C. WALKER.

Mustard Mill.

No. 5,262. Patented Aug. 28, 1847.

Fig. 4

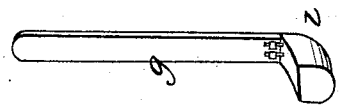


Fig. 2

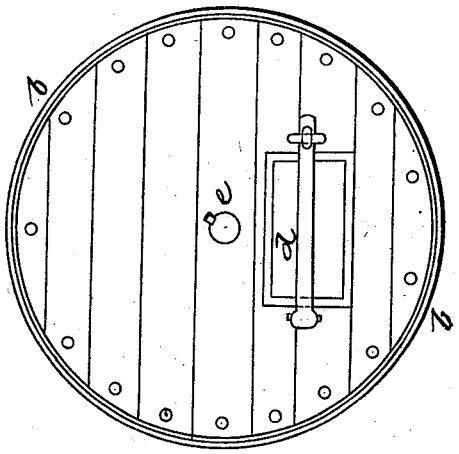


Fig. 1

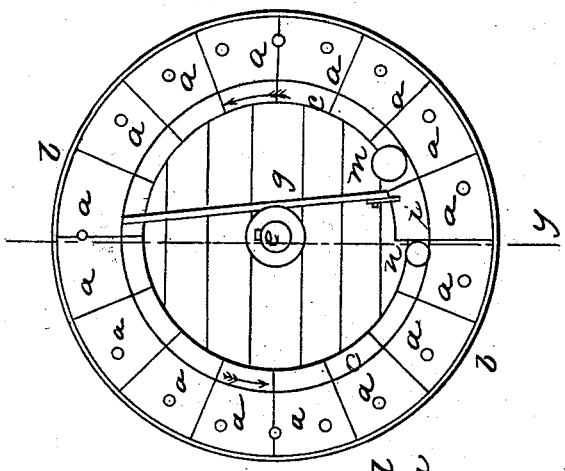
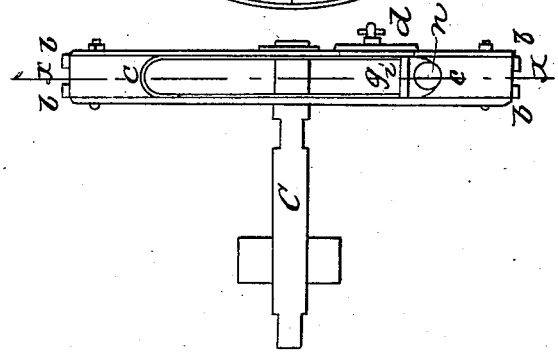


Fig. 3



UNITED STATES PATENT OFFICE.

CHARLES WALKER, OF BROOKLYN, NEW YORK.

MILL FOR GRINDING MUSTARD, &c.

Specification of Letters Patent No. 5,262, dated August 28, 1847.

To all whom it may concern:

Be it known that I, CHARLES WALKER, of Brooklyn, in the county of Kings and State of New York, have invented a new and useful Machine for Pulverizing Mustard and Oily Substances; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure I is a section through the line *x*—*x*. Fig. II is a side elevation. Fig. III is a section through (*y*—*y*). Fig. IV is a view of the sliding partition and foot.

The nature of my invention consists in the construction of a machine or mill for pulverizing mustard seeds grain drugs and other like things especially gummy or oleaginous substances. The peculiar properties of said machine or mill being rapidity of action without becoming clogged, with the matters it pulverizes no matter how sticky their nature. In the construction of this mill I prepare a number of blocks of hard wood (*a a a*) and so shape each block on two of its sides as to form segments of a circle. The blocks are to be planed so that all their fibers shall be parallel or nearly so. The blocks are then hooped together by the iron hoops (*b*) forming a massive wooden ring. The inner surface of this ring presents only the end-wood, the fibers lying nearly parallel to one another, and directed toward the center. A semicircular channel or groove is then turned out on the inside as seen at (*c c*). This done the ring is next cased or planked up on both sides; a door (*d*) being cut through for feeding, with proper means of securing it. The wheel is then suspended on the shaft (*e*) with a driving pulley attached. Within the wheel I put a moving partition consisting of a board (*g*) just wide enough to play freely between the two side surfaces and long enough to fill its diameter the top of the board is rounded to fit the groove (*c*), but at the bottom it is fastened to one end of a block (*i*) curved on its underside to match the groove. I then put in the wheel two balls (*m* and *n*) one on each side of the block (*i*) but of different sizes— the small ball (*n*) being in advance of the block (*i*).

The operation is as follows. Having put the substance to be ground within the wheel a high speed is given by suitable power the motion being in the direction of the arrows. By means of the partition (*g*) all the seeds or other substance will be put within that part of the wheel (*g*, *m*, *c*) and of course be subjected constantly to the action of the ball (*m*). The dividing block (*i*) and the ball (*n*) are for the purpose of throwing the large ball (*m*) beyond the line of its gravity, and thus ride up, some distance upon the wheel as is readily seen in the figure; and the use of this is to keep the large ball (*m*) constantly traversing the material it is to puverize; the particles of which from their size lightness or other cause would be carried up by the traction of the wheel.

The importance of having the end wood of the blocks presented to the action of the balls and materials is obvious, as being the means by which any tendency to cause adhesion of the particles is removed, and also to equalize and prolong its wear. For some materials it is necessary to cause the ball (*m*) to ascend higher or come lower down on the wheel. This is done by regulating the length of the block (*i*) and also the weight of the ball (*n*).

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

The peculiar combination of the segments with one another to form a ring of wood, so that the ends of their fibers shall make the wearing surface for the purpose herein described. Also the combination of the movable partition (*g*) and, block (*i*) with the balls (*n* and *m*) and the ring (*a a*) in manner and for the purpose set forth.

CHARLES WALKER.

Witnesses:
J. L. KINGSLEY,
THOS. T. GURNEY.