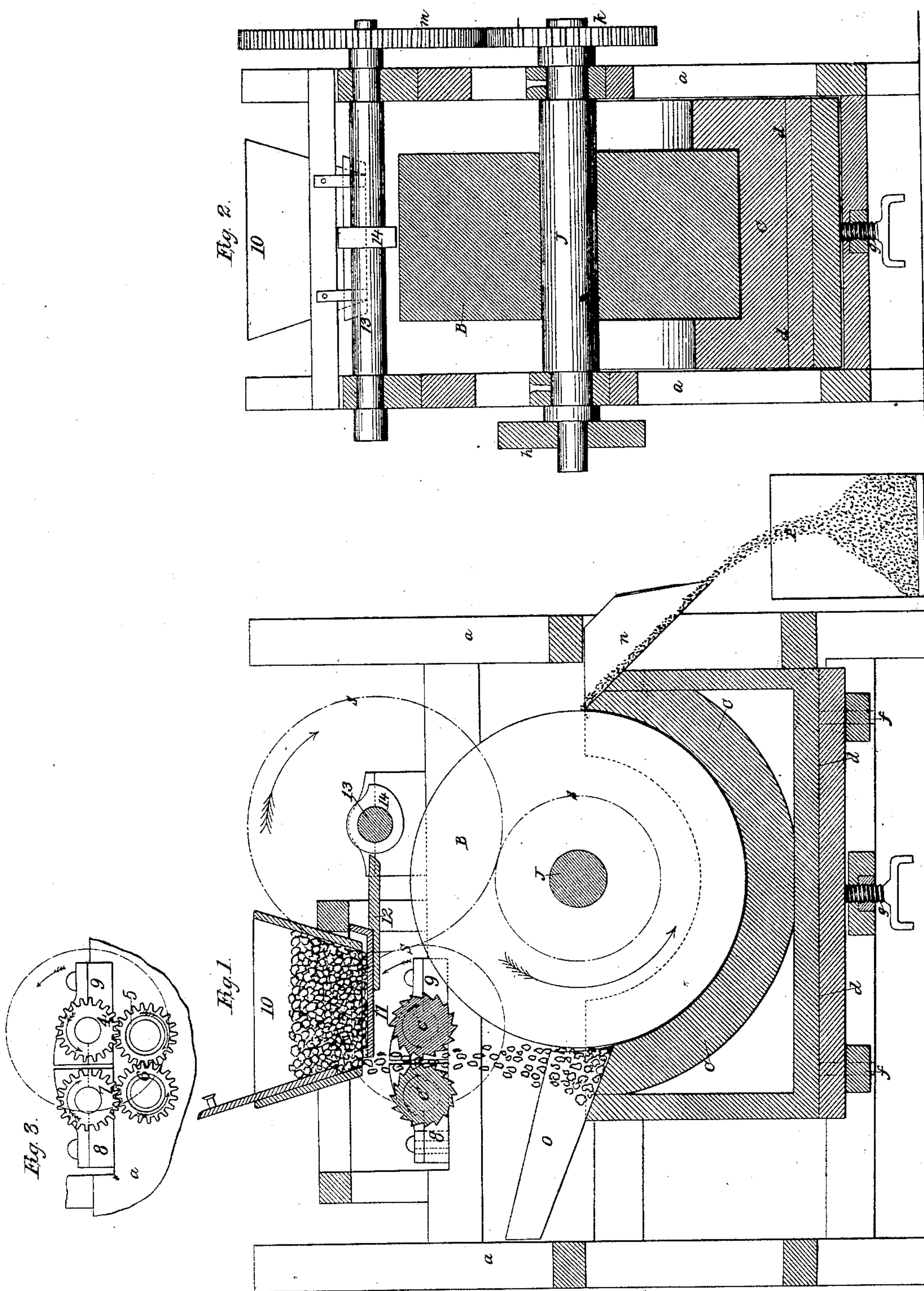


S. VASCOW & A. GUIRAND.

Grinding Mill.

No. 20,310.

Patented May 18, 1858.



UNITED STATES PATENT OFFICE.

S. VASCON AND A. GUIRAUD, OF CINCINNATI, OHIO.

GRINDING-MILL.

Specification of Letters Patent No. 20,310, dated May 18, 1858.

To all whom it may concern:

Be it known that we, SALVADOR VASCON and ADOLPHE GUIRAUD, of the city of Cincinnati, Ohio, have invented a new and useful
5 Improvement in Grinding-Mills; and we do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings and to the letters and figures of
10 reference marked thereon and made to form part of this specification.

Similar letters and figures refer to like parts of the improvement.

The nature of our improvement consists
15 in the combined arrangement of parts composing the mill, with which we make one not liable to get out of order in its running gear and the grinding surface will not become dull with the same amount of wear as those
20 in ordinary use, and can be made cheaper for grinding a given quantity of grain than any mill in common use and will not heat the grain in the process of grinding and occupy less space.

25 To enable others skilled in the art to make and use our improvement we will proceed to describe its construction and operation by referring directly to the accompanying drawings.

30 Figure 1, is a longitudinal sectional view of the mill showing the end of the stone. Fig. 2, is a transverse sectional view through the mill stone and other parts of the machinery, and Fig. 3 represents the gearing
35 used for giving the proper motion to the grain crackers.

(a, a,) is the general frame work of the mill.

40 (B) is a French bur stone mounted on the shaft (J,) and attached firmly to it by any suitable means so that the stone can be revolved by a belt working over the pulley h on the end of the shaft (J.)

45 (C, C,) is a concave piece made of French bur stone and attached to the frame work (d, d,) which frame work will be made of metal and the whole will be adjustable up and down with the screw (g,) and cross
50 pieces (f, f,) for regulating the edge of the stone (B) and the bottom of the concave (C, C,) apart.

The dotted lines (s, s, s,) in Fig. 1, represent the place for the gearing for giving

motion to the shaking shaft (13,) and breaking rollers (C', C',) But two of the gear
55 wheels one on the stone shaft (J) and the other on the shaking shaft 13, are represented by k and (m) in Fig. 2.

10 is the hopper in which the grain is placed to be ground. 60

(11,) is the bottom of the hopper and swings, by being attached with straps of leather and is acted upon with the cam (14,) on the shaft (13,) by striking the rod (12,) which rod is attached to and moves the bot-
65 tom (11) and thus jars the grain from the hopper, down between the breaking rollers (C', C',) which rollers are furnished with grooves as represented—and as the grain passes between them it is broken and passes
70 from them into the chute (O) and then passes between the edge of the stone (B,) and concave (C, C) as represented and is ground to any required fineness by adjust-
75 ing the edge of the stone and concave apart with the screw (g.)

(m,) is the chute in which the ground grain passes from the mill into the box (P.)

The edge of the stone and inside of the concave will be furnished with grinding sur-
80 faces—and will be made for grinding grain of all kinds.

Cob and corn can be ground together by this mill, by adjusting the breaking rollers apart to suit for breaking the cob which
85 is effected by moving the pillow blocks 8, out in which one of the breaking rollers revolve and then adjust the mill to suit the size of the pieces of cob as it comes from the breaking rollers for grinding. When the
90 cob is ground up with the corn it will be used as feed for stock.

The wheels 4, 5, 6, and 7, are employed for giving motion and the right direction
95 of it to the breaking rollers (C'' C').

A mill of this description furnished with one stone (1,) foot in diameter and 8, inches face with 500 revolutions per minute can grind from six to eight bushels of grain in
100 one hour. And a stone 1½ feet in diameter 12 inches face with 400 revolutions per minute will grind from 9, to 12, bushels per hour. And a stone 2, feet in diameter and 16, inches face with 250, revolutions per
105 minute will grind from 12 to 15 bushels per hour. The facts stated above I know from

actual experience having had the mills in operation.

What we claim as our improvement and desire to secure by Letters Patent is—

5 The combined arrangement of the breaking rollers (C' C') with the cylindrical grinder (B) and concave (C, C,)—when the whole is constructed as described for ad-

justing the cylinder and concave apart as before described for grinding.

SALVADOR VASCON.
ADOLPHE GUIRAUD.

Witnesses:

M. BENSON,
EDWARD GOURJON.