

No. 636,398.

Patented Nov. 7, 1899.

B. F. DINGLEY, JR.

MACHINE FOR SEPARATING CURRANTS OR LIKE FRUITS.

(Application filed Feb. 3, 1899.)

(No Model.)

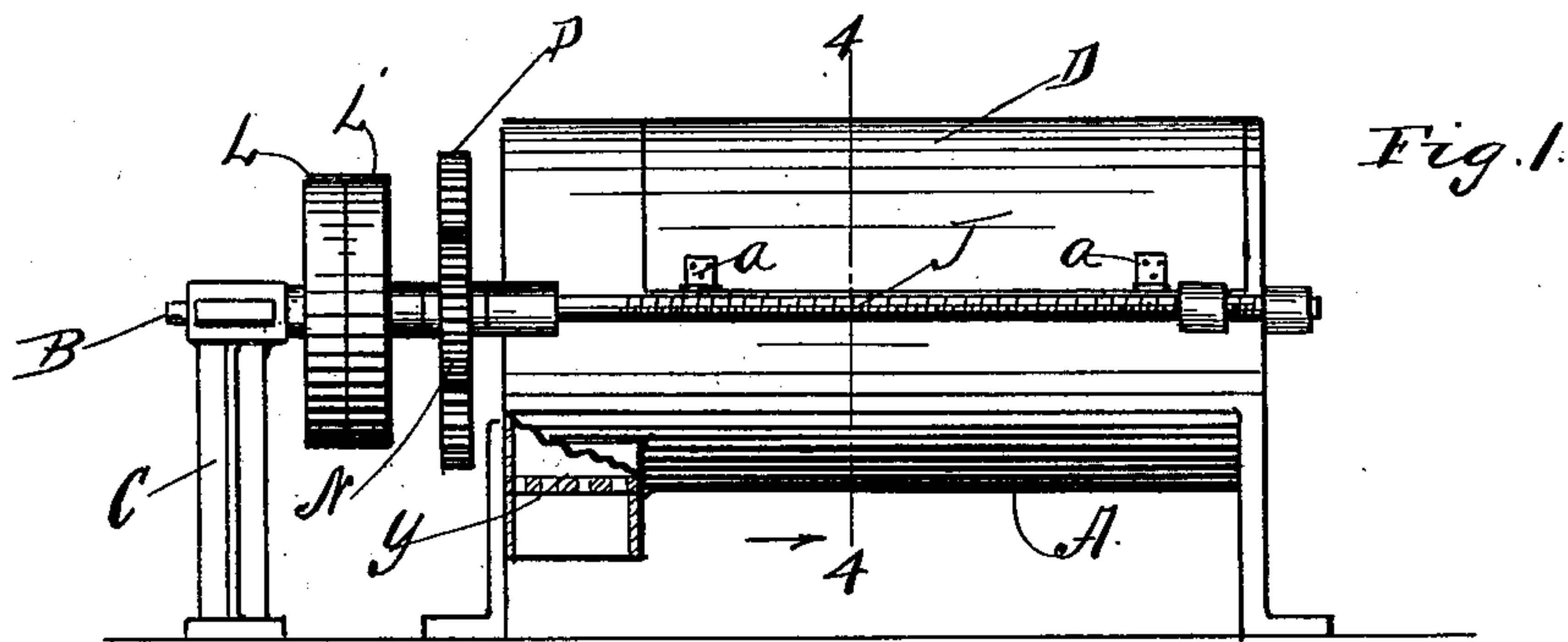


Fig. 1.

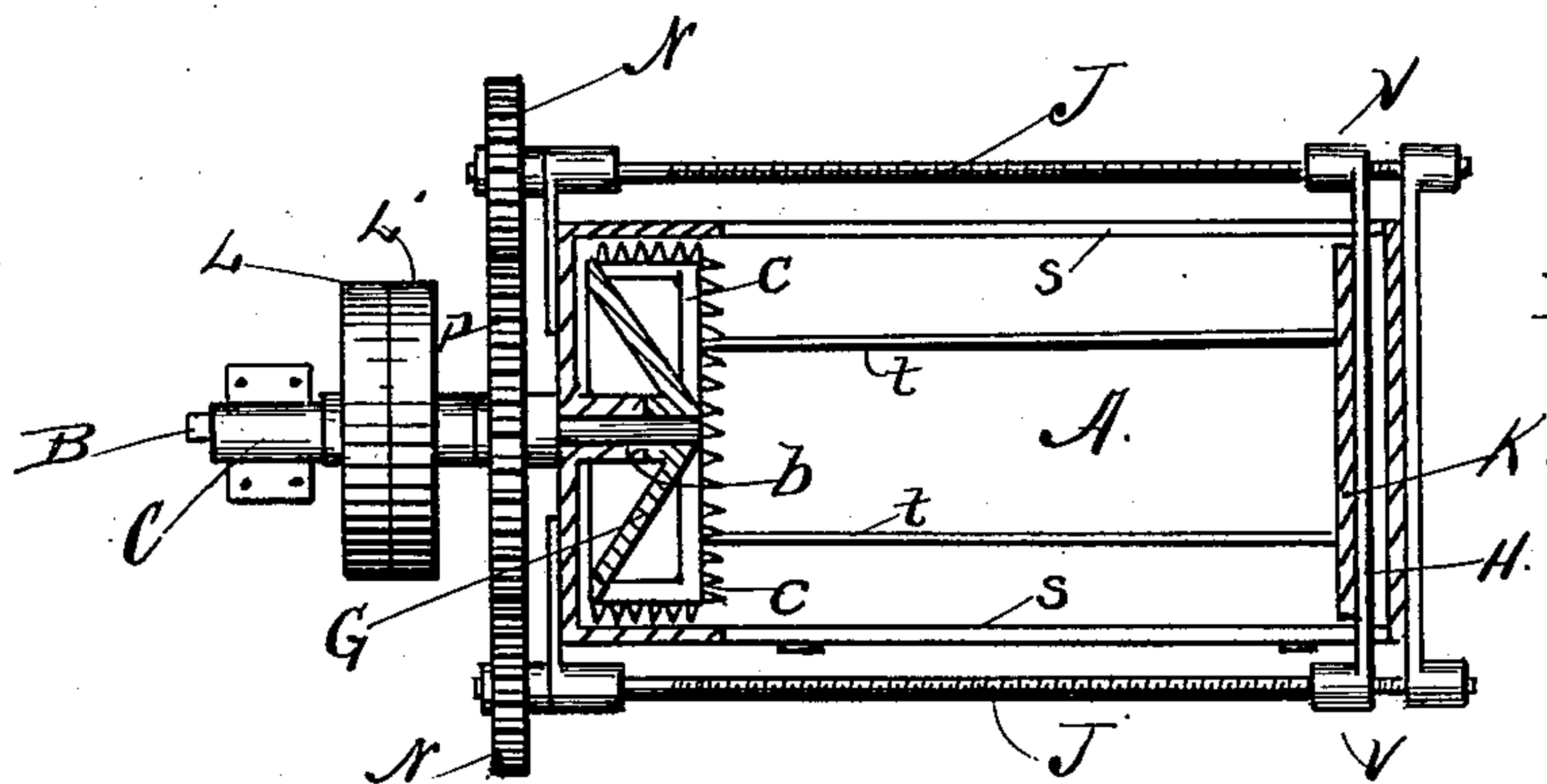


Fig. 2.

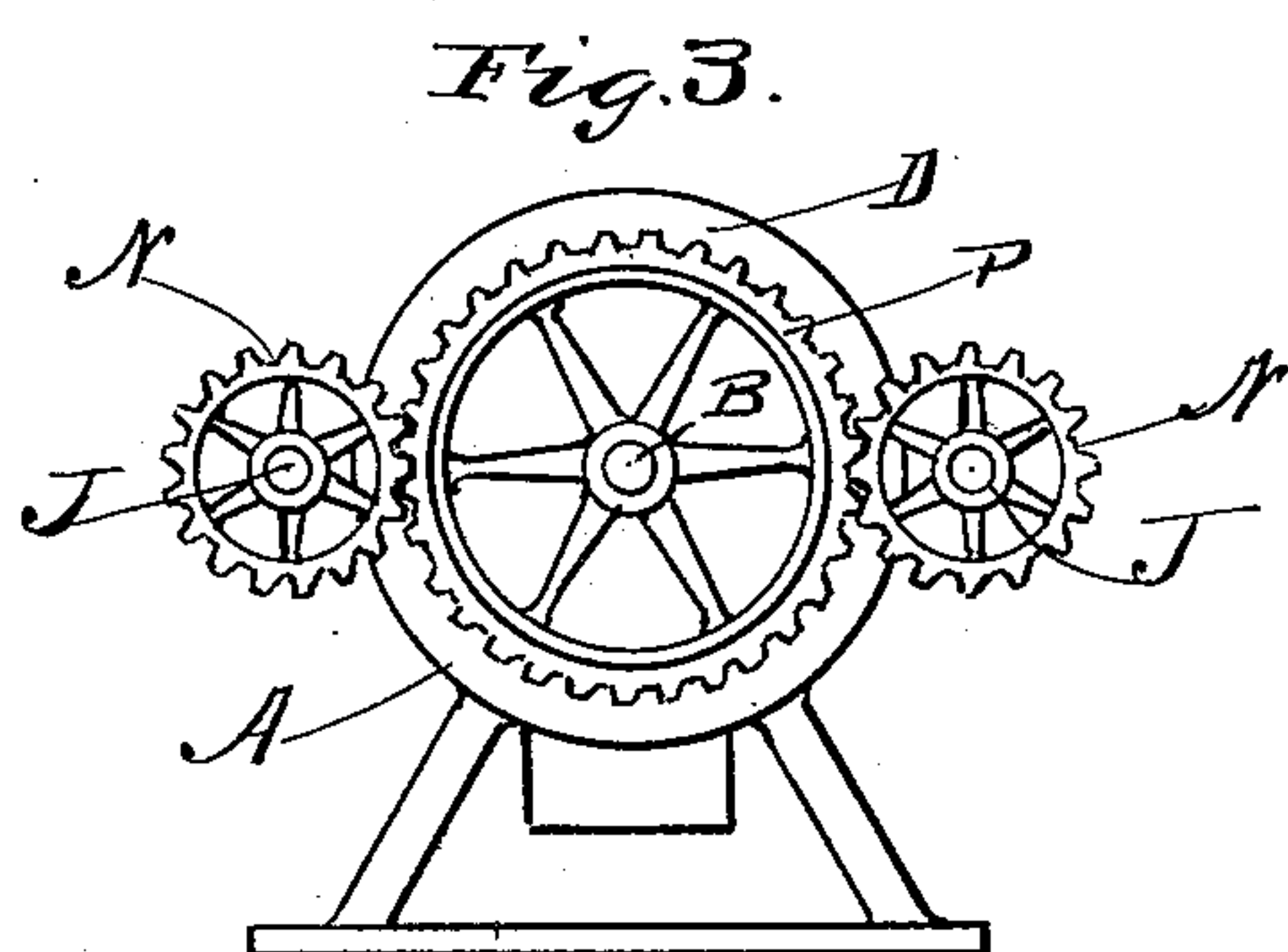


Fig. 3.

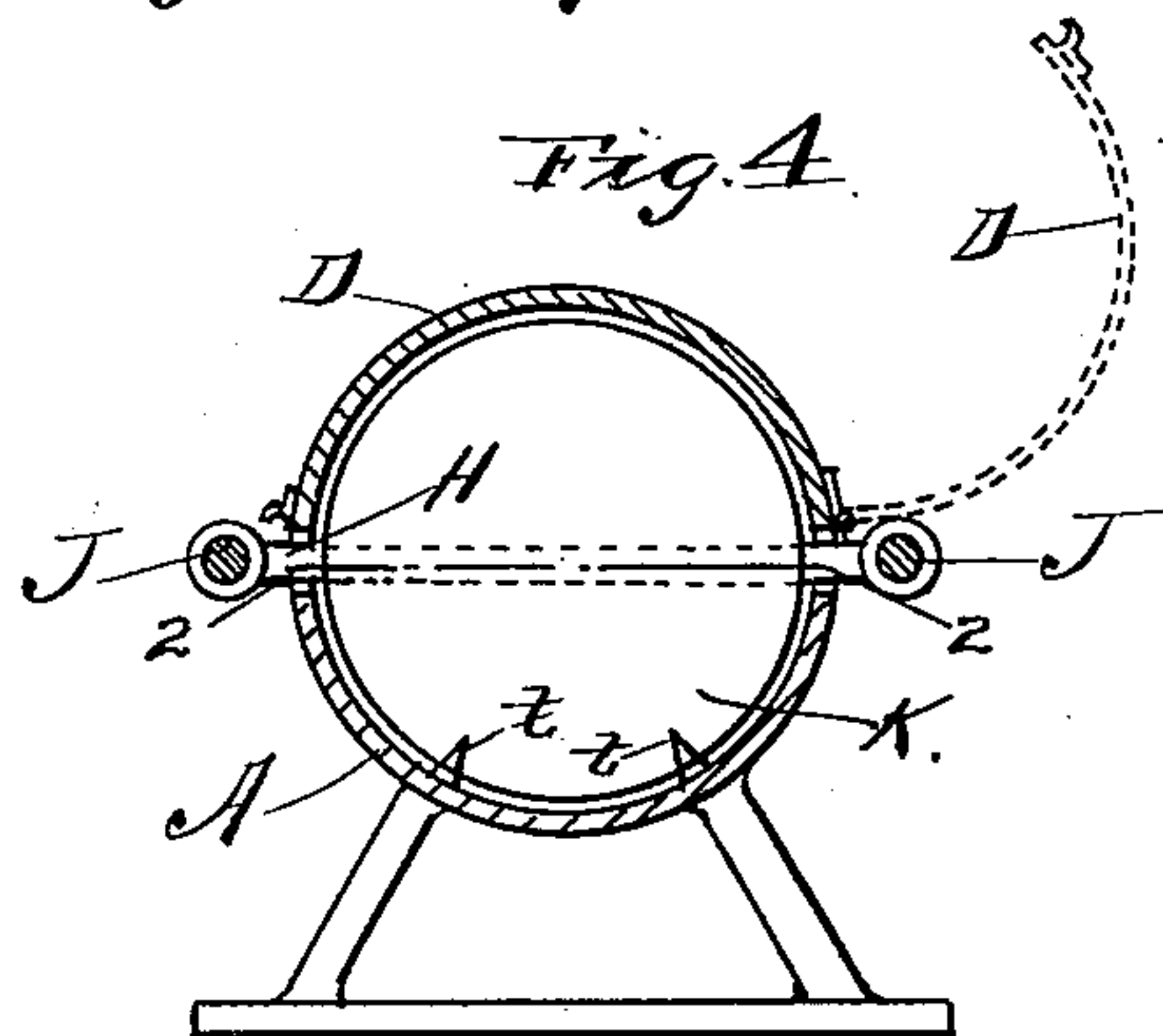


Fig. 4.

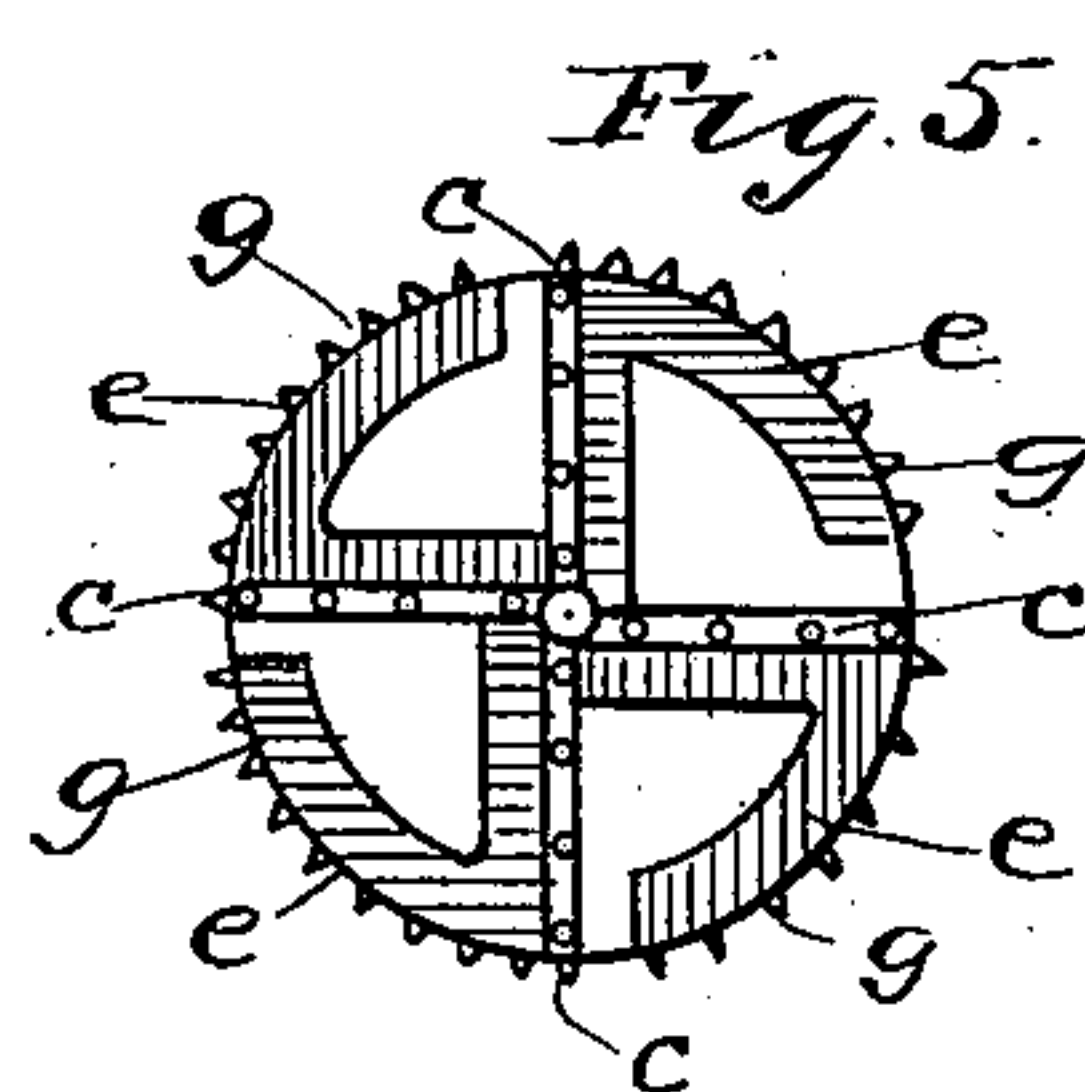


Fig. 5.

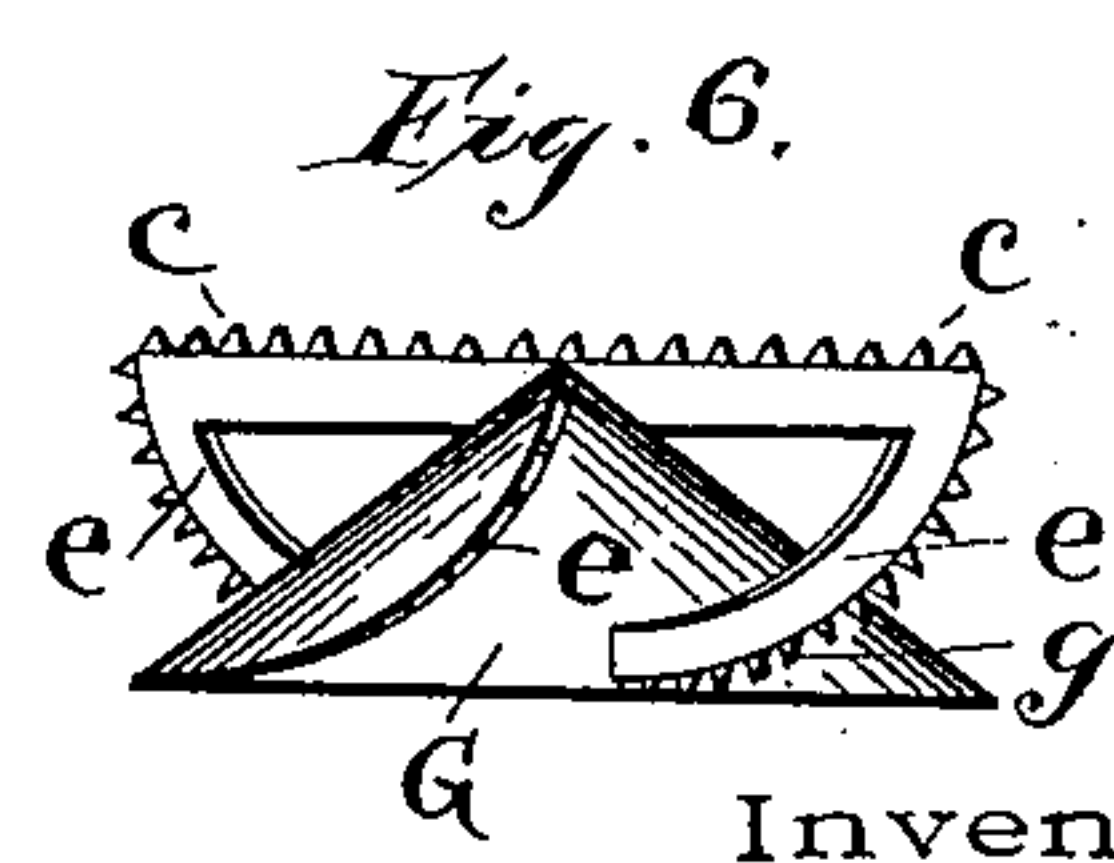


Fig. 6.

Witnesses.

M. E. Cleveland
John P. Smith

Inventor.

B. Frank Dingley, Jr.

by

Arnold Barlow
Attorneys.

UNITED STATES PATENT OFFICE.

BENJAMIN F. DINGLEY, JR., OF PROVIDENCE, RHODE ISLAND.

MACHINE FOR SEPARATING CURRANTS OR LIKE FRUITS.

SPECIFICATION forming part of Letters Patent No. 636,398, dated November 7, 1899.

Application filed February 3, 1899. Serial No. 704,406. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN F. DINGLEY, Jr., of Providence, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Machines for Separating Currants or Like Fruits; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to machines made for breaking up and separating currants and other small fruits that have become caked together in the casks or boxes in which they are imported.

The object of the invention is to provide a power-machine to perform the labor of breaking up and separating currants and like small fruit, which is now done by means of hand-augers, and to break the larger cake into lumps, which are then rubbed apart with the hands. The process is very slow and extremely hard on the hands because of the short sharp currant-stems in the mass.

Figure 1 represents a side elevation of the machine. Fig. 2 is a horizontal section of the machine, taken through the center of the case on line 2 2 in Fig. 4. Fig. 3 is a view taken from the driving end of the machine with the pulleys removed. Fig. 4 shows a vertical cross-section taken on line 4 4, Fig. 1. Fig. 5 represents a face view of the breaker. Fig. 6 is a side elevation of separating-head.

The construction of the machine is as follows:

A cylinder or case A is supported on four legs and is divided horizontally through its center for about four-fifths of its length. The upper part of this division is hinged to the lower part of the case at *a a*, so as to form a movable cover D for the open lower part of the case to be opened when the caked fruit is put in.

A short shaft B has a bearing in a standard C at its outer end and a bearing in the end of the case A at its inner end. This shaft B extends in through the end of the case and has a head with teeth or prongs on it, called a "breaker," fast on its inner end. This breaker consists of a hub *b*, around which is

formed a cone-shaped body G, from the apex of which four wings *c c* extend out radially, (see Fig. 6,) and from the outer end of each of these wings a curved arm *e* is carried down to the edge of the base of the cone G at about a quarter of its circumference from the end of the wing to which the arm is attached. The outer edges of the wings *c* and the arms *e* have projecting teeth or prongs *g g*. The use of the teeth on the edge of the wings *c* is, when the head revolves, to separate the currants from the cake, so that they will fall down onto the screen or holes *y y* in the bottom of the case, and the arms *e e* with their teeth sweep the currants diagonally across the screen because of the curved shape of the arms and separate the currants still more thoroughly and rattle them through the holes in the screen.

On each side of the case A is a shaft J, which are held in bearings *h h* at each end of the case. These side shafts J J have screw-threads made on them, on which screw-nuts *v v* are fitted to work, and these nuts *v v* are attached to the ends of a cross-bar H, that extends through the case in slots *s s*, Fig. 1, cut out of the lower half of the case or out of the cover. The bar H is attached to a follower K, which is nearly of the inside diameter of the case. The screw-shafts J are driven by means of gears N N, fast on one end, that engage with a main gear P, fast on the center shaft B.

Fast and loose pulleys L L' are put on the shaft B to receive a driving-belt to run the machine.

The case A has openings *y y* made in it under the breaker G, (see Fig. 1,) where the case is broken away for the currants to pass out of when separated, and sharp ridges *t t* are put in the bottom of the case to keep the cake from turning with the breaker.

The mode of operating the machine is as follows: The cover D of the case is turned back, (see dotted lines in Fig. 3,) and the follower K is carried to the right end of the case. (See Fig. 2.) The cake of currants after having the cask stripped off of it is put into the case A, and the cover D is closed. The machine is then started by a belt on the pulleys F, and the breaker G is revolved. The screw-shafts J, being turned by the gears N and P,

draw the bar H and follower K toward the breaker G, pressing the cake against the prongs *g g*, which disintegrates it, and the separated currants drop out of the holes *y y* 5 into a receiver.

Having thus described my improvements, I claim as my invention and desire to secure by Letters Patent—

10 In a machine of the character described, the combination of a case made in two parts, a short shaft in one end of said case, a breaker attached to the inner end of said shaft consisting of a hub, four wings extending out from said hub, arms attached to the outer 15 ends of said wings sloping toward the back of the breaker, pointed teeth on the front

edge of said wings, and pointed teeth on the outside edge of said arms, a screw-shaft on each side of the case, a follower in said case, a bar attached to said follower and having 20 screw-threads made in its ends fitted to work on said screw-shafts, a gear fast on said short shaft, a gear fast on each screw-shaft engaging the gear on the short shaft, with means for driving said short shaft, substantially as 25 described.

In testimony whereof I have hereunto set my hand this 1st day of February, A. D. 1899.

BENJAMIN F. DINGLEY, JR.

In presence of—

BENJ. ARNOLD,

E. H. ROYDEN.