2 Sheets—Sheet 1.

A. H. JOHNSON.

Shoes for Grain-Thrashers, &c.

No. 225,838. **Patented Mar. 23, 1880.**

Fig. 1.

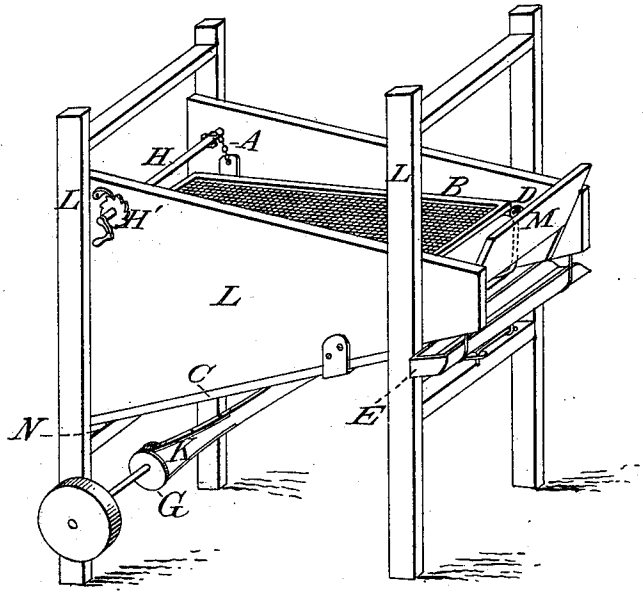
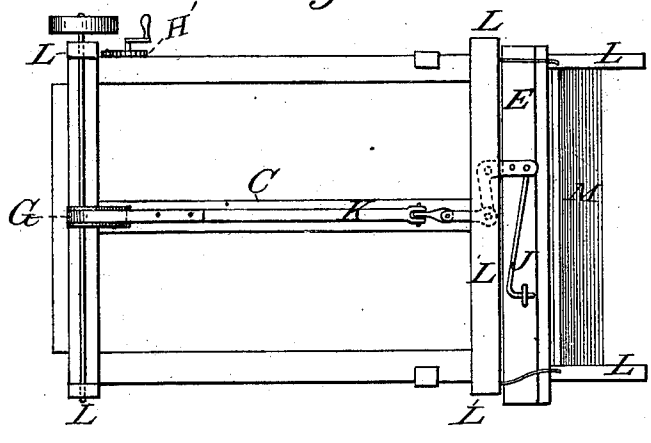


Fig. 2.



Attest:

Hudson Grant

B S Dennis

Inventor.

Arthur H Johnson

2 Sheets—Sheet 2.

A. H. JOHNSON.

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Fig. 3.

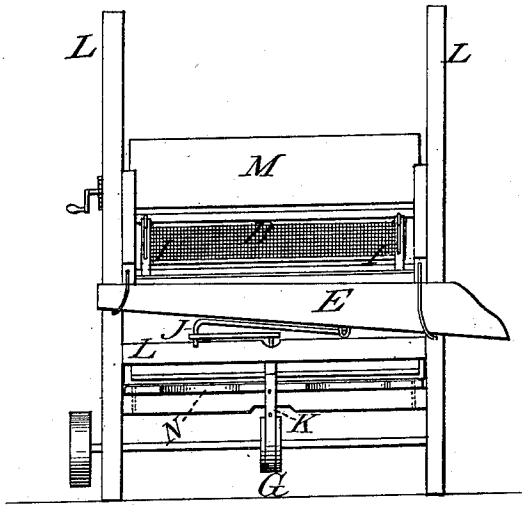
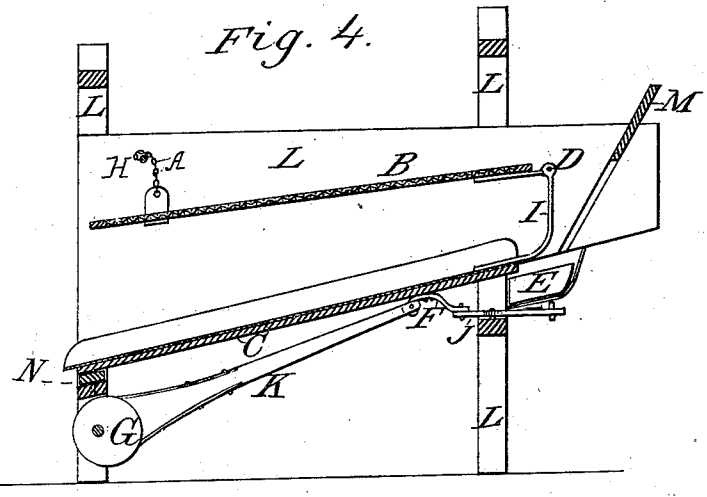


Fig. 4.



Attest:

Hudson Grant

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Inventor.

Arthur H Johnson

UNITED STATES PATENT OFFICE.

ARTHUR H. JOHNSON, OF WOODLAND, CALIFORNIA.

SHOE FOR GRAIN-THRASHERS, &c.

SPECIFICATION forming part of Letters Patent No. 225,838, dated March 23, 1880.

Application filed August 15, 1879.

To all whom it may concern:

Be it known that I, ARTHUR HENRY JOHNSON, of Woodland, Yolo county, California, have invented a new and useful Improvement on Shoes for Grain Thrashers and Separators; and I do hereby declare that the following is a full and clear description of the construction and operation of the same, reference being had to the annexed drawings, said drawings making a part of this specification, in which—

Figure 1 is a view, in perspective, of a shoe for grain thrashers and separators embracing my invention. Fig. 2 is a bottom view of the same. Fig. 3 is an end view of the same. Fig. 4 is a vertical longitudinal sectional view of the same.

Similar letters of reference indicate corresponding parts in the four figures.

A is the regulating-chain, by means of which the riddle or screen B is held at the proper elevation.

B is the riddle, upon which the thrashed grain is discharged, and which separates the grain from the chaff and other foreign substances.

C is the grain-board, upon which the grain drops after passing through the riddle, and by which it is discharged into the conveyer or chute which carries it from the machine.

D represents a pivotal joint-connection, which allows the riddle and grain-board to vibrate or be shaken backward and forward, both moving the same way at the same time, thus avoiding the alternate shake or vibration which is necessary in machines now in use.

E represents the cross end vibrating or shaking conveyer, which carries the unthrashed heads of grain to the elevators.

F represents the connection which gives the vibrating motion to the conveyer E.

G represents the eccentric, which gives the vibrating or shaking motion to the riddle B, grain-board C, and conveyer E, through suitable connection.

J represents the rod which connects the grain-board with the cross end conveyer E and the eccentric.

K represents the rod which connects the eccentric G with the connection F.

L represents the frame in which the whole apparatus works.

H represents the windlass-rod, to which the chain A is fastened, by means of which the riddle or screen B may be raised or lowered to the proper height while the machine is in motion, thereby avoiding the necessity of stopping the machinery in order to properly adjust the screen or riddle B, thus saving much inconvenience and valuable time.

H′ represents the ratchet by means of which the windlass-rod is held and the riddle B kept in the proper place.

I represents a crooked connecting rod or bar, connecting the screen or riddle B with the grain-board C, compelling them to move in the same direction at the same time, thus avoiding the alternate shake.

It will be seen from the foregoing specification and drawings that my improvement consists of a riddle or screen pivotally connected to and supported at its outer or rear end by the grain-board, by means which cause both to be vibrated at the same time and to the same extent and with equal speed; and, in connection therewith, I provide means whereby the inner or forward end of the screen may be adjusted vertically, as may be required to suit the character and feed of the grain, and without interfering with its free longitudinal movements.

The means for effecting these movements of the screen and grain-board also serve to impart to the cross end conveyer for the thrashed heads of grain and the tailings a simultaneous vibration crosswise the end of the machine, and these vibrating parts are connected and operated simultaneously from a single eccentric, rendering the machine effective for the proper separation and cleaning of the grain.

The vertical adjustment of the screen is to give the proper angle to prevent its loading or becoming choked, and being suspended at its rear end for such adjustment, and supported at a single central pivot-point at its outer or rear end, avoids the liability of the screen becoming fast in the side grooves by which it is usually supported. The adjustment of the screen is made by the hand device on the outer side of the frame.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. The screen or riddle B, pivotally connected to and supported by the outer or rear end of the grain-board C by means of the arm-connection D I, substantially as and for the purpose herein set forth.

2. The combination of the reciprocating grain-board C, the upwardly-bent arm I, the riddle or screen B, hinged to and supported at its outer or rear end by said arm-connection, and provided with vertically-adjusting cords at its forward end, whereby simultaneous longitudinal movement is imparted to the grain-board and screen, and the latter adjusted during the operation without interfering with its free movement, substantially as herein set forth.

ARTHUR H. JOHNSON.

Witnesses:
HUDSON GRANT,
B. S. DENNIS.