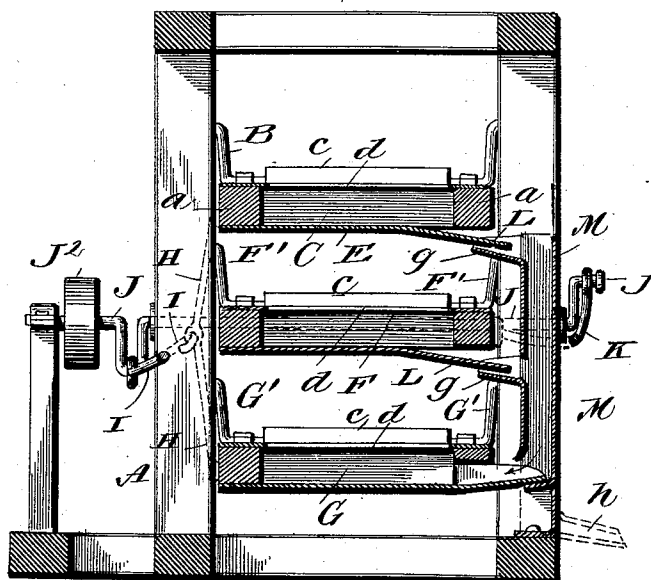
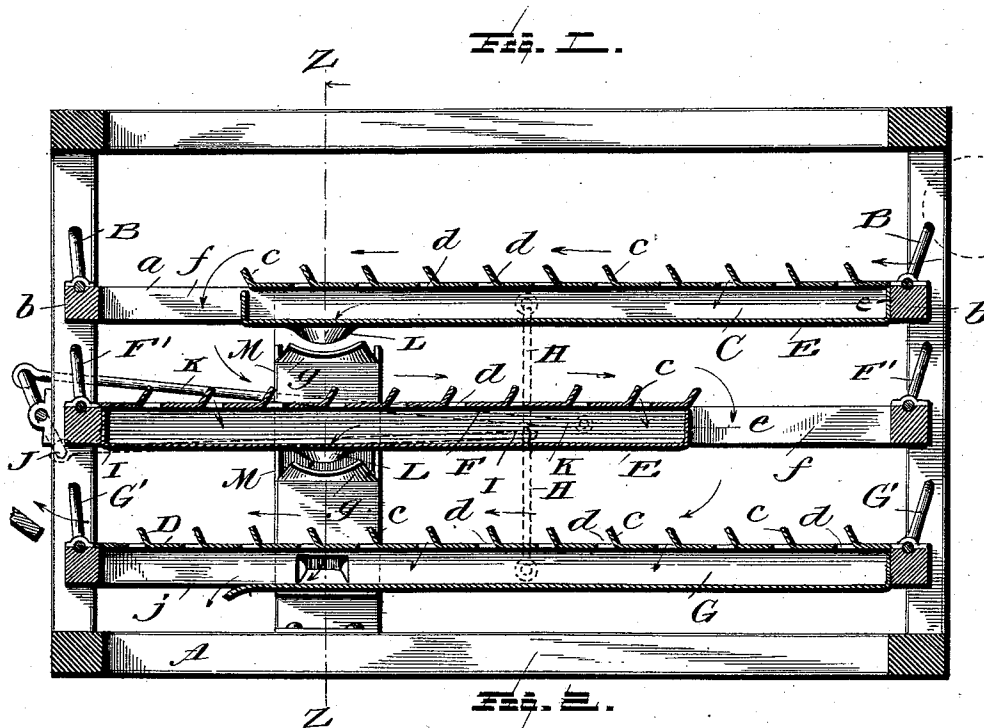


(No Model.)

G. A. SCHRAUD.
GRAIN SEPARATOR.

No. 477,783.

Patented June 28, 1892.



Witnesses

L. C. Hills.
E. A. Bond.

Inventor

George A. Schraud.
per Cha. H. Fowler
Attorney

UNITED STATES PATENT OFFICE.

GEORGE A. SCHRAUD, OF SENECA, ILLINOIS.

GRAIN-SEPARATOR.

SPECIFICATION forming part of Letters Patent No. 477,783, dated June 28, 1892.

Application filed January 28, 1892. Serial No. 419,542. (No model.)

To all whom it may concern:

Be it known that I, GEORGE A. SCHRAUD, a citizen of the United States, residing at Seneca, in the county of La Salle and State of Illinois, have invented certain new and useful Improvements in Grain-Separators; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters of reference marked thereon.

This invention relates to certain new and useful improvements in grain-separators; and it has for its objects, among others, to provide a simple, cheap, and efficient machine by which the grain may be separated, the straw being carried alternately in opposite directions over three shakers. Provision is made for the gathering of the grain as it is shaken from the straw and conducting it into the desired receptacle.

Other objects and advantages of the invention will hereinafter appear and the novel features thereof will be specifically defined by the appended claims.

The invention is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification, and in which—

Figure 1 is a vertical longitudinal section through my improved machine. Fig. 2 is a vertical cross-section on the line zz of Fig. 1.

Like letters of reference indicate like parts in both views.

Referring now to the details of the drawings by letter, A designates a suitable frame for supporting the parts. At each end of this frame, journaled between the end pieces thereof, is a hanger B, which supports the upper shaker C, which consists of the side bars a and end pieces b , the hanger being held to the end pieces, as seen, and to the upper side of the side pieces there is secured the sheet-metal plate D, which has stamped therefrom the transverse ribs or flanges c , leaving where each rib is stamped up an opening d , as seen best in Fig. 1. Secured to the under sides of the side bars is a sheet-metal plate E, which extends to the forward end piece and has its other end turned up, as seen at e , to form an end to the chamber, which is thus formed be-

neath the shaker for the collection of the grain that falls through the said openings, as will be readily understood from Fig. 1. The upper and lower sheet-metal plates do not extend the entire length of the side bars, but terminate at a distance therefrom, as seen in Fig. 1, to leave a space f for the fall of the straw onto the next lower shaker, as seen in Fig. 1.

F is the middle shaker. It is similar in construction to the upper one and is similarly supported by the hangers F' , as shown. It is arranged with its closed end inversely arranged to that of the upper shaker, so that the straw as it falls from the end of the upper shaker through the space f will drop onto the end of the middle shaker, as shown by the arrows in Fig. 1.

G is the lower shaker. It is supported by the hangers G' and extends the entire length of the machine, as shown in Fig. 1. The three shakers are arranged with their transverseribs alternately oppositely inclined, so as to cause the straw to take a circuitous passage, that from one end of the machine to the other on one shaker, then dropping onto the next lower shaker take the opposite course onto the lower shaker and then travel in the same direction as it did on the first shaker. The upper and lower shakers are connected to move in unison in the same direction by the links or rods H on one side, which rod or rods is connected by the rod I with the crank on one end of the crank-shaft J, which is designed to receive its motion from any suitable source—as, for instance, by belt or otherwise on the pulley J^2 , as seen in Fig. 2. The central shaker is connected by the rod K with the crank on the other end of the said crank-shaft, so as to be agitated in the opposite direction to the upper and lower shakers. The chamber of the upper shaker has a transverse discharge opening or spout L, as may also each of the others, which empties into the vertical side conduit M, which may have inwardly-inclined lips g , as seen in Fig. 2. The lower shaker may have a discharge-spout, so that the grain may be conducted out at the side of the machine, as seen at h in dotted lines in Fig. 2; but I prefer to so arrange the parts that the grain from the two upper shakers will be conducted through the vertical conduit into the chamber

of the lower shaker, and thence out at the opening *j* on the under side thereof at one end, as seen in Fig. 1.

The operation will be readily understood from the foregoing description when taken in connection with the annexed drawings.

The arrows in Fig. 1 indicate the course taken by the straw and by the grain.

The device is simple, requires but little power to operate, and by its use the grain is completely separated.

What I claim as new is—

1. The combination, with the frame, of a shaker hung from said frame to move in the direction of its length and having integral transverse ribs and openings formed by the upturning of the material which forms the ribs, with an integral chamber beneath the openings, with a side discharge and an opening in the bottom of the chamber, an opening

into the side of the chamber, and a vertical conduit which discharges through said opening into the chamber, substantially as specified.

2. In a grain-separator, the combination, with the shakers, each provided with transverse ribs and openings, and a chamber beneath the same with side discharge and the lowermost one having an opening at one end of its chamber also, of the vertical conduit and the spout formed by a portion of the bottom of the chamber conducting the material to the lower shaker, as set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

GEORGE A. SCHRAUD.

Witnesses:

C. D. CARPENTER,
WILLIAM H. WHITTAKER.