No. 772,507. PATENTED OCT. 18, 1904.

G. W. GLASSFORD.

DUST COLLECTOR.

APPLICATION FILED MAY 9, 1904.

NO MODEL. 2 SHEETS—SHEET 1.

Fig. 1.

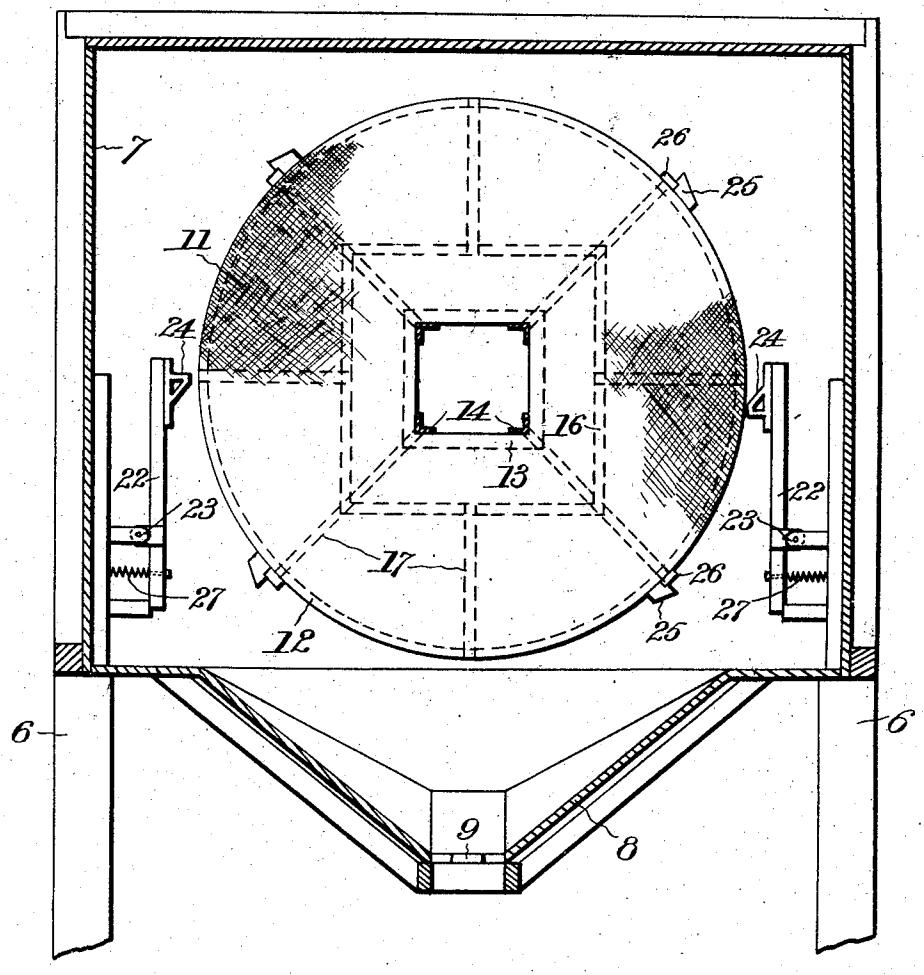
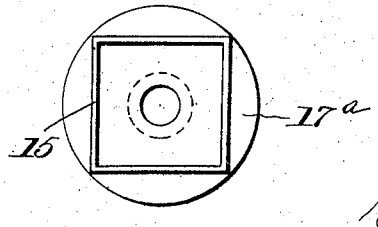


Fig. 4.



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NO MODEL. 2 SHEETS—SHEET 2.

Fig. 2.

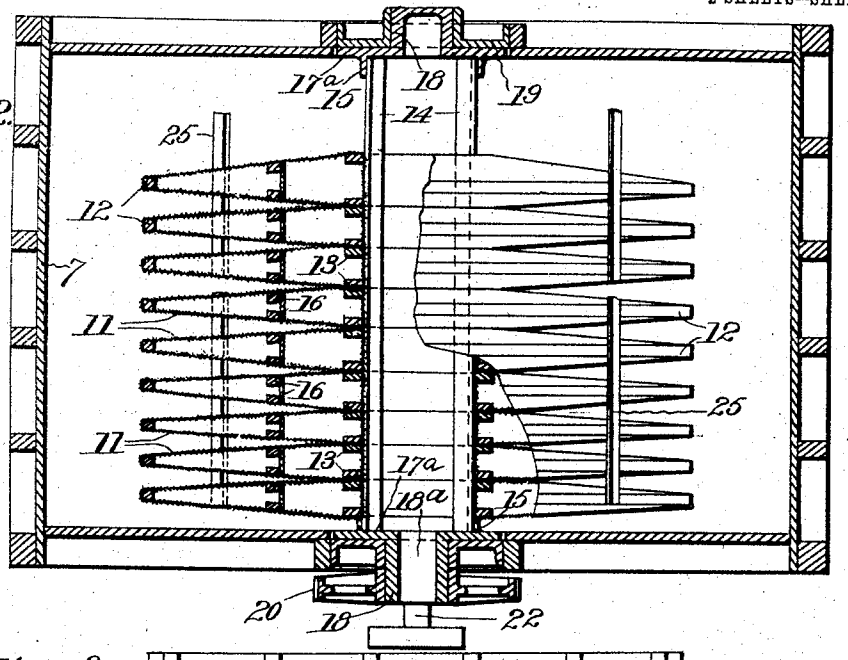
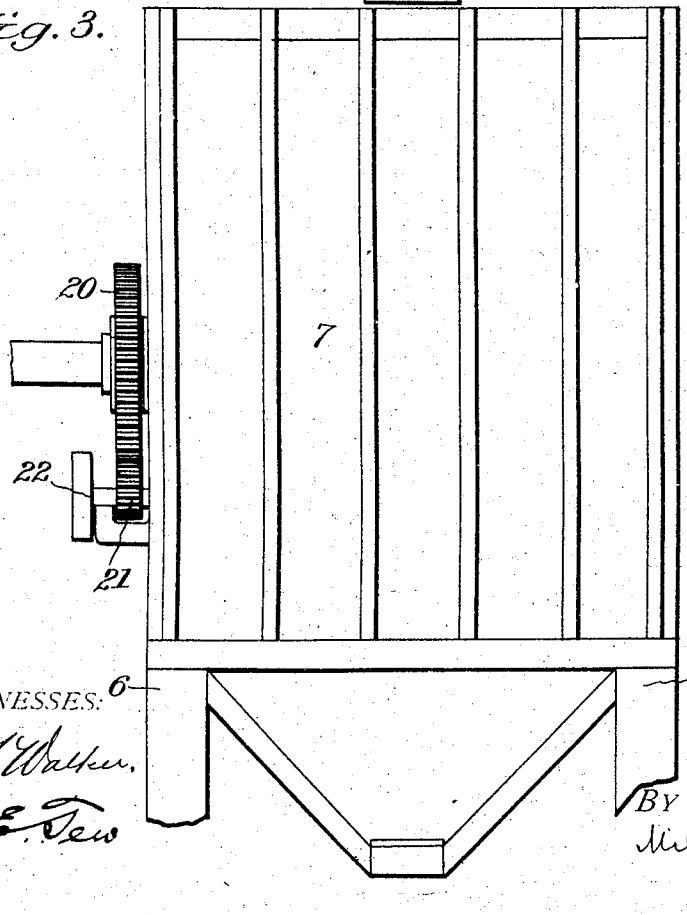


Fig. 3.



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No. 772,507. Patented October 18, 1904.

UNITED STATES PATENT OFFICE.

GEORGE W. GLASSFORD, OF CLEVELAND, OHIO.

DUST-COLLECTOR.

SPECIFICATION forming part of Letters Patent No. 772,507, dated October 18, 1904.

Application filed May 9, 1904. Serial No. 207,051. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. GLASSFORD, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented new and useful Improvements in Dust-Collectors, of which the following is a specification.

This invention relates particularly to dust-collectors of the rotary type, suitable particularly for collecting the dust from grain cleaning or purifying mills, but not limited thereto, and is characterized particularly by improvement with respect to the screens and to the mounting of the screens upon an axially-rotatable frame carried by journals, one of which is hollow to permit the exhaust therefrom.

The machine is illustrated in the accompanying drawings, wherein—

Figure 1 is an end elevation with the casing in vertical section. Fig. 2 is a horizontal section. Fig. 3 is a side elevation. Fig. 4 is a detail of one of the journal-pieces.

Referring specifically to the drawings, 6 indicates posts upon which is supported the casing 7, which contains the drum or rotary screens. The bottom of the casing is inclined to form a hopper 8, into which the dust falls and from which it may be let out as desired by means of a slide-valve 9.

10 indicates an inlet to the casing from the cleaning-mills.

The rotatable drum or battery of screens comprises a plurality of screens, the cloths of which are indicated at 11, stretched between hoops 12 and square frames 13, which fit closely over angle-irons 14, the ends of which fit the corners of rectangular flanges 15, projecting from the inside of the journal-pieces. The screens are also braced by frames (indicated at 16) which are located between the frames 13 and the hoops 12, and by spokes 17, extending radially between the said frames and the hoops. The screens are constructed singly, and as many may be fitted and placed upon the bars 14 as are desired or needed. Each screen consists of a web of cloth which is joined to the hoop at the outer edge and at the middle at each side to one of the frames 13, the frames being spaced apart to allow the passage therebetween of the air drawn through the cloths. When assembled upon the angle-bars, the frames 13 of the respective screens fit closely against each other to prevent passage of air therebetween.

The journal-pieces 17^a are circular and have on the inside the rectangular flange 15, above referred to, and on the outer side the journals proper, 18, one of which is closed and the other of which is open, as indicated at 18^a, through which opening the air may be forced or drawn. The journals are mounted in boxings 19, supported in the casing of the machine, and are rotatable therein, as will be understood. The hollow journal carries outside the casing a spur-wheel 20 in mesh with a pinion 21 on the pulley-shaft 22, whereby the journal and the battery of screens may be rotated.

To jar the screens and dislodge the dust therefrom, hammers are used. These hammers consist of levers 22, pivoted at 23 to supports on the side of the casing and having inclined heads 24, which are properly positioned to be struck by beveled trip-bars 25, which extend across between and are fixed to the hoops 12 at suitable distances apart. Just behind the bars 25 are bars 26, which extend likewise across the hoops and which receive the stroke of the hammers. The springs 27, connected between the hammers and the casing, serve to give the stroke as the hammer-heads trip over the bars 25. When the screens are set up, the bars 25 and 26 are fixed thereto by screws or otherwise.

The construction above described permits the convenient placing or removal of any of the screens, and it is quite immaterial how many screens be used. It will be understood that if a less number of screens is used than is necessary to fill the space between the journal-pieces a boxing or cloth will be placed around the uncovered portions of the bars 14, so as to close the space therebetween. The construction gives a large screen-space in proportion to the size of the machine and obviates the necessity of a partition in the casing. In case of the injury of any screen it can be removed and replaced with comparative facility and in a short space of time.

What I claim as new, and desire to secure by Letters Patent, is—

A rotary screen structure comprising, in combination, journal-pieces one of which is hollow, spaced bars extending between said pieces, and a plurality of separate screen units each of which comprises a pair of spaced frames fitting over the bars, an outer hoop, spokes extending between the frames and the hoop, and cloths stretched between the hoop and the frames, the frames of the respective units fitting closely against each other upon the bars, and connecting-bars secured to and extending across the hoops of the respective units.

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

GEORGE W. GLASSFORD.

Witnesses:

JOHN A. BOMMHARDT,

LOTTIE NEWBURN.