(No Model.)

K. H. A. STITZ.

SIFTING AND SORTING APPARATUS.

No. 546,562. Patented Sept. 17, 1895.

Fig. 1.

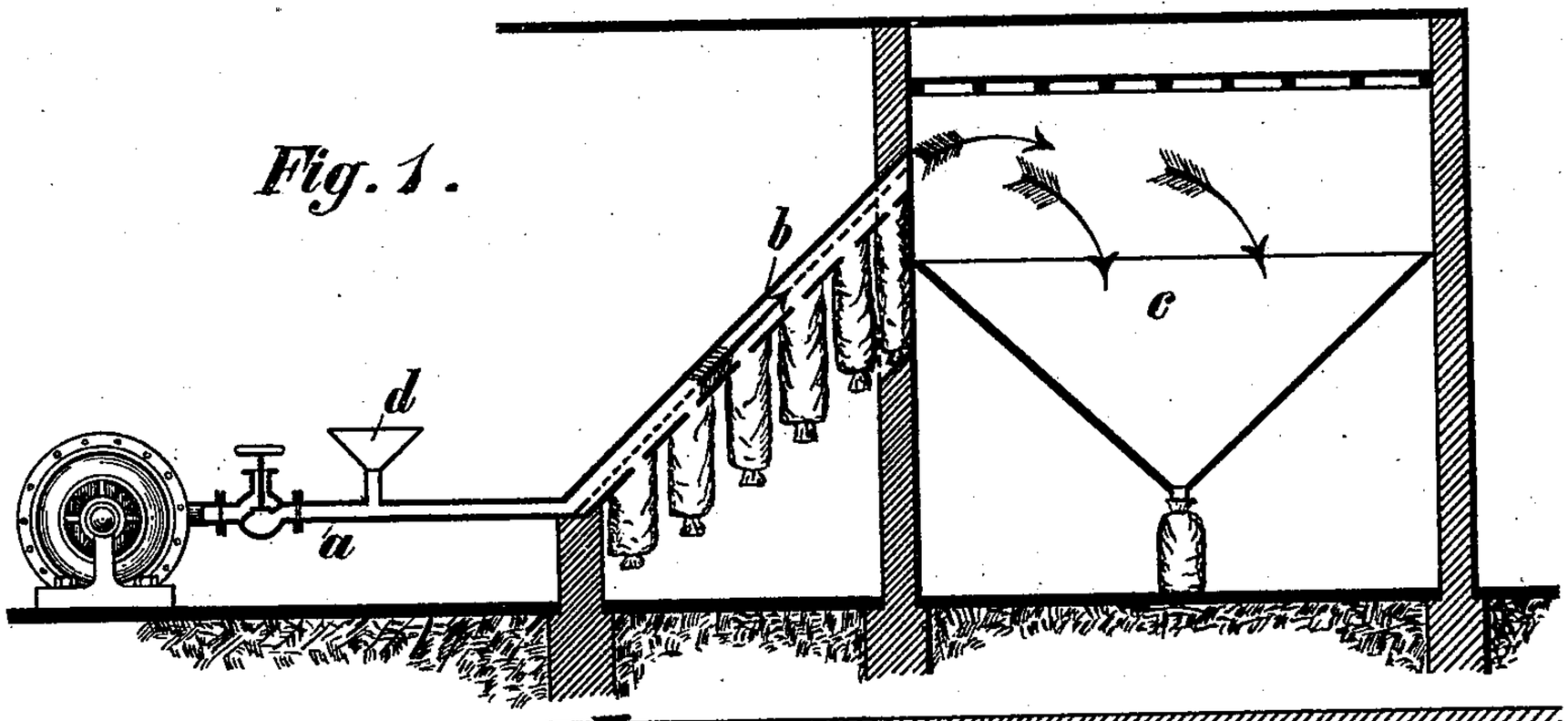


Fig. 2.

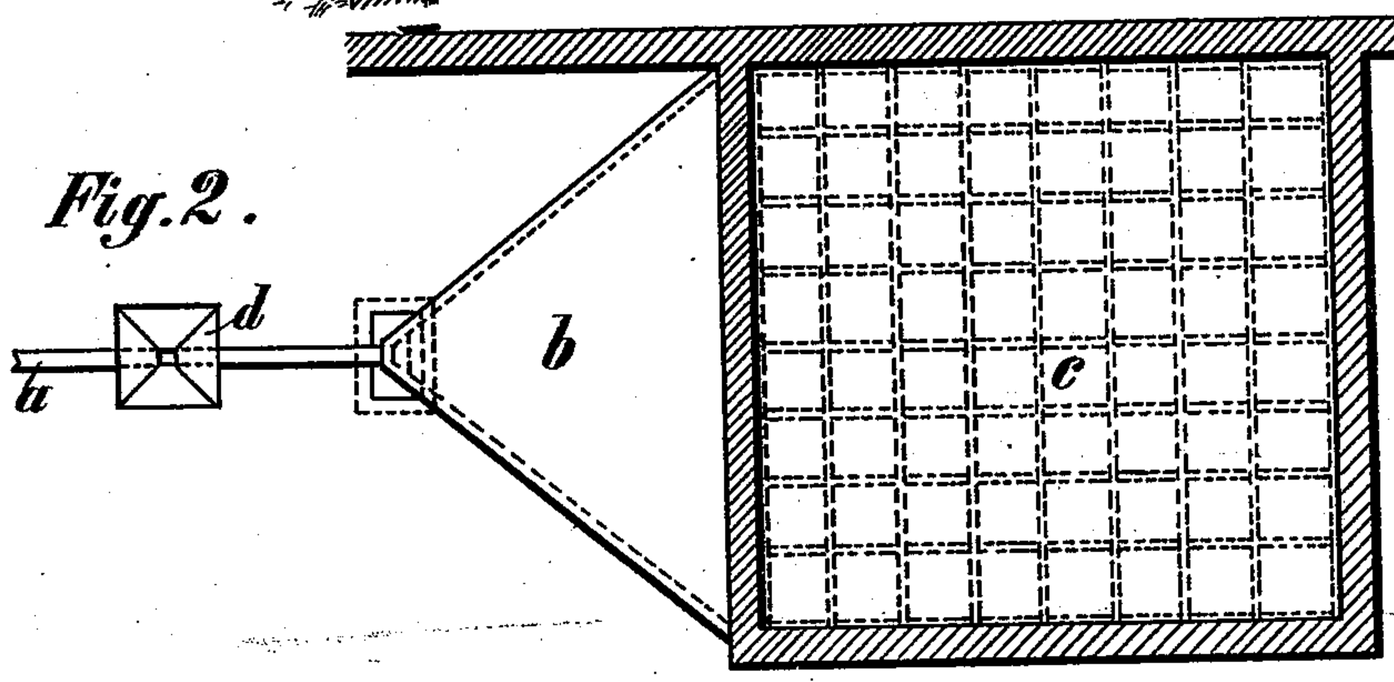
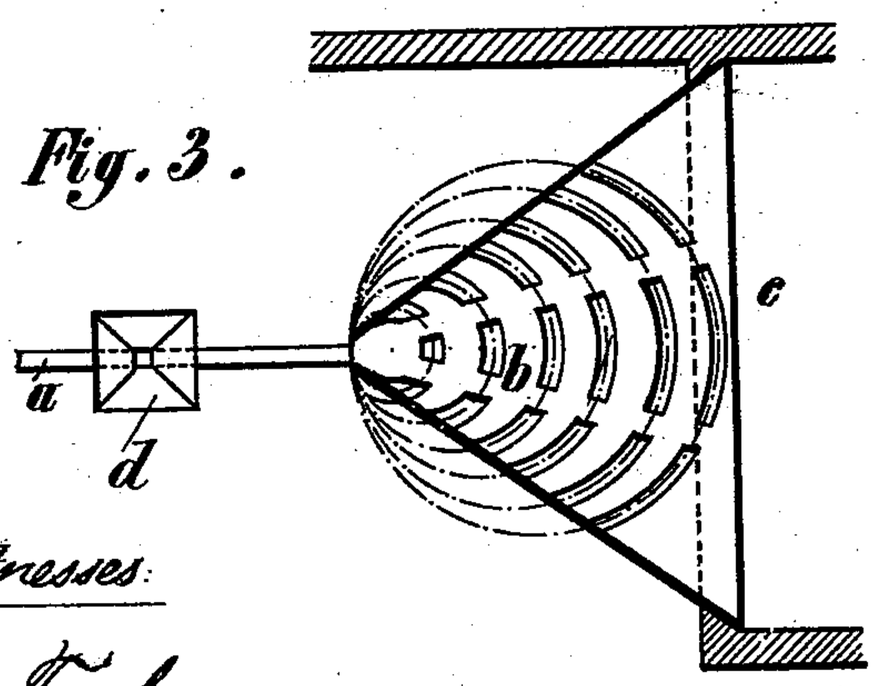


Fig. 3.



Witnesses:

Paul Fischer

Hans Sauerland

Inventor:

Karl Hermann Albert Stitz

by Wirebrock

Attorneys

ANDREW B. GRAHAM PHOTO-LITHO WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

KARL HERMANN ALBERT STITZ, OF HALLE-ON-THE-SAALE, GERMANY.

SIFTING AND SORTING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 546,562, dated September 17, 1895.

Application filed October 14, 1893. Serial No. 488,202. (No model.)

To all whom it may concern:

Be it known that I, KARL HERMANN ALBERT STITZ, of 33 Grosse Steinstrasse, Halle-on-the-Saale, in the Kingdom of Prussia and German Empire, have invented a new and useful Sorting Apparatus, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to apparatus for sorting granular and pulverulent materials.

In the accompanying drawings, Figure 1 shows a longitudinal section of the improved sorting apparatus, and Figs. 2 and 3 are plans of the same.

This sorting apparatus comprises a blower, the pipe *a*, the grading-surface *b*, and a dust-chamber *c*. The grading-surface *b* constitutes a box made in the form of an isosceles triangle and closed on all sides. The pipe *a* for the admission of the material to be graded terminates at the apex of this triangle, and the grading-surface is hermetically joined to the dust-chamber. The material to be graded is introduced into the hopper *d* and thence passes into the pipe *a*, in which it is forced by a powerful current of air to the inclined grading-surfaces *b*. In the grading-surface are provided outlet-openings bounded by arcs of circles, which openings lead to sacks adapted to be closed. The centers of the arcs of circles which bound the outlet-openings are all in the axis or the center line of the grading surface, forming an isosceles triangle, and are at gradually-increasing distances from the apex of this grading-surface. For instance, the first outlet-opening may be obtained by taking the center on the center line of the grading-surface at a distance of one-half meter from the apex and describing a circle with a radius of one-half meter, the portion of the circle which falls on the sifting-surface bounding the first outlet. The second outlet-opening is found by taking the center on the center line at a distance of one meter from the apex of the grading-surface and describing a circle with a radius of one meter, the portion of the circle which falls on the grading-surface bounding the second outlet. The third, fourth, fifth, and sixth outlets are found by taking the centers from the said apex at distances of 1.5 meter, two meters, 2.5 meters, and three metres and describing circles with radii of 1.5 meters, two meters, 2.5 meters, and three meters, the portions of circles which fall on the grading-surface bounding the outlet-openings. According to the sorts to be obtained and the quantity of the material to be graded the dimensions of the apparatus and of the outlet-openings are determined on the aforesaid principles. The material introduced by means of air under pressure allows its coarse portions to drop through the outlets placed nearest to the apex of the sifting-surface and its finer portions through the outlets farther away, while only fine material or dust will pass into the dust-chamber.

What I claim, and desire to secure by Letters Patent of the United States, is—

1. A sorting apparatus comprising an upwardly inclined covered surface having the form of an isosceles triangle, a series of openings therein, and a blower arranged to discharge the material at the lower apex of the surface; substantially as described.

2. A sorting apparatus comprising an upwardly inclined covered surface having the form of an isosceles triangle, a series of circular openings whose centers are in the axial line of the triangle, and a blower arranged to discharge the material at the lower apex of the surface; substantially as described.

3. A sorting apparatus comprising an upwardly inclined covered surface having the form of an isosceles triangle, a series of openings therein, a blower arranged to discharge the material at the lower apex of the surface, and a dust chamber communicating with the upper end of the sorting surface; substantially as described.

In witness whereof I have hereunto set my hand in presence of two witnesses.

KARL HERMANN ALBERT STITZ.

Witnesses:
CARL BORNGRAEBER,
AUGUST KUNAD.