

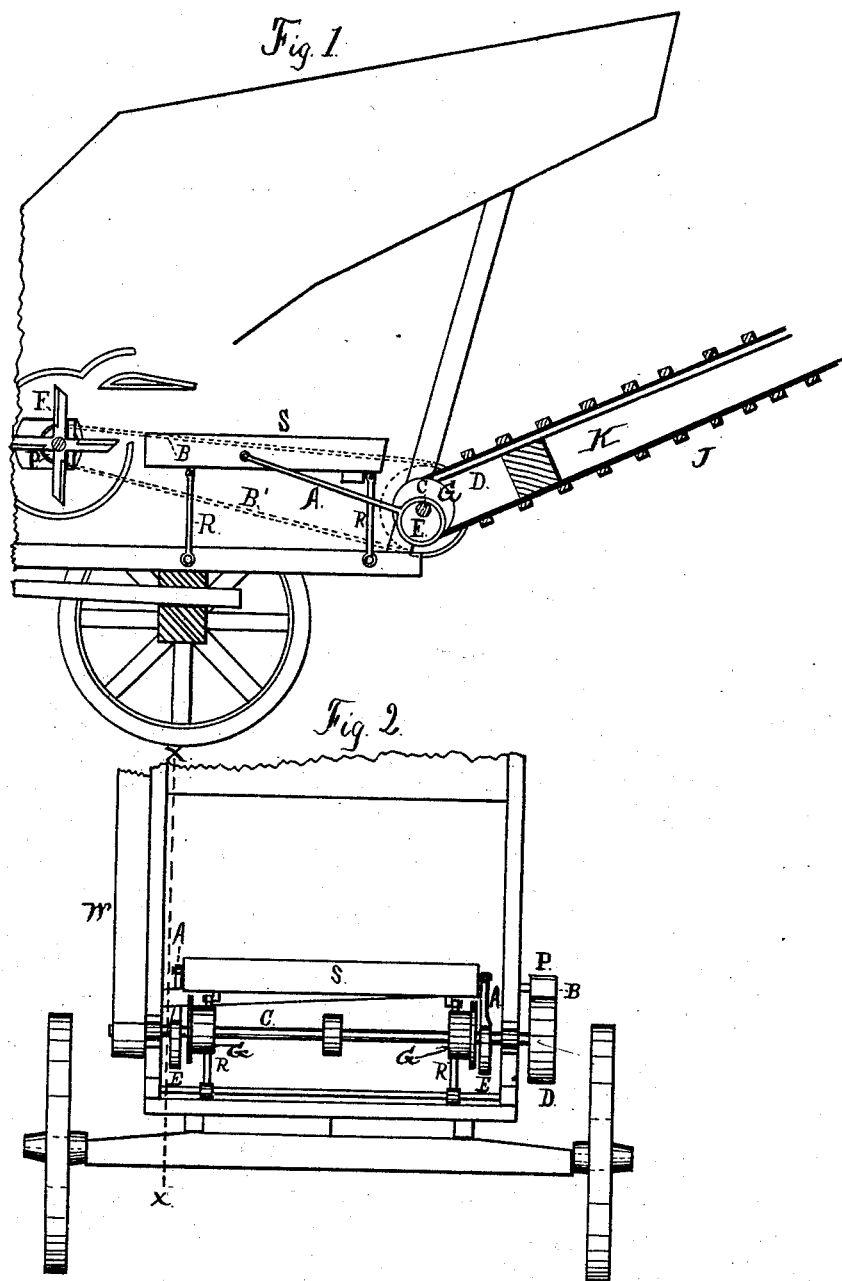
(No Model.)

W. U. RICHMOND.

GRAIN SEPARATOR.

No. 267,254.

Patented Nov. 7, 1882.



Witnesses.

Edward A. Kenwick

Fred W. Stevens

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UNITED STATES PATENT OFFICE.

WILL U. RICHMOND, OF GRAND RAPIDS, MICHIGAN.

GRAIN-SEPARATOR.

SPECIFICATION forming part of Letters Patent No. 267,254, dated November 7, 1882.

Application filed May 4, 1881. Renewed September 14, 1882. (No model.)

To all whom it may concern:

Be it known that I, WILL U. RICHMOND, of the city of Grand Rapids, in the county of Kent and State of Michigan, have invented certain new and useful Improvements in Grain-Separators, of which the following is a specification.

My invention relates to grain-separators having straw-stackers combined with them; and the nature of my invention consists in the combination of a cam-shaft which is located at the rear of the frame of the machine, near the sill thereof, and which receives its rotation from the fan-shaft, a screen-shoe mounted on rockers and located between the fan and the said cam-shaft and receiving vibration therefrom, and a stacker which is pivoted on said cam-shaft and provided with endless carriers which receive motion from pulleys on this shaft, all as will be hereinafter explained.

Figure 1 is a longitudinal sectional view on the line *x x* of Fig. 2, and Fig. 2 is a rear elevation of a grain-separator constructed in accordance with my invention.

Similar letters refer to similar parts throughout the several views.

In the drawings, F represents the fan for separating the chaff from the grain, which fan is constructed similar to those now in use. On the fan-shaft is the band-pulley P.

B is a band or belt connecting P with band-pulley D, and conveying motion to the pulley D, and also to the shaft C, to which D is rigidly attached. The belt B is not within the casing of the separator, as shown.

E is an eccentric on shaft C, constructed as shown, and designed to give the vibrating motion to the sieves.

A is a rod or pitman, one end of which engages with the eccentric E, and the other end being attached to the shoe S, thereby conveys the reciprocating motion to the shoe S, which holds the screens or sieves of the separator.

The machine may be made with the device for vibrating the shoe double—that is, an eccentric and connecting-rod at each side of the shoe, as shown in Fig. 2.

The shaft C is provided with pulleys G G for operating the straw-carrier, or for other purposes, if desired. The shoe S is supported by rockers R R, two at each side, as shown in the drawings.

I am aware that the end shake in a separator is not new.

It will be seen by reference to Fig. 1 that the straw-stacker frame K is pivoted on the cam-shaft C, and that the pulleys G G on this shaft give motion to the straw-carrier J. The cam-shaft C thus serves three purposes—viz., it operates the shoe S through the medium of its cams and the pitman-rods, it affords a bearing for the lower end of the stacker-frame, and it gives motion to the slotted straw-carrier through the medium of its pulleys G G.

By locating the lower end of the straw-stacker at the point named the machines can be made more compact vertically, and the stacker can be adjusted more conveniently than it could be if raised at a point nearly to the top of the machines.

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

The combination, in a grain-separator, of the main frame, shaft C, provided with eccentrics E, and located near the bottom of the main frame, the shoe S, the fan F, and pitman-rods A, the stacker frame K, articulating on shaft C, and pulleys G G on said shaft for giving motion to the straw-carrier of the stacker-frame, substantially as described.

WILL U. RICHMOND.

Witnesses:

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EDWARD TAGGART.