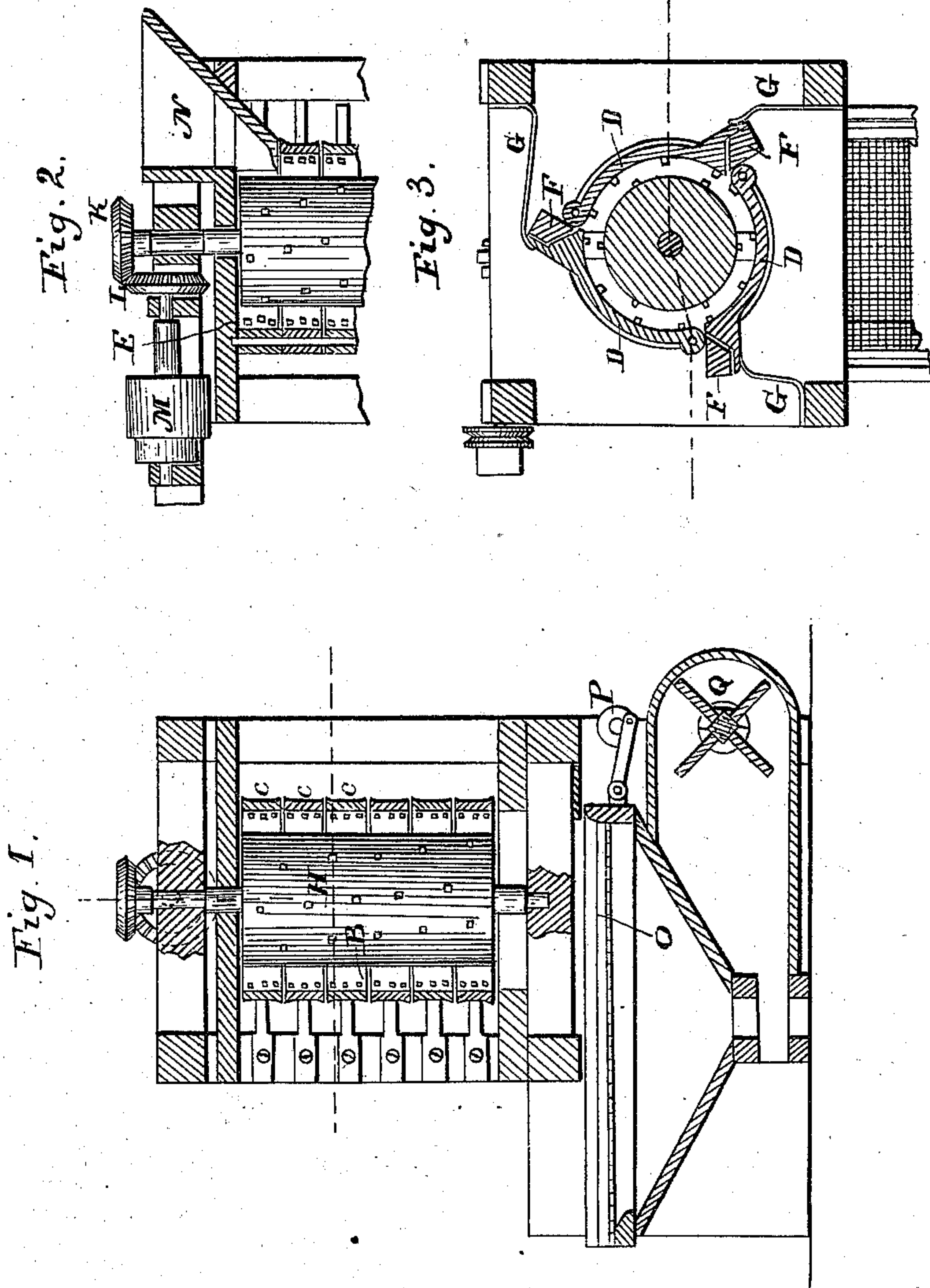


J. S. RACKHAM.

Corn Sheller.

No. 83,314.

Patented Oct. 20, 1868.



Witnesses:  
J. A. Morgan  
G. B. Cotton.

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# United States Patent Office.

JOSHUA S. RACKHAM, OF WATERPORT, NEW YORK.

Letters Patent No. 83,314, dated October 20, 1868.

## IMPROVEMENT IN CORN-SHELLING MACHINE.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, JOSHUA S. RACKHAM, of Waterport, in the county of Orleans, and State of New York, have invented a new and improved Corn-Shelling Machine; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

The nature of this invention relates to improvements in corn-shelling machines, the object of which is to provide a more simple and effective machine than those now in use.

It consists in a vertical cylindrical shell, made in sections, which are divided into segments hinged at one end, the other being allowed to swing outwardly against springs, which constantly tend to maintain them in a concentric position.

A vertical cylinder is provided within the said shell on an axis, and provided with teeth, which act in conjunction with corresponding teeth upon the interior of the shell.

The swinging segmental sections are designed to yield to the different sizes of ears to be shelled.

A screen and fan-blower are also provided for clearing the corn as it passes through the machine, as will be more fully described on reference to the accompanying drawings, wherein—

Figures 1 and 2 represent sectional elevations, and

Figure 3 represents a horizontal section on the line  $x x$  of fig. 1.

Similar letters of reference indicate corresponding parts.

A represents a frame, whereon may be supported, in any suitable manner, a hollow vertical cylinder, B, which is made in sections, as shown at C, and each section divided into three or any other suitable number of segments, D, which are hinged at one end to vertical rods E, each rod being common to all the segments of one division.

The opposite ends of the segments shut in against the vertical posts F, which limit their upward movement, and against which they are borne by springs.

When resting against the said posts, the segments are designed to be in a concentric position.

Within the cylindrical shell B, a cylinder, H, is fitted to rotate on the axis I, which may be operated by the wheels K L and pulley M, or by any other suitable means.

The cylinder H is provided with teeth arranged thereon in spiral rows, and the shell B is also provided with teeth, which operate in conjunction with the teeth of the cylinder H.

N represents a hopper, for feeding the corn to the cylindrical shell B.

O represents a vibrating screen, beneath the shelling-apparatus, which may be operated from a crank-shaft, P, deriving motion from the main shaft by a belt, and Q represents a fan-blower, suitably arranged to blow out the chaff from the corn after it has been separated from the cobs by the screen O.

The cylinder being set into high rotary motion, and the ears of corn fed in through the hopper N, it will be rapidly shelled by the action of the cylinder and the shell.

If the ears be large, the springs will yield and allow the segments to swell out at one end, at which point the large ears will be acted on to shell the corn, and thereby reduced in size as they arrive near the hinges.

The segments will also readily accommodate themselves to the different sizes of the same ear, as, while the large end may be acted on by one segment, the small end may be in contact with another segment.

The entrance of large ears from the hopper is also facilitated, and the grain is also not so likely to be injured by the teeth of the shell and cylinder.

I claim as new, and desire to secure by Letters Patent—

1. A hollow-toothed corn-shelling cylinder, composed of yielding segmental sections, substantially as and for the purpose described.

2. The combination, with the same, of the cylinder H, substantially as and for the purpose described.

3. The combination, with the cylinder H and shell B, of the screen and fan-blower, substantially as and for the purpose described.

JOSHUA S. RACKHAM.

Witnesses:

T. O. BENTLEY,  
T. G. AVIS.