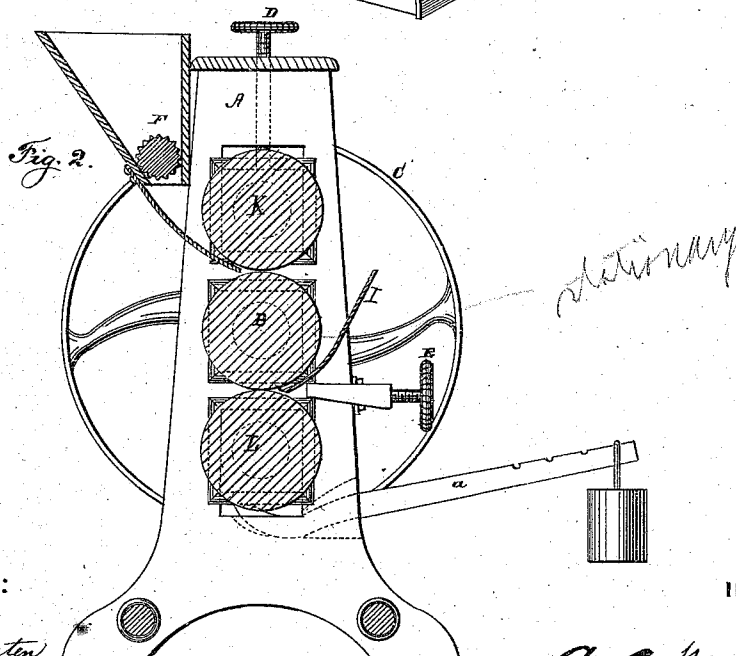
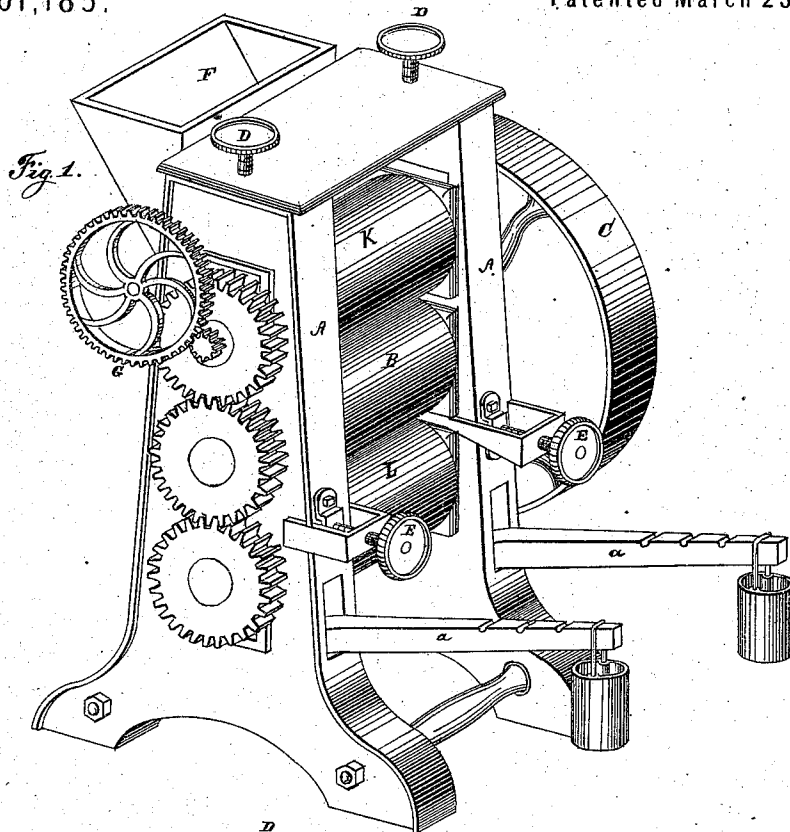


C. C. WASHBURN.
Machine for Crushing Grain.

No. 161,185.

Patented March 23, 1875.



WITNESSES:

Horn. Lauder
LeB. Wayne, Jr.

INVENTOR:

C. C. Washburn

UNITED STATES PATENT OFFICE.

CADWALLADER C. WASHBURN, OF MADISON, WISCONSIN.

IMPROVEMENT IN MACHINES FOR CRUSHING GRAIN.

Specification forming part of Letters Patent No. **161,185**, dated March 23, 1875; application filed March 13, 1875.

To all whom it may concern:

Be it known that I, CADWALLADER C. WASHBURN, of Madison, Dane county, Wisconsin, have invented a Machine for Crushing Wheat and other Grain Preparatory to Grinding between Millstones, also for crushing middlings and making flour, of which the following is a specification:

The object of my invention is to provide a machine especially adapted for crushing wheat before it passes between the millstones, thus doing a large part of the work usually done by the stones, and by which a large part of the flour is separated from the bran by a crushing rather than a rubbing process, and by which process a more perfect separation of the bran and embryo is enabled to be made.

In the accompanying drawing, forming a part of this specification, Figure 1 is a perspective view of the machine, and Fig. 2 a longitudinal vertical section.

A A represent the cast-iron frame-work, forming the two sides of the machine. In each side is a stationary box, in which revolves the center roller B, upon one end of which is attached a driving-pulley, C, and on the other end a gear-wheel, which drives the upper and lower rollers K L. The upper and lower rollers revolve in movable boxes, which are held in their place by the compound levers *a a a*. When it is desired to crush wheat alone the

levers should be used, but in crushing middlings the levers are to be laid aside and the rollers held in place by the screws D, and by which the rollers may be lowered or raised at pleasure, as shown in Figs. 1 and 2. To prevent the rollers from pressing too hard together when a lever is used, a wedge-shaped slide passes below the upper box and above the lower box, which may be pressed in or drawn out by the screws E E. F represents the hopper to receive the grain; G, the gearing that moves the feed-roller; I, the chute that delivers the material passing through the first and second rollers between the second and third rollers. The rollers should be constructed of chilled iron or the hardest steel.

I am aware that rollers have long been in use for crushing grain, and do not claim them, broadly; but

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

The combination of the rollers B K L, arranged one above the other, feed-hopper F, and chute I, all constructed to operate substantially in the manner as and for the purpose specified.

CADWALLADER C. WASHBURN.

Witnesses:

ABRAHAM MOORE,
H. S. MILLER.