

G. Gessert.
Flour Sifter.

No. 105,667.

Patented July 26, 1870.

Fig. 1.

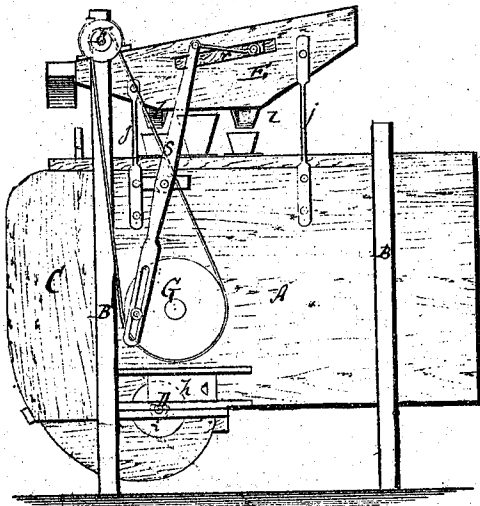


Fig. 2.

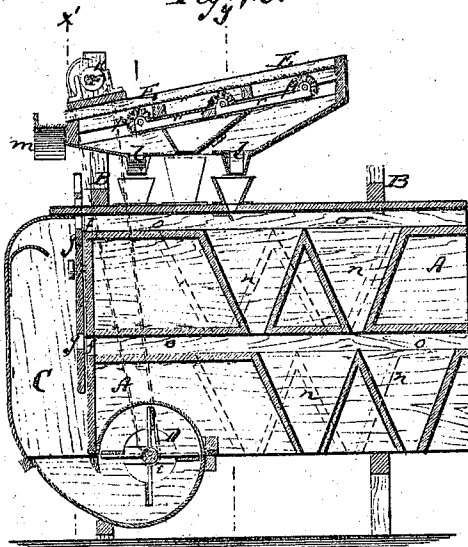


Fig. 4.

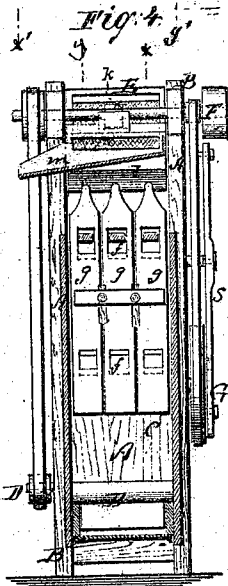


Fig. 5.

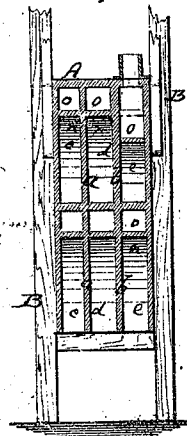
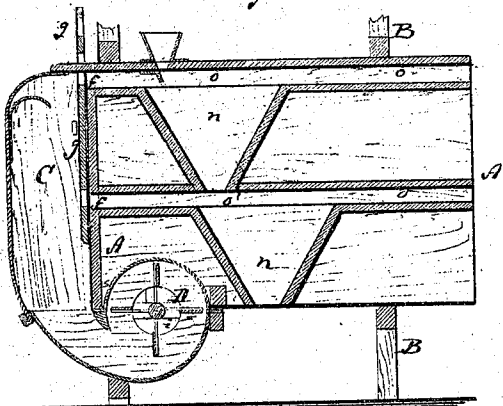


Fig. 3.



Witnesses:

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UNITED STATES PATENT OFFICE.

GEORG GESSERT, OF EDWARDSVILLE, ILLINOIS.

IMPROVEMENT IN FLOUR-SIFTERS.

Specification forming part of Letters Patent No. 105,667, dated July 26, 1870.

To all whom it may concern:

Be it known that I, GEORG GESSERT, of Edwardsville, in the county of Madison and State of Illinois, have invented a new and Improved Flour-Sifter; 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 represents a side elevation of my improved flour-sifter. Fig. 2 is a vertical longitudinal section of the same, taken on the plane of the line $x x$, Fig. 4. Fig. 3 is a vertical longitudinal section of the same, taken on the plane of the line $y y$, Fig. 5. Fig. 4 is a vertical transverse section of the same, taken on the plane of the line $x' x'$, Fig. 2. Fig. 5 is a vertical transverse section of the same, taken on the plane of the line $y' y'$, Fig. 2.

Similar letters of reference indicate corresponding parts.

This invention relates to a new machine for dividing and cleaning the middlings, and liberating them from specks, so that a grade of flour may be produced from middlings fully equal to the first grade.

The invention consists in the construction of a machine, whereby the middlings are rebolted and exposed to an adjustable draft. They will thereby not only be thoroughly cleaned, but can, by the bolting, also be subdivided into a suitable number of grades.

A in the drawing represents the stationary case of my improved flour-sifter. It is made of wood or other suitable material, and is in a frame, B, held upright, as shown. By means of two (more or less) vertical partitions, $a b$, it is divided in three (more or less) chambers, $c d$, and e , as shown in Fig. 5. Each chamber $c d e$ is entirely open at one end, while the other end is in contact and communicates with an air-chamber, C, into which air is forced by a suitable fan, D. The openings $f f$, which lead from the air-chamber C to the chambers of the case A, can be regulated by means of slides or gates $g g$. Similar slides or gates h may also be provided at the suction-openings i of the fan, so that the draft thus will be under complete control. Above the case A is secured, on pivoted or spring arms j , a sieve, E, which receives reciprocating motion by a

cam, K, on a transverse shaft, F. The sieve proper is divided into as many grades as there are vertical chambers in the case A. Under each grade is a spout, l , leading into one of the said chambers, and a discharge-spout, m , is at the lower end of the slide.

The flour to be cleaned and divided is placed upon the upper finer plate of the sieve, and is gradually worked down by the shaking motion of the same. The flour will, according to its fineness, pass through the meshes of the sieve, and will be conducted into the chambers $c d e$, where it is exposed to the regulated draft. The bran will be blown out at the open end of each vertical chamber, while the flour falls down through openings at the lower end.

It is evident that the draft must be regulated with great nicety, in order not to lose flour.

Each chamber of the case A contains two or more hoppers, $n n$, vertically above each other. The flour is only exposed to the draft in the horizontal channels o , which are above these hoppers, as indicated in Figs. 2 and 3, so that it will not be obstructed during its descent. Under the sieve proper is arranged in its frame E a series of brushes, $p p$, which are moved backward and forward under the sieve to clean the same. These brushes are hung in a frame, r , which receives reciprocating motion from a shaft, G, by a connecting-rod, S.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The case A of the sifter, divided by vertical partitions into three (more or less) chambers, $c d e$, in which the flour is exposed to the draft, as set forth.

2. The arrangement of reciprocating graded sieve E on spring-arms j , and with respect to a cam, K, on the transverse shaft F, as and for the purpose specified.

3. The air-chamber C, having adjustable openings $f g$, fan D having openings i , and one or more chambers, $c d e$, entirely open at one end, all relatively arranged in a flour-sifting machine, as and for the purpose specified.

GEORG GESSERT.

Witnesses:

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