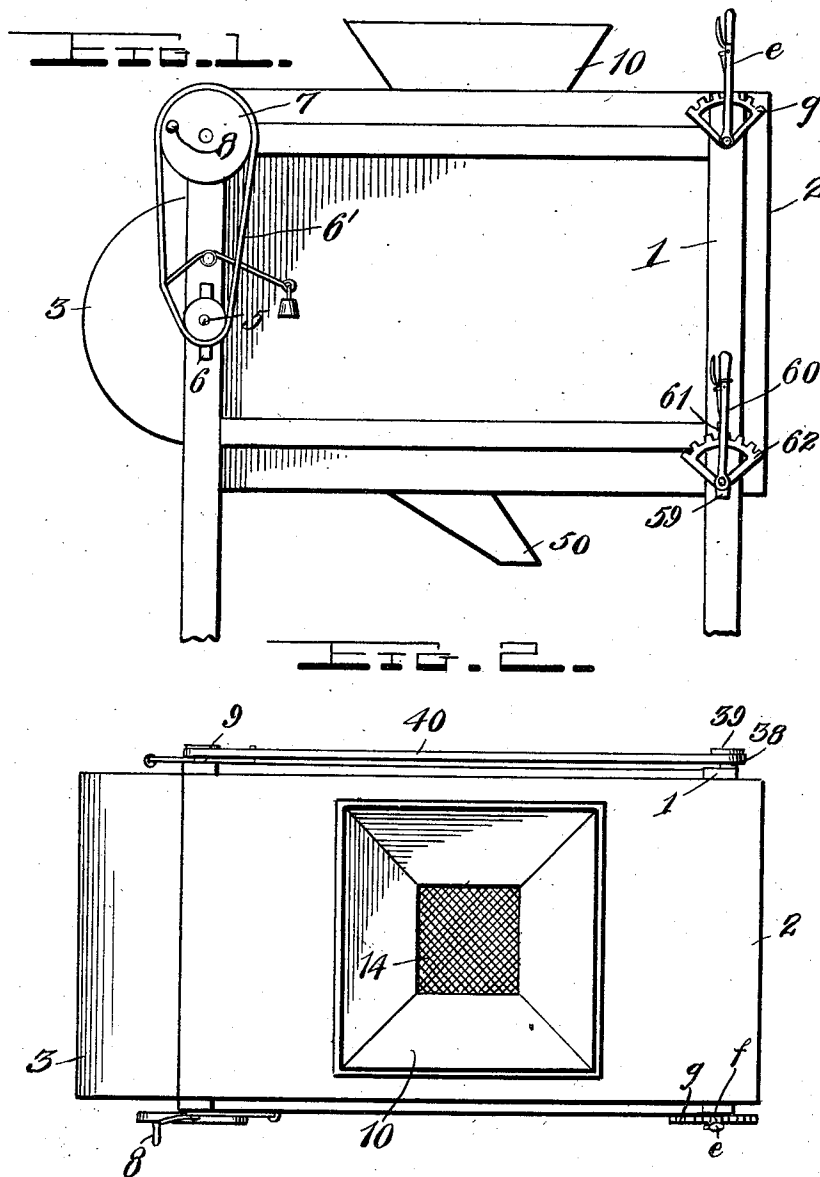


F. PAUKERT.
GRAIN SEPARATOR.
APPLICATION FILED MAY 3, 1911.

1,013,433.

Patented Jan. 2, 1912.

2 SHEETS—SHEET 1.



Inventor
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Witnesses

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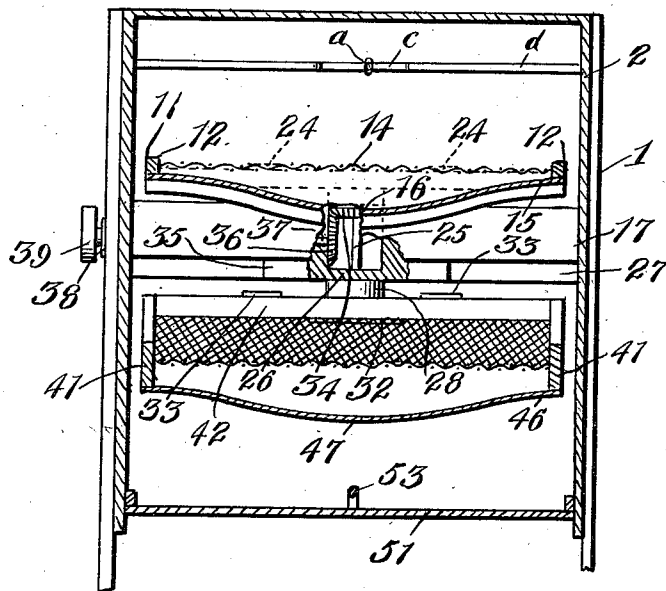
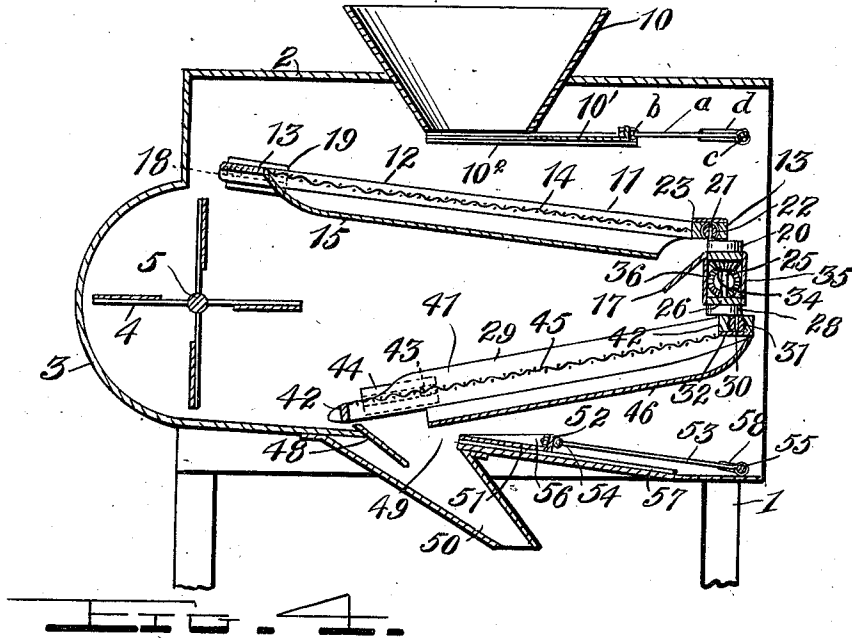
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FIG. 3.



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UNITED STATES PATENT OFFICE.

FREDERICK PAUKERT, OF REGENT, NORTH DAKOTA.

GRAIN-SEPARATOR.

1,013,433.

Specification of Letters Patent.

Patented Jan. 2, 1912.

Application filed May 3, 1911. Serial No. 624,744.

To all whom it may concern:

Be it known that I, FREDERICK PAUKERT, a citizen of the United States, residing at Regent, in the county of Hettinger and State of North Dakota, have invented certain new and useful Improvements in Grain-Separators, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to new and useful improvements in grain separators and more particularly to a machine of this character for cleaning seeds by removing and separating foreign seeds and other substances therefrom.

The invention has for an object to provide a machine of this character which will possess advantages in points of efficiency, durability, is inexpensive of manufacture and at the same time being simple in construction and operation.

With the above and other objects in view, the invention consists in the novel features of construction, combination and arrangement of parts hereinafter described, pointed out in the claims and shown in the accompanying drawings, in which—

Figure 1 is a side elevation; Fig. 2 is a top plan view; Fig. 3 is a vertical longitudinal sectional view; and Fig. 4 is a transverse sectional view.

Referring more particularly to the drawings 1 indicates the frame, preferably of the form here shown, but may be of any suitable construction, and the same supports an inclosing casing 2, at one end of which is formed a drum 3, in which is disposed a blower fan 4. The shaft 5 of the fan 4 is journaled in suitable bearings 6 in the frame 1 and the said shaft is connected by means of the belt 6' with a power wheel 7 operated by a handle 8 or other suitable means can be used, and a pulley 9 is keyed upon the other end of said shaft. A hopper 10 is mounted in the upper side of the casing. To regulate the flow of grain from the hopper into the body a plate 10' is provided adapted to slide on the guides 10², said plate having a rod *a* secured to the bolt *b* in the back side of the plate, and having its outer end mounted on the crank arm *c* of the crank shaft *d* which is mounted in suitable bearings in the frame. A hand lever *e* is secured upon the outer end of said shaft, hav-

ing a catch *f* formed thereon to engage in a notched rack *g* secured to the side of the frame.

An upper frame 11, which comprises the sides 12 and suitable end connections 13, is disposed below the hopper 10. The frame 11 is provided with a chaffing screen 14, which is secured to the sides and ends thereof, and a bottom 15 is secured to the lower side of the frame, which is made into concave form as indicated at 16, near its outer end and the same is provided to throw the grain against the return board 17 secured to the end of the frame. The upper end of the frame 11 is provided with the lugs 18 upon each side thereof and adapted to slide in the grooved strips 19 secured to the sides of the casing. The lower end of the frame 11 is mounted upon the cam 20 by means of the pin 21, which is disposed through the roller 22 and has its lower end secured in one side of the cam 20. The roller 22 is mounted in a housing 23 formed in the lower end of the frame 11 and has its ends mounted in suitable bearings 24.

The cam 20 is keyed upon the upper end of a vertically disposed shaft 25 mounted in suitable bearings 26 in the cross beam 27. Keyed to the lower end of the shaft 25 is a cam 28, to which is secured the frame 29 by means of a pin 30 passing through the roller 31 mounted in the outer end of the frame and its upper end secured in one side of the cam 28. The roller 31 is mounted in a housing 32 formed in the outer end of the frame 29 and having its ends mounted in suitable bearings 33.

The cams 20 and 28 are operated by means of a bevel gear 34 mounted on the shaft 25 and disposed in a suitable housing 35 formed in the cross beam 27 and adapted to mesh with a bevel gear 36 mounted upon the inner end of the shaft 37, which is horizontally disposed in the cross beam 27, said shaft being mounted in a suitable bearing 38 near the outer end thereof. Keyed upon the outer end of the shaft 37 is a pulley 39 connected to the pulley 9 by means of a belt 40.

The frame 29 comprises the sides 41 connected by the end pieces 42, said frame being provided at its inner end with the lugs 43, disposed upon each side of the frame and adapted to slide in the grooved strips 44 secured to the sides of the casing. The

frame 29 is provided with a chaffing screen 45, and an inclined bottom 46 is secured to said frame, said bottom being provided with a central concave surface 47 adapted to
 5 bring the grain down to the bottom of the casing where it strikes the inclined return board 48 and is discharged through the opening 49 into a suitable chute 50 thence it is run off into bags or other suitable receptacles.

10 When the pulley 39 is rotated by the belt 40, which is connected to the power shaft, the cams 20 and 28 are rotated by means of the bevel gears 34 and 36, thus it will be seen
 15 that the frames 11 and 29 will be moved longitudinally and transversely, and the rollers 22 and 31 serve to produce a universal movement between the cams 20 and 28 and the frames 11 and 29. Thus it will be obvious
 20 that when the material to be separated is thrown into the hopper 10 it will drop directly onto the screen 14 and the grain and chaff will drop through onto the bottom 15 and will be carried down and deposited on
 25 the screen 45 while the straw and larger material are discharged out of the front end of the casing. While the grain and chaff are falling from the screen 14 to the screen 45 the draft from the fan 4 will tend to blow
 30 the chaff and foreign seed out through the front end of the casing and the good grain will drop down on to the screen 45 and thence through onto the inclined bottom 46 where it is discharged into the opening 49.
 35 The bottom 46 is to extend in so that when the inner end of the frame 29 is disposed in the casing to the limit of its movement the bottom will be brought up to the return board 48 and when the frame is the farthest
 40 out on its outward movement the inner end of the bottom 46 will come flush with the other side of the opening 49.

To regulate the flow of grain through the opening 49, I have provided a regulator 51
 45 in the shape of a scoop which is adapted to catch any grain that is not discharged through the opening 49, said regulator being provided with a back side 52 and the two inwardly extending ends 56 and adapted to
 50 slide on the guides 57, said regulator having a rod 53 secured to an eye-bolt 54 in the back side of the regulator, and having its outer end mounted on the crank arm 55 of the crank shaft 58 which is mounted in the
 55 bearings 59 in the frame 1. A hand lever 60 is secured upon the outer end of said crank shaft, having a catch 61 formed thereon and adapted to engage in a notched rack 62 secured to the frame.

60 It will be obvious that various changes in the details of construction and in the proportions may be resorted to for successfully carrying the invention into practice without sacrificing any of the novel features or de-
 65 parting from the scope thereof.

Having thus described the invention what is claimed is:—

1. In a device of the character described, the combination of a casing supported by a suitable frame, a drum formed at one end of said casing in which is disposed a blower fan, oppositely inclined frames carrying chaffing screens mounted in said casing for longitudinal and transverse movement, a cross beam mounted in the front end of said casing and between the adjacent ends of said inclined screen frames, a vertically disposed shaft mounted in said cross beam, cam wheels keyed to each end of said shaft, said cams being connected to said frames, by means of pins disposed through rollers mounted in the end of said frames and having their free ends secured in said cams at one side thereof, and means for imparting motion to said vertically disposed shaft and operating said screens.

2. In a device of the character described, the combination of a casing, oppositely inclined screens mounted in said casing for longitudinal and transverse movement, the inner ends of said screens having lugs upon each side thereof adapted to slide in grooved strips secured to the sides of the casing, a cross beam secured in the outer end of said casing and between the adjacent ends of said inclined screen frames, a vertically disposed shaft mounted in said beam, cam wheels keyed to each end of said shaft, means for connecting said cam wheels to the outer ends of said screens, and means for imparting motion to said vertically disposed shaft and operating said screens.

3. In a device of the character described, the combination of a casing, oppositely inclined screens mounted in said casing for longitudinal and transverse movement, a cross beam secured in the outer end of said casing and between the adjacent ends of said inclined screen frames, a vertically disposed shaft mounted in said beam, cam wheels keyed to each end of said shaft, means for connecting said cam wheels to the outer ends of said screens, a bevel gear keyed on said shaft and disposed in a housing, formed in said cross beam, a second bevel gear keyed to a horizontally disposed shaft and adapted to mesh with the first mentioned gear, said horizontal shaft being disposed in said cross beam and having its outer end mounted in a suitable bearing, and means for imparting motion to said horizontal shaft and operating said screens.

4. In a device of the character described, the combination of a casing, a hopper mounted in the upper side thereof, means for regulating the flow of grain from the hopper into the casing, oppositely inclined frames mounted in said casing for longitudinal and transverse movement, chaffing screens secured to said frames, a bottom se-

cured to the upper end of said frames, having a concave surface near its outer end, a return board secured to the outer end of said frame and projecting downwardly, the
5 lower of said frames being provided with an inwardly inclined bottom having a central concave surface leading to a discharge opening in the bottom of the casing, a cross beam secured in the outer end of said casing and
10 between the adjacent ends of said inclined screen frames, a vertically disposed shaft mounted in said beam, cam wheels keyed to

each end of said shaft, means for connecting said cam wheels to the outer ends of said screens and means for imparting motion to
15 said vertically disposed shaft and operating said screens.

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

FREDERICK PAUKERT.

Witnesses:

A. C. GOLDTRAP,
A. B. SWITZER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."