2 Sheets—Sheet 1.

P. FLANDERS.

Cranberry Cleaner.

No. 10,736.

Patented April 4, 1854.

Fig. 4.

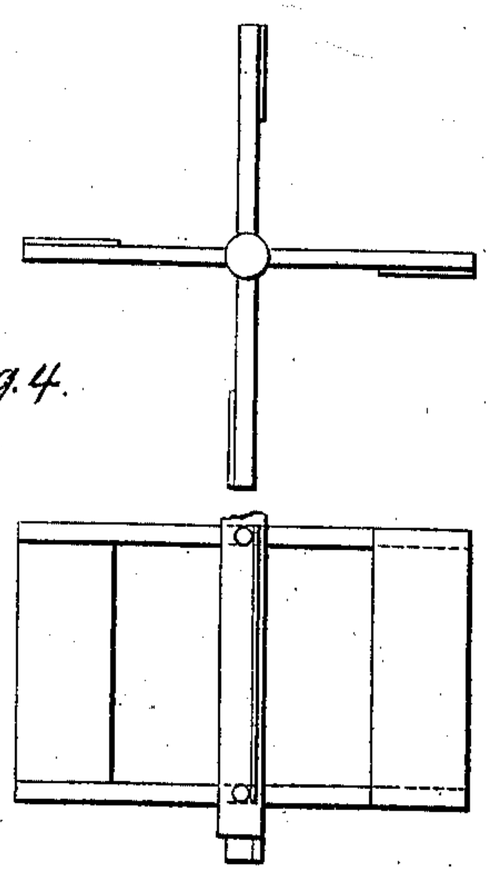

Fig. 1

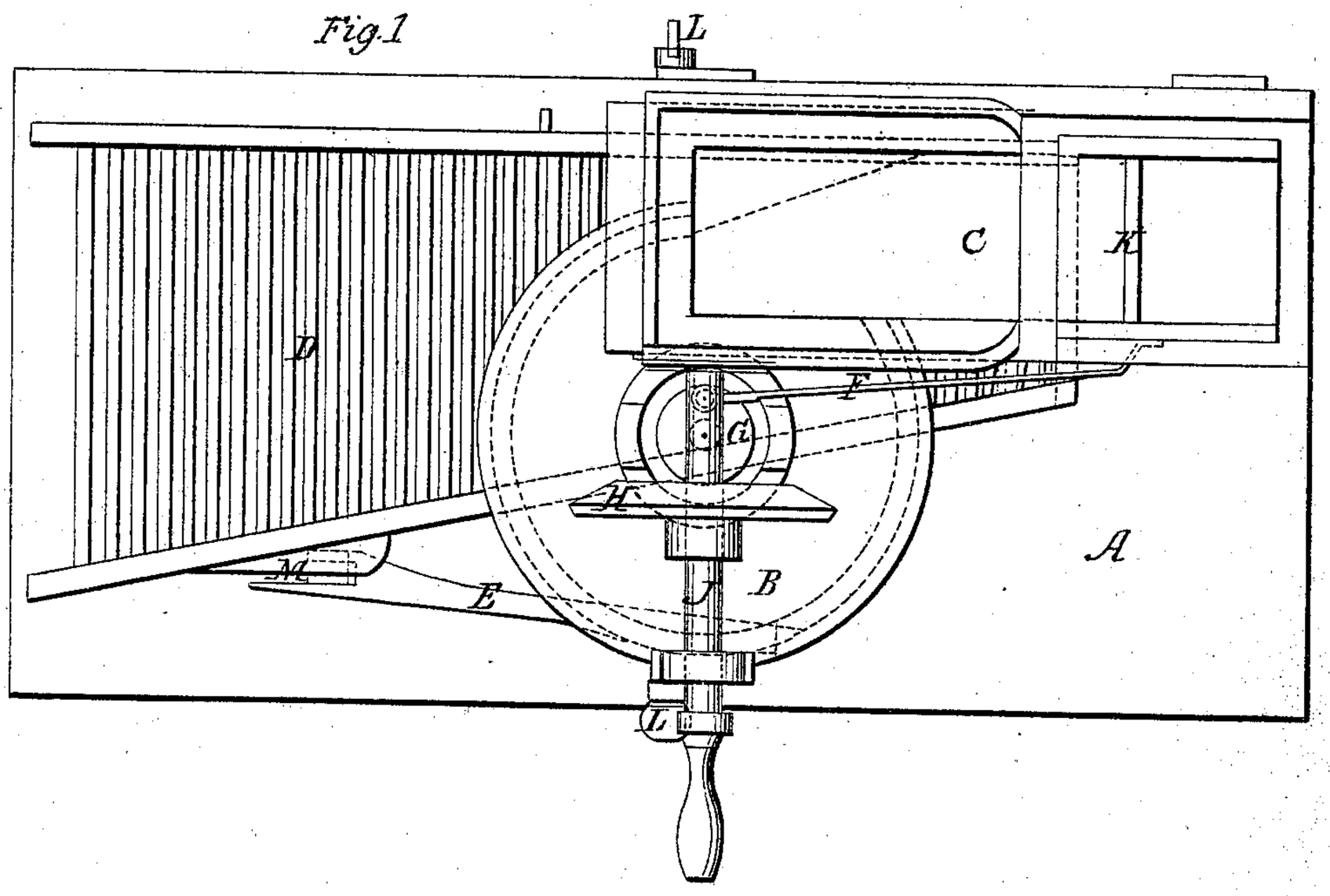

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Fig. 3.

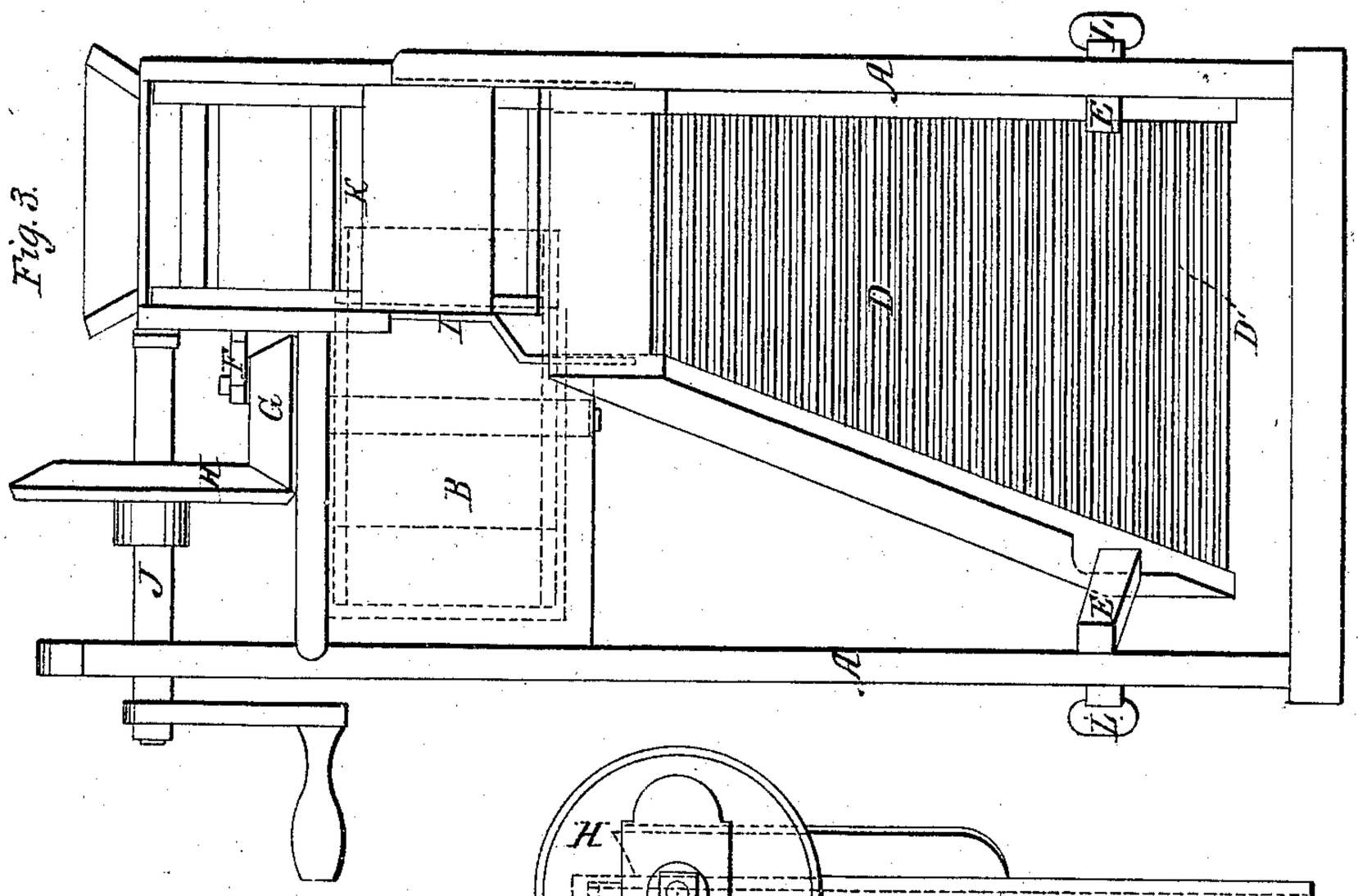
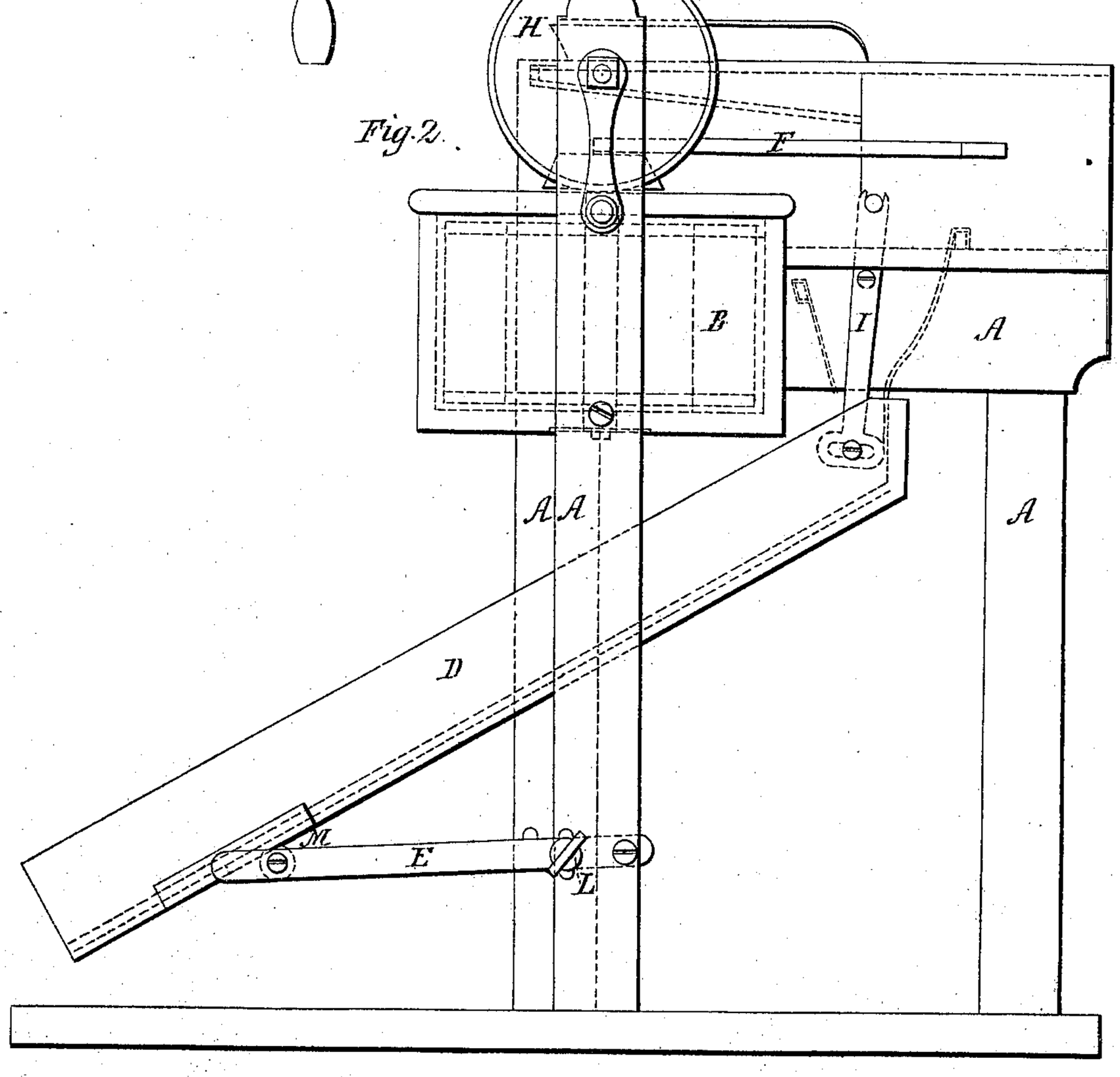


Fig. 2.



UNITED STATES PATENT OFFICE.

PHANUEL FLANDERS, OF LOWELL, MASSACHUSETTS.

IMPROVEMENT IN CRANBERRY-WINNOWERS.

Specification forming part of Letters Patent No. **10,736**, dated April 4, 1851.

To all whom it may concern:

Be it known that I, PHANUEL FLANDERS, of Lowell, in the county of Middlesex and State of Massachusetts, have invented a new and useful Cranberry-Cleaner; and I do hereby declare that the following is a full, clear, and exact description of the manner of making and using the same, reference being had to the within drawings, the letters of which refer to like parts in the several figures.

Of the said drawings, Figure 1 is a plan. Fig. 2 is a side elevation. Fig. 3 is an end elevation. Fig. 4 is a view of the blower.

To construct these cranberry-cleaners I make a frame of wood, as seen at A A, Figs. 1, 2, and 3, and in the top of the frame A, I place a vibrating platform or shoe, as seen at C, Figs. 1 and 3. At the right of and in the said platform I place a stationary separator, K, (shown partly in dotted and partly in full lines in Figs. 1, 2, and 3,) the top of which is made of wood and reaches across the inside of the frame or platform, as seen in Fig. 1, and secured to the said frame by wood-screws; and on the aforesaid piece of wood or top part of the separator K, I attach a piece of leather wide enough to reach across the frame, the lower end of the said leather reaching down into the cleaner D for the purpose of conducting the cranberries into the same, as seen at K. The position of this separator, which receives and conducts the cranberries to the cleaner D as they fall below the chaff to the said cleaner D, Figs. 1, 2, and 3, is exactly the same relatively as it should be in a large machine to work successfully. The object of this separator, which is attached to the shoe and vibrates with the same, is to separate the chaff from the cranberries, in conjunction with the blower. As the chaff and cranberries fall from the hopper C the chaff is blown out from the cranberries by the blower, two views of which are seen at Fig. 4, and the bad cranberries are cleaned from the good ones, as explained in the operation of the machine hereinafter. The cranberries drop from the hopper C to the vibrating cleaner D, which is connected to the shoe or hopper C by two arms, one of which is shown at I, Fig. 2. I then construct a shaft, as seen at J, and gears H and G, and to the top of the pinion G, I connect the rod or spring F for the purpose of moving the shoe or hopper C and cleaner D, as seen in the drawings.

On the outer end of the horizontal shaft J there is a crank, by turning of which the whole machine is put in operation, and on the said horizontal shaft J there is placed the gear H in the right place to gear into the pinion G on the blower-shaft. These shafts should be supported in proper bearings, as shown in the drawings. On the under side of the cleaner D there are two adjustable arms, E E, Figs. 1 and 2, which are attached to the two front posts, one of which is shown at A, Fig. 2. In the front end of the said arms there are placed friction-pulleys, as seen at M, Figs. 1 and 2, and these pulleys or rolls M and arms E are for the purpose of sustaining the front end of the cleaner and giving it a free vibrating motion. The said arms E are raised or lowered to the required angle or incline, and secured by the two thumb-screws, one of which can be seen at L, Fig. 2, and both at L, Fig. 1, and the said cleaner D may be constructed of wood or metal, or partially of both, with sides of sufficient height to prevent the cranberries from falling over them during their forward bounding motion. The under part of the cleaner may be made of wood or metal, as aforesaid, and I design to construct the said bottoms of slats or round rods that will revolve, or round stationary rods, and the same running crosswise or lengthwise, or at any angle, as may be necessary in practical operation. The best plan to make the said bottoms, and one which I have found by experiment to be perfectly effectual to clean cranberries, is to make the bottom of the said cleaner of slats and placing their upper surfaces nearly on a line with the angle of the cleaner, the said slats being flat on the top and beveled on the under side, so that the slots or holes between the said slats are the narrowest on the top, so that the rotten or bad cranberries will readily fall through without sticking or lodging between them. I place the said slats crosswise of the cleaner, and at the upper end of the said cleaner they should be five-sixteenths of an inch apart, and at the lower end of the said cleaner they should be about one-half an inch apart, with the width of the said holes or slots diminishing gradually to the upper end of the cleaner.

The upper ends of the arms I are attached to the shoe, as aforesaid, with the pivots, as seen at N, Fig. 2, on which they turn or swing when the machine is in operation, and at the lower end of the said arms I there is a slot described from the center N, and there are pins attached to the cleaner D, which play freely in the said slots in the arms I, the object of this being to give the cleaner D a sudden rap or jerk at each movement of the same.

At B, Figs. 1, 2, and 3, is shown the curb or cylinder in which the blower is placed to operate, and on the top and bottom of the said curb there should be an orifice to receive the air that is blown through the chaff and cranberries when they are falling from the hopper or shoe to the separator K and cleaner D, as hereinbefore described.

Having thus described the process of constructing my cranberry-cleaner, I will now explain the operation of the same. By placing the cranberries as they are raked from the meadows or grounds into the hopper C, then the crank is turned and the cranberries commence dropping from the hopper or shoe to the separator K and then to the cleaner D, and during the dropping of the same the chaff is blown from them (the cranberries) by the blower, which is shown at Fig. 4. The cranberries when they drop from the hopper or shoe strike partially upon the separator and then upon the upper end of the cleaner D, and the said machine-frame and posts being of sufficient length for the cleaner D to operate at its lowest position and highest position, the said holes or slots in the said cleaner being too small to admit the cranberries to pass through, and the good cranberries being of a round form then roll or bound forward down and out of the lower end of the cleaner D into the receiver; but it is otherwise with the rotten or bad cranberries, for they, after dropping upon the cleaner D, commence a half-rolling, half-sliding slow motion downward, until they get over a slot or hole that is large enough to admit them, and then they pass through the bottom of the cleaner before they arrive at the lower end of the same.

I design to make the working machines six times as large as the inclosed drawings, and model hereto belonging; but that size can be deviated from and the machine work equally as well, except the slots in the cleaner D.

Having thus described my invention, I claim and desire to secure by Letters Patent to me and my legal representatives—

The cleaner D and the arms I, or their equivalents in substance, and the separator K, when the same is made and operated, substantially as set forth and specified, for the purposes of cleaning cranberries.

PHANUEL FLANDERS.

Witnesses:
JAMES WILSON,
DAVID C. G. FIELD.