

No. 662,454.

Patented Nov. 27, 1900.

J. MAYER.
GRAIN SORTING MACHINE.

(Application filed Nov. 9, 1899.)

(No Model.)

Fig. 1

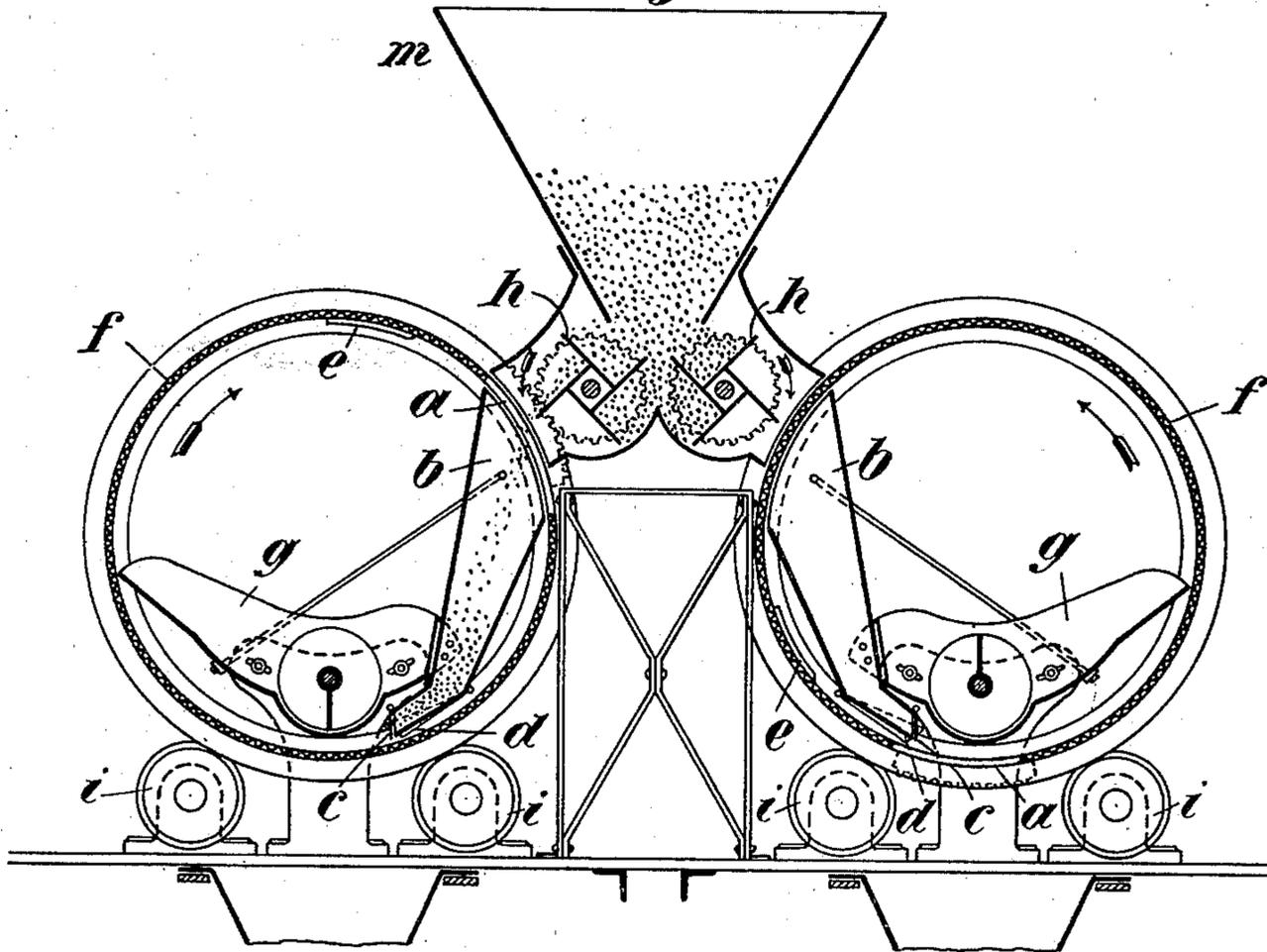
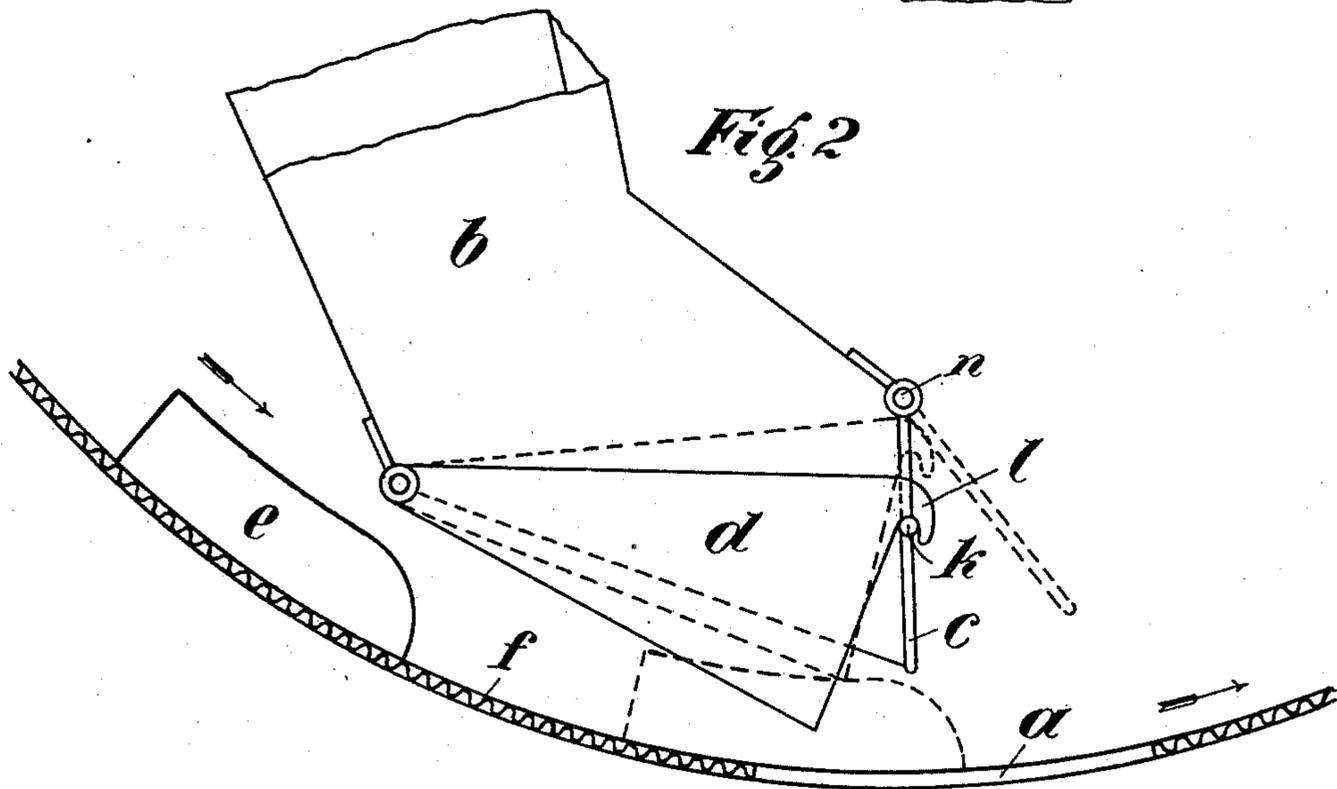


Fig. 2



Witnesses:
Ella L. Gile
O. D. [unclear]

Inventor:
Johann Mayer
BY [Signature]

ATTORNEYS

UNITED STATES PATENT OFFICE.

JOHANN MAYER, OF COLOGNE, GERMANY.

GRAIN-SORTING MACHINE.

SPECIFICATION forming part of Letters Patent No. 662,454, dated November 27, 1900.

Application filed November 9, 1899. Serial No. 736,396. (No model.)

To all whom it may concern:

Be it known that I, JOHANN MAYER, manufacturer, a subject of the King of Prussia, German Emperor, and a resident of Cologne-on-the-Rhine, in the Kingdom of Prussia, German Empire, have invented certain new and useful Improvements in Grain-Sorting Machines, of which the following is a specification.

10 This invention refers to grain-sorting machines of the kind in which the grain to be sorted is fed into a rotary sorting-cylinder through a longitudinal slot in the mantle of the same; and my invention relates especially to that form of construction of grain-sorting machines as is described in my United States application, Serial No. 671,500, filed February 24, 1898. In that machine the grain is fed from a vertical supply-channel into the sorting-cylinder or into the longitudinal slot of the same, respectively, by the mediation of a flap closing the lower end of the supply-channel and being kept closed until the longitudinal slot of the constantly-rotating sorting-cylinder has arrived just in front of said flap, when the latter is freed, so as to swing outward under the pressure or weight of the grain accumulated behind the flap. The latter then forms a bridge for the passage of the grain on its way from the supply-channel to the sorting-cylinder, and as this cylinder continues rotating the lowered flap is again raised until it again attains the position in which it closes the lower end of the supply-channel, when it is again checked until the longitudinal slot of the sorting-cylinder has again arrived in front of the said flap. Owing to the rather great flap being thrown open under the rather heavy weight of the grain and owing to the quickly-moving flap being suddenly arrested by the one edge of the longitudinal slot aforementioned, there occurs at every time of such transmission of the grain a pretty powerful blow, which causes a correspondingly-strong shock through the entire structure of the machine. The object proper of my invention is to do away with this drawback, and I attain this object by the combinations and arrangements of parts hereinafter described.

50 In order to make my invention more clear, I refer to the accompanying drawings, in

which similar letters denote similar parts throughout both views, and in which—

Figure 1 is a vertical cross-section through a machine having two sorting-cylinders, each of which is furnished with my invention; and Fig. 2 is an enlarged view of some parts of the right-hand cylinder of Fig. 1, which will duly be referred to hereinafter.

60 The two sorting-cylinders *f*, each of which is supported and rotated in known manner by rolls *i*, are fed from a common reservoir *m*, delivering the grain by rotary wings *h*, that are moved intermittently by any suitable means in such a way that the movement commences in the same moment in which the longitudinal slot *a* of the sorting-cylinder arrives in front of the exit-opening of the reservoir *m*.

70 Inside of each sorting-cylinder is located a stationary hopper *b*, the upper end or upper opening of which is located exactly opposite to the respective exit-opening of the reservoir *m*. I prefer to secure the hopper to the tray *g*, that serves for the reception of the impurities removed from the grain by the small cavities at the inner periphery of the sorting-cylinder; but of course the said hopper may be fixed in position also by other means, as the sorting-cylinder is open at and thus affords access from its two frontal ends. The lower end of the hopper *b* is provided with a flap *c*, Fig. 2, attached to the hopper by means of a hinge *n*, and the flap itself is provided with a projection or pin *k*, over which may take a hook *l* of a pawl *d*. This pawl may be raised by means of a ledge *e*, secured to the inner mantle-surface of the cylinder *f* and located shortly behind the longitudinal slot *a* with regard to the direction of movement of the cylinder. As long as the parts *c*, *d*, and *e* are in the position shown in full lines in Fig. 2 the grain accumulated in the lower end of the hopper cannot escape; but shortly after the slot *a* has passed the flap *c* for such a distance that the grain rushing forth from the hopper cannot reach that opening the ledge *e* pushes against the pawl *d*, and the latter is now raised, so as to free the pin *k* from the hook *l*, when the flap *c* will instantly be thrown open under the pressure or weight of the grain. The pawl *d* remains in its raised position as long as the ledge *e*

passes along below the pawl, the length of the ledge being such that during this time all the grain contained in the hopper *b* may leave the same. The flap *c* assumes then its
5 former position under its own weight, and instantly thereafter the ledge *e* leaves the pawl *d*, when this latter will again check the flap by its hook *l* taking again over the pin
10 *k* of the same.

10 Having now described my invention, what I desire to secure by a patent of the United States is—

15 In combination, a rotary separating-cylinder having an opening in the periphery thereof, a stationary hopper located within the

cylinder, and a discharge-chute outside the same with which said opening is adapted to align, a flap pivoted to the mouth of the hopper within the cylinder, a catch adapted to automatically engage said flap, and a releasing device for the catch secured to the interior of the cylinder, substantially as described.

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

JOHANN MAYER.

Witnesses:

CHAS. E. BARNES,
WILLIAM H. MADDEN.