No. 610,659. Patented Sept. 13, 1898.

J. W. MILLER & E. HUBER.

PNEUMATIC STRAW STACKER.

(Application filed May 25, 1898.)

(No Model.)

Fig. 1.

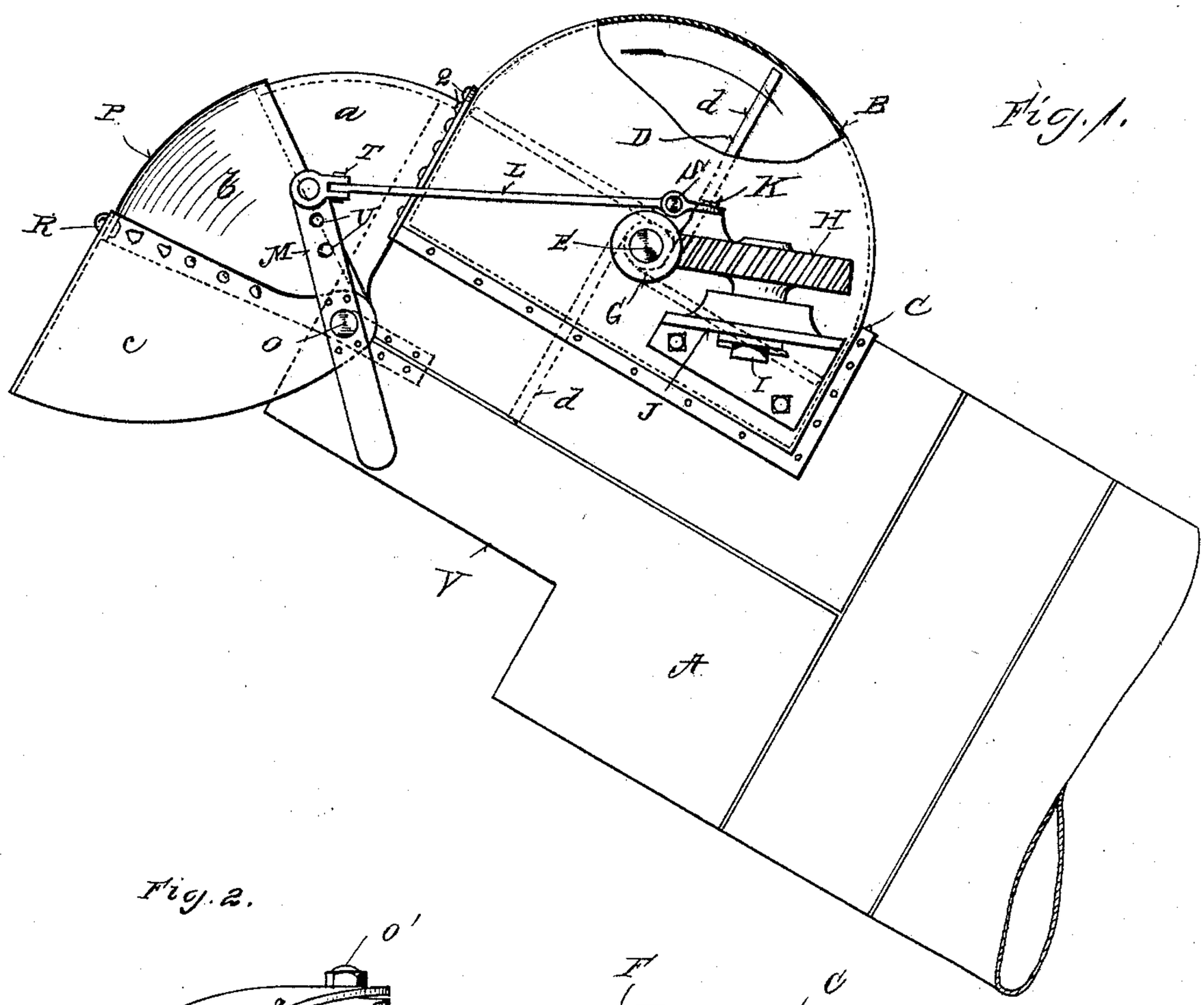
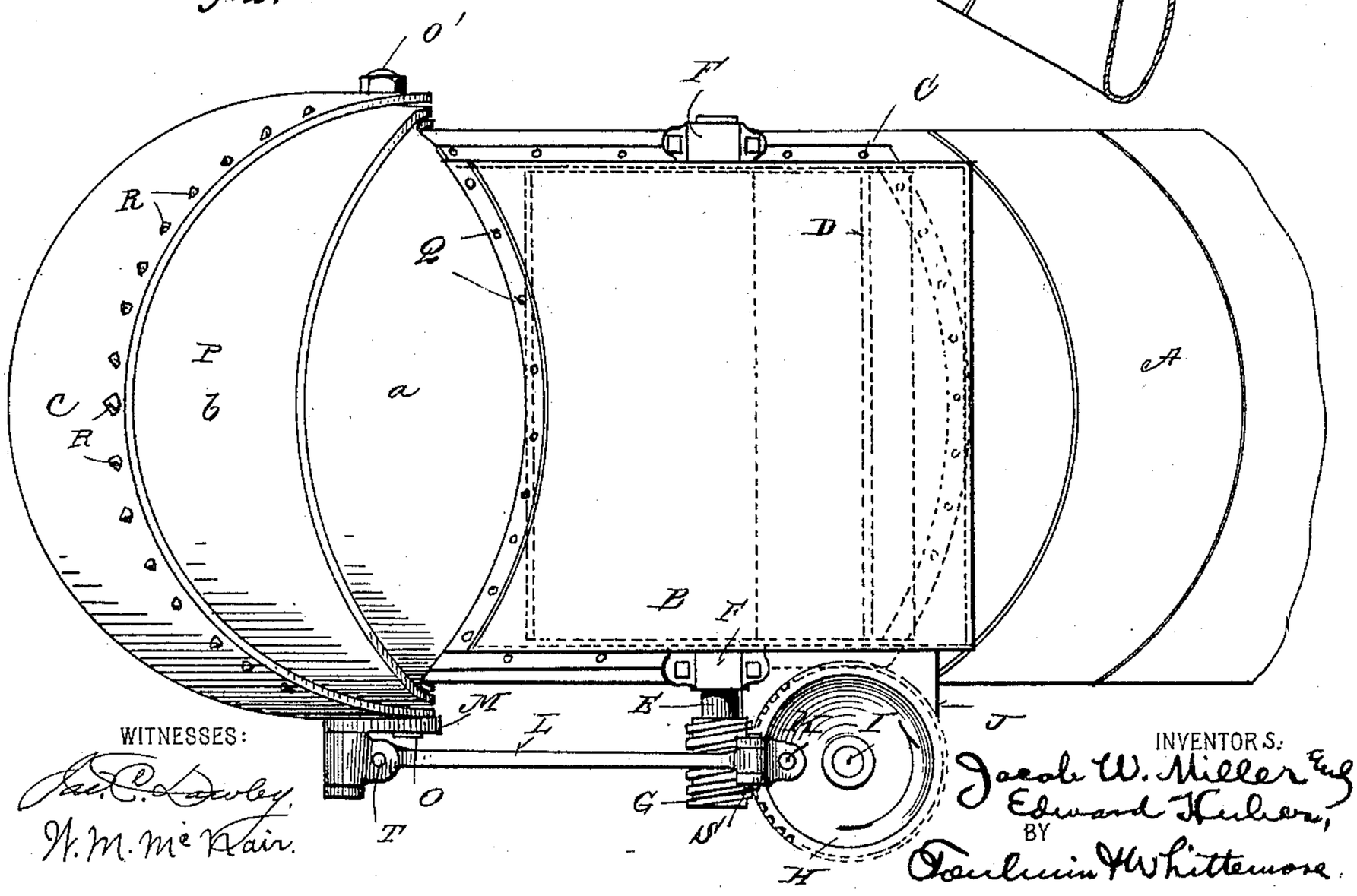


Fig. 2.



WITNESSES:

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UNITED STATES PATENT OFFICE.

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PNEUMATIC STRAW-STACKER.

SPECIFICATION forming part of Letters Patent No. 610,659, dated September 13, 1898.

Application filed May 25, 1898. Serial No. 681,662. (No model.)

To all whom it may concern:

Be it known that we, JACOB W. MILLER and EDWARD HUBER, citizens of the United States, residing at Marion, in the county of Marion and State of Ohio, have invented certain new and useful Improvements in Pneumatic Straw-Stackers, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to certain new and useful improvements in pneumatic straw-stackers.

The object of our invention is to provide for the utilization of air-currents to automatically operate a straw-delivering hood in a pneumatic stacker for the purpose of delivering or directing the discharging straw to different places.

Our invention also relates to details of construction hereinafter appearing, and particularly pointed out in the claims.

In the accompanying drawings, on which like reference-letters indicate corresponding parts, Figure 1 is a side elevation of a portion of a pneumatic straw-delivery pipe with our invention applied thereto, and Fig. 2 is a plan view of the same.

The letter A represents a portion of a pneumatic straw-delivery pipe, such as usually employed in connection with threshing-machines where an air-blast is used for carrying the straw, chaff, dust, &c., passing through the thresher and discharging the same in any convenient place. Near the outer end of this pipe we mount a fan-casing B, secured to said pipe by means of rivets C or in any other suitable manner. We have provided a fan D, having a shaft E, mounted in suitable bearings F, also carried by said fan-casing. On one end of said fan-shaft E is formed or otherwise secured a worm G. This worm G meshes with a worm-driven gear H, mounted on a stud I, carried by a bracket J, extending from said casing B. A wrist-pin K extends from the upper face of the worm-driven gear H and has mounted thereon a pitman L. The other end of said pitman L is connected with the crank M, which is rigidly connected with the adjustable parts of our hood P. Such hood consists of three sections *a b c*, the section *a* being secured to the casing B by means of rivets or bolts Q or in any other suitable manner, while the sections *b c* are riveted or otherwise secured to each other by means of rivets R, as clearly shown in Fig. 1. These sections *b* and *c* are mounted on studs O O′ to permit them to swing in a manner presently to appear.

Referring again to the pitman, it will be seen that it has an up-and-down movement by reason of its joint S and also a sidewise movement by reason of its jointed connection with the crank M, as shown at T. This up-and-down movement permits the crank to be set in any one of the holes U in said crank, which is for the purpose of varying the swinging movement of the hood P, above referred to.

The hood is operated by means of a portion of the air within the pipe A, which comes in contact with the arms *d* of the fan D and causes the said fan to rotate. This in turn drives the shaft E with its worm G and which latter meshes with and drives the worm-driven gear H and through its pitman connection with the hood P causes the latter to oscillate back and forth across the opening in the end of said discharge-pipe. This oscillation back and forth of said hood directs the outward throw of the straw. In order that the discharge end of said pipe may not be unduly contracted by said hood, we have provided a cut-away portion V in the pipe A, whereby the straw and air at all times may have ample room to discharge.

We regard ourselves as the first to operate a directing-hood so as to direct the discharging straw in different directions by the utilization of air-currents actuating hood-operating devices and wish to lay broad claim thereto accordingly.

Having thus fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In a pneumatic straw-stacker, the combination with a pneumatic delivery-pipe, of a hood, and its operating device actuated by air-currents delivered by said pneumatic pipe, whereby said hood will direct the discharging straw to different places.

2. In a pneumatic straw-stacker, the combination with a pneumatic delivery-pipe, of a hood mounted thereon and adapted to direct the discharging straw in different directions, and operating devices for said hood including

a fan arranged to receive operating air-currents from said pneumatic pipe.

3. In a pneumatic straw-stacker, the combination with a delivery-pipe, of a fan carried thereby and projecting within said pipe, a hinged hood extending over the end of said delivery-pipe, and mechanism between said fan and said hood whereby when the fan is operated said hood is also operated.

4. In a pneumatic straw-stacker, the combination with a delivery-pipe, of a fan having a shaft carried thereby and projecting within said pipe, a hood hinged to said pipe and adapted to extend across and be removed from the end of said pipe, and mechanism between said fan and said hood whereby when said shaft is operated said hood is also operated.

5. In a pneumatic stacker, the combination with a delivery-pipe, of a fan having a shaft carried thereby and projecting therein, a worm on said shaft, a worm-driven gear meshing with and driven by said worm, a swinging hood hinged to said pipe, and a pitman connecting said hood and said driven gear whereby motion is transmitted from said gear to said hood.

6. In a pneumatic stacker, the combination with a delivery-pipe, of a fan carried thereby having a worm on its shaft, a worm-driven gear meshing with said worm, a hood hinged to said pipe, a crank secured to said hood, and a pitman connecting said driven gear and said crank and adjustable on said crank, whereby when the fan is driven the hood is vibrated across the outer end of said delivery-pipe.

7. In a pneumatic stacker, the following instrumentalities: a pneumatic delivery-pipe, a fan and its casing carried thereby, said fan extending within said delivery-pipe, and having a shaft with a worm, a worm-driven gear meshing therewith and carried by said casing, a hood hinged to said pipe, a crank secured to said hood and having a series of holes, a pitman having a vertical joint and a horizontal joint therein connecting said crank and said driven worm-gear and adapted to engage with any one of said holes in said crank, substantially as shown and described.

In testimony whereof we affix our signatures in presence of two witnesses.

JACOB W. MILLER.
EDWARD HUBER.

Witnesses:
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JOHN J. CRAWLEY.