

(No Model.)

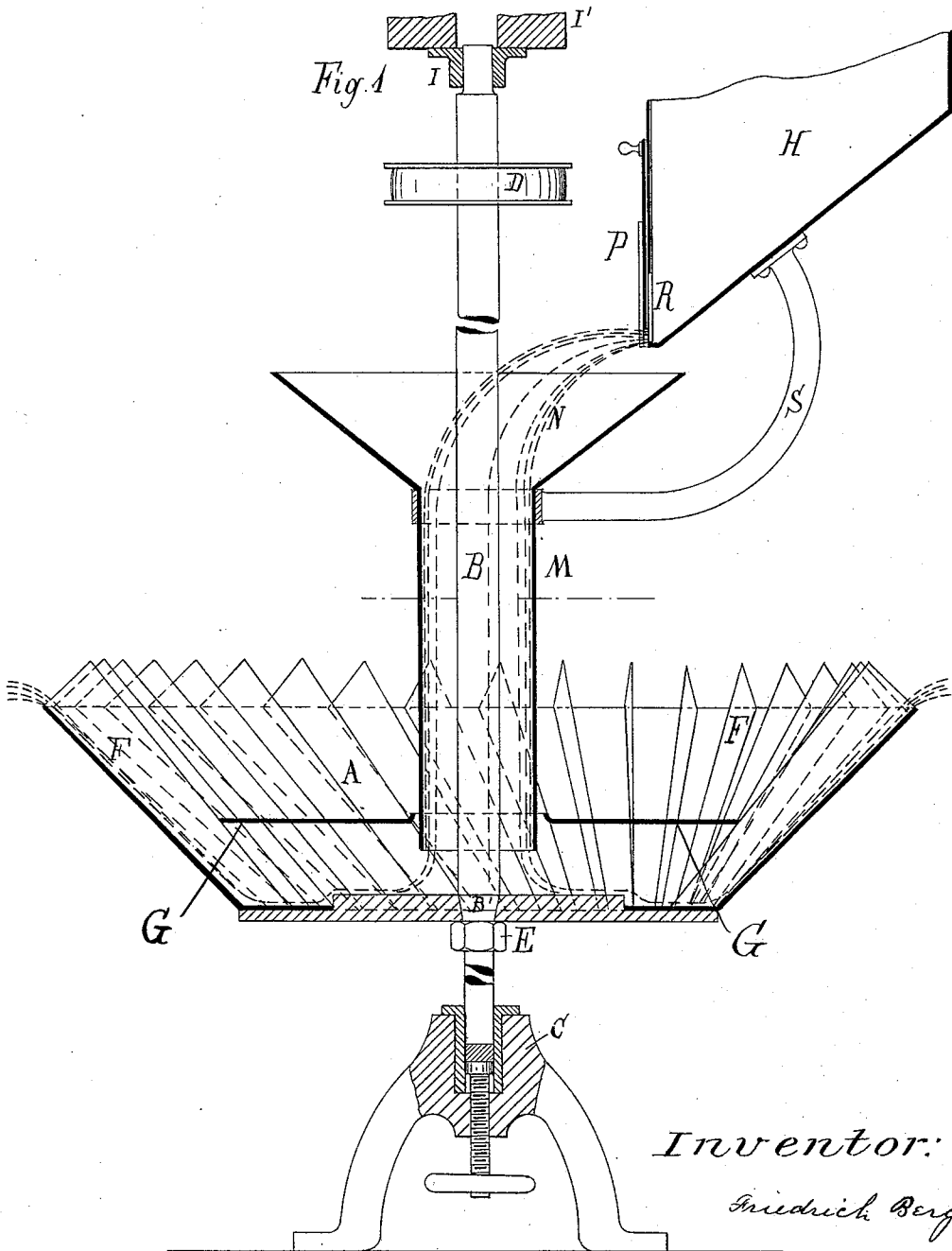
2 Sheets—Sheet 1.

F. BERG.

CENTRIFUGAL GRAIN SIFTER AND SORTER.

No. 468,865.

Patented Feb. 16, 1892.



Inventor:

Friedrich Berg.

Witnesses:
E. B. Bolton
M. A. C. Walsh.

By

Richardson
his Attorneys.

(No Model.)

2 Sheets—Sheet 2.

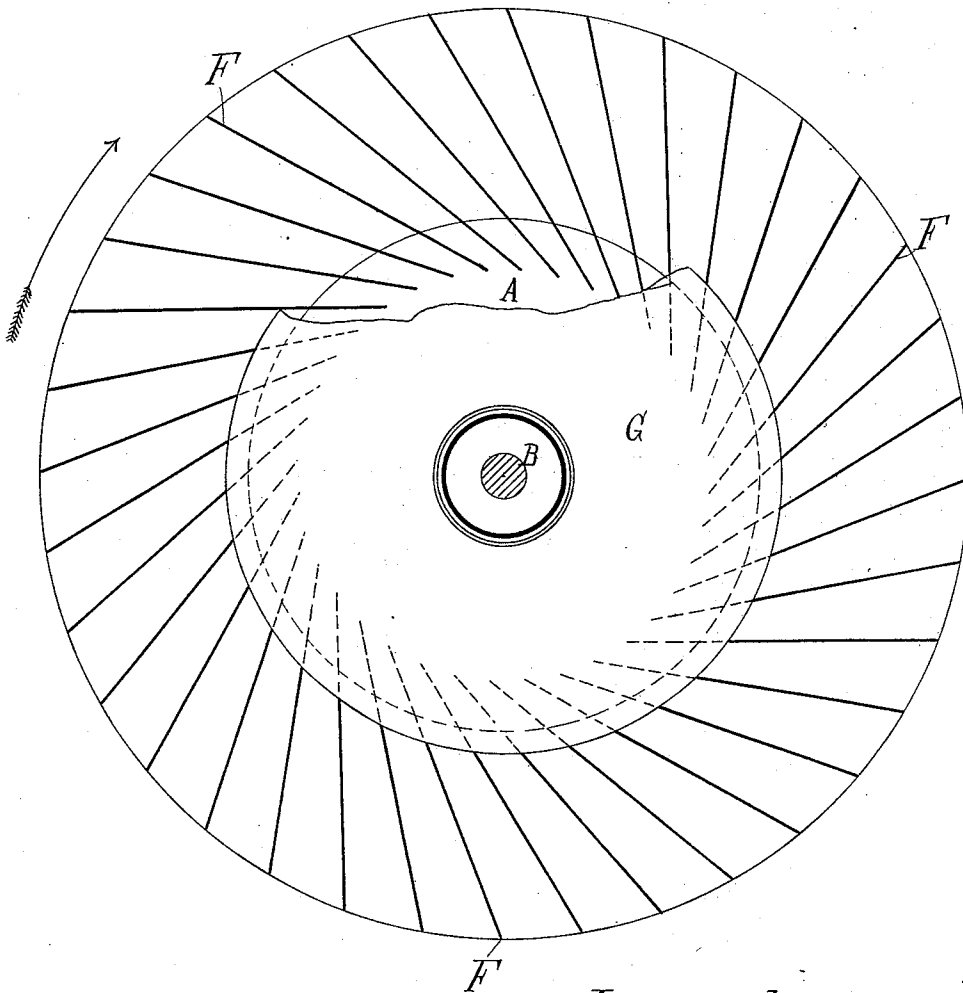
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Fig. 2.



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UNITED STATES PATENT OFFICE.

FRIEDRICH BERG, OF SAGNITZ CASTLE, LIVLAND, RUSSIA.

CENTRIFUGAL GRAIN SIFTER AND SORTER.

SPECIFICATION forming part of Letters Patent No. 468,865, dated February 16, 1892.

Application filed June 26, 1891. Serial No. 397,909. (No model.)

To all whom it may concern:

Be it known that I, Count FRIEDRICH BERG, a subject of the Emperor of Russia, residing at Sagnitz Castle, Livland, Russia, have invented
5 new and useful Improvements in Centrifugal Grain Sifters and Sorters, of which the following is a specification.

The grain runs out of the lower aperture R of the hopper H if the slide P is drawn up
10 into the hopper N, and through this into the bowl A. This bowl, of sheet metal, is the most essential part of the machine. It consists of a flat bottom, which is secured by two dish-like plates and with the aid of the screw-
15 nut E to the upright shaft B. The shaft is of conical shape at B'. The bowl A has on its obliquely-rising walls upright-standing cross-pieces or compartments F F, which are not placed radially, but, as shown in the drawing,
20 slope.

C is an adjustable step-bearing on which the shaft stands. The bearing I for the upper end of the shaft B is fitted to beam I' in corresponding height.

25 G is a cover, which is fixed in the bowl A in about a third of the height above the bottom. The purpose of same is to limit the jumping about of the grains. The arrangement of the central circular cover G within the bowl parallel with and at a short distance
30 above the bottom thereof tends to cause the accumulation and maintenance of a dense body of grain, partially and equally penetrated on every side by the lower or inner ends of the equidistant blades F, thus tend-
35 ing to insure the equal circular distribution of said grain. The bowl rotates in the direction of the arrow, as shown in the drawing. The grains which fall through the hopper H
40 on the bottom of the bowl are thrown first to the periphery by centrifugal force. There they are taken up by the cross-pieces and obliquely thrown upward. The space in which the machine stands must be wide enough so
45 that the grains do not bounce against the wall, but fall to the ground, according to the curve described in the air. The heavy grains fly farther than the lighter ones, which fall sooner to the ground.

50 D is a belt-sheave on the upper end of the

shaft B. If the centrifugal grain sifter and sorter were in the open field, it would be better to fix this sheave on the lower end of the shaft. The sheave D is driven by a belt or a cord from a large crank-wheel or from any
55 other suitable shaft. It is placed best in the building above the space in which the machine stands.

The consumption of power is very small. One man can easily turn the machine; but it
60 is better to let two men turn on opposite handles, so that the rotation is as uniform as possible.

The preference of this machine over all other known sorting-machines consists of its im-
65 mense work done (on the average two hectoliters in one and one-half minutes, or, during quicker rotation, if it stands in a larger place, in one minute) and of the beautifully uniform sorting according to the weight of
70 the grains; therefore according to that quality which is most important both for the farmer and for the consumer; also in this respect no other known sorting-machine equals
75 same.

With no other machine the work can be done so cheaply.

It is to be mentioned still that, according to circumstances, the dimensions of the machine, the number of partitions F, the size of the
80 angle at which the machine throws the corn, &c., can be modified correspondingly. If, for instance, the grain contains much coarse dirt, ears, &c., less cross-compartments must be made—i. e., the distance of the cross-com-
85 partments must be larger. If the space is limited, the corn must be thrown up steeper. If the machine to be constructed is for very large quantities—as, for instance, for an elevator silo-granary—correspondingly larger
90 dimensions are chosen. If no second board (cover) is above the machine, the feeding cannot be effected from a box which is situated above the machine, but by means of an elevator and apron or a conveyer.

I claim—

The improved centrifugal sifter and sorter consisting of a horizontally-rotating flat-bot-
tomed bowl having oblique walls and ob-
liquely-arranged partitions, a hopper with a
100

slide, a cover within the bowl, arranged a short distance above the bottom of the same and having its outer edge at a distance from the inner edge of the bowl, a conical shaft, and
5 an adjustable step therefor, substantially as described.

In testimony whereof I have signed my

name to this specification in the presence of two subscribing witnesses.

FRIEDRICH BERG.

Witnesses:

P. LAMBERT,
G. HÜLSMANN.