

No. 775,171.

PATENTED NOV. 15, 1904.

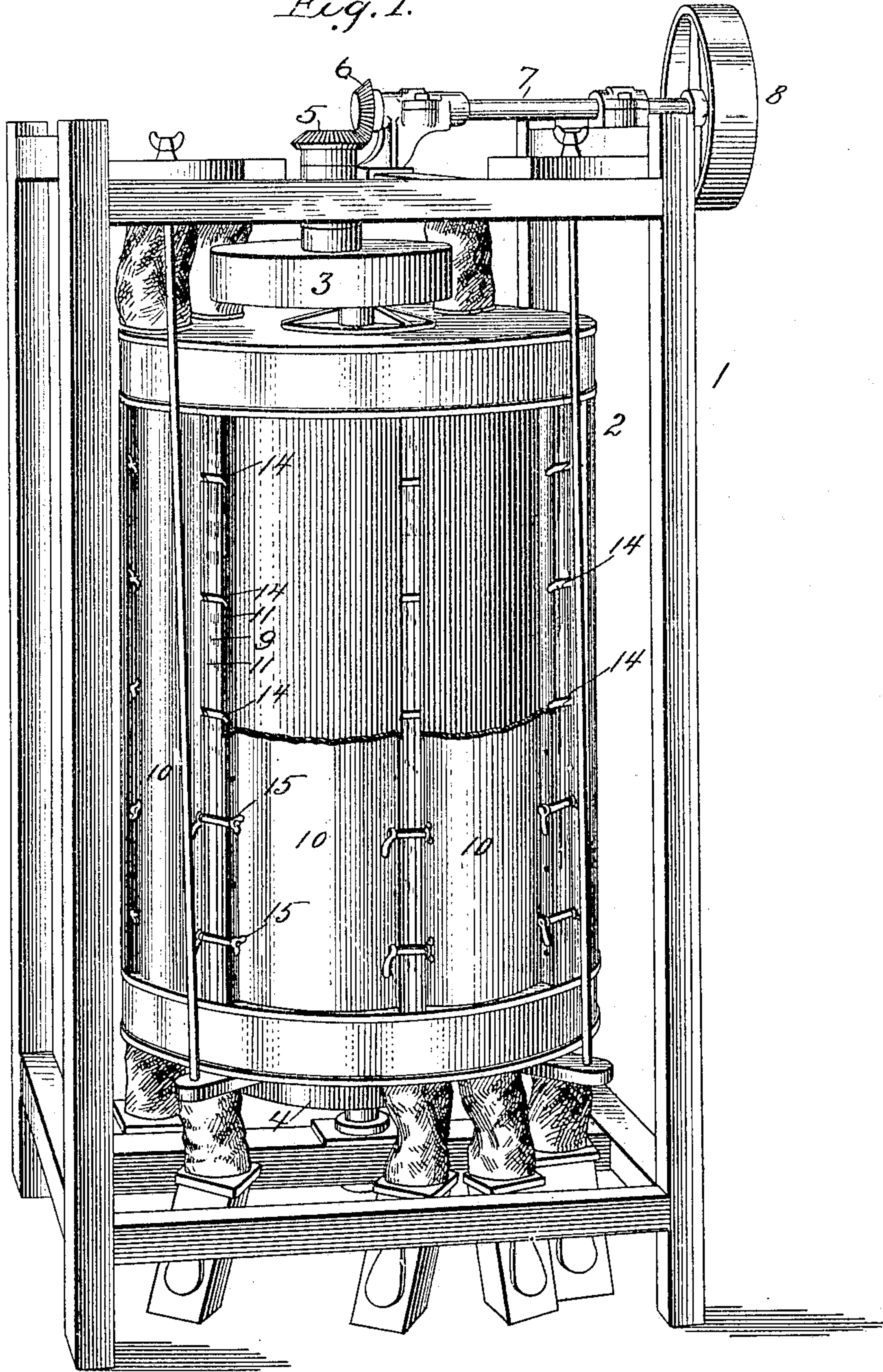
W. D. GRAY.  
FLOUR DRESSING MACHINE.

APPLICATION FILED AUG. 12, 1897.

NO MODEL.

2 SHEETS—SHEET 1.

*Fig. 1.*



Witnesses  
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D. E. Burdine

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William D. Gray,  
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Attorneys

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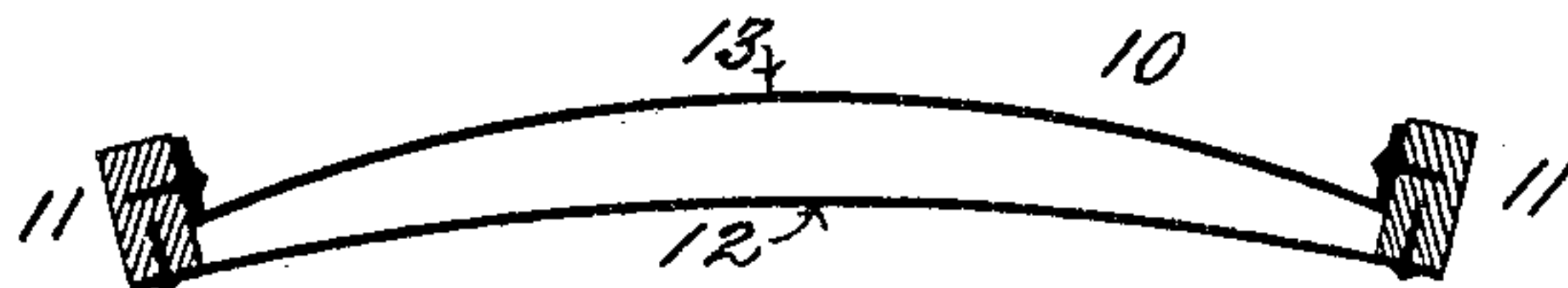
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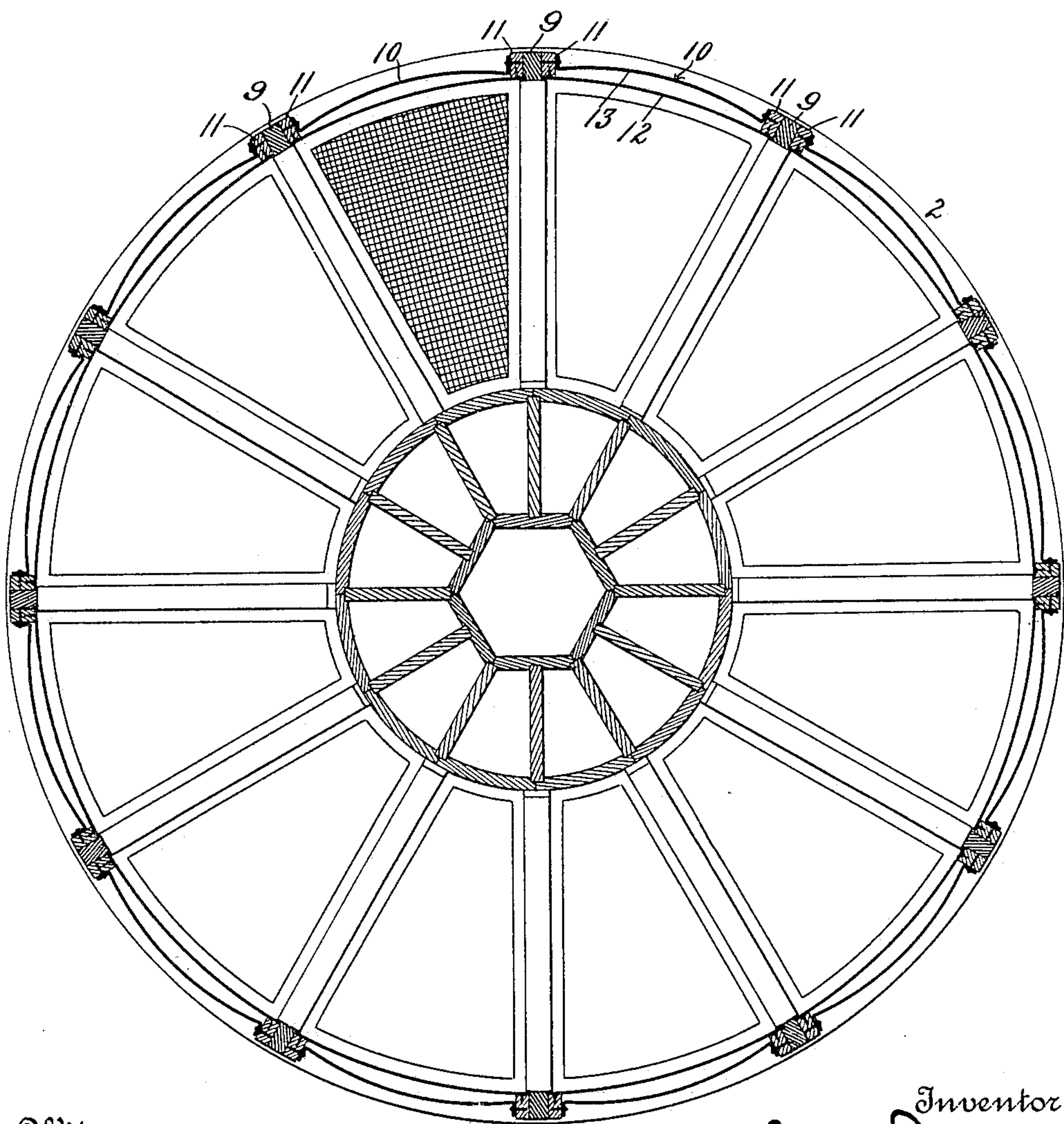
NO MODEL.

2 SHEETS—SHEET 2.

*Fig. 3*



*Fig. 2.*



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# UNITED STATES PATENT OFFICE.

WILLIAM D. GRAY, OF MILWAUKEE, WISCONSIN, ASSIGNOR, BY MESNE ASSIGNMENTS, TO ALLIS-CHALMERS COMPANY, A CORPORATION OF NEW JERSEY.

## FLOUR-DRESSING MACHINE.

SPECIFICATION forming part of Letters Patent No. 775,171, dated November 15, 1904.

Application filed August 12, 1897. Serial No. 648,013. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM D. GRAY, a citizen of the United States, residing at Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Flour-Dressing Machines, of which the following is a specification.

My invention pertains to that class of flour bolting or dressing machines in which a spiral sieve or screen or series of sieves or screens is arranged within a casing to which a circular motion is imparted in a horizontal plane, a type of such machines being represented in Letters Patent of the United States granted to me May 5, 1896, No. 559,378. In the use of machines of this type it has been found that, owing to the heat of the material as it passes to the bolt or dresser and to the heat generated by the operation of the machine, considerable moisture is given off in the form of vapor, which, encountering the walls of the metallic casing, kept cool by the surrounding air condenses and running down the walls mingles with the stock under treatment, producing a dough or paste. This in turn causes the meshes of the sieves to become clogged or filled and the frames of the sieve-sections to become coated in such way as to interfere with the proper working of the machine. The action just stated is infrequent, yet is liable to take place under certain conditions of the atmosphere, and is a matter against which it is desirable to guard. I remedy the difficulty by so constructing the outer shell or casing as to produce a double wall with a body of confined air between the inner and outer walls.

The invention is illustrated in the accompanying views, in which—

Figure 1 is a perspective view of the machine of the class mentioned, the outer shell or casing being broken away, in part, to show the inner shell; Fig. 2, a horizontal sectional view, and Fig. 3 a cross-section of one of the panels detached.

As here represented, the machine consists of an upright frame 1, in which is suspended the shell or casing 2, carried by counterbalanced

cranks or disks 3 4 at top and bottom and rotated by bevel-gearing 5 6, one of the gears or pinions being carried by a shaft 7, journaled in boxes or bearings at the top of the frame and provided with a band-wheel 8.

The shell or casing 2, as here shown, comprises the central column with the feed and discharge passages, as in my former patent, and a series of vertical posts or bars 9, between which are secured the casing-panels 10, of which one is shown detached in Fig. 3. Each panel comprises two vertical strips 11, connected by a sheet-metal plate 12, tacked, screwed, or otherwise made fast to the inner faces of the strips and of a curvature concentric with the axis of the shell or casing, and a second sheet-metal plate, 13, the edges of which are turned at an angle to form flanges by which the plate may be tacked or otherwise made fast to the proximate side faces of the strips 11. The plate 13 may be arranged parallel with the inner plate 12 or may be given a curve of shorter radius, as shown, and this is preferred, for the reason that it gives greater stiffness and support to the panels themselves, enabling them to be removed and handled without liability of buckling or twisting. It also gives greater air-space, while affording a sufficiently wide flange for the application of tacks, screws, or other fastenings.

The manner of securing the panels in place may vary; but in practice it is found convenient to provide the uprights 9 and strips 11, as also the flanges of the plates 13, with slots 14, preferably extending downward from the outer face toward the axis of the drum, as indicated in Fig. 1. Within these slots are placed clamping-bolts 15, provided with a handhold at one end and a thumb-nut at the other. These devices may be readily applied and removed and when removed will permit the sections or the panels to be lifted out to give access to the sieve within.

Other materials than sheet metal may be employed—as, for instance, papier-mâché, veneer, and the like—the essential feature being the production of a tight air-space between the inner and outer surfaces of the shell or casing.

This is of course more necessary when sheet metal is used than in the case of other thin substances, owing to the relatively greater conductivity of the metal, but is desirable in all  
5 cases.

Having thus described my invention, what I claim is—

10 In a flour-dressing machine, the combination with a sieve-frame having uprights or posts, of a series of panels each comprising two upright side bars or strips and two imperforate

sheet-metal plates connecting said strips but separated one from the other to form when in place in the frame of the machine, a confined air-space.

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

WILLIAM D. GRAY.

Witnesses:

WM. BANNEN,  
JOHN PHELPS.