

No. 704,906.

Patented July 15, 1902.

W. H. McWILLIAMS.
WIND STACKER.

(Application filed June 24, 1901.)

(No Model.)

2 Sheets—Sheet 1

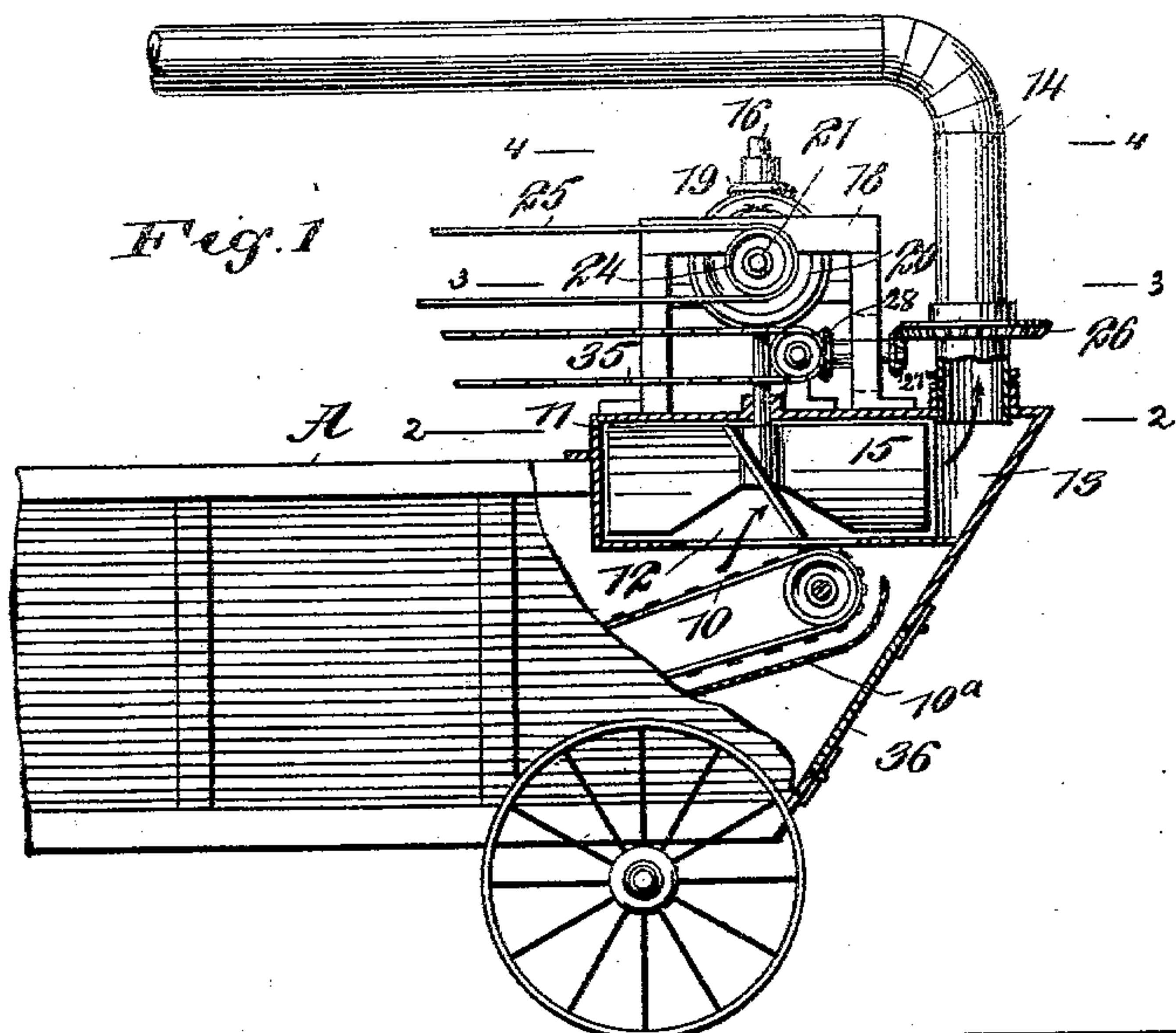


Fig. 2

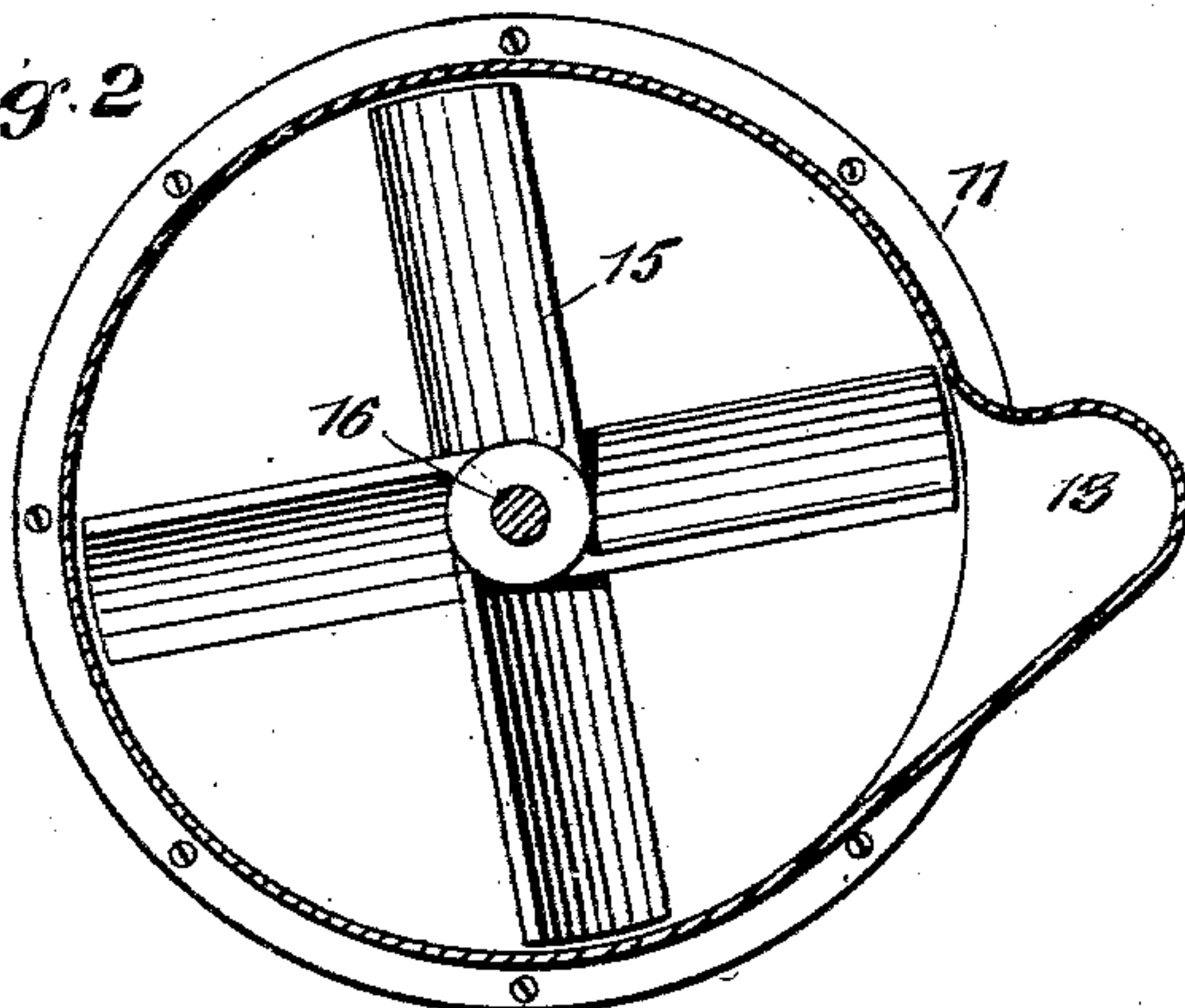
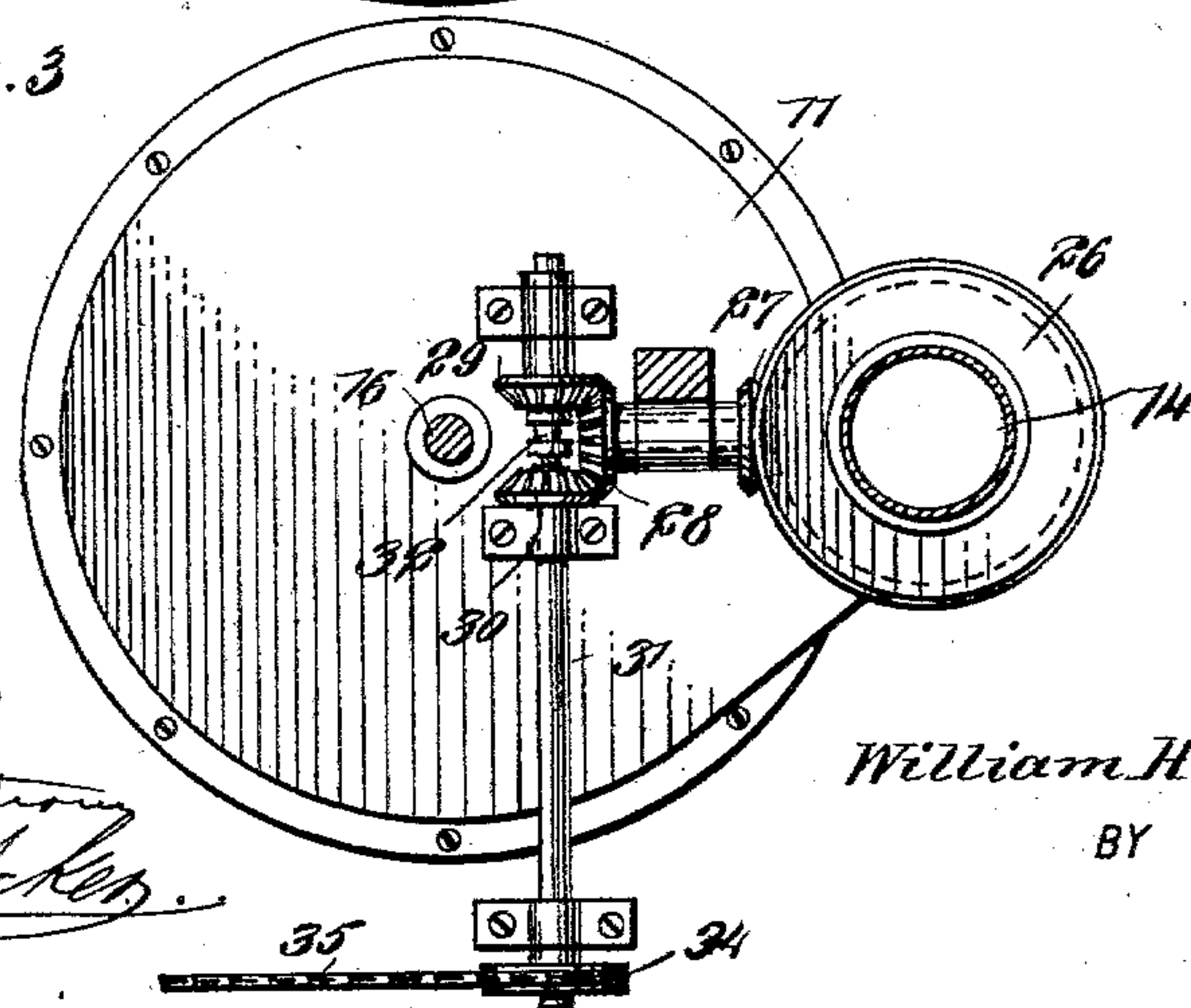


Fig. 3



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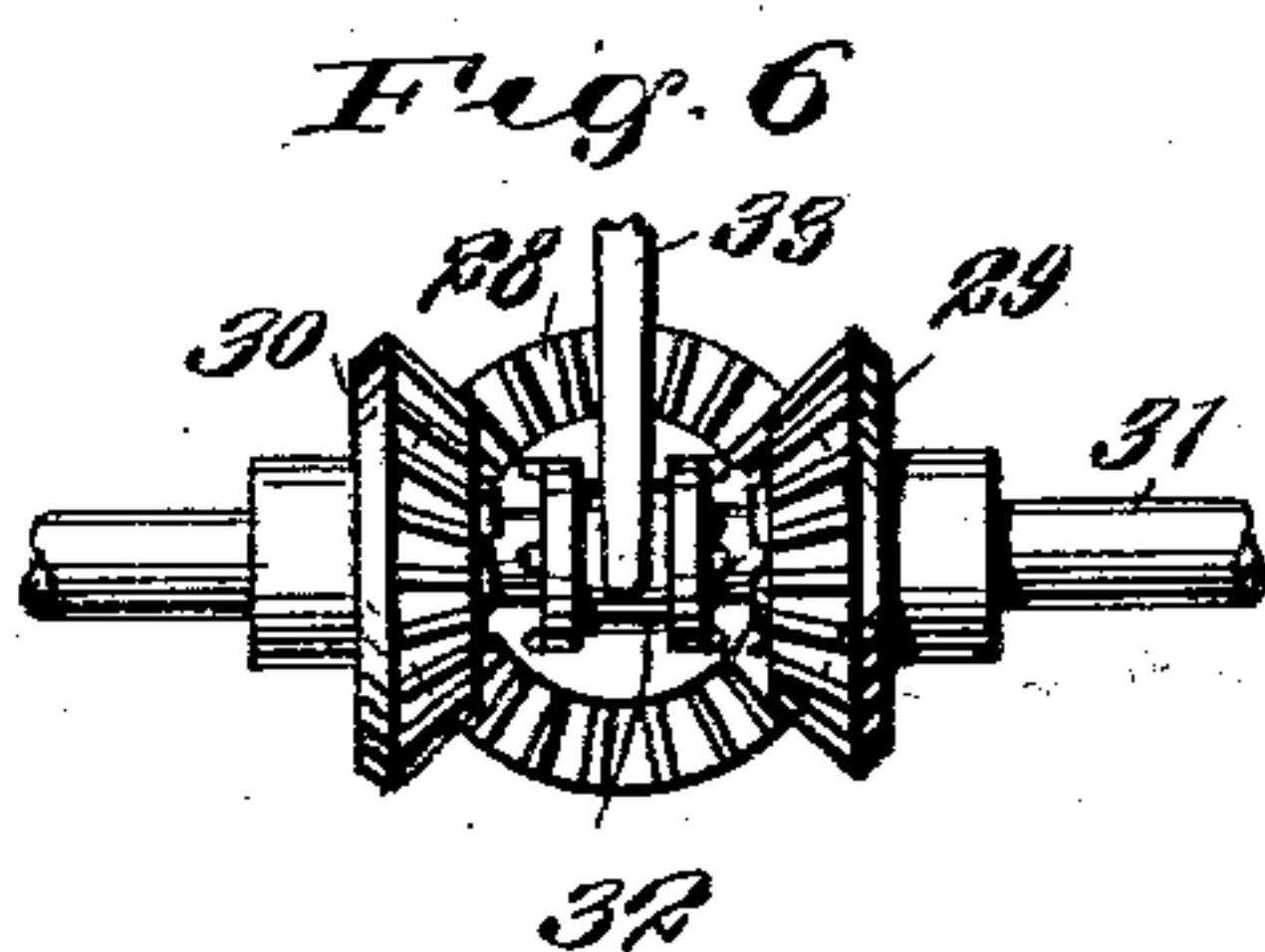
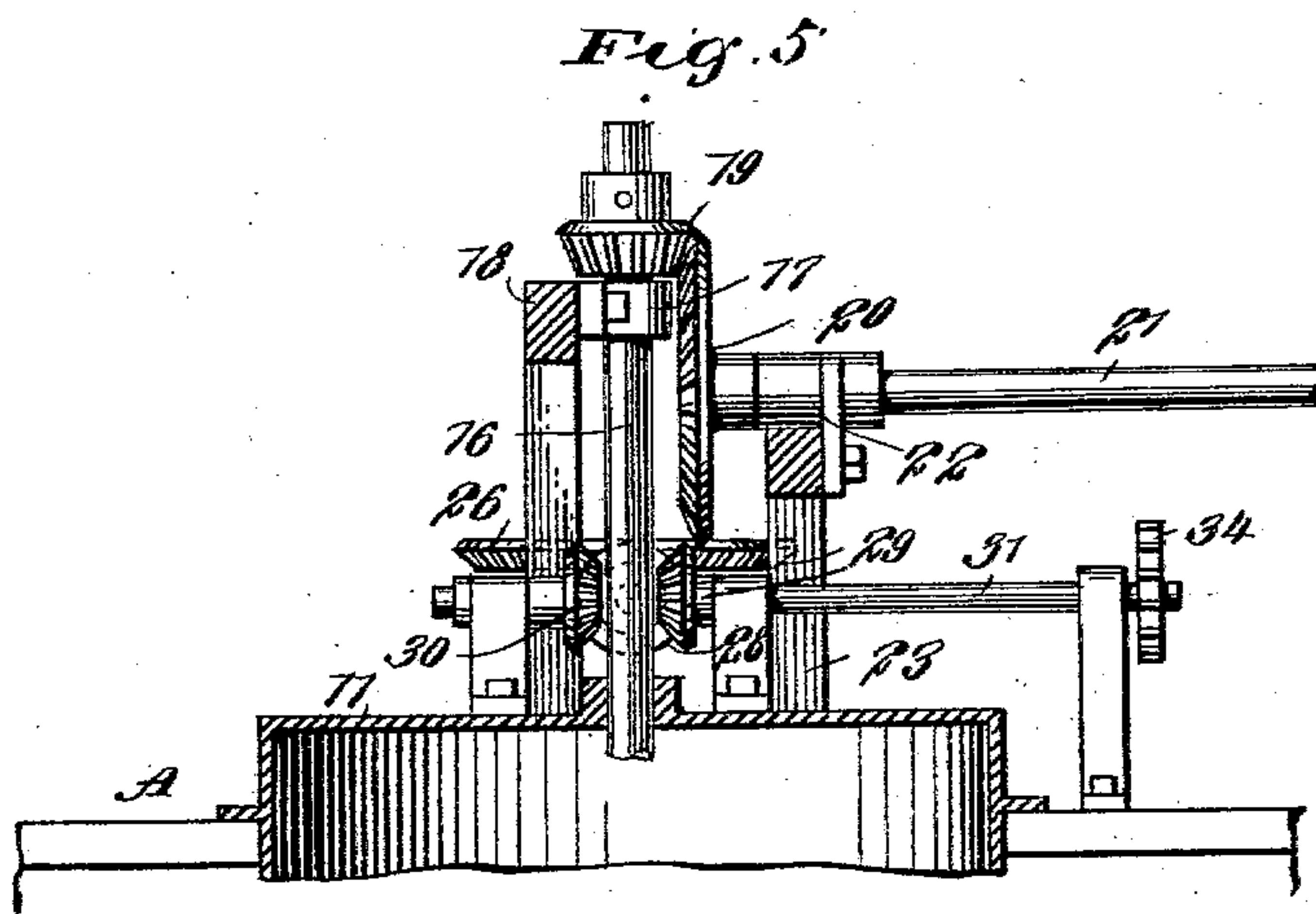
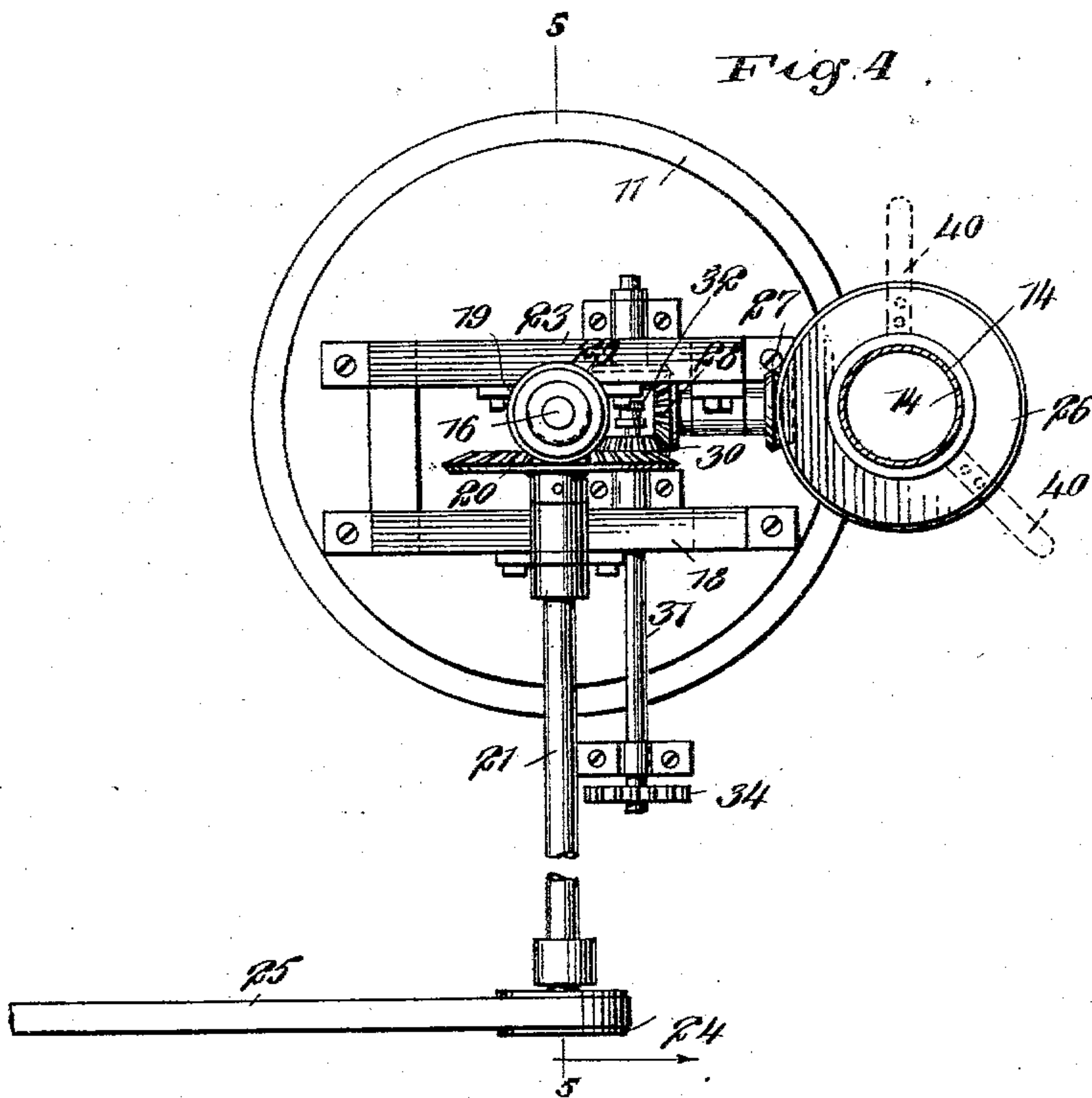
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2 Sheets—Sheet 2.



WITNESSES:

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UNITED STATES PATENT OFFICE.

WILLIAM HARVY McWILLIAMS, OF WATONGA, OKLAHOMA TERRITORY.

WIND-STACKER.

SPECIFICATION forming part of Letters Patent No. 704,906, dated July 15, 1902.

Application filed June 24, 1901. Serial No. 65,845. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM HARVY McWILLIAMS, a citizen of the United States, and a resident of Watonga, in the county of Blaine and Territory of Oklahoma, have invented a new and Improved Wind-Stacker, of which the following is a full, clear, and exact description.

The purpose of the invention is to provide a wind-stacking attachment to threshing and similar machines, so constructed that the fan, which is a suction-fan, is located at the upper portion of the rear part of the body of the machine at a point above the conveyer-belt adapted to carry up straw and to so locate the fan relative to the conveyer that the straw will be stacked up by the fan, the straw passing through the casing in which the fan revolves to a stacking-tube, while the grain, which is heavier than the straw, will drop from the conveyer to a conductor and be directed to the riddles, thus providing a convenient means for removing the straw and a means which will cause the least possible waste of grain.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claim.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of the rear portion of a threshing-machine with the attachment applied, parts of the attachment and parts of the machine being in section. Fig. 2 is a horizontal section taken practically on the line 2 2 of Fig. 1. Fig. 3 is a horizontal section taken substantially on the line 3 3 of Fig. 1. Fig. 4 is a horizontal section taken substantially on the line 4 4 of Fig. 1. Fig. 5 is a vertical section taken substantially on the line 5 5 of Fig. 4, and Fig. 6 is a detail view of a portion of the gearing used to operate the stacking-tube.

A represents the body of a threshing-machine, which is provided with a casing 11 at the top portion of its rear end. This casing is over a conveyer 10, which inclines from the front bottom portion of the casing upward and rearward, and beneath the conveyer 10

a shield 10^a is located, which curves up at the rear of the conveyer. This shield is adapted to receive the grain and conduct the same to the riddles of the machine. The casing 11 may be made removable and is provided with an opening 12 in its bottom and with a side opening 13, which latter opening is in communication with a stacking-tube 14, which stacking-tube may be of any suitable construction and is mounted to turn at its bottom portion.

A suction-fan 15 is located in the casing 11, and the blades of this fan, as shown in Figs. 1 and 2, are more or less inclined, being at more or less of an acute angle to the hub of the fan. The lower central portions of the blades are cut away to a greater or less extent over the opening 12, so as to permit the straw to be sucked up from the body of the machine by the fan and conduct it out through the outlet-opening 13 to the stacking-tube 14. The fan is secured to a shaft 16, and this shaft extends upward from the central portion of the casing 11, as is shown in Fig. 5, and is journaled at its upper end in a suitable bearing 17, secured to a frame 18, carried by the casing. A bevel-pinion 19 is secured to the upper end of the shaft 16, and this bevel-pinion meshes with a bevel-gear 20, the gear being secured to the inner end of a drive-shaft 21, mounted in bearings 22, secured to a second frame 23, which is also supported by the casing 11, as is shown in Fig. 5. The shaft 21 carries a pulley 24 at its outer end, which is connected by a belt 25 with any nearby source of power.

At the bottom portion of the stacking-tube 14 a bevel-gear 26 is secured. This stacking-tube is adapted to have motion alternately from right to left and from left to right, and the gearing usually employed to accomplish this end is that shown in the drawings, which gearing consists of a bevel-pinion 27, meshing with the gear 26, and this pinion 27 is secured to a shaft mounted in suitable bearings on the frame 23, as shown in Fig. 4, and a bevel-pinion 28 is secured at the inner end of this shaft. A second shaft 31 is journaled in bearings attached to the two frames 18 and 23, and this shaft 31, which is also a drive-shaft, has two pinions 29 and 30 loosely mounted thereon, both of which pinions engage with

the inner pinion 28 of the short shaft connected with the stacking-tube.

A double clutch 32 is mounted to slide upon the drive-shaft 31 and turn therewith, the clutch being located between the pinions 29 and 30, as shown in Fig. 6, and the clutch is alternately brought to engagement with one or the other of the pinions 29 and 30 through the medium of a shifting-lever 33, operated in any suitable or approved manner. The shaft 31 is provided at its outer end preferably with a sprocket-wheel 34, connected by a chain belt 35 with any source of power.

When the fan 15 is located, as above described, at the upper portion of the body A of the machine, a door 36 may be located at the rear of the machine, enabling a person to readily reach the riddles and adjust the same.

The lever 33 is moved to operate the clutch (shown in Fig. 6) usually through the medium of arms 40, preferably adjustably connected to the gear 26 on the stacking-tube 14. As these arms are brought alternately in engagement with the lever 33 said lever is carried first to one side and then to the other, causing the stacking-tube to swing from right to left and then from left to right, and vice versa.

In operation the fan 15 sucks up the straw and forces the straw into the stacking-tube, while the grain, which is carried up by the

conveyer, drops over the rear thereof into the shield or chute 10^a and is conducted to the riddles, where it is treated in the ordinary way.

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

A wind-stacker for threshing-machines, comprising a conveyer for carrying mixed grain and straw, a fan for separating said grain from said straw, a vertical shaft for supporting said fan, a substantially cylindrical casing surrounding said fan, a revoluble member journaled upon said casing and provided with gear-wheels, a pair of gear-wheels mounted upon said casing and operatively connected with said revoluble member, said gear-wheels being disposed oppositely to each other and upon opposite sides of said shaft supporting said fan, a cylindrical stacking-tube, an annular bevel-gear rigidly secured thereto and meshing with one of the gear-wheels upon said revoluble member, a clutch, and a lever for actuating said clutch.

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

WILLIAM HARVY McWILLIAMS.

Witnesses:

JOSEPH McWILLIAMS,
JAMES McWILLIAMS.