

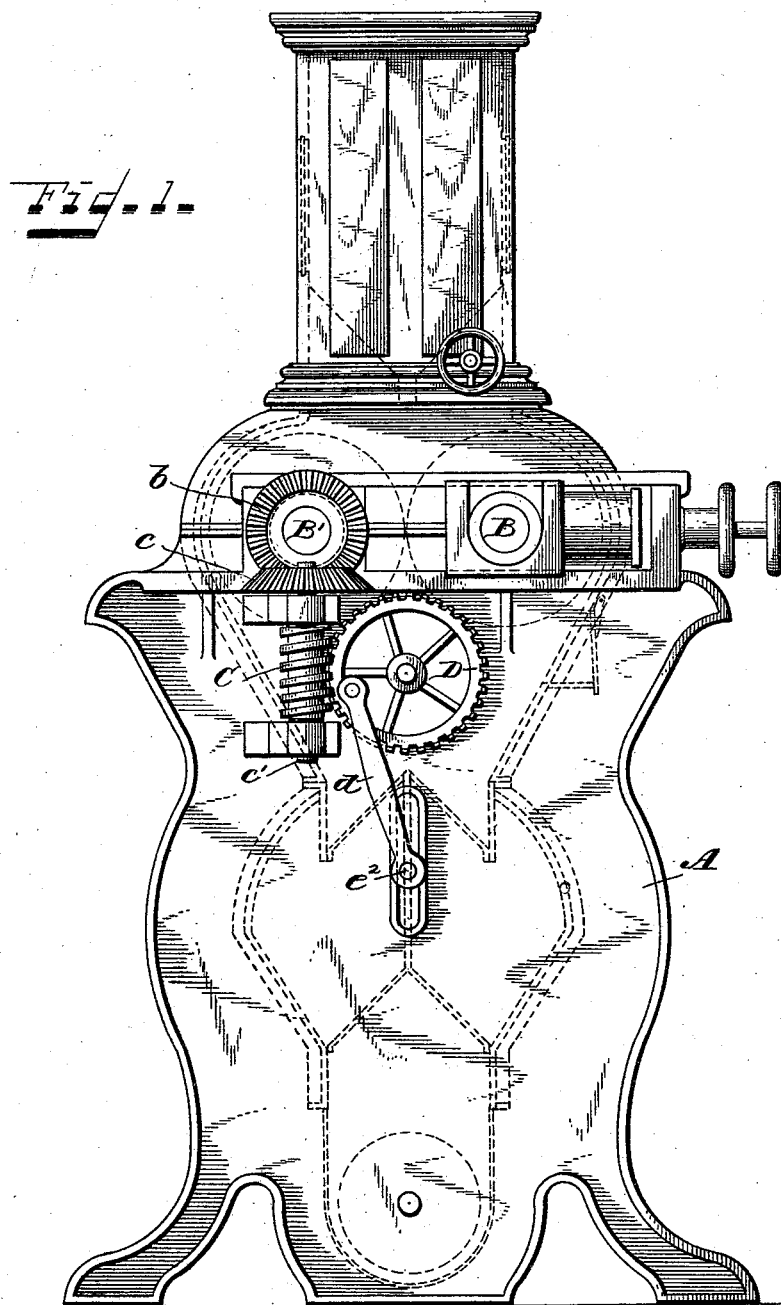
(No Model.)

2 Sheets—Sheet 1.

J. BRAUER.  
MALT GRINDING MILL.

No. 522,584.

Patented July 10, 1894.



Witnesses.  
J. Thomson Cross  
James W. Ramsey

Inventor.  
John Brauer  
By Geo. W. Farnham  
His Attorney.

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Fig. 2.

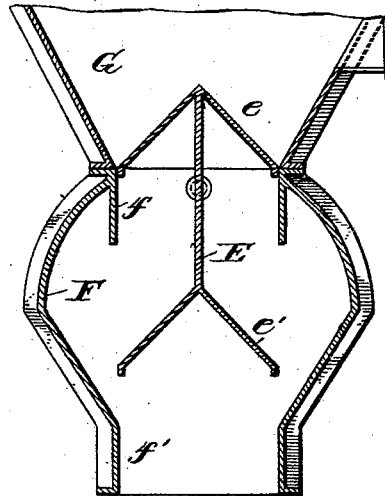
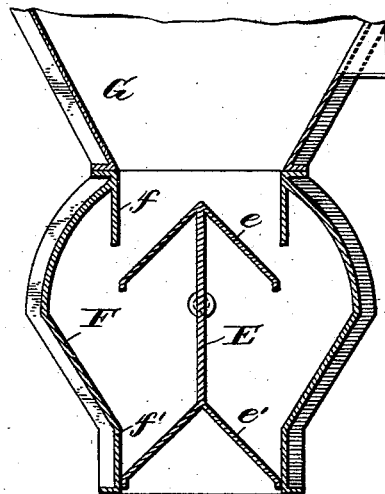


Fig. 3.



Witnesses.

*John Cross*  
*James H. Ramsey*

Inventor.

*John Brauer*  
By *Geo. S. Parkinson*  
His Attorney.

# UNITED STATES PATENT OFFICE.

JOHN BRAUER, OF CINCINNATI, OHIO, ASSIGNOR TO THE FRANCIS FRITSCH  
MANUFACTURING COMPANY, OF SAME PLACE.

## MALT-GRINDING MILL.

SPECIFICATION forming part of Letters Patent No. 522,584, dated July 10, 1894.

Application filed July 25, 1892. Renewed January 2, 1894. Serial No. 495,396. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN BRAUER, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Malt-Grinding Mills, of which the following is a specification.

My invention consists in an improved construction and arrangement of parts whereby the passage between the discharge hopper of the mill and the chute or conveyer through which the ground malt travels to its destined receptacle is always closed and the injurious effects of explosions in the mill prevented.

In the drawings: Figure 1 is an end view of the mill showing the rolls, valves and valve seats in dotted lines; Fig. 2 a vertical cross section through the valves and valve seats showing the valves at the upper limit of their travel; Fig. 3 a like view showing the valves at the lower limit of their travel.

A represents the frame or casing of a malt mill; B and B' the shafts of the grinding rolls; b a beveled wheel upon one of the roll shafts adapted to mesh with a gear wheel c upon a worm shaft c' carrying a worm C which in turn meshes with a worm wheel D.

E is a valve having sloping heads e and e' the barbs of which are adapted to take against and slide upon seats f and f' in a valve chamber F placed between the discharge hopper G and the discharge chute or conveyer. A link d eccentrically secured to the worm wheel D

connects the latter with a suitable bearing e<sup>2</sup> upon the valve stem adapted to reciprocate in a slot a in the casing.

I have illustrated but one end of the machine but it will be understood that the link connection with the valves is preferably duplicated.

It will be seen that rotation of the roll B' will communicate motion to the worm wheel D which acting through link d will cause a vertical reciprocation of the valve. The valve heads are arranged at such distance from each other that as one engages with its seat the other disengages, thereby permitting an intermittent flow of the ground malt from the discharge hopper into the extension or valve chamber F and from the latter to the chute or conveyer, but always cutting off the passage between the mill and the discharge chute or conveyer at the parts f or f'.

I claim—

The combination with a malt grinding mill of the valve chamber F having ports at each end, the valve E having sloping heads e and e' adapted to close the respective ports alternately the worms C, the worm wheels D, the links d and gearing connecting the worm shafts with the driving shaft, substantially as and for the purpose specified.

JOHN BRAUER.

Witnesses:

JAMES N. RAMSEY,  
BENJAMIN BLOCH.