

F. JOHNSON.  
Grain-Separators.

No. 152,291.

Patented June 23, 1874.

Fig. 1.

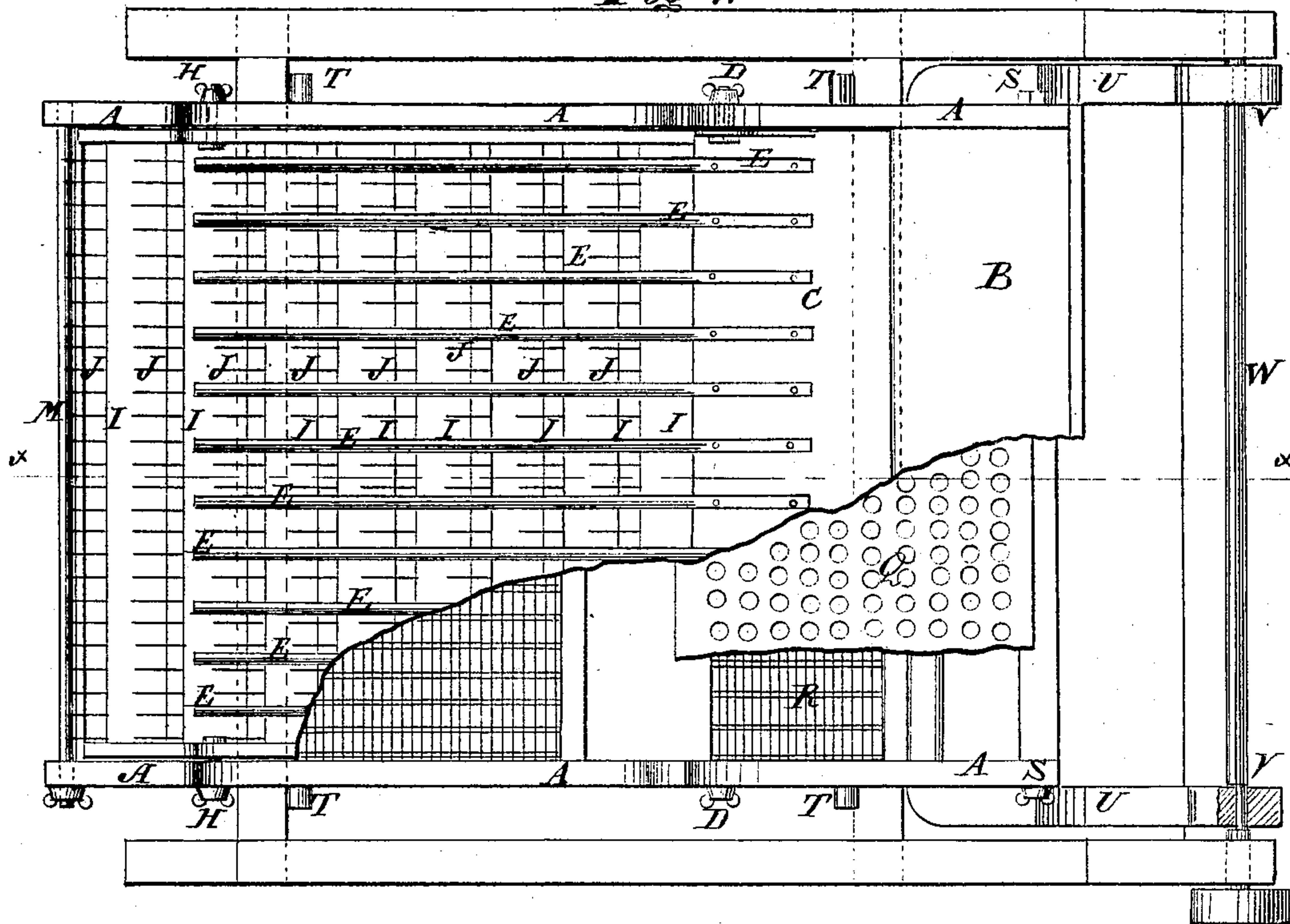
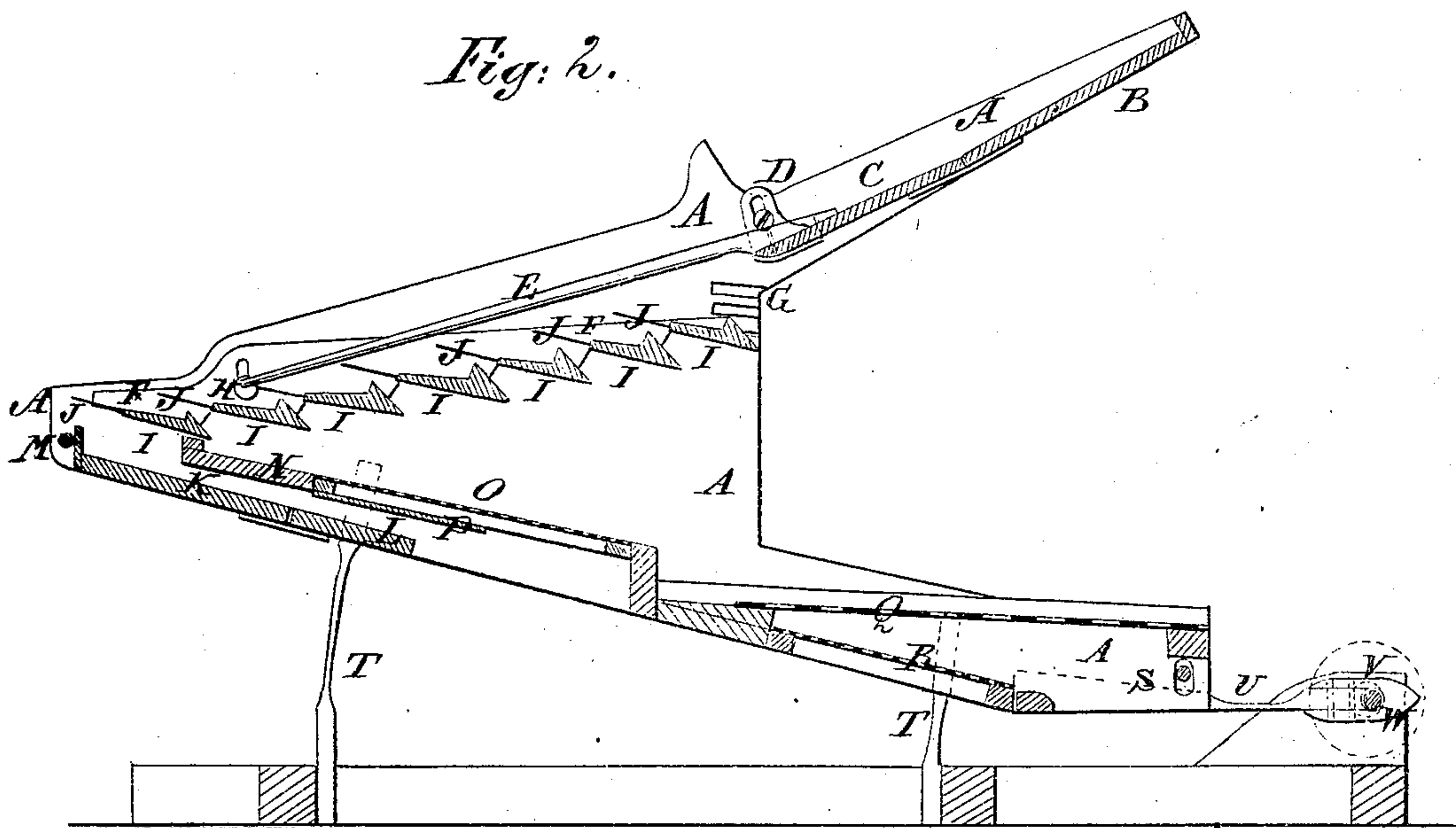


Fig. 2.



Witnesses:

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# UNITED STATES PATENT OFFICE.

FRANK JOHNSON, OF FREDERICKSBURG, MISSOURI.

## IMPROVEMENT IN GRAIN-SEPARATORS.

Specification forming part of Letters Patent No. **152,291**, dated June 23, 1874; application filed March 7, 1874.

*To all whom it may concern:*

Be it known that I, FRANK JOHNSON, of Fredericksburg, in the county of Gasconade and State of Missouri, have invented a new and useful Improvement in Grain Separator and Cleaner for Thrashers, of which the following is a specification:

Figure 1 is a top view of my improved device, parts being broken away to show the construction. Fig. 2 is a vertical longitudinal section of the same, taken through the line *xx*, Fig. 1.

Similar letters of reference indicate corresponding parts.

The invention relates to an improvement in grain-separating and cleaning attachments for thrashers, as hereinafter described and specifically indicated in the claim.

A represents the side boards of the shoe, to the upper forward part of which is attached the board B C, upon which the straw and grain are received from the thrasher. The upper part B of the receiving-board is stationary, and the lower part C may be hinged or pivoted at its upper edge to the said upper part or to the shoe A. The lower edge of the lower part C is secured adjustably to the shoe A by bolts D, which pass through the side boards of the said shoe, and through slotted lugs attached to said hinged board C. To the adjustable board C are attached fingers E about three inches apart, and two feet, more or less, in length, along which the straw slides, while the grain drops through. To the sides of the shoe A below the fingers E is attached a frame, F, to the side edges of the forward end of which are attached, or upon them are formed, short tongues, which enter grooves G in the side boards A of the shoe, so that the forward end of said frame F may be adjusted higher or lower by shifting it from one to another of said grooves. The rear end of the frame F is supported by bolts H, which pass through holes in the side boards A of the shoe, and through slots in the rear parts of the side bars of the said frame F. To the side bars of the frame F are attached the ends of the cross-slats I, which are arranged one inch apart, and the forward edge of each rear slat one-half an inch below the rear edge of the next

forward slat. The slats I are made about half an inch thick and four inches wide, and to their rear edges are attached wires J, about one-quarter of an inch apart, and which project about four inches. The forward edges of the slats I are made thicker and are beveled off, or have narrow inclined plates attached to them, so as to allow the grain to pass through, and also to give the blast of air a proper direction to blow off the chaff. K L is the tailings-board, the lower part L of which is stationary, and from its lower and forward edge the tailings drop into the conveyer placed beneath, and which is not shown in the drawings. The upper part K of the tailings-board is hinged at its lower and forward edge to the rear edge of the part L, and its rear edge is secured at any desired elevation by a long rod, M, which passes through the rear ends of the side boards of the shoe A, and has a head formed upon one end, and a hand-nut screwed upon its other end. N is the grain-board, the forward edge of which is hinged or pivoted at the rear edge of the cheat or cockle screen O, so that its rear edge may have a vertical movement of about two inches. The rear part of the cheat and cockle screen O is covered upon its lower side with a plate, P, to carry the small seeds that pass through said screen O over the tailings-conveyer. Q is a screen for separating any heavy substance that the blast of air from the fan cannot remove. R is a cheat or cockle screen, placed beneath the rear part of the screen Q, and below and in front of which is placed the grain-conveyer, which is not shown in the drawings. The screens Q R are secured in place by a long bolt, S, which passes through the lower forward part of the shoe A, and has a head formed upon one end and a hand-nut screwed upon its other end. The screens Q R are placed below the fan, so that the blast from said fan can only strike the screen O and slats I. The screens O R may be removed and replaced with boards when desired. The shoe A is supported by four upright spring-standards, T, which are so formed as to allow the shoe to have a longitudinal but no lateral movement. To the outer sides of the lower part of the forward ends of the sides of the shoe A are attached the rear ends of the spring

connecting bars U, the forward ends of which work on short cranks V formed upon the shaft W, which revolves in bearings in the frame of the machine, and may be driven from the cylinder or fan shaft, as may be convenient.

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

The combination, with shoe A and adjustable frame F, having slats and wires, as specified, of the adjustable board C and fingers E, as shown and described.

FRANK JOHNSON.

Witnesses:

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