

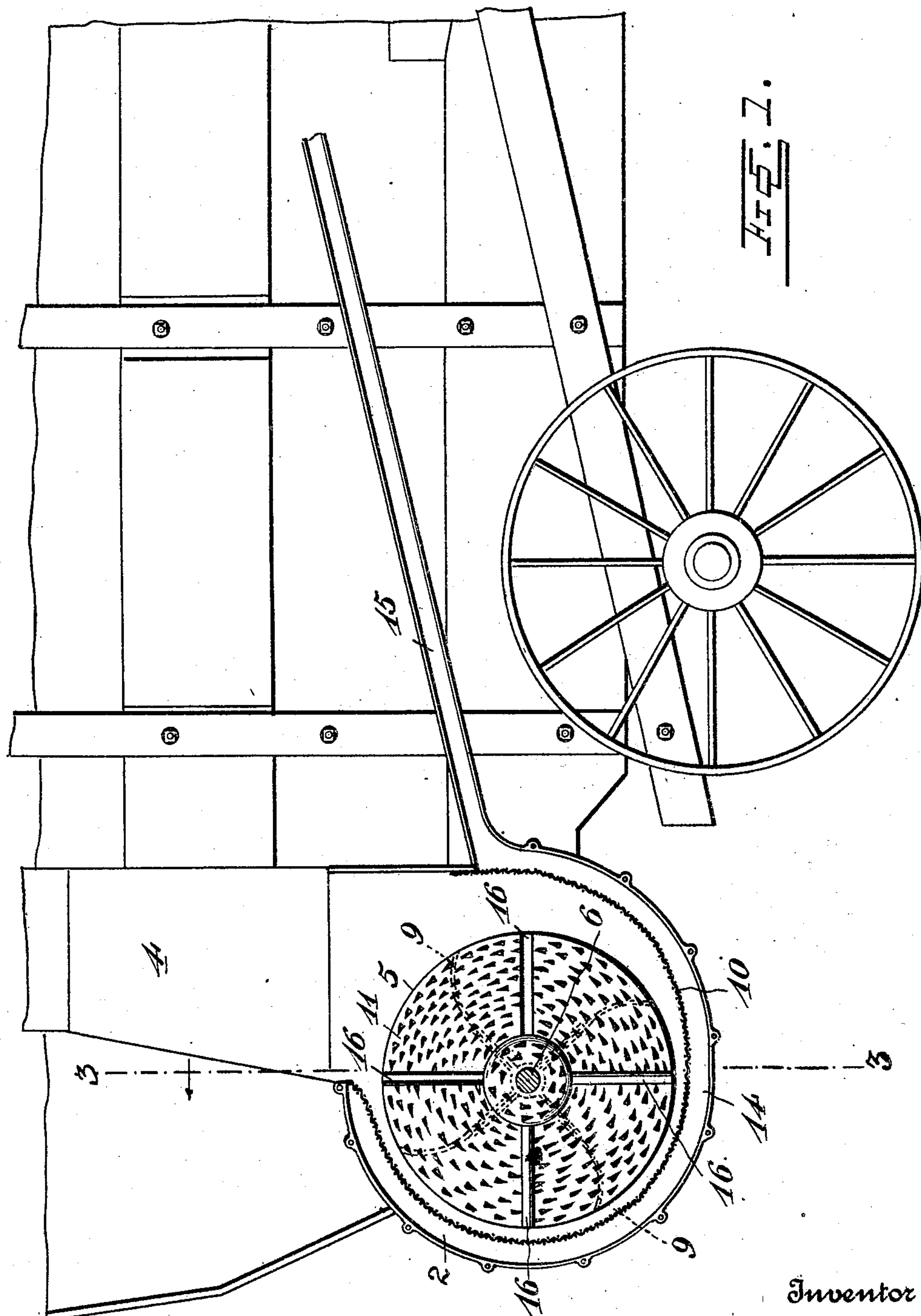
No. 788,397.

PATENTED APR. 25, 1905.

J. FAHRNEY.
STRAW STACKER.

APPLICATION FILED JAN. 4, 1905.

2 SHEETS—SHEET 1.



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2 SHEETS—SHEET 2.

FIG. 2.

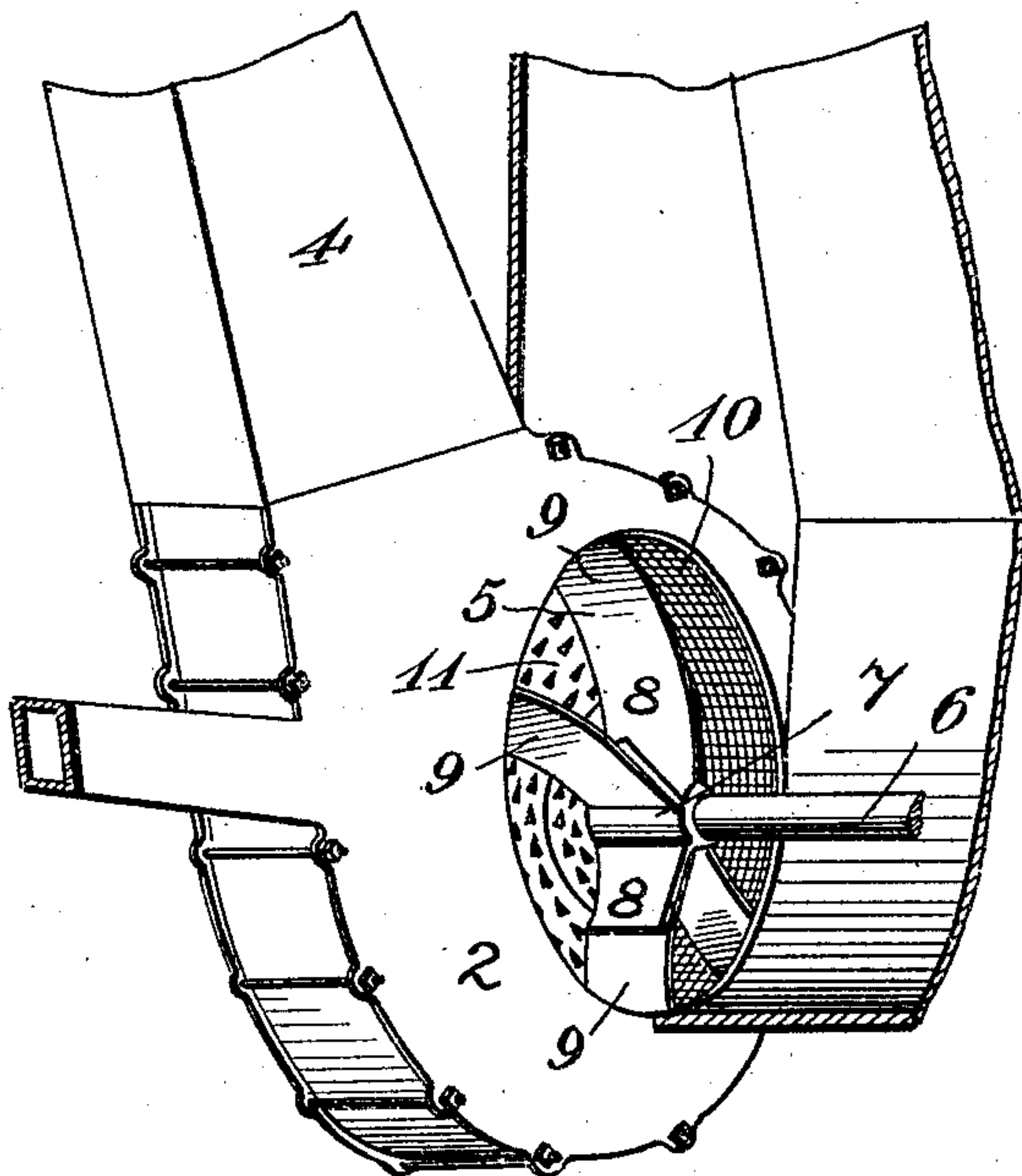


FIG. 3.

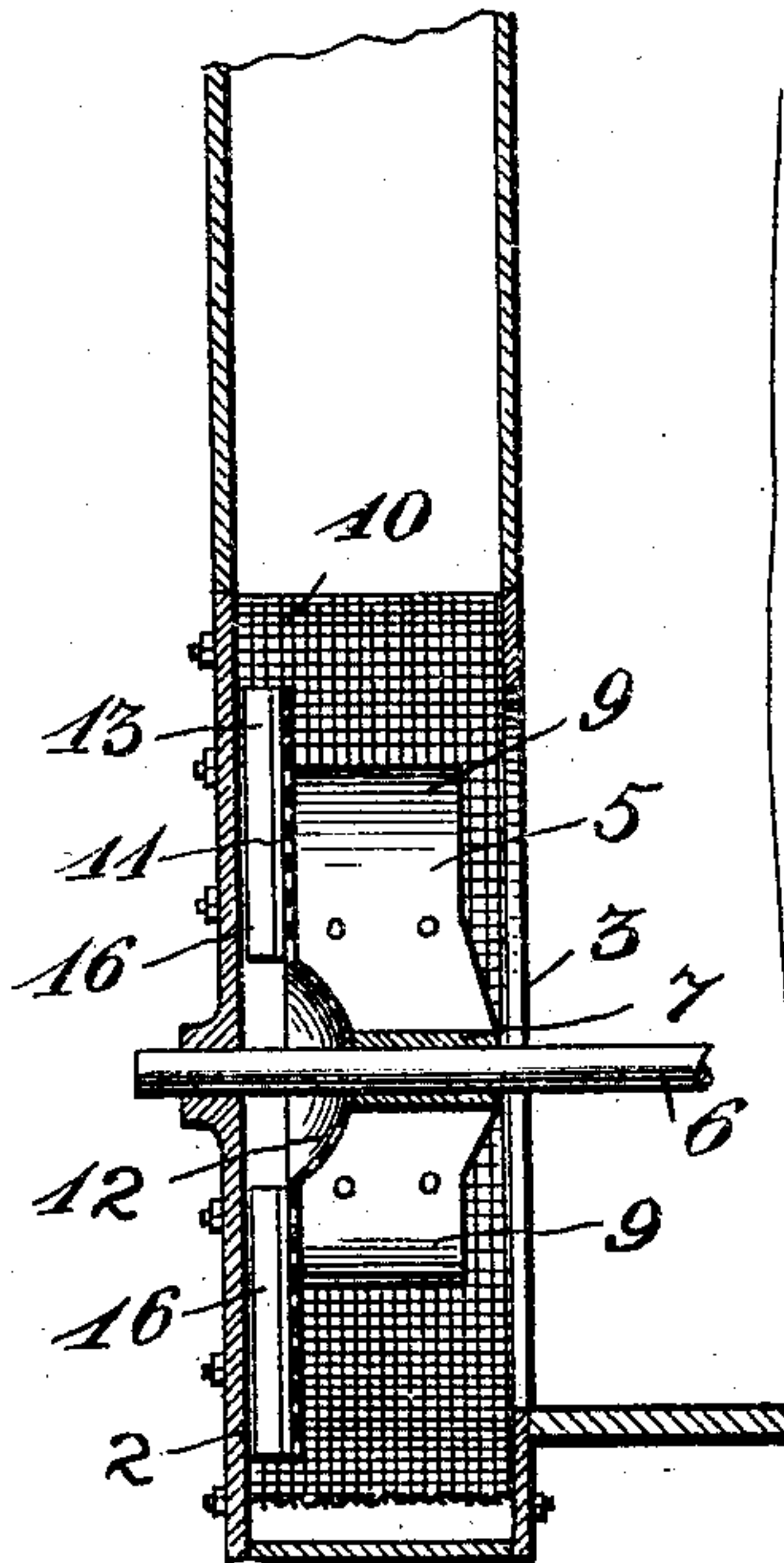


FIG. 4.

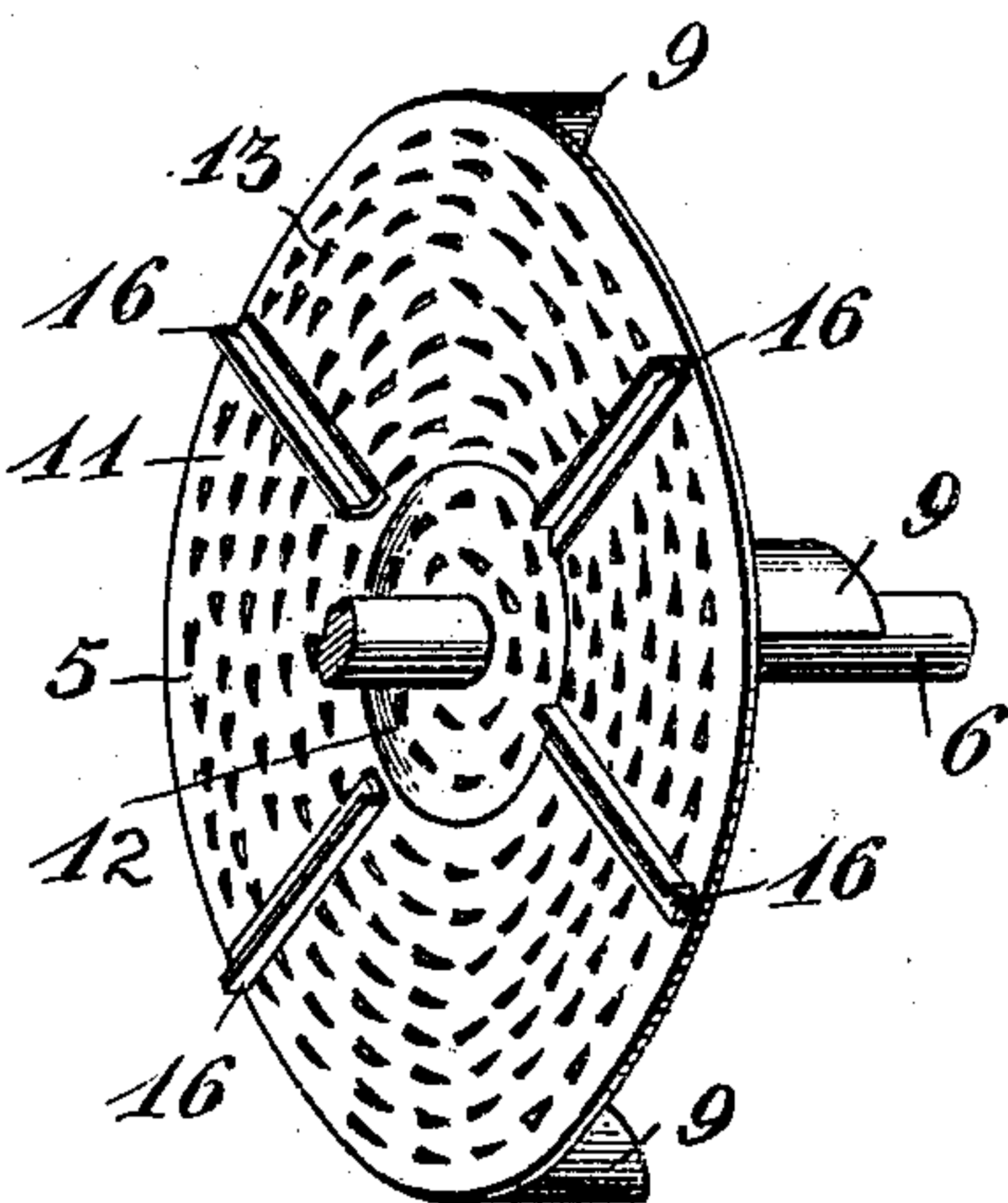
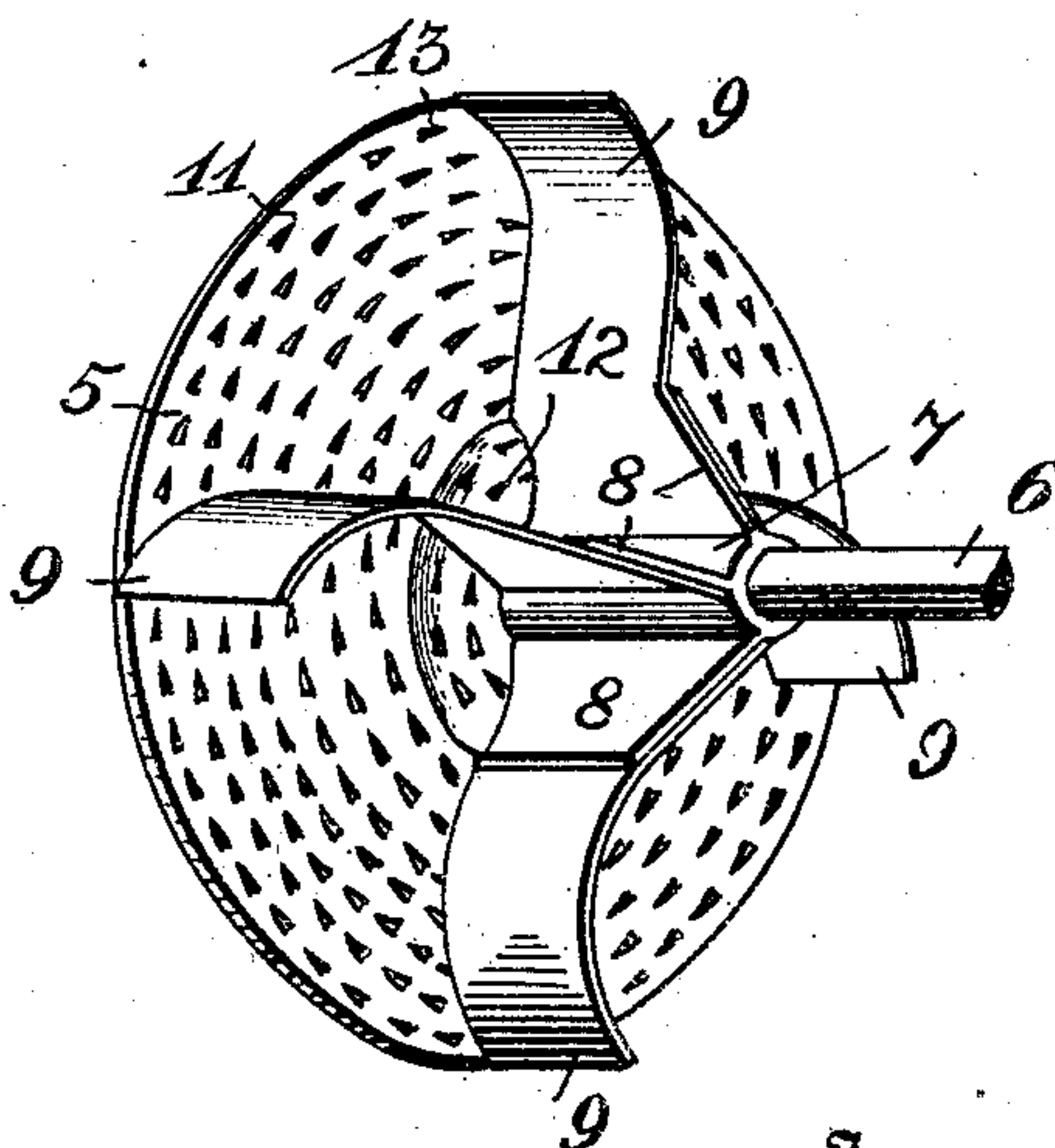


FIG. 5.



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UNITED STATES PATENT OFFICE.

JOSIAH FAHRNEY, OF WAYNESBORO, PENNSYLVANIA.

STRAW-STACKER.

SPECIFICATION forming part of Letters Patent No. 788,397, dated April 25, 1905.

Application filed January 4, 1905. Serial No. 239,602.

To all whom it may concern:

Be it known that I, JOSIAH FAHRNEY, a citizen of the United States, residing at Waynesboro, in the county of Franklin and State of Pennsylvania, have invented certain new and useful Improvements in Straw-Stackers; and I do 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.

My invention relates to improvements in straw-stackers, and more particularly to the pneumatic stackers used in connection with grain separators or threshers.

The object of my invention is to provide in a stacker simple and efficient means for separating and collecting the kernels of grain which work their way into the stacker or fan-casing together with the threshed straw, and thereby save such grain, which would otherwise become wasted by being discharged with the straw through the discharge-pipe of the stacker.

With the above and other objects in view the invention consists of certain novel features of construction, combination, and arrangement of parts, as will be hereinafter described and claimed.

In the accompanying drawings, Figure 1 is an elevation, with parts in section, of my improved pneumatic or fan stacker attached to a grain separator or thresher. Fig. 2 is a sectional perspective view of the same. Fig. 3 is a detail sectional view taken on the line 3-3 in Fig. 1. Fig. 4 is a perspective view of the inner face of the fan. Fig. 5 is a similar view of the outer face of the same.

Referring to the drawings by numeral, 1 denotes the rear portion of the grain separator or thresher, to which is secured a fan-casing 2, having in one of its faces an inlet-opening 3 and at its top a discharge blast-pipe or connection 4. This casing may be of any well-known or preferred construction and is mounted in the usual manner to one side or the rear end of the separator or thresher.

Mounted within the casing 2 is the usual rotary blast-fan 5, which draws the straw from the separator 1 into the casing through its inlet-opening 3 and discharges it through

its outlet. This fan is secured upon a horizontal shaft extending transversely through the fan-casing and the separator and comprises a hub 7, formed with radially-extending ribs 8, to which are secured the curved blades 9 of the fan. These blades are curved rearwardly or in a direction reversed to that in which the fan rotates, so as to cause the straw to discharge freely through the outlet-pipe 4.

In order to separate and collect any loose grain which works its way into the fan-casing, together with the straw and any grain which becomes threshed or separated from partially-threshed straw by the action of the blast-fan, I provide in the fan-casing around said fan a grain screen or grate 10 and upon the outer side or face of the fan a perforated deflector-plate 11, which also forms a grain screen or grate. This perforated deflector-plate 11, which is circular in form, is secured concentric with the shaft 6 upon the outer edges of the blades 9 of the fan, so that as the straw is drawn into the fan-casing by the blast of the fan it will strike said perforated plate. To facilitate this separation of the loose grain and also to facilitate the discharge of the straw from the casing, the deflector-plate 11 is preferably formed in two parts—an inner concavo-convex disk 12 and an outer ring or annular plate 13. The inner disk 12 has its convex face extending inwardly, as shown in Fig. 3 of the drawings, so as to admit of a more free delivery from the center. The said grain-screen 10 extends partially around the blast-fan and is spaced from the bottom and sides of the fan-casing, so as to form a grain-receiving space 14, into which the grain falls after passing through the screens or grates 10 and 11. The grain may be discharged from this space 14 in any desired manner; but I preferably provide the same at its inner end with a discharge-pipe 15, through which the grain is forced by a blast from the fan 5. The pipe 15 may lead to any desired part of the grain-separator or to a suitable point of discharge.

In order to prevent the space between the outer face of the deflector-plate 11 and the inner face of the adjacent wall of the fan-cas-

ing from becoming choked and also to assist the blast through the grain-discharge pipe 15. I provide upon the outer face of said plate 11 a series of radially-extending blades or wings 5 16 which, as shown, are in the form of angle metal bars or rods.

From the foregoing description, taken in connection with the accompanying drawings, the construction and operation of the invention will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

20 1. A straw-stacker comprising a casing having an inlet and a discharge, a rotary fan in said casing, said fan having an apertured deflector-plate for separating grain from the straw discharged into said casing, and a screen 25 in said casing partially around said fan, substantially as described.

2. A straw-stacker comprising a casing having an inlet and a discharge, a rotary fan in said casing, said fan having an apertured deflector-plate for separating grain from the 30 straw discharged into said casing and having

a substantially conical projecting central portion, and a screen in said casing partially surrounding said fan, substantially as described.

3. A straw-stacker comprising a casing having an inlet and an outlet, a shaft extending through said casing, curved fan-blades upon said shaft, an apertured deflector-plate upon said shaft at one side of said fan-blades, said plate having a centrally-disposed, inwardly-extending convex portion, substantially as described.

4. A pneumatic straw-stacker comprising a casing having an inlet and a discharge, a shaft extending through said casing, a fan upon said shaft within said casing, a screen partially surrounding said fan and spaced from the interior of said casing, a grain-discharge pipe for the space between said screen and said casing, a perforated deflector-plate secured to one side of said fan and having a centrally-disposed, inwardly-projecting, convex portion, and radially-extending blades upon the outer face of said deflector-plate, substantially as described and for the purpose set forth.

In witness whereof I have hereunto set my hand in presence of two subscribing witnesses.

JOSIAH FAHRNEY.

Witnesses:

E. B. FAHRNEY,
S. W. CUNNINGHAM.