W. BOREN.

BLAST REGULATORS FOR THRASHING-MACHINES.

No. 190,812. Patented May 15, 1877.

Fig. 1.

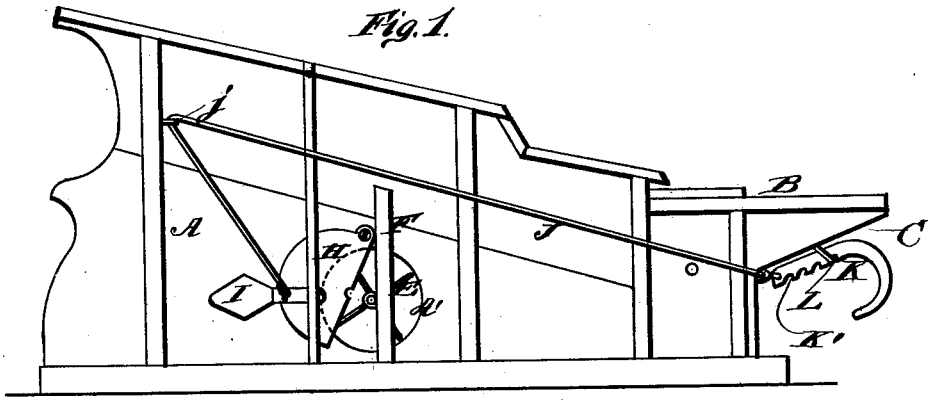


Fig. 2.

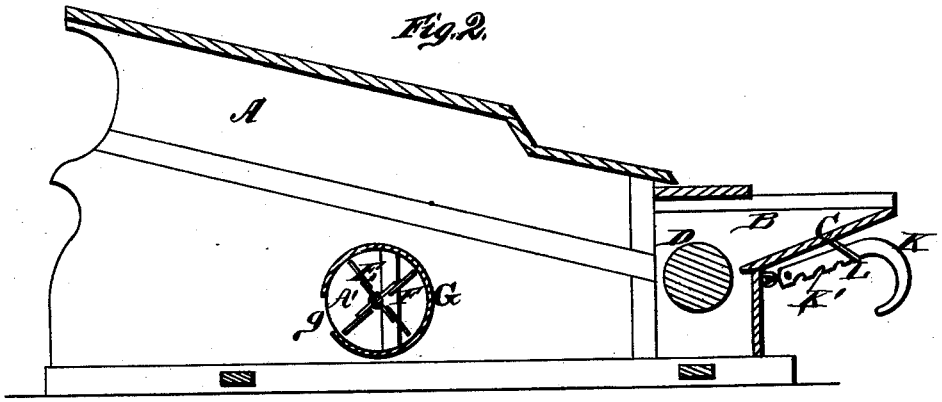
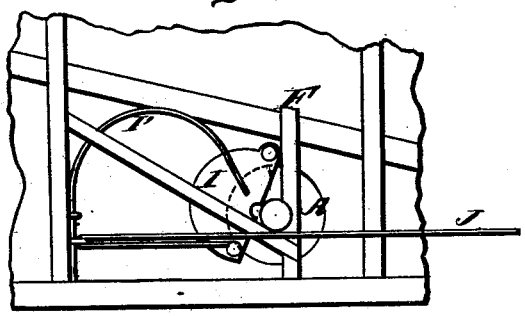


Fig 3.



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IMPROVEMENT IN BLAST-REGULATORS FOR THRASHING-MACHINES.

Specification forming part of Letters Patent No. **190,812**, dated May 15, 1877; application filed February 17, 1877.

To all whom it may concern:

Be it known that I, WILLIAM BOREN, of Ashland, in the county of Ashland and State of Ohio, have invented a new and valuable Improvement in Wind-Regulators for Fans; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a side view of my wind-regulators for fans; and Fig. 2 is a central vertical sectional view thereof. Fig. 3 is a detail view of the same.

This invention relates to fans used in thrashing-machines; and it consists in certain devices for regulating the supply of air to the same, substantially as hereinafter particularly set forth and claimed.

In the accompanying drawings, A designates the casing or housing of an ordinary thrashing-machine, which is provided at one end with a feeding-opening, B, and a feed-board, C. D designates a thrashing-cylinder journaled within said casing or housing in front of and below said opening B and feed-board C.

About the middle of casing or housing A are two opposite openings, A′ A′, in the sides of the same, through which openings air is supplied to fan E. Said fan extends across said casing or housing, and is journaled at each end in a bearing secured to a standard, F, on the outside of said casing A. Said standards F F on the opposite sides of said casing are similar in construction and office. One of them is shown in Fig. 1, and the other in Fig. 2. Said fan is inclosed in a cylindrical sheet-metal shell, G, which is open at the ends to receive the air through openings A′ A′, and in front at *g*, Fig. 2, so as to allow the expulsion of the air for the purpose of driving off chaff and light impurities.

Vertical standards F F, respectively, bisect openings A′ A′. One part of each opening is left permanently unclosed, the other being wholly or partly closed by a swinging shutter, H. Said shutters are semicircular in form, and pivoted above to the sides of casing A. Each of them is provided with a weight, I, as shown in Fig. 1, or with a spring, I′, as shown in Fig. 3, which operates to hold its straight side against the nearer standard F. When in that position the said shutter completely closes the half of the opening A′ across which it operates.

Said shutters H H are simultaneously raised, so as to let in a greater or less supply of air by means of a continuous cord, J, which is connected by its ends to the lower parts of said shutters. Said cord is passed through eyes *j j*, which are arranged above, or on a level with, said attachment, according as weights or springs are used, and the middle part of said cord is connected to the rear end of a hook, K. The shank of said hook works through a large staple or metal catch-loop, L, on the lower side of feeding-board C, and is provided on its under side with a rack or series of notches, K′, which may be made to engage with said staple or catch-loop L and lock said hook, cord, and shutters in any desired degree of adjustment. Said hook is conveniently grasped and operated by the man who feeds the machine. When the supply of air is to be increased he simply pulls out the said hook to the required extent, and locks it, as stated. When the supply is to be diminished he unlocks it and allows the weights or springs to depress the said shutters sufficiently, then locks it again.

The man who feeds the machine may judge of the proper degree of adjustment of the shutters by the rapidity of the rotary movement of the thrashing-cylinder and fan, the shutters being depressed by him when the fan revolves rapidly, and raised when the fan and thrashing-cylinder revolve slowly, or by the sound, or by an examination of the grain after it leaves the machine as regards the chaff mixed with it, a little practice readily enabling him to adjust the shutters properly.

A weight may be used with one shutter H, and a spring on the other, as shown. A different form of adjusting and locking device may be substituted for hook K, rack K′, and staple or locking-loop L. Various other changes may be made without departing from the spirit of my invention.

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

1. In a thrashing-machine, the combination of a fan with weighted or spring-pressed shutters and an operating cord extending to the feed-board, substantially as and for the purpose set forth.

2. The combination of weighted shutters H H with cord J, hook K having rack K′, and locking staple or loop L, substantially as and for the purpose set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

WILLIAM BOREN.

Witnesses:
J. D. JONES,
WILLIAM MANSFIELD.