(No Model.)

A. H. PATCH.

CORN SHELLER.

No. 353,080. Patented Nov. 23, 1886.

Fig. 1.

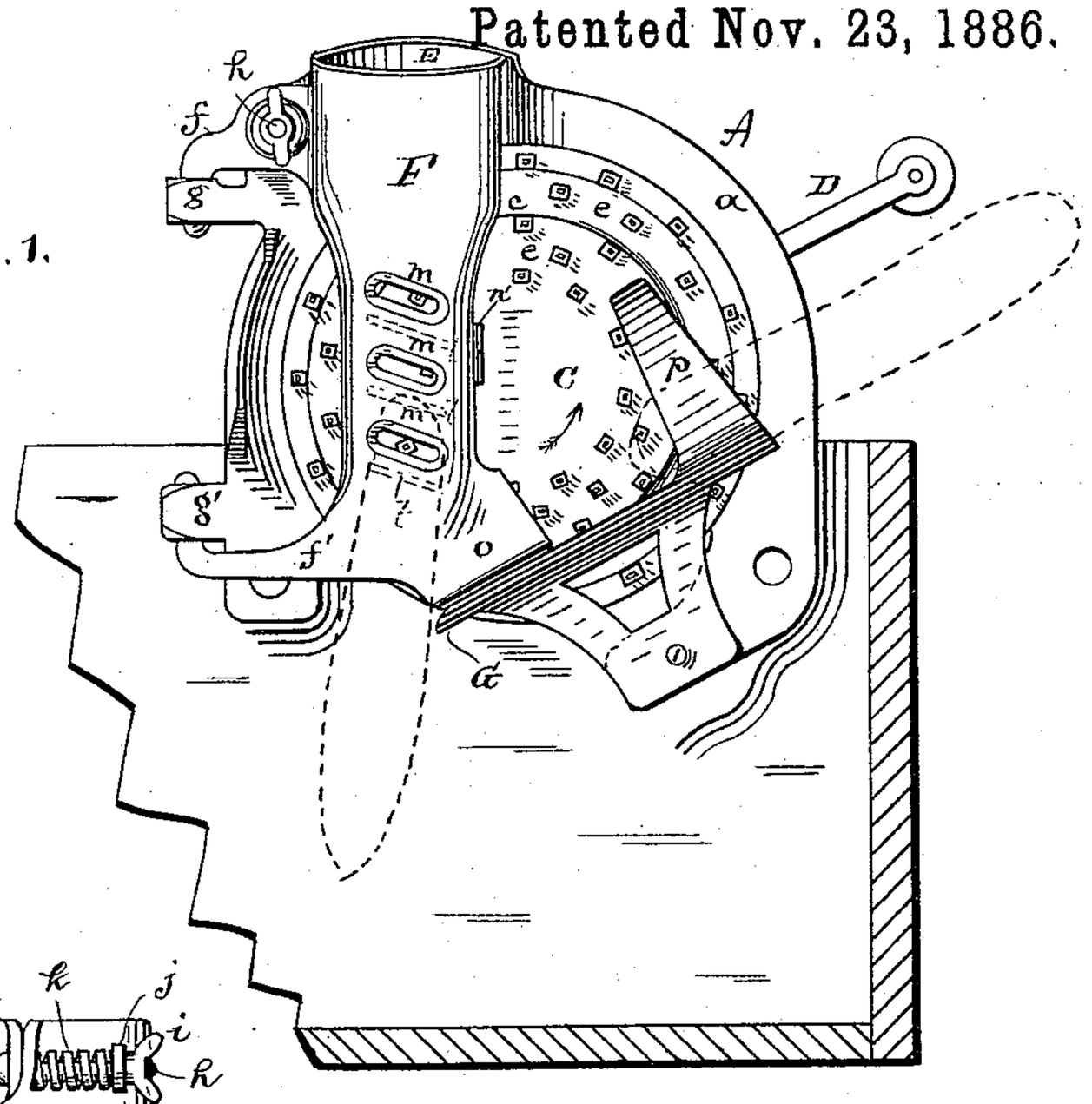

Fig. 2.

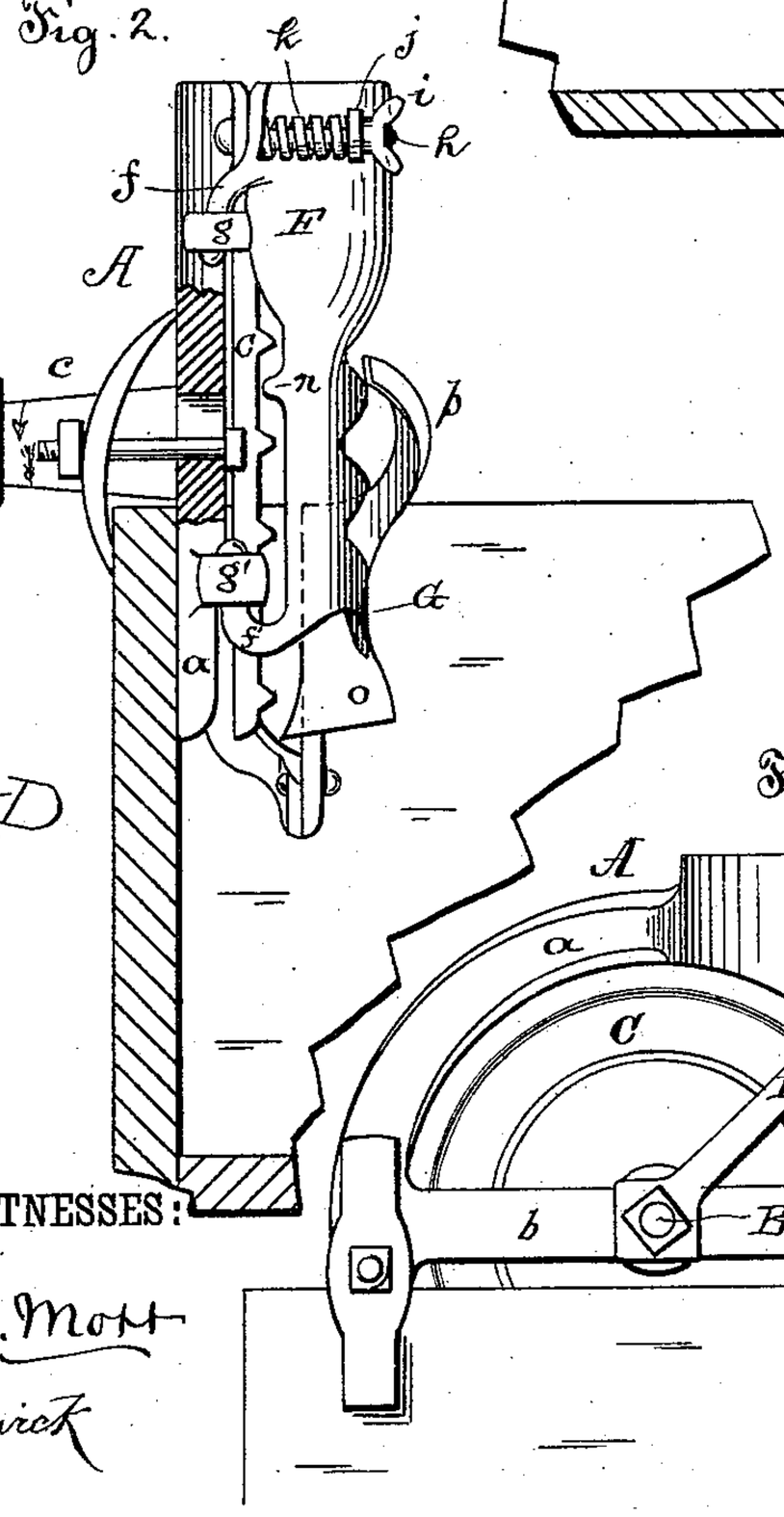

Fig. 4.

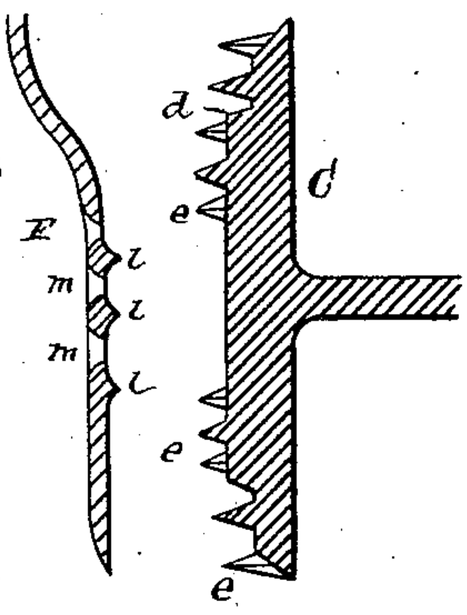

Fig. 3.

WITNESSES:

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ASAHEL H. PATCH, OF CLARKSVILLE, TENNESSEE.

CORN-SHELLER.

SPECIFICATION forming part of Letters Patent No. 353,080, dated November 23, 1886.

Application filed May 1, 1886. Serial No. 200,829. (No model.)

To all whom it may concern:

Be it known that I, ASAHEL H. PATCH, of Clarksville, in the county of Montgomery and State of Tennessee, have invented a new and useful Improvement in Corn-Shellers, of which the following is a specification, reference being had to the annexed drawings, forming a part thereof, in which—

Figure 1 is a front elevation, partly in section, of my improved corn-sheller. Fig. 2 is a side elevation of my improved corn-sheller. Fig. 3 is a rear elevation of the same. Fig. 4 is a diametrical section of the corn-shelling wheel and the shell.

Similar letters of reference indicate corresponding parts in the different figures of the drawings.

The object of my invention is to provide a simple, light, and inexpensive machine for shelling corn and automatically separating the cobs therefrom.

My invention consists in the construction and combinations of parts, as will be hereinafter fully described and claimed.

The main frame A of the machine consists of a yoke, *a*, provided with a cross-arm, *b*, upon which is formed a sleeve, *c*, for receiving the shaft B of the toothed wheel C, which is arranged to revolve near, but not in contact with, the yoke *a*.

The shaft B is provided with a hand-crank, D, by which it is turned, and the face of the wheel C opposite that from which the shaft B projects is offset at *d* near its periphery, and at its periphery is beveled away from the working face of the wheel. The face of the wheel is provided with a number of teeth, *e*, projecting from the beveled and offset portions and from the portion adjoining the offset of the wheel.

In the yoke *a* is formed a part of the hopper E, which leads directly to the beveled portion of the wheel C. The hopper is completed by the shell F, which is pivotally supported opposite the wheel by pivot-arms *f f'*, the ends of which are bent downward, and their round ends are received and free to turn in perforations in ears *g g'*, projecting from the edge of the yoke *a*. A bolt, *h*, projecting from the yoke *a* passes loosely through an aperture in the arm *f*, and receives on its outer extremity a wing-nut, *i*, between which and the arm *f* is placed a washer, *j*, and a spiral spring, *k*. By turning the wing-nut *i* on the bolt *h* the compression of the spring *k* is increased or diminished, according to the requirements of the machine. The shell F is thus permitted to swing to a limited extent upon the pivot-arms *f f'*, so as to accommodate itself to large-sized ears and to permit the discharge of the cobs, and the shell is kept in contact with the ears and its movement is limited by the spiral spring *k*.

The shell F, which is approximately semi-cylindrical in cross-section, is made in two diameters, the upper and larger portion forming part of the hopper for receiving the ears of corn, and the lower portion forming the holder for retaining the ear while the kernels are removed. The interior of the smaller part of the shell F is provided with spiral ribs *l*, between which are formed the inclined openings *m*, the ribs being designed to retard the corn while it is acted on by the wheel. The inclined openings *m* assist the spiral ribs *l* in retarding the ear of corn in its passage between the shell F and the wheel C. The shell F is supported near, but not in contact with, the wheel C, and is provided on opposite sides with the lugs *n n'*, which extend toward the wheel and assist in retaining the ear or the cob in place in the hopper. The lower part of the hopper is provided with a guide, *o*, for directing the cob, and in front of the wheel C near the guide *o* is supported an inclined chute, G, by attachment to the main frame, the said chute being provided at its outer end with a curved finger, *p*.

The ears of corn to be shelled are introduced into the hopper E F and the crank is turned in a right-handed direction, when the outer teeth of the wheel C will cause the ear to revolve and at the same time will tend to carry it down in the hopper. The spiral ribs *l* engage the surface of the ear and control the speed with which the ear is carried downward along the face of the wheel C, while the teeth *e* remove the kernels from the cob, and the cob is turned by engagement with the end of the chute G, so that it is carried outward along the chute and between the finger *p* and the wheel C and delivered at the side of the ma-

chine. The cobs, after passing below the center of the wheel C, are at liberty to swing on the end of the chute G from the position shown in dotted lines, and the turning of the lower part of the wheel toward the chute causes the cob to swing from its position shown by the dotted lines at the lower end of the shell F, and enter and be carried up the chute by the revolution of the wheel, as shown by the dotted lines at the right side of Fig. 1.

The frame A of the machine is secured to its support by means of a clamp, as shown in Fig. 2, or by screws passing through the frame into the support.

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

1. The combination, in a corn-sheller, of the toothed offset and bevel-edged wheel C, spring-pressed shell F, provided with spiral ribs and with the guide *o*, and the chute G, arranged at an angle with the shell F, and having the finger *p*, substantially as herein shown and described.

2. In a corn-sheller, the combination of the frame A, formed of the yoke *a*, and cross-bar *b*, carrying the sleeve *c*, the offset and bevel-edged toothed wheel C, the shell F, having spiral ribs *l*, openings *m*, and the guide *o*, and the inclined chute G, having the finger *p*, substantially as herein shown and described.

3. The combination, with the toothed wheel C and frame A, provided with perforated ears, of the shell F, provided with pivot-arms *f f'*, the bolt *h*, projecting from the frame and provided with the wing-nut *i*, and the spring *k*, placed between the wing-nut and the arm *f*, substantially as herein shown and described.

ASAHEL H. PATCH.

Witnesses:
BEN AVERY PATCH,
MAMIE E. PATCH.