S. W. POWELL.

Corn Mill.

No. 6,926. Patented Dec. 4, 1849.

Fig. 1

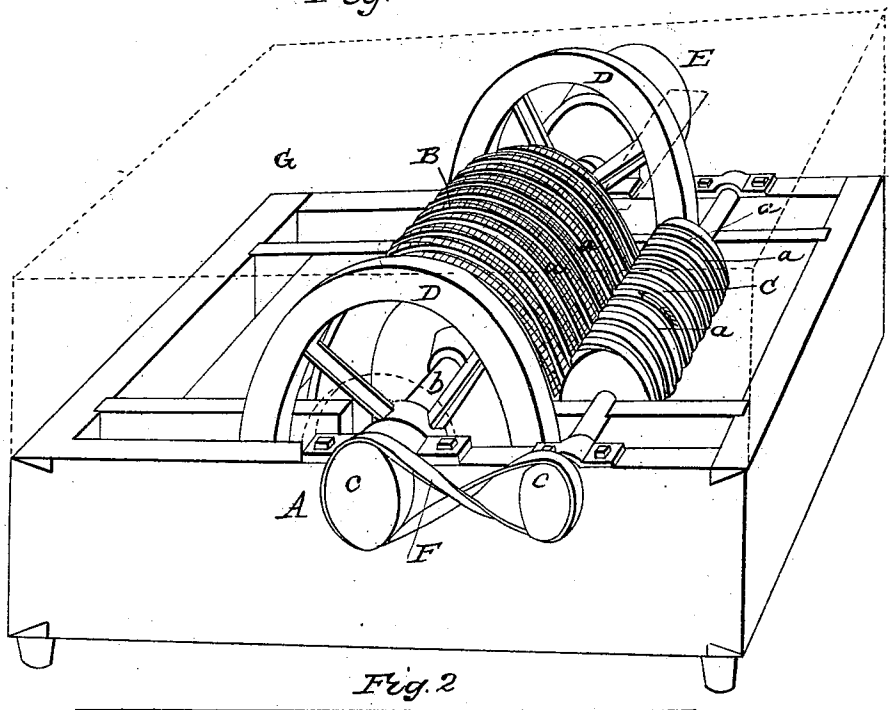
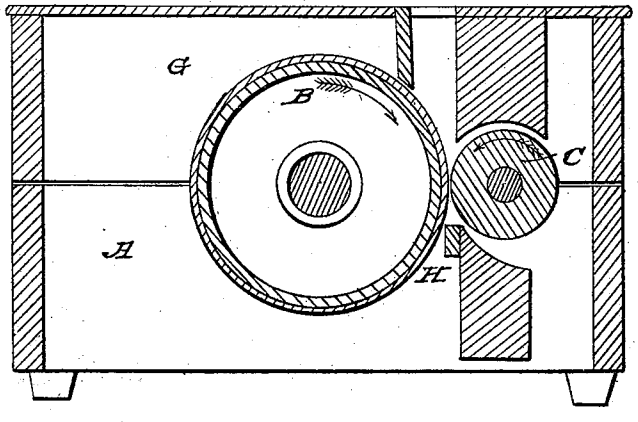


Fig. 2



UNITED STATES PATENT OFFICE.

SAML. W. POWELL, OF TUSCARORA VALLEY, PENNSYLVANIA.

MILL FOR GRINDING.

Specification of Letters Patent No. 6,926, dated December 4, 1849.

To all whom it may concern:

Be it known that I, SAMUEL W. POWELLS, of Tuscarora Valley, in the county of Juniata and State of Pennsylvania, have invented a new and useful Improvement in Mills for Grinding Corn and other Substances, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing, which forms part of this specification, and in which—

Figure 1 represents a perspective view of my machine, and Fig. 2 is a vertical longitudinal section through the same.

My invention consists in forming helical or screw shaped ribs on the barrels of two rolls the surfaces of which are driven with different velocities, so that the corn is not only crushed between them but is cut by the sharp edges of the ribs of one roll, passing obliquely across those of the other.

In the drawing A is a strong frame forming a case to which the pillow blocks of the journals of the two rolls B, C, are secured. The barrels of the rolls are covered with ribs *a* extending like the thread of a screw around their barrels from one of their extremities to the other. The larger roll is mounted upon a shaft *b* to which two fly-wheels D, D, are secured to steady the motion of the mill. A belt pulley E is secured to one extremity of this shaft to which the power of the driver is communicated through the medium of a belt. The lesser roll receives motion from the larger either through a belt F, encircling belt pulleys *c*, *c*, on their two shafts, as represented in the drawing, or by means of cog wheels.

The mill is surmounted by a cover G (red lined in Fig. 1), which prevents the dust from rising and forms a hopper into which the corn or other substances is introduced. As the rolls revolve in the directions indicated by the arrows the screw formed ribs are continually passing each other, and thus act to cut the corn while it is at the same time crushed between the approaching surfaces. I prefer to make the rolls of cast iron and to shrink a cylinder of steel upon them of which the ribs are formed. To increase the grinding action of the ribs their surfaces are indented, or fluted and grooved. A bar H, is secured between the diverging surfaces of the rolls which acts as a scraper to detach the crushed grain from the ribs, and also as a fixed grinding surface to act upon the mass passing through the mill.

What I claim as my invention and desire to secure by Letters Patent is—

A grinding mill consisting of two rolls on whose surfaces grooved and fluted helical ribs are formed, and which move with different velocities, the several parts of the machine being arranged and operated substantially as herein set forth.

In testimony whereof I have hereunto subscribed by name.

SAMUEL W. POWELL.

Witnesses:

HAGARD KNOWLES,

P. A. WATSON.