

(No Model.)

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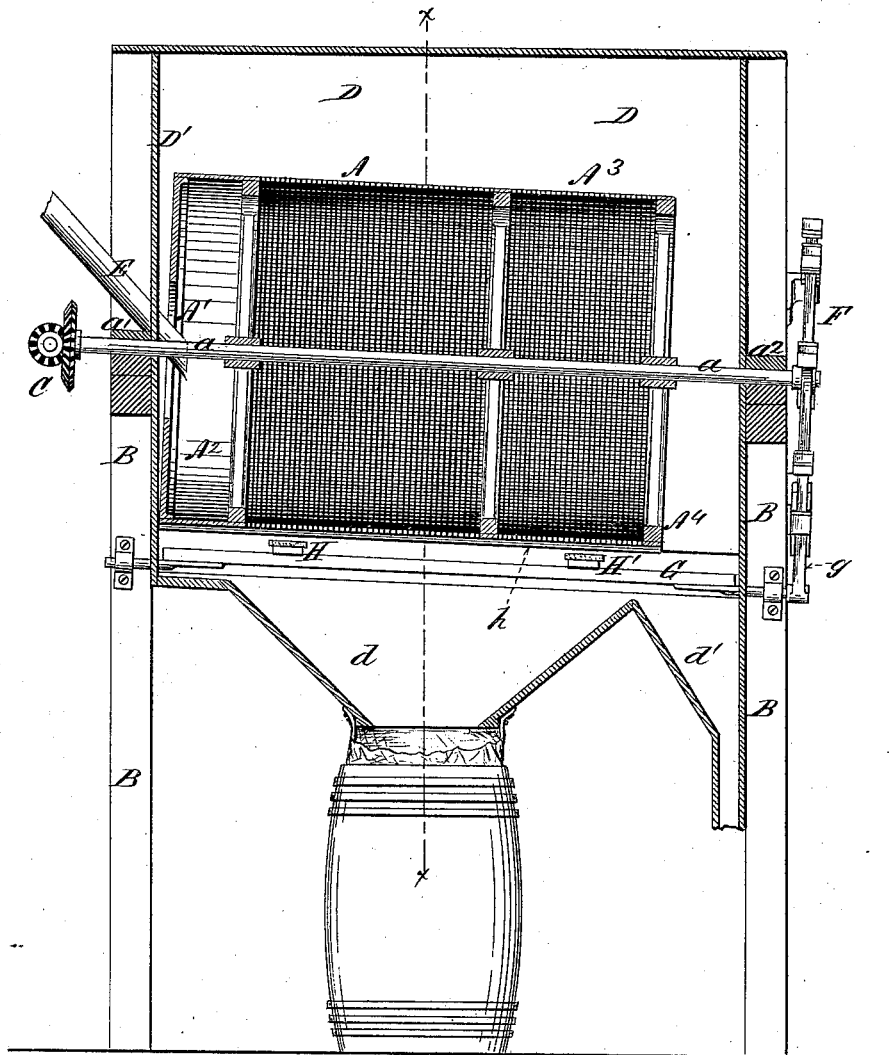
G. DINKEL.

MACHINE FOR SIFTING POWDERED SUGAR, &c.

No. 347,473.

Patented Aug. 17, 1886.

*Fig. 1.*



*Witnesses:*

*M. L. Adams.*

*R. C. Howes*

*Inventor:*

*George Dinkel,*  
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*Atty.*

(No Model.)

2 Sheets—Sheet 2.

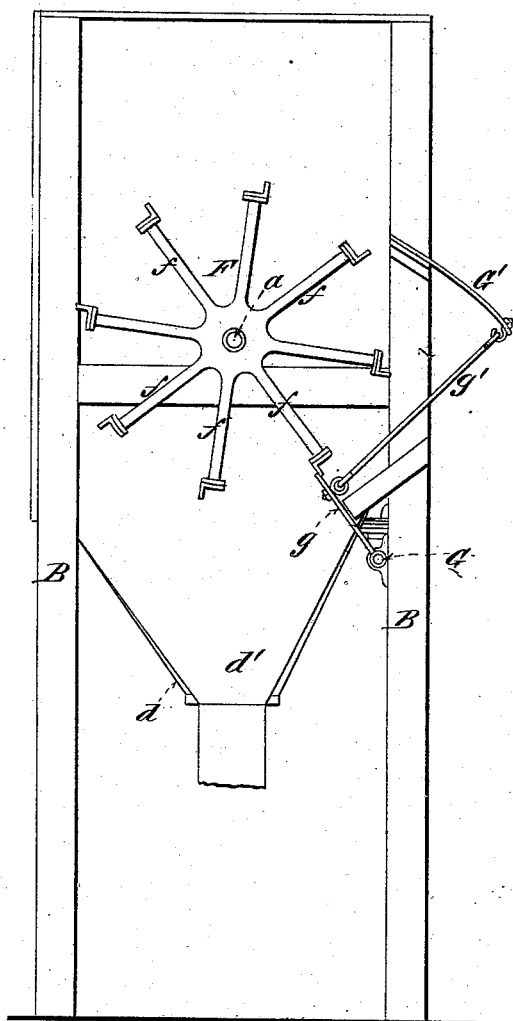
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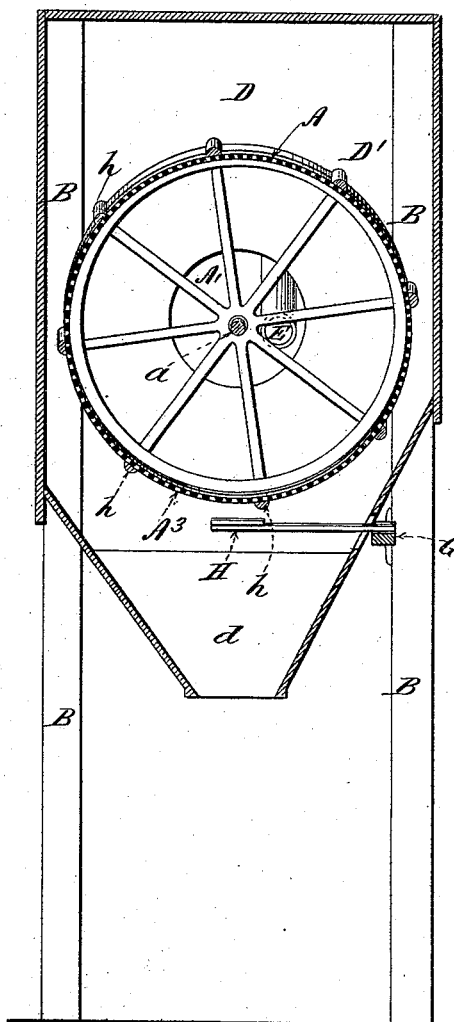
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*Fig. 2.*



*Fig. 3.*



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# UNITED STATES PATENT OFFICE.

GEORGE DINKEL, OF JERSEY CITY, NEW JERSEY.

## MACHINE FOR SIFTING POWDERED SUGAR, &c.

SPECIFICATION forming part of Letters Patent No. 347,473, dated August 17, 1886.

Application filed March 11, 1886. Serial No. 194,784. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE DINKEL, of Jersey City, New Jersey, have invented certain Improvements in Machines for Sifting Powdered Sugar and other Materials, of which the following is a specification.

This invention relates to a sifting-machine of the kind which is composed of a cylinder rotating upon a slightly-inclined axis and having its surface finely perforated, and having openings at both ends, so that the sugar or other material to be sifted can be fed into the opening at the higher end of the cylinder, and such portion of it as is not sifted through the perforations in the surface of the cylinder will be discharged through the opening in the lower end of the cylinder.

The accompanying drawings of a rotating sifter embodying the improvements are as follows: Figure 1 is a longitudinal vertical section. Fig. 2 is an end elevation. Fig. 3 is a transverse vertical section through the line *x* *x* on Fig. 1.

The machine consists of the cylinder A, affixed to a slightly-inclined shaft, *a*, provided with suitable bearings, *a'* and *a''*, in the frame B B. By means of suitable gearing, C, or any other convenient means power is applied to effect the rotation of the shaft *a* and the cylinder A, affixed thereto.

The cylinder A and the portion of the shaft which is between the bearings are usually inclosed in a chamber, D, the bottom of which is formed into the two chutes *d* *d'*.

The material to be sifted is fed into the cylinder A through the feed pipe or chute E, which is inserted through the wall D' of the chamber D and through the opening A' in the higher end of the cylinder A.

A portion, A<sup>2</sup>, of the mantle or shell of the cylinder A immediately adjoining its higher end is usually made solid, in order that it may be better able to receive the shock of the falling sugar or other material discharged from the feed-pipe E. The remaining portion, A<sup>3</sup>, of the mantle of the cylinder is composed of suitably-fine wire-cloth, or is finely perforated, as may be preferred. The width at the top of the chute *d* is about equal to the length of the perforated portion A<sup>3</sup> of the mantle of the cylinder, so that the fine sugar or other material

sifted through the perforations in the cylinder will be caught in the chute *d*. The unsifted material, which falls from the open lower end, A<sup>4</sup>, of the cylinder A falls into the chute *d'*.

At its lower end the shaft *a* is provided with the spider F, composed of a prescribed number of radial arms, *f f f*, &c. As the cylinder A rotates the ends of the arms *f* are successively brought into collision with the end of the crank-arm *g*, affixed to the rock-shaft G, provided with bearings in the frame B B. The knockers H and H' are affixed to the rock-shaft G, and project laterally therefrom, preferably beneath the cylinder A, and so that their free ends extend slightly beyond the vertical plane of the shaft *a*.

The exterior of the cylinder A is provided with parallel longitudinal strips *h h h*, &c., which are intended to receive the blows of the knockers, and thus prevent the knockers from striking directly against the perforated portion of the mantle of the cylinder. The number of external protecting-strips, *h h h*, &c., is the same as the number of spider-arms *f f f*, &c.

As the cylinder rotates and the ends of the spider-arms are successively brought into collision with the end of the crank-arm *g* the shaft G is rocked and the knockers swung downward until the crank-arm *g* has been disengaged from the end of the spider-arm with which it was in contact. When such disengagement takes place, the crank-arm *g* swings upward in obedience to the pull of the spring G', with the free end of which the crank-arm *g* is connected by means of the link *g'*. The knockers are thus made to strike a smart blow against that one of the guard-strips *h* which happens to be immediately over the knockers, and the fine sugar or other material contained in the cylinder is thereby jarred downward through the perforations in the bottom and falls into the chute *d*.

It is very desirable that the knockers shall strike a percussive upward blow against the cylinder, and the more nearly upward is the direction in which this blow is given the more effective is the machine for the purpose for which it is designed. It will of course be understood, however, that a result similar in character, although not equal in extent, can be produced by striking the cylinder anywhere be-

low the level of its axis, and that such a blow need not necessarily be delivered in a direction perfectly vertical. It will also be seen that the rock-shaft G may be provided with only one knocker, or with any larger number of knockers required.

The rotating perforated cylinder and knockers broadly are not claimed; but

What is claimed as the invention is—  
10 In a machine for sifting powdered sugar or

other material, the combination of a rotating perforated cylinder and a rotating spider-wheel, F, with a rock-shaft, G, provided with a crank-arm and with knockers for striking upward or nearly upward blows against the cylinder, as herein set forth.

GEORGE DINKEL.

Witnesses:

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ALEX. T. MCGILL.