(No Model.)

W. B. ANTHONY.

GRAIN SCOURER.

No. 454,159. Patented June 16, 1891.

Fig. 1.

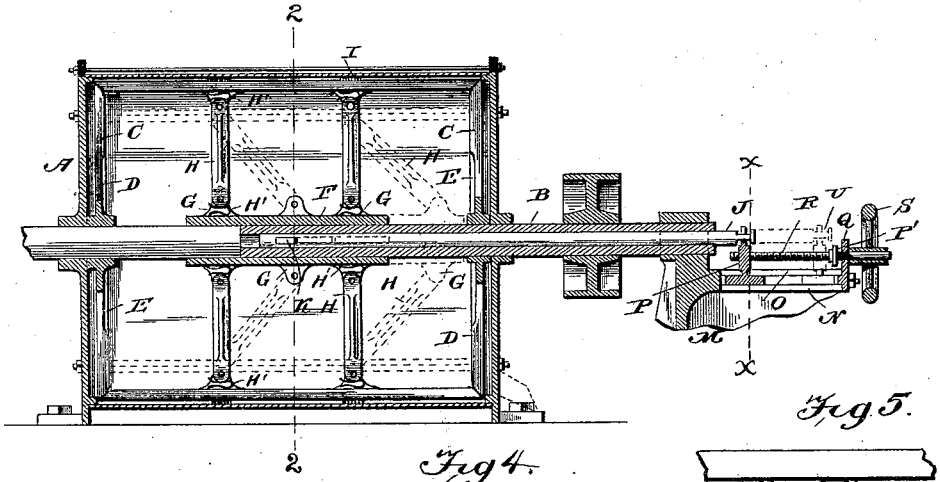


Fig. 4.

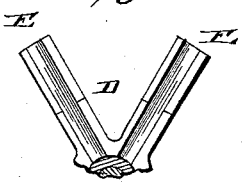


Fig. 5.

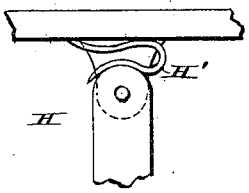


Fig. 2.

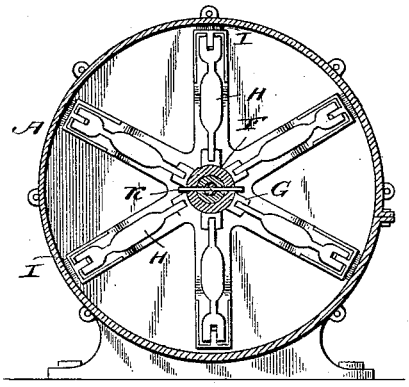
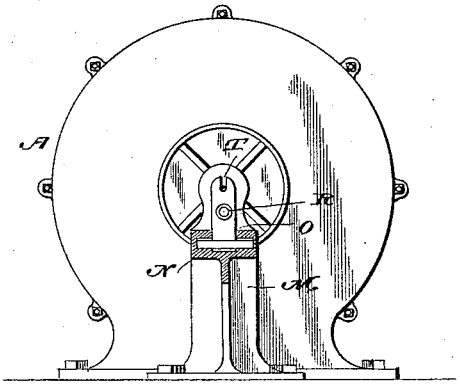


Fig. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

WILLIAM B. ANTHONY, OF CETRONIA, PENNSYLVANIA.

GRAIN-SCOURER.

SPECIFICATION forming part of Letters Patent No. 454,159, dated June 16, 1891.

Application filed February 14, 1891. Serial No. 381,438. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM B. ANTHONY, a citizen of the United States, residing at Cetronia, in the county of Lehigh and State of Pennsylvania, have invented certain new and useful Improvements in Grain-Scourers, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to improvements in grain-scourers, and has especial reference to the mechanism for adjusting the brushes to and away from the cylinder, the object being to provide a mechanism by the use of which the brushes can be readily and easily moved into the desired position while the machine is in operation.

The invention consists in certain novel features of construction and arrangement, as hereinafter more fully disclosed in the drawings, specification, and claim.

In the annexed drawings, which fully illustrate my invention, Figure 1 is a longitudinal section of a grain-scourer cylinder provided with my improvements. Fig. 2 is a transverse section of the same on line 2 2 of Fig. 1, and Fig. 3 is a detail section on the line *x x* of Fig. 1. Fig. 4 is a detail view of a portion of one of the end frames, and Fig. 5 is a detail view of the connection between the end of the arm and the brush.

The cylinder A is of the usual or any preferred construction, and is mounted upon a hollow driving-shaft B, as shown. On the said shaft B, within the cylinder and at the ends of the same, I secure the frames C, which consist, essentially, of a series of radial arms D, having longitudinal grooves E in their inner faces. A sleeve F is mounted on the driving-shaft and is adapted to slide freely thereon. This sliding sleeve is provided with the radial lugs G, to which I pivot the inner ends of the links or arms H, the outer ends of which are pivoted to the brushes I. Springs H′ are secured to the sleeve and to the brushes, and bear on the ends of these arms to hold them firmly in their positions and to prevent all lost motion and the consequent wear. The ends of the brushes engage the grooves E, and the said brushes are thereby guided in their movements.

A shifting-rod J is fitted in the hollow shaft B, and its inner end is connected with the sliding sleeve by a pin or key K inserted through the said sleeve and the end of the rod and passing through a longitudinal slot L in the shaft. The shifting-rod can thus be moved longitudinally in the shaft and the sleeve thus adjusted, said movement being limited by the pin or key coming into contact with the end walls of the slot.

The outer end of the driving-shaft is mounted in a bearing on a support M, which may be a separate standard or a part of the machine, and the said support is provided with a horizontal arm N, having ways O, in which a slide P is mounted. At the outer end of the arm N there is a projection Q, in which I mount a screw-threaded rod R, which is provided with a hand-wheel S at its outer end, and has its inner end engaging an internally-threaded opening in the slide P. The upper end of the slide P is forked, as shown at T, and the said fork engages an annular groove U in the outer end of the shifting-rod J. A binding nut or wheel P′ is mounted on the screw-threaded rod, near the outer end of the same, and is adapted to be turned up against the outer bearing of the rod, so as to hold it firmly in its adjusted position.

The construction and arrangement of the several parts of my device being thus made known, it is thought the operation of the same will be readily understood. When the hand-wheel S is rotated, the worm-shaft or screw-threaded rod will be turned and will act on the slide P, so as to move the same to or away from the support M, according to the direction in which the wheel is turned. The slide, being connected to the shifting-rod, will cause the said rod to move simultaneously with itself, and thus impart motion to the sleeve F. This movement of the sleeve F will move the inner ends of the arms H toward the ends of the cylinder, and as the brushes will be prevented from moving longitudinally by the frames C they will be forced to move radially, and thus be adjusted to or away from the cylinder, as will be readily understood upon reference to the dotted lines in Fig. 1.

It is obvious from the foregoing description that I have provided an extremely simple mechanism by means of which the brushes can be readily adjusted to and away from the

cylinder while the machine is in operation and without in any way affecting the success of the operation.

My improvements can be applied to any horizontal grain-scourer now in use, and it is not necessary to especially construct a machine in order to employ them.

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

The combination of the cylinder, the frames secured in the ends of the same and provided with radial grooves, the brushes having their ends engaging said grooves, the hollow driving-shaft, the arms having their opposite ends pivoted, respectively, to the said sleeve and to the brushes, springs secured to the sleeve and the brushes and bearing on the ends of the arms, the shifting-rod mounted in the driving-shaft and connected with the sleeve, the support M, the slide thereon engaging the end of the shifting-rod, the screw-threaded rod mounted on the support and engaging the said slide, and the hand-wheel or binding-nut mounted on the said rod and adapted to be turned home against the outer bearing of the same, substantially as specified.

In testimony whereof I affix my signature in the presence of two witnesses.

WILLIAM B. ANTHONY.

Witnesses:
EMERSON F. SCHOCK,
HENRY G. WILSON.