

(No Model.)

H. A. ADAMS.
CORN SHELLER.

No. 459,196.

Patented Sept. 8, 1891.

Fig. 1.

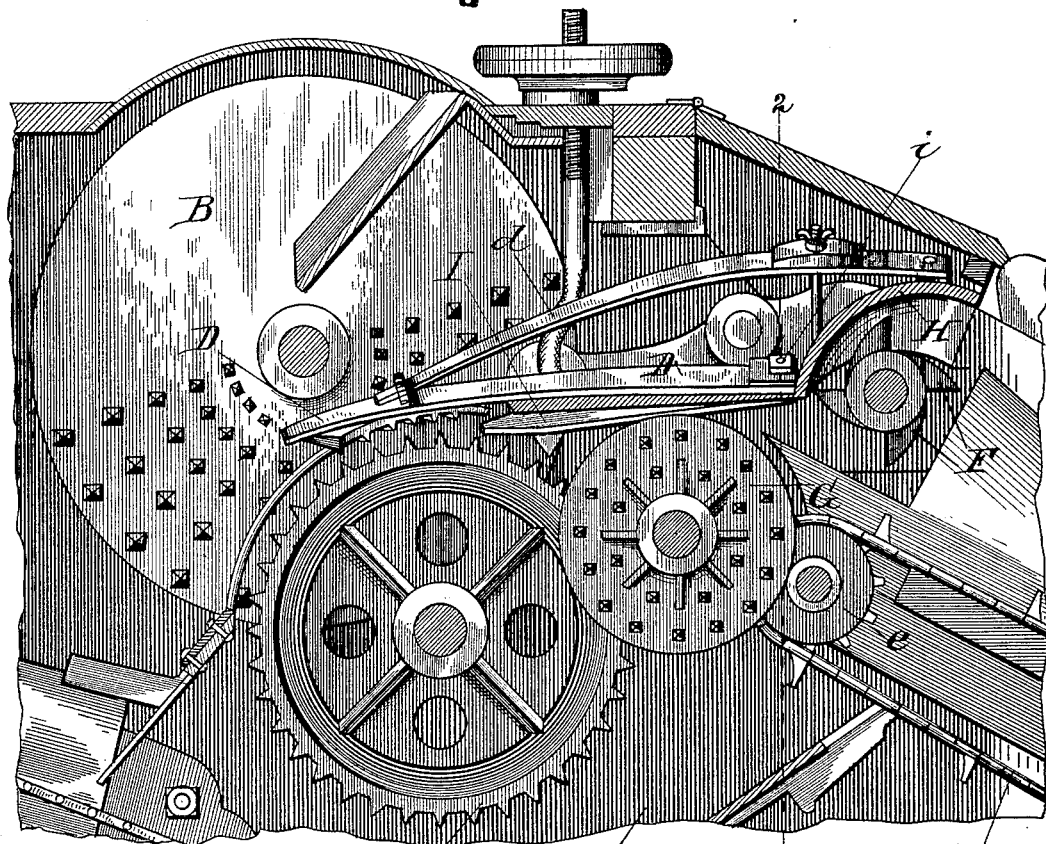
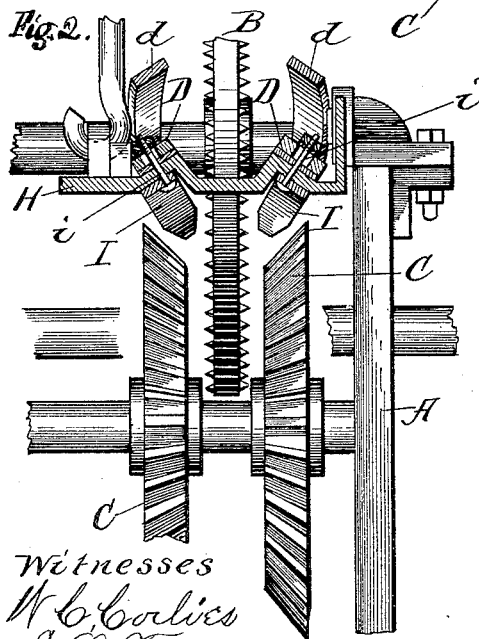
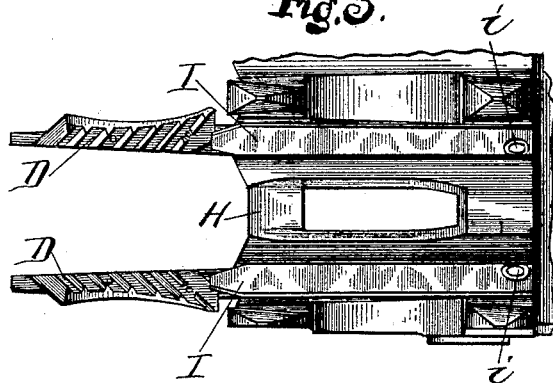


Fig. 2.



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Fig. 3.



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CORN-SHELLER.

SPECIFICATION forming part of Letters Patent No. 459,196, dated September 8, 1891.

Application filed February 9, 1891. Serial No. 380,763. (No model.)

To all whom it may concern:

Be it known that I, HENRY A. ADAMS, a citizen of the United States, residing at Sandwich, in the county of De Kalb and State of Illinois, have invented a certain new and useful Improvement in Corn-Shellers, which is fully set forth in the following specification, reference being had to the accompanying drawings, in which—

Figure 1 represents a longitudinal vertical section of so much of a corn-sheller as is necessary to illustrate my invention; Fig. 2, a section of the same, taken on the line 2 2 of Fig. 1, but partly broken away; and Fig. 3 a detail bottom plan of a portion of the spout-front and rag-irons attached thereto.

My invention relates to corn-shellers of a well-known type, in which the ears of corn are fed endwise to the shelling devices and the latter consist of straight runners, bevel runners, and rag-irons.

The invention consists in a supplementary spring which is attached to the under side of the respective rag-irons and serves to direct the ears of corn with certainty and immediately to the bevel runners, thus insuring the engagement of the ear with the shelling devices and the commencement of the shelling at once.

I will proceed to describe so much of the shelling-machine as is necessary to understand the construction and operation of my present invention, and will then point out more definitely in the claims the particular improvement which I believe to be new and desire to secure by Letters Patent.

As this improvement is associated only with the feed devices and shelling mechanism of the machine, I have shown in the drawings only that part of the machine containing these devices, the corn-sheller as a whole being of any ordinary construction.

In the drawings, A represents the main frame of the corn-sheller, and in this frame are mounted the shelling devices, consisting of straight runners B, bevel runners C, and rag-irons D, all of which are well-known devices which have long been used in corn-shelling machines. The feed devices shown are also of a well-known type, consisting of feed-chains E, passing over a head-roller e,

a force-feed, beater-shaft F, and picker-wheels G, the latter, as shown in the drawings, being arranged between the head-roller of the feed-chains and the bevel runners. The rag-irons D are mounted upon the spout-front H in the usual way, both the rag-irons and the spout-front being of an ordinary and well-known construction and the rag-irons being provided with the usual springs *d*. Now in these devices as ordinarily constructed and arranged there is considerable space directly under the spout-front between the picker-wheel shaft and the bevel runners, this space being of a somewhat triangular shape, as will be seen from an inspection of Fig. 1 of the drawings. It sometimes occurs that ears of corn, especially short ears, will rise or turn up in this space, instead of going straightforward directly to the bevel runner. This tends to interrupt the shelling somewhat and delays a little the engagement of an ear thus moving with the shelling devices.

It will be understood, of course, that there is no shelling until the end of the ear engages with the bevel runner, straight runner, and rag-iron where they come near together, forming a triangular opening or passage. When the ear of corn is brought properly to the bevel runner and straight runner, the shelling commences at once, and the ear is rotated by the straight runner. The object of my improvement is to direct all the ears of corn, even short ones, immediately to the bevel runner, so that this desired engagement will be effected at once and the shelling of the ear commence without any delay. To accomplish this result I provide a short supplementary spring I for each of the rag-irons. These springs are of the flat-spring type, being fastened at one end to the spout-front and rag-iron by bolts *i*, passing through the same, the springs being arranged on the under side of the spout-front, as seen in Fig. 2 of the drawings. The springs extend forward from their attached ends over the space between the picker-wheel shaft and bevel runners, their forward ends running in over the respective bevel runners, as seen in Fig. 1, and these ends being left entirely free. The springs are shaped so as to bend down somewhat from the under side of the spout-front, so as to

bring the forward ends as close to the bevel runners as possible, and they may be slightly curved, if desired. They reach in nearly to the corrugated ends of the rag-irons, as seen in Fig. 1, but drop somewhat lower than the latter. Now as the ears of corn are fed in through the respective shelling-holes in the usual way their ends will be directed by these supplementary springs directly to the bevel runners, thus causing engagement of all short ears and others which may be somewhat displaced immediately with the shelling devices. The elasticity of the springs permits their forward ends to rise readily as required by ears of corn of different sizes passing in underneath them, while at the same time securing regularity and certainty in the proper engagement of the ears with the shelling mechanism.

The attachment of the springs may be somewhat different from that here shown and described, and their form may be somewhat varied to suit different arrangements of the shelling parts and a difference in the construction of these parts, for the springs may be used with shelling devices of a different

construction, though especially intended for those here shown and described.

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

1. In a corn-sheller, a shelling mechanism, in combination with a feeding mechanism for delivering the corn endwise to the former, the spout-front, and plain guide-springs separate from and independent of the rag-irons, attached to the under side of the spout-front and extending in therefrom over each shelling-hole to the bevel runner, substantially as and for the purposes specified.

2. In a corn-sheller, the straight runners, in combination with the bevel runners, the spout-front H, rag-irons D, attached to the spout-front, and supplementary springs I, fastened at their outer ends to the under side of the spout-front and extending into and partly over the bevel runners, substantially as and for the purposes specified.

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Witnesses:

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