No. 686,104. Patented Nov. 5, 1901.

A. J. MESSER.

STRAW STACKER.

(Application filed May 11, 1901.)

(No Model.)

Fig. 1.

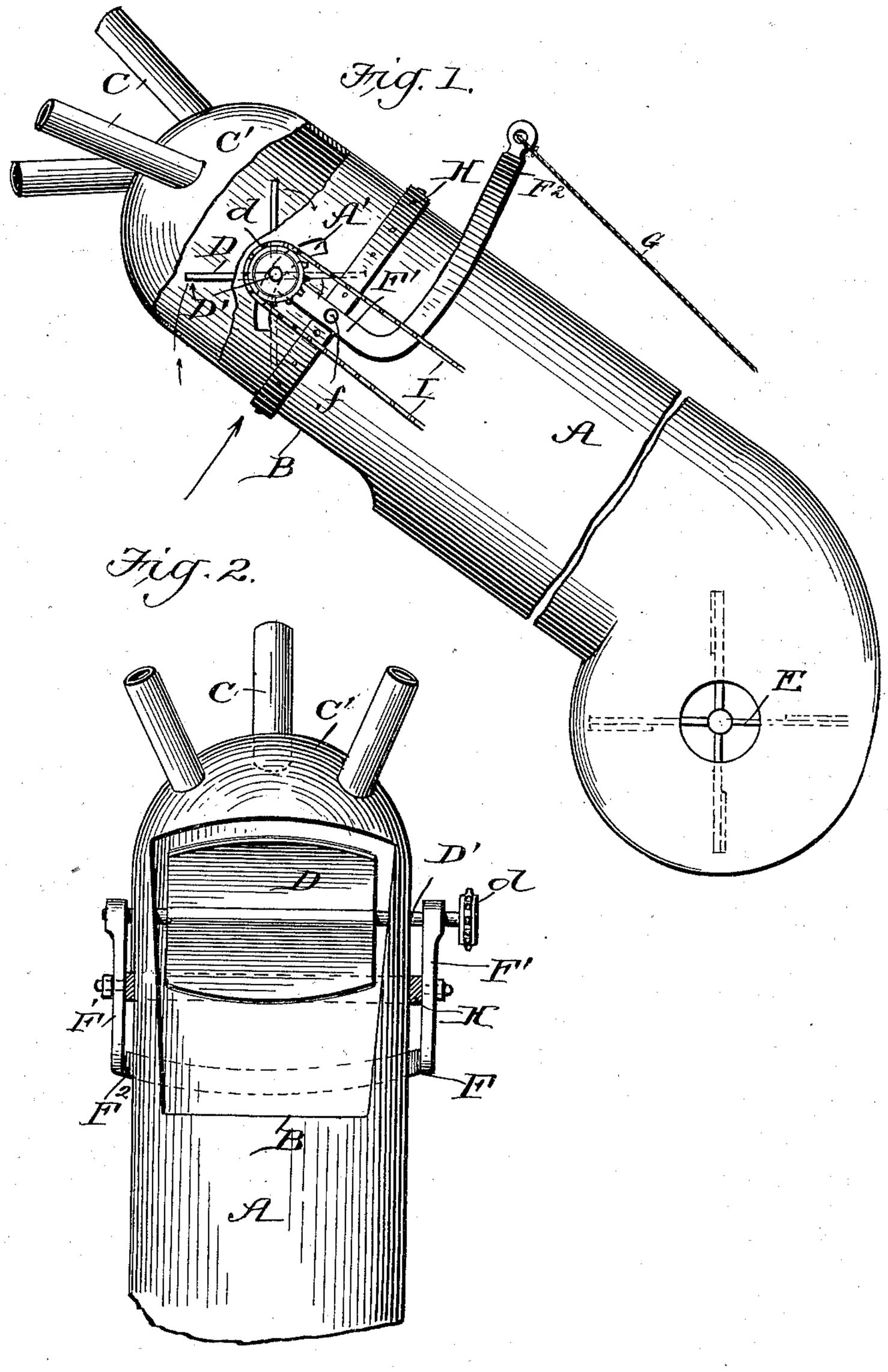

Fig. 2.

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STRAW-STACKER.

SPECIFICATION forming part of Letters Patent No. 686,104, dated November 5, 1901.

Application filed May 11, 1901. Serial No. 59,766. (No model.)

To all whom it may concern:

Be it known that I, ADAM JOHN MESSER, a citizen of the United States, residing at Ashton, in the county of Lee and State of Illinois, have made certain new and useful Improvements in Straw-Stackers, of which the following is a specification.

My invention is an improvement in straw-stackers of the class known as "pneumatic" stackers, in which the straw is forced up the tube by pneumatic action; and the present invention has for an object to provide means by which to prevent the blast from discharging the straw with such force as to throw it about and prevent its accurate delivery at any point desired.

The invention consists in certain novel constructions and combinations of parts, as will be hereinafter described and claimed.

In the drawings, Figure 1 is a side view, partly broken away, of a portion of a stacker embodying my invention; and Fig. 2 is an elevation thereof in the direction indicated by the arrow in Fig. 1.

In carrying out my invention I provide at the upper end of the stacker tube or casing A a lateral discharge at B for the straw and a contracted discharge for the air or blast at the end of the tube, such contracted discharge consisting, preferably, of a series of small tubes C, leading from the rounded end C′ of the tube A, and what air is taken away from the blast is discharged up through these tubes C. The tubes convey such escaping air sufficiently far from the end of the stacker-tube to prevent its affecting the straw discharged from the opening B. By this means a contracted discharge is provided for the blast, which relieves the straw-discharge B to a considerable extent of the force of the blast, and thus aids in preventing the scattering of the straw by the force of the blast.

An important feature, however, of my invention is the fan D, which is arranged within the tube A at the discharge end of the latter, turns in the direction indicated by the arrow in Fig. 1, is operated independently of the blast from the fan E or other blower by which the pneumatic stacking is accomplished, and operates in opposition to the stacking-blast at the discharging end of the tube in such manner as to counteract the same, and thus prevent the scattering of the straw. In the construction shown the fan D is supported within the casing A opposite the straw-discharge B and may be adjusted toward and from such discharge, being supported by journaling its shaft D′ in the arms F′ of a yoke-lever F, whose cross-bar F^2 is connected with a cord G, by which the supporting-lever may be rocked to adjust the fan as may be desired. To permit this adjustment, the shaft D′ extends through curved slots A′, struck from the center *f*, which is the pivot of the supporting-lever F, as shown. To provide a firm support for the lever F, I secure a band H around the casing A and pivot the lever to such band, as shown in Figs. 1 and 2. The band H does not cross the opening B, but extends from such opening around the tube and terminates at the edge of such opening. As before suggested, the fan is driven independently of the blast produced by the blower E. To this end I provide the shaft D′ with a sprocket-wheel *d*, which receives a belt I, by which the fan D may be driven from any suitable moving part of the stacker. In operation by raising or lowering the fan D the straw may be thrown forward or backward.

In operation it will be understood the fan D acts in opposition to the blast of the stacker, the air being permitted to escape through the pipes C after the blast has been destroyed by the fan D, as before described.

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

1. A pneumatic stacker having the blower or blast-creating mechanism, a fan at the discharge end of the tube and arranged to operate in opposition to said blast mechanism, and mechanism for operating the said fan independently of the blower substantially as set forth.

2. In a pneumatic stacker the combination of the stacker-tube having its upper end closed and having adjacent to such end a lateral discharge-opening for straw, the pipes leading from the end of the tube, the fan operating in the stacker-tube near its upper end, the yoke-lever having its arms pivoted and supporting the shaft of said fan, and

mechanism for operating the said fan substantially as set forth.

3. A pneumatic stacker-tube having its upper end closed and the pipes projecting from such end for the discharge of the air, the tube having adjacent to its closed end a lateral discharge for the straw substantially as set forth.

4. A pneumatic stacker-tube a fan at the discharge end of such tube and arranged to act in opposition to the blast devices and means whereby the said fan may be positively driven independently of said blast devices substantially as set forth.

5. A pneumatic stacker comprising the stacker-tube, blast devices and a fan arranged within said tube at its discharge end and adapted to act in opposition to the blast devices of the stacker substantially as set forth.

6. The combination with a stacker-tube provided with a lateral straw-discharge, of a fan arranged within the tube opposite such discharge, and an adjustable support for the said fan whereby it may be adjusted within the tube substantially as set forth.

7. A pneumatic stacker provided at its discharge end with a fan to act in opposition to the blast of the stacker and with mechanism by which the said fan may be positively operated substantially as set forth.

8. In a stacker the combination of the stacker-tube provided with curved slots A′ and the band H the fan operating within the stacker, the yoke-lever arms pivoted to the band H and the fan-shaft extending through the slots A′ and journaled in the lever-arms substantially as set forth.

9. The herein-described improvement in stackers comprising the tube having its upper end closed and rounded and having the lateral straw-discharge, the pipes leading from the tube, the fan arranged within the tube opposite the straw-discharge and adjustable toward and from the same, and means for supporting and operating the said fan substantially as set forth.

10. A pneumatic stacker having its tube provided with a lateral straw-discharge and a fan located within the tube opposite the said discharge and adjustable toward and from the same substantially as set forth.

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Witnesses:
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