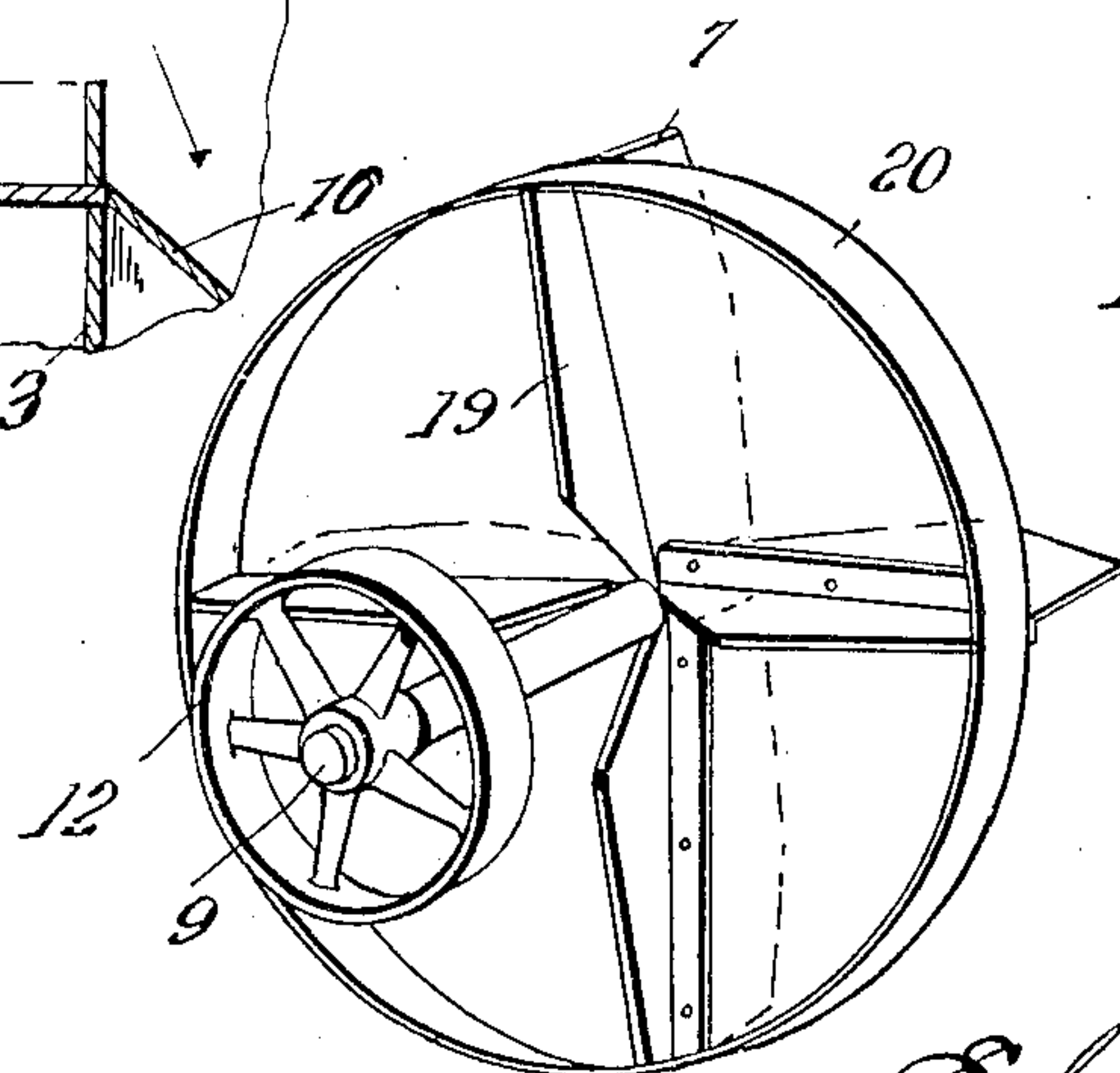
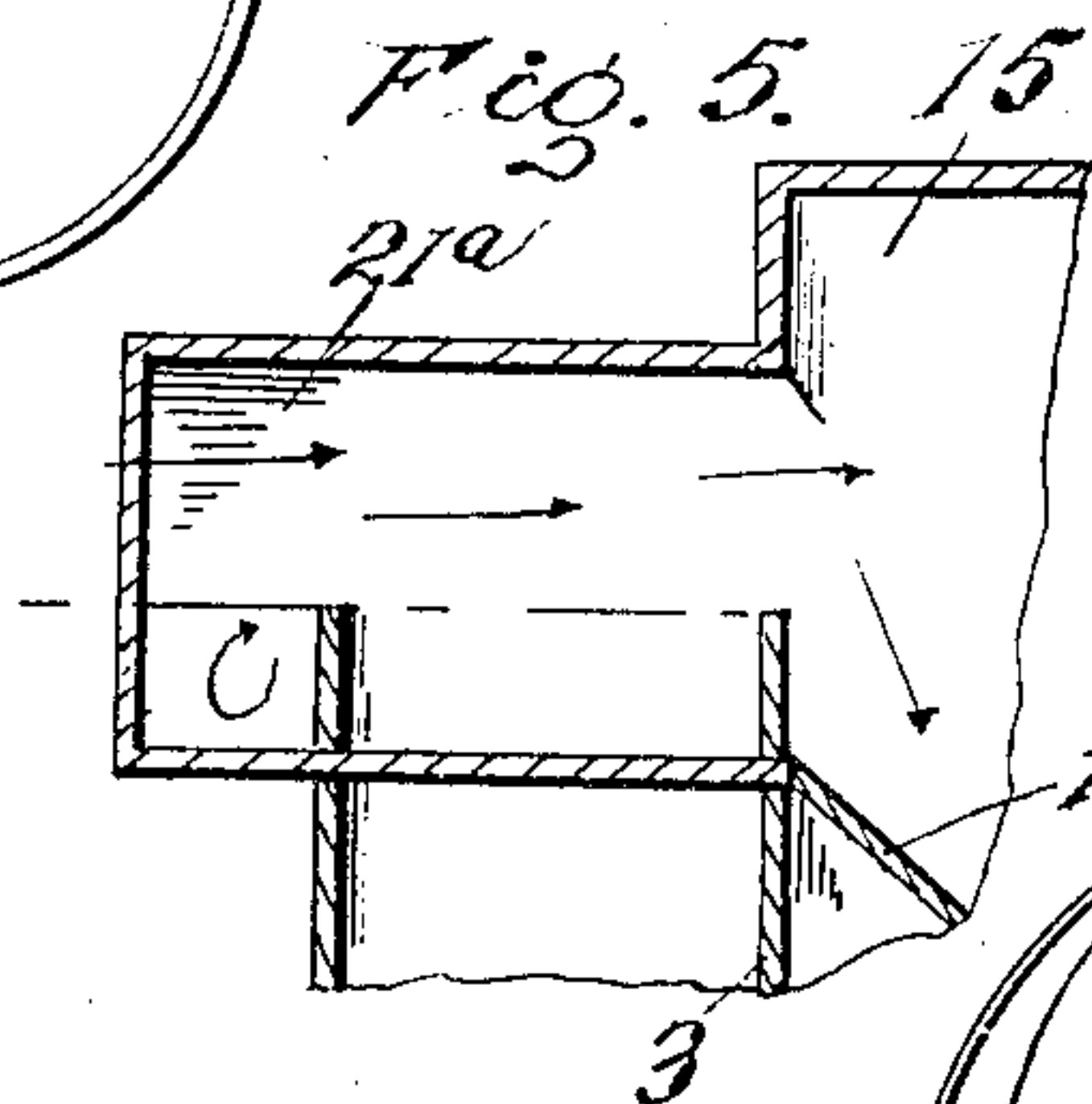
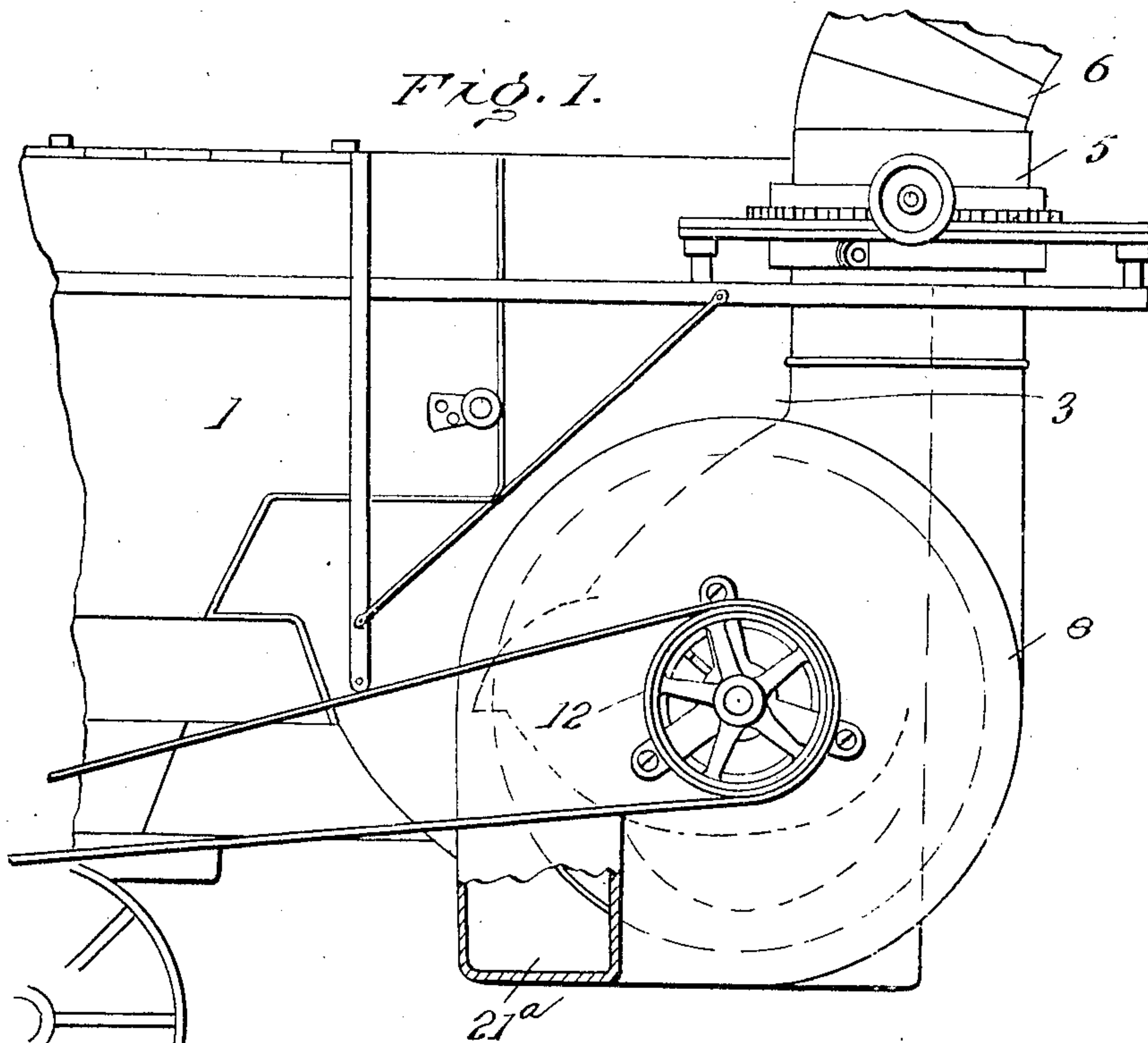


No. 876,115.

PATENTED JAN. 7, 1908.

E. J. VRAALSTAD.
PNEUMATIC STACKER.
APPLICATION FILED MAY 4, 1906.

2 SHEETS—SHEET 1.



Witnesses

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Francis S. Chapman

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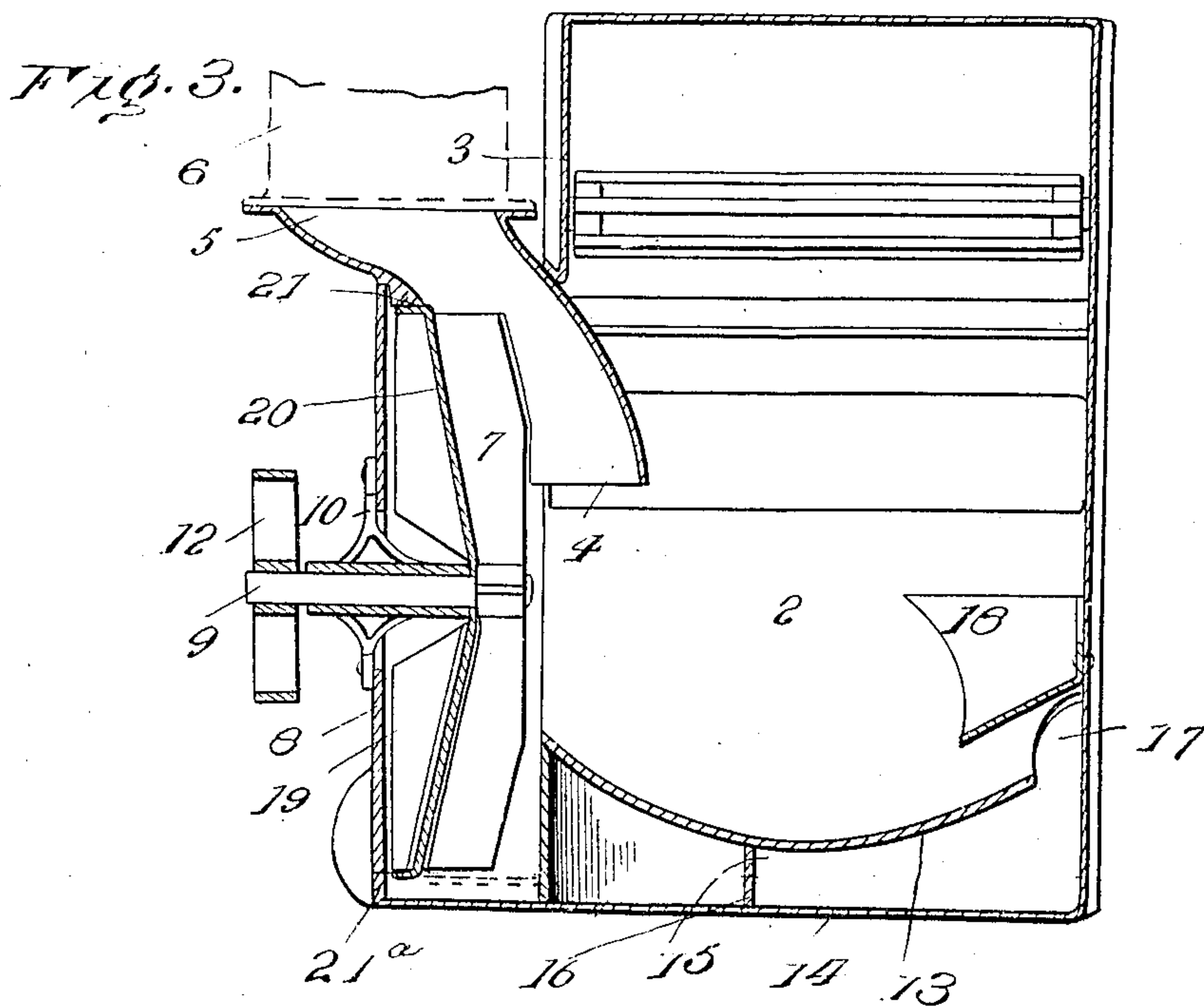
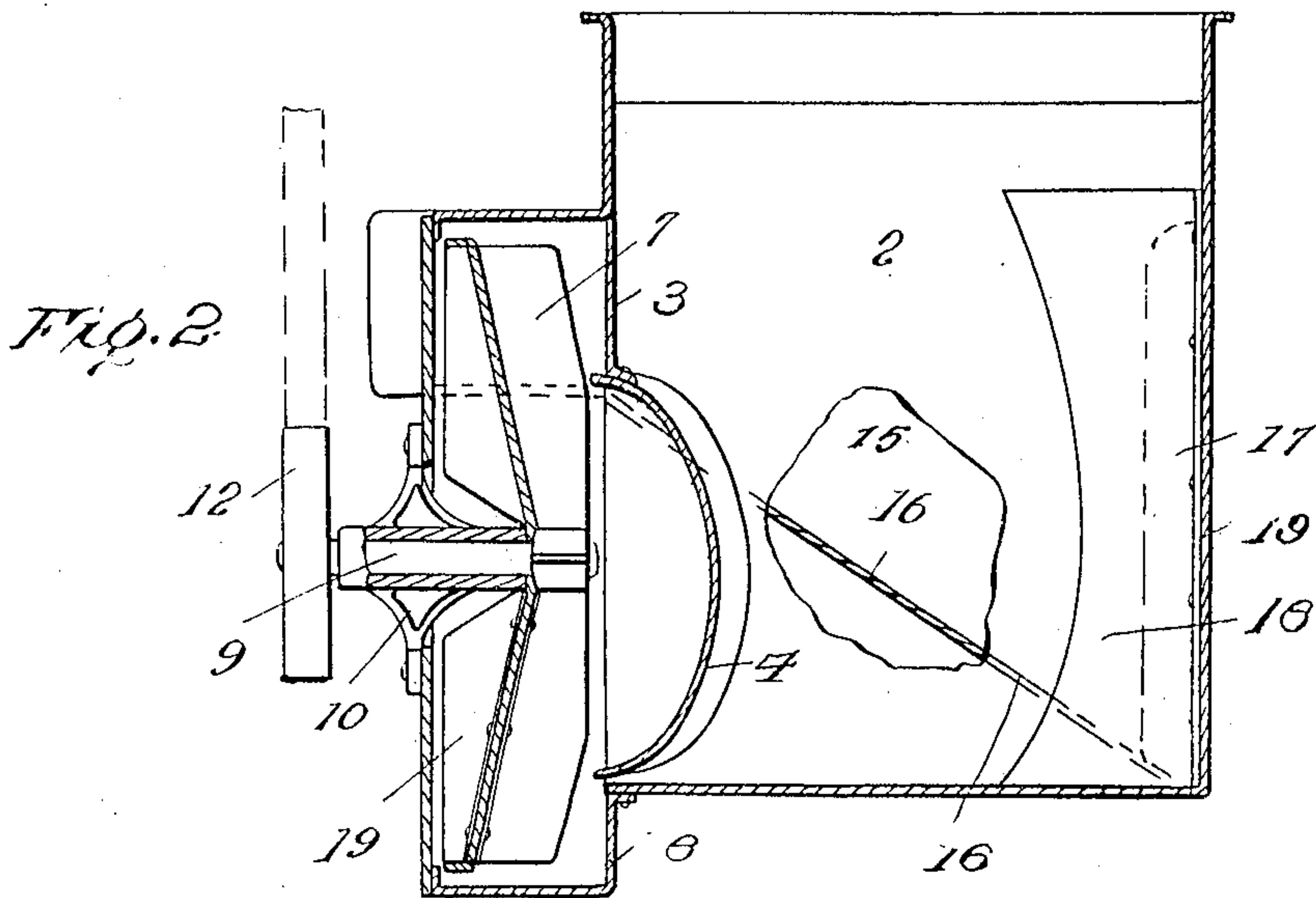
Attorney

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2 SHEETS—SHEET 2.



Witnesses

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UNITED STATES PATENT OFFICE.

EDWARD J. VRAALSTAD, OF BUFFALO, NEW YORK, ASSIGNOR OF ONE-HALF TO BUFFALO PITTS COMPANY, OF BUFFALO, NEW YORK, A CORPORATION OF NEW YORK.

PNEUMATIC STACKER.

No. 876,115.

Specification of Letters Patent.

Patented Jan. 7, 1908.

Application filed May 4, 1906. Serial No. 315,236.

To all whom it may concern:

Be it known that I, EDWARD J. VRAALSTAD, of Buffalo, in the county of Erie and State of New York, have invented certain new and useful Improvements in Pneumatic Stackers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The primary object of this invention is to provide means for expeditiously and economically effecting the discharge of straw, chaff, etc., and prevent the lagging thereof within the discharge chamber.

The invention will be hereinafter fully set forth and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a view in side elevation of a portion of the discharge end of a threshing machine, the stacker being broken away. Fig. 2 is a horizontal sectional view through the discharge chamber and the fan. Fig. 3 is a vertical sectional view looking toward the thresher. Fig. 4 is a view in perspective of the fan and the band wheel. Fig. 5 is a fragmentary sectional view.

Referring to the drawings, 1 designates a thresher, a portion of which is shown in Fig. 1, and the ends of the sieves indicated in Fig. 3.

2 is the chamber into which the straw is received as it is discharged from the thresher. In the wall 3 of the casing of this chamber is formed an outlet opening over which extends a hood 4 for guiding the straw into the trunk 5 of the stacker or elevator 6.

7 designates the primary fan located within a sub-casing 8 attached to, or forming part of, wall 3 of the discharge chamber. The power shaft 9 of this fan is shown as mounted in a bracket 10, and as equipped with a band wheel 12. The construction and operation of parts so far described are well known in the art, the action of the fan being to draw the straw from the discharge chamber up into the trunk and force it outwardly through the stacker.

The discharge chamber is formed with a curved false bottom 13, between which and the bottom 14 of the casing is an air passage-way 15 which leads from the bottom of the fan casing, at one end thereof, to the opposite side of the casing where it opens into such chamber. A diagonally positioned partition

16 forms one side of this passage-way, as shown in Fig. 2, and in the false bottom, at the wide end of the passage-way, is formed an extended opening 17 through which the air will escape into the straw chamber. Over this entrance opening is a deflector 18 which serves to direct auxiliary air blasts down against the curved bottom 13 and toward the outlet to the stacker.

19 designates an auxiliary fan for supplying blasts of air through the passage-way 15 and into the straw chamber, such blasts serving to force or feed the straw up to the main fan and out into the trunk of the elevator. I have shown this fan as mounted on shaft 9 and in close relation to fan 7, with the blades of the two fans separated by a division plate 20 to which such blades are secured, preferably by riveting. The circumferential edge of this division plate is flanged over the edges of the blades of the auxiliary fan, and by reason of such edge traveling beneath a ledge 21 of trunk 5, no blasts created by the auxiliary fan can pass directly into the trunk. These blasts leave the fan casing only at the bottom thereof, at one side through a lateral pocket and a port or channel 21^a, leading into the passage-way 15. (See Figs. 1 and 2.) These blasts upon entering chamber 2 so act upon the straw as to impel it toward the primary fan and up through and into the trunk, and there they coöperate with the blasts of the primary fan to discharge the straw etc. through the stacker. The latter blasts are all at the top and directly into the elevator.

The auxiliary fan need not necessarily be positioned on the same shaft as the primary fan, nor located within the casing of the latter. The object of my invention is attained by utilizing an auxiliary blast for feeding the straw into the zone of action of the primary fan and then assist the latter in ejecting the straw through the stacker. It is preferable, however, for economical reasons, to mount the two fans on the same shaft, it being an easy matter to arrange for the blasts from the main fan to pass directly into the trunk of the stacker, while the blasts of the auxiliary fan will leave the casing at a lower point and enter the straw chamber at the side opposite the entrance to the stacker, and in direct line with the outlet. Since the inlet opening extends nearly the full length of the straw chamber all of the straw within the latter will be forced to the outlet, thus preventing any

lagging or clogging close up against the walls of the casing.

I claim as my invention:

1. The combination with a threshing machine, of a pneumatic elevator and stacker comprising a straw chamber, a fan at one side thereof for withdrawing the straw and ejecting it into the stacker, a second fan at the same side of the chamber as the first mentioned fan, and means for conducting the blasts from said second fan to said chamber throughout approximately the full length of the side thereof opposite to said fans.
2. The combination with a threshing machine, of a pneumatic elevator and stacker comprising a straw chamber, having a false bottom and an air passage way thereunder opening into said chamber at one side thereof, throughout approximately the full length of such side a fan located in the opposite side of such chamber for ejecting the straw therefrom, and an auxiliary fan for supplying air through said passage-way for feeding the straw to the first mentioned fan.
3. The combination with a threshing machine, of a pneumatic stacker comprising a casing forming a chamber having an outlet opening in one side, a fan located over said opening for feeding the straw into the stacker, a second fan, means for conveying the blasts of such second fan into said chamber at the side opposite the outlet opening, and means for deflecting such blasts toward the bottom of said chamber.
4. The combination with a threshing machine, of a pneumatic stacker comprising a casing forming a chamber having an outlet opening in one side, a fan located over said

opening for feeding the straw into the stacker, a second fan mounted on the same shaft as the first mentioned fan, a passage-way in said casing for conveying the blasts of said second fan into said chamber before entering the stacker, and a deflector for directing such blasts toward the bottom of such chamber.

5. The combination with the straw chamber having an opening in one wall and a passage-way leading therefrom beneath said straw chamber and opening into the latter adjacent to the opposite wall thereof, of a fan located at such outlet opening, a casing for such fan, a shaft for the latter, a second fan on such shaft, and a divider between the two fans, the blasts of such second fan being conducted through said passage-way to said chamber.

6. The combination with the straw chamber having an outlet opening in one wall, and a false bottom formed with an opening adjacent to the opposite wall of such chamber, of a fan located at such outlet opening, a casing for such fan, a shaft for the latter, a second fan on such shaft, a division plate between the blades of the two fans, and an air-passage way for conveying blasts of said second fan to said chamber through the opening in the false-bottom thereof.

In testimony whereof, I have signed this specification in the presence of two subscribing witnesses.

EDWARD J. VRAALSTAD.

Witnesses:

H. P. SEIPP,
E. F. HICKMAN.