

Mill Bolt.

Patented June 30, 1857.



UNITED STATES PATENT OFFICE.

A. T. CLARK, OF LANCASTER, PENNSYLVANIA.

DISTRIBUTING APPARATUS OF FLOURING-MILLS.

Specification forming part of Letters Patent No. 17,667, dated June 30, 1857; Reissued August 4, 1857, No. 481.

To all whom it may concern:

Be it known that I, ALFRED T. CLARK, of Lancaster, in the county of Lancaster and State of Pennsylvania, have invented an Improvement in Flouring-Mills, and that the following is a full, clear, and exact description of the principle or character which distinguishes it from all other things before known and of the usual manner of making, modifying, and using the same, reference being had to the accompanying drawings, of which—

Figure 1 is a perspective view of the bolting machine. Fig. 2 a vertical cross section of the same taken through that part containing the double sets of valves and spouts, and, Fig. 3 is an enlarged perspective detached view of the double set of valves and spouts.

My invention consists in certain improvements in flouring mills described and specified as follows: It may be premised that the grinding parts of the mill and those immediately connected therewith are not shown in the drawings as my improvements relate to the bolting and separation of the different qualities of flour and the grinding parts may be such as those in common use for portable or other flouring mills.

A, is the first conveyer which receives the flour from the grinding mill. The conveyer is open at top so as to cool the flour by exposure to the air and for another purpose to be hereinafter explained when describing the functions of the "double set of spouts and valves." The flour is delivered from this conveyer into the bottom of the trunk B, whence it is raised by an elevator of the usual construction and conducted by a spout in the usual manner into the open end of the bolt C. Under the other end of the bolt are arranged in succession the several spouts D opening into the bolting chamber for the purpose of discharging the various qualities of flour separately into their proper receptacles. Adjacent to this end of the bolt is the trunk E within which is the returning elevator which raises and delivers to the grinding mill the bran or whatever is to be ground over again, according to the usual practice in mills. My mode of separating the various qualities of flour is as follows:

D is the separator being a trunk or box divided into as many compartments or spouts a as may be deemed necessary each of which spouts open into the bolting chamber as seen at a' in Fig. 2. Each of these tubes is provided with a valve a^2 which regulates the discharge of the flour through the spout. These spouts are also provided with apertures a^3 on their under sides for discharging the flour into the open conveyer A. These apertures are opened and closed by valves a^4 for regulating this discharge and the operation of the separator is as follows. Whatever quality of flour is to be run off is discharged at a the valve a^2 being open and the valve a^4 being shut and if it is to be returned to the bolt for further sifting, the valves a^2 and a^4 are both open and when it is necessary to return the bran or any other quality to the mill the valve a^2 is shut.

It will be readily seen that by the double sets of spouts and valves I obtain great control over the separation and the subsequent mixing of the flour in various proportions and of various qualities.

I am aware that a single series of spouts has been connected with a bolt as in the patent of E. and I. M. Clark granted June 6, 1854, and I shall not therefore lay any claim to this device, but intend to limit my claims to the double series of spouts and valves so arranged in connection with the bolt and the open conveyer A as to give me facilities for separation and mixing not attainable by a single series, as hereinafter more particularly specified.

What I claim as my invention and improvement on the mill of E. and J. M. Clark, patented June 6, 1854, is—

1. The double series of spouts and valves arranged and connected with the bolting chamber substantially as herein set forth.

2. I also claim the arrangement of the conveyer (A) in combination with the double series of valves and spouts as set forth.

ALFRED T. CLARK.

Witnesses:

CHAS. G. PAGE,
M. RADCLIFF.