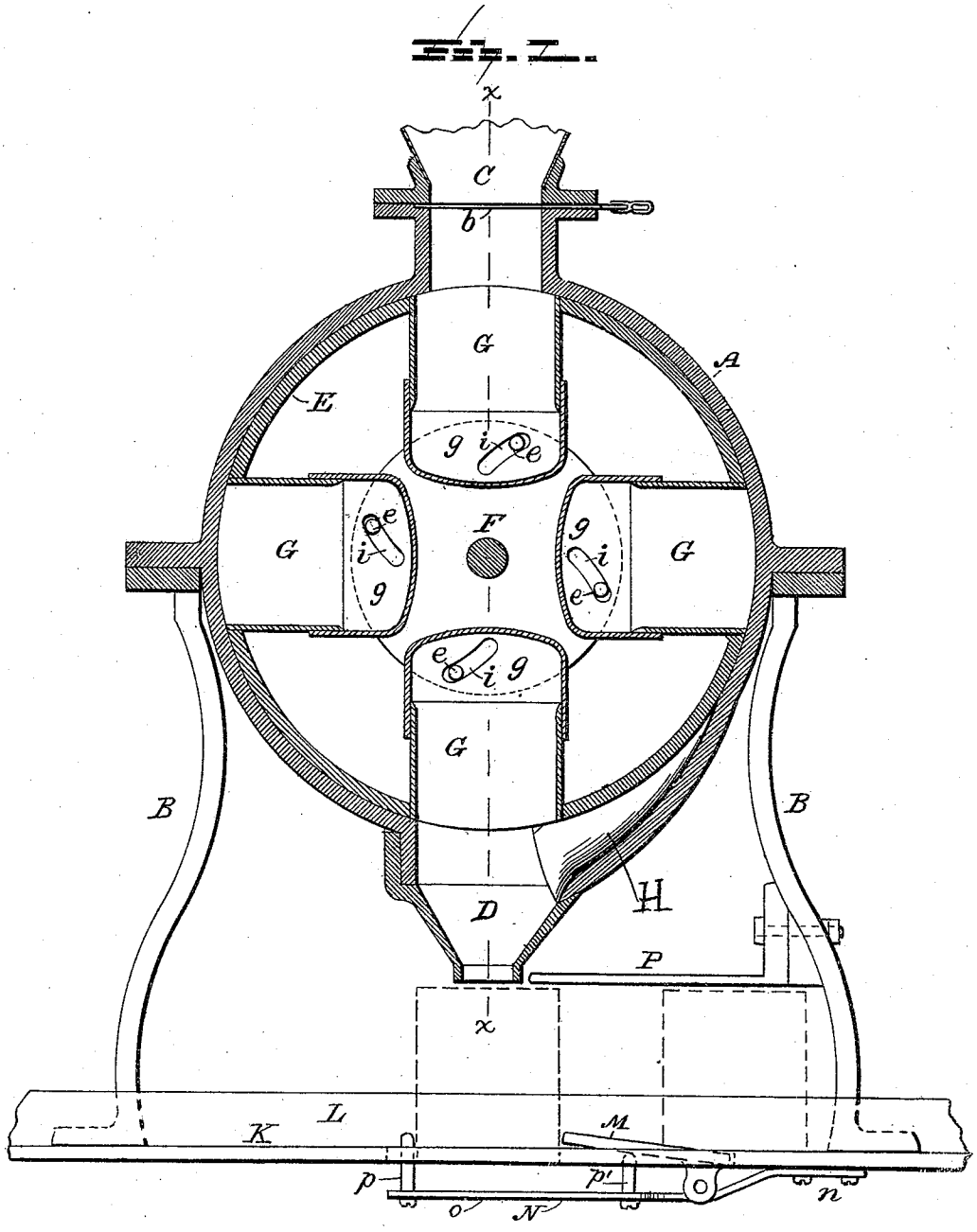
(No Model.) 3 Sheets—Sheet 1.

J. BAKER.

CAN FILLING MACHINE.

No. 503,029. Patented Aug. 8, 1893.



Witnesses
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(No Model.) 3 Sheets—Sheet 2.

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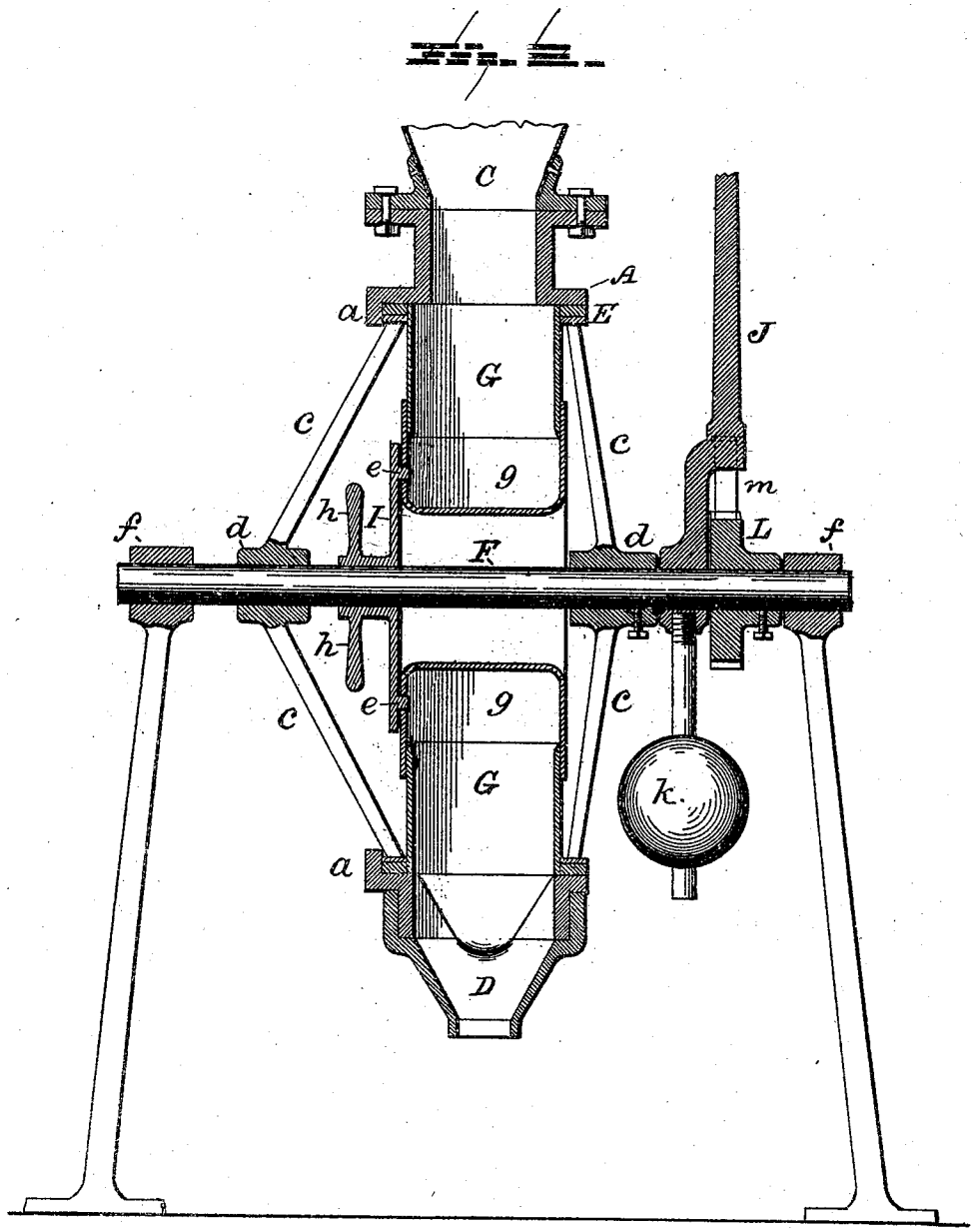

Witnesses
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(No Model.)

3 Sheets—Sheet 3.

J. BAKER.

CAN FILLING MACHINE.

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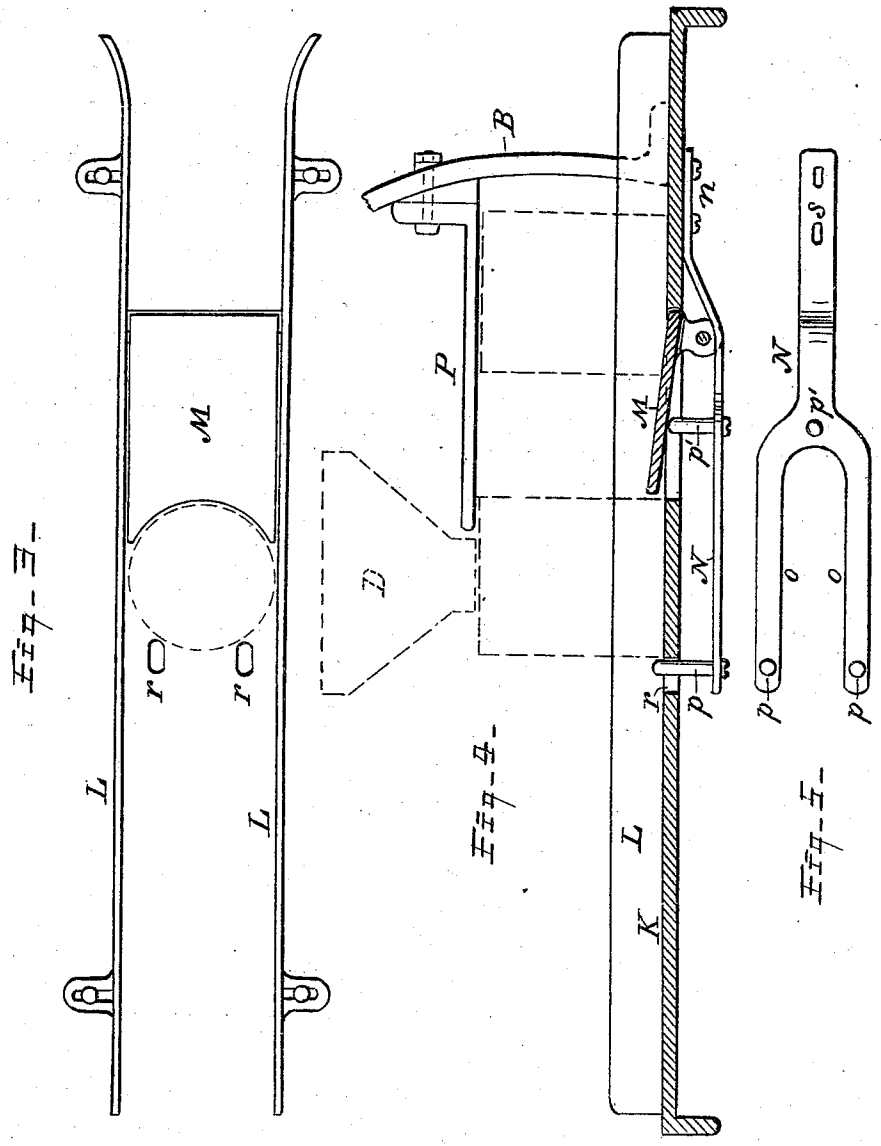

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UNITED STATES PATENT OFFICE.

JOHN BAKER, OF MUSCATINE, IOWA.

CAN-FILLING MACHINE.

SPECIFICATION forming part of Letters Patent No. 503,029, dated August 8, 1893.

Application filed March 18, 1891. Serial No. 385,514. (No model.)

To all whom it may concern:

Be it known that I, JOHN BAKER, a citizen of the United States of America, residing at Muscatine, in the county of Muscatine and State of Iowa, have invented certain new and useful Improvements in Can-Filling Machines, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention consists in certain improvements in machines for canning peas and small fruits and also for filling packages by gravity with any material, the device herein described being adapted for operation by hand.

In the accompanying drawings—Figure 1 represents a central, vertical section of a can-filling machine, constructed according to my invention. Fig. 2 is a section taken on line *x*—*x* of Fig. 1. Fig. 3 is a plan showing certain details of the bed-plate on which the can-filler is placed. Fig. 4 shows a section of the bed-plate with other details. Fig. 5 shows, in plan view, a spring connected with the bed plate.

A designates a circular frame or rim which is provided at one edge with an annular flange *a* and is supported by legs B. On the top of the frame is a hopper C which is provided with a slide *b*, by which the passage from the hopper may be opened or closed. The frame A is provided at the bottom with a spout D through which the article to be canned or packed is discharged into the cans or packing cases.

E indicates a rim which is placed within the frame A and fits therein. This rim E is mounted on a rotative shaft F with which it is connected by the spokes or arms *c* and hubs *d*, the latter being secured to the shaft which is supported in bearings *f*. The rim E has a series of circular openings in each of which is fixed a cup or bucket G, the top or mouth of the cup being secured to the rim, with the body extending inward toward the shaft F. The parts are so constructed that, by the rotation of the shaft, the rim E may be rotated freely within the rim A to bring the cups G successively under the hopper C. The said cups are preferably four in number, these being arranged on the rim to be equi-distant one from another, so that one cup is brought directly under the hopper at every quarter revolution of the rim E.

The cups G are adjustable in extent, the bottom or lower part *g* of each cup being movably connected with the main portion, so as to slide thereon, whereby the receiving capacity of the cup may be increased or diminished. This adjustment is effected by means of a wheel or circular disk I on the shaft F, in position adjacent to the buckets G, said disk having a hub from which extend the handles *h*. A series of fixed pins *e* extends laterally from the disk I, said pins being so arranged on a circle, that each pin enters a curved, inclined slot *i*, made in the movable part *g* of one of the buckets.

By turning the disk I, by means of the handles *h*, in one direction, the inward or lower parts of the buckets may be raised, the pins *e* moving in the slots *i*, so that the buckets are reduced in depth, their main portions being secured to the rim E as before stated; and by turning the disk I in the opposite direction, the lower parts *g* of the buckets are moved downward, or toward the shaft F, and the cups may thus be extended.

J indicates a hand-lever which is loose on the shaft F, the lower end of said lever being provided with a counter-balance *k*. A ratchet wheel L is fast on the shaft in position adjacent to the lever, the latter having a pawl *m* connected therewith and adapted to connect with said ratchet wheel when the lever is moved in one direction. Thus by a movement of the lever from a vertical to a horizontal position, the pawl engaging the ratchet wheel, the rim E may be turned one quarter of a revolution and another cup G is thus brought in position under the hopper to be filled; and the same movement brings a cup which had been previously filled to an inverted position over the spout D and the contents of said cup are discharged through the spout by gravity and fall into a can below.

At a point next to the spout D, the frame A is somewhat enlarged, or made to spread from the rim E, as seen at H, so that the contents of each cup as they pass the spout, may entirely fall out and pass through the latter.

The can-filler described is placed on a bed K and secured thereto, and to this bed are

adjustably secured the guides L which form a passage for cans or packing cases to be filled, the said passage extending directly under the discharge spout of the can-filler. In an opening in the said bed, between the said guides, is placed a pivoted trap door M which is usually made concave at its forward end to conform to a cylindrical can.

N indicates a spring which is secured to the lower side of the bed at *n* and extends forward under the door M, the forward portion of said spring being bifurcated, or formed with branches *o*, to each of which is fastened a pin *p*. Another pin *p'* is fastened to the spring, in position to press upward against the door M and slightly raise said door, as seen in Fig. 4. The spring N tends to hold the pins *p* in position slightly extending through the slots or elongated apertures *r* in the bed-plate, and to hold the pin *p'* so that the latter raises the forward end of the door M a little above the plane of the bed plate. The apertures *r* in said plate and also the apertures *s* in the spring, where the latter is secured to said plate, are elongated, so that the spring may be adjusted to regulate the position of the pins *p* for cans of different sizes. When a can is being filled it occupies the space between the elevated end of the door M and the pins *p* and is directly under the spout D. Above the passage formed by guides L is a fixed horizontal bar P which forms a guide for the cans at the top when they are pushed along between said guides L.

In operation, the rim E being in position with one of the cups G directly under the hopper and the lever J extending upward, the peas, or other article to be canned, are cast into the hopper and the uppermost cup G is filled. A can to be filled is then placed between the guides L and is pushed forward, the said guides with bar P keeping it in place. As the can passes over the door M, the latter is pressed down to the plane of the bed, and as the can passes from the door, the latter and also the pins *p* are raised by the spring N, thus stopping the can directly under the spout D. The operator then, by means of the hand-lever, turns the rim E one quarter of a revolution and brings the next cup G under the hopper, the first cup filled being turned by the movement half way down to the spout. Another like movement of the lever brings the last mentioned cup to an inverted position over the spout D and its contents are discharged into the can below, and at each subsequent movement causing a quarter of a revolution of the rim E, one cup G is brought under the hopper and another cup in position over the spout D. The cans to be filled are pushed along between the guides, and when the first can is filled, it is pushed forward by the next one, the latter moving on the door M and pressing the said door and the spring N with pins *p* downward by such movement.

I claim—

1. The combination, with a fixed, circular frame, provided with a hopper and spout, of a perforated rim, mounted on a rotative shaft and fitting in said frame, a series of cups, carried by said rim, each of said cups being made in two parts, the bottom part being constructed to slide on the other part and provided with a slot, whereby the said cups may be adjusted in their receiving capacity, and a circular disk mounted on said shaft and provided with pins which extend into the slots in the cups, substantially as and for the purposes described.

2. The combination, with a rotative shaft, of a perforated rim E, mounted thereon, cups G, *g*, which are severally made in two parts, the bottom parts being provided with slots *i* and constructed to slide on the other parts which are secured to said rim, a disk I, mounted on said shaft and provided with handles for turning said disk, pins extending from said disk into the slots in the cups, and a frame A, fitting about the rim E and provided with a hopper and a spout, substantially as set forth and described.

3. The combination, with a can-filling machine, of a perforated bed, two guides secured thereto to form a passage for cans, a pivoted trap door, located in said bed, between said guides and adapted to assist in retaining a can in position, a guide-bar, fixed in position over said passage, and a spring constructed to raise said trap-door and being provided with pins in position to extend through apertures in said bed, substantially as set forth and described.

4. A can-filling device provided with a discharge spout, in combination with a bed-plate K, provided with guides L, a pivoted trap-door M, located between said guides and adapted to assist in retaining a can in position, a spring N, secured to said bed-plate and provided with pins *p*, in position to extend through apertures in said bed-plate, and pins *p'*, in position to press upward said trap-door, and fixed guide-bar P, extending over the passage between guides L, substantially as set forth and described.

In testimony whereof I have affixed my signature in presence of two witnesses.

JOHN BAKER.

Witnesses:
NICHOLAS BUSSY, Jr.,
JNO. POEHLS.