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H. M. BROWN & H. M. DAHL.

BLOWER AND SUCTION DEVICE.

APPLICATION FILED DEC. 3, 1904.

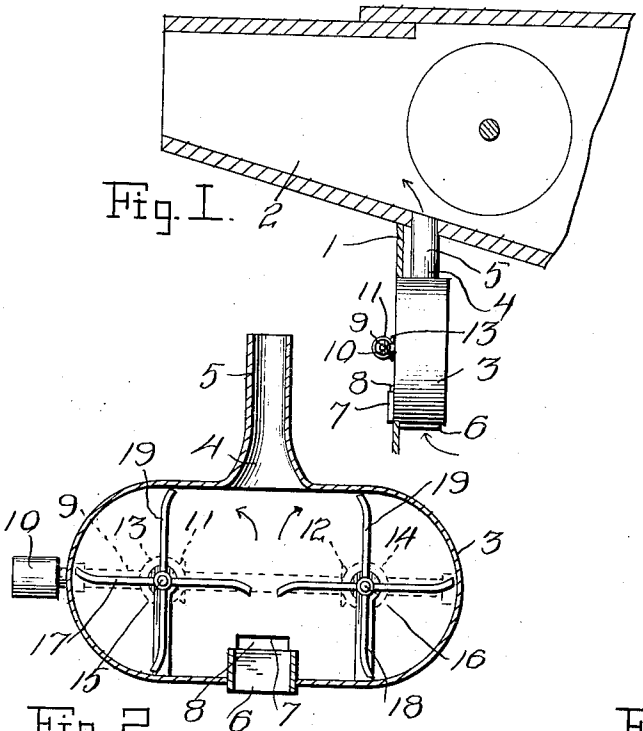

Fig. 1.

Fig. 2.

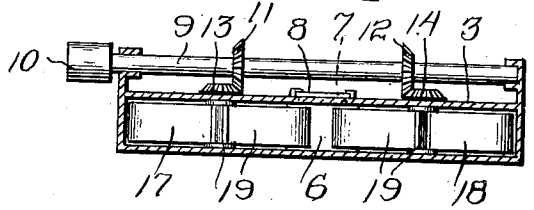

Fig. 3.

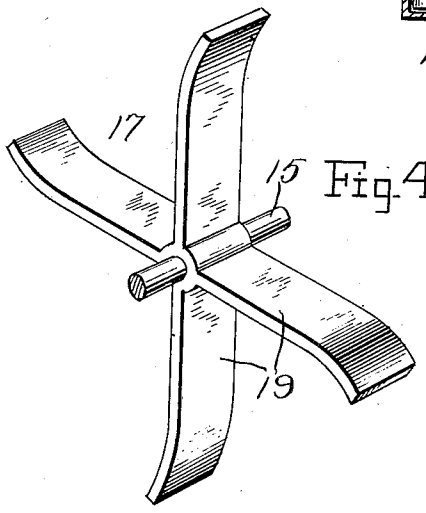

Fig. 4.

Witnesses
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UNITED STATES PATENT OFFICE.

HARRY M. BROWN AND HARRY M. DAHL, OF EL CAMPO, TEXAS.

BLOWER AND SUCTION DEVICE.

No. 848,343. Specification of Letters Patent. Patented March 26, 1907.

Application filed December 3, 1904. Serial No. 235,415.

To all whom it may concern:

Be it known that we, HARRY M. BROWN and HARRY M. DAHL, citizens of the United States, residing at El Campo, in the county of Wharton and State of Texas, have invented a new and useful Blower and Suction Device.

This invention relates to fan-blowers for threshing-machines.

The primary object of the invention is to provide an exceedingly simple, inexpensive, and durable fan-blower threshing-machine having means for regulating the blast of air given thereby, the said blower being mounted upon the threshing-machine in the usual manner, with its discharge-chute directed into the discharge-chute of the threshing-machine, the purpose of the blower being to force the straw discharged into the said chute from the chute.

With these and other objects in view the present invention consists in the combination and arrangement of parts, as will be hereinafter more fully described, shown in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that changes in the form, proportion, size, and minor details may be made within the scope of the claims without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings, Figure 1 is a view illustrating a portion of a threshing-machine and our improved fan-blower associated therewith. Fig. 2 is a detail view of the fan-blower, the casing being broken away to illustrate interior parts. Fig. 3 is a horizontal sectional view through the fan-casing. Fig. 4 is a detail view of one of the fans.

Referring now more particularly to the accompanying drawings, the reference character 1 represents a part of a frame of a threshing-machine of any suitable character provided with the usual discharge-chute 2.

Arranged within the frame of the threshing-machine near its discharge-chute is a fan-casing 3, having its upper end contracted, as at 4, and terminating in a chute 5, designed to be directed toward the discharge-chute 2 of the threshing-machine.

Formed in the bottom of the fan-casing 3 is an air-supply opening, in which is engaged a spout 6, which projects a slight distance within the casing, but not to such a degree that it will interfere with the rotation of the fans, which are to be hereinafter described. Ordinarily the supply of air is taken solely through this spout; but under certain conditions—for instance, as when wet or heavy grain is being threshed—it is desirable to have a greater supply of air to the casing in order to force the grain through the discharge-chute of the threshing-machine. For this purpose an air-supply opening 7 is formed in the forward face of the casing and directly in advance of the spout 6. In order that the size of this opening may be varied to obtain different degrees of blasts, a plate 8 is mounted upon the outer face of the said side of the casing and is movable to entirely or partially close the opening 7.

Arranged exteriorly of the fan-casing 3 is a horizontal shaft 9, having a drive-wheel 10 secured upon one of its ends for the connection of a suitable belt or chain (not shown) for the purpose of driving the said shaft 9. Adjustably mounted upon the drive-shaft 9 are oppositely-disposed beveled gears 11 and 12, each of which is designed to mesh with the corresponding smaller beveled gears 13 and 14, the smaller beveled gears 13 and 14 being arranged at right angles to the larger beveled gears 11 and 12, so as to mesh therewith. These smaller beveled gears 13 and 14 are mounted upon the shafts 15 and 16, respectively, which are journaled in the fan-casing 3 and provided with fans 17 and 18, respectively, the blades 19 of the fan having their extremities bent, the extremities of each blade being bent in the same direction, the blades in the other wheel being bent in the opposite direction. It will be seen that these fans are spaced apart and that by reason of the disposition of the beveled gears are caused to rotate in opposite direction with respect to each other, thereby sending an air-current in a straight line, causing a direct current of air through the discharge-spout 5.

The casing may be formed of any suitable material, as may also the blades of the fans, and it will be appreciated that the suction will be increased in the event that the slide 8 is moved from over ventilator-opening 7.

We are aware that fan-blowers have been heretofore employed in connection with threshing-machines, and therefore we do not claim, broadly, the idea of sucha fan; but we do claim the specific arrangement of mechanism shown in the accompanying drawings, including the rotating fans operating in different directions, whereby the fanning capac-

ity is increased considerably as compared with the blowing action of a single fan.

What is claimed is—

1. A fan-blower comprising a casing, fans mounted for rotation within the casing, an air-supply spout extending through the bottom of the casing and partially within the same, an auxiliary air-supply located in one side of the casing adjacent the said spout.

2. A fan-blower comprising a casing, fans mounted for rotation within the casing, an air-supply pipe extending through the bottom of the casing and within the same, said casing being provided with an opening in one of its side walls in alinement with the said spout, and a plate mounted for movement upon the outer face of the said wall of the casing in position to entirely or partially close said opening.

In testimony whereof we have signed our names to this specification in the presence of the two subscribing witnesses.

HARRY M. BROWN.
HARRY M. DAHL.

Witnesses:
MACK. WEBB,
G. F. WEBB.