

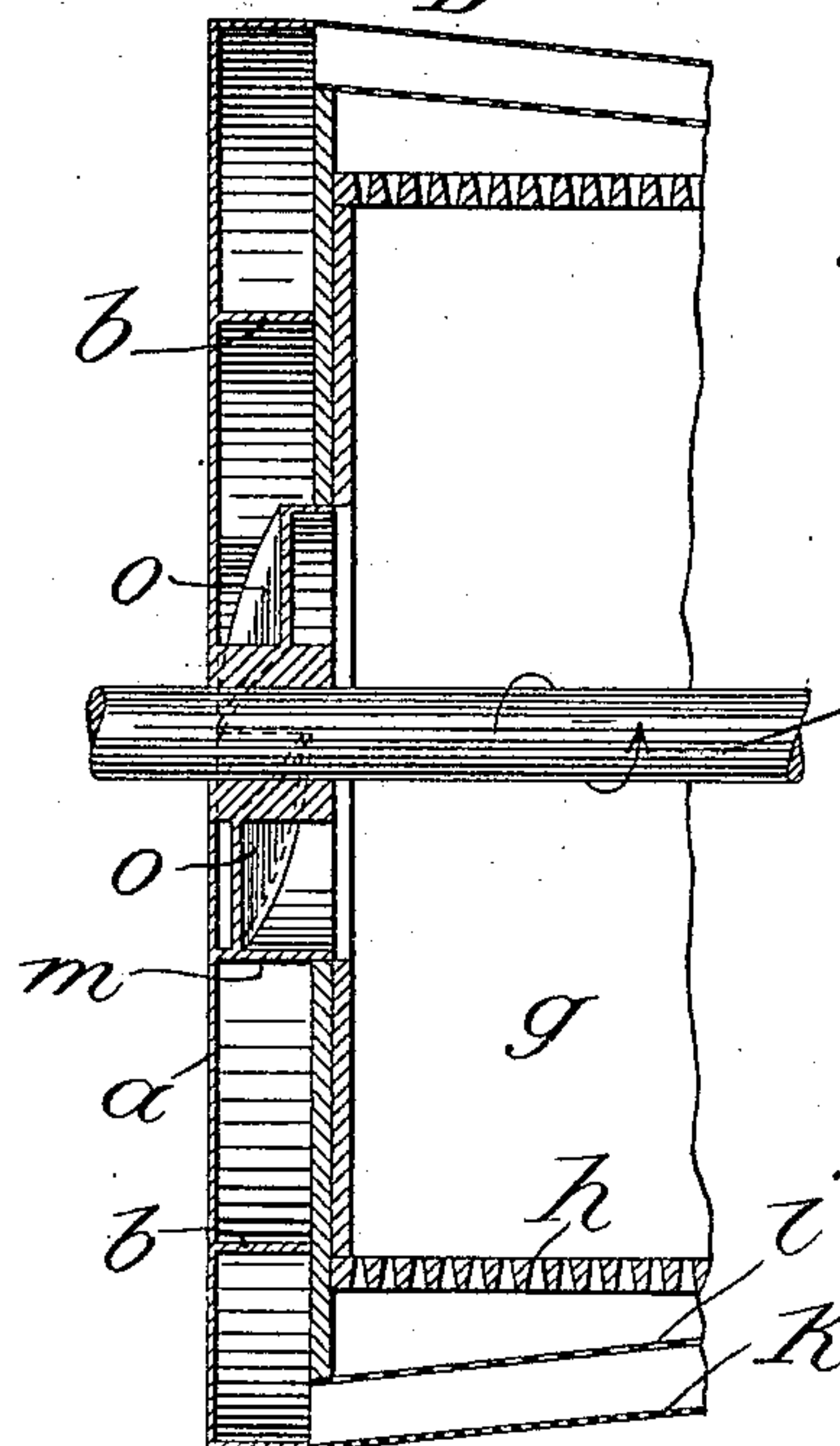
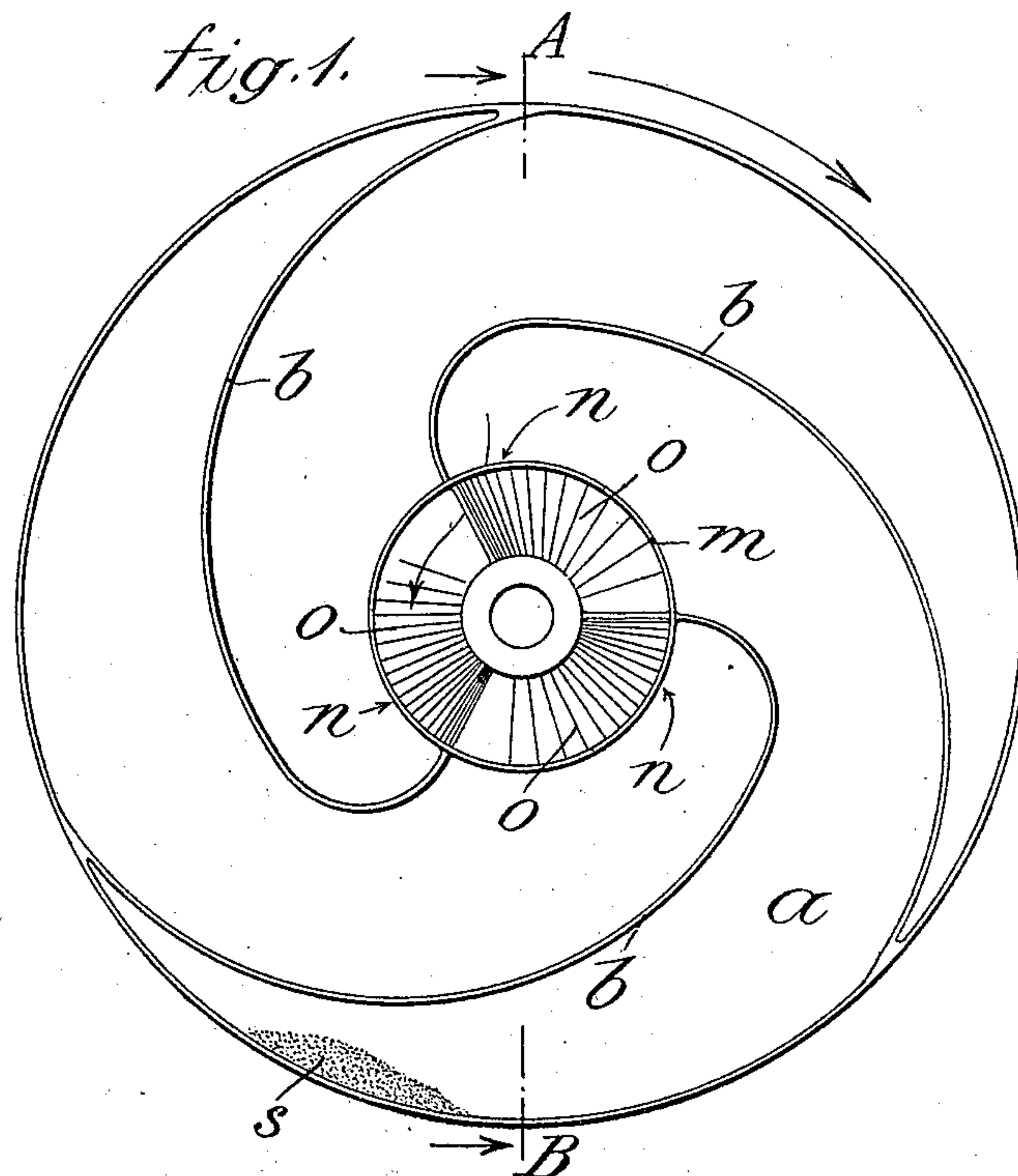
No. 820,087.

PATENTED MAY 8, 1906.

R. BENEKE.
DRUM MILL.

APPLICATION FILED JAN. 18, 1905.

2 SHEETS—SHEET 1.



Witnesses

J. P. Britte
E. C. Duffett

334

Inventor
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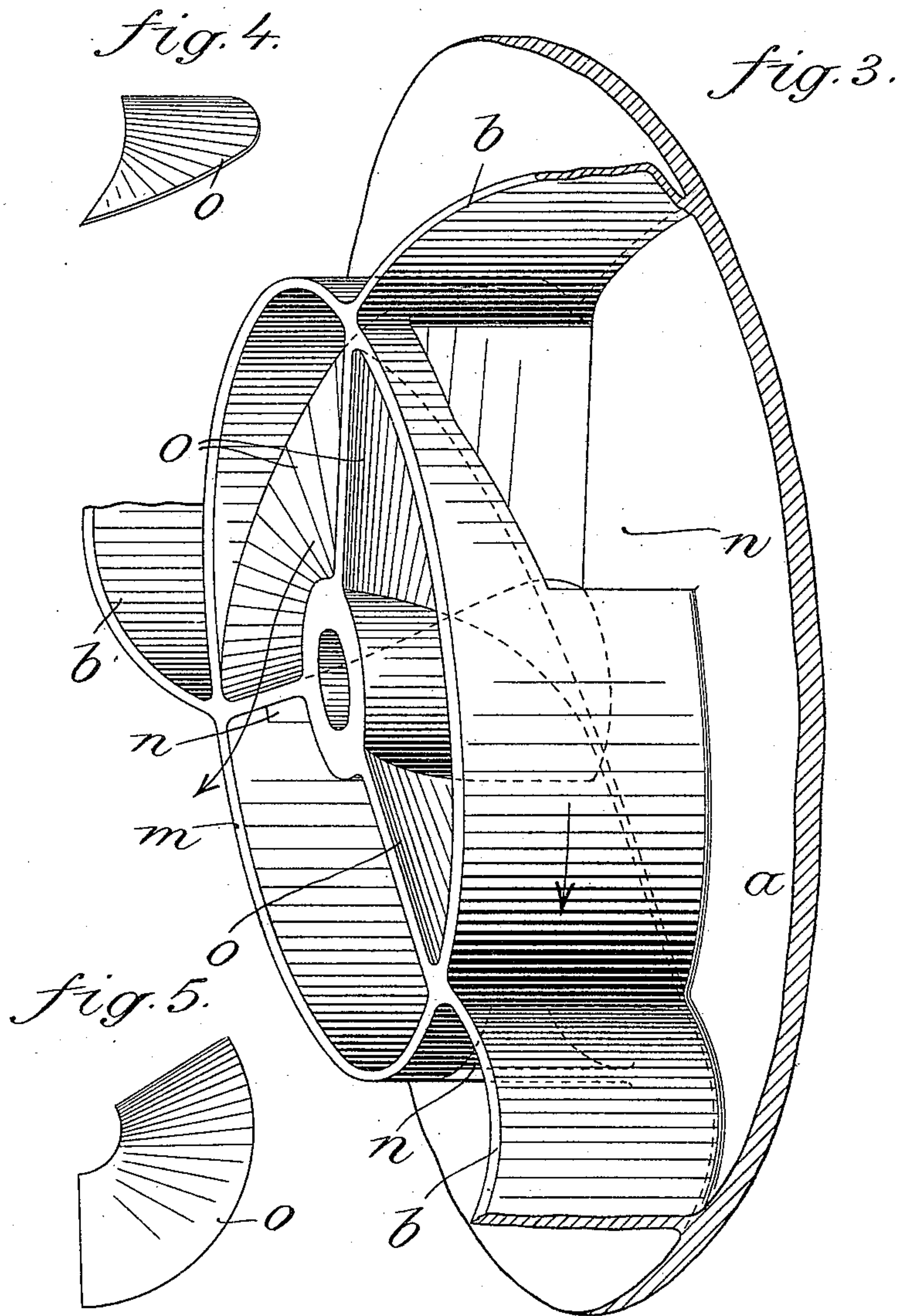
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J. P. Britt
E. C. Duff

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UNITED STATES PATENT OFFICE.

RICHARD BENEKE, OF BROMBERG, GERMANY.

DRUM-MILL.

No. 820,087.

Specification of Letters Patent.

Patented May 8, 1906.

Application filed January 18, 1905. Serial No. 241,608.

To all whom it may concern:

Be it known that I, RICHARD BENEKE, director, a subject of the King of Prussia, German Emperor, residing at No. 6 Bahnhofstrasse, Bromberg, German Empire, have invented new and useful Improvements in Drum-Mills, of which the following is a specification.

My invention relates to an improved boss for drum-mills having a perforated rim, whereby coarse material not passing through the sieve is returned to the grinding-drum in a continuous stream without shocks being occasioned, the construction for conveying the material from the casing back into the drum-mill being the same as set forth in my co-pending application, Serial No. 214,372, filed June 27, 1904, the object of this application being to cover the said construction.

The accompanying drawings show one embodiment of the invention.

Figure 1 is an inside view of the apparatus. Fig. 2 is a section on the line A B of Fig. 1. Fig. 3 is a perspective view of the central portion of the apparatus. Fig. 4 is a front view of one of the vanes in the interior of the boss. Fig. 5 is a plan of Fig. 4.

The material falling out of the grinding-drum *g* through the apertures *h* descends upon the two perforated shells or sieves *i* and *k* in the ordinary manner. The coarse material remains lying on the sieve *k* and passes into the casing *a*, as shown at *s*. Here the blades *b* scoop it up and return it through the boss into the interior of the grinding-drum again. In order to admit this coarse material to travel unimpeded by the shortest path into the grinding-drum, the rim *m*, Fig. 3, of the boss, which is open laterally, is provided with apertures *n*, corresponding in number with the number of blades *b*, and through

these apertures the material lying on each blade passes unobstructed. The material falls upon that one of a series of wings or vanes *o* which lies opposite the aperture *n* which is uppermost for the time being. These vanes *o* in the interior of the boss, Figs. 3, 4, and 5, have a spiral curve forming the arms of the boss and may be regarded as extensions of the blades *b*. Since the boss, as Fig. 3 shows, is open at the side toward the interior of the grinding-drum and since the vanes *o* travel against the direction of fall of the material *s*, the latter immediately a blade *b* discharges its contents slides through the boss and falls unimpeded by the shortest path from the vane *o*. In this manner the material is returned to the grinding-drum in a continuous stream, no shocks being occasioned.

Having thus described my invention, what I claim is—

In a drum-mill having a casing at the drum end, communicating with the outer shell of the drum, and presenting blades running from the periphery toward the center; in combination, a central boss for the drum-shaft, having a perforated rim, communicating peripherally with the casing and laterally with the grinding-drum; and spirally-curved vanes in the interior of the boss said vanes forming the arms of the boss, rotating against the direction of fall of material through the perforated rim, located one below each aperture in the latter, substantially as described.

In witness whereof I have hereunto signed my name, this 21st day of December, 1904, in the presence of two subscribing witnesses.

RICHARD BENEKE.

Witnesses:

WOLDEMAR HAUPT,
HENRY HASPER.