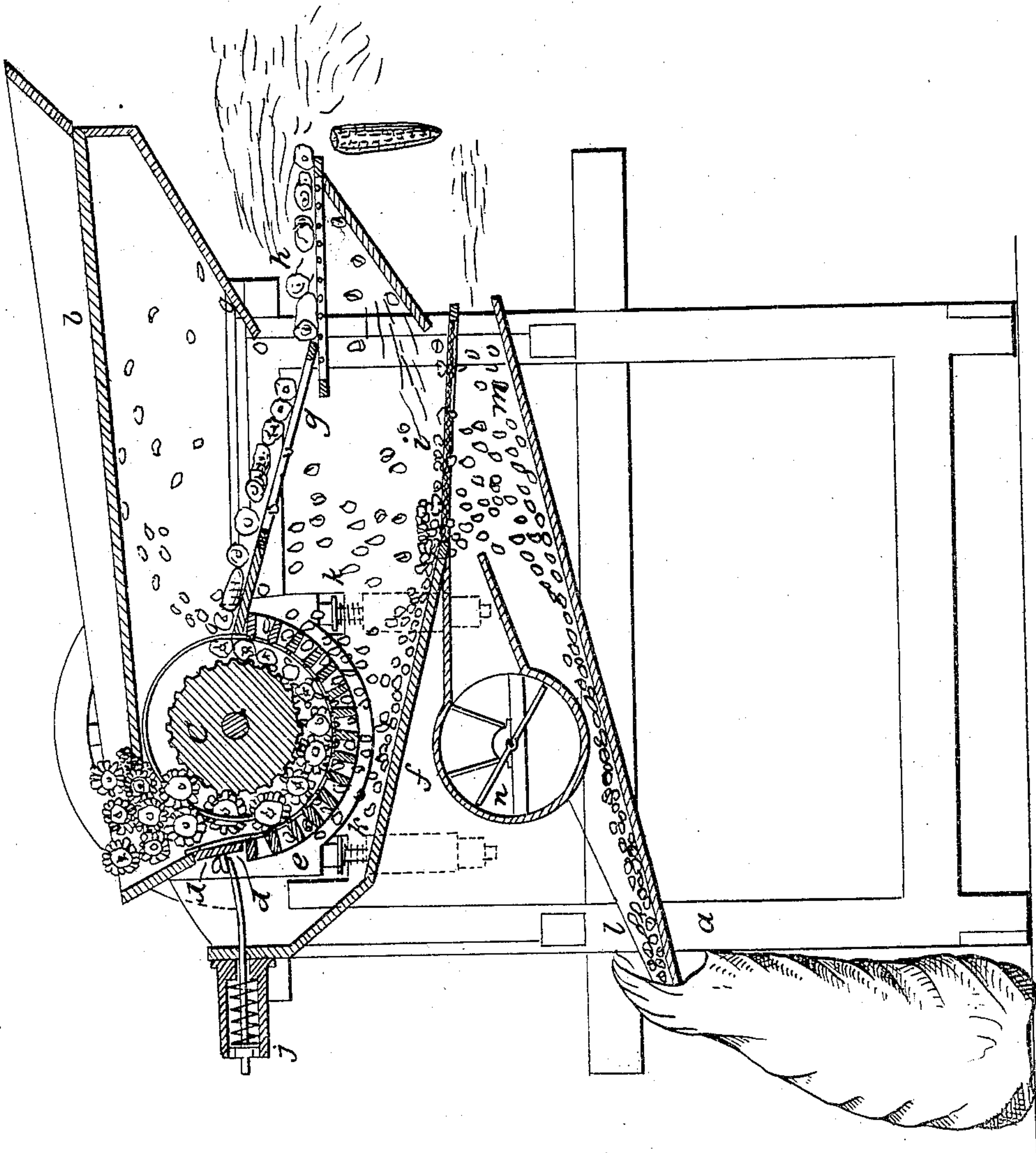


G. W. REID,
Corn Sheller.

No. 9,698.

Patented May 3, 1853.



UNITED STATES PATENT OFFICE.

GEO. W. REID, OF EVANSVILLE, INDIANA.

CORN-SHELLER.

Specification of Letters Patent No. 9,698, dated May 3, 1853.

To all whom it may concern:

Be it known that I, GEO. W. REID, of Evansville, in the county of Vanderburg and State of Indiana, have made new and
5 useful Improvements in Machinery for Shelling and Cleaning Corn.

My improvements consist in, 1st, the forming the feed hopper shelling concave and separator in one connected and self adjustable piece; 2d, the peculiar construction of
10 the screens for the separation of the cobs and other refuse.

The annexed drawing is a longitudinal section of my machine.

15 (a) is a suitable frame (of wood).

(b) is a hood, which serves the double purpose of preventing the escape of the corn, and presenting a conducting trough to the ears. The top of the hood being
20 sloping, the shake of the machine conveys the corn from the hood top into the shelling apparatus, which consists of a toothed cylinder (c) and concave (d, e); this concave at its upper part, forms a hopper or con-
25 ducting chute (d) for the entering ears, and the other part (e) forms a semicylindrical range of bars forming a grating, which serves the purpose both as a means of shelling the grains from the cob and a
30 screen to separate them from the latter. The concave is held by horizontal springs (j) and by vertical springs (k) to a position sufficiently eccentric with regard to the cylinder, to admit unshelled ears at its for-
35 ward side, and just pass the shelled cobs at its rear side, the pressure of the escaping cobs, by acting in opposition to the springs, serving to cause the concave to approach the cylinder upon the other side and thus to
40 bring the requisite abrasion upon the entering ears. Thus, not only has the concave, complete mobility in every direction necessary to its proper action, but in case of an intractible sample of corn, being subjected
45 to the operation of the machine, the cobs cannot escape unshelled, because in the effort so to do, the increase of the pressure on the opposite parts of the concave and cylinder causes a greater action on the cobs
50 or ears at that part and thus this difficulty is made self remediable. The grains fall from the concave upon the conducting chute (f), and the cobs remaining behind, are rolled around between the cylinder and
55 concave, until every grain is separated, and are discharged upon the screen (g) which in its turn deposits them upon the screen

(h). The screen (g) is placed obliquely, and consists of rods or slats longitudinally arranged, and the screen (h) of slats trans- 60
versely arranged; the construction of the former facilitating the passage of the cobs, and also the separation of the grain, and the construction of the latter screen serving to retain the cobs sufficiently to insure the 65
separation of all the corn, and its conduction onto the screen (i) which also receives grain from the chute (f) before spoken of. The screen (i) is of wire, and its meshes are of a size which will pass the corn but will 70
retain all the fragments of the husk or cob which may have escaped the upper screens. The particles detained by the screen (i), and all the other lighter refuse are blown away from the corn by the fan (n). The 75
corn is received from the screen (i) on to the chute (m) which finally discharges it at the opening (l) where a sack may be placed for its reception.

The tension of the concave springs may 80
be increased or diminished at discretion by nuts.

The screens may be assisted in their action by means of any shaking mechanism, such as that commonly applied to the separat- 85
ing apparatus of winnowing machines.

The machine is throughout of great simplicity and compactness of construction and its effectiveness is established by the fact that in the course of a working day one 90
thousand bushels of corn have been effectually shelled and cleaned. In the instance cited the cylinder was 22 inches long and was driven by a single horse—but by lengthening the cylinder and adding proportion- 95
ate power the effective action may be increased at pleasure.

Having thus fully described my improved corn sheller, what I claim therein as new and desire to secure by Letters Patent is— 100

The combination and arrangement of the sloping longitudinal slat screen g, and the transverse slat screen h, for the rapid and thorough separation of the corn from the cobs, as they are thrown from the con- 105
cave by the shelling cylinder upon the said combined screens, substantially as herein set forth.

In testimony whereof, I have hereunto set my hand before two subscribing witnesses. 110

GEO. W. REID.

Witnesses:

GEO. H. KNIGHT,
E. H. PUGH.