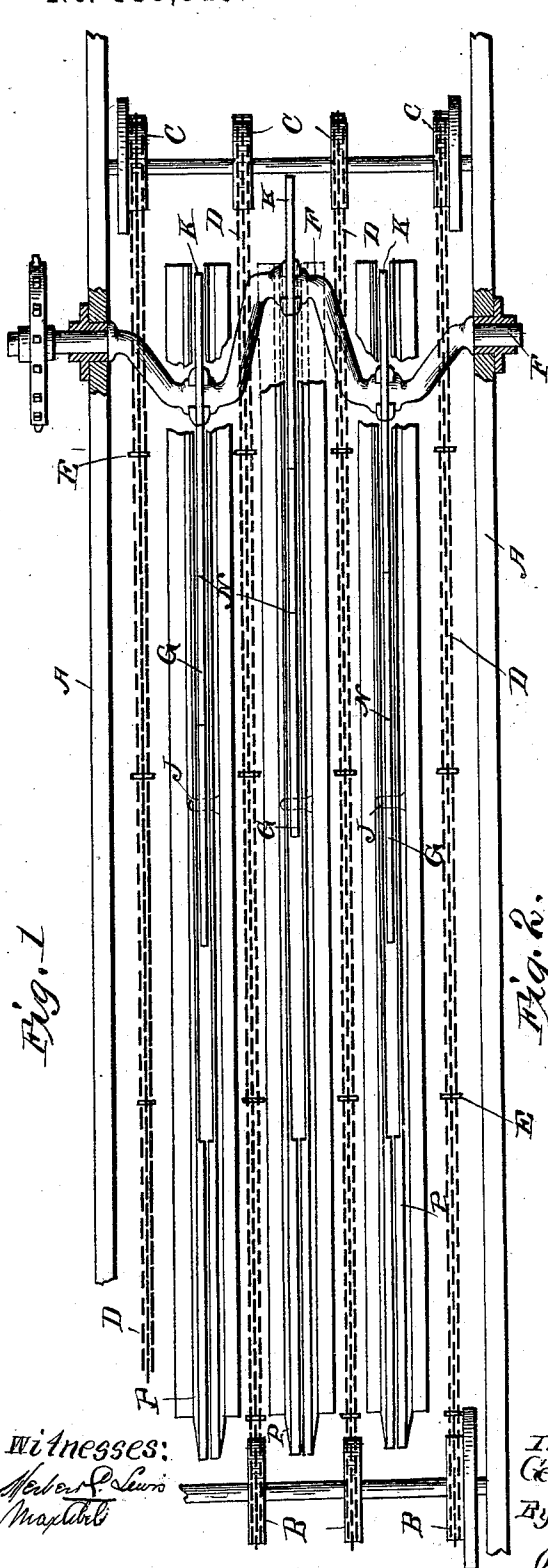


(No Model.)

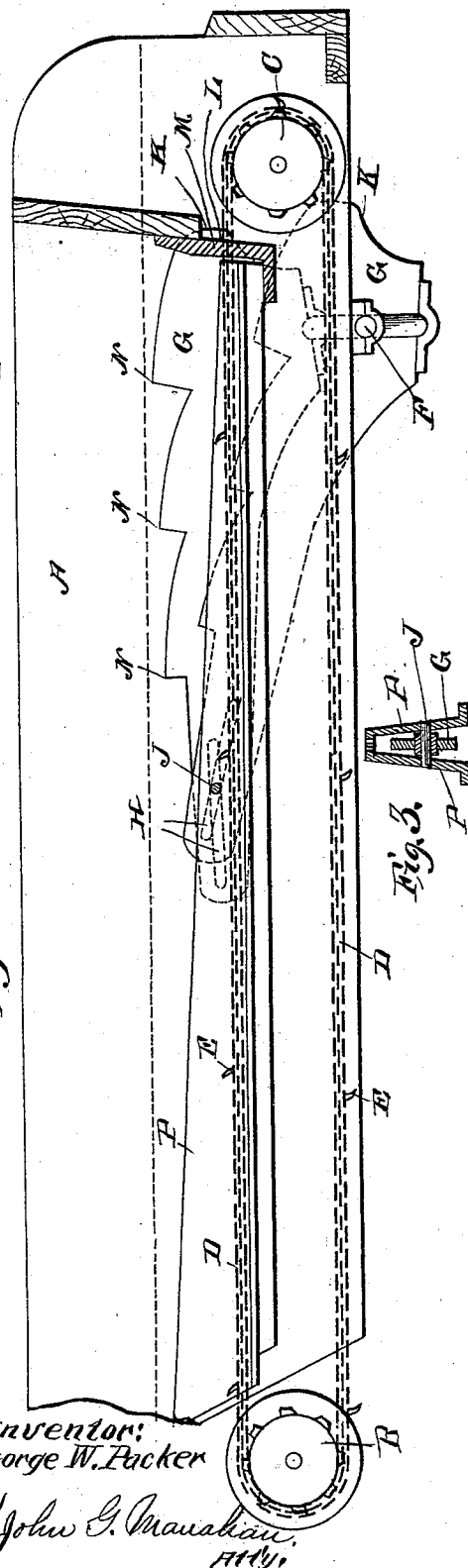
G. W. PACKER.
CORN SHELTER FEED.

No. 553,315.

Patented Jan. 21, 1896.



Witnesses:
Herbert P. Lewis
Maxwell



Inventor:
George W. Packer

By John G. Manahan,
Att'y.

UNITED STATES PATENT OFFICE.

GEORGE W. PACKER, OF ROCK FALLS, ASSIGNOR TO THE KEYSTONE
MANUFACTURING COMPANY, OF STERLING, ILLINOIS.

CORN-SHELLER FEED.

SPECIFICATION forming part of Letters Patent No. 553,315, dated January 21, 1896.

Application filed October 4, 1895. Serial No. 564,599. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. PACKER, a citizen of the United States, residing at Rock Falls, in the county of Whiteside and State of Illinois, have invented certain new and useful Improvements in Corn-Shellers Feeds; 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, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention has reference to improvements in the feed of corn-shellers, and pertains to that class of corn-shellers in which the ears of corn are carried to and through the shelling mechanism in a lengthwise position by sprocket-chains having upward projections, which engage the respective ears and positively carry them into the entrance of the shelling mechanism. These elevating feed-chains operate longitudinally, respectively, in the base of the compartments or troughs into which the bottom of the general feed-hopper is subdivided. The ears of corn are shoveled promiscuously into said feed-hopper. In former constructions the ears of corn lay in all directions across the rigid and grooved bottom of the feed-hopper, with the result that many of the projections of the feed-chains would fail to withdraw an ear of corn from this stationary mass which accumulates at the lower portion of said hopper, and the miscellaneous manner in which the ears lay across the said grooves and across each other delayed the proper adjustment of the ears lengthwise in the troughs and on the feed-chains, rendering the work of the latter irregular and to that extent interfering with the normal operation and reducing the shelling capacity of the machine.

My invention consists in supplementing the aforesaid action of the feed-chains, in extricating individual ears from the general mass, with a series of vertically and longitudinally oscillating plates set edgewise in the said feed-hopper and located midway in the partitions between the feed-chains and serving as intermittent upward extensions of the ordinary

divisions or partitions between said feed-chains and thus disintegrate the mass of ears as the latter are shoveled into the hopper, and the longitudinal movement of said plates expedites the straightening of said ears of corn on the feed-chains, respectively, so that the latter go up to the shelling mechanism uniformly and evenly loaded, and the operation of the machine is also uniform and even and the best results and largest shelling capacity obtained. As the plates on each side of the feed-chains move in opposite directions, an ear lying across two plates is straightened by both coincidently.

I attain the above advantages by the use of the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a plan view of the feed-hopper, showing the ear-adjusting plates referred to in relation to the carrying-chains. Fig. 2 is a longitudinal vertical section at the side of one of the feed-chains. Fig. 3 is a detail in cross-section of the front bearing of the plate G.

Similar letters refer to similar parts in all the views.

As my invention is adapted for application and use in any of the self-feeding corn-shellers, and the different types or constructions of the latter are well known, I do not deem it necessary to show or describe an entire machine or any more of the same than will render intelligible the construction, location, and operation of my invention.

A is the usual feed box or hopper, the front end of which is suitably supported on the frame of the corn-sheller, in communication with the throat of the latter, through which the ears of corn pass lengthwise to the shelling devices. The opposite or outer end of the feed-box A is supported upon suitable legs and is usually adjustable vertically to increase or diminish the amount of feed. B is one of the usual series of sprocket-wheels seated at the upper end of the feed-box A and driven in any suitable manner from some convenient portion of the machinery of the sheller.

C is one of the usual series of sprocket-wheels located transversely in an extension of the lower end of the feed-box A. Each of the sprocket-wheels B and C carry a feed-

chain D, provided with upward projections E, adapted to engage and force the ears of corn into the sheller.

F is a zigzag shaft suitably journaled transversely on the bottom of the feed-box A, near the lower end of the latter.

G G are plates journaled, respectively, edgewise near their lower ends on the various crank-wrists of the shaft F and projected toward the machine toward the carrying-chains D, respectively. In the forward end of the plate G is formed a longitudinal slot H, through which slot is passed a transverse supporting-bolt J, suitably attached at each end to the sides of the partitions P in the box A. In the orbital movement of the plates G, occasioned by the rotation of the shaft F, the forward ends of said plates reciprocate on the bolt J, while the rear portions of said plates have a circular movement from a point below the plane of the carrying portion of the chains D. The upper half of the rotation of the plates G is toward the sheller, whereby the action of said plates is to lift the corn lying above them and projecting laterally from the chains D toward the sheller, and at the same time straighten the ears of corn into the interval between said partitions P, in the bottom of which interval said chains have their progressive movement. The interval between the plates G is something greater than the transverse diameter of the ears of corn. Therefore when said plates straighten said ears of corn into said intervals said ears rest upon said chains, respectively, and are thereafter carried forward wholly by the latter.

The constant movement of the plates G, which, as aforesaid, form part of the sides of the channels in the bottom of which said chains move toward the sheller, prevents any lodging of the ears of corn against the sides of said channels, as is often the case when said sides are wholly stationary. The rear ends K of the plates G in each rotation of the shaft F project through and reciprocate in the lower end M of box A through vertical slots L formed in said lower end of box A for that purpose. By this construction no opportunity is afforded for the ears of corn casually interposing between the lower end of said plates and the lower end of the box. This

construction also prevents any contact of the lower end of said plates with the ears, which, if permitted, would drive the ears the wrong way, and also increase the labor of driving said plates. The upper edge of the plate G is provided with angular projections N, so that said plates may more readily engage any superimposed ears of corn. The constant stirring and partially propelling ears of corn by said plates G tend to disintegrate the mass of corn shoved into the box A, and at the same time straighten such ears in said intervening channels and upon said carrying-chains. This operation of the plates G not only greatly lessens the usual labor of the carrying-chains in tearing single ears of corn out of said mass, but is more rapid, because the contact of said plates with said ears is more direct, and occurs at the best locality to force said ears into a straightened position upon said chains. At the same time the usual function of said chains is much more effective.

What I claim as my invention, and desire to secure by Letters Patent of the United States, is—

1. In a corn sheller provided with feed chains, a series of reciprocally moving, corn propelling plates G set edgewise between said chains, substantially as shown and for the purpose described.

2. In a corn sheller, the combination of a feed box A, suitable endless feed chains D, arranged parallel in the bottom of said box, and a series of reciprocally moving plates G placed edgewise between said chains, substantially as shown and for the purpose specified.

3. In a corn sheller provided with a feed box A, the combination of a series of parallel feed chains arranged longitudinally in the bottom of said feed box and a series of reciprocally moving plates G interposed between said chains substantially as shown and for the purpose described.

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

GEORGE W. PACKER.

Witnesses:

JOHN G. MANAHAN,
CHATTIE L. MANAHAN.