N. BRYAN.

Mill Attachment.

No. 108,442. Patented Oct. 18, 1870.

Fig. 1.

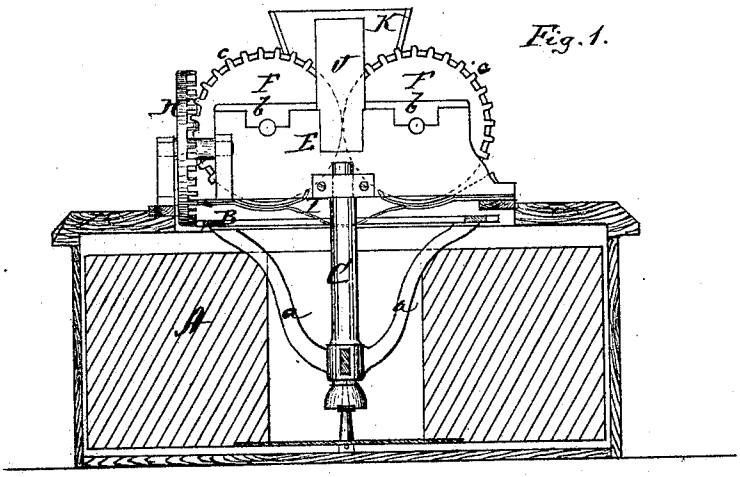
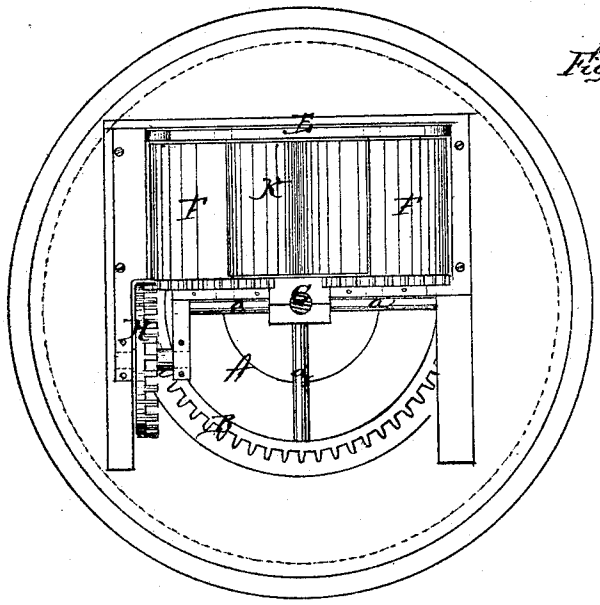


Fig. 2.



Witnesses:

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NORMAN BRYAN, OF THOMASTON, GEORGIA, ASSIGNOR TO HIMSELF AND WILSON SAWYER, OF SAME PLACE.

Letters Patent No. 108,442, dated October 18,.1870.

IMPROVEMENT IN ATTACHMENTS TO MILLS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, NORMAN BRYAN, of Thomaston, in the county of Upson and State of Georgia, have invented certain new and useful Improvements in Combined Mill and Grain-Crusher; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon which form a part of this specification.

The nature of my invention consists in the construction and combination with a grain-mill of a grain-crusher, for the purpose of crushing the grain before it goes between the burs or stones.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a longitudinal vertical section, and

Figure 2 is a plan view.

A represents the upper or running bur of a mill as it is ordinarily fixed up.

B is a cog-wheel, of suitable size, attached on the upper side of the stone A, in the manner shown in fig. 1.

The arms *a a* of this wheel are crooked, so as to reach far down into the eye of the stone, for the purpose of preventing them from knocking out the grain as it falls from the crusher into the eye of the stone.

These arms unite, forming a bulb in the center, with a hole in it, through which passes the center shaft C.

This has a bulb on the lower end that is forked, to fit down on the balance-iron and cock-head. The upper end is split, in order to attach a short rattle-staff to the top of it.

This shaft varies in length to suit the thickness of the stone; it also has grooves on two sides of it corresponding to slots or grooves in the hole through which it passes, in order that the wheel may be keyed onto it at any desired point.

It has its bearing at the upper end, in a box attached to the frame E, which is made of cast-iron, of sufficient form for convenience, for the support of rollers F F, and for the fastening of it to the hoop surrounding the stone A.

This frame is cast with openings to receive composition-boxes *b b*, which are held in place by straps of iron, and form bearings for the journals of the rollers F F.

The boxes at each end of one of the rollers are movable, so as to be regulated by set-screws, in order that the rollers may be placed close together, or separated at will.

The rollers are cast hollow, and with journals of sufficient size to bear the pressure that may be put upon them.

They are moved by a cog-wheel, H, which is attached to the side of the frame on the proper side for making the rollers run in the proper direction.

The wooden blocks J J are let into the frame E, and confined to it at their lower ends with bolts.

These blocks are to support the hopper K, which hopper prevents the grain from scattering when it falls from the common feed-chute.

Underneath the rollers is attached a floor, of sheet-iron, to catch the grain as it falls from the rollers.

This floor being inclined, the grain runs down a spout, I, into the eye of the stone A.

Between this floor and the rollers is placed a scraper or cleaner under each roller, to keep the grain scraped clean from the rollers.

By such an attachment for crushing grain the grinding is much facilitated, besides making a much more perfect meal in grinding of wheat; by the grain being flattened it makes a yield of from three to five pounds more to the bushel, turning out the bran in almost whole sheets, rather than cutting it up among the flour.

The cog-wheel H gears with cog-wheel on one roller, and this with a similar wheel on the other roller.

Having thus fully described my invention,

What I claim as new, and desire to secure by Letters Patent, is—

The combination and arrangement of the rollers F F, gearing B H *c c*, shaft C, arms *a a*, and burs A A, substantially as shown and described.

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

NORMAN BRYAN.

Witnesses:.

B. D. HARDAY,

BENJAMIN BETHEL.