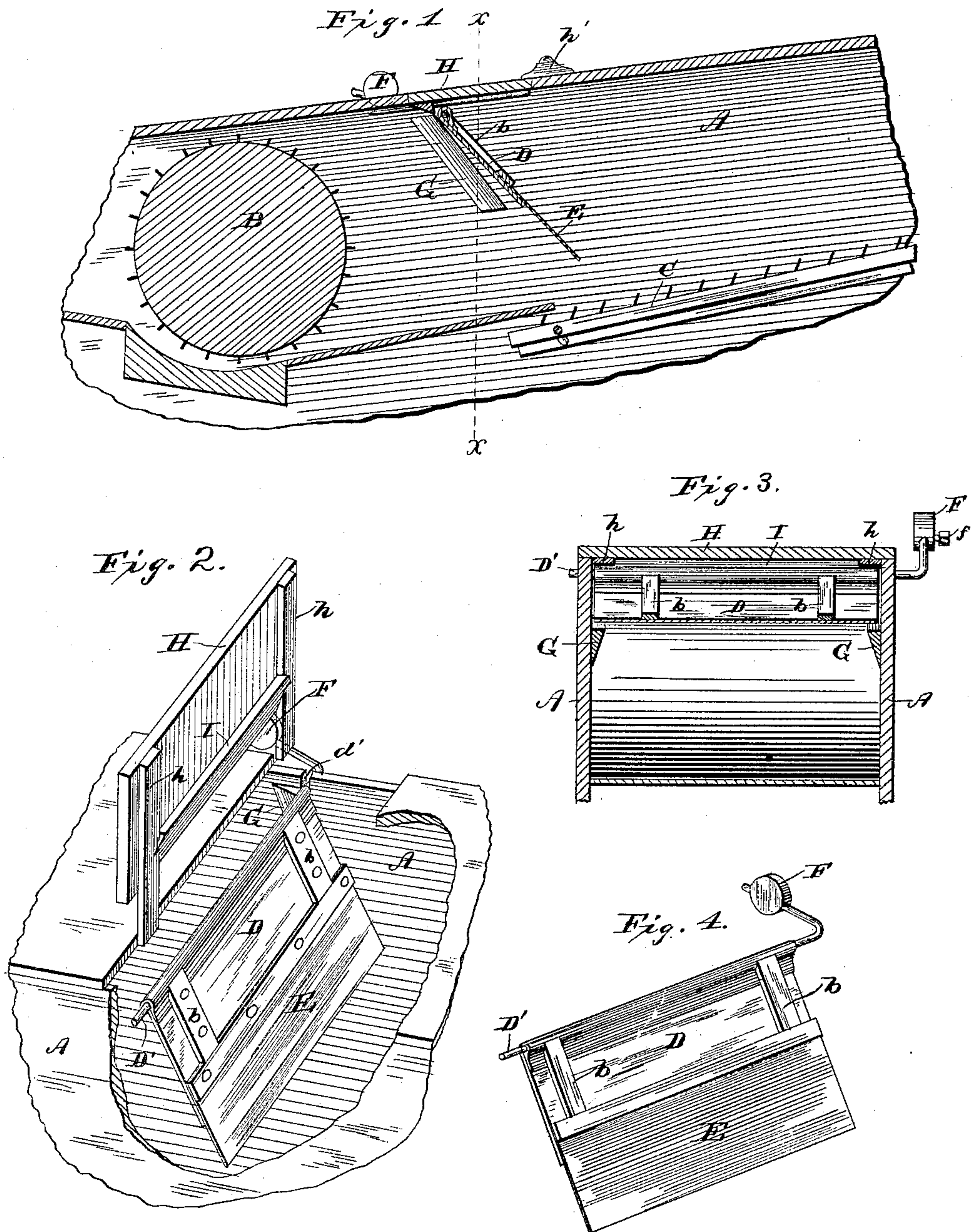


(No Model.)

W. D. HEEBNER.
THRASHING MACHINE.

No. 339,174.

Patented Apr. 6, 1886.



Witnesses.
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A. J. Stewart.

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UNITED STATES PATENT OFFICE.

WILLIAM D. HEEBNER, OF LANSDALE, PA., ASSIGNOR OF TWO-THIRDS TO
DAVID S. HEEBNER AND ISAAC D. HEEBNER, OF SAME PLACE.

THRASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 339,174, dated April 6, 1886.

Application filed December 8, 1885. Serial No. 185,067. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM D. HEEBNER, of Lansdale, in the county of Montgomery and State of Pennsylvania, have invented certain
5 new and useful Improvements in Thrashing-Machines; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and to the figures and letters of reference marked thereon.

My invention relates to the construction of the valves or deflectors for thrashing-machines placed in rear of the thrashing-cylinder and
15 over the straw-carrier for preventing the straw and grain from flying, and the latter from being carried out with the former; and it consists in certain novel details of construction and combinations of parts, which I will now
20 proceed to describe.

In the drawings, Figure 1 is a sectional view of a portion of a thrashing-machine, showing the application of my invention thereto; Fig. 2, a perspective view of the same with casing
25 broken away and with the cover removed; Fig. 3, a cross-sectional view on the line *x x*, Fig. 1; Fig. 4, a perspective view of the valve or deflector and its shaft.

Similar letters of reference in the several
30 figures indicate the same parts.

Heretofore these deflectors or doors have usually been made of a piece of canvas or board hinged to the top of the casing and allowed to hang down vertically, or nearly so,
35 in rear of the thrashing-cylinder. The straw and grain from the latter, moving with a good deal of force, strike against the board and are deflected downward onto the straw-carriers, between which the grain falls into the sieves
40 below, while the straw is carried out and delivered at the rear of the machine.

One of the objections to the ordinary form of deflector is that the straw and grain are liable to be forced in between it and the sides
45 of the casing, thus clogging and preventing its effective operation; and a further objection is that it cannot readily be removed when necessary or desirable, nor is it capable of adjustment so as to offer more or less resistance to

the stream of straw and grain when different
50 kinds are to be thrashed. All these and other objections are, however, remedied by my invention, which provides a cheap serviceable device which is adapted to be adjusted to suit
55 the different varieties of grain being thrashed, is removable, and cannot be clogged by the material or easily get out of order or repair.

A represents the casing of the machine; B, the thrashing-cylinder thereof, and C the straw-carrier. D is the deflector or door, consisting, preferably, of a piece of metal stiffened
60 by cleats or braces *b*, secured to a shaft or rod, D', which has its journals in slots *d' d'* in casing of the machine, as shown. Secured to the lower side of this deflector and extending
65 a short distance below the edge thereof is a piece of canvas or leather, E, forming a flexible end therefor. If desired, the door can be made of wood, with the leather or canvas secured thereto, as described. One end of the
70 shaft D' is bent at right angles, and upon this end is mounted an adjustable sliding weight, F, adapted to be secured in adjusted position by means of the set-screw *f*. The deflector is
75 adapted to be held normally in an inclined position, as shown, resting upon the inclined cleats G, secured to the sides of the casing, and these cleats, it will be observed, are triangular in cross-section, with their sharp edges
80 toward the thrashing-cylinder and the door resting against the flat sides, so there will be no opportunity for the straw and grain to be forced in between and prevent the free movement of the deflector. The arm of the shaft
85 on which the weight is mounted is placed at an angle to the plane of the deflector and on the opposite side of the shaft, so that as the weight is moved toward the outer end of the arm it will tend to raise the deflector from the
90 cleats, so as to permit the grain and straw to pass by more readily. As before stated, the shaft D' has its bearings in small slots *d' d'* in the sides of the casing, and is secured therein
95 by means of the door H, which also permits ready access to be had to the interior of the casing, for the removal of the deflector when desired. To the under side of the door are secured two forwardly-projecting cleats, *h h*,

and a third transverse cleat, I, at its forward edge, beveled, as shown, and with its straight side toward the shaft D', so that the straw and grain coming from the cylinder would be deflected toward the center and would not find lodgment behind it, and the same effect being produced by the cleats G G on the sides against which the deflector rests. This door H and the shafts are fastened in position by inserting the cleats h h beneath the top of the casing, turning the door down and fastening its rear end by means of the turn-button h', or any other suitable fastening device.

The operation of the device, of course, will be readily understood. When short grain—such as oats—is to be thrashed, as the grain and straw are very light and liable to be forced directly out without touching the straw-carriers or the grain passing down to the sieve, the weight F is adjusted near the pivots of the deflector, so that nearly the whole weight will be resisting the passage out of the straw and grain, and it will be deflected down to the straw-carrier, as is desirable. When, however, long grain—as wheat and rye—is thrashed, the weight is adjusted away from the pivot toward the outer end, so that part of the weight of the door will be counterbalanced, and the resistance offered to the passage of the grain and straw will be slight.

The advantages of this construction of de-

flector are numerous, and will be readily appreciated by those using thrashing-machines.

I claim as my invention—

1. In a thrashing-machine, the combination, with a thrashing-cylinder and straw-carrier, of the shaft having the extension or arm on one side of its center and the adjustable counterweight mounted thereon, and the deflector mounted upon the shaft on the side opposite the extension and weight, substantially as described.

2. In a thrashing-machine, the combination, with the casing and the inclined beveled cleats secured to the sides thereof, of the deflector pivoted within said casing and resting upon the cleats at opposite sides, substantially as described.

3. In a thrashing-machine, the combination, with the casing and the inclined cleats secured to the sides thereof, of the deflector secured to the shaft, and the transverse cleat secured to the top of the casing and directly in front of the shaft, substantially as described.

4. The combination, with the pivoted counterbalanced deflector, of the flexible material—such as canvas—secured to its lower side, substantially as described.

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Witnesses:

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