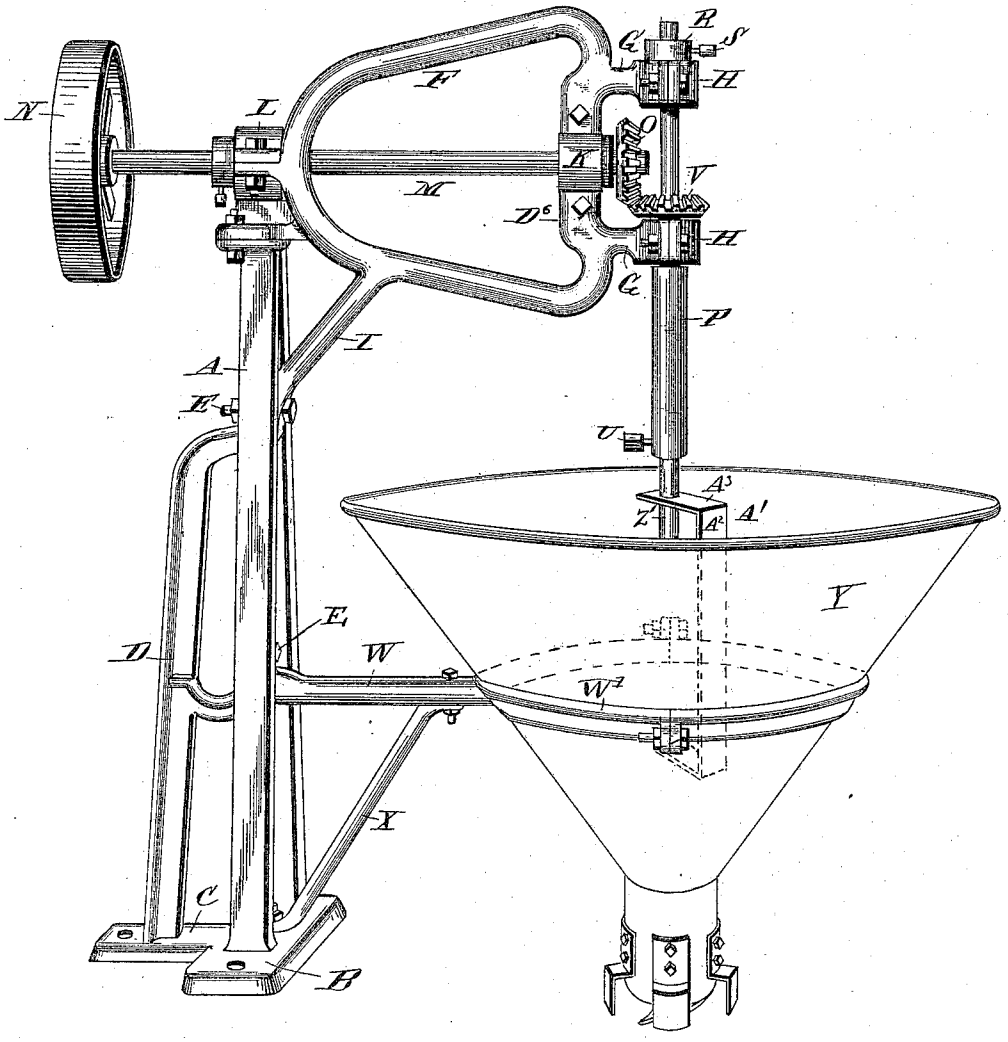
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AUTOMATIC FEEDER FOR CAN FILLING MACHINES.

No. 363,068. Patented May 17, 1887.

Fig. 1.



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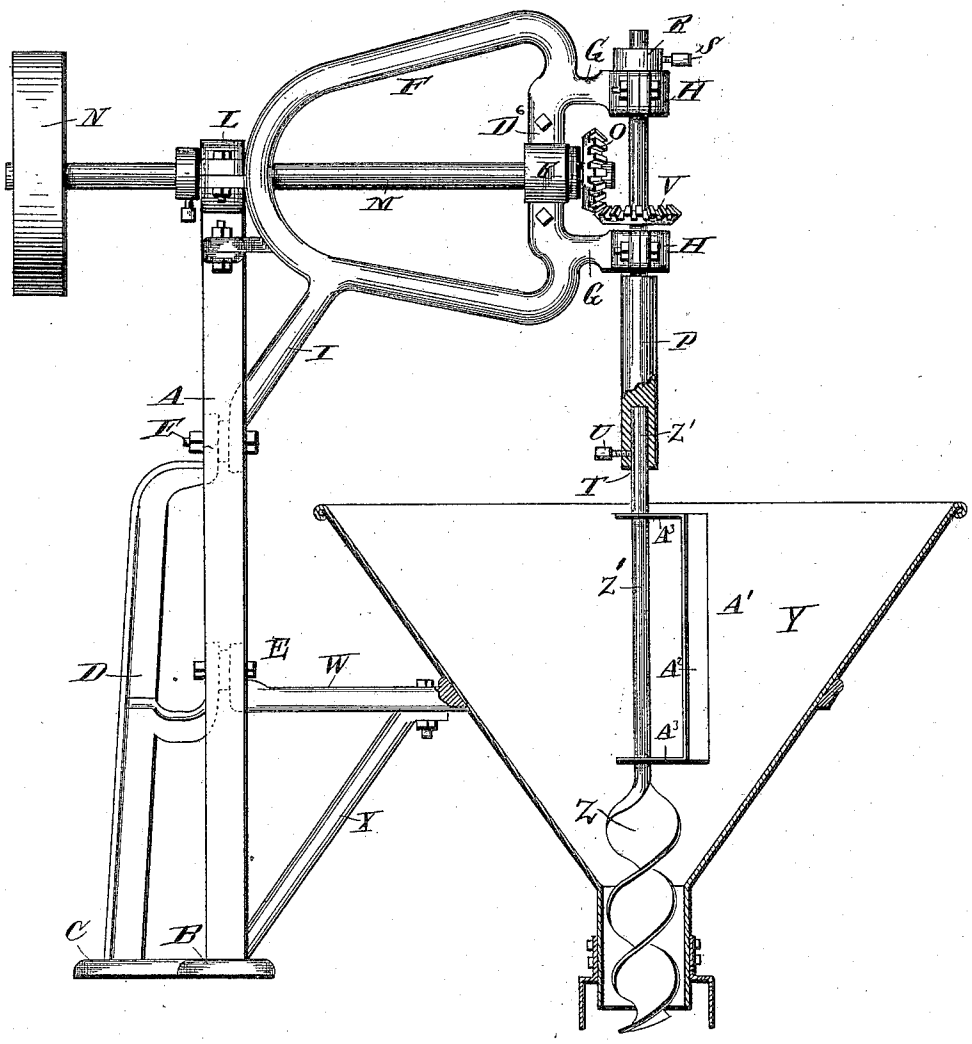
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Fig. 2.



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UNITED STATES PATENT OFFICE.

JAMES EDWARD HUTSON AND JOHN M. C. JONES, OF BEATRICE, NEBRASKA.

AUTOMATIC FEEDER FOR CAN-FILLING MACHINES.

SPECIFICATION forming part of Letters Patent No. 363,068, dated May 17, 1887.

Application filed December 8, 1886. Serial No. 220,995. (No model.)

To all whom it may concern:

Be it known that we, JAMES EDWARD HUTSON and JOHN M. C. JONES, citizens of the United States, residing at Beatrice, in the county of Gage and State of Nebraska, have invented a new and useful Improvement in Automatic Feeders for Can-Filling Machines, of which the following is a specification.

Our invention relates to an improvement in automatic feeders for machines for filling cans with corn; and it consists in the peculiar construction and combination of devices, that will be more fully set forth hereinafter, and particularly pointed out in the claims.

The object of our invention is to provide a device for automatically supplying the can-filling machine with corn, and thereby enabling the machine to operate steadily and regularly and at an increase of speed.

In the drawings, Figure 1 is a perspective view of an automatic feeder embodying our improvements. Fig. 2 is an elevation of the same, partly in section.

A represents a vertical standard, which is provided at its lower end with a supporting base-plate, B, from the rear side of which projects a right angled extension, C. An inclined brace-rod, D, projects from the part C, and has its upper end attached to the rear side of the standard A, near the upper end thereof, the said inclined brace-rod being secured at its upper and near its center by bolts E. To the upper end of the standard A is bolted a forwardly-extending open frame, F, consisting of two arms, which are provided at their front ends with horizontal brackets G, arranged one above the other and in line with each other, and to the front end of the said bracket-arms are bearings, to which are bolted boxes H. The lower arm of the frame F is provided with the rearwardly and downwardly inclined arm I, the lower end of which is bolted to the standard A by the same bolt which secures the upper end of the brace-arm D thereto. Connecting the front side of the frame F is a vertical portion, D^6, and arranged midway between the bracket-arms G, on this portion D^6, is a journal-box, K, and the rear end of the said frame is also provided with a journal-box, L, which is in a horizontal line with the box K.

M represents a horizontal driving-shaft, which is journaled in the boxes K and L, and is provided at its rear end with a driving-pulley, N. To the front end of the shaft M is secured a pinion, O.

P represents a vertical shaft, which has its upper end reduced and journaled in the boxes H. The said shaft is provided at its upper end with a collar, R, that is fastened to the shaft by a set-screw, S. In the lower end of the shaft P is formed a socket, T. A set-screw, U, works in a threaded opening, which communicates with one side of the said socket.

V represents a miter gear-wheel, which is secured on the shaft P above the lower journal-box, H, and meshes with the wheel O.

W represents a horizontal supporting-arm, which has its inner end bolted to the vertical standard A at a suitable distance from the lower end thereof. The outer end of the arm W forms the half of a ring, W′, the other half of which is formed separately and is bolted to that portion which is formed with the arm.

X represents an inclined brace-arm, which has its lower end bolted to the base-plate B between the sides of the standard A, the upper end of the said brace-arm being bolted to the under side of the supporting-arm W, as shown. A funnel-shaped hopper, Y, is supported in the ring W′, and the center of the said hopper is vertically in a line with the center of the shaft P.

Z represents a worm conveyer, which has a spindle, Z′, at its upper end, that is adapted to fit in the socket T, and is secured therein by the set-screw U. This conveyer extends downwardly through the center of the hopper and through the spout at the lower end thereof. To the upper end of the conveyer is attached a stirrer, A′, comprising a vertical blade, A^2, having horizontal arms A^3 at its upper and lower ends, which are attached to the spindle of the conveyer.

The operation of our invention is as follows: When rotation is imparted to the shaft M by means of the driving-pulley N, the shaft P is also rotated by being geared to the shaft M, and the conveyer is caused to rotate in the hopper, and the stirrer is also caused to sweep around in the hopper, so as to thoroughly agitate the contents thereof. The corn to be fed to the can-filling machine is poured into the hopper, and as the shaft P and the conveyer are rotated at a regular rate of speed, the corn is

fed from the hopper to the can-filling machine with the desired rapidity to keep the can-filling machine steadily at work.

The standard A, the frame F and W, and the brace-rod D are made of cast metal, and are bolted together, as before described, thus rendering the feeding mechanism very cheap, and enabling it to be very readily manufactured. The ring W′ is made in two sections in order that the outer half thereof may be removed to attach the hopper or funnel, as the space between the said ring and the arm F is not sufficient to admit of the hopper being inserted vertically in the ring or removed therefrom.

Having thus described our invention, we claim—

1. In a feeding mechanism for can-fillers, the combination of a hopper having a contracted spout at its lower end, a vertical rotating worm conveyer arranged centrally within the lower part of the hopper and its spout, and an agitator carried by the conveyer above the worm thereof, to sweep around with the same in the upper portion of the hopper, and comprising the vertical blade A^2, arranged parallel with the conveyer-shaft, and the arms secured to the said shaft, as and for the purpose described.

2. The herein-described feeding mechanism for can-fillers, comprising a standard carrying a horizontal frame, a horizontal driving-shaft journaled in the horizontal frame, a vertical shaft, also journaled in the horizontal frame and geared to the driving-shaft to be rotated thereby, a horizontal arm, W, arranged beneath the horizontal frame and connected to the standard, the outer end of the arm having a separable ring, a hopper fitted in the ring and having its center arranged in line with the vertical center of the vertical shaft, and a removable conveyer coupled to the vertical shaft, and having a worm at its lower end and a fixed stirrer above the worm, which operates in the lower and upper portions of the hopper, as and for the purpose described.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in presence of two witnesses.

JAMES EDWARD HUTSON.
JOHN M. C. JONES.

Witnesses:
W. S. BOURNE,
J. E. BUSH.