

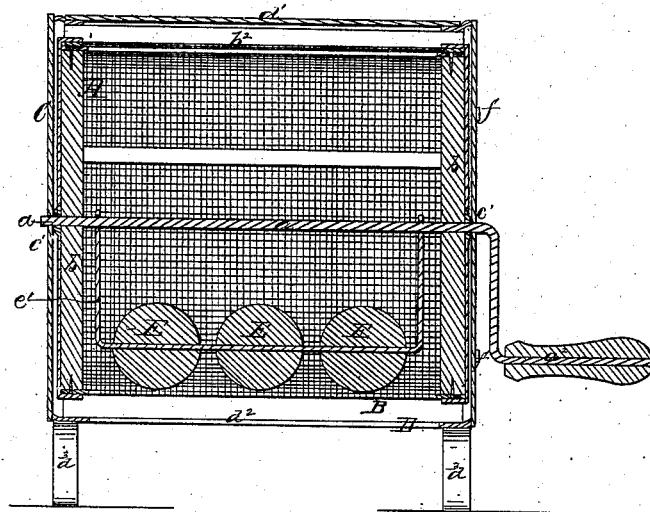
*E. Spencer,*

*Flour Siere.*

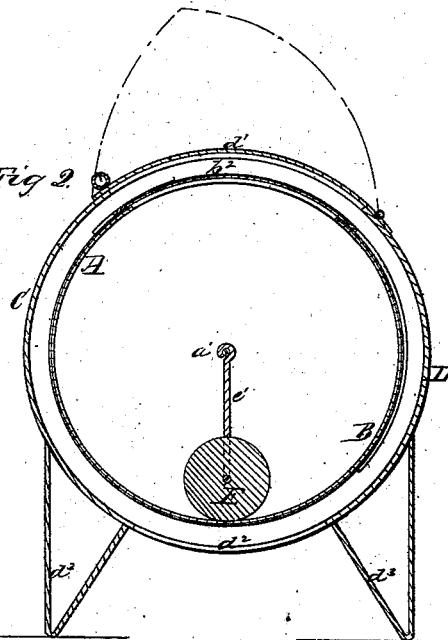
*N<sup>o</sup> 54,788.*

*Patented May 15, 1866.*

*Fig 1*



*Fig 2*



*Witnesses*

*Benj. Moulton*  
 *Jas. Winmore*

*Inventor.*

*Edward Spencer*

# UNITED STATES PATENT OFFICE.

EDWARD SPENCER, OF PHILADELPHIA, PENNSYLVANIA.

## FLOUR-SIFTER.

Specification forming part of Letters Patent No. 54,788, dated May 15, 1866; antedated May 3, 1866.

*To all whom it may concern:*

Be it known that I, E. SPENCER, of the city of Philadelphia, in the State of Pennsylvania, have invented a new and useful Improvement in Rotary Flour-Sifters; 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 accompanying drawings, making a part of this specification, in which—

Figure 1 is a vertical central longitudinal section, and Fig. 2 a vertical central transverse section, of the said improvement applied, like letters of reference indicating the same parts when in both figures.

The object of my invention is to render a portable rotary flour-sifter for family use more effective and suitable for the purpose.

It consists in the employment, in combination with a hollow rotary wire cylinder or sifter, of several small weighty or solid spheres or balls that will be free to rotate or roll in contact with, or near the lower side of, the said hollow wire cylinder, so as to mash the lumps of flour therein by gravitation as the said cylinder is rotated upon its axis.

In the drawings, A B is the wire cylinder,  $a'$  its axis, C D its inclosing-case, and E E E the spheres or balls.

The cylinder A B is made by tacking any required size of gauze or sieve-wire around two wooden end disks,  $b' b'$ , leaving an opening, at which a concentrically-sliding door,  $b^2$ , is arranged for admitting and confining the flour to be sifted.

The axis  $a'$  is fixed longitudinally through the cylinder, so as to form a journal at each end, both of which rest in suitable holes in the centers of the ends  $c' c'$  of the case, one end of the said axis being bent so as to form a crank-handle,  $a^2$ . The balls E are in this instance strung on a wire,  $e'$ , which is bent and suspended by its ends loosely on the axis  $a'$ , so that the said balls will turn freely thereon, and be either near to or in close contact with the bottom side of the cylinder A B, as

shown in the drawings. The said balls E, however, may be simply laid loosely on the bottom of the said cylinder, if preferred; but it is believed the first-mentioned arrangement will be the better one.

The case C D is made of tin-plate, in a cylindrical form, and sufficiently large to allow a free rotary motion to the sieve A B within it, and also to rest upon suitable legs  $d^3$ . It is made open both above and below, and the upper opening is provided with a hinged cover,  $d'$ , for giving access to the sieve A B, while the lower opening,  $d^2$ , allows the sifted flour to pass out as it leaves the sieve above.

The crank end of the case C D is attached by means of springs  $f f$ , so as to allow the whole cylinder, with its axis  $a'$ , to be easily taken out together or be replaced in the case, if occasion should require it.

Operation: The flour to be sifted being placed in the wire cylinder A B and the covers  $d' b^2$  closed, rotary motion is given to the sieve or cylinder A B, and the balls E, by gravitation, roll over the lumps of flour on the bottom of the sieve and crush them, so that the flour thereof passes freely through the sieve in the pulverized state required.

This is a very effective machine for sifting flour in small quantities, and being very simple of construction and not liable to get easily out of order in use, it is peculiarly appropriate for family use.

Having thus fully described my improved flour-sifter, what I claim as new therein of my invention, and desire to secure by Letters Patent, is—

The employment of the balls E, in combination with the rotary cylindrical sieve A B, suspended in a suitable case, C D, the whole being constructed and arranged together, so as to operate substantially as and for the purpose described.

EDWARD SPENCER.

Witnesses:

BENJ. MORISON,  
JAS. WINSMORE.