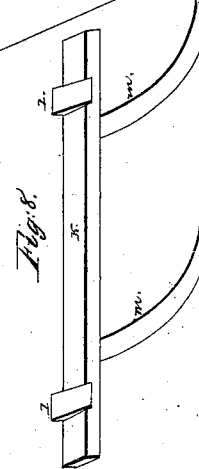
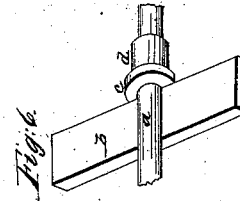
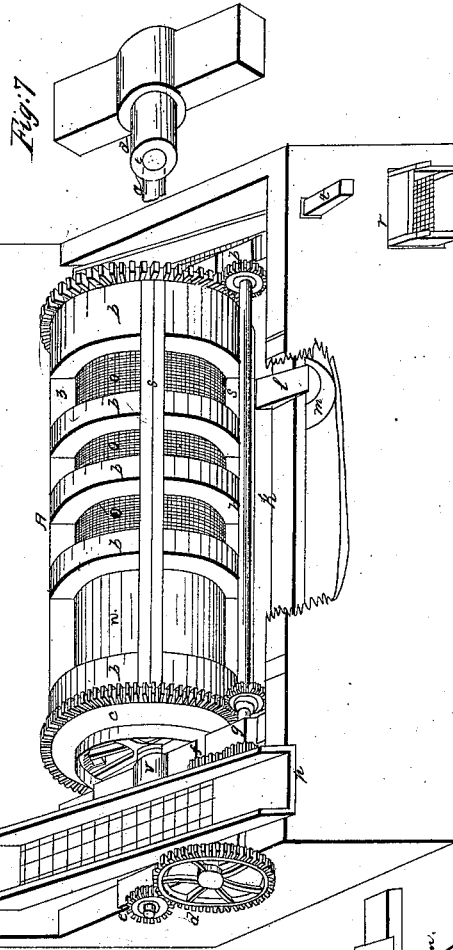
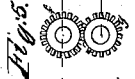
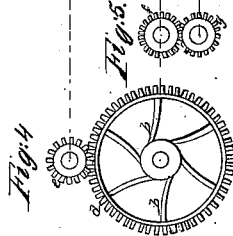
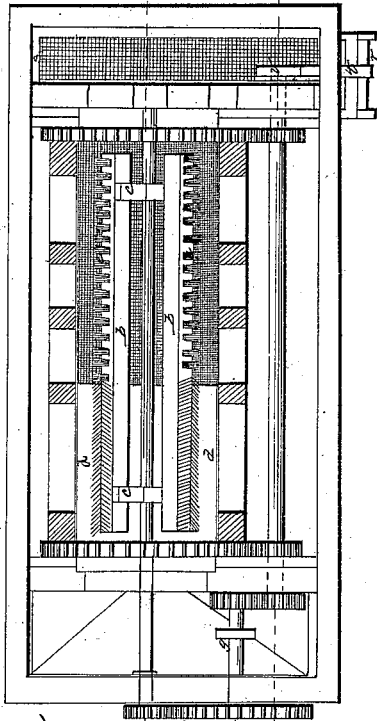
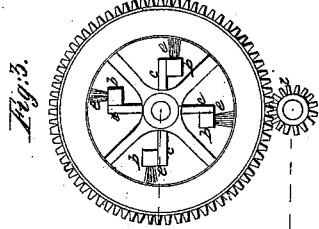


E. Bradfield,

Mill Bolt,

Patented Sep. 15, 1846.

N^o 4,758.



UNITED STATES PATENT OFFICE.

EDWARD BRADFIELD, OF ROCHESTER, NEW YORK.

BOLTING FLOUR.

Specification forming part of Letters Patent No. 4,758, dated September 15, 1846; Reissued October 12, 1858, No. 612.

To all whom it may concern:

Be it known that I, EDWARD BRADFIELD, of Rochester, in the county of Monroe and State of New York, have invented a new and useful Machine for Scouring and Dusting Mill Feed after Bolting; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a perspective view with upper part of case removed and part of case broken away to show the operation of spring beater, Fig. 2 a horizontal section through the center of outside cylinder showing inside of machine, separator and gearing in vertical projection, Fig. 3, an end view of both cylinders with driving pinion, Fig. 4, a vertical section of main driving wheel and pinion giving motion to inside cylinder, Fig. 5, vertical section of pinions, one on main driving shaft the other on shaft giving a reverse motion to outside cylinder, Fig. 6 an enlarged view of head box and cylindrical journal combined, Fig. 7 an enlarged view of tail box and journal combined, Fig. 8 a view of spring beater.

A, Fig. 1, the outside cylinder, being a cylindrical frame of wood formed of two equal longitudinal halves fastened together with bolts and nuts and lined inside at *n* with sheet iron or steel and at *o, o, o*, with fine wire gauze fastened to the circular ribs *b, b, b*.

c, c (seen also in Fig. 3) are cast heads with spur gearing forming the extreme end of outside cylinder and fastened to end ribs *b, b*.

d, shown also at Fig. 4, is the main driving wheel which by means of pinion *e* gives an accelerated motion to inside cylinder pinion *f* on same shaft as wheel *d* gives motion to pinion *g* on shaft *h* and by means of pinions *i, i* on shaft *h* gives a reverse and diminished motion to outside cylinder A, P, P flat screen of coarse wire hung at the upper end on the case of machine by a hook or hinge and receiving a vertical motion from the cam *g* Fig. 2.

r r Figs. 1 and 2 is the lower end of a double separator suspended at the end of lever *t* by means of which and cam V, Fig.

2 it receives a vertical motion, the sides of separator are formed of wood the bottom covered with fine wire gauze and at a given distance above that and parallel with it is another covering of coarser wire gauze, *s*, Fig. 2, the upper end of separator hung on case of machine, *a*, Fig. 2, shaft of inside cylinder, *b, b* bars of wood attached to the arms *c, c* seen also at *c, c, c* Fig. 3 with an end view of bars *b, b, b, b*.

d d, Fig. 2 are cards or wire bushes, *e, e* are hair brushes fastened to the bars *b, b* seen also at *e, e, e, e* Fig. 3, *a*, Fig. 6 shaft of inside cylinder running in the box *b* (with cap V Fig. 1, removed) passing through the flange *e* and cylindrical journal *d* on which journal the upper end of the outside cylinder revolves. *d* Fig. 7 a similar journal on which revolves the lower end of outside cylinder with a bore at *e* to receive the end of shaft *a*, K Fig. 8 a bar of wood.

m, m are steel springs fastened to the bar K and when in place the other ends are fastened to the case of machine, the bar K then presses against the circular ribs *b, b, b, b*, Fig. 1 and as the cylinder A revolves the bars *s, s, s* passing over the wedge shaped blocks *l, l* presses back the bar K which then by the action of springs *m, m* strikes and gives a tremulous motion to cylinder A, after bolting the feed is conveyed into the upper end of flat screen P Fig. 1 which, by means of the wire carries off any substance that might accidentally get into the feed and if not thus prevented would pass into the cylinder and injure the machine, the feed passes through the wire and is conducted by a hopper or spout into the cylinder A Fig. 1 where it is scoured by the cards *d, d* Fig. 2 against the lining *n* Fig. 1 by which process the flour adhering to the feed after dusting in the usual way is loosened and pulverized and by the operation of the hair brushes *e, e* Fig. 2 is discharged through the wire gauze *o, o, o* Fig. 1, the meshes of the wire being kept open by the operation of the spring beater the feed is then discharged at the lower or tail end of cylinder A into the double separator *r* the upper or coarser wire separating the bran, and the finer wire the shorts from the middlings.

The advantage to be derived from the use of this machine is the increased amount of flour obtained from a given quantity of

wheat, the feed after being dusted in the usual way on passing through this machine yields an increase of four or five per cent of flour on the original yield.

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

Constructing the inside cylinder with a combination of card and hair brushes, also in combination with the above the flat screen

10 P Fig. 1, the double separator *r*, the spring

beater Fig. 8 and the manner in which the 15 outside cylinder revolves on the cylindrical journals *d, d*, Figs. 6 and 7 without coming in contact with the shaft *a*, all as herein set forth, for the purposes herein described.

EDWARD BRADFIELD.

Witnesses:

CHARLES HUTCHINS,
FRANCIS BEMIS.

[FIRST PRINTED 1913.]