DANIEL GARVER.

Improvement in Fan-Blast Regulators.

No. 114,547. Patented May 9, 1871.

Fig. 1.

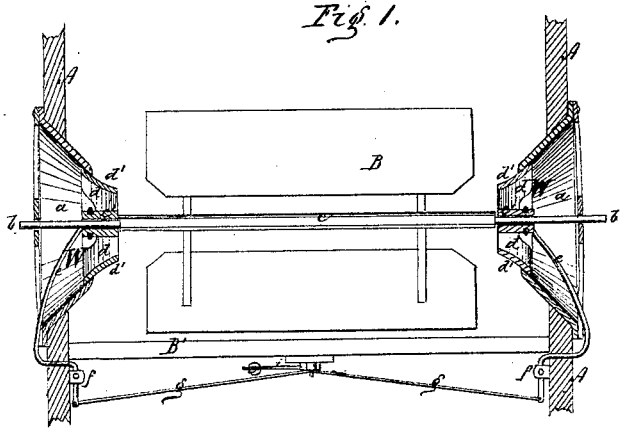


Fig. 2.

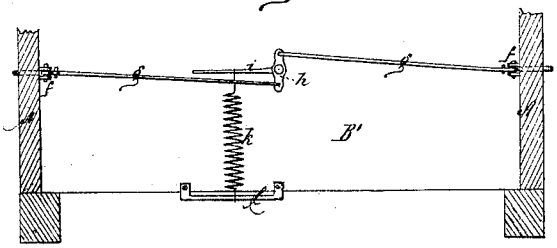
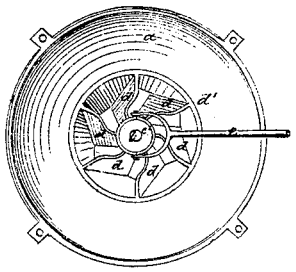


Fig. 3.



Witnesses:

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A.M. PHOTO-LITHOGRAPHIC CO. N.Y. (OSBORNE'S PROCESS.)

United States Patent Office.

DANIEL GARVER, OF RINGGOLD, MARYLAND, ASSIGNOR TO HIMSELF AND CYRUS GARVER, OF SAME PLACE.

Letters Patent No. 114,547, dated May 9, 1871.

IMPROVEMENT IN FAN-BLAST REGULATORS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, DANIEL GARVER, of Ringgold, in the county of Washington and State of Maryland, have invented a new and improved Fan-Blast Regulator; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawing making a part of this specification, in which—

Figure 1 is a sectional elevation;

Figure 2, a side elevation of the levers and spring; and

Figure 3, a front elevation of one fan-head and valve.

This invention has for its object to automatically regulate the air-supply of a fan-blower for the purpose of maintaining a blast of uniform and proper strength.

Referring to the drawing—

a a are conical fan-heads, set in the side frame A, that inclose the fan B.

Through the centers of these fan-heads pass the journals *b* of the fan-shaft *c*.

On the journals *b*, within the conical fan-heads, are sliding valves W, consisting of hubs *c'*, spiral wings *d*, and conical rims *d'*, which, when the valves are moved in as far as possible, fit closely the interiors of the fan-heads.

The valves are revolved independently of the fan-journals by the force of the blast drawn through them by the rotation of the fan.

When the air-currents rushing through the valve become too strong they drive the valves inward, causing them to diminish the size of the orifices of the fan-heads, and thus diminish the force of the blast.

When the force of the blast has been sufficiently diminished valves are moved outward in order to enlarge the orifices of the fan-heads.

The moving outward of the valves is accomplished by means of forked levers *e*, which embrace the hubs *c'* and pass outside of the fan-heads, and are bent inward in rear of the latter so as to pass through orifices in the side frames.

Within the frames are pivoted lugs *f*, which form the vibrating fulcrums of the levers *e*.

The latter are bent so as to be nearly parallel with the inner surfaces of the side frames, and at their inner ends are jointed to the extremities of rods *g*, which extend straight inward from each side frame.

The other extremities of the rods *g* are jointed to opposite ends of a bar, *h*, which is pivoted at its center upon a pin that extends from the frame B' in rear of the fan.

An arm, *i*, extends horizontally from one side of the bar *h*, and to this bar is fastened the upper end of a spring, *k*, the lower end of which is secured to a rail, *l*, that stands out from the frame B'.

As soon as the force of the currents that blow through the fan-heads is so diminished as to be less than the tension of the spring *k* the latter operates, through the above-described intermediate mechanism, to draw the valves out and thus enlarge the apertures in the fan-heads. Such enlargement is followed by an increase in the force of the blast, and this increase by another closing of the valves. In this way the blast is maintained at a nearly uniform strength.

Having thus described my invention,

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

The combination and arrangement, with the fan B, of the fan-heads *a*, sliding valves W, levers *e*, connecting-rods *g*, bar *h*, arm *i*, and spring *k*, as and for the purpose specified.

DANL. GARVER.

Witnesses:

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THOS. D. D. OURAND.