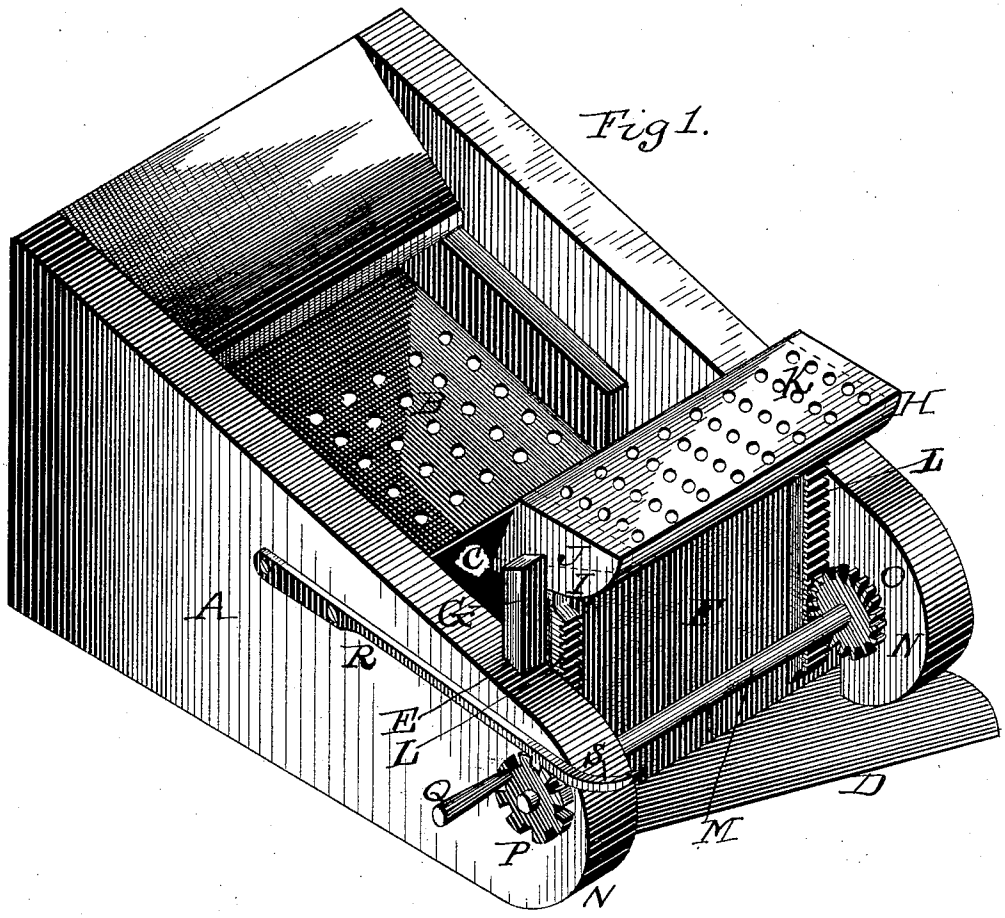
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C. B. DOW.

SEPARATOR SHOE FOR THRASHING MACHINES.

No. 345,285. Patented July 13, 1886.

Fig 1.



Witnesses:
B. C. Tennick.
Chas J. Gooch

Inventor
Charles B. Dow
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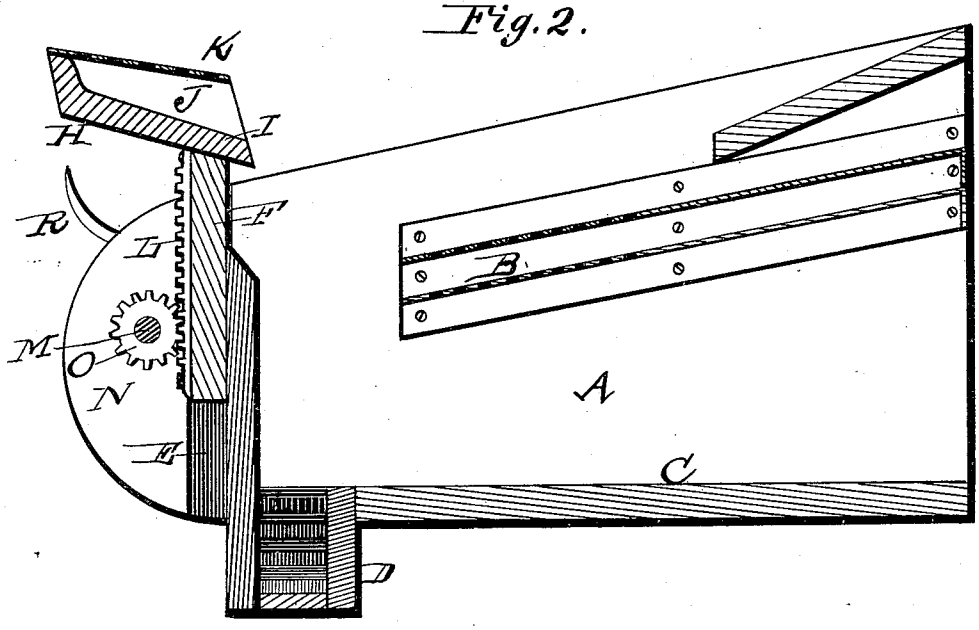
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C. B. DOW.

SEPARATOR SHOE FOR THRASHING MACHINES.

No. 345,285. Patented July 13, 1886.

Fig. 2.



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UNITED STATES PATENT OFFICE.

CHARLES B. DOW, OF MANCHESTER, DAKOTA TERRITORY.

SEPARATOR-SHOE FOR THRASHING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 345,285, dated July 13, 1886.

Application filed October 31, 1885. Serial No. 181,486. (No model.)

To all whom it may concern:

Be it known that I, CHARLES B. DOW, a citizen of the United States of America, residing at Manchester, in the county of Kingsbury and Territory of Dakota, have invented certain new and useful Improvements in Separator-Shoes for 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 letters or figures of reference marked thereon, which form a part of this specification.

This invention relates to improvements in separator-shoes for thrashing-machines.

It consists of a shoe having grooved sides, a tail-board having a rearwardly or extending portion, a return-riddle having side wings adapted to fit within said grooves, and racks on its outer face, a shaft journaled within the shoe-frame, and having pinions mounted thereon to engage the racks, a ratchet-wheel keyed to one end of the shaft, and having an operative arm or handle, and a pawl pivoted to the shoe, so as to engage the ratchet-wheel, as and for the purposes hereinafter described.

Figure 1 of the drawings represent a perspective view, partly broken away, of a separator-shoe constructed according to my improvements. Fig. 2 represents a longitudinal section of the separator-shoe.

A represents the frame or body of the separator-shoe of a thrashing-machine, and B the screen suspended therein, in an ordinary manner, so as to have the customary shaking motion imparted thereto.

C represents the floor or bottom of the shoe, which is inclined and has at one end an inclined elevator-spout, D.

E represents vertical grooves formed in the inner faces of the rear ends of the side walls of the shoe.

F represents the tail-board, which, at its ends, is provided with wings or flanges G, which, when the tail-board is in position, rest within the grooves E, and are by them held in position and guided during its vertical movements. The upper portion of this tail-board is constructed with an upwardly and rearwardly extending portion, H, having an inclined bottom, I, and to the upwardly-extending sides J of which is secured an inclined return-riddle, K. This riddle K extends rearwardly about ten inches beyond the tail-board.

L L represent racks connected, respectively, to the outer face of the tail-board, and preferably at or near each end thereof, as shown.

M represents a shaft journaled within the rearwardly-projecting portions N of the shoe-frame, and having keyed thereon cogs or pinions O O, which engage with the racks L on the tail-board, so as to raise or lower the same, according to the direction in which said shaft is revolved. One end of the shaft M extends through and projects from the outer face of one side of the rear of the shoe, and has keyed thereon a ratchet-wheel, P, having a handle or arm, Q, projecting therefrom, by means of which said ratchet, and consequently the shaft M connected thereto, may be revolved.

R represents a pawl pivoted at its front end to the side of the shoe, and having near its opposite end a downwardly-projecting tooth or lug, which engages with the ratchet-wheel for the purpose of holding it and the shaft from rotary movement. The rear or free end of this pawl is extended in an upward curve, S, to permit of the operator raising the pawl out of engagement with the ratchet-wheel when it is desired to rotate the shaft for the purpose of either raising or lowering the tail-board and return-riddle. When it is desired to adjust the vertical position of the tail-board and riddle thereon, either by raising or lowering the same, the operative places his finger against the under side of the curved end S of the pawl R, and presses upwardly thereon, whereupon said lever is released from engagement with the ratchet-wheel P. Then, by grasping the handle or arm Q, said wheel can be turned in either direction, as it may be desired, to either raise or lower the tail-board and riddle thereon. Upon the ratchet P being thus rotated a corresponding rotary movement is imparted to the shaft M, to which said wheel is keyed, and as said shaft revolves the cogs or pinions O thereon engage with the racks, L upon the tail-board, and force said tail-board either up or down, according to the direction in which the shaft is rotated.

By attaching the racks L to the tail-board,

as shown, they serve as a support and strengthener of the return-riddle.

In practice I have found that by extending the return-riddle rearwardly beyond the perpendicular tail-board I am enabled to save all the grain that is ordinarily lost and wasted where the return-riddle does not extend rearwardly beyond the tail-board, and that by forming the bottom of the return-riddle inclined the grain is delivered to the elevator-spout without waste or loss.

By rendering the tail-board and return-riddle thereon adjustable the operator can apply more or less wind, as may be desired, and thus secure a more effective cleaning of the grain without danger of waste thereof, as has sometimes occurred heretofore. This is very important, as in thrashing flax and damp grain the tail-board can be very readily adjusted by even the least skilled operative, so as to secure the application of enough wind to secure the clean working of the sieves and entirely prevent their clogging.

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

A separator-shoe having grooved sides, in combination with a tail-board having a rearwardly-extending portion, a return-riddle having side wings adapted to fit within the grooves, and racks on its outer face, a shaft journaled within the framing of the shoe, and having pinions mounted thereon to engage said racks, a ratchet-wheel keyed to one end of the shaft, and having an operative arm or handle, and a pawl pivoted to the shoe and adapted to engage the ratchet-wheel on the shaft, substantially as and for the purpose set forth.

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

CHARLES B. DOW.

Witnesses:
A. M. KELLER,
HUGH CURLEY.