No. 826,869. PATENTED JULY 24, 1906.

G. M. ORTMANN.

BLAST REGULATOR FOR FANNING MILLS AND THRESHER FANS.

APPLICATION FILED JULY 21, 1905.

FIG. 1.

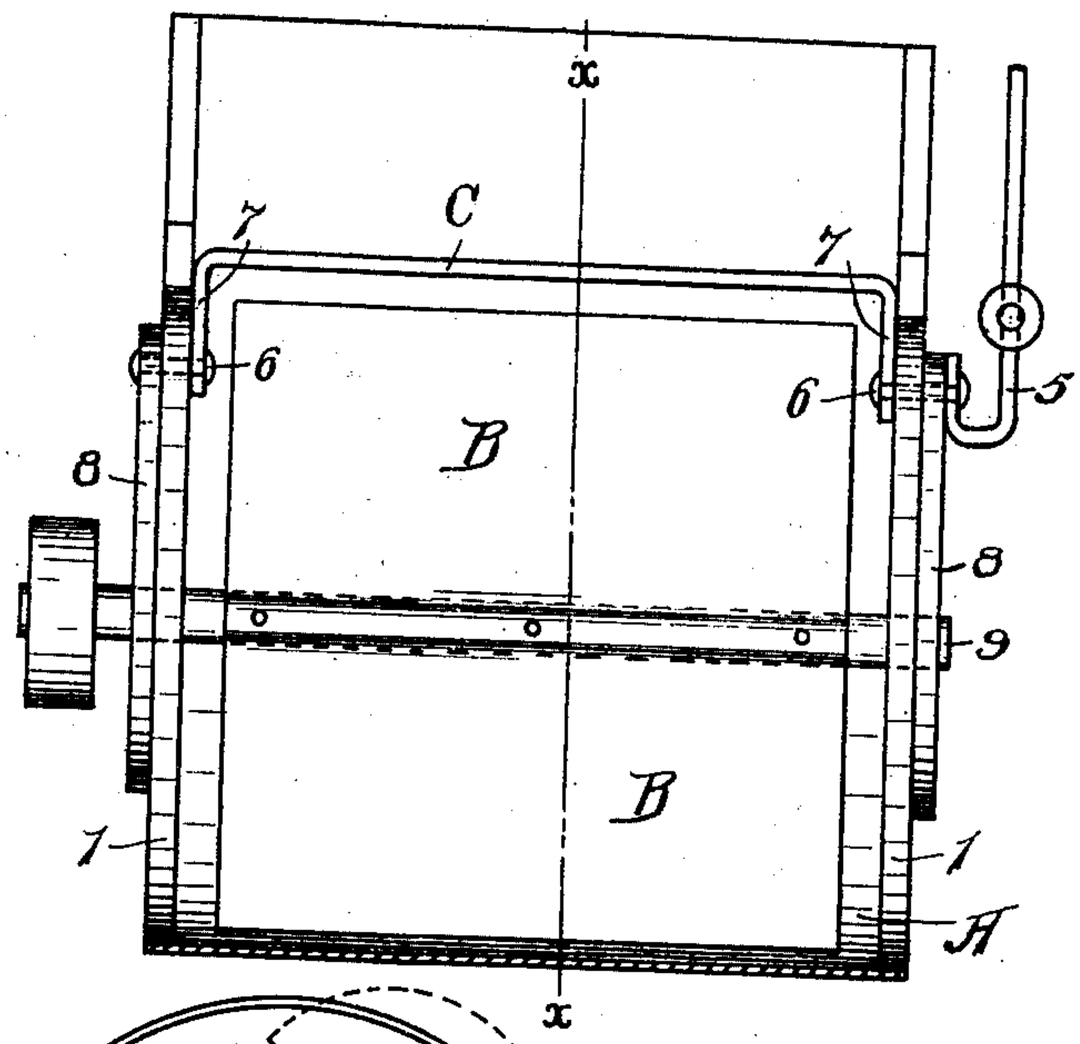


FIG. 2.

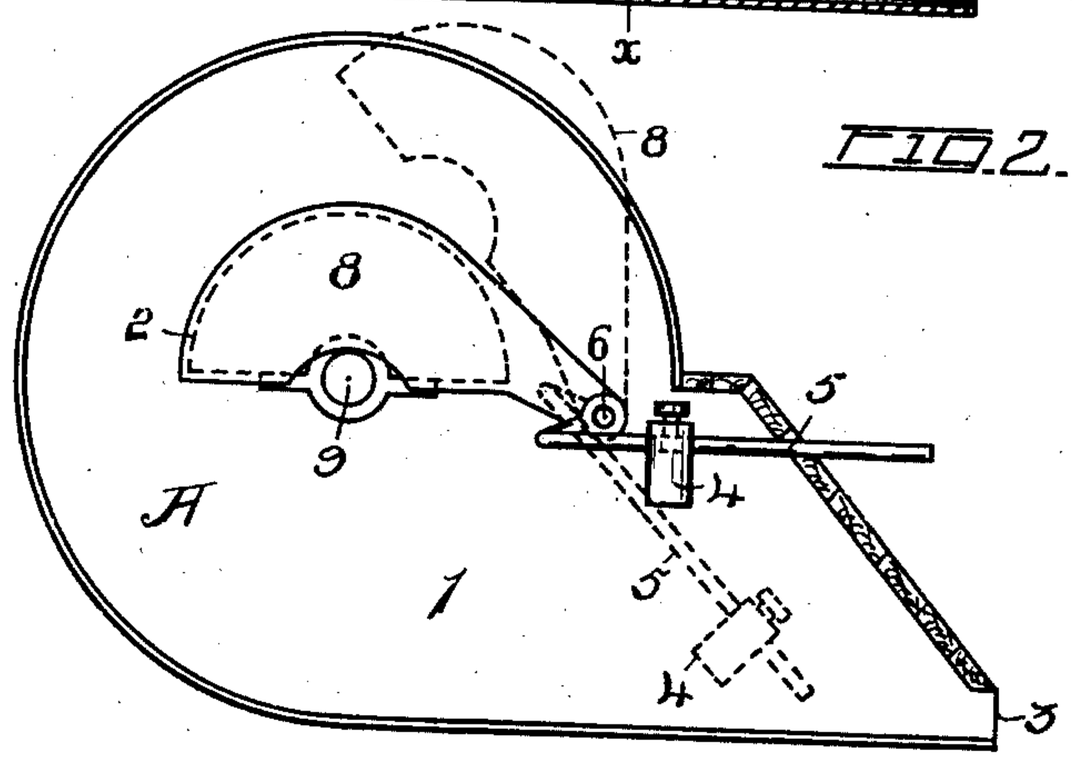
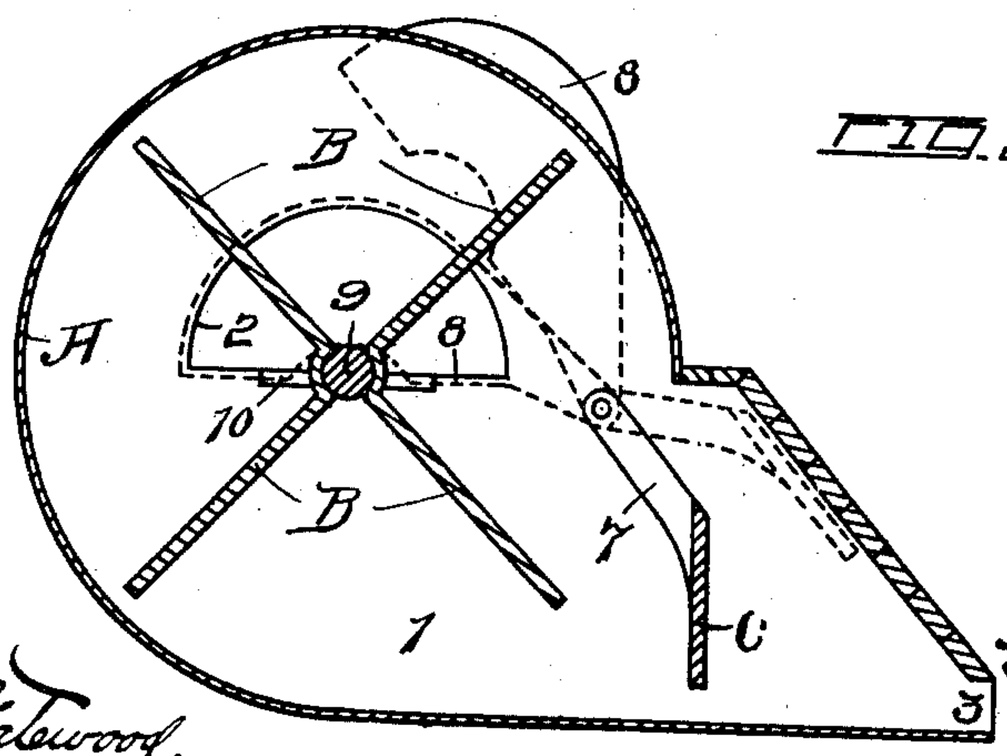


FIG. 3.



Witnesses:

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UNITED STATES PATENT OFFICE.

GEORGE M. ORTMANN, OF PENDER, NEBRASKA.

BLAST-REGULATOR FOR FANNING-MILLS AND THRESHER-FANS.

No. 826,869. Specification of Letters Patent. Patented July 24, 1906.

Application filed July 21, 1905. Serial No. 270,661.

To all whom it may concern:

Be it known that I, GEORGE M. ORTMANN, a citizen of the United States, residing at Pender, in the county of Thurston and State of Nebraska, have invented certain new and useful Improvements in Blast-Regulators for Fanning-Mills and Thresher-Fans, of which the following is a specification.

My invention relates to a new and useful improvement in blast-regulators for fans used in connection with fanning-mills and threshing-machines.

The object of my invention is to provide a comparatively inexpensive automatic blast-regulator for fans to control and regulate the blast or current of air delivered from the fan, which object I accomplish by means of the construction and combination of elements set forth in the following specification and which the accompanying drawings form a part, and in which—

Figure 1 is a top plan view of my new improved blast-regulator for fanning-mills and thresher-fans with a portion of the housing or casing broken away. Fig. 2 shows a side elevation thereof, while Fig. 3 shows a section on the line X X of Fig. 1 looking in direction of the arrow.

Referring to the drawings, the reference character A designates the casing, within which the fan B and the blast-regulator blade C are carried. The sides 1 of the casing A are provided with openings or holes 2, which allow a current of outside air to pass into the casing A, which is then driven out through the passage or opening 3 of the casing A and regulated by means of the regulator-blade C, which in turn is controlled and allowed to work easy or hard by means of the weight 4, which is movably secured to the rod 5. This rod 5 is at one end secured to the pins 6 on the outside of the casing A. Secured to the other or inside ends of these pins 6 are the ears 7 of the regulator-blade C. Further secured to these pins 6 on the outside of the casing A are the ears 8, which cut off the outside air from the fan and the interior of the casing A.

The fan-blades B are secured to the shaft 9 and the same works within the bearings 10, which are secured to the sides 1 of the casing A.

It will be observed that when the openings or holes 2 are closed by means of the ears 8, as shown in Fig. 2, so that no outside air can pass into the casing A, the weight 4 is secured near the inner end of the rod 5 and near the ears 8 are up, as shown in dotted lines in Fig. 2, to allow a free passage of the outside air to pass into the casing A. The weight 4 is then placed near the outer end of the rod 5, as clearly shown in dotted lines.

It will be further observed that when the ears 8 are down, thus closing the openings or holes 2, the regulator-blade C is in a position as shown in dotted lines in Fig. 3, and when the ears are up, as shown in dotted and full lines in Fig. 3, the regulator-blade C is standing perpendicular to the bottom of the casing A, so as to allow but a small and strong blast or current of air to pass out of the passage 3, which blast is delivered upon the grain falling from the sieves, thus thoroughly cleaning all the chaff from the same. If a weak blast or current of air is desired to pass through the passage 3 and upon the grain, the weight 4 is changed upon the rod 5, so that the ears 8 will partly close the openings or holes 2 and allow the regulator-blade to stand at an angle, thus allowing a larger air-space within the casing A for the small amount of air entering the casing A.

In regulating the ears 8 and the regulator-blade C in this manner it will be observed that a small or weak blast or current of air may be delivered upon the grain to be cleaned.

It will be readily seen that by changing the weight upon the rod 5 it regulates the regulator-blade C and the ears 8, thus regulating the blast or current of air desired to be delivered upon the grain.

It will also be noticed that the regulator-blade C automatically regulates the blast or current of air to be delivered upon the grain, for the reason that if the fan were rotating at a slow speed the current of air delivered upon the regulator C would not be sufficient to close the ears 8, thus delivering a strong blast of air upon the grain.

If the fan were rotating at a high speed, the blade C would regulate the speed desired, as the current of air delivered upon the blade C would be strong enough to carry the blade C upward, as shown in dotted lines in Fig. 3, thus automatically closing the holes 2 to prevent the outside air from passing into the casing A.

It is of course understood that my blast-regulator is more particularly adapted to be used on fanning-mills and thresher-machines, and that the same may be made of any size

and of any suitable material, and that various changes in minor details of construction and arrangement of parts may be made to adapt the machine of varying conditions and requirements without departing from the principle and intended scope of the invention.

Having thus fully described my invention, what I claim as new, and desire to secure by United States Letters Patent, is—

In a blast-regulator for fanning-mills and the like, the combination of a fan, a blast-regulator blade pivotally held within and across the delivery-chute of the machine by means of the pins 6, ears substantially of the shape shown secured to, and pivotally held by means of said pins, and the hook-shaped counterbalanced arm secured to, and pivotally held at the outer extreme ends of the aforesaid pins, said parts being arranged substantially as shown and for the purpose set forth.

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

GEORGE M. ORTMANN.

Witnesses:
JOHN A. WACHTER,
GEO. J. ADAMS.