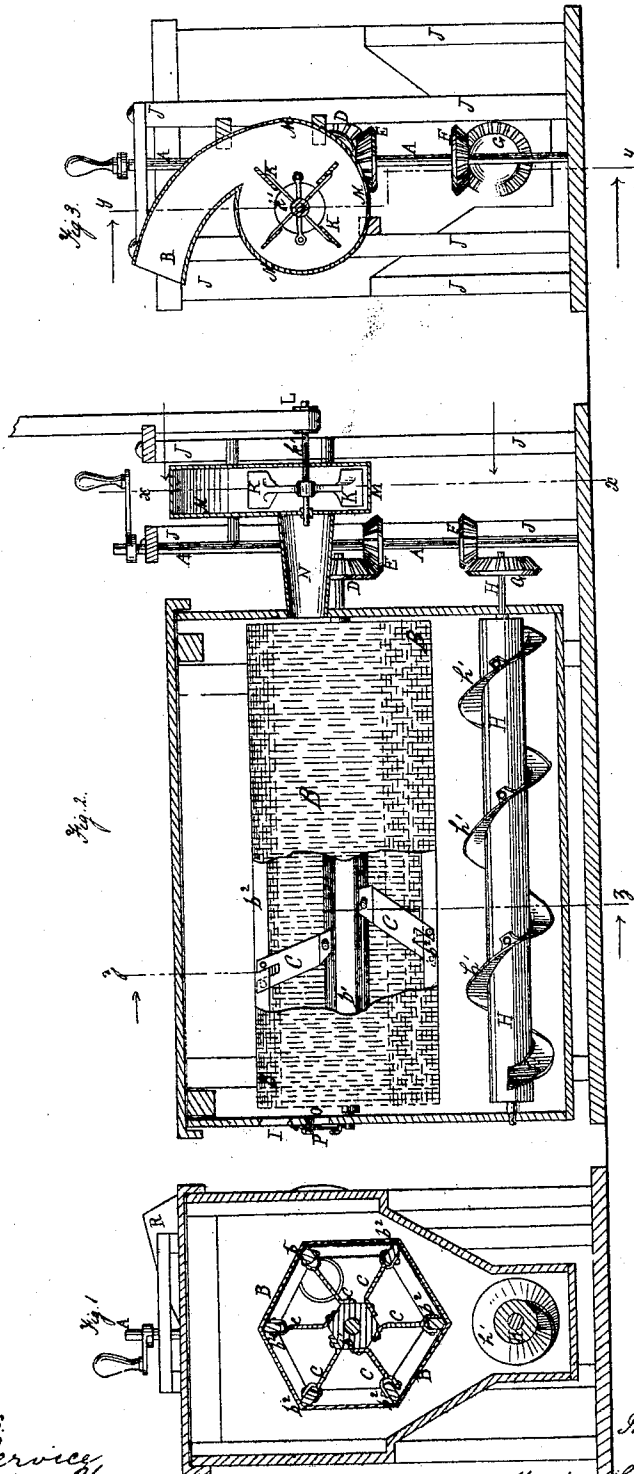


M. Cosgro.

Flour Bolt.

N^o 71709

Patented Dec. 3, 1867.



Witnesses
J. A. Service
J. Allison Fraser

Inventor.
Martin Cosgro
Per Munn & Co
Attys.

UNITED STATES PATENT OFFICE.

MARTIN COSGRO, OF PEORIA, ILLINOIS, ASSIGNOR TO HIMSELF AND
GEORGE H. REYNOLDS, OF SAME PLACE.

IMPROVED FLOUR-BOLT.

Specification forming part of Letters Patent No. 71,709, dated December 3, 1867.

To all whom it may concern:

Be it known that I, MARTIN COSGRO, of Peoria, in the county of Peoria and State of Illinois, have invented a new and useful Improvement in Flouring Machinery; 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 drawings, forming part of this specification.

Figure 1 is a cross-section of a flour-bolt illustrating my improvement, taken through the line *z z*, Fig. 2. Fig. 2 is a longitudinal section of the same, taken through the line *y y*, Fig. 3. Fig. 3 is a cross-section of the same, taken through the line *x x*, Fig. 2.

Similar letters of reference indicate corresponding parts.

My invention has for its object to improve the construction of flouring machinery, so as to take out the fine bran and red particles from the flour while passing through the bolt; and it consists in the combination of an exhaust-fan and broad arms or wings with the flour-bolt, as hereinafter more fully described.

A is the shaft, to which the power is applied for driving the bolting machinery.

B is the bolt, which is made in the ordinary manner, except the arms or wings C, which are made broad, and are set in an inclined position, one end being secured to the shaft *b*¹, and their other ends being secured to the longitudinal bars or arms *b*² of the bolt, as shown in Fig. 2. The broad arms or wings C are designed to promote and equalize the currents of air passing through the bolt.

D is a bevel-gear wheel attached to the end of the bolt-shaft *b*¹, the teeth of which mesh into the teeth of the bevel-gear wheel E, attached to the driving-shaft A.

F is a bevel-gear wheel attached to the driving-shaft A, the teeth of which mesh into the teeth of the bevel-gear wheel G, attached to the end of the carrier-shaft H, to operate the carrier.

H' is a spiral flange attached to the shaft H,

to move the flour forward to the discharging-orifice. The flour is introduced into the bolt through the hole I, into which the lower end of the conveyer-spout is fitted.

J is the frame-work which supports the fan K, to which motion is communicated by the pulley L, attached to the end of the fan axle or shaft *k'*.

The central part of the case M of the fan K is connected with the bolt B by a spout or pipe, N, which enters the bolt near its upper part, as shown in Figs. 1 and 2.

The air enters the bolt at its other end through the hole O, and the volume of air passing through the bolt is regulated by a slide, P, which may be placed so as to cover or partially cover the hole O, or which, if more convenient, may be placed at the other end of the bolt.

By this construction and arrangement the red particles, light bran, &c., which rise to the upper part of the bolt as it revolves, will be taken away by the current of air passing through the upper part of the bolt, and will be discharged through the spout R into a bin prepared for its reception, leaving the heavier particles of pure white flour to pass through the bolt-cloth.

This improvement enables the middlings to be passed through the bolt with the finer flour, producing flour of a better grade and in larger quantities than when it is bolted in the ordinary manner and with the ordinary machinery.

I claim as new and desire to secure by Letters Patent—

A bolt, B, provided with broad arms or wings C, constructed and arranged substantially as described, for promoting and equalizing the currents of air, which are made to pass through the bolt by means of the exhaust-fan K.

The above specification of my invention signed by me this 1st day of June, 1867.

MARTIN COSGRO.

Witnesses:

J. G. REYNOLDS,
B. F. WELLES.