

No. 749,574.

PATENTED JAN. 12, 1904.

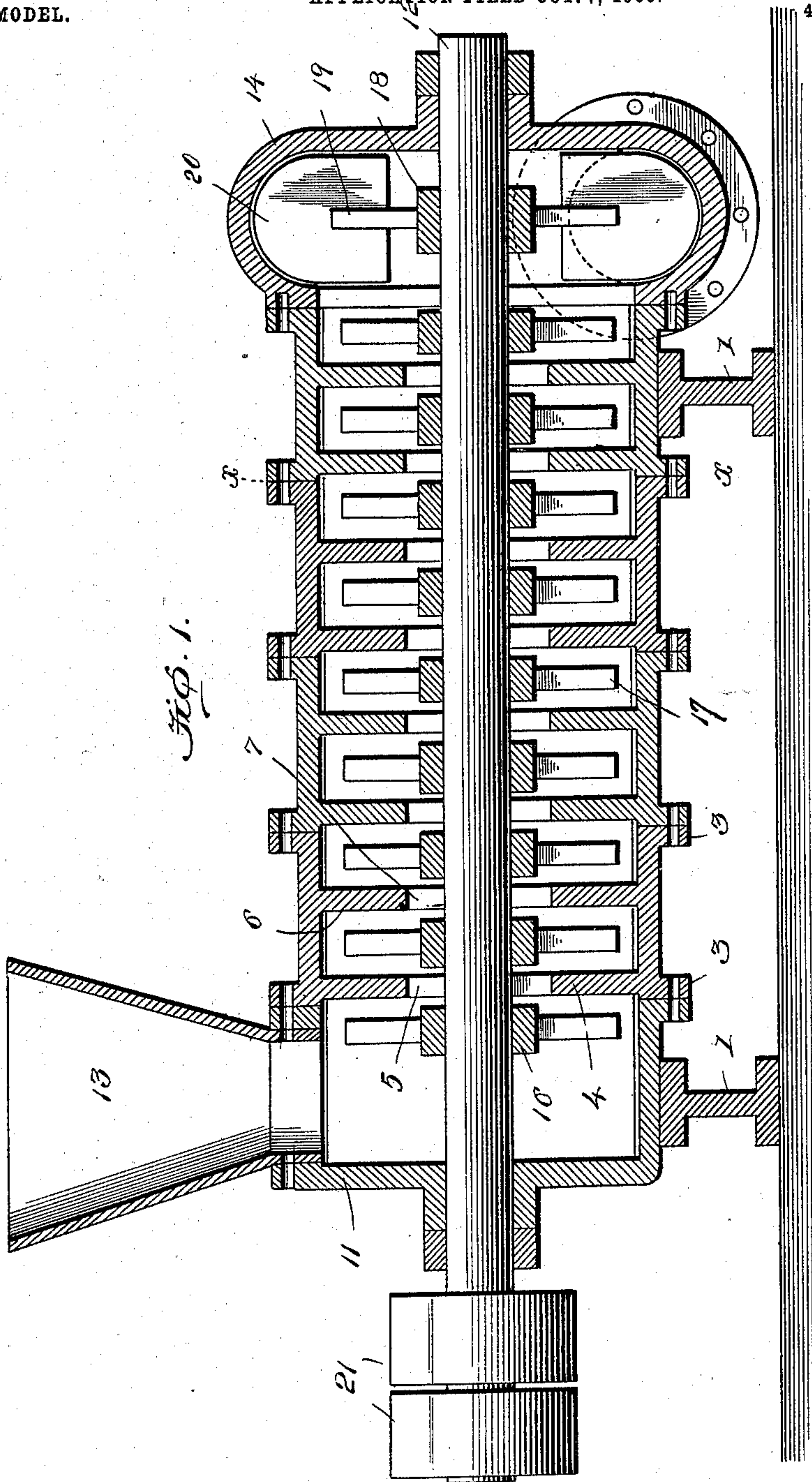
J. G. McAULEY, DEC'D.
M. W. McAULEY, ADMINISTRATRIX.

PULVERIZER.

APPLICATION FILED OCT. 7, 1900.

NO MODEL.

4 SHEETS—SHEET 1.



Witnesses

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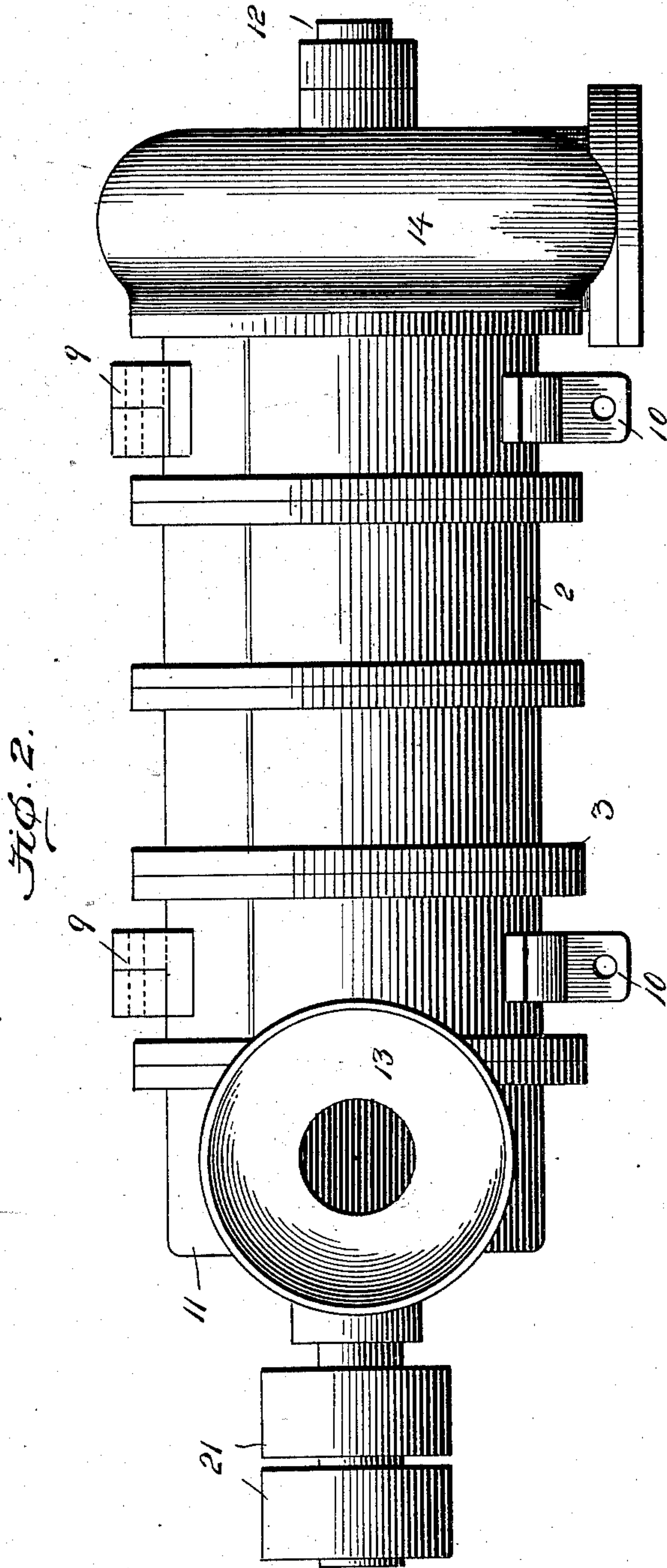
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4 SHEETS—SHEET 2.



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4 SHEETS—SHEET 3.

Fig. 4.

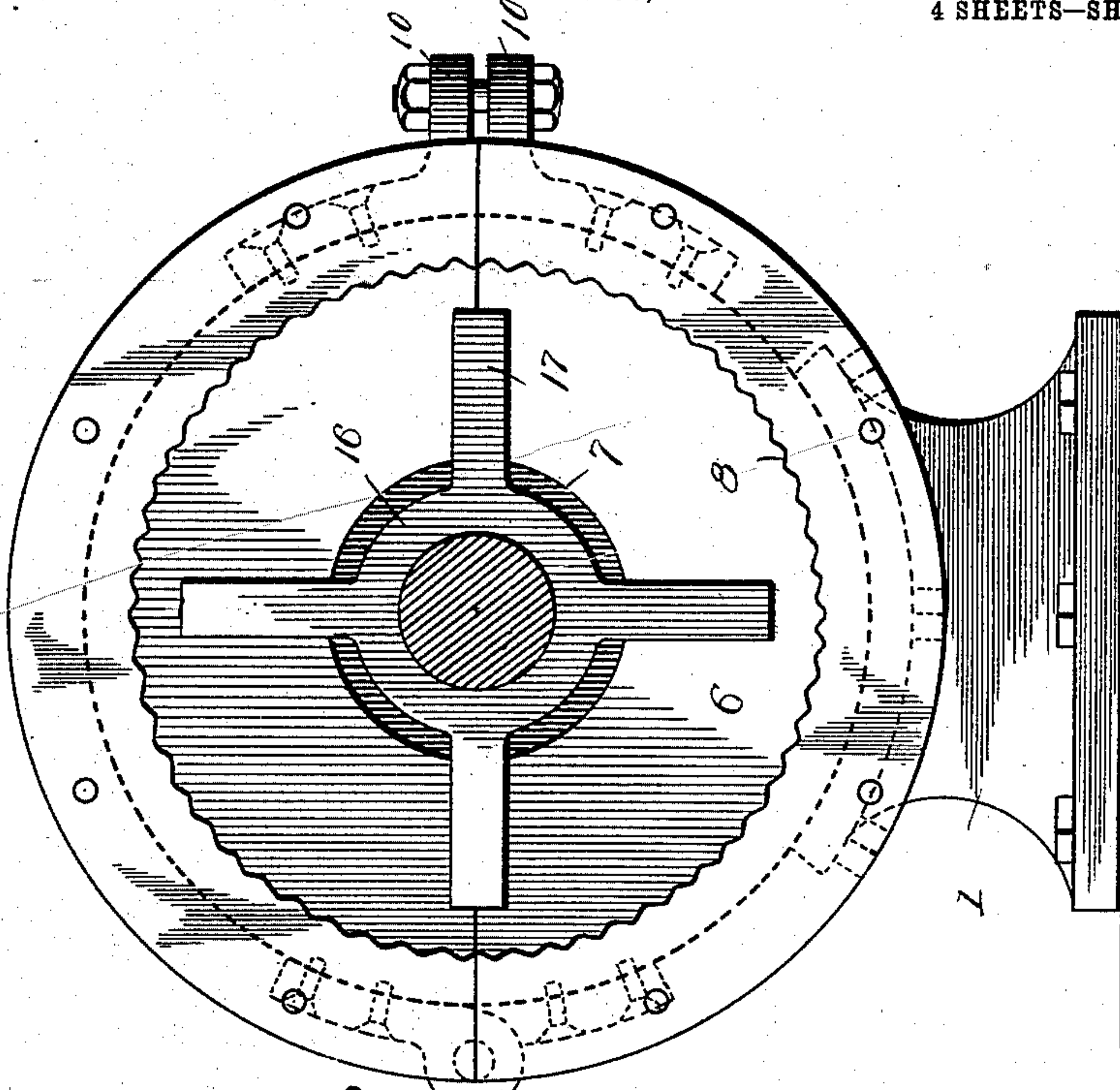
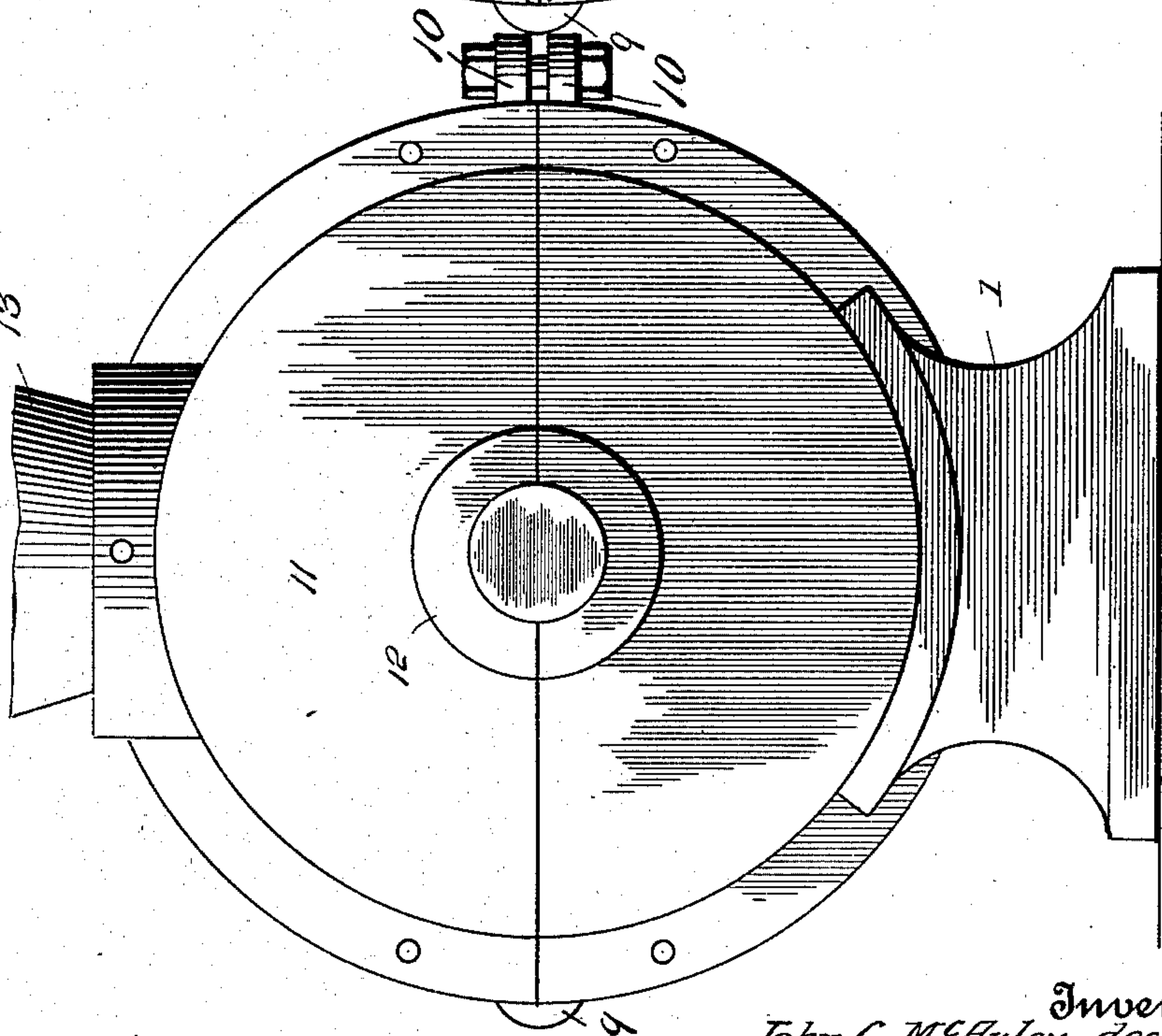


Fig. 5.



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4 SHEETS—SHEET 4.

Fig. 5.

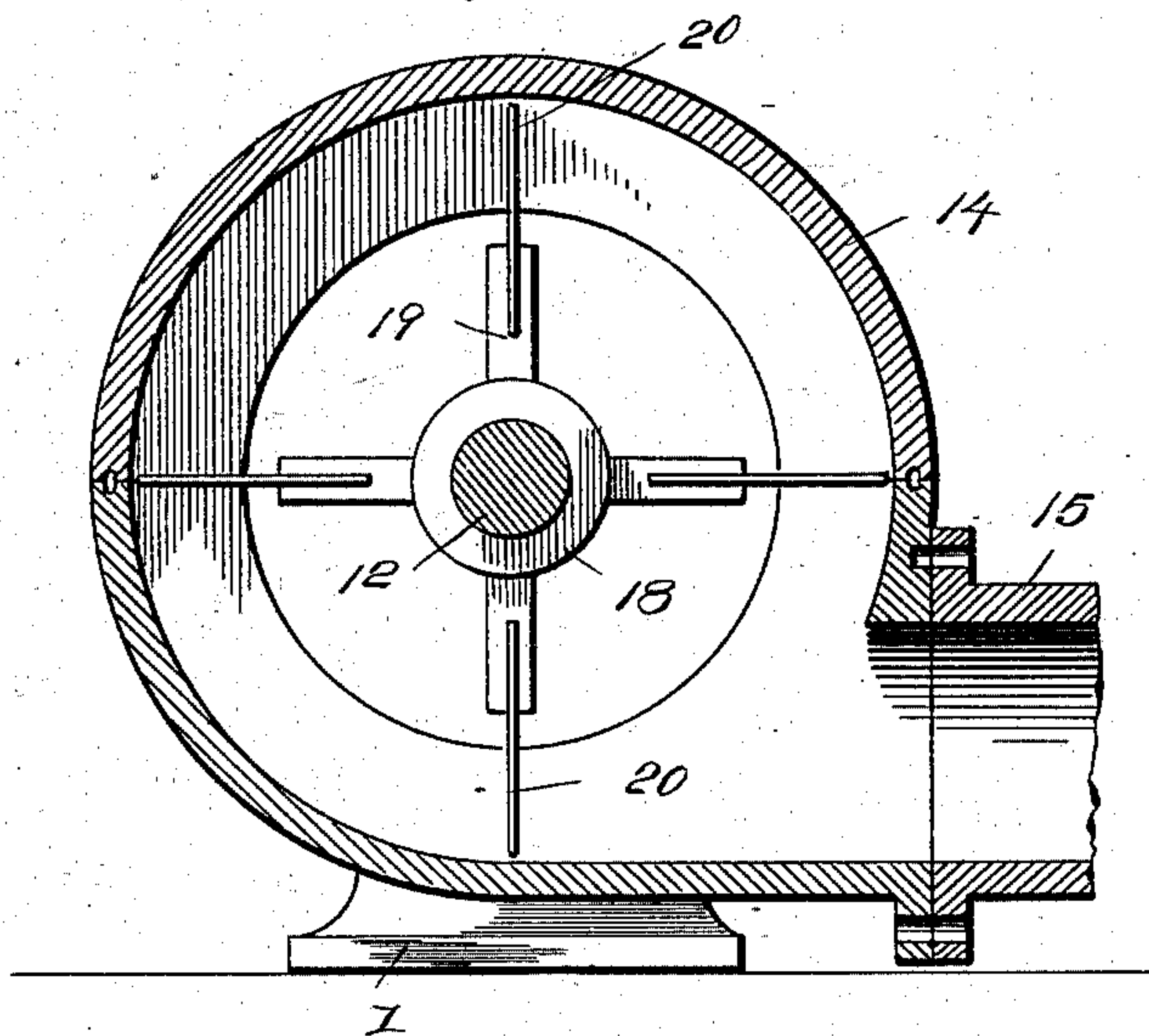


Fig. 6.

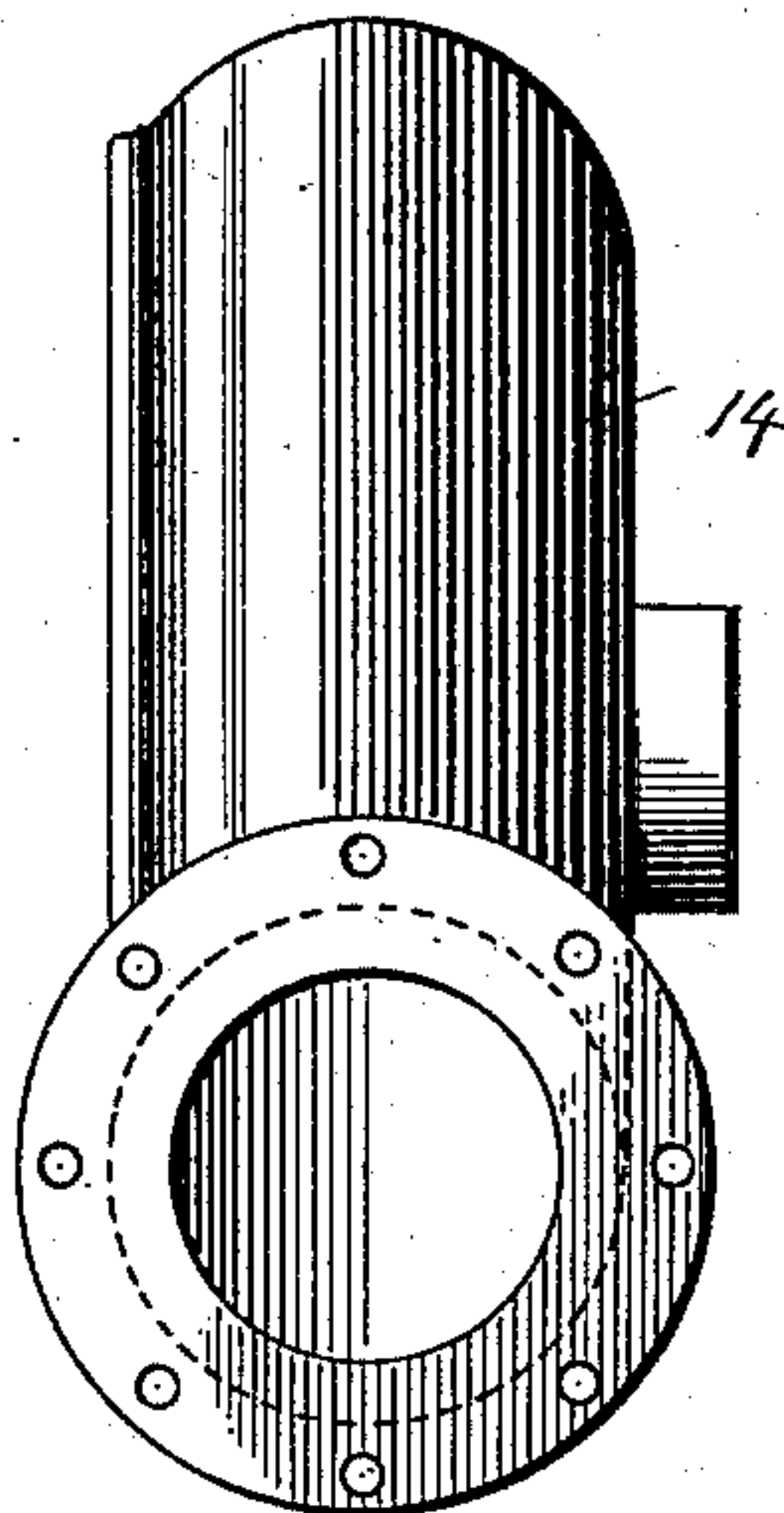


Fig. 7.

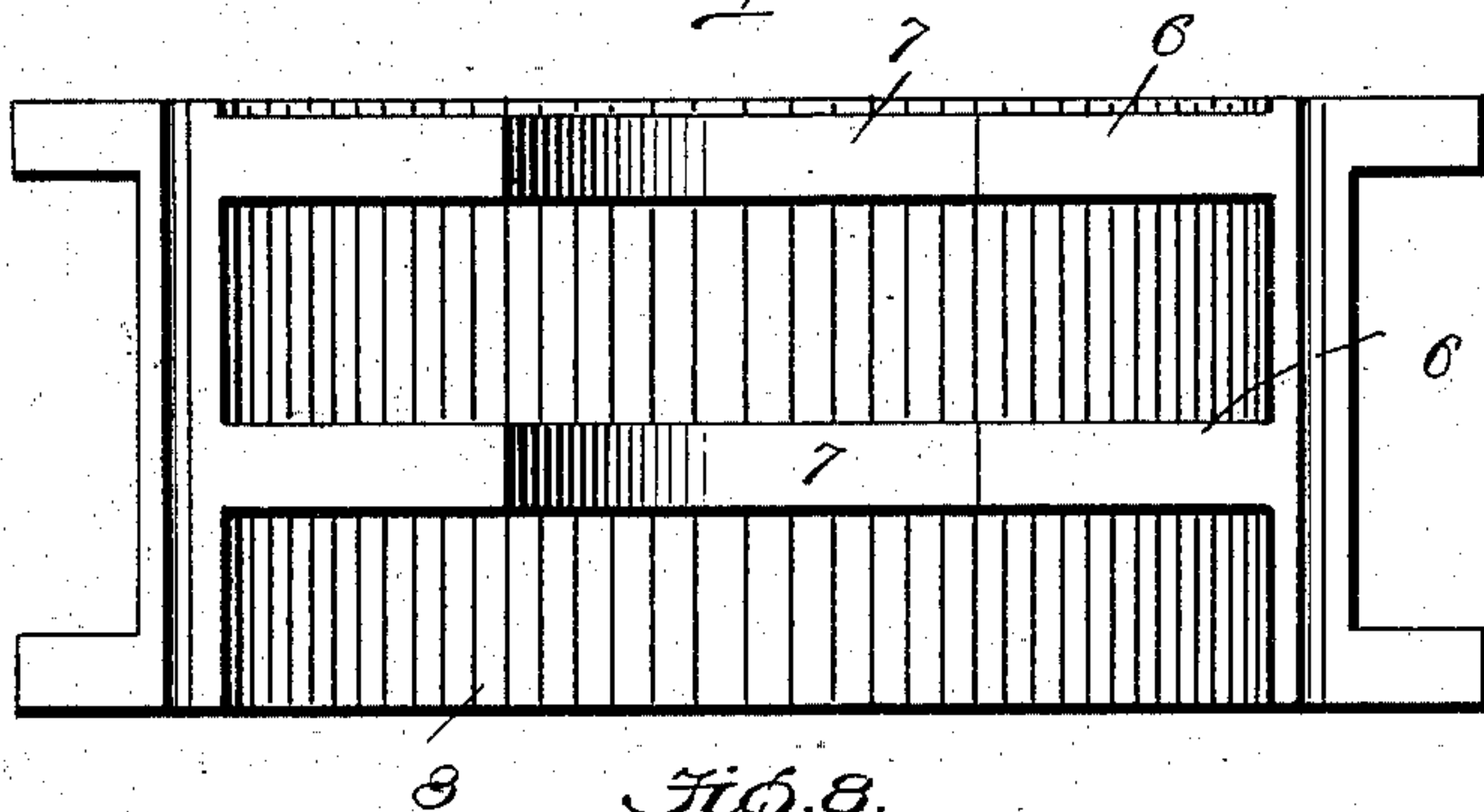
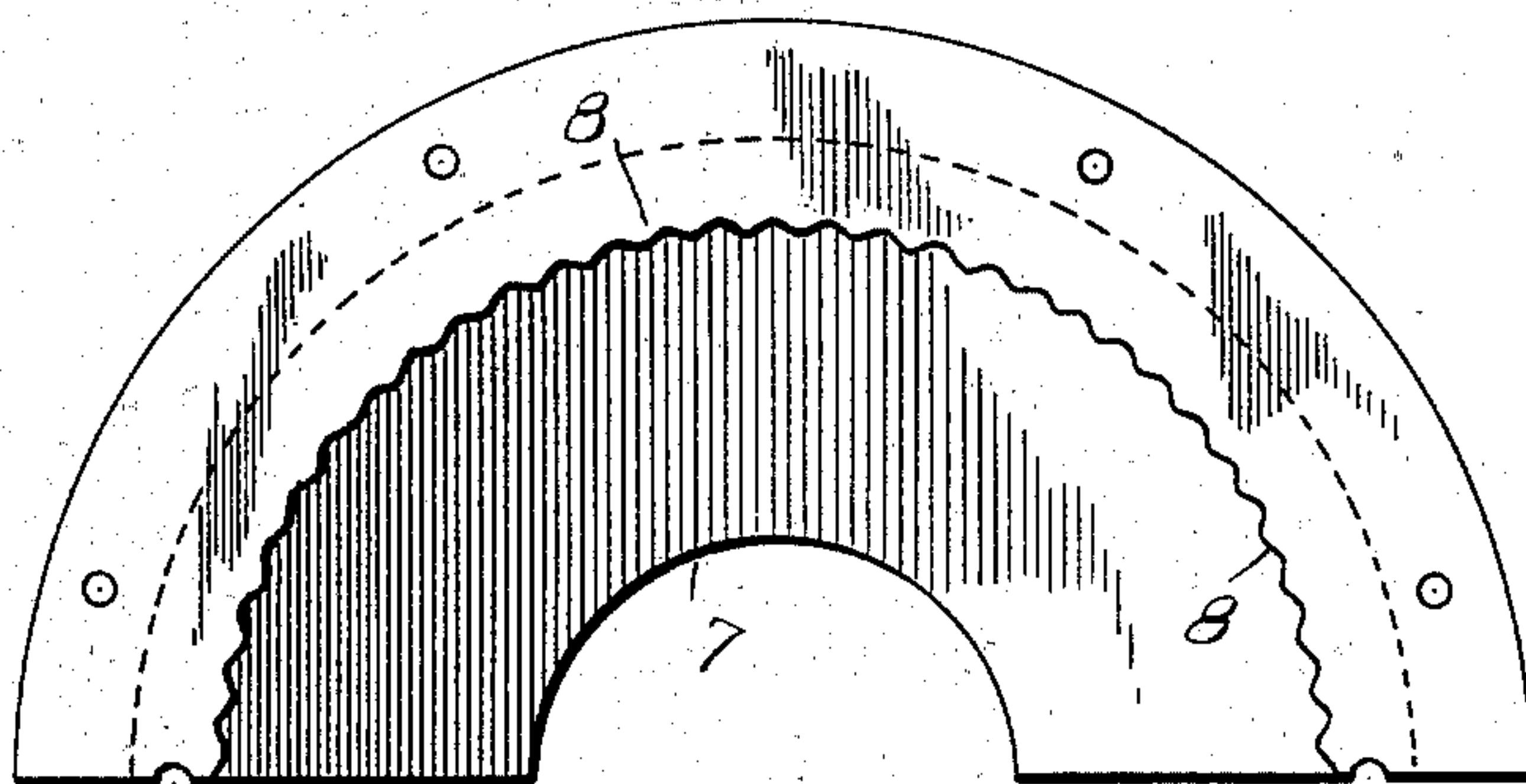


Fig. 8.



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UNITED STATES PATENT OFFICE.

MARY W. McAULEY, OF LANSING, MICHIGAN, ADMINISTRATRIX OF JOHN G. McAULEY, DECEASED.

PULVERIZER.

SPECIFICATION forming part of Letters Patent No. 749,574, dated January 12, 1904.

Application filed October 7, 1900. Serial No. 32,284. (No model.)

To all whom it may concern:

Be it known that JOHN G. McAULEY, deceased, late a citizen of the United States, residing at Lansing, in the county of Ingham and State of Michigan, invented certain new and useful Improvements in Pulverizers, of which the following is a specification.

This invention relates to new and useful improvements in pulverizers, especially adapted for reducing coal or other combustible material to an impalpable powder and discharging the same into the fire-box of a boiler or other combustion-chamber.

The primary object of the device is to provide a device of simple construction having means whereby the material may be quickly ground and mixed with air, said mixture being discharged by means of a fan.

The invention consists in the construction and arrangement of parts as will be hereinafter described, and particularly pointed out in the claim.

Means are provided for feeding material into the casing at the end farthest removed from the fan.

The invention also consists in the further novel construction and combination of parts hereinafter more fully described and claimed, and illustrated in the accompanying drawings, showing the preferred form of the invention, and in which—

Figure 1 is a vertical longitudinal section through the device. Fig. 2 is a top plan view. Fig. 3 is an end view. Fig. 4 is an elevation on line *x x*, Fig. 1. Fig. 5 is a section through the fan-casing. Fig. 6 is a side view thereof. Fig. 7 is an interior view of one of the sections of a casting, and Fig. 8 is an elevation thereof.

Referring to the figures by numerals of reference, 1 1 are supports or standards which are bolted or otherwise secured to the casing of the device. This casing comprises a suitable number of similar cylindrical castings 2 of a desired length and diameter and having annular flanges 3 extending outward from each edge thereof. Each casting is closed at one end, as at 4, with the exception of a circular aperture 5 in the center thereof, and a partition 6 is arranged within each casting, at

the center thereof, and is provided with an aperture 7, similar in size to the aperture 5, before referred to. Each of the castings is formed of two semicylindrical portions, such as shown in Figs. 7 and 8, and the inner surfaces thereof are corrugated longitudinally, as at 8. The castings 2 are secured together preferably by means of bolts passing through the flanges 3, and the hinges 9 are secured to the upper and lower portions of the casings to permit the same to be opened. Ears 10 are arranged at the opposite edges and are adapted to permit the casing to be locked in closed position, as shown in Fig. 4.

To one of the end castings 2 is secured a larger casting 11, the closed end of which serves as a bearing for a shaft 12. This casting is also formed in two pieces, and a hopper 13 opens into the top thereof. The shaft 12 extends through each of the apertures 5 and bears at its opposite end in the closed side of a casting 14, formed of two parts and secured to the other end casting 2. A cylindrical outlet 15 extends from this casting at the bottom thereof, as shown.

Secured to the shaft within the casting 11 and between the partitions 6 are collars 16, from which extend, preferably, four arms 17, the ends of which are adjacent to the corrugated surface of the casing.

A collar 18 is secured to the shaft within the casting 14, and the arms 19, extending therefrom, are provided with fan-blades 20, as shown.

Coal in any condition and character is fed into the machine through hopper 13 and power is applied to the shaft 12 through pulleys 21. As the shaft revolves the beaters will pulverize the coal upon the corrugated surfaces and the suction created by the fan 20 will draw the particles through the apertures 7 from one casting to the other, said particles being ground finer in each successive casting. The powdered material is finally discharged through the outlet 15.

In the foregoing description is shown the preferred form of the invention; but it is not limited thereto, as modifications may be made therein without departing from the spirit or

sacrificing the advantages thereof, and therefore the right is reserved to make all such changes as fairly fall within the scope of the invention.

5 Having thus fully described the invention, what is claimed as new, and desired to be secured by Letters Patent, is—

10 In a pulverizer, a sectional cylindrical casing made up of separable flanged sections comprising a receiving-end section, an exhaust-end section, and a series of intermediate sections with internally-corrugated rims divided

by centrally - apertured partitions to form a plurality of beater-chambers in each intermediate section; beaters mounted on a central shaft and turning in said chambers and an exhaust-fan driven by the same shaft in the exhaust-end section. 15

In testimony whereof I affix my signature in presence of two witnesses.

MARY W. McAULEY.

Witnesses:

ROBERT P. HUDSON,
A. M. STARMONT.