

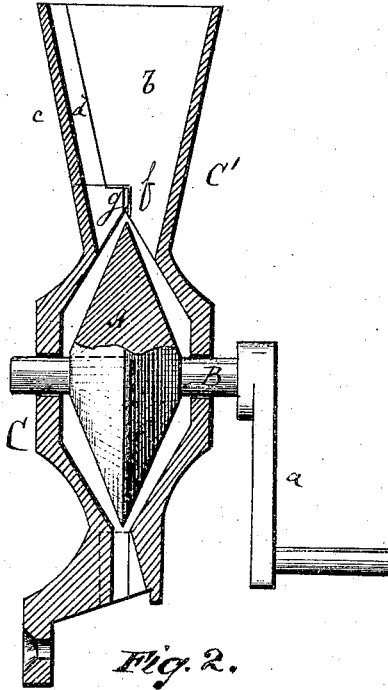
F. C. RICHER.

Coffee Mill.

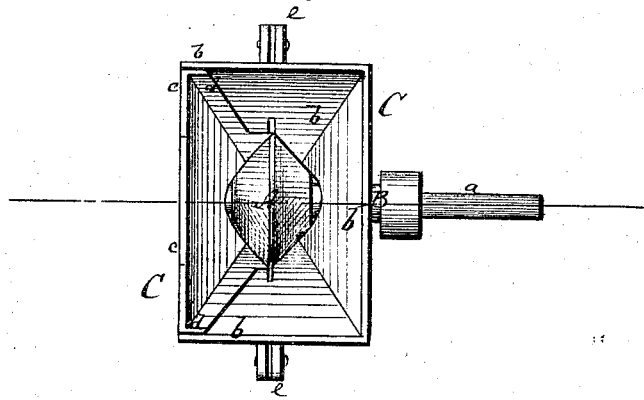
No. 106,407.

Patented Aug. 16, 1870.

*Fig. 1*



*Fig. 2.*



Witnesses:

*John Becker.*  
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# United States Patent Office.

FRANÇOIS CHARLES RICHER, OF GILMER, TEXAS.

Letters Patent No. 106,407, dated August 16, 1870.

## IMPROVEMENT IN COFFEE-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, FRANÇOIS CHARLES RICHER, of Gilmer, in the county of Upshur and State of Texas, have invented a new and improved Coffee-Mill; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification.

My invention relates to upright coffee-mills, and consists in an improved construction thereof, whereby the bearings are always maintained in their true relative position, while the strain on the two is made automatically counteracting, and each part of the shell firmly and effectually supported by the other.

Figure 1 is a vertical section, and

Figure 2 a plan view of a coffee-mill.

A is a rotary grinder.

B, a shaft which rotates it, and

a, the crank to which power is applied.

C C' are the two parts which form the shell.

It will be perceived, from fig. 1 of drawing, that C' has three sides, *b b b*, and that, on each of the two opposite of these a right-angled recess, *f*, is formed.

The part C is also composed of three sides, *c* and *d*, but has each of the latter provided with a shoulder, *g*.

The mode of operation is as follows:

The part C of the shell being made fast to a bracket, or any suitable support, and located in an upright position, the projecting shoulders *g g* are fitted snugly into the recesses *f* of the part C'.

The operator, in turning the crank *a*, brings a down-

ward strain upon the part C' of the shell and an upward strain upon the part C. This produces a tendency, in these two parts of the shell, to work in reverse directions, and to lose their exact and necessary coincidence.

A very slight change of this character makes the bearings of the shaft B non-horizontal, and throws the grinder nearer to one side of the shell than the other. This will produce an uneven grist, and render the mill useless, or else necessitate a repair which will cost nearly as much as a new coffee-mill.

With the construction shown the part C' of the shell, upon which the downward pressure is brought, rests securely upon C, which receives the upward pressure.

Under these circumstances the two parts of the shell are not held merely by the attaching-pins or screws, but are made to counteract and counterbalance the opposite tendencies of each other. One, therefore, cannot move without its companion, and the mill will continue to grind uniformly until worn out.

Having thus described all that is necessary to a clear understanding of my invention,

What I esteem to be new, and desire to protect by Letters Patent, is—

In an upright coffee-mill, a shell formed of two parts, C' *b f* and C *c d*, applied together, as and for the purpose specified.

FRANÇOIS CHARLES RICHER.

Witnesses:

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