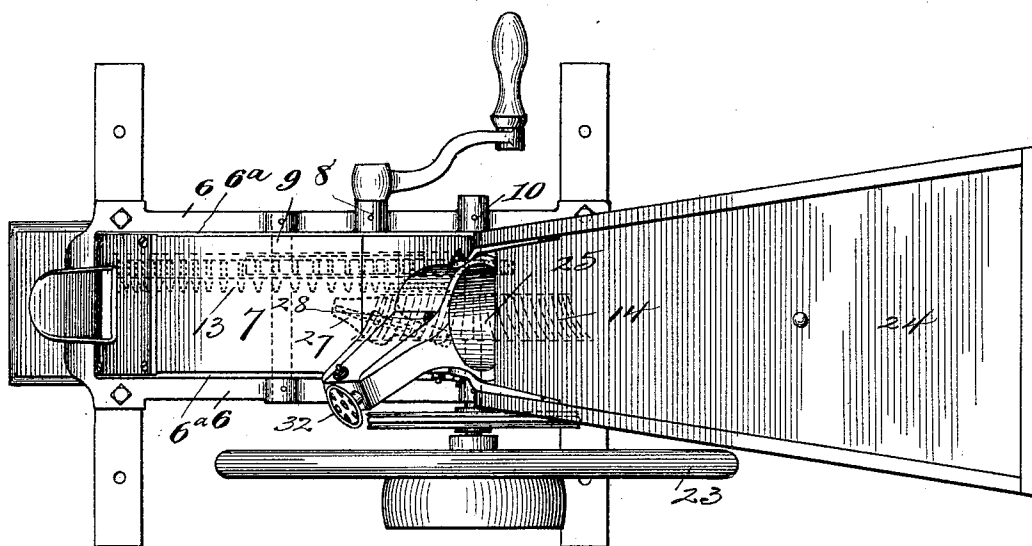
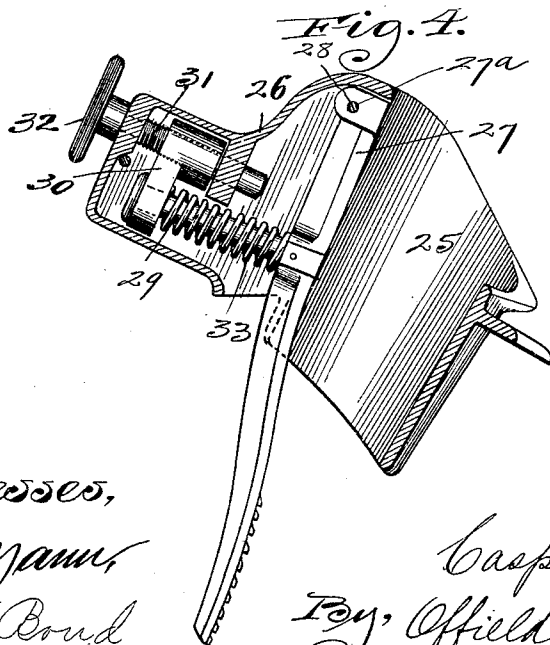


Fig. 4.



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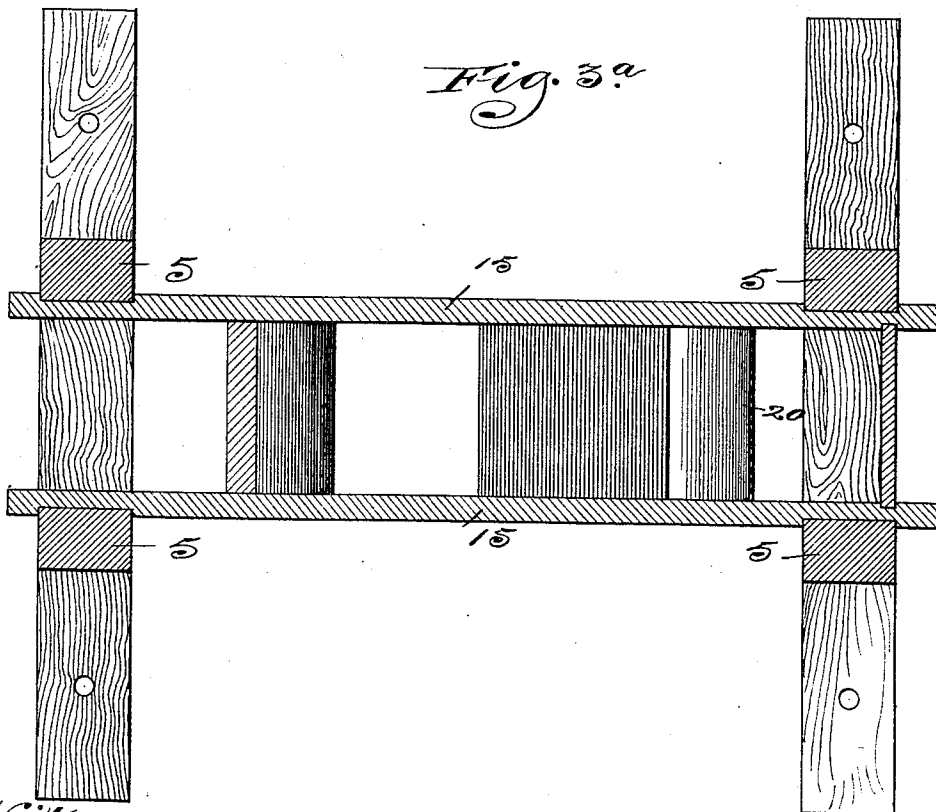
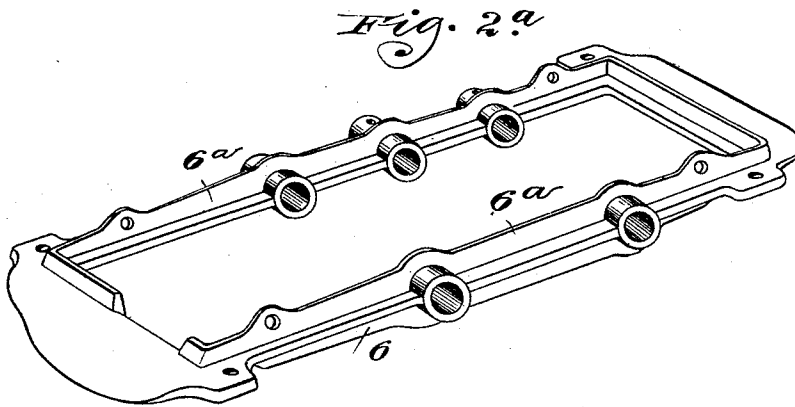
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No. 500,159.

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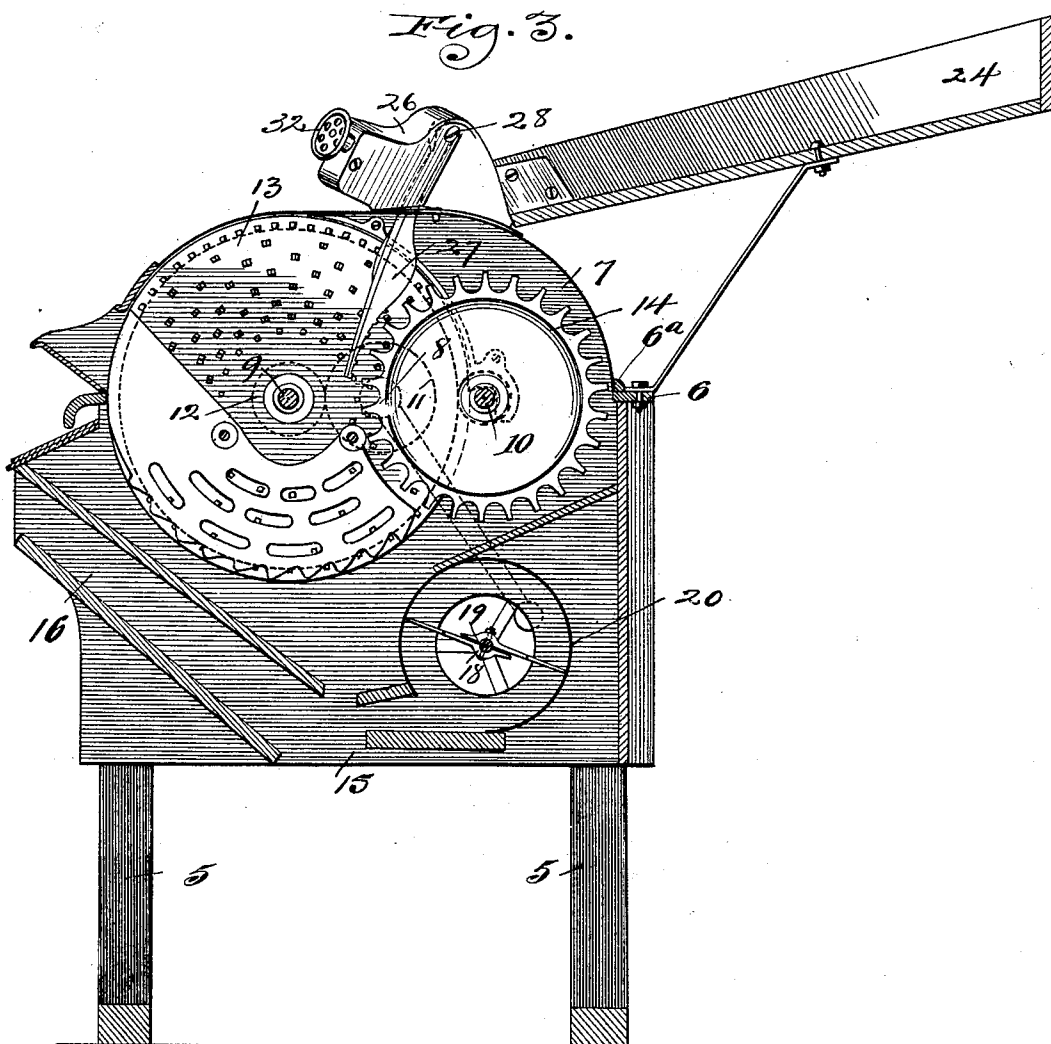
(No Model.)

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C. F. SEARCH.
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Patented June 27, 1893.



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UNITED STATES PATENT OFFICE.

CASPER F. SEARCH, OF APPLETON, WISCONSIN, ASSIGNOR TO THE APPLETON MANUFACTURING COMPANY, OF SAME PLACE.

CORN-SHELLER.

SPECIFICATION forming part of Letters Patent No. 500,159, dated June 27, 1893.

Application filed February 6, 1892. Serial No. 420,589. (No model.)

To all whom it may concern:

Be it known that I, CASPER F. SEARCH, a citizen of the United States, residing at Appleton, Wisconsin, have invented certain new and useful Improvements in Corn-Shellers, of which the following is a specification.

My invention relates to corn shellers and particularly to the construction of hand power shellers; and it consists in various improvements in the structural features of such machines all as hereinafter described but particularly pointed out in the claims.

I have improved the construction of the sheller by providing a continuous metal frame which is fitted to the tops of the corner posts so as to bind them together and to support the hood or cover for the shelling devices. This metal frame also furnishes bearings for the several shafts. I have also changed the location of the fan from the end of the case to its interior and have provided air inlet openings in the side walls of said case, and such openings are provided with an annular frame having bearings at its center for the fan shaft. The case is also provided on its interior with proper chutes for delivering the shelled corn, the cobs and the chaff, and the posts are mortised into the case so as to make a more rigid construction. I have also improved the construction of the rag iron so as to adapt it for adjustment to various sized ears of corn and to cause it to bear equally in its various adjusted positions.

These several improvements are illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of the sheller complete. Fig. 2 is a top plan view thereof, the beveled runner, the straight runner and rag iron showing in dotted lines. Fig. 2^a is a perspective view of the metal frame. Fig. 3 is a longitudinal sectional elevation through the case, the shelling devices showing in elevation, and Fig. 3^a a transverse section through the wooden case and posts. Fig. 4 is a sectional view through the housing of the rag iron and the throat of the feed spout of the feed box, the rag iron with its adjusting devices being shown in elevation.

In the drawings, 5 represents the posts of the machine, and 6 a continuous metal frame bolted to the top of said posts and having an

upright flange 6^a to receive the hood 7. This frame is provided with boxes for the driving stud 8, the straight runner shaft 9, and the beveled runner shaft 10.

11 represents the driving wheel, 12 a pinion on the shaft 9.

13 represents the straight runner and 14 the beveled runner.

15 represents the side walls of the wooden case within which are arranged the inclined chutes 16. These side walls are grooved and the posts are let into said grooves as clearly shown in Fig. 3^a whereby a more rigid construction is provided. The walls 15 are cut out at the rear of the machine and over the apertures are fitted annular castings 17 which support the boxes 18 for the fan shaft 19. The fan case 20 is arranged concentric to such shaft and the latter is driven by a belt 21 carried over a pulley 22 on the beveled runner shaft.

23 represents the usual fly wheel and 24 the feed hopper which delivers to a cast iron throat piece 25, shown in cross section in Fig. 4. This throat piece is preferably divided vertically and its members have integral extensions 26 forming a chamber within which the rag iron 27 is mounted. This rag iron is pivoted at 27^a to a stud 28 and depends in the usual manner in a vertical opening in the front of the throat. In order to adjust this iron to adapt it for operation with different sized ears of corn, I pivotally connect thereto a rod 29, the opposite end of said rod passing through an aperture in a traveling nut 30, which is moved by a screw 31 having a hand wheel 32 fixed thereto. A spiral spring 33 has one end seated against the rear side of the rag iron and its other end against the nut, the rod 29 passing through the spring and being free to slide back through the nut to permit the rag iron to yield to any unusual obstruction in the throat. If now it be desired to adjust the rag iron so as to vary the size of the throat opening it is readily done by manipulating the hand wheel which will cause the nut to travel one way or the other, thus thrusting in or drawing out the rag iron while the spring pressure remains at all times the same.

Heretofore in the construction of corn shell-

ers the rag iron has been adjusted by varying the tension of the spring and the result being that the pressure of the rag iron upon the corn varied with the tension of the spring.
 5 It is to obviate this difficulty that this part of my improvement is mainly designed, although such improved construction has other features of superiority over such older constructions. In my construction the rag iron swings
 10 on a free pivot and the spring thrusts it out as the nut advances without varying the tension of the spring while the rag iron is drawn back by the rod thus enlarging the throat opening without varying the spring tension
 15 which exerts an unvarying pressure whether large or small sized ears of corn are being shelled.

The advantages of these several improvements are apparent. The metal frame secures
 20 the posts rigidly at their tops, provides suitable bearings for the several shafts and a seat for the hood or cover. The fan is located within and protected by the frame and case and is not therefore liable to injury in shipment or use.
 25

I claim—

1. In a corn sheller, the combination with the supporting posts, of an open metallic frame
 30 secured to the tops of said posts and providing bearings for the shafts of the shelling de-

vices and having a flange to provide a seat for the hood or cover, substantially as described.

2. In a corn sheller, the combination with the shelling devices and a feed passage or throat to deliver the material thereto, of a rag
 35 iron pivoted at its upper end at one side of said throat or passage, an operating rod pivotally connected to the rag iron between its ends, a traveling nut operatively connected
 40 with said rod, a screw for causing said nut to travel and a spring seated against the nut and the rag iron, substantially as described.

3. In a corn sheller, the combination with the shelling devices and a throat or passage
 45 for delivering the material to said shelling devices, a rag iron pivotally supported at its upper end at one side of the throat or passage, a rod pivotally connected to the rag iron between
 50 its ends, a traveling nut having an aperture through which said rod may slide and said rod provided with a head or stop, means for causing said nut to travel and a spring interposed between the nut and the rag iron, substantially as described.

CASPER F. SEARCH.

Witnesses:

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