(No Model.) 2 Sheets—Sheet 1.

T. J. PORTER.

PEA THRASHER AND SEPARATOR.

No. 287,324. Patented Oct. 23, 1883.

Fig. 1.

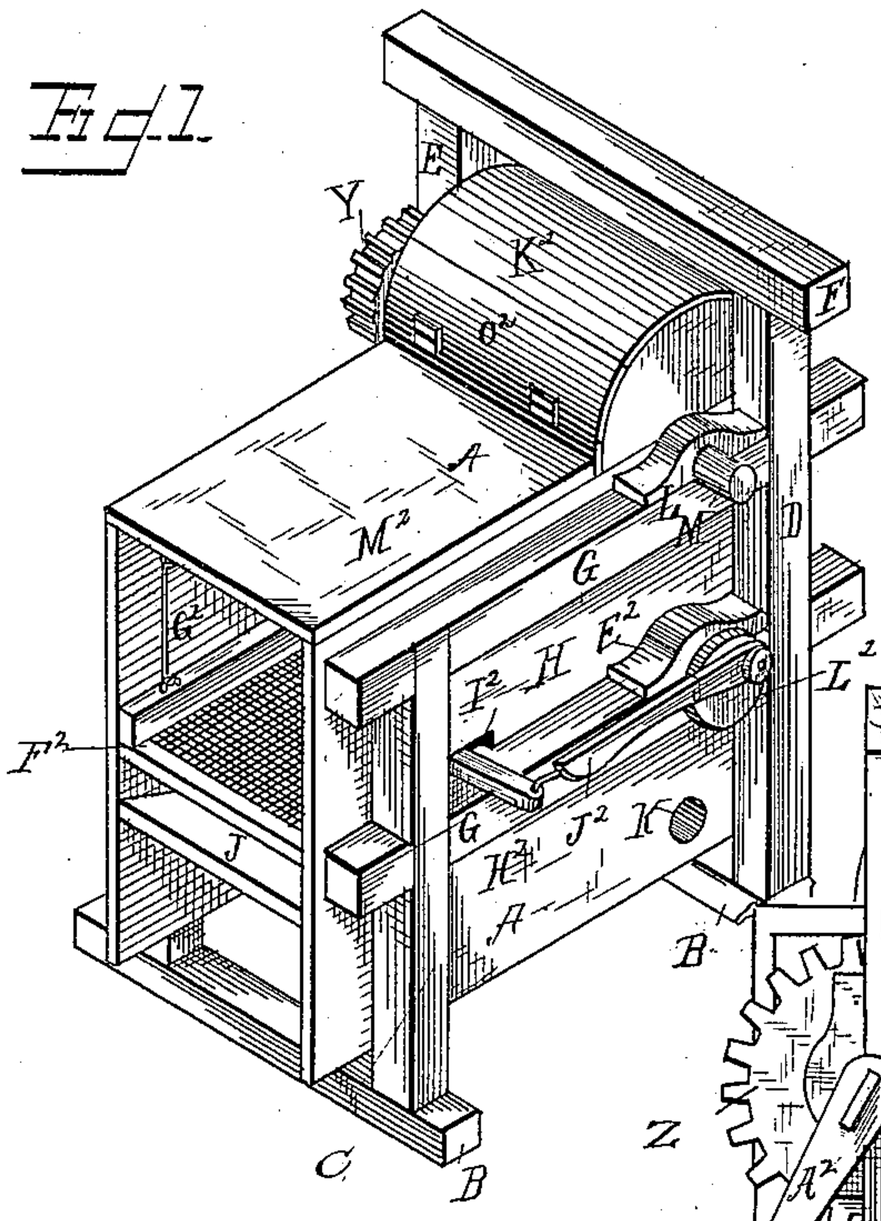


Fig. 2.

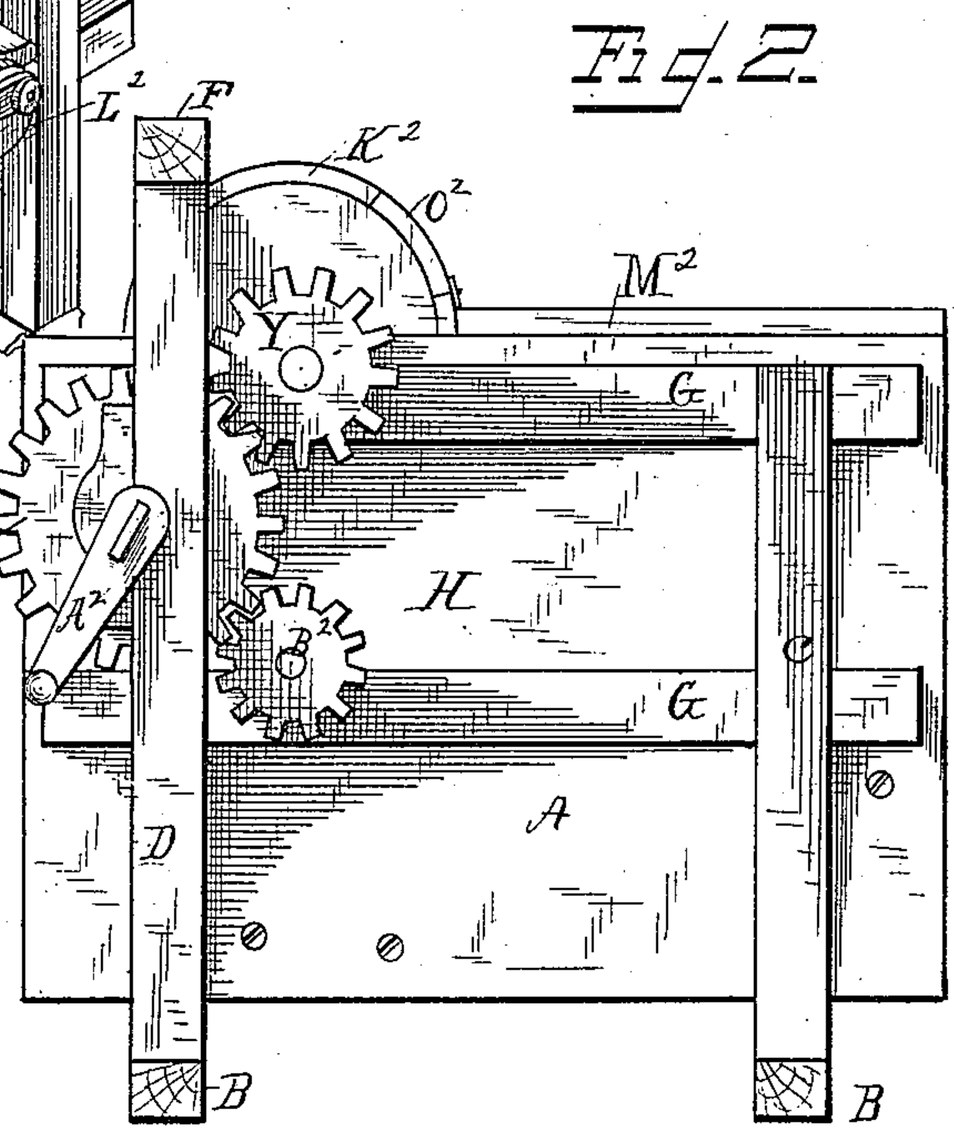
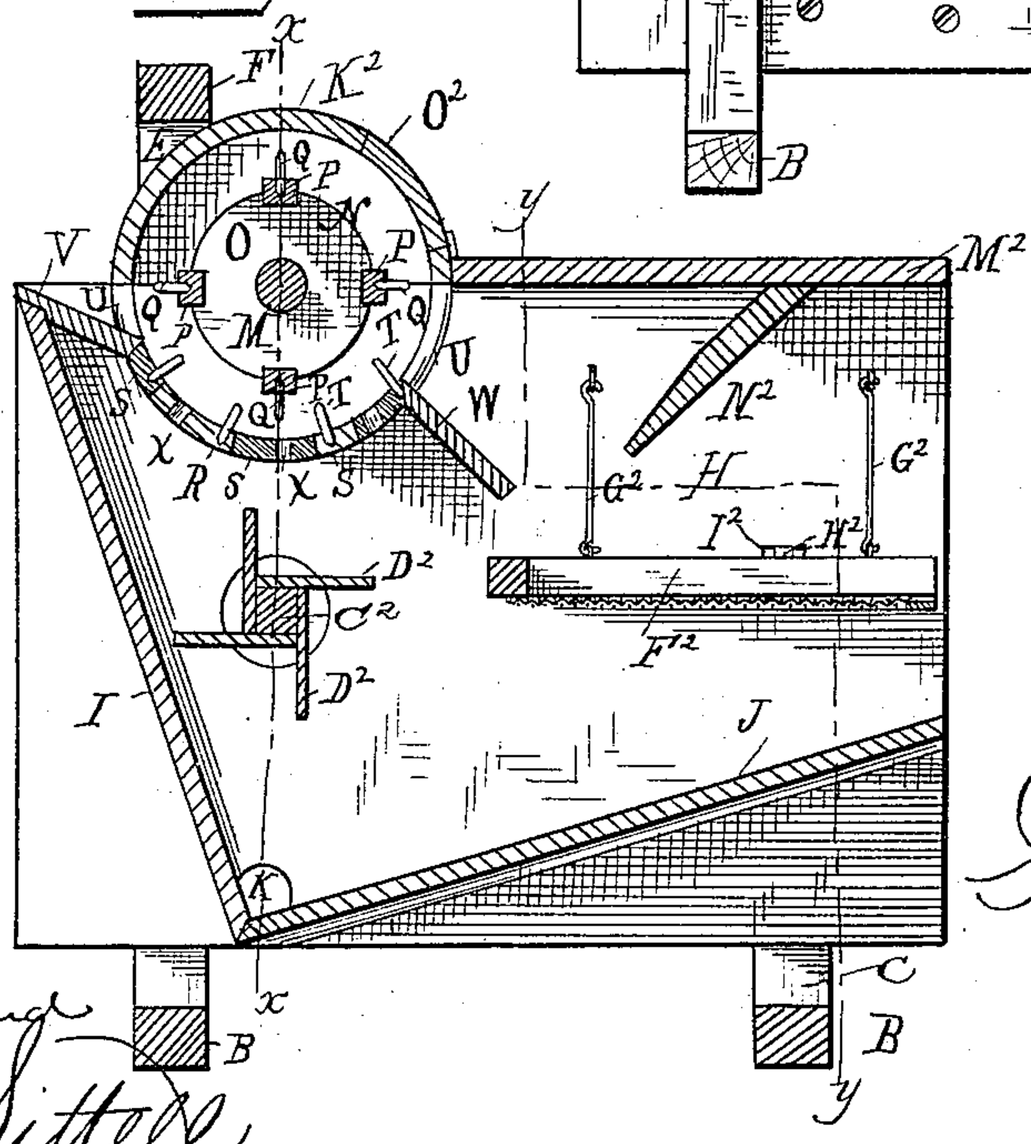


Fig. 3.



WITNESSES

F. L. Ourand

J. R. Sittell,

T. J. Porter,

INVENTOR

by A. Know & Co.

Attorneys.

(No Model.) 2 Sheets—Sheet 2.

T. J. PORTER.

PEA THRASHER AND SEPARATOR.

No. 287,324. Patented Oct. 23, 1883.

Fig. 4.

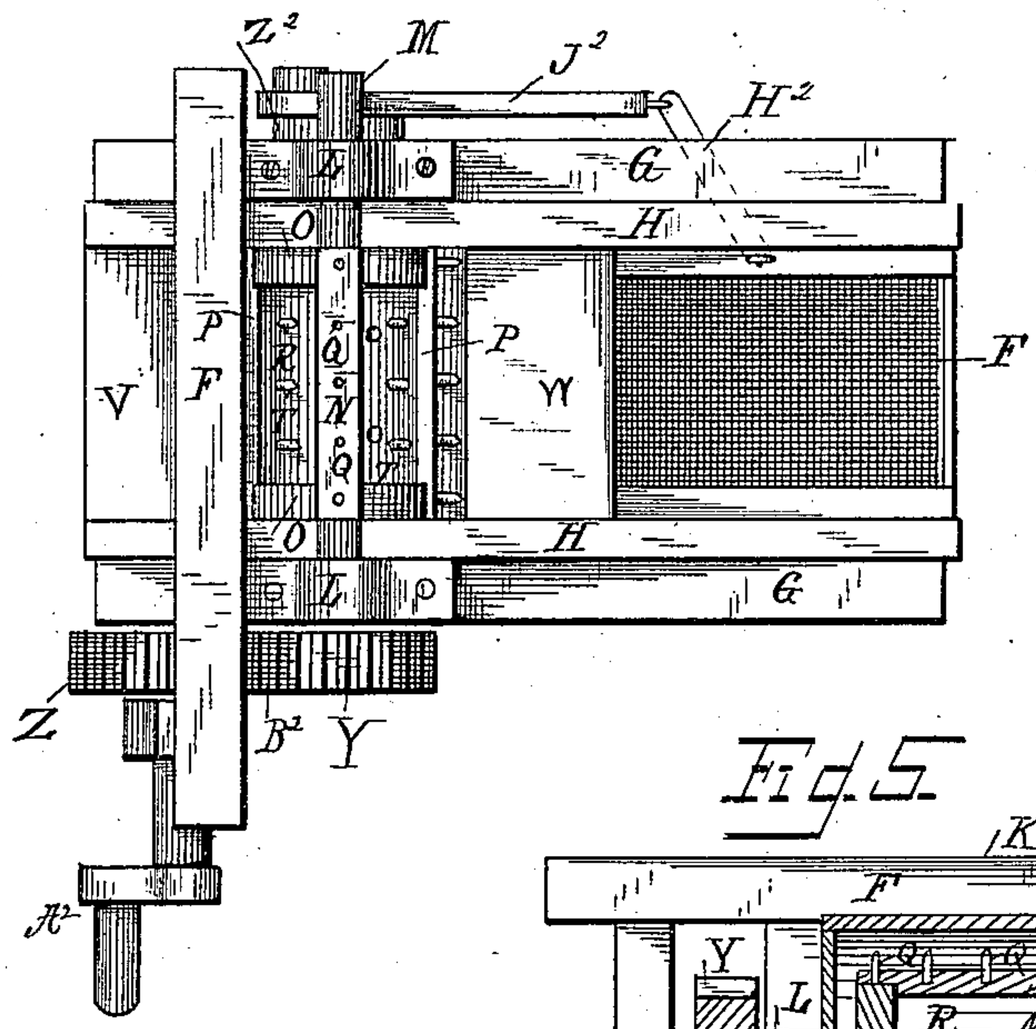


Fig. 5.

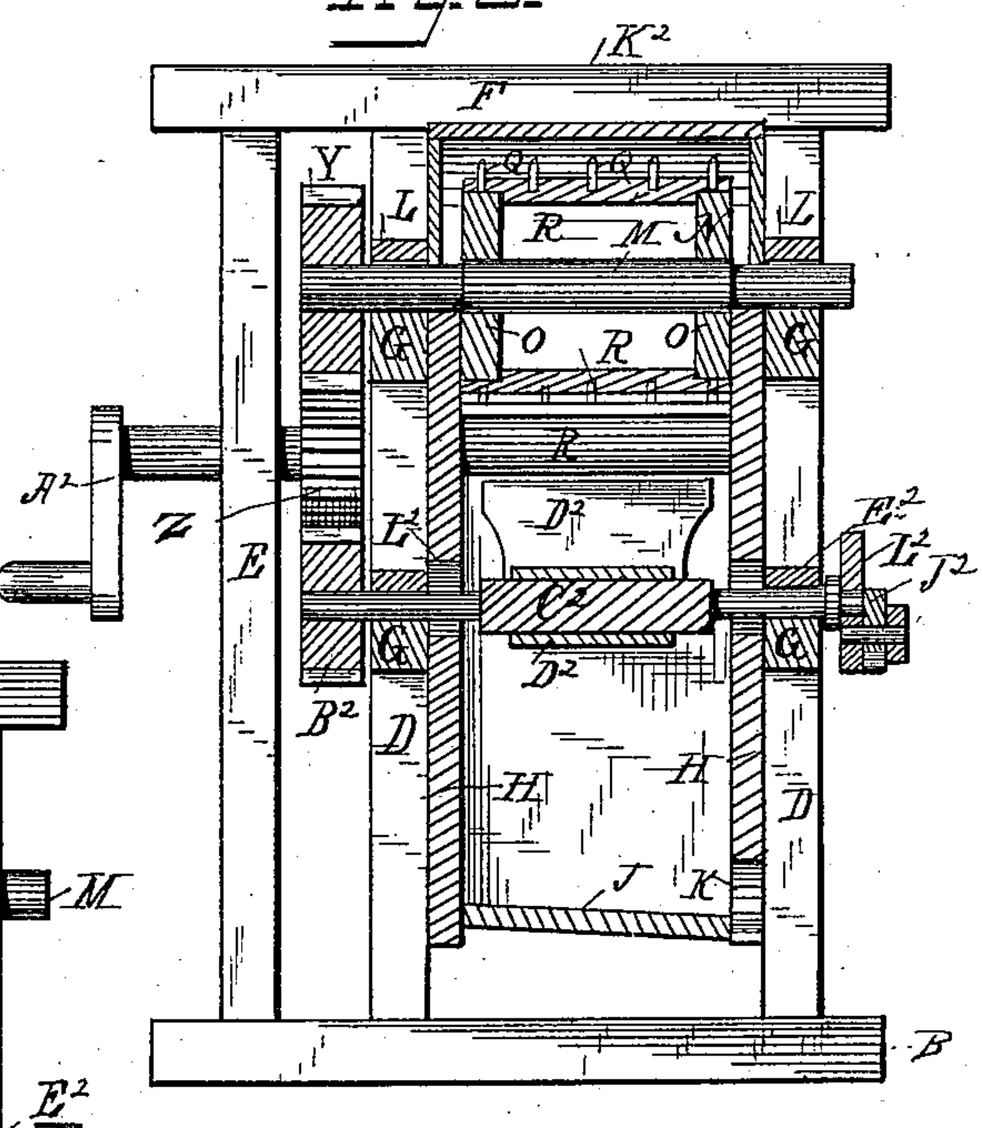
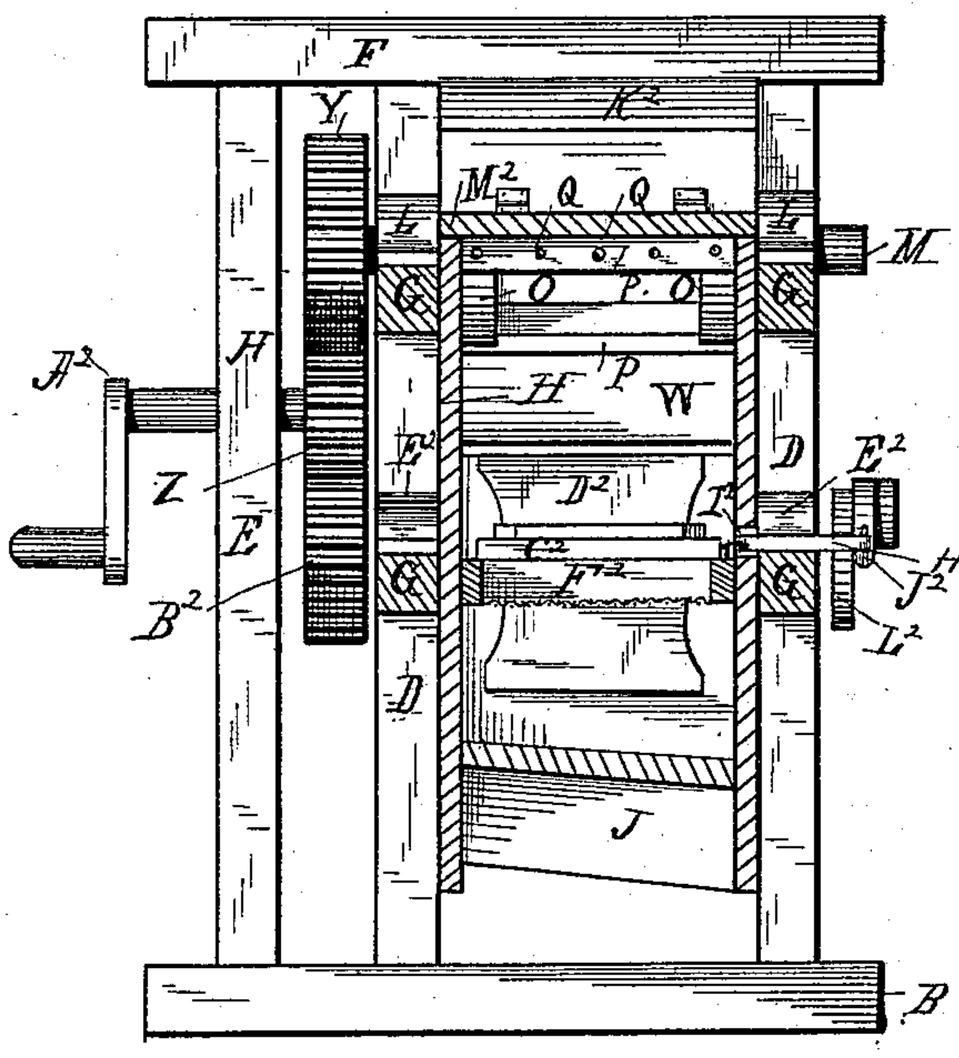


Fig. 6.



WITNESSES

F. L. Durand

J. R. Sittell,

Thomas J. Porter,
INVENTOR,

by Munn & Co.
Attorneys.

UNITED STATES PATENT OFFICE.

THOMAS J. PORTER, OF TALLADEGA, ALABAMA, ASSIGNOR OF ONE-HALF TO JOHN H. HICKS, OF SAME PLACE.

PEA THRASHER AND SEPARATOR.

SPECIFICATION forming part of Letters Patent No. 287,324, dated October 23, 1883.

Application filed July 5, 1883. (No model.)

To all whom it may concern:

Be it known that I, THOMAS J. PORTER, a citizen of the United States, residing at Talladega, in the county of Talladega and State of Alabama, have invented a new and useful Pea Thrasher and Separator, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to separating-machines of that class which are more especially adapted for thrashing peas and the like and afterward separating the same; and its object is to provide a machine possessing superior advantages in point of simplicity and convenience in construction, durability, inexpensiveness, and general efficiency.

In the drawings, Figure 1 is a perspective view of the machine. Fig. 2 is a side elevation. Fig. 3 is a vertical longitudinal sectional view. Fig. 4 is a top view with the top of the casing removed. Fig. 5 is a vertical transverse sectional view on the line *x x*, Fig. 3. Fig. 6 is a vertical transverse sectional view on the line *y y*, Fig. 3.

Referring to the drawings, A designates the main frame of the machine, which comprises, preferably, two bottom sills, B B, from which extend rear vertical beams, C C, and a series of three vertical front beams, D D and E, a top cross-beam, F, uniting the beams D D and E, and longitudinal side beams, G G, extending horizontally and secured to the beams C C and D D, as shown. The beams C and D carry the side pieces of the casing, these sides being designated by the letter H. Between these sides, and at the front of the casing, is secured the front wall, I, that inclines downwardly and inwardly, while the bottom J is arranged between the sides, and also inclines downwardly and inwardly from the rear end. The lower ends of these convergent pieces I and J come together, and at that point is formed an opening, K, in one of the sides H, through which the peas can pass into a suitable receptacle, while the hulls will pass off the rear end of the screen, as hereinafter set forth. It is preferable to incline the pieces I and J toward the opening K, as shown, to facilitate the passage of the peas through the latter. In the top of the casing, at its front end, are provided bearings L L, for the shaft M of the thrashing-cylinder N, which latter comprises end disks, O O, connected by strips P, that carry radially-projecting teeth Q.

Directly under the cylinder N is arranged the concave R, which is formed by independent transverse strips S, having teeth T projecting up from their faces. The ends of these strips are received in segmental grooves U U on the inner face of the sides H H, so that the strips can be readily removed by sliding them in and out of the grooves, as desired.

From the top of the front wall, I, extends an inclined strip, V, to the front strip, S, and serves to retain the said strip in position in the grooves, and from the rear strip, S, projects a downwardly-inclined strip, W, from which the peas pass onto the screen after they have been thrashed between the cylinder and concave. A narrow space, X, may be left between each pair of bottom strips, S, of the concave, through which the peas that escape from the hulls in the concave may pass through the latter onto the convergent pieces I and J, and pass out at the opening K without going through the screen. These narrow openings will also prevent an accumulation of shelled peas in the concave, which would retard the operation of the cylinder. The hulls will not pass through the openings, as the blast from the fan, which is located directly under the concave, will be sufficiently felt through the said openings to prevent the passage of the hulls.

The cylinder-shaft M is provided with a pinion, Y, that meshes with a main operating gear-wheel, Z, which is journaled between the beams D and E, and may be turned by a crank-handle, A^2, or other suitable mechanism. A pinion, B^2, on the shaft C^2 of the fan D^2 also meshes with the gear-wheel Z, the said fan-shaft having bearings E^2 E^2 in the casing, so that the fan will be located directly under the concave.

F^2 is the screen, which is swung inside the casing on pivoted rods G^2, and extends from under the incline W to the rear end of the casing. The screen is reciprocated by a pivoted lever, H^2, passing through a slot, I^2, in one of the sides H, and operated by a pitman, J^2,

connected with a crank-disk, L^2, on the end of the fan-shaft.

The operation and advantages of my invention will be readily understood and appreciated. The relative arrangement of the parts comprising my machine is especially adapted to effect economy in space and to secure a rapid and efficient operation of the machine without waste.

A semicircular cover, K^2, is arranged to be placed over the thrashing-cylinder, and the casing is provided with a cover, M^2, from which projects a deflecting-incline, N^2, that converges to the incline *w*. The cover K^2 is provided with a door, O^2, hinged as shown, through which an inspection of the cylinder can be had without removing the covers.

I claim as my invention—

The herein-described pea thrasher and separator, comprising the casing having the segmental grooves in its inner walls, the opening K at its bottom, the convergent front wall, I, and bottom J, inclining toward the opening K, as described, the removable strips forming the concave and seated in the grooves, so that transverse openings or slots are left between the strips and over the opening K, the strip V, abutting against the series of strips forming the concave to retain the same from displacement, the screen extending over the bottom J, and the fan directly under the concave, substantially as and for the purpose set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

THOMAS J. PORTER.

Witnesses:

JAMES A. HUEY,

THOMAS HAYDEN.