

(No Model.)

2 Sheets—Sheet 1.

J. HUGHES.

THRASHING MACHINE.

No. 264,294.

Patented Sept. 12, 1882.

Fig. 1.

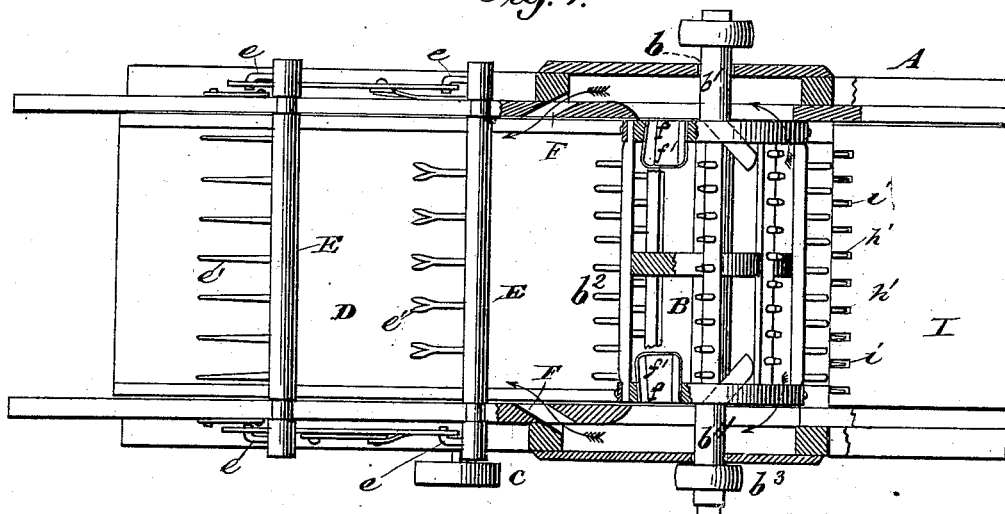


Fig. 2.

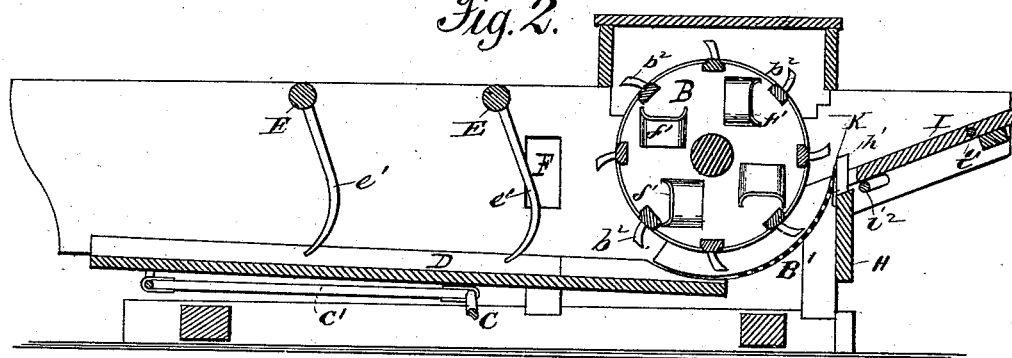
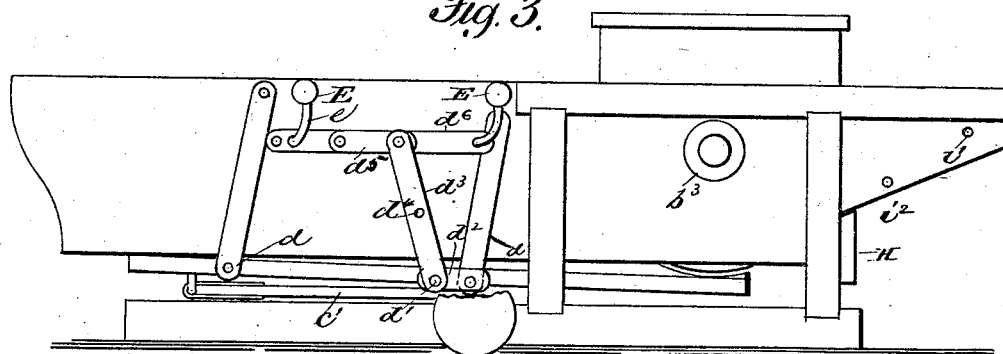


Fig. 3.



Witnesses.
A. Rupper A.
W. H. Knight

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Fig. 4.

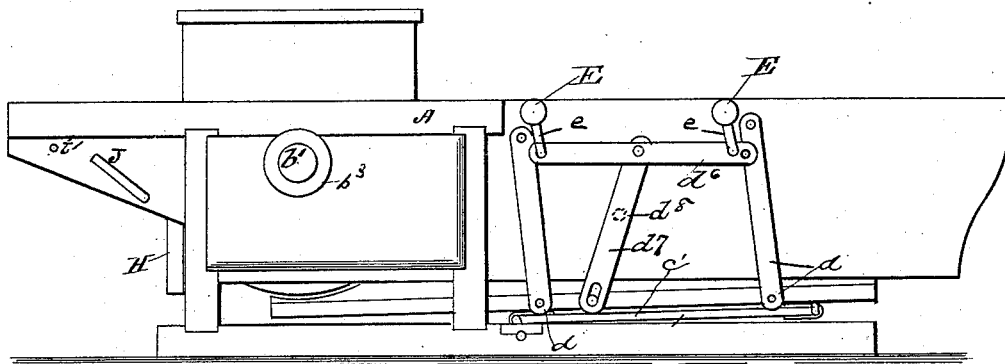


Fig. 5.

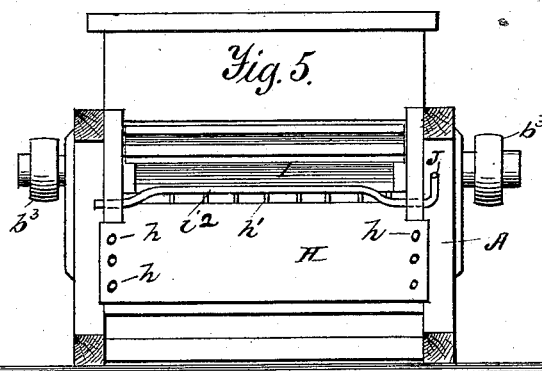
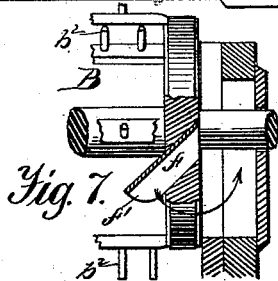
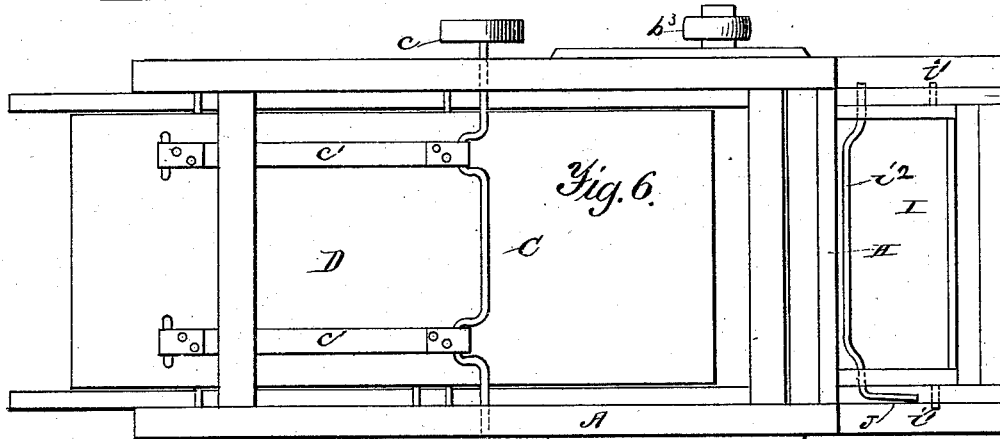


Fig. 6.



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Fig. 7.

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UNITED STATES PATENT OFFICE.

JOHN HUGHES, OF MANSFIELD, OHIO.

THRASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 264,294, dated September 12, 1882.

Application filed October 11, 1881. (No model.)

To all whom it may concern:

Be it known that I, JOHN HUGHES, a citizen of the United States, residing at Mansfield, in the county of Richland and State of Ohio, have invented certain new and useful Improvements in Thrashing-Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters or figures of reference marked thereon, which form a part of this specification.

My invention relates to a combined thrasher, band-cutter, straw-carrier, and separator; and the novelty consists in the construction and arrangement of parts, as will be more fully hereinafter set forth, and specifically pointed out in the claims.

The invention is fully illustrated in the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a plan, partly in section. Fig. 2 is a central vertical longitudinal section; Fig. 3, a left elevation; Fig. 4, a right elevation; Fig. 5, a front elevation; Fig. 6, a plan of the bottom, and Fig. 7 a detail of a machine constructed in accordance with my invention.

Referring to the drawings, in which the same letters of reference indicate the same or corresponding parts in all the figures, A represents the frame, in which is journaled, at *b*, the shaft *b'* of a revolving beating-cylinder, B, having beating-teeth *b''*, arranged upon longitudinal beams secured at each end to one of the cylinder-heads, the arms on each succeeding beam being situated opposite the space between two arms on the preceding beam, so that during each revolution of the cylinder all portions of the concave located beneath it will be passed over or traversed by the arms. The shaft *b'* may be provided with a pulley, *b''*, which is adapted to be belted to a pulley, *c*, upon a crank-shaft, C, Fig. 2, upon the crank-arms of which are pivoted levers *c'*, which operate the shoe D. To this shoe are secured metal straps *d d*, which support it in such a manner that it can be vibrated.

To the front strap, *d*, at its point of attach-

ment to the shoe, is pivotally secured a link, *d''*, which connects pivotally with an arm, *d'''*, pivoted at *d''* to the frame A, and a link, *d''''*, connects pivotally with a horizontal arm, *d'''''*, as shown. The arm *d''''* is connected by a crank-arm, *e*, at two or more places with rock-shafts E, carrying arms or forks *e'*, as shown. It will be observed that this construction of parts not only vibrates the shoe, but that as the shoe recedes the pitching arms or forks *e'* have at their free ends a quick motion in the opposite direction, and vice versa, on account of the increased length of said forks over that of the arms *e*.

A modification of the system of connections between the vibrating shoe and the pitching-arms is shown upon the opposite side of the machine in Fig. 4 of the drawings, wherein the arm *d''''* is connected directly with the rear shoe-supporting strap, *d*; or it may be connected to the shoe by a slotted strap, *d'''''*, pivoted to the frame at *d''''''*.

Inclined chutes *f* reach through the heads of the beating-cylinder B, and are provided with inwardly-projecting similarly-inclined flaring mouth-pieces *f'*, which serve to induce a current through a channel, F, formed in the frame A, the exit of which is above or below the vibrating screens in the shoe, as may be desired.

In Fig. 5, H represents a transverse board, which is adjustable vertically by means of the holes *h*, or any other convenient means, and it carries the band-cutters *h'* in such a manner that the said cutters may be placed in or out of operation at will by reason of the adjustment *h*. The band-cutters *h'* project through kerfs *i* in a feed-board, I, pivoted at *i'*, and adjusted at will by a crank-shaft, *i''*, having external arm, J, operating in a proper segmental rack. This construction allows the feed-board to be elevated or depressed at will, and to thus expose more or less of a toothed or serrated portion, K, which serves to retard the feed of grain by engaging the lower portions thereof, and by reason of the friction between the straws or stalks of the gavel.

What I claim as new, and desire to secure by Letters Patent of the United States, is—

1. In a thrasher and separator, a cylinder

provided with arms arranged in the order described, and rigidly connected to the cylinder, combined with a stationary retarding device and a concave perforated as shown, and having no stationary arms, as specified.

2. In a thrasher and separator, the combination of a shoe adapted to be vibrated, a series of forks secured to rock-shafts, a bar connecting the arms of the rock-shafts, and a link pivoted to the frame-work and connected to said bar and to the shoe, substantially as shown and described.

3. The combination of the forks c' , secured to the rock-shaft E, the arms e , the bar d^6 , le-

ver d' , pivoted to the frame-work, and the shoe D, substantially as shown and described.

4. The combination of the feed-table I, pivoted at i' , the crank-shaft i^2 , the fixed retarding device K, the toothless perforated concave B', and the cylinder B, substantially as shown and described.

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

JOHN HUGHES.

Witnesses:

JOSEPH FORREST,

H. CLAY SMITH.