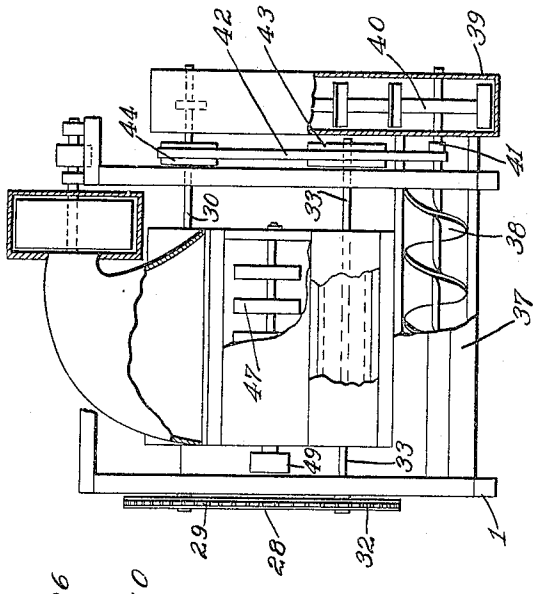
Dec. 25, 1923. 1,478,616

J. B. RYLANDER

SEED SEPARATOR

Original Filed June 28, 1920

Fig. 2.



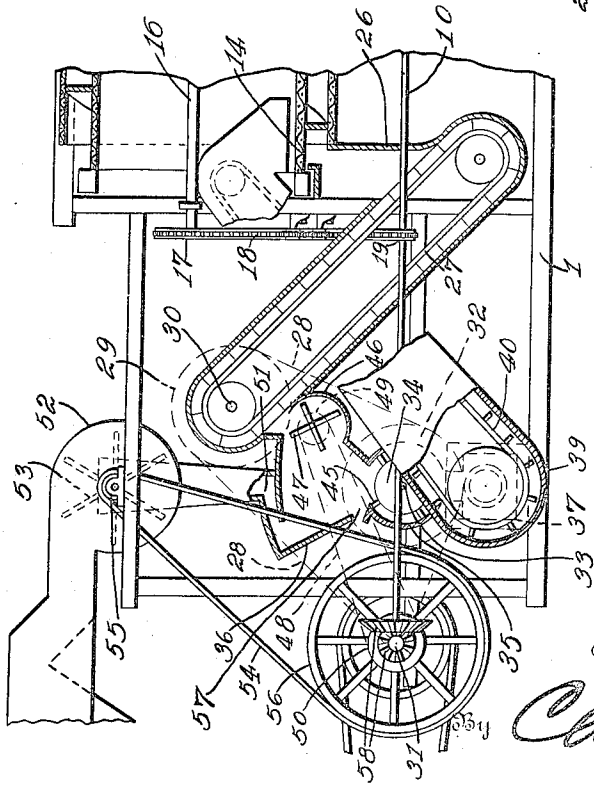


Fig. 1.

Inventor

J.B. Rylander.

By Cushman & Co.

Attorneys

Patented Dec. 25, 1923. 1,478,616

UNITED STATES PATENT OFFICE.

JAMES B. RYLANDER, OF AUSTIN, TEXAS, ASSIGNOR TO THE RYLANDER COMPANY, OF AUSTIN, TEXAS.

SEED SEPARATOR.

Original application filed June 28, 1920, Serial No. 392,430. Divided and this application filed August 30, 1922. Serial No. 585,200.

To all whom it may concern:

Be it known that I, JAMES B. RYLANDER, a citizen of the United States, residing at Austin, in the county of Travis and State of Texas, have invented a new and useful Seed Separator, of which the following is a specification.

This invention relates to apparatus for separating seeds of different specific gravities and is more particularly a division of an application filed by me on June 28, 1920, Serial No. 392,430.

It is an object of the invention to provide simple and efficient means whereby the seeds may not only be separated but whereby the dust and chaff can also be removed from the seeds, the structure being simple, durable and compact and easy to operate.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that, within the scope of what is claimed, changes in the precise embodiment of the invention shown can be made without departing from the spirit of the invention.

In the accompanying drawings the preferred form of the invention has been shown.

In said drawings—

Figure 1 is a vertical longitudinal section through the mechanism constituting the present invention, certain parts being shown in elevation.

Figure 2 is a view partly in end elevation and partly in section.

Referring to the figures by characters of reference 1 designates a supporting structure in which is supported a double screen indicated generally at 14, this screen being revoluble with a shaft 16 on which is mounted a sprocket 17. A chain 18, which is driven by a sprocket 19, receives its motion from a longitudinal shaft 10. This screen 14 constitutes means for feeding grain to the mechanism constituting the present invention, the material delivered from the screen being directed into the boot 26. An endless elevator 27 is mounted in the boot 26 and is driven by a belt 28 engaging a pulley 29 on the upper shaft 30 of the elevator. This belt receives motion from the main drive shaft 31 and also drives a pulley 32 secured to the shaft 33 of a rotary delivering valve 34. The valve is mounted within a substantially cylindrical casing 35 located in the bottom portion of a separating chamber 36, said chamber opening downwardly into the casing 35 and said casing, in turn, opening downwardly into a trough 37 containing a worm conveyor 38. This worm conveyor is adapted to deliver material into a boot 39 from which extends a delivering elevator 40 which can be driven by the shaft of the worm conveyor 38. Any suitable mechanism may be provided for actuating this elevator and the worm conveyor. For example a pulley 41 may be secured to the shaft of the worm conveyor, as shown in Figure 2 and may receive motion through a belt 42 from a pulley 43 on the shaft 33. The same belt 42 can also drive a pulley 44 secured to the shaft 30.

Blades 45 radiate from the valve 34 and are adapted to work close to the casing 35 so as positively to carry off seeds directed into the casing from the separating chamber 36.

The elevator 27 is adapted to discharge seeds downwardly into a pocket 45 formed in one wall of the chamber 36 and mounted for rotation in this pocket is a beater of alternating paddles 47 adapted to be driven by a belt 48 mounted on a pulley 49 rotating with the beater 47 and on a pulley 50 carried by the shaft 31. Formed in the top of the chamber 36 adjacent the opposite wall thereof is an outlet flue 51 which extends to the casing 52 of a suction fan 53. This fan is driven by a belt 54 which engages a pulley 55 revoluble with the fan and a pulley 56 carried by the shaft 31. Thus it will be seen that when the beater 47 and fan 53 are operating the beater will drive the seeds across the chamber 36 and against the far wall thereof. While the seeds are thus being thrown they will come into an upwardly moving current of air created by the suction fan 53 and extending to the flue 51 from an air inlet 57 formed in the bottom portion of the separating chamber. As the material passes into this upwardly moving current of air the chaff and lighter particles, including light, faulty seeds, will flow upwardly through the flue 51 and be expelled by the

fan 55 while the heavy seeds will gravitate into the casing 35 and be delivered downwardly by the rotating valve 34 to the trough 37.

The shaft 10 receives its motion from the shaft 31 in any suitable manner, as by means of meshing gears 58 on the two shafts.

What is claimed is:—

Separating apparatus including a separating chamber increasing in transverse area from its lower to its upper end and having a seed outlet at its bottom and an air outlet at its top, there being an air inlet in one wall of the chamber near the bottom thereof, a seed delivering valve rotatably mounted below the seed outlet and constituting a closure to prevent free flow of air through said seed outlet into the chamber, means for setting up a suction of air across one side portion of the chamber between the air inlet and the air outlet, a beater at one side of the chamber for throwing seeds horizontally across the chamber against the opposed wall and through the air current between the air inlet and air outlet, and means for supplying seeds to the beater.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

JAMES B. RYLANDER.

Witnesses:

W. L. BRODFIELD,

NANA HOWARD.