2 Sheets--Sheet 1.

W. STOVER.

Corn-Sheller.

No. 162,429. Patented April 20, 1875.

Fig: 1

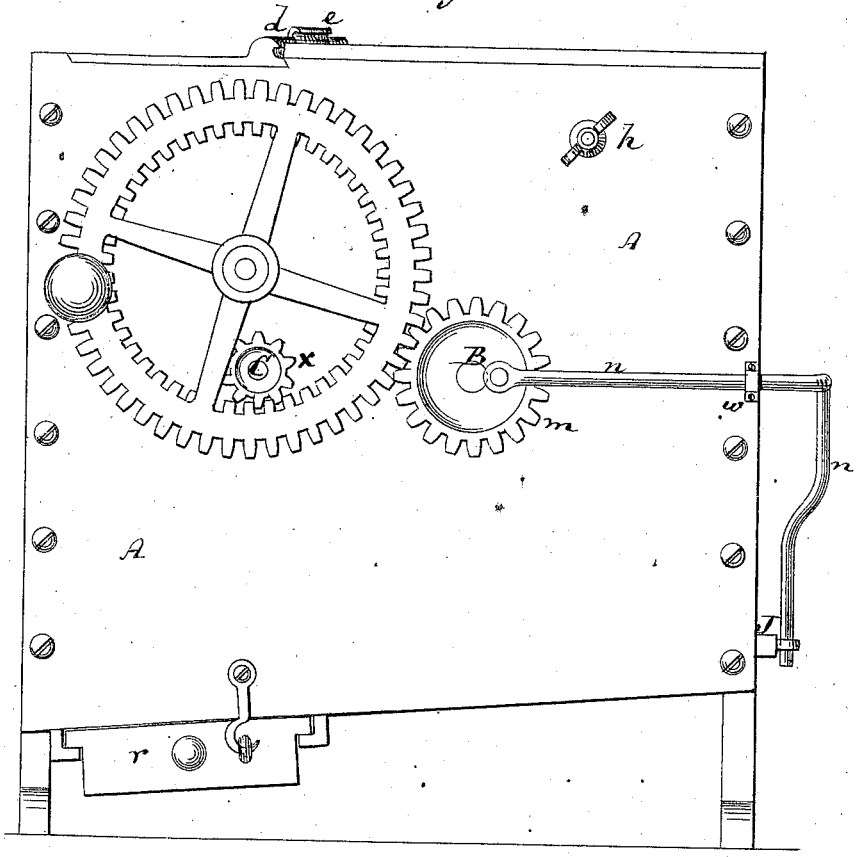
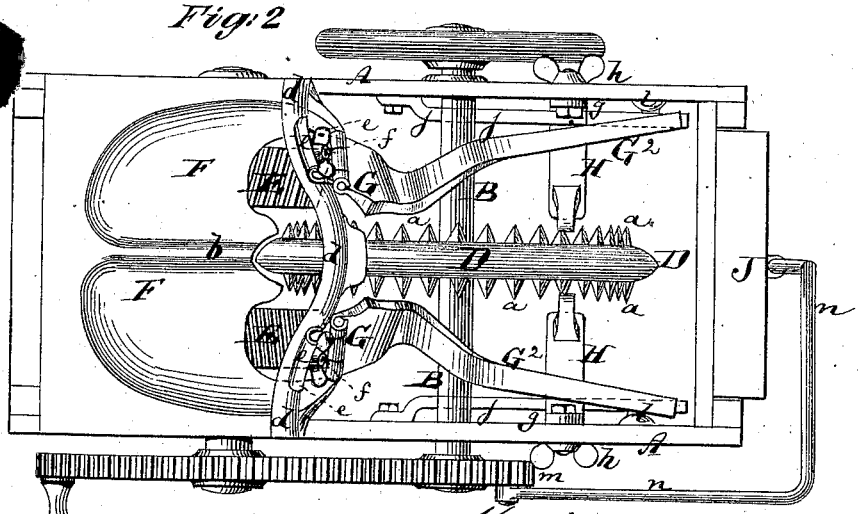


Fig: 2



Witnesses:
Michael Ryan
Fred Haynes

William Stover
by his Attorneys
Brown & Allen

W. STOVER.
Corn-Sheller.

2 Sheets--Sheet 2.

No. 162,429.

Patented April 20, 1875.

Fig: 4

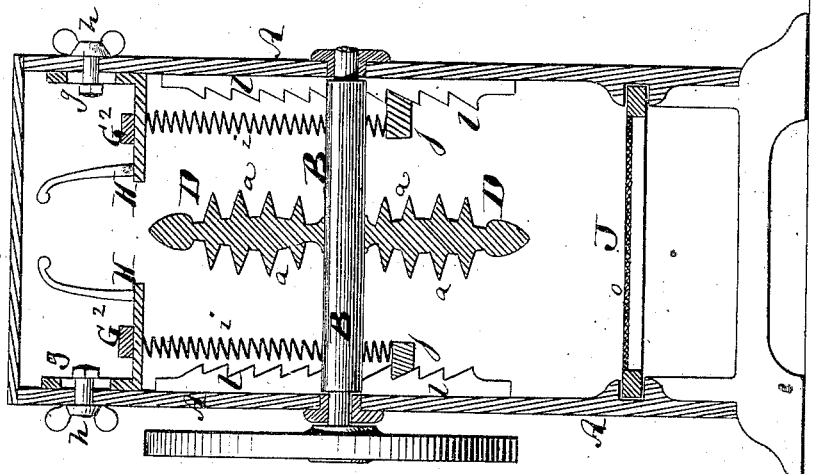
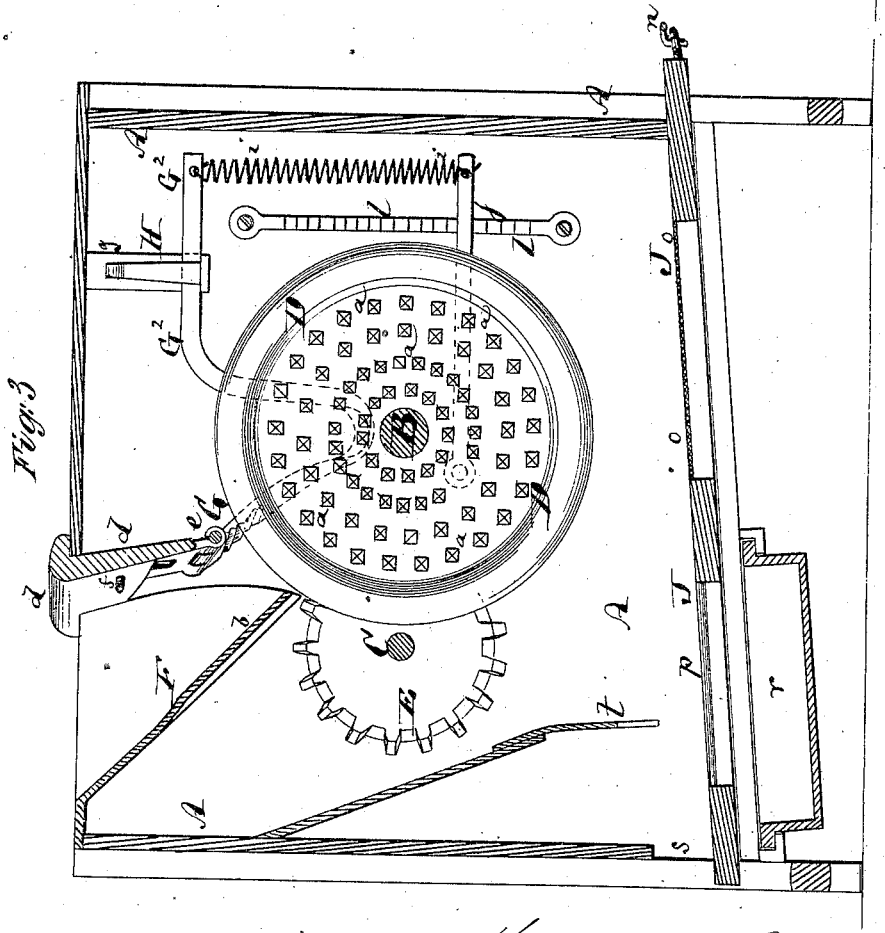


Fig: 3



Witnesses
Michael Ryan
Fred Holmes

William Stover
by his Attorneys
Brown & Allen

UNITED STATES PATENT OFFICE.

WILLIAM STOVER, OF AUBURN, NEW YORK.

IMPROVEMENT IN CORN-SHELLERS.

Specification forming part of Letters Patent No. **162,429**, dated April 20, 1875; application filed August 21, 1873.

To all whom it may concern:

Be it known that I, WILLIAM STOVER, of Auburn, in the county of Cayuga and State of New York, have invented a Combined Corn Sheller and Separator, of which the following is a specification:

Figure 1 represents a side elevation of my improved corn sheller and separator. Fig. 2 is a plan or top view, partly in section, of the same. Fig. 3 is a vertical longitudinal section thereof; Fig. 4, a vertical transverse section.

Similar letters of reference indicate corresponding parts in all the figures.

The invention consists of a novel construction of parts, which are fully hereinafter described, and pointed out in the claims, whereby the apparatus is rendered more effective in operation than heretofore.

In the accompanying drawing, the letter A represents the frame or casing of my improved machine. The same is made of wood or other suitable material, of convenient size and shape, and supports two horizontal transverse shafts, B and C. Upon the shaft B is mounted a cast-iron wheel, D, which has rings of teeth *a a* formed on both of its faces, while its rim is enlarged at the inner periphery, and brought to a sharp edge on the outer periphery, as shown in Fig. 4. This wheel D may be cast in one piece, as indicated, in a suitable mold, shaped to receive the iron that will produce such wheel, and may, if desired, even be cast upon, *i. e.*, in one piece with, the shaft B, in which case I prefer to form brackets on the shaft, that intimately connect it with the inner part of the wheel. Upon the shaft C are mounted two toothed wheels, E E, both of which have their edges slightly beveled, as is more fully indicated in Fig. 2. These two wheels E E straddle the wheel D, and are almost entirely covered by a chute-plate or hopper, F, that is suspended over them stationarily from the top of the frame A. This chute-plate is made concave over each wheel E, so as to form an elevated ridge, *b*, along the middle, and two hollow channels along each side of such ridge. It will therefore be possible to feed at one and the same time two ears of corn to opposite sides of the wheel D for simultaneously having the same shelled. On opposite sides of the wheel D, and directly in front of each wheel E, is suspended, from an upper cross-bar, *d*, of the frame or of the chute-plate F, an adjustable jaw, G. This jaw is toothed on that face which is opposite the wheel E, (see Fig. 3,) and is, by a butt or hinge, *e*, suspended from the cross-bar *d*. The butt or hinge is slotted, and connected by a thumb-screw, *f*, with such cross-bar, so as to be up and down adjustable thereon. The lower end of the jaw G is, by an angle iron or arm, G^2, rested upon a bracket, H, that is fastened to the inner side of the frame A, which bracket H has a slotted upright portion, *g*, through which a bolt, *h*, fastening it to the side of the case A, is passed, so that the brackets are up and down adjustable to a certain extent. A spring, *i*, connects the back end of the angle projection G^2 with a lever, *j*, that is pivoted within the casing in the lower part thereof. The free end of such lever connects with the said spring, the spring bearing the lever against one of the teeth of a fixed rack, *l*, secured to the inner side of the case.

By bearing the lever *j* down into a lower tooth of the rack, greater tension will be applied to the jaw G, and the same will be less apt to yield to the pressure of a larger piece or ear of corn. Therefore, for corn which adheres firmly to its cob, the spring-tension is increased by lowering the lever *j*, while for corn readily loosened from its ear the spring-tension is reduced by raising the lever *j* to an upper notch in the rack *l*. By regulating the height of the bracket H and of the butt *e* the jaw is adjusted to various sizes of corn.

The two shafts B and C carry pinions *m* and *x*, respectively, that gear into the outer and inner toothed edges of a driving-wheel, as shown, so that when said wheel is revolved by means of a crank-handle or otherwise it will cause the shafts B and C to be revolved in opposite directions, and therefore also the wheels D and E E. These wheels will draw the ears of corn that are placed upon the hopper on both sides of the ridge *b*, down along the inner-toothed faces of the jaws G, and will strip such ears of the corn thereon contained, depositing the stripped matter upon a screen, J, which constitutes the bottom of the case A. This screen is, by a bent pitman, *n*, that passes through and rocks in a projecting holder, *u*, of

A, connected with a crank of the shaft B, as shown in Fig. 1, and is by the revolution of such shaft reciprocated in grooves, provided on the inner side of the case A. Directly beneath the wheel D the screen contains a sieve, *o*, and beneath the wheels E a sort of grate, *p*. The matter falling upon the screen will be properly separated, the chaff passing through the sieve *o*, the corn through the grate *p* into a drawer, *r*, that is suspended beneath the screen from the case A, while the shelled cobs are discharged at the end of the machine through an opening, *s*, directly above the screen. A curtain, *t*, of leather, or other material, slit or cut into narrow strips at its lower part, is suspended above the grate, or nearly so, in order to separate the cobs that pass out from all corn that may have adhered thereto.

What I claim as my invention is—

The combination, with the toothed wheels E and toothed wheel D, of the toothed jaws G, having the arms G^2 connected to the cross-bar *d* by an adjustable hinge, *e*, for adjusting said jaws vertically, substantially as and for the purposes described.

WILLIAM STOVER.

Witnesses:

CHAS. E. FINCH,

HORACE T. COOK.