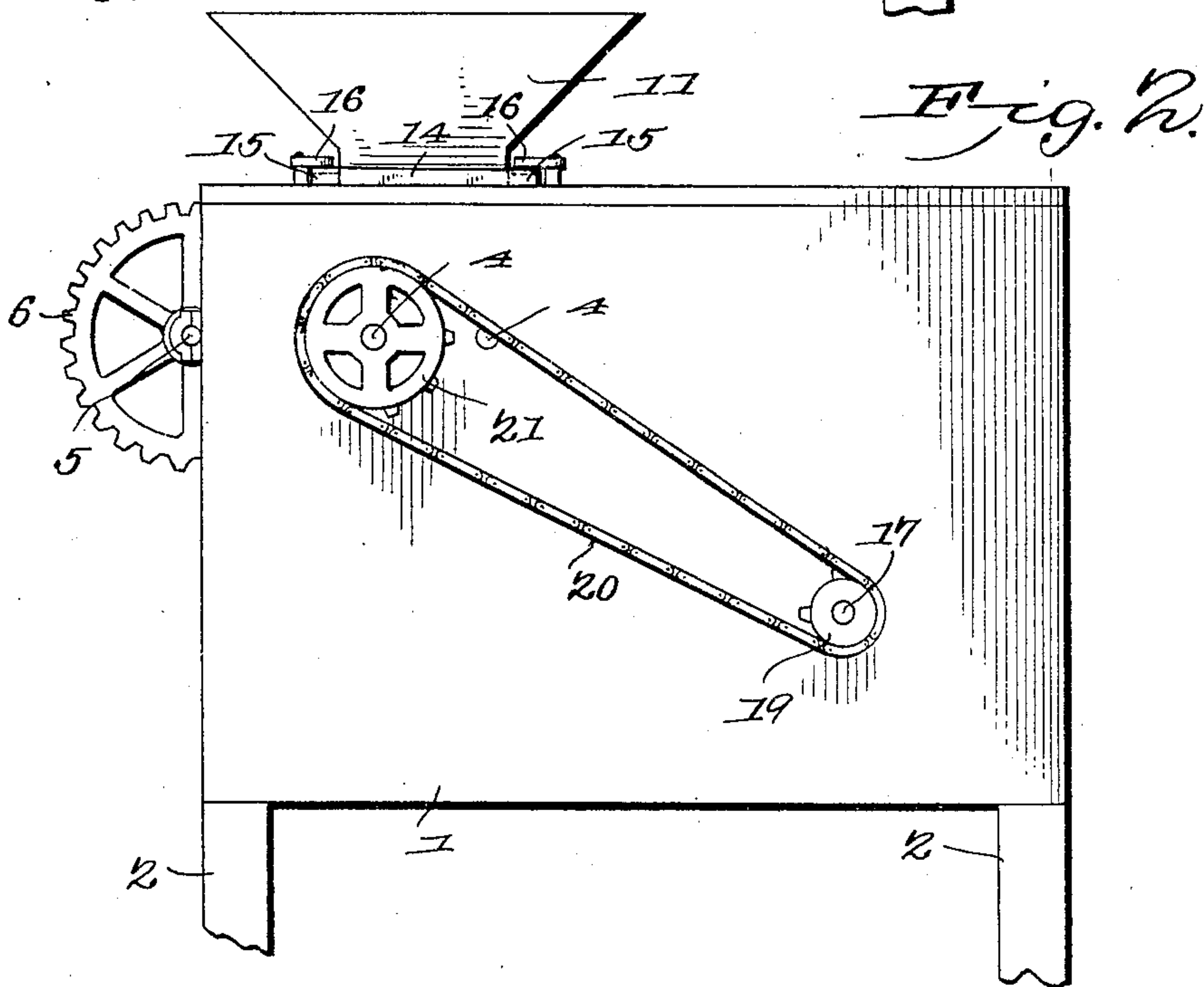
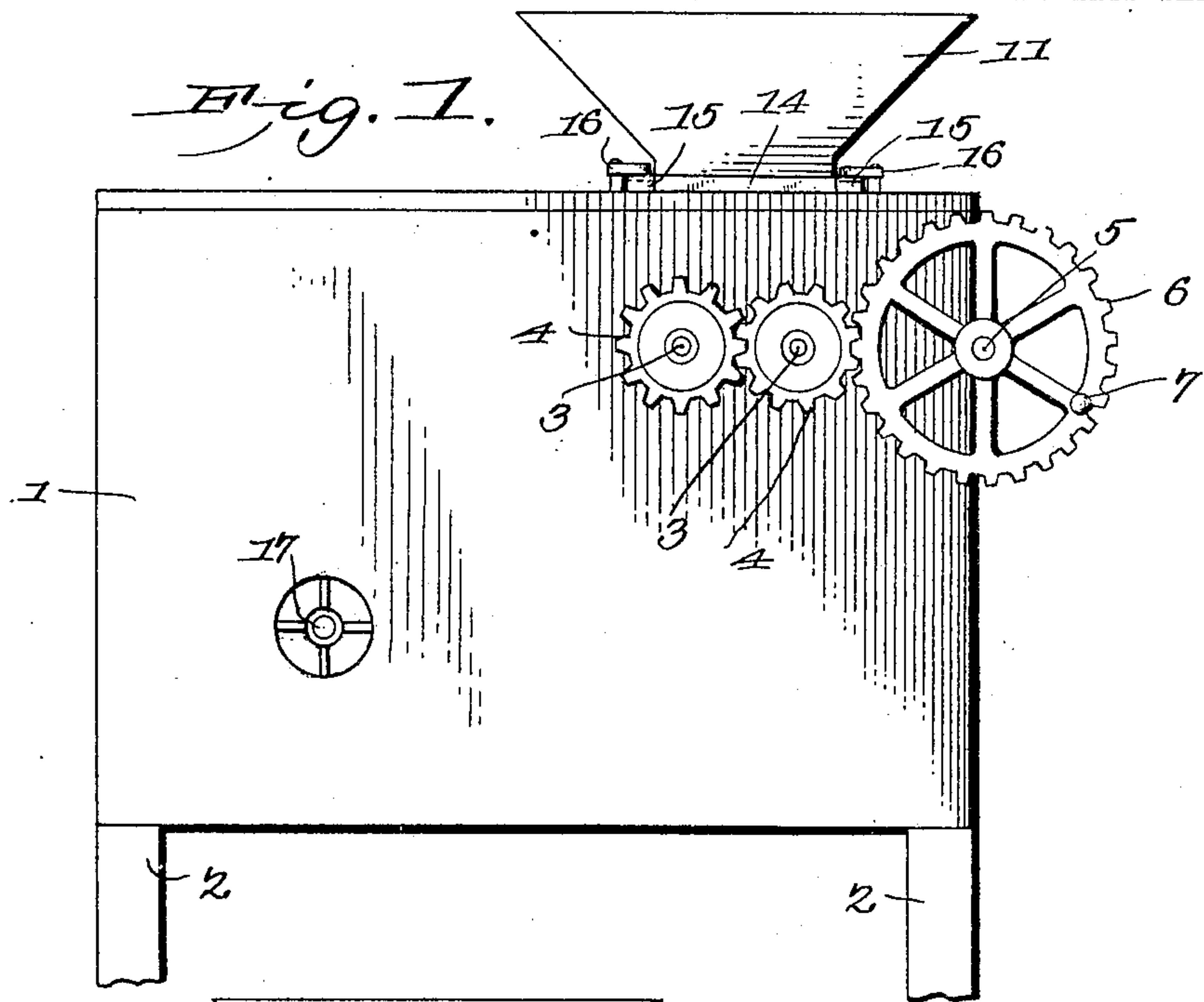


No. 803,809.

PATENTED NOV. 7, 1905.

W. C. COMBEST.
PEA HULLING MACHINE.
APPLICATION FILED APR. 13, 1905.

2 SHEETS—SHEET 1.



Witnesses

E. J. Stewart
Wm. Bagger

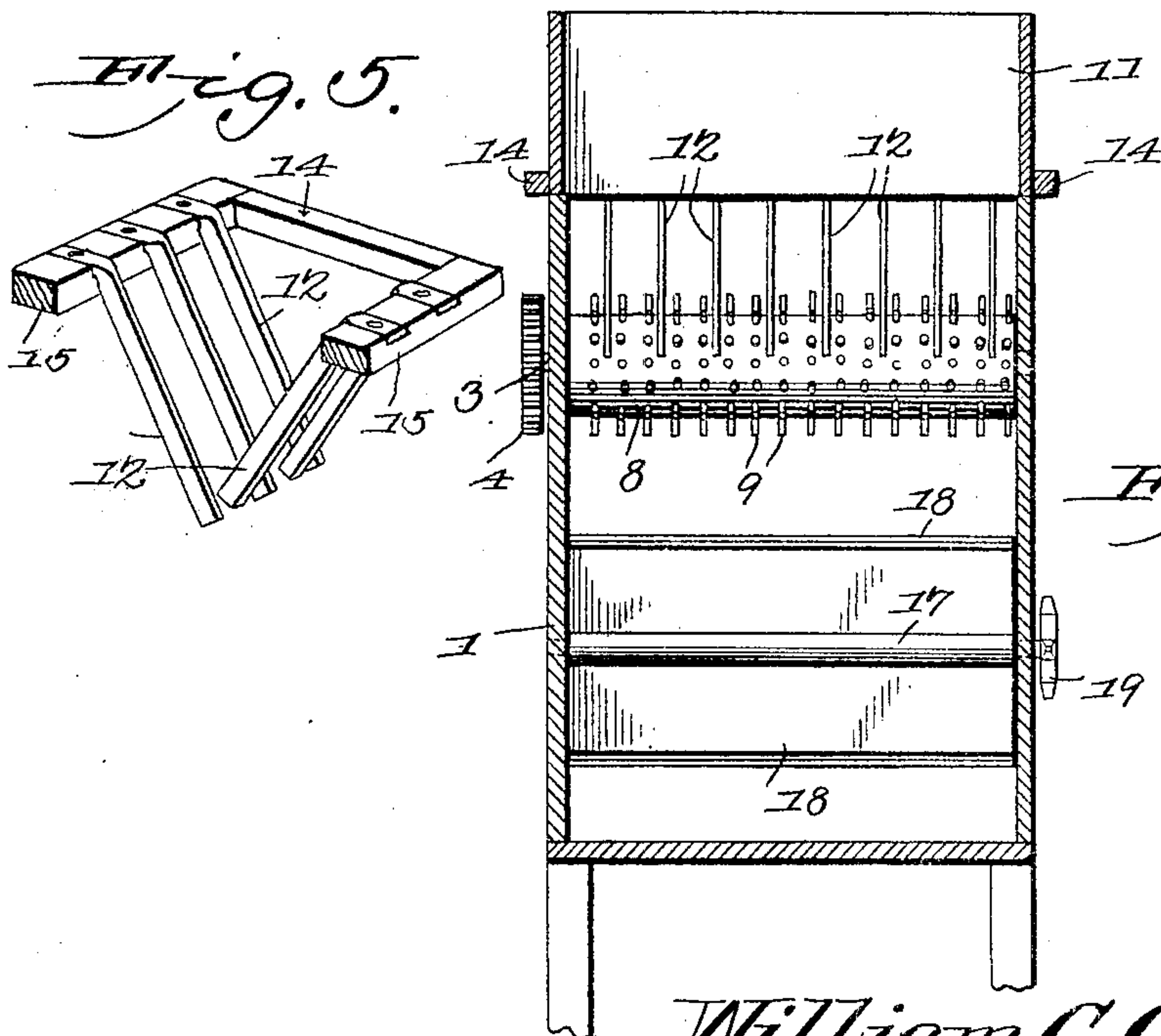
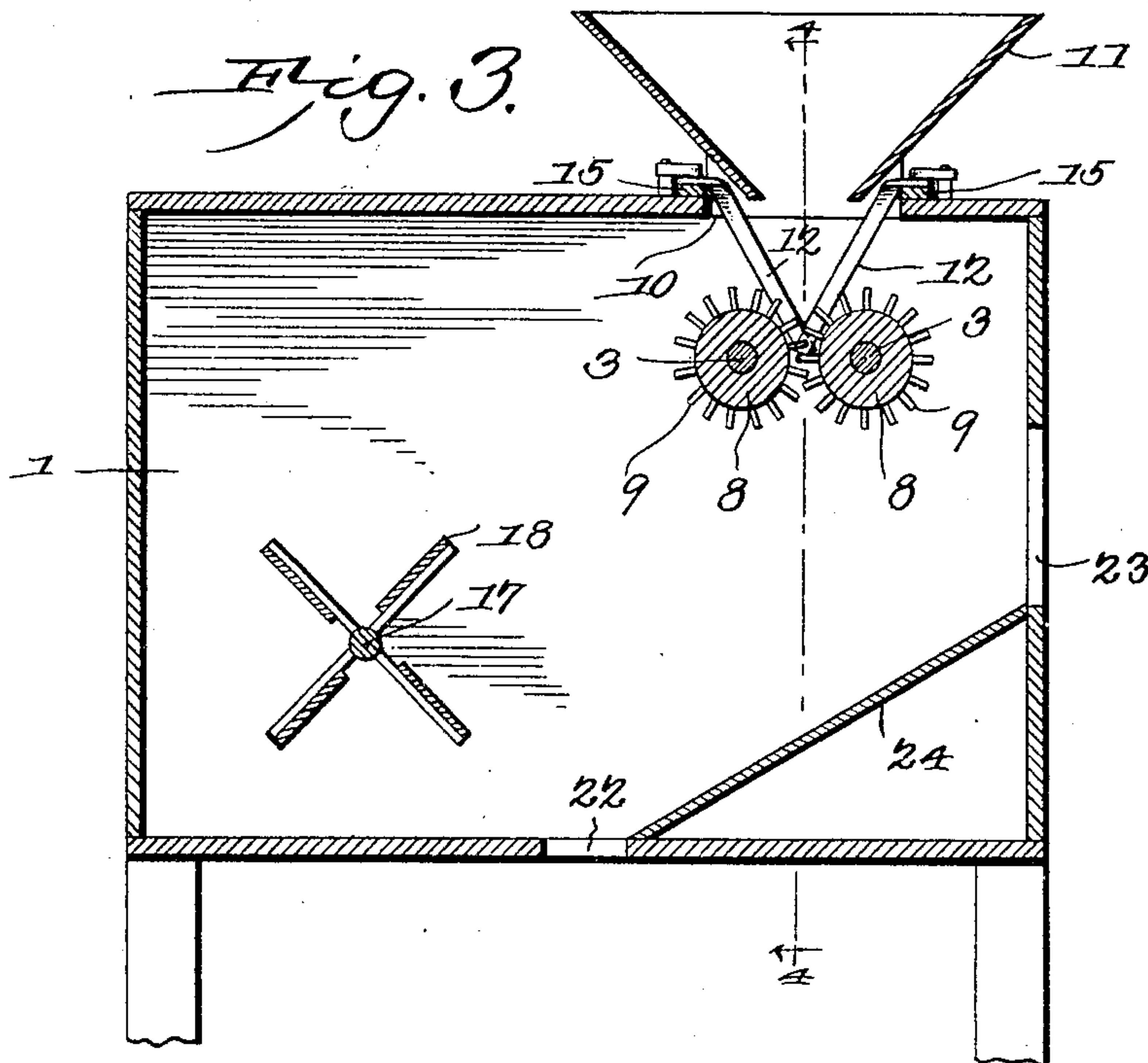
William C. Combest, Inventor.
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2 SHEETS—SHEET 2.



Witnesses

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UNITED STATES PATENT OFFICE.

WILLIAM C. COMBEST, OF PAULDING, MISSISSIPPI.

PEA-HULLING MACHINE.

No. 803,809.

Specification of Letters Patent.

Patented Nov. 7, 1905.

Application filed April 13, 1905. Serial No. 255,392.

To all whom it may concern:

Be it known that I, WILLIAM C. COMBEST, a citizen of the United States, residing at Paulding, in the county of Jasper and State of Mississippi, have invented a new and useful Pea-Hulling Machine, of which the following is a specification.

This invention relates to pea-hulling machines; and it has for its object to simplify the construction and to improve the operation of this class of devices.

With these and other ends in view, which will readily appear as the nature of the invention is better understood, the same consists in the improved construction and novel arrangement and combination of parts, which will be hereinafter fully described, and particularly pointed out in the claims.

In the accompanying drawings has been illustrated a simple and preferred form of embodiment of the invention, it being, however, understood that no limitation is necessarily made to the precise structural details therein exhibited, but that the right is reserved to any changes, alterations, and modifications to which recourse may be had within the scope of the invention and without departing from the spirit or sacrificing the efficiency of the same.

In said drawings, Figure 1 is a side elevation of a machine constructed in accordance with the principles of the invention. Fig. 2 is a side elevation of the machine as seen from the opposite side. Fig. 3 is a longitudinal vertical sectional view. Fig. 4 is a vertical transverse sectional view taken on the line 4-4 in Fig. 3. Fig. 5 is a perspective detail view illustrating the construction of the breast of the machine.

Corresponding parts in the several figures are indicated by like characters of reference.

A casing 1, which may be supported upon legs 2 2, is provided with bearings for shafts 3 3, each of which is provided at one end with a pinion 4, said pinions intermeshing with each other, as will be seen in Fig. 1 of the drawings. The casing also supports a shaft 5, carrying a gear-wheel 6, which meshes with one of the pinions 4. The shaft 5 may be driven by means of a handle 7, attached to the gear-wheel 6, or it may be driven in any suitable manner from any convenient source of power.

The shafts 3 3, which are driven in the direction of each other, are provided with cylinders 8, disposed between the sides of the

casing, and each of said cylinders is provided with a plurality of radiating teeth 9, said teeth being disposed in regular annular series, as will be clearly seen by reference to Fig. 4 of the drawings. The top of the casing has an inlet consisting of a transverse opening 10, beneath which the cylinder-carrying shafts are located. A hopper 11 is supported upon the sides of the casing above said opening, the ends of said hopper being constructed so as to rest upon the upper edges of the sides of the casing. The sides of the hopper are made to converge downwardly, as clearly shown in the several figures of the drawings.

The improved machine is provided with a breast which is composed of end members 14, supported adjacent to the front and rear sides of the hopper, said end members being preferably connected by side members, as 15, to constitute a rigid frame. Securely connected with each of the end members 14 are a plurality of ribs 12, extending downwardly in the direction of each other and having their lower ends slightly overlapped in approximate V shape, as shown. Said ribs, which are preferably though not necessarily of rectangular cross-section, present their edges inward, as shown. The ribs 12, composing the breast of the machine, are suitably spaced apart to permit the teeth 9 of the cylinders 8 to work therebetween, and the bars 15, carrying the ribs, are of a length slightly exceeding the width of the machine, said bars being supported upon the deck or upper side of the casing adjacent to the sides of the opening 10 with the side members 15 adjacent to the hopper and the ribs being obviously made of proper dimensions to span said opening. Turn-buttons 16 or other suitable means may be employed to secure the breast in position for operation. The apex of the breast extends down between the two toothed cylinders, as will be clearly seen in Fig. 3, and the teeth upon said cylinders are not only disposed in registry with the spaces between the ribs, but also intercurrently with each other, so that there will be no hindrance or obstruction to the operation of the machine. In order that the relative distance between the teeth upon the two cylinders may be maintained, it is necessary that they be positively driven, as by means of the intermeshing-pinions herein described.

Journaled transversely in the casing, near the front end thereof, is a shaft 17, carrying a fan 18, and provided at one end thereof,

which projects beyond the side of the casing, with a sprocket-wheel 19, connected by a chain 20 with a sprocket-wheel 21 upon one of the cylinder-carrying shafts 3, from which the fan will thus be driven. By properly proportioning the sprocket-wheels the fan may be driven at the desired or any requisite speed.

The bottom of the casing has an opening 22, and one end of the casing is provided with a similar opening 23, from the lower edge of which an inclined plane 24 extends to the opening 22. The latter forms the exit for the peas, while the opening 23 constitutes an exit for the straw and waste material.

In operation the material to be threshed or hulled is fed through the hopper 11 to the breast of the machine, between the ribs of which it is operated upon by the toothed cylinders. The hulls will be torn open and the peas will drop upon the inclined plane 24 and be discharged through the opening 22. The straw or halm will be torn by the toothed cylinders between the ribs of the breast and will be discharged through the opening 23 by the air-blast set up by the fan.

It will be specially observed that under the construction herein shown and described the breast as well as the hopper is supported detachably upon the frame of the machine and is removable at a moment's notice for the purpose of cleaning the machine, removing obstructions, or disentangling vines in the event of the latter being in such a matted state as to interfere with the operation of the device.

Having thus described the invention, what is claimed is—

1. In a machine of the class described, a breast comprising a frame separate from the casing of the huller, and a plurality of ribs connected with opposite members of the frame and having free ends overlapping or crossing each other.

2. In a machine of the class described, a casing having an opening, a pair of toothed cylinders mounted for rotation beneath said opening, and a breast comprising a plurality of ribs, and frame-bars connecting said ribs, said bars being supported detachably upon the casing adjacent to the sides of the opening and the free ends of said ribs being extended between the cylinders.

3. In a machine of the class described, a casing having an opening, a pair of toothed cylinders mounted for rotation beneath said opening, and a breast comprising a plurality of ribs, and frame-bars connecting said ribs, said bars being supported upon the casing adjacent to the sides of the opening and the free ends of said ribs being extended between the cylinders and crossed or overlapped.

4. In a machine of the class described, a

casing having an opening in the deck thereof, a pair of toothed cylinders mounted for rotation beneath said opening, a breast comprising a plurality of ribs, and frame-bars connecting the same, said frame-bars being supported detachably upon the casing of the machine and a hopper having converging sides and provided with end pieces supported upon the upper edges of the sides of the casing.

5. In a machine of the class described, a casing, a pair of cylinders mounted for rotation in said casing and geared together, teeth upon said cylinders disposed in annular series, the teeth upon one cylinder being disposed intercurrently with those upon the other cylinder and the annular series of teeth upon the two cylinders being disposed in registry with each other, and a breast supported above the toothed cylinders and consisting of a plurality of ribs, suitably connected and spaced apart, the free ends of said ribs being extended into the spaces between the annular series of teeth upon the cylinders.

6. In a machine of the class described, a casing, a pair of cylinders mounted for rotation in said casing and geared together, teeth upon said cylinders disposed in annular series, the teeth upon one cylinder being disposed intercurrently with those upon the other cylinder and the annular series of teeth upon the two cylinders being disposed in registry with each other, and a breast supported above the toothed cylinders and consisting of a plurality of ribs, suitably connected and spaced apart, the free ends of said ribs being extended into the spaces between the annular series of teeth upon the cylinders and crossed or overlapped.

7. In a machine of the class described, a casing having openings in the deck, in the bottom, and in one end thereof, an inclined plane extending from the bottom opening to the lower edge of the opening in the end of the casing, a pair of toothed cylinders mounted for rotation above said inclined plane and beneath the opening in the deck of the casing, a breast comprising a plurality of ribs suitably connected and spaced apart, said breast being supported upon the deck of the casing with the ribs extending through the opening therein for coöperation with the toothed cylinders, a hopper supported above the breast and having converging sides spaced from the ribs, and a fan supported for rotation within the casing.

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

WILLIAM C. COMBEST.

Witnesses:

J. C. ROWELL,
M. E. COCHRAN.