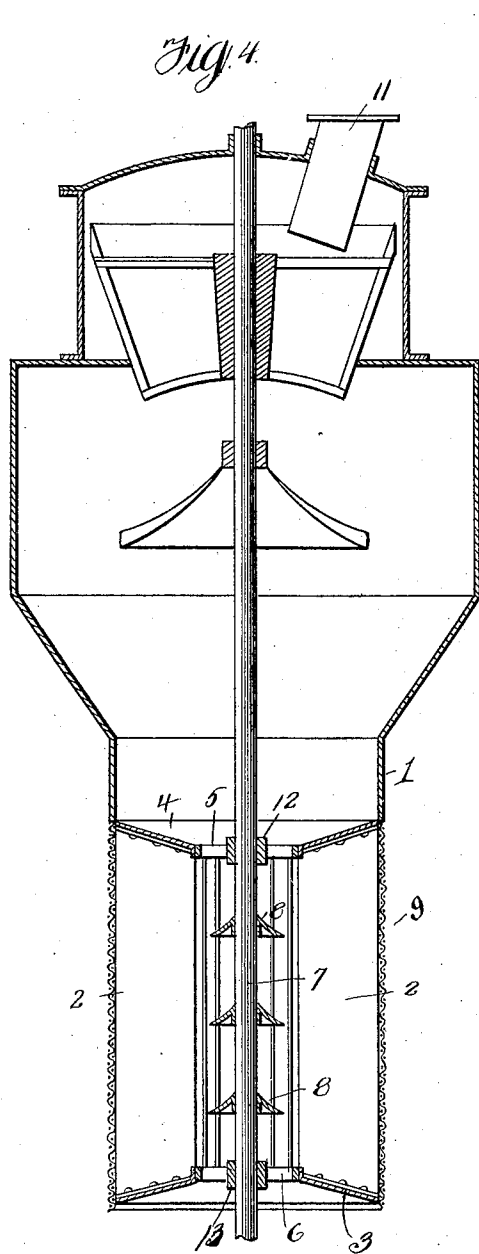
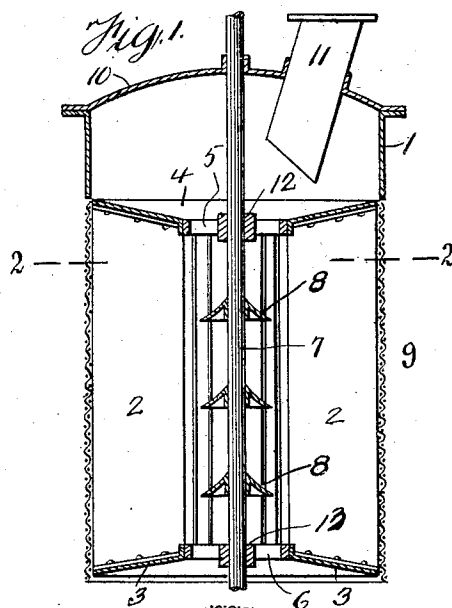
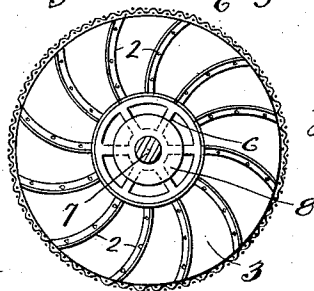
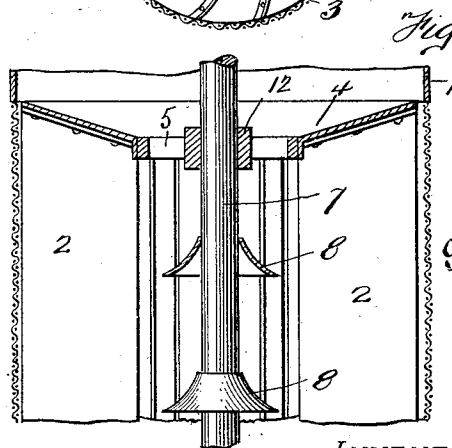


No. 869,085.

PATENTED OCT. 22, 1907.

G. HILLER.
SIFTING MACHINE.
APPLICATION FILED NOV. 12, 1906.



WITNESSES:

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UNITED STATES PATENT OFFICE.

GEORG HILLER, OF TEPLITZ, AUSTRIA-HUNGARY.

SIFTING-MACHINE.

No. 869,085.

Specification of Letters Patent.

Patented Oct. 22, 1907.

Application filed November 12, 1906. Serial No. 343,080.

To all whom it may concern:

Be it known that I, GEORG HILLER, engineer, a subject of Saxony, Germany, residing at Teplitz, Bohemia, Austria-Hungary, have invented certain new and useful Improvements in Sifting-Machines, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to improvements in sifting machines, and has for its object to improve the construction and increase the efficiency and utility of devices of this character.

With this and other objects in view, which will appear as the nature of the invention is better understood, the invention consists in certain novel features of construction as hereinafter shown and described and specifically pointed out in the claims.

In the drawings forming a part of this application, in which corresponding parts are designated by the same reference characters, is shown the preferred embodiment of the invention capable of carrying the same into practical operation and in the drawings employed:—

Figure 1 is a sectional elevation of the invention in its simpler form. Fig. 2 is a transverse section on the line 2—2 of Fig. 1. Fig. 3 is a sectional elevation of the improved device connected with a mixing machine of approved form. Fig. 4 is an enlarged sectional detailed view of a portion of the improved device.

In its simpler form the improved device comprises a casing having an imperforate upper portion 1 and a perforated lower portion 9, the imperforate portion having a dome-like top 10 through which the feed spout 11 is extended. A shaft 7 extends through the casing 1—9 and is supported by suitable bearings, and fitted to be rotated by any suitable means, but as the rotating means forms no part of the present invention it is not shown.

Attached to the shaft 7 within the casing 1—9 are two spaced members consisting of hubs 12, 13 having radial arms 5, 6, the radial arms 5 connected at their outer ends to annular conical plate 4 with its inclination inwardly and downwardly, and the arms 6 connected by their terminals to a conical annular plate 3, the inclination of the latter being outwardly and downwardly, as shown in Figs. 1 and 2. Attached to the shaft 7 between the hubs 12, 13 are a plurality of concave circular plates 8, and extending between the plates 3 and 4 are curved wings 2, the wings being spaced uniformly apart as shown in Fig. 2. The outer edges of the wings extend nearly to the inner face of the perforated portion 9 of the casing. By this means the material fed through the spout 11 falls upon the

upper plate 4 and passes from thence between the arms 5 and upon the plates 8 in succession, and is thrown into the spaces between the curved blades 2 and by them thrown forcibly against the screened sides 9 and discharged thence into suitable receptacles. The shaft 7, being rapidly rotated produces a vigorous action upon the material and throws it forcibly against the screen, causing it to pass through the same, and thus be finely divided as will be obvious. The material in falling through upon the central portion of the casing between the arms 5 and 6, and being acted upon by the concave plates 8, the coarser particles fall directly upon the arms 6 and are discharged at the center of the machine, while the finer particles only come in contact with the wings or blades 2. The arms 5 serve an important purpose in assisting in breaking up the material and disposing it in better condition for the action of the plates 8 and the wings or blades 2. The rapid motion of the blades 2 creates a strong current or suction through the machine, and thus materially aids in the action. The centrifugal force of the device is also an important feature, as will be obvious.

The screen material 9 may be of any desired size of mesh to enable the machine to be employed for the separation of material of different qualities or sizes.

The machine is preferably constructed entirely of metal but may be of any other material required.

In Fig. 4 the improved device is shown associated with a mixing machine of improved construction, which serves to thoroughly mix the material before it is inducted into the sifting machine, but as this mixing machine is the subject of another application for patent, it is not further described.

Having thus described the invention, what is claimed as new is:—

An apparatus of the class described comprising a cylindrical casing having an upper imperforate portion and a lower perforated portion, a vertical shaft mounted for rotation through said casing, hubs spaced apart upon said shaft within said casing and each provided with a plurality of radiating arms, an annular conical plate connected to the terminals of the arms of the upper hub and inclining inwardly toward the center of the machine, an annular conical plate connected to the terminals of the arms of the lower hub and inclining outwardly toward the periphery of the machine, a plurality of curved wings extending between said annular conical plates, a plurality of concave plates spaced apart and connected to said shaft between said hubs, and means for feeding material upon the upper of said conical plates.

In testimony whereof I affix my signature in the presence of two witnesses.

GEORG HILLER.

Witnesses:

ADOLPH FISCHER,
ARTHUR SCHURZ.