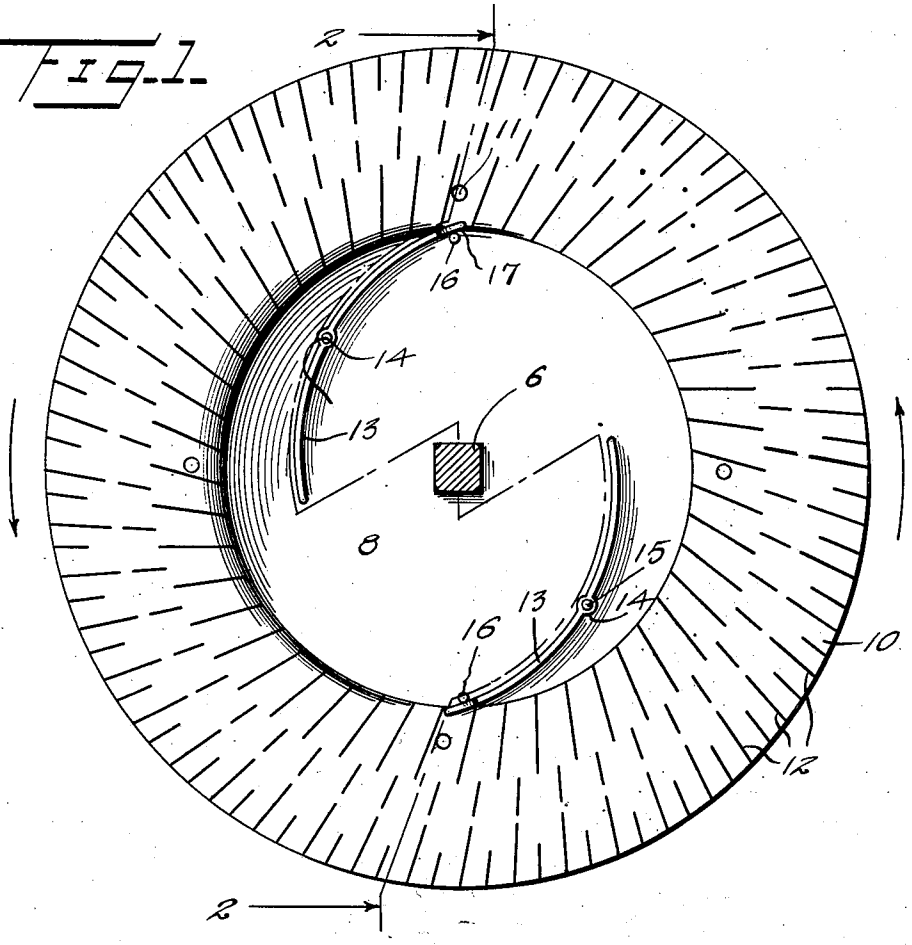
Dec. 26, 1939. H. BAEHR 2,184,903

GRINDING MILL

Filed Nov. 1, 1937

Fig. 1.



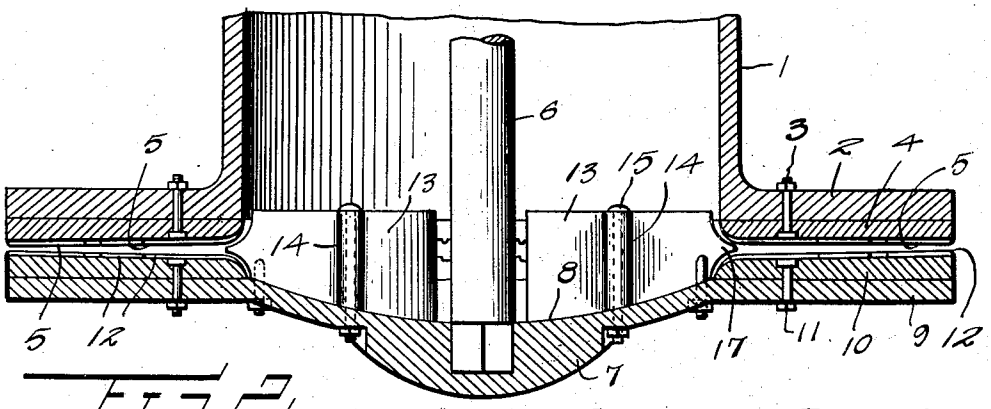


Fig. 2.

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GRINDING MILL

Henry Baehr, Grafton, Ohio

Application November 1, 1937, Serial No. 172,265

1 Claim. (Cl. 83—8)

This invention relates to grinding mills of the disk plate type, and its general object is to provide a mill that includes grain deflecting wings or baffle plates for directing and feeding the grain toward and between the grinding disks, thereby expediting the grinding of the grain which materially increases the grinding capacity of the mill.

A further object is to provide a grinding mill that includes grain feeding means of the character set forth, that are detachable, and can be applied to practically all types of disk mills, with no material change thereto.

Another object is to provide a grinding mill which includes grain feeding wings that are easy to apply and remove with respect to the mill, inexpensive to manufacture, and extremely efficient in use and service.

This invention also consists in certain other features of construction and in the combination and arrangement of the several parts, to be hereinafter fully described, illustrated in the accompanying drawing and specifically pointed out in the appended claim.

In describing the invention in detail, reference will be had to the accompanying drawing wherein like characters denote like or corresponding parts throughout the several views, and in which:

Figure 1 is a top plan view with the drive shaft in section and illustrates the application of the wings with respect to the rotary disk.

Figure 2 is a sectional view taken approximately on line 2—2 of Figure 1, looking in the direction of the arrows.

Referring to the drawing in detail, the reference numeral 1 indicates the body of the mill and which as shown is of cylindrical formation, with an annular horizontally disposed flange 2 formed on and extending outwardly from the lower edge thereof. Secured to the under surface of the flange 2 by bolt and nut connections 3, is the stationary ring disk 4 which is of a width corresponding to that of the flange. The ring disk has inclined ribs 5 providing teeth or burrs, formed on the lower surface thereof, for cooperation with the ribs of the rotary ring disk which will be presently described.

Secured to the lower end of the drive shaft 6 for rotation therewith, is the rotary disk 7 of the mill and which includes a concaved central portion providing a concavity 8 for the grain. Formed on the concaved central portion is an outer annular portion 9 providing a seat for the rotary ring disk 10 that is fixed thereon by bolt and nut connections 11 for disposal in face to face relation with the stationary ring disk 4, so that the ribs 12 of the disk 10 cooperate with the ribs 5 as previously set forth, the ribs 12 being likewise inclined for that purpose, as will be apparent.

It will be noted that the rotary ring disk 10 is slightly tapered downwardly on its rib bearing surface from its outer edge to its inner edge, so that the inner edges of the ring disks 4 and 10 are spaced farther apart than the outer edges thereof, and the inner edges of both of the disks 4 and 10 are curved inwardly toward the grain receiving space between the same, to provide a grain receiving mouth.

Mounted on and rising from the curved inner surface or concavity 8 of the concaved central portion, for disposal in opposed relation with respect to each other, is a pair of grain deflecting wings or baffle plates 13 that have their lower edges curved to follow the shape of the concavity, for fitting engagement therewith as shown in Figure 2. The wings are relatively long and are curved longitudinally throughout their length, and each have a sleeve 14 formed thereon throughout their width substantially midway their ends to receive the bolts of bolt and nut connections 15 for securing the wings to the concaved central portion, the bolts extending through the same with the nuts countersunk in pockets therein. Cooperating with the bolt and nut connections 15 are bolt and nut connections 16, the bolts thereof being fixed to the wings adjacent the outer ends thereof and extend through the concaved central portion adjacent the juncture of the annular portion 9 therewith, therefore it will be seen that the wings are fixed against movement and the inner ends are spaced a considerable distance from the ring disks 4 and 10, while their outer ends are reduced in triangular formation, with the apex portions 17 thereof directed within the grain receiving mouth or the space between the inner edges of the ring disks 4 and 10, as clearly shown in Figure 2, which likewise illustrates that the triangular shaped ends are curved to follow the inwardly curved edges of the ring disks.

From the above description and disclosure of the drawing, it will be obvious that the wings or baffle plates 13 will direct or feed the grain to the space between the ring disks 4 and 10, thereby materially expediting the grinding action and increasing the grinding capacity of the mill, without increasing the speed of the latter or the amount of power for driving the same.

It is thought from the foregoing description

that the advantages and novel features of the invention will be readily apparent.

It is to be understood that changes may be made in the construction and in the combination and arrangement of the several parts, provided that such changes fall within the scope of the appended claim.

What I claim is:

In a grain grinding mill, a stationary grinding ring disk, a rotary disk having a central concaved portion providing a grain receiving concavity, an annular portion formed on and surrounding the concaved portion, a ring grinding disk secured to the annular portion and disposed in spaced relation to the stationary grinding ring disk for cooperation therewith to provide a grain receiving space between the same, said ring disks having their inner peripheries curved inwardly toward the space to provide an annular mouth for the latter, a pair of relatively wide elongated longitudinally curved baffle plates fixed to and rising vertically from the bottom of the concavity and having their lower edges curved to follow and engage with said bottom, said baffle plates having one of their ends reduced in triangular formation with said ends extending into the mouth of the grain space, bolts rising from the periphery of the concavity to engage the plates adjacent to the triangular shaped ends for holding the latter within said mouths and said baffle plates having their opposite ends spaced a considerable distance from the center of the concavity and with respect to each other for the passage of the grain about the same and the plates from their triangular shaped ends being arranged in gradually spaced relation from the mouth to provide passages to direct the grain within said mouth.

HENRY BAEHR.