

(No Model.)

2 Sheets—Sheet 1.

G. COTTRELL.
OATMEAL MACHINE.

No. 320,048.

Patented June 16, 1885.

FIG. 1

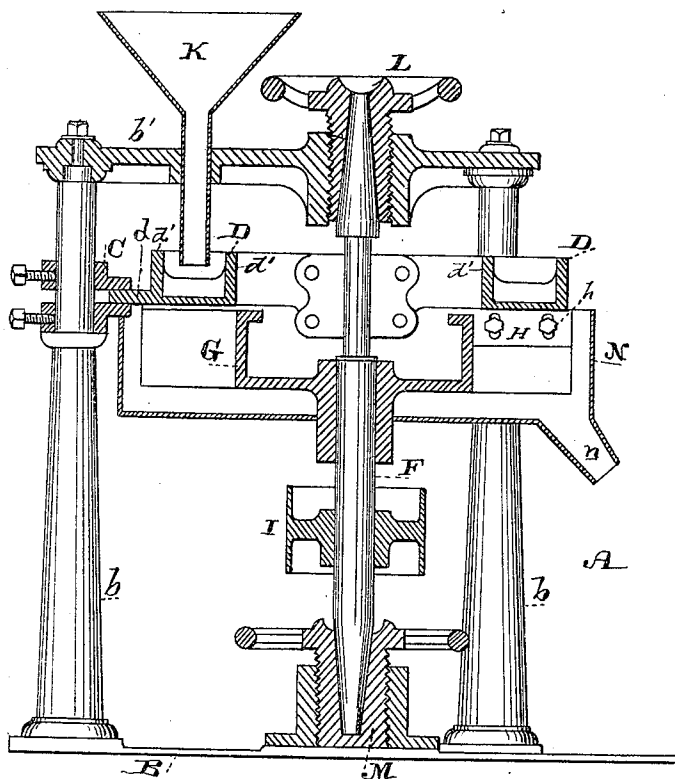
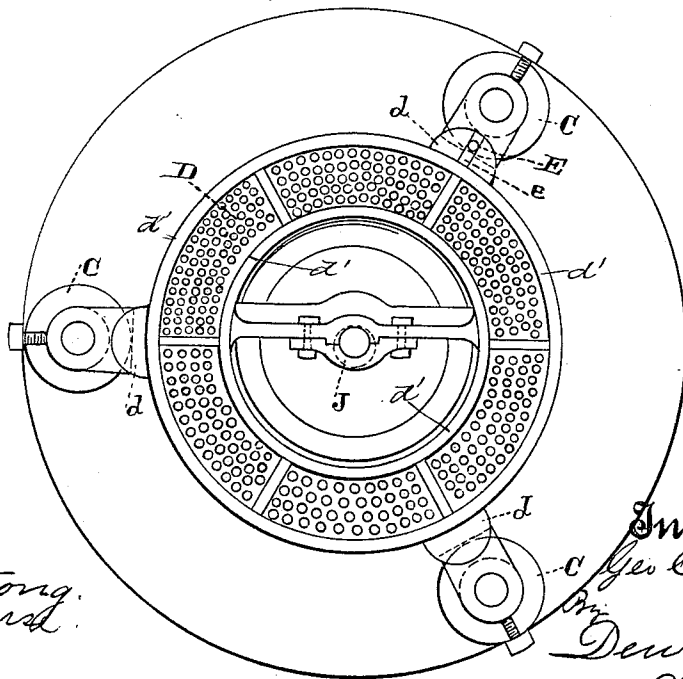


FIG. 2.



Witnesses,
Geo. D. Strong,
Chas. H. Hurd.

Inventor,
G. Cottrell,
By Dewey & Co.
attorneys

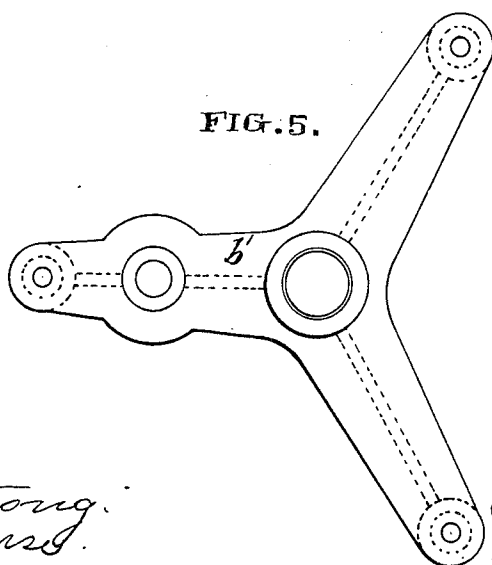
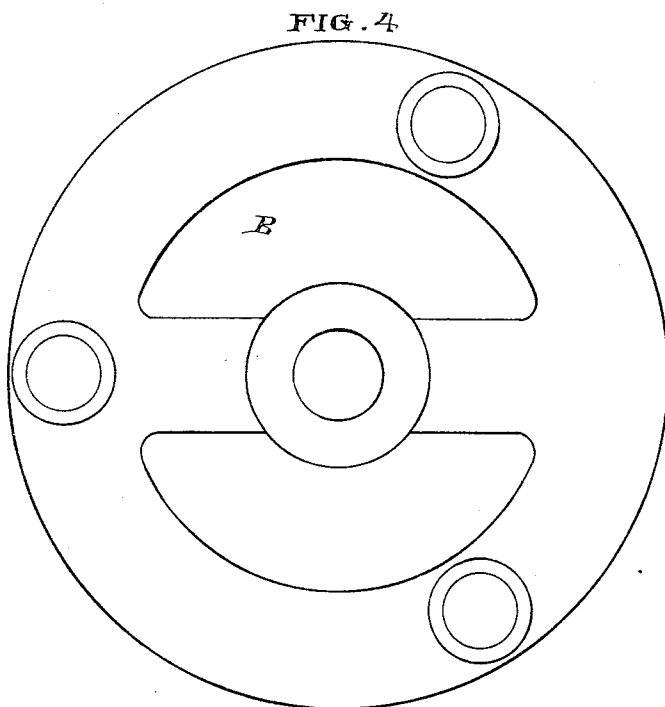
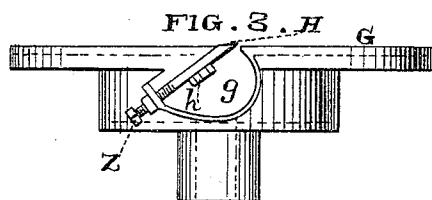
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Geo. H. Strong.
J. H. Strong.

Inventor,
Geo. Cottrell
By Duway & Co.
attorneys

UNITED STATES PATENT OFFICE.

GEORGE COTTRELL, OF SAN FRANCISCO, CALIFORNIA.

OATMEAL-MACHINE.

SPECIFICATION forming part of Letters Patent No. 320,048, dated June 16, 1885.

Application filed January 12, 1885. (No model.)

To all whom it may concern:

Be it known that I, GEORGE COTTRELL, of the city and county of San Francisco, State of California, have invented certain Improvements in Oatmeal-Machines and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to that class of machines for cutting oats to form oat meal or grits in which a shaking movable screen is employed in connection with an underlying cutter-head; and my invention consists in the combination of devices, which will be claimed and more fully explained.

The objects of my invention will appear in the following description:

Referring to the accompanying drawings, Figure 1 is a vertical section of my machine. Fig. 2 is a plan of the same. Fig. 3 is an elevation of the cutter-head, showing the adjustable knife. Fig. 4 is a plan of the base-plate. Fig. 5 is a plan of the top yoke.

A is the frame, generally, of the machine. This consists of a base-plate, B, (shown in Fig. 4,) pillars *b*, and a top yoke *b'*. (Shown in Fig. 5.)

Upon the pillars near their upper ends are secured bearings C, which consist of horizontally spaced or separated strips secured to the pillars by means of set-screws.

D is the screen, annular in plan, and provided with concentric flanges *d'*, which form side walls or grooves for it and make a channel. The object of this construction is to prevent the oats from feeding over the edges of the screen, instead of feeding through it; and the outer flange of the screen is provided with ears *d*, which extend within the bearings C and are adapted to slide back and forth therein. One of the ears is provided with a slot, *e*, (shown in Fig. 2,) which fits over a fixed stud, E. F is the driving-shaft, upon which is secured the cutter-head G. This is also annular in shape, and consists of a disk or plate in which one or more open-sided recesses, *g*, are formed. In these recesses are fitted, by slots and set-screws *h*, the knives H, which may be adjusted up or down by means of the screws Z. The cutter-head G lies just under the screen, and the upper edges of its knives operate immediately under the bottom of the

screen and in as close relation thereto as possible.

I is a pulley on the shaft, by which it is rotated, thus imparting a rotary movement to the cutter-head.

Upon the shaft F is an eccentric, J, (see Fig. 2,) which is housed or boxed in the hub or center of the screen, by means of which the screen is given an eccentric movement or shake which is controlled by reason of its slotted ear and stationery stud E, which prevent it from having any tendency to rotate and still allow it to have a considerable and effective shake.

K is the hopper, which is adapted to discharge its contents in the channel of the screen.

The upper end of the shaft F is mounted in a screw-box, L, and its lower end in a screw-step, M, whereby the shaft may be vertically adjusted and at the same time kept tight in its bearings.

Encircling the cutter-head is a shell or casing, N, with which the recesses *g* of the cutter-head communicate. This shell is provided with a discharge spout, *n*.

The operation of the device is as follows: The oats, after being properly hulled, are placed in the hopper, and by it are fed down upon the screen, the shaking movement of which up-ends the oats and causes them to project through the perforations of the screen, their lower ends resting on the surface of the cutter-head disk. When the knives reach them, they are cut off and the cut sections fall into the recesses, from which the centrifugal force throws them outward into the shell N, whence they are discharged.

When it is desired to cut the oats into any given number of sections, the cutter-head and its knives are adjusted in the following manner. If a longer or shorter section be desired, the shaft F is lowered or raised by means of its screw-boxes, whereby the cutter-head is separated by a greater or lesser distance from the screen. The knives H are then adjusted to bring them properly under the screen. When the first section is cut, if the remaining portion is still longer than the cut-off section it drops down again and rests upon the cutter-head until one of the knives comes around and cuts off another section from it.

Having thus described my invention, what

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

1. In an oatmeal-machine, the screen D, having a hub and ears *d* and guides on the frame, in combination with the means by which motion is imparted to it, consisting of the rotating shaft F, having an eccentric, J, housed in the hub of the screen, and the fixed stud E fitted in a slot, *e*, in one of the supporting ears of the screen, whereby the motion of the screen is controlled, substantially as herein described.

2. In an oatmeal-machine, the frame A, having bearings C, the annular screen D, having a hub and ears *d*, adapted to slide in the bearings, one of said ears being slotted, and a fixed stud E, in combination with the underlying annular cutter-head G, having suitable knives, the driving-shaft F, by which the cutter-head is rotated, and the eccentric J on the shaft, housed in the hub of the screen, where-

by said screen is shaken, substantially as herein described.

3. An oatmeal-machine comprising the frame A, having bearings C, the annular screen D, having ears *d* sliding in the bearings, one of said ears being slotted, a fixed stud, E, the hopper K, the annular cutter-head G, having recesses *g* and adjustable knives H therein, the vertically-adjustable driving shaft F, by which the cutter-head is adjusted and rotated, the eccentric J on the shaft, by which the screen is shaken, and the circumscribing shell or casing N, all arranged and adapted to operate substantially as herein described.

In witness whereof I have hereunto set my hand.

GEORGE COTTRELL.

Witnesses:

H. C. LEE,
C. D. COLE.