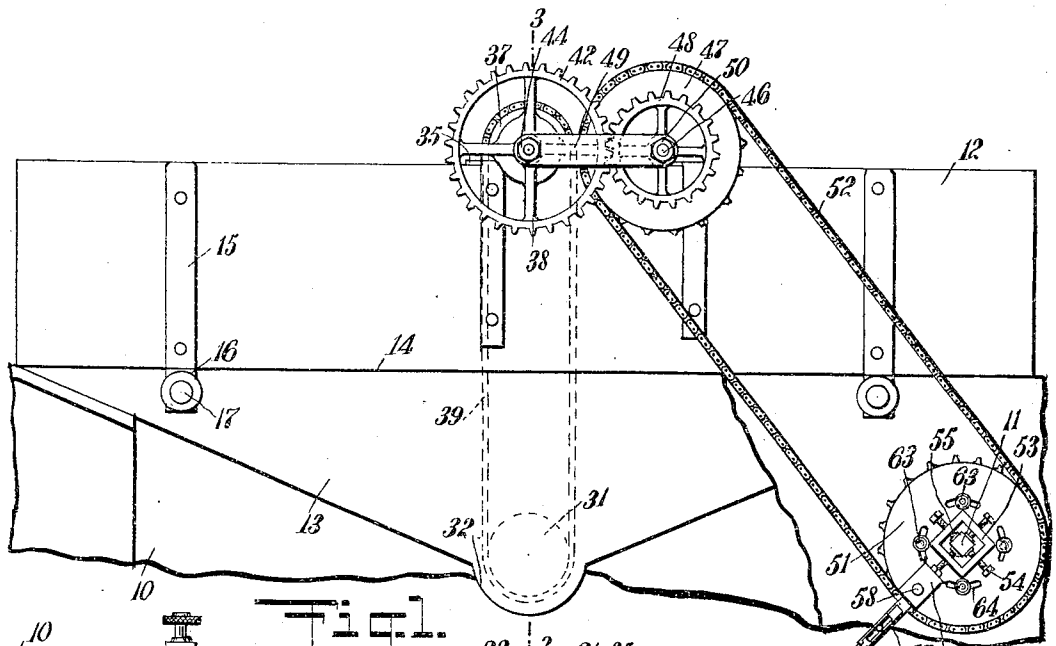
H. DYKSTRA.

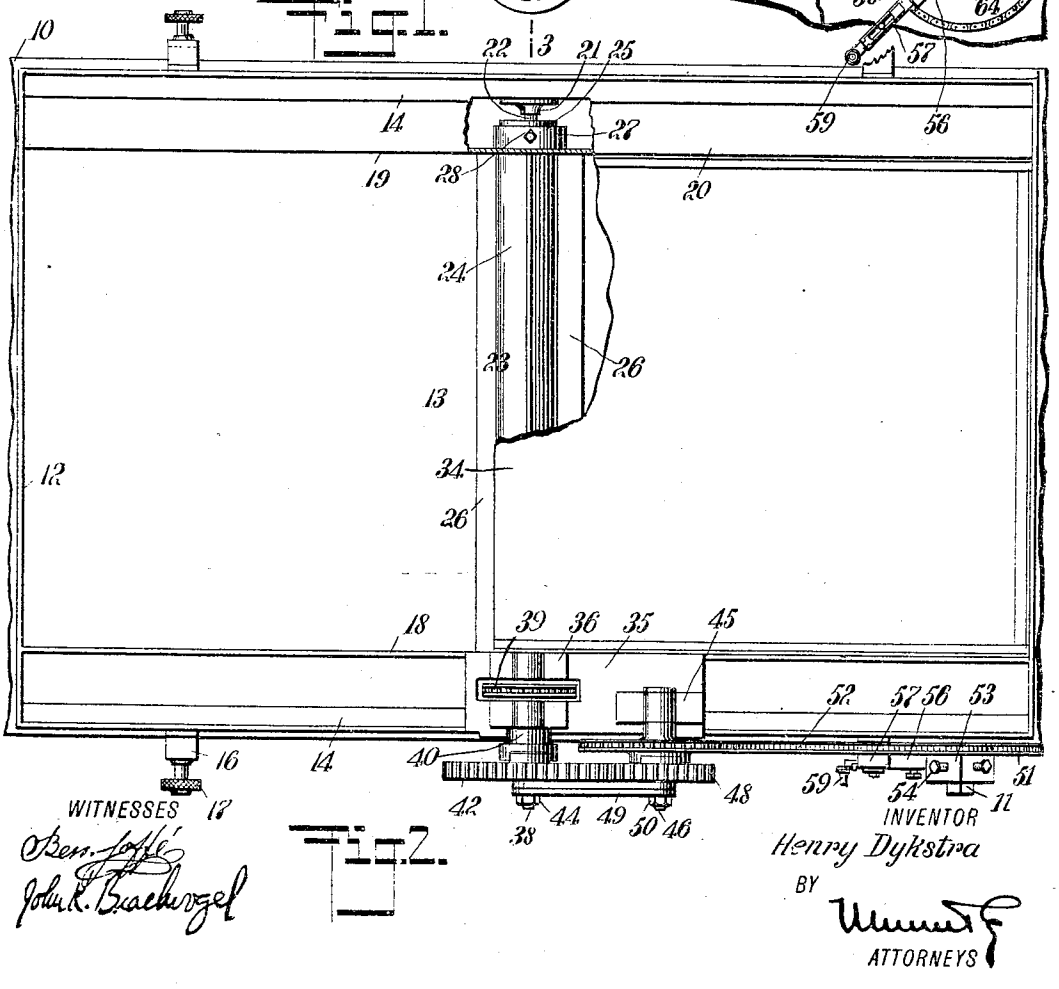
FEEDING ATTACHMENT FOR FANNING MILLS.

APPLICATION FILED SEPT. 11, 1909.

958,483. Patented May 17, 1910.

2 SHEETS—SHEET 1.





WITNESSES

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2 SHEETS—SHEET 2.

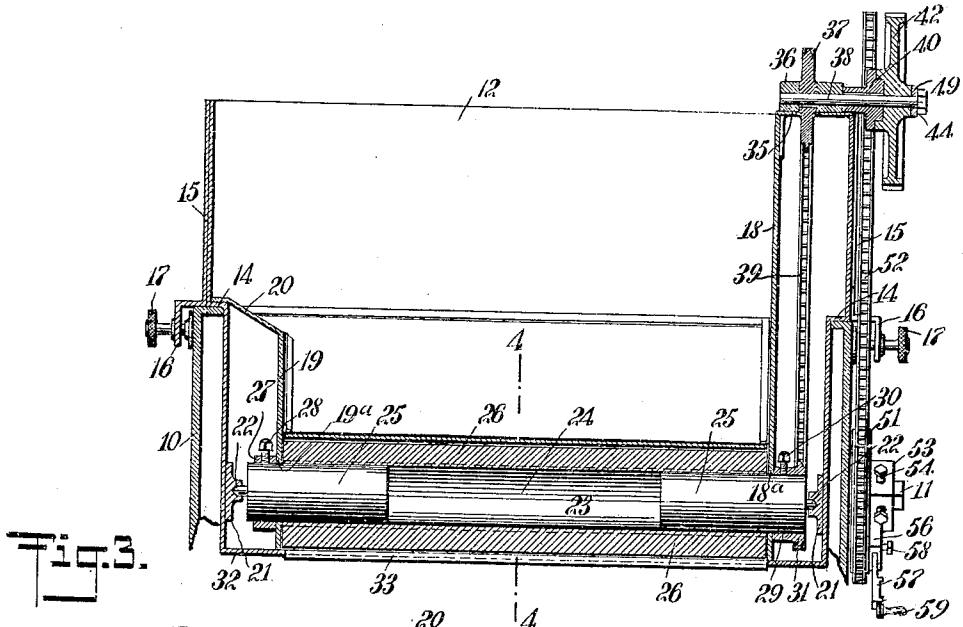


Fig. 3.

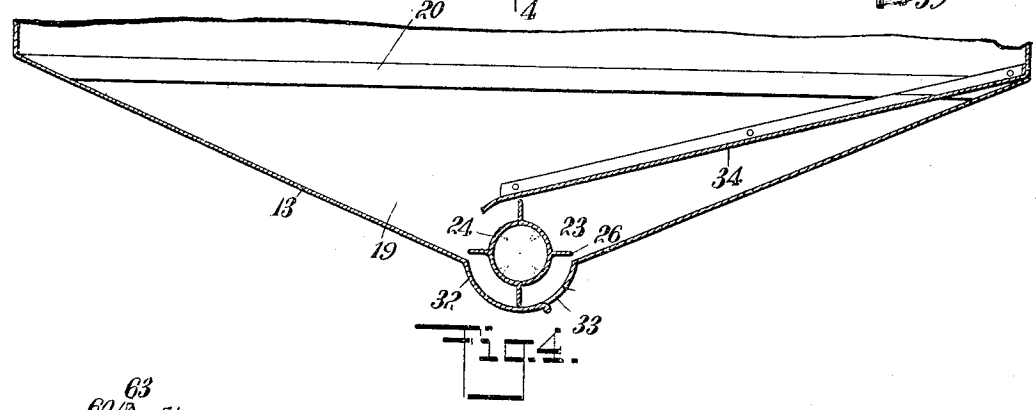


Fig. 4.

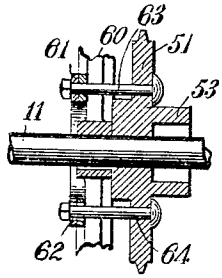


Fig. 5.

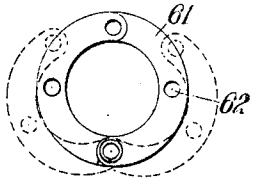


Fig. 6.

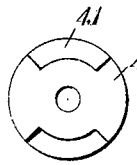


Fig. 7.

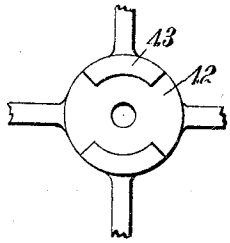


Fig. 8.

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HENRY DYKSTRA, OF SPRING VALLEY TOWNSHIP, McCOOK COUNTY, SOUTH DAKOTA.

FEEDING ATTACHMENT FOR FANNING-MILLS.

958,483. Specification of Letters Patent. Patented May 17, 1910.

Application filed September 11, 1909. Serial No. 517,199.

To all whom it may concern:

Be it known that I, HENRY DYKSTRA, a citizen of the United States, and a resident of Spring Valley township, in the county of McCook and State of South Dakota, have invented a new and Improved Feeding Attachment for Fanning-Mills, of which the following is a full, clear, and exact description.

This invention relates to feeding attachments for grain-fanning mills, and relates more particularly to a device of this class comprising a frame adapted to be mounted upon the fanning mill, a feeding roll or drum, means for operating this drum, and means for operatively connecting the above-mentioned means and the driving mechanism of the mill, so that the feeding mechanism and the mill can be driven simultaneously.

The object of the invention is to provide a simple, strong and efficient feeding attachment for fanning mills, which can be removably mounted upon the fanning mill, which is adapted to feed fanning mills of different sizes and types, by means of which grain and the like can be fed into the mill continuously and evenly, in which the rate of feeding can be exactly controlled, which is adapted for use with fine as well as coarse grain, and which is simple in operation.

The invention consists in the construction and operation of parts, to be more fully described hereinafter and particularly set forth in the claims.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views, and in which—

Figure 1 is a side elevation of the upper portion of a fanning mill showing an embodiment of my invention applied thereto; Fig. 2 is a plan view of a fanning mill, showing parts of my invention broken away; Fig. 3 is a transverse section on the line 3—3 of Fig. 1; Fig. 4 is a longitudinal section on the line 4—4 of Fig. 3; Fig. 5 is a transverse section showing part of the means for operatively connecting the driving mechanism of the fanning mill with the feeding attachment; Fig. 6 is a side elevation of a detail of the mechanism shown in Fig. 5; Fig. 7 is a side elevation of a further detail; and Fig. 8 is a similar view of another detail associated with that shown in the last-mentioned figure.

Before proceeding to a more detailed explanation of my invention, it should be clearly understood that, while the attachment is designed to be removably associated with any suitable type of fanning mill, it can be permanently attached to the mill, if so desired, by any suitable means adapted for the purpose. It is arranged upon and partly in the ordinary feed hopper of the mill, and is removably secured in place.

Referring more particularly to the drawings, I have shown a part 10 of the frame of a fanning mill of any suitable type, having driving mechanism, which includes a main driving shaft 11, adapted to be operated by a hand crank (not shown), or in any other suitable manner.

I employ a frame or casing 12, the lower part 13 of which is inclined from the ends to the center, and thus serves as a hopper, being inwardly offset at the sides, so that supporting shoulders 14 are formed, which rest upon the upper edges of the hopper sides to mount the casing 12 upon the hopper. At the sides, the casing has brackets 15, provided with offset lower ends 16 carrying holding screws 17 adapted to be forced against the sides of the hopper to clamp the casing in position. The casing has double walls 18 and 19 respectively, at the sides. The wall 18 extends to the top, whereas the wall 19 terminates near the adjacent shoulder 14, and is outwardly and upwardly disposed toward the same, as is shown most clearly in Fig. 3, having the upper part 20 inclined and resting upon the shoulder 14.

The walls 18 and 19, near the lower edges thereof, have bearings 21, in which are journaled the gudgeons 22 of a feeding roll or drum 23. The latter comprises a hollow cylinder 24, having correspondingly formed adjustable heads 25 projecting from the ends thereof. The gudgeons are rigidly secured in the extremities of the heads. The drum has longitudinal radially-disposed wings or vanes 26. One of the heads, at its projecting end, has a retaining collar 27, held in place by means of a set screw 28. The other head has a collar 29, secured in place by means of a set screw 30, and having integral therewith a sprocket 31, for a purpose which

will appear more clearly hereinafter. The walls 18 and 19 have openings 18ª and 19ª through which the heads extend.

The collars 27 and 29 engage respectively at the outer sides of the walls 19 and 18, and serve to maintain the drum in place. The drum is arranged within a substantially semicircular transverse depression 32 at the bottom of the casing. The depression has an outlet opening 33, through which the grain escapes into the fanning mill. A feed slide 34 extends transversely of the casing from one end to the center, over the feeding drum, terminating at the latter, as is shown most clearly in Fig. 4. The grain moves down the inclined slide 34, and is evenly fed by rotating the drum, through the outlet opening 33 in the usual manner.

A carrier plate 35 is located upon the upper edges of the wall 18 and the corresponding side of the casing, and has bearings 36, in which is journaled a sprocket 37, by means of a spindle 38. The sprocket 37 and the sprocket 31 are operatively connected by means of a chain 39. The spindle has keyed thereon a disk 40, having diametrically opposed quadrant-shaped recesses 41. A gear wheel 42 is mounted upon the upper projecting end of the spindle 38, and has opposite quadrant-shaped extensions 43 adapted to engage in the recesses 41 of the disk, to secure the gear wheel 42 against rotation upon the spindle. A nut 44 holds it against movement longitudinally of the spindle. The carrier plate 35 has a further bearing 45, in which is journaled a spindle 46 having a sprocket 47 thereon. A pinion 48 is mounted upon the spindle 46, and is secured with respect to the sprocket 47 in the same manner as is the gear wheel 42 with respect to the disk 40. The pinion 48 is in mesh with the gear wheel 42. The spindle 46, at the outer end, has a retaining nut 50. A bar 49 extends from the spindle 38 to the spindle 46, and is held in place by the retaining nuts.

I employ a driving sprocket 51, operatively connected by means of a chain 52 with the sprocket 47. The driving sprocket 51 is adapted to be connected with the driving mechanism of the fanning mill, so that when the feeding attachment is operated, the mill is at the same time driven. The sprocket 51 has an opening therethrough to adapt it to receive the shaft 11, and is provided with a hollow extension 53, which is of substantially angular cross section, and in the sides of which are adjustably located set screws 54, having ends 55 adapted to engage the squared sides of the end of the shaft 11 to secure the sprocket in place. It has, furthermore, a socket 56, which receives the end of a crank handle 57. The latter is secured in position by means of a set screw 58, and is preferably telescopic, being provided with a handle or grip 59, so that the sprocket 51 can be manually operated. It will be seen that if the driving sprocket of the fanning mill is located within the body thereof, and the end of the shaft 11 alone projects, the driving sprocket 51 can then be secured to the latter.

For attaching the sprocket 51 to the driving sprocket 60 of the fanning mill, I employ a split ring 61, having openings 62 therethrough adapted to receive bolts 63. The driving sprocket 51 has curved slots 64, also designed to receive the bolts 63. The sprocket 51 is arranged at the outside of the sprocket 60, and the ring 61 at the inside of the latter, the bolts extending between the spokes of the sprocket 60, as is shown most clearly in Fig. 5. The driving sprocket 51 may have a handle socket on each side so that it can be reversed if so desired.

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

1. A casing mounted upon a fanning mill, and having walls inwardly offset, whereby it can extend partly into the mill, said casing having an inclined bottom provided with an opening, a drum journaled adjacent to said opening, a feed slide in said casing and extending partly over said drum, and means for actuating said drum.

2. A casing mounted upon a fanning mill and to extend partly into the mill, said casing having the bottom inclined from the ends toward the center, and being provided at the center with a transverse depression, said depression having an opening extending longitudinally thereof, a feeding drum journaled within said casing and extending into said depression, and a feed slide extending downward into said casing and having the end projecting over said drum to the side thereof opposite said opening in said depression.

3. In a device of the class described, a feeding drum comprising a hollow cylinder, heads adjustable within said cylinder and projecting from the ends thereof, said cylinder having vanes, and retaining collars upon said heads in combination with means for rotatably mounting said drum, and means for driving the same.

4. A device of the class described, comprising a casing, a feeding drum journaled within said casing, said casing having an outlet opening adjacent to said drum, said drum comprising a hollow cylinder having longitudinal vanes, heads within said cylinder and projecting from the ends thereof, and retaining collars mounted upon said heads, said casing having bearings, said heads having gudgeons journaled in said bearings, and means for driving said drum.

5. A device of the class described, comprising a casing having double side walls, bearings mounted within said walls, a feed-

ing drum positioned between said walls and comprising a hollow cylinder having vanes, heads adjustably mounted within said cylinder and projecting from the ends thereof, through said inner walls, said inner walls having openings to receive said heads, said heads having pivots journaled in said bearings and being provided with retaining collars within said double walls, and means for driving said drum.

6. A device of the class described, comprising a casing having spaced inner and outer walls, said inner walls having openings therethrough, a feeding drum mounted between said inner walls, said drum being hollow, adjustable heads mounted within said drum and projecting from the ends thereof through said openings of said inner walls, said outer walls at the insides having bearings, said heads having gudgeons journaled in said bearings, retaining collars mounted upon said heads at the outside of said inner walls, vanes carried by said drum, said casing having the bottom inclined toward said drum and being provided with a depression under said drum, said casing having an outlet opening at said depression, and means for driving said drum.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HENRY DYKSTRA.

Witnesses:
R. L. CLISBY,
A. M. FISHER.