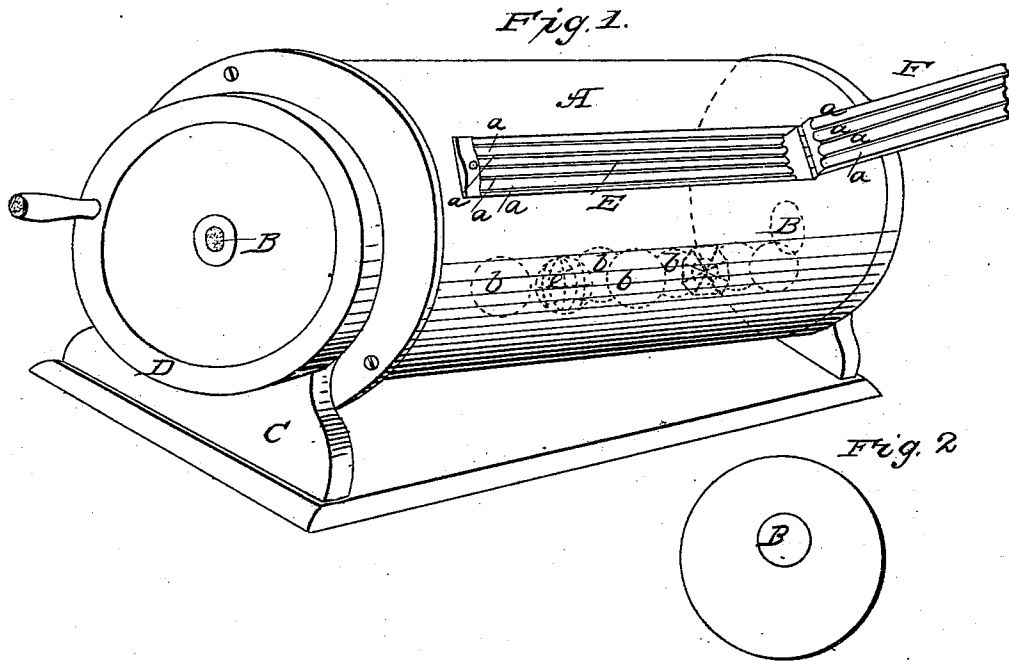


E. HEATH.

Spice Mill.

No. 36,517.

Patented Sept. 23, 1862.



witnesses  
P. P. Yball.  
J. S. Smith.

Inventor  
E. Heath

# UNITED STATES PATENT OFFICE.

ELANDER HEATH, OF SAN FRANCISCO, CALIFORNIA.

## IMPROVED SPICE-MILL.

Specification forming part of Letters Patent No. **36,517**, dated September 23, 1862.

*To all whom it may concern:*

Be it known that I, ELANDER HEATH, of the city and county of San Francisco, in the State of California, have invented, made, and used a new and useful machine for grinding and pulverizing spice of every description, entitled Heath's Improved Spiral Spice and Sage Mill; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a perspective view of the mill according to my plan; Fig. 2, the end pieces of the cylinder.

The nature of my invention is chiefly designed for the expeditious pulverization or grinding of vegetable, mineral, or fibrous material.

To enable others skilled in the art to make and use my invention, I will now proceed to describe its construction and operation.

I construct the cylinder A, of any given length or dimension, in sections or staves of iron or steel, fitting them closely together. To each end of this cylinder I secure an end piece, as shown in Fig. 2. Said cylinder is held by two axles—that is, each axle is secured to the drum-head or end piece, Fig. 2. These axles run in journals, which are a part of the framework C.

The axles are represented by letter B, and, as will be seen in Fig. 2, are placed on the heads of the drums, so that the same may revolve eccentrically, thus giving the cylinder, when in motion, a spiral movement. The axles are so placed by their drum-heads or end pieces that the eccentric will appear on one side up, the other down. D represents the power-pulley with a crank I leave an

opening, E, in said cylinder for introducing the material to be pulverized. F is its corresponding lid, which may be fastened thereto in any convenient manner.

The inner surface of cylinder A, as well as the inner sides of the drum-heads, Fig. 2, are made with furrows or corrugations *a a a a*. I also employ any given number of spheroids and polysided bodies, as represented by *b c b c*, the balls *b* being entirely spherical, and *c* the polysided bodies, which may be made in proportion to the size and dimension of said cylinder.

Having thus described its construction, I will now show its peculiar manner of operation and advantages.

I have practically employed this device for a number of years for pulverizing, and have always found that it grinds and pulverizes material of every description, be they mineral, vegetable, or fibrous, in a most expeditious manner. The material for pulverization is constantly brought into contact with either the one side or the other of the drum-heads at the same time, while the material is under the pressure of the bodies *b c*. The cylinder A describes a spiral movement in consequence of the axles B being placed or set eccentrically.

I do not claim the cylinder or balls; but

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

The construction and combination of the cylinder A, describing a spiral movement, together with the balls and bodies *b c*, operating substantially as and for the purposes herein set forth.

ELANDER HEATH.

Witnesses:

P. P. HALL,  
J. SILVERSMITH.