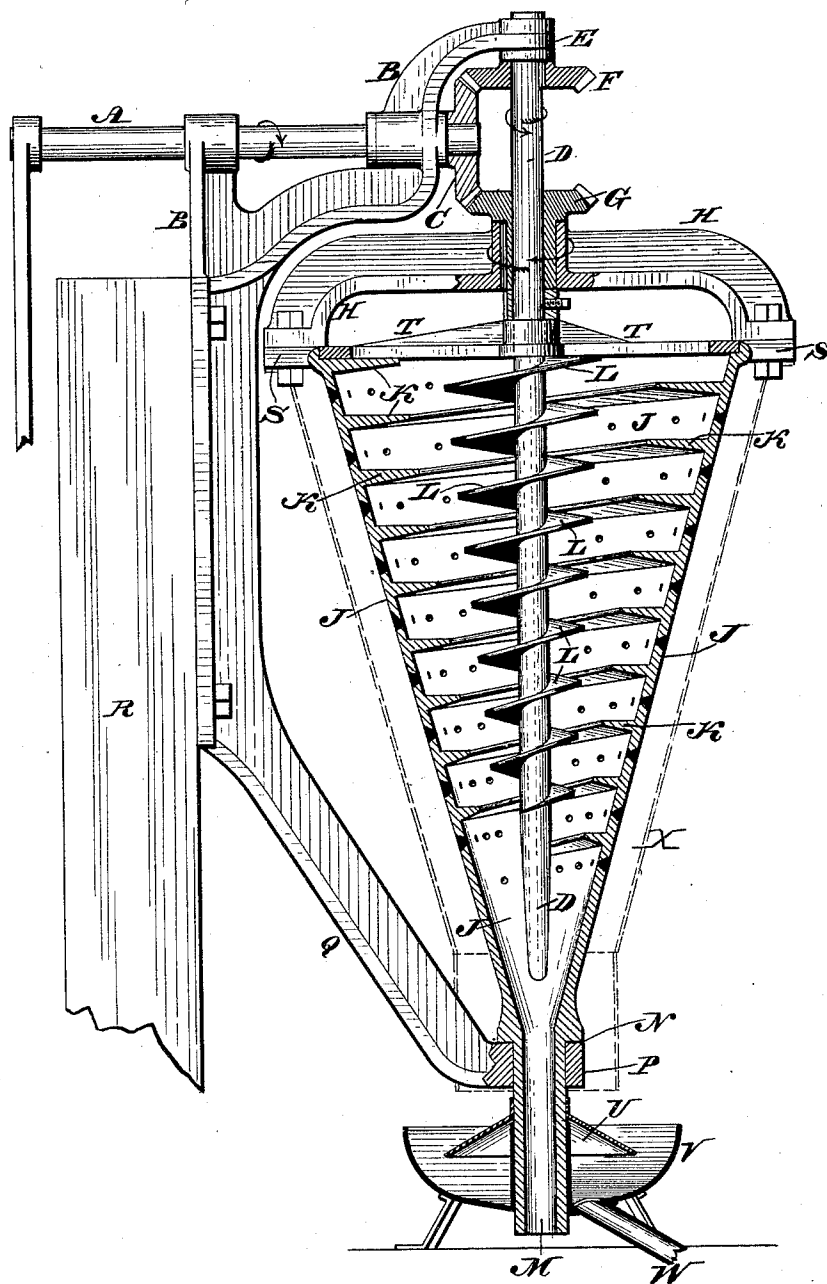


(No Model.)

J. A. MORRELL.
PRESS FOR FRUITS, VEGETABLES, &c.

No. 433,691.

Patented Aug. 5, 1890.



WITNESSES:

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JAMES A. MORRELL, OF LANSDALE, PENNSYLVANIA.

PRESS FOR FRUIT, VEGETABLES, &c.

SPECIFICATION forming part of Letters Patent No. 433,691, dated August 5, 1890.

Application filed August 29, 1889. Serial No. 322,310. (No model.)

To all whom it may concern:

Be it known that I, JAMES A. MORRELL, a citizen of the United States, residing at Lansdale, in the county of Montgomery and State of Pennsylvania, have invented a new and useful Improvement in Presses for Fruit, Vegetables, &c., which improvement is fully set forth in the following specification and accompanying drawing.

My invention consists of a press formed of a screw shaft or spindle and a surrounding casing or vessel, having on the inner periphery thereof a spiral flange, said screw and casing or vessel rotating in reverse directions, whereby when the material to be pressed is placed in the vessel it is subjected to the combined actions of the screw and spiral flange, thus effectively pressing the material.

It also consists of means for collecting the expressed juices.

The figure represents a partial side elevation and partial vertical section of a press embodying my invention.

Referring to the drawing, A designates a driving-shaft which is mounted on the arm B, and carries at one end a bevel gear-wheel C.

D designates a shaft or spindle whose upper end is mounted in a boss E on the arm B, and has secured to it a bevel gear-wheel F, which meshes with the wheel C.

G designates a bevel gear-wheel which meshes with the wheel C and freely encircles the shaft D near the upper end thereof, said wheel G having a collar or hub formed with or secured to it, which also freely encircles the shaft D, and is keyed or otherwise secured to the center of a yoke H, whereby said yoke is caused to be revolved by the wheel G. Connected with the yoke H is a casing, vessel, or receiver J, which is of the form of an inverted cone, and having formed with or secured to its inner periphery a spiral flange K.

The portion of the shaft or spindle D which is within the hopper J constitutes a screw L, the threads of which, as also the convolutions of the flange K, are wider at top than at the bottom. The bottom of the hopper is open, and is connected with the tube M, which forms an outlet for the refuse or solid matter from the hopper J, and the wall of the hopper is perforated for the escape of the expressed

juices, the same running or flowing down the outer periphery of the hopper to the place of collection below the bottom of the hopper. The lower portion of the hopper has a shoulder N, which rests on the boss P of the arm Q, it being noticed that the said arm Q and the upper arm B are connected with an upright or standard R, and thus properly sustained.

The upper end of the hopper J is formed with a flange S, by which it is bolted to the yoke H, and a spider T is fitted upon the shaft D and supported on a shoulder at the upper end of the hopper J, and is furthermore held in position by the yoke H. Secured to the bottom extension M, below the boss P, is a deflector U, and freely encircling the same is a cup or vessel V, which is provided with a spout W, it being evident that the expressed juices drop from the hopper J, and are directed by the deflector U into the receptacle V, so as to be conveyed by the spout W to some suitable place of collection.

It will be seen that when the shaft A is rotated motion is communicated by the wheel C to the wheels F G in reversed direction, whereby motions are communicated to the shaft D and yoke H likewise in reverse directions. By this action the receiver J and the screw L are caused to rotate in reverse directions, so that the fruit or other material or substance placed in the hopper is subjected to the combined actions of the screw and spiral flange, which, as has been stated, rotate in reverse directions, whereby the pressing is effectively accomplished, the action of the same increasing as the material or substance enters the narrow portion or base of the receiver. The material to be pressed is placed in the top of the receiver between the bars of the spider. The refuse or solid matter is discharged through the tube or outlet M, by which it may be directed elsewhere.

A jacket or casing X is shown in dotted lines surrounding the receiver for inclosing the same.

The perforations of the receiver J are conical or flaring, the wide end being at the outer periphery, so as to prevent clogging of said openings.

Having thus described my invention, what

I claim as new, and desire to secure by Letters Patent, is—

1. A receiver having a spiral flange on the inner periphery thereof, a screw within said receiver, and mechanism, substantially as described, connected with said receiver and screw for rotating the same in opposite directions, substantially as described.

2. In a press, a conical receiver having perforations in its sides and provided with an interior spiral flange, a rotary screw within said receiver, and mechanism, substantially as described, for imparting rotary motion to said receiver and screw, said parts being combined substantially as described.

3. In a press, a receiver of the form of an inverted cone and with perforated sides and interior spiral flange, a yoke to which said receiver is secured, a spiral screw in said receiver having its stem or shaft passing through the said yoke, a loose and a fast bevel-gear on said stem or shaft, the loose bevel-gear being secured to the yoke, and a rotary counter-shaft with bevel-gear engaging on its opposite sides said loose and fast bevel-gears,

said parts being combined substantially as described.

4. In a press, an arm with a horizontal shaft having a bearing thereon and provided with a boss forming a bearing for a vertical shaft, meshing bevel gear-wheels on said shaft and rotatable therewith, a loose bevel gear-wheel on said vertical shaft meshing with said gear-wheel on the horizontal shaft, a yoke secured to the hub of said loose bevel gear-wheel, a perforate receiver having an inner flange secured to said yoke and an open lower end, and a spiral thread on said vertical shaft, said parts being combined substantially as described.

5. A press having a receiver with inner flanges at its upper end, a rotary screw within said receiver, and a spider freely mounted on the rotary screw and resting on said flanges, said parts being combined substantially as described.

JAMES A. MORRELL.

Witnesses:

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