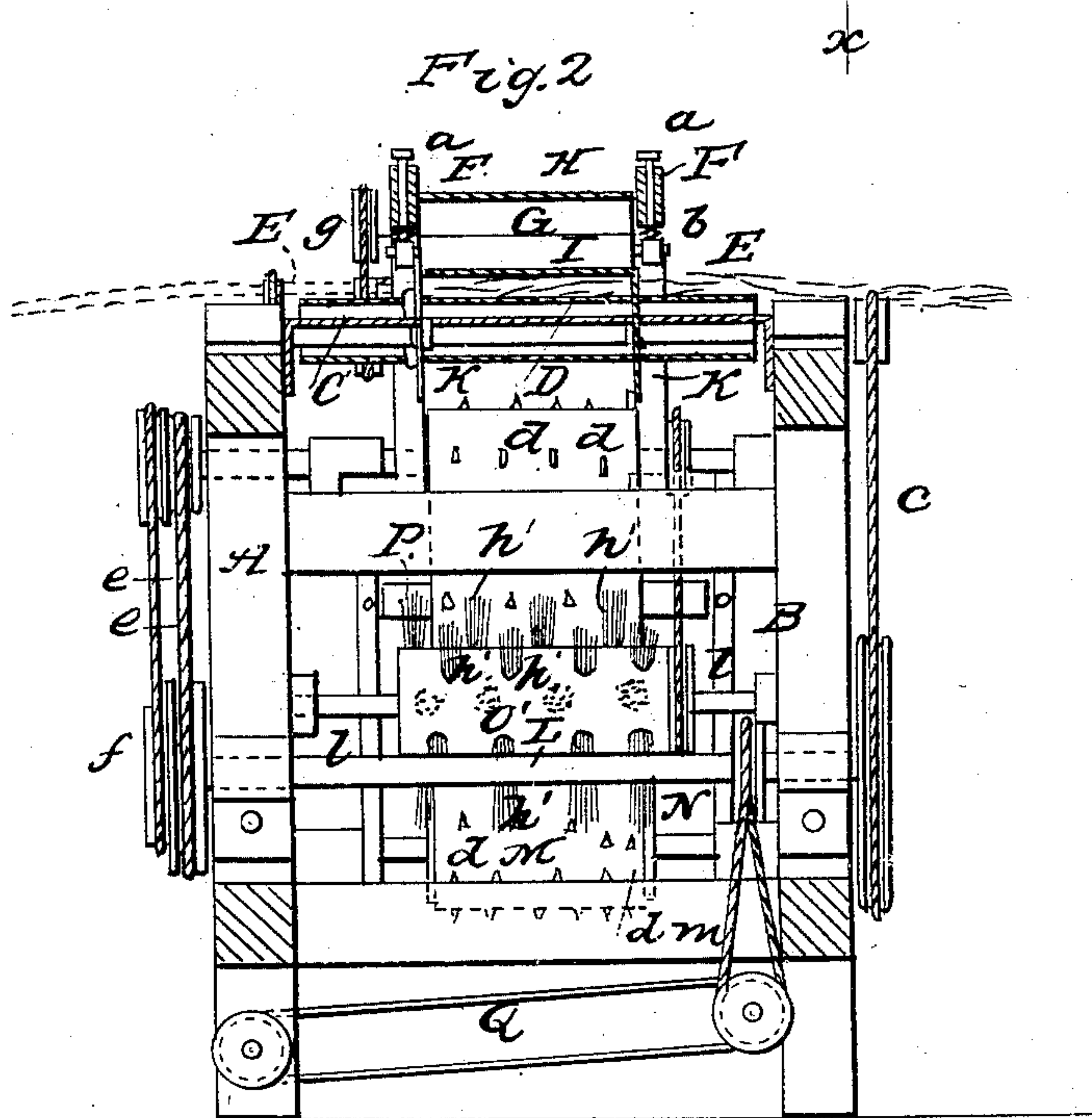
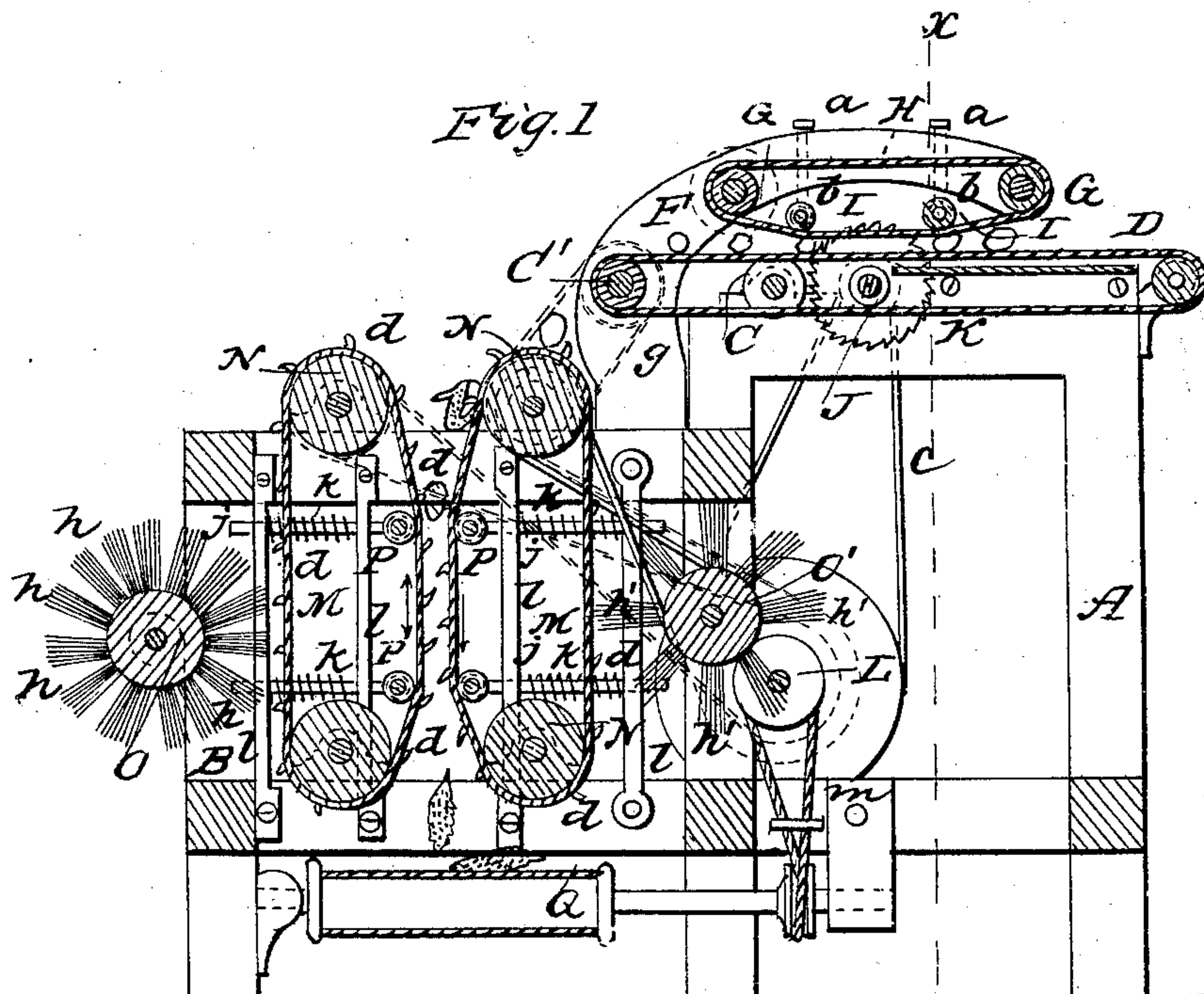


W. H. SMITH.

Corn Husker.

No. 18,358.

Patented Oct. 6, 1857.



UNITED STATES PATENT OFFICE.

WILLIAM H. SMITH, OF NEWPORT, RHODE ISLAND.

IMPROVED CORN-HUSKER.

Specification forming part of Letters Patent No. 18,358, dated October 6, 1857.

To all whom it may concern:

Be it known that I, WILLIAM H. SMITH, of Newport, in the county of Newport and State of Rhode Island, have invented a new and Improved Machine for Husking Corn; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a longitudinal vertical section of my improvement, the plane of section passing through the center. Fig. 2 is a transverse vertical section of my improvement, *xx*, Fig. 1, showing the plane of section.

Similar letters of reference indicate corresponding parts in both figures.

This invention relates to an improved machine for husking corn direct from the stalks.

The invention consists in the employment or use of endless aprons, saws, toothed aprons, stripping-brushes, and a discharging-apron, combined, arranged, and operating as will be hereinafter fully shown and described.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe its construction and operation.

A B represent two rectangular frames connected together, the frame A being a trifle higher than the frame B, as shown clearly in Fig. 1. On the upper part of the frame A two rollers C C are placed, one roller being at the front and the other at the inner end of said frame. On the rollers C C three endless aprons D E E are placed, the apron D being at the center and the aprons E E at each end of the rollers. The inner end of the apron D, however, works over a separate roller on a shaft C'.

F F are two curved arms, the lower ends of which are attached to the upper surface of the frame B. These arms are so curved as to extend over the apron D, and two rollers G G are fitted transversely between said arms, and an endless apron H is placed over these rollers. Through each of the arms F two rods *a* pass, said rods having spiral springs *b* on them below the arms, and between the lower ends of the arms rollers I are fitted. On the upper part of the frame A there is also placed transversely a shaft or arbor J, on which two saws K K are placed. This shaft or arbor is

driven by a belt *c* from the driving-shaft L, which is placed in the frame A.

M M' represent two vertical endless aprons which work over rollers N in the frame B, as shown clearly in Fig. 1. Both of the aprons M M are provided with teeth *d*, which are somewhat curved or hooked. The aprons M M are driven by belts *e e* from a pulley *f* at one end of the driving-shaft L, and the central apron D on the frame A is driven by a belt *g* from the shaft on one of the upper rollers N.

O represents a brush-cylinder, which is placed at the outer side of the frame B, said brush-cylinder being so placed that its brushes *h* as the cylinder rotates will brush or pass over the end of the teeth of the outermost apron M. O' represents a similar brush-cylinder, which is placed at the inner side of the frame B, and the brushes *h'* of this cylinder act against the innermost apron M precisely in the same way as the brush-cylinder O acts against the outermost apron.

P P represent rollers, the shafts of which are fitted in rods *j*, having spiral springs *k* around them. The rods *j* pass transversely through vertical bars *l*, secured in the frame B, and the springs *k* press the rollers P against the inner sides of the aprons, causing the inner sides of the two aprons to be pressed toward each other, as shown clearly in Fig. 1.

In the lower part of the frame B and directly underneath the aprons M M an endless apron Q is placed. This apron may be slightly inclined from a horizontal line, as shown clearly in Fig. 2, and is driven by a belt *m* from the driving-shaft L.

The operation is as follows: Motion is given the driving-shaft L in any proper manner and the attendant takes the stalks and lays them transversely on the aprons D E E in such a way that the ears will be upon the central apron D. These aprons move in the direction of the arrow 1, (see Fig. 1,) and as the ears pass underneath the apron H they are held firmly down upon the apron D, while the saws cut the ears from the stalks. The stalks when cut from the ears fall down at each side of the frame A, and the ears as they pass off the inner end of the apron D fall between the upper ends of the aprons M M. These aprons move in opposite directions, as indicated by the red arrows, Fig. 1, and the husks

are stripped from the ears as the ears pass down between the aprons by the teeth *d*, the requisite pressure of the teeth *d* against the ears being produced by the pressure-rollers P P. The ears as they pass from between the aprons M fall upon the apron Q and are conveyed by it to one side of the frame B. The brush-cylinders O O' strip the husks from the aprons M and keep their teeth *d* always clean and in perfect order.

By employing two saws K K two persons may attend and feed the machines—one at each side—and if one person only attend it the employment of two saws render the work of feeding lighter, because the stalks may be laid upon the aprons just as attendant may happen to grasp them, it not being necessary to turn them so that the butts and tops will be in one and the same direction.

This machine is particularly adapted for that section of the United States where the standing cornstalks are cut and placed in shocks to dry. This is practiced principally in the Eastern and Middle States, and, as by my improvements the ears may be husked direct from the stalks with only one handling, it will save a vast deal of labor. The machine herein described, however, possesses

advantages over the one formerly patented. The two aprons will yield better than one and accommodate themselves more perfectly to different-sized ears.

I am aware that machines have been devised in which one toothed endless apron and brush-cylinder were used, and a patent was formerly granted to me for an arrangement of such devices in connection with a toothed disk. I am also aware that circular saws have been used for sawing off the butts from the ears. I do not claim, therefore, separately the employment or use of saws, neither do I claim the employment or use of endless aprons irrespective of the arrangement herein shown; but,

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

The combination of the two toothed aprons M M, provided with pressure-rollers P, with the brush-cylinders O O' arranged and operating conjointly, as shown, for the purpose specified.

WILLIAM H. SMITH.

Witnesses:

WM. J. SWINBURNE,
WM. MASON.