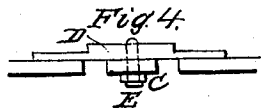
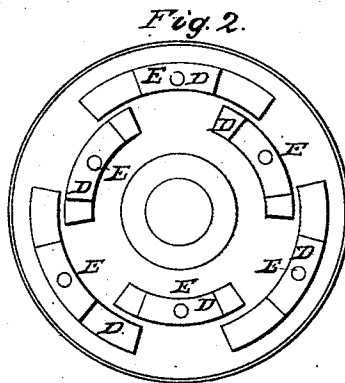
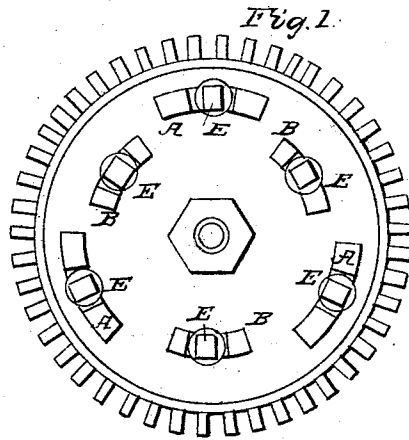


D. R. AVERILL.

Balancing Thrashing Machine Cylinders.

No. 18,369.

Patented Oct. 6, 1857.



Witnesses,
W. M. Watson
John Crawford

Inventor,
D. R. Averill

UNITED STATES PATENT OFFICE.

D. R. AVERILL, OF PULASKI, NEW YORK, ASSIGNOR TO HIMSELF, JAS. F. DAVIS, AND
HENRY TWITCHELL.

METHOD OF BALANCING THRESHING-CYLINDERS.

Specification of Letters Patent No. 18,369, dated October 6, 1857.

To all whom it may concern:

Be it known that I, DAMON R. AVERILL, of Pulaski, in the county of Oswego and State of New York, have invented an Improve-
5 ment in Balancing Threshing-Cylinders, the construction and operation of which I have described in the following specification and illustrated in the accompanying drawings with sufficient clearness to enable competent
10 and skilful workmen in the arts to which it pertains or is most nearly allied to make and use my invention.

My said invention consists in: hanging weights in circular slots in the cylinder ends
15 in such a manner that their position may be changed so as to balance the cylinder, while at the same time, their centrifugal force caused by the rotation of the cylinder cannot throw them out of place.

20 In the accompanying drawings: Figure 1, is an external elevation of one of the ends of the cylinder, the other end being similar in every respect. Fig. 2, is an internal elevation of the same thing. Fig. 3, is an internal
25 elevation of one of the sliders or weights hereafter described. Fig. 4, is an elevation of the edge of the same thing.

The end of the cylinder is perforated with six circular slots, A, A, A, B, B, B, all concentric with the axis; three of these slots,
30 A, A, A, are nearer to the circumference than the remaining three, and are so placed that their central points divide the ring of which they form a portion into equal parts.
35 The three remaining slots, B, B, B, for portions of another ring, so much smaller than the preceding, that sufficient space is left on the inner surface of the end, for the sliding pieces or weights C, C, C, to pass each
40 other without touching. The position of these latter slots is such, that their central points divide the spaces between the central points of the outer slots into equal parts.

A slider or weight works in each slot, which
45 is shown in Fig. 4, the parts C and D forming one piece, of which the part C, works in one of the slots, while the part D moves around upon and projects from the inner surface of the end of the cylinder. The part
50 C may be moved along the whole length of

the slot, if necessary, and the inner part D is made of sufficient length to cover the end of the slot whatever may be the position of the part C, and so broad as to cover the
55 edges. The surfaces of the slider and cylinder head which come into contact are fitted to each other so as to effectually exclude dirt and dust. The slider or weight is kept in position by means of the screw bolt
60 E, the head of which is made sufficiently large to take a bearing on the end of the cylinder beyond the sides of the slots. The middle portions of the parts D of the sliders are made thicker than the extremities, which
65 are rabbeted down to the latter thickness as shown.

By slackening the bolt E in any slider, and altering the position of the part C in the slot, a corresponding alteration is made
70 in the position of the inner part D of the slider, and by tightening the bolt this alteration is made permanent as long as may be requisite; this permanency arises from the
75 fact, that the only disturbing cause must proceed from the centrifugal force of the cylinder when rotating, having a tendency to throw the sliders or weights from the center, which force is completely counteracted
80 in consequence of said weights being confined in concentric instead of radial slots. The sliders or weights may therefore be distributed and fixed at unequal distances over
85 the inner surfaces of the ends of the cylinder, and by means of this unequal distribution may be made to neutralize any want of balance existing in the cylinder from any cause whatever.

The particular improvement which constitutes my said invention, and which I claim
90 as having been first and originally invented by me, is:

Hanging the movable weights or sliders in circular slots concentric with the axis of the cylinder, by which means the centrifugal
95 force of the cylinder is prevented from throwing them out of position, as set forth.

D. R. AVERILL.

Witnesses:

J. B. WATSON,
JOHN CRAWFORD.