

TO ALL WHOM IT MAY CONCERN:

Be it known that I, Jerry William Kirby,
(*Contractor*), a citizen of the United States, re-
siding at Butte, in the County of Silverbow and State of
Montana, United States of America, have invented a new and
useful improvement in

COFFEE OR SPICE MILLS,

of which the following is a specification.

The object of my invention is to provide a mill of the
character stated, which shall be adapted for grinding or
pulverizing coffee and spices, the same to be not only simple
in construction, but adapted for more thoroughly grinding
or pulverizing than is possible with any similar mill known
to me.

The invention consists of the special construction, ar-
rangement, and combination of parts, which will hereinafter
be fully described, with reference to the accompanying draw-
ing, and the novel features thereof be pointed out in the
claims.

In the drawing,

Figure 1 is a perspective view illustrating my
invention.

Figure 2 is an enlarged plan view, partly broken
away and with the top of the box and hopper removed, and

Figure 3 is a transverse vertical sectional view
taken on the line 3-3 of Figure 2.

In the practice of my invention, I employ a suitable box
or case A, formed of wood, metal, or other material, having a
drawer or other compartment B. In the box A I arrange two
conical rollers C, D, having reduced ends forming journals E,

P, therefor, projecting through the walls of the box, as shown. The rollers C, D, are constructed with parallel teeth G extending lengthwise thereof, having an abrupt side H and an inclined side I separated by a flat surface J. The angle formed by the said flat surface J and abrupt side H of the teeth, provides the rollers with cutting or grinding edges, while the incline sides I serve for pulverizing.

It will be noticed that the conical rollers C, D, are arranged with their smaller ends reversed, end for end, and that the abrupt side H of the teeth G on one roller is located adjacent to the similar abrupt side of the teeth on the other roller.

The journals E, F, of the rollers C, D, are connected by exterior gearing K, L, the former of which is made wider and smaller, or with less teeth than the latter, whereby the roller D is caused to rotate slower than the roller C, and when turning together as indicated by the arrows, obviously the flat surfaces of the teeth on the roller C will operate with rubbing effect on the incline side of the teeth on the roller D and thereby pulverize the material. At the same time the angle formed by the abrupt and flat surfaces of the teeth on both rollers, will cut and grind according to the separating space between the two rollers.

The roller C is made the full length of the space in the box A, and has no adjustment, that is, endwise adjustment. The roller D is constructed shorter than the roller C, and is made endwise adjustable for regulating the separating space, and thereby gauging the degree of grinding or pulverizing of the material.

Adapting the roller D to be adjusted as stated, I have ar-

ranged on the outside of the box A, a suitable collar M through which the journal F at the larger end of the roller D is extended.

On the extreme end of the journal F at the larger end of the roller D, I fixedly arrange a cap N having interior screw thread O. The collar M has similar but exterior screw thread, whereupon the cap N may be screwed. Now, obviously, screwing action of the cap N, on the collar M, will draw with it the connected end of the journal, and thereby adjust the roller D endwise, adapted for fine or coarse grinding or pulverizing.

It will be noticed that the inner side of the box A is provided with ledges P, overlying the rollers C, D. These ledges are intended for guiding the material being ground and at the same time, serve for covering the open spaces between the rollers, particularly the roller D, and the inner sides of the box A. A hopper Q is arranged on the box, with its discharge opening located to properly feed to the rollers, and power may be applied, for rotating the rollers, through means of a suitable crank R, on one journal E, of the roller C.

Coffee or Spice Mills.

Fig. 1

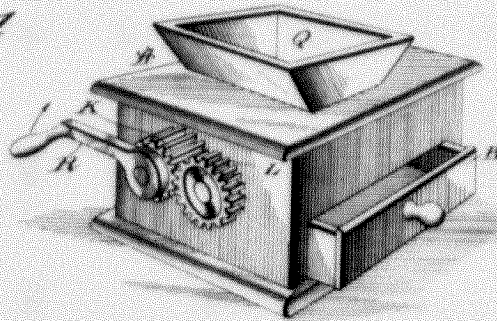


Fig. 2

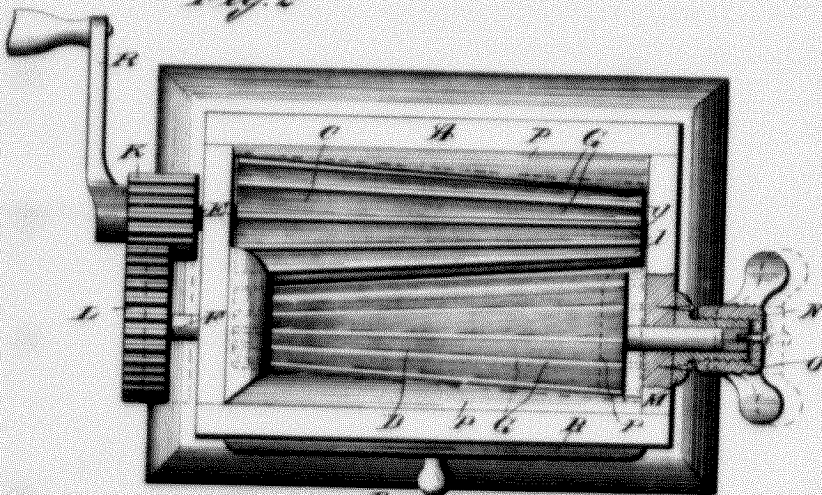
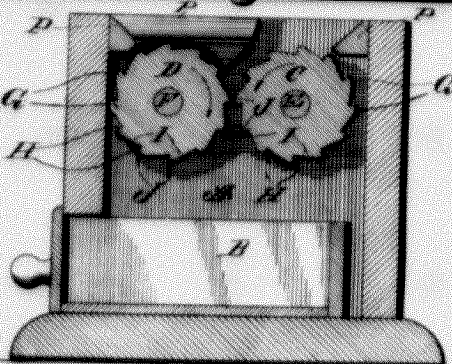


Fig. 3



Witnesses

M. M. Avery

E. B. Marshall.

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By

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Certified to be the drawing referred to in the specification herewith annexed.

Witness, N. Y., April 1, 1909.