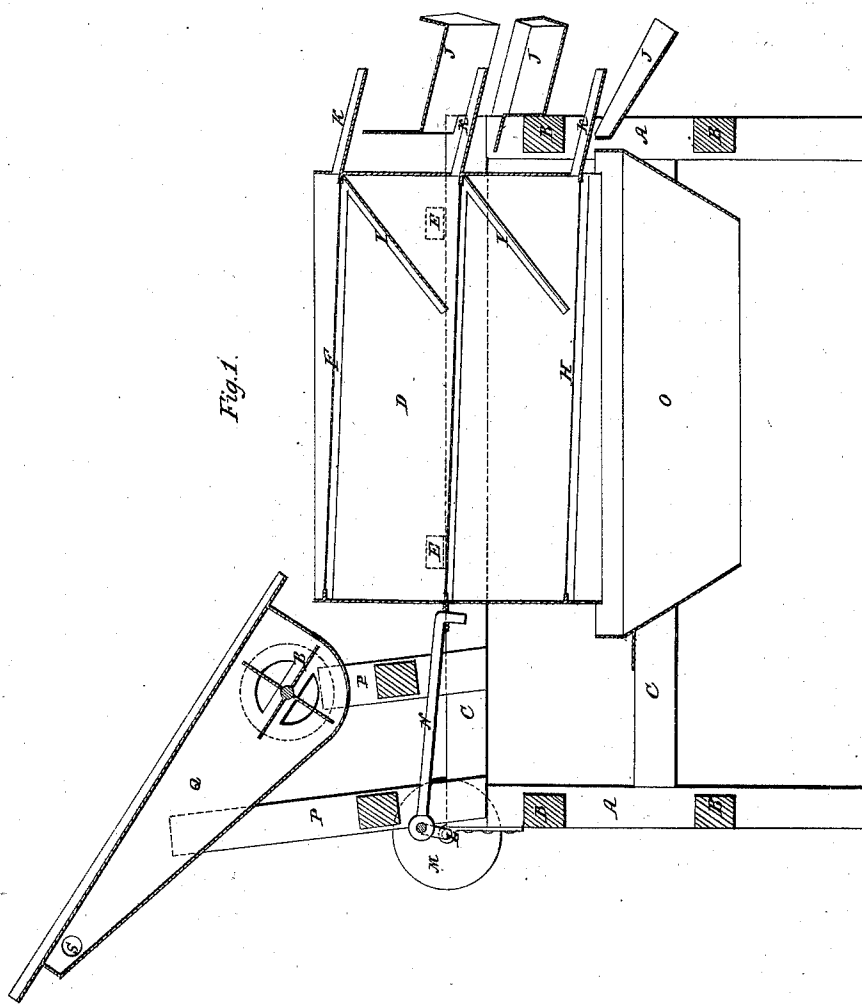
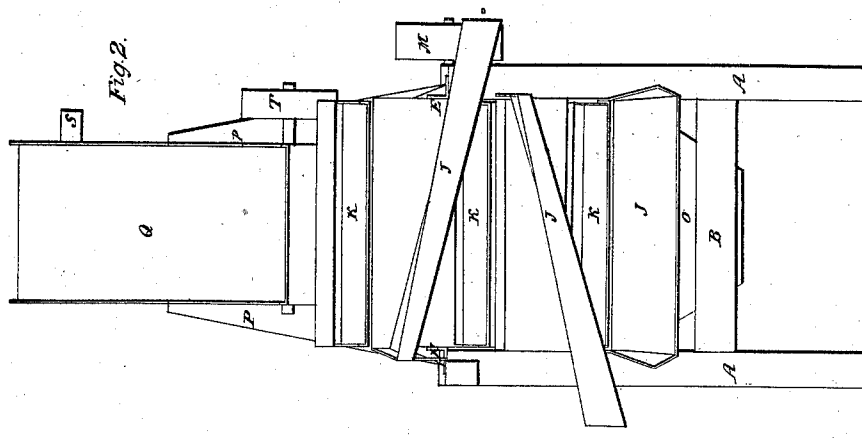


S. Cook.
Mill Bolt.

N^o 8,241.

Patented Jul. 22, 1851.



UNITED STATES PATENT OFFICE.

SAMUEL COOK, OF ADAMS BASIN, NEW YORK.

FLOUR-BOLT.

Specification of Letters Patent No. 8,241, dated July 22, 1851.

To all whom it may concern:

Be it known that I, SAMUEL COOK, of Adams Basin, in the county of Monroe and State of New York, have invented a new and useful Improvement in Machines for Cooling and Bolting Flour; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part thereof, in which—

Figure 1, represents a longitudinal vertical section through the machine. Fig. 2, represents a view of one of the ends of the machine, showing the spouts and chutes by which the several qualities of ground material are carried off, as they are separated.

Similar letters in both the figures represent the same parts.

The nature of my invention consists in the arrangement by which the ground material is received from the burs on an inclined cooling board under which a blast of air is kept up by a fan blower, and conveying it onto a series of graduated screens arranged in a case which has a reciprocating motion, and by means of which the bran, shorts, fine and superfine flour are separated and carried off from the machine; also the arrangement of inclined boards, by which the material screened or bolted near the delivery end of the machine, is carried back on each succeeding screen, so as to insure its being properly bolted before leaving the machine, the advantages of this machine being its adaptation for cooling and bolting flour at one operation, without elevators, or any other machinery, its compact form, which admits of its being placed in any part of the mill without occupying the space usually required for machines for a similar purpose; and bolting in the open air instead of being closed up tight, as is usual with ordinary bolting machines.

To enable others skilled in the art to make and use my invention, I will proceed to describe the same with reference to the drawings.

I construct a frame of suitable size and form, made of corner posts A, end cross pieces B, and longitudinal side pieces C, firmly secured together by mortise and tenon, or other well known means, and upon the top longitudinal pieces of the frame rests the case D, by means of flanges E, on its outer sides, and upon which flanges it moves back and forth in said frame, and is held in

place vertically. Upon flanges on the inside of said case, (and which said flanges have a slight inclination from the rear of the machine, where the material to be bolted is received, to the front where it is deposited in the chutes to be carried off) are arranged a series of graduated screens F, G, H, the upper two (F, G,) of which may be of woven wire, and the lower (H) of fine bolting cloth, so as to separate the ground material into bran, shorts, fine and superfine flour respectively.

Between the screens, at the front end of the machine are arranged the inclined boards I, upon which the material falls when near the end of the screen immediately over it, and by which inclined boards it is carried back far enough onto the next screen to insure its separation before it finally leaves the machine; and on the front end of the case, is arranged the spouts K, which are of sufficient length, to deposit the material screened into the chutes J, which are permanently arranged on the frame of the machine for that purpose. The chutes may be inclined in contrary directions so as to carry the different qualities separated, to different sides of the machine, or to any convenient place of deposit.

To the frame in the rear of the machine, is arranged a crank shaft L, resting and revolving in suitable bearings, and upon said crank shaft at one end is a pulley M, over which a belt may pass from any of the moving machinery of the mill; for the purpose of giving motion to the case of screens. On the center of said shaft is a crank, to which a pitman N, is attached, the other end of said pitman being secured to the case of screens, and as the shaft revolves it vibrates the case of screens, and which vibration may be regulated by the length of the crank aforesaid.

To the lower longitudinal pieces of the frame is secured the hopper O, which is stationary, and into which the superfine flour drops after passing through the bolting cloth H, and from which hopper it may be received into, or conveyed to, any suitable receptacle.

Behind the case of screens, and secured by the uprights P, to the frame of the machine, is arranged the cooling apparatus Q, which consists of an air chamber, in which is placed a fan blower R, for keeping up a current of cool air underneath the in-

clined upper side of the same, and upon which the ground material is received from the burs, and carried to the screens, it being provided with flanges to keep the meal from sliding off at the sides, and in passing over which the meal is cooled sufficiently for bolting. On the shaft which drives the fan blower is arranged a pulley T, over which may pass a belt for communicating motion to the same. The air is drawn into the chamber at the eyes of the fan blower, and is discharged at the pipe S, so as not to produce any current of air over the meal, and the air thus passed underneath the cooling board may be cooled artificially or brought from the wheel house (by pipes), or other

desirable place. The cooling board may be made of wood, metal, or highly glazed cloth, sufficiently thin to be readily operated upon by the blast underneath it.

Having thus fully described my invention what I claim therein as new and desire to secure by Letters Patent is—

The combination and arrangement of the inclined boards I with a case of graduated screens constructed and arranged substantially as herein described and represented and for the purpose specially set forth.

SAMUEL COOK.

Witnesses:

B. K. MORSELE,
A. B. STOUGHTON.