No. 743,818. PATENTED NOV. 10, 1903.

A. E. BRONSON, JR.

COFFEE MILL.

APPLICATION FILED APR. 7, 1902.

NO MODEL.

Fig. 1.

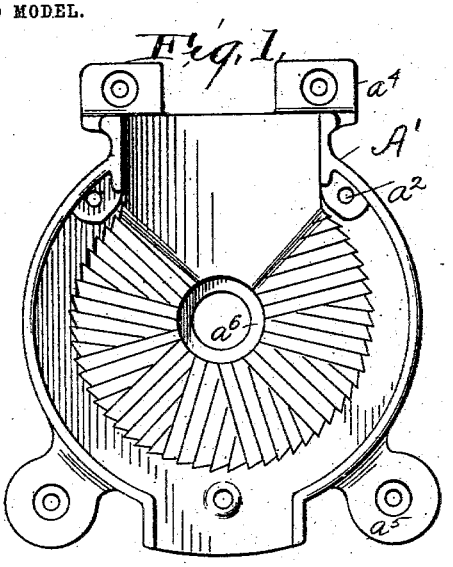


Fig. 2.

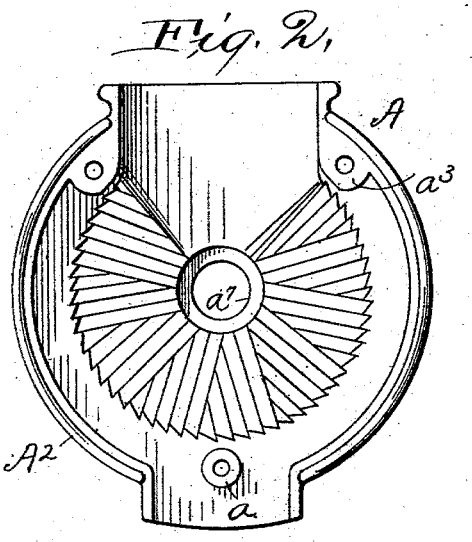


Fig. 3.

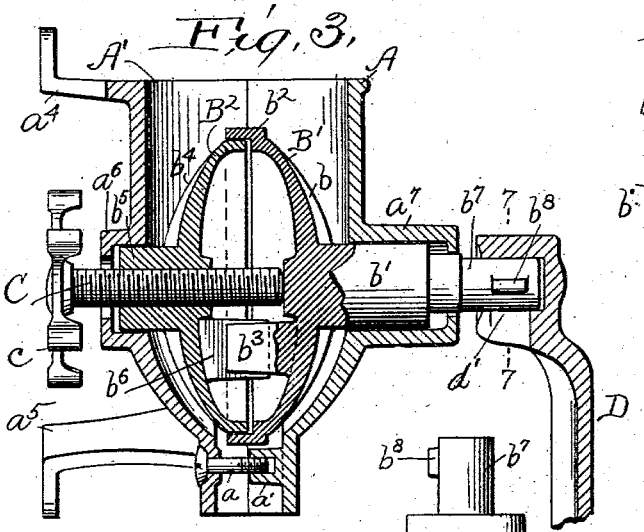


Fig. 5.

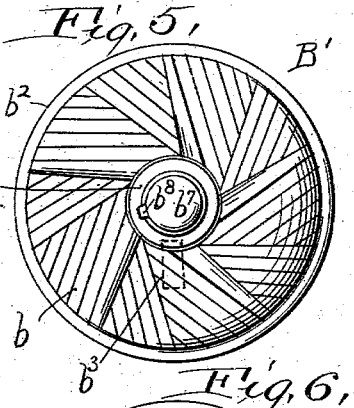


Fig. 6.

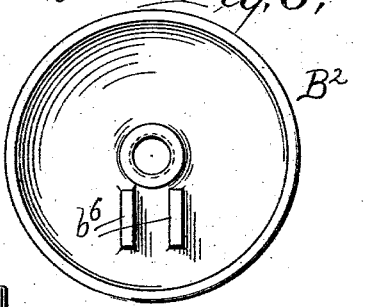


Fig. 7.

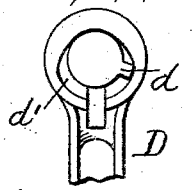
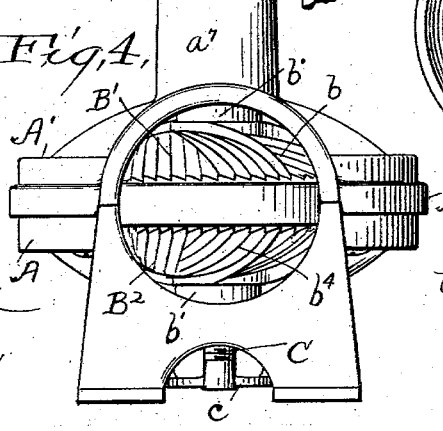


Fig. 4.



Witnesses
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By his Attorneys,
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No. 743,818. Patented November 10, 1903.

UNITED STATES PATENT OFFICE.

ADELBERT E. BRONSON, JR., OF CLEVELAND, OHIO, ASSIGNOR TO THE BRONSON-WALTON COMPANY, OF CLEVELAND, OHIO, A CORPORATION OF OHIO.

COFFEE-MILL.

SPECIFICATION forming part of Letters Patent No. 743,818, dated November 10, 1903.

Application filed April 7, 1902. Serial No. 101,669. (No model.)

To all whom it may concern:

Be it known that I, ADELBERT E. BRONSON, Jr., a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented a certain new and useful Improvement in Coffee-Mills, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings.

The object of this invention is to provide a cheap and efficient coffee-mill which shall have a large grinding capacity and a very simple means of adjustment. To this end I provide with a suitable shell and rotating mechanism two separate grinding-burs, one having a peripheral flange overlapping the other and there being an interlock between them preventing independent rotation. The invention comprises such an arrangement, as hereinafter more fully described.

In the drawings which fully illustrate my invention, Figures 1 and 2 are inner face views of the two members of the shell. Fig. 3 is a vertical central transverse section through the assembled mill. Fig. 4 is a plan of such mill with the crank removed. Fig. 5 is a view of the grinding-face of the bur which is driven directly by the crank, and Fig. 6 is a view of the inner face of the opposite bur. Fig. 7 is a section on the line 7 7 of Fig. 3, showing a preferred method of attaching the crank.

The shell of the mill is composed of two sections A A′ of the general construction shown in Figs. 1 and 2. One of these sections, as A^2, is provided with a peripheral overhanging flange, whereby the two make a neat joint when in juxtaposition, as shown in Figs. 3 and 4. In this position they are held when the mill is assembled by a screw a taking through one member into a threaded boss a' provided by the other member and screws taking through the holes a^2 of one member into the threaded bosses a^3 in the other. The section A′ is shown as provided with suitable legs a^4 a^5 for securing the mill to a suitable support.

The two sections of the mill carry integrally formed on them cylindrical bearings a^6 a^7 for the burs. The bur B′ has a grinding-surface b, a trunnion b', adapted to be journaled in the bearing a^7, an overhanging peripheral flange b^2, and a lug b^3 on its face opposite the grinding-face. The other bur B^2 has a grinding-face b^4, a trunnion b^5, and a pair of lugs b^6, between which takes the lug b^3 of the other bur. The engagement of the lugs b^6 b^7 compels the bur B^2 to rotate when the bur B′ is rotated.

Threaded into the trunnion b^5 is a screw C, impinging at its inner end against the bur B′ and at its outer end projecting loosely through an opening in the shell A′ and carrying an operating-head c. The screw C thus furnishes means for adjusting the compound bur. The coffee passing onto opposite grinding-faces of the two burs centers the same, and the fineness of the grinding is regulated by the screw C, which, being turned in, may cause the two burs to approach the grinding-surfaces of the shell as desired.

The trunnion b' of the bur B′ has a projecting shank b^7 for the attachment of the crank D. This attachment is shown in the drawings as being simply by means of a recess d in the crank, into which the shank extends, and an eccentric enlargement d' of said recess, into which a lug b^8 on the shank may pass. This allows the very convenient placing or removal of the crank; but after the crank has been turned enough for the lug b^8 to jam in place at the end of the eccentric enlargement the connection becomes rigid in operation.

It will be seen from the foregoing description that my coffee-mill is extremely simple in construction and very neat in appearance. The adjustment may be varied with the greatest ease as the coffee is being ground to produce just the required fineness. The mill having a double grinding-surface its capacity for delivering the ground coffee is twice that of the ordinary mill.

Having described my invention, I claim—

1. The combination, in a coffee-mill, of a shell, two oppositely-facing grinding-burs within the same, one of said burs having a peripheral flange extending over the other, means for rotating said burs in unison, and means for adjusting their approach, substantially as described.

2. The combination, in a coffee-mill, of a

shell having two internal grinding-faces, two burs within the shell, one bur having a peripheral flange extending over the other, interlocking shoulders carried by said burs to prevent independent rotation, an adjusting-screw carried by one bur for limiting the approach of the burs, and a driving member secured to the other bur, substantially as described.

3. The combination, in a coffee-mill, of a shell composed of two sections each having an inner grinding-face and a bearing-recess, a pair of oppositely-facing burs within said shell, each having a trunnion journaled in one of said recesses, and one of said burs having a peripheral flange extending over the other, said burs being each outwardly convex and inwardly concave, a pair of projecting lugs on the concave side of one of said burs, and a coöperating projecting lug on the concave side of the other bur, whereby said burs may be adjusted toward or from each other without opening the cavity or breaking the connection between them, substantially as described.

4. In a coffee-grinding mill, the combination of a shell having oppositely-disposed grinding-surfaces, a pair of hollow oppositely-facing burs, one of said burs being provided with a peripheral flange extending over the other, means for adjusting said burs with reference to each other and to the grinding-surfaces of the shell, and telescopic connections extending between the inner faces of said burs and permitting the adjustment of the burs without breaking their connection with each other, substantially as described.

5. In a coffee-grinding mill, the combination of a shell having oppositely-disposed grinding-surfaces, a pair of hollow oppositely-facing burs within said shell, one of said burs being provided with a peripheral flange extending over the other, shoulders or lugs projecting from the inner surface of one of said burs, a coöperating shoulder or lug projecting from the inner surface of the other of said burs and extending between the lugs on the inner surface of the former bur, and means for adjusting said burs with reference to each other and to the grinding-surface of the shell, substantially as described.

In testimony whereof I hereunto affix my signature in the presence of two witnesses.

ADELBERT E. BRONSON, JR.

Witnesses:

ALBERT H. BATES,

H. M. WISE.