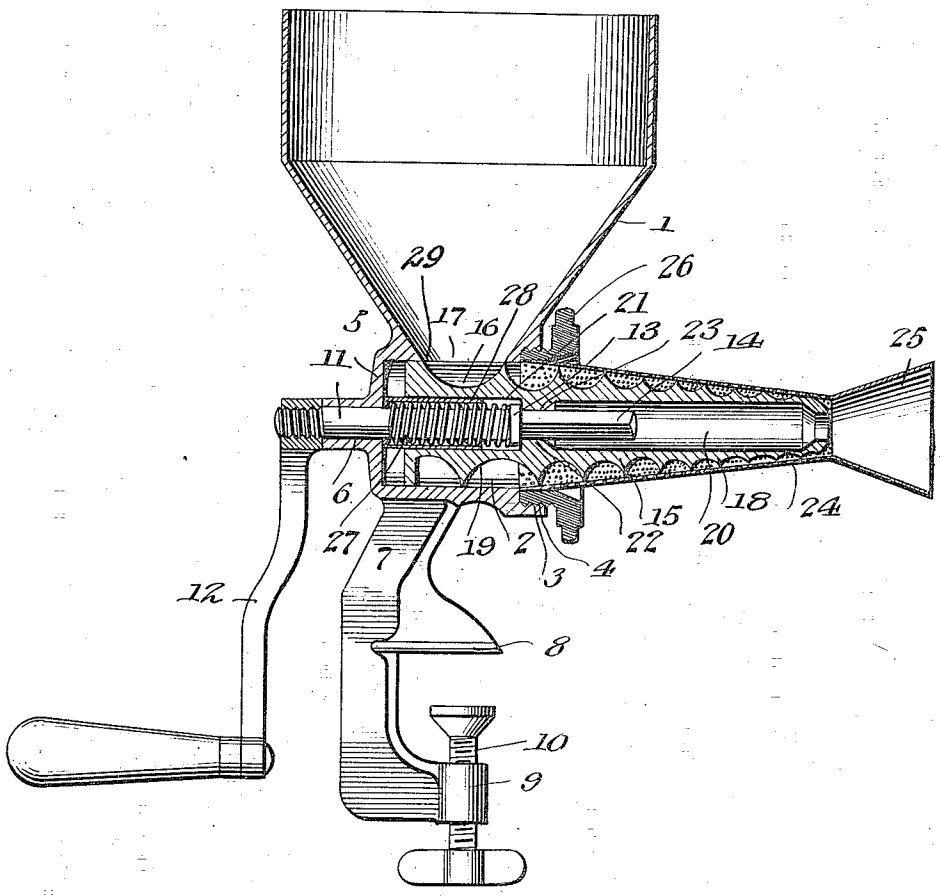
J. MOLINA & H. ASOR.

FRUIT AND VEGETABLE JUICE EXPRESSER.

APPLICATION FILED JUNE 23, 1914.

1,127,910. Patented Feb. 9, 1915.



Witnesses

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JOSEPH MOLINA AND HENRY ASOR, OF NEW HAVEN, CONNECTICUT.

FRUIT AND VEGETABLE JUICE EXPRESSER.

1,127,910. Specification of Letters Patent. Patented Feb. 9, 1915.

Application filed June 23, 1914. Serial No. 846,884.

To all whom it may concern:

Be it known that we, JOSEPH MOLINA and HENRY ASOR, the latter a citizen of Italy, the former a citizen of the United States, residing at New Haven, in the county of New Haven and State of Connecticut, have invented new and useful Improvements in Fruit and Vegetable Juice Expressers, of which the following is a specification.

This invention is an improved machine for expressing the juice from tomatoes and other vegetables and fruits, the object of the invention being to provide an improved device of this kind which is cheap and simple, which may be readily operated and which is not likely to become clogged.

A specific object of the invention is to combine with the feed and compressing screw a conical screen in which the screw operates and a spring to normally keep the screw pressed outwardly in the screen and yet permit the screw to yield and move inwardly a slight distance from the screen to prevent the machine from becoming clogged and to permit of the discharge of the skins and seeds from the discharge end of the screen.

The invention consists in the construction, combination and arrangement of devices hereinafter described and claimed.

The accompanying drawing is a vertical longitudinal central sectional view of a juice expresser constructed in accordance with our invention.

In accordance with our invention the hopper 1 is formed at its lower, discharge end, with a horizontally arranged cylindrical chamber 2 which is open at one end and the wall of which is annularly recessed as at 3 and provided with a screw thread 4. The opposite end of the chamber has its end wall 5 formed with a bearing 6. A standard 7 depends from the lower side of the wall of the chamber and is formed with a foot or shoulder 8 to bear on a table or other support and with an angle arm 9 under said foot, the said angle arm having a threaded opening engaged by a screw 10 for clamping the device on the table and holding the same firmly in place when in use, as will be understood.

A shaft 11 is mounted in the bearing 6 and extends through the center of the chamber 2. A crank handle 12 is screwed to the projecting outer end of the shaft. Said shaft is provided at a suitable distance from its outer end with an annular flange 13 and its inner end 14 is cross sectionally rectangular as indicated in the drawing.

A compressing screw 15 is provided with a cylindrical enlarged inner portion 16 which is arranged to fit and revolve in the chamber 2, directly below the discharge opening 17 of the hopper and the said screw has a tapered outer portion 18 which projects through and beyond the open end of the chamber 2. The thread of the screw is formed by a spiral groove 19 which is widest at the inner end of the screw and which diminishes in width and depth toward the smaller outer end of the screw as shown. The screw is hollow, having a bore 20 in its outer portion and a somewhat larger bore 21 in its inner portion and spaced from the bore 20, the wall 22 which separates the bores being provided with a rectangular opening 23 through which the correspondingly shaped portion 14 of the shaft 11 extends. Hence the screw is mounted on the shaft for rotation therewith and also for longitudinal movement. The flange 13 of the shaft bears against the inner side of the wall 22.

A frusto-conical screen 24 is fitted on the tapered portion of the screw and is here shown as made of foraminous material. The screen is formed at its smaller, outer end, with a discharge funnel 25 and has its larger, inner end arranged in and secured to an annular nut 26 which is screwed in the recess 3 of the body of the machine and at the outer end of the chamber 2.

A coiled spring 27 is arranged around the shaft 11 and in a tubular bushing 28 which is fitted in the bore 21 of the screw. The bushing, against which one end of the spring bears, bears against the wall 5. The opposite end of the spring bears against the flange 13 and the spring exerts its tension to force the screw outwardly so as to normally engage the tapered portion of the screw against the inner side of the screen.

In the operation of our invention the tomatoes or other vegetables or fruits, which are placed in the hopper 1 are caught by the screw, and the latter being revolved the screw coacts with the edge 29 formed around the discharge opening of the hopper to cut the vegetables or fruits and as the screw revolves the pieces are forced outwardly thereon and between the screw and the screen and so compressed by the action of the

screw as to extract all the juices therefrom, the juices passing out through the openings in the screen. The skins, seeds, and the like are urged outwardly between the screen and the screw and are eventually discharged by the funnel 25. The spring while normally pressing the screw against the screen and holding it to its work permits the screw to yield and move inwardly a slight distance from the screen from time to time as required to permit the discharge of the residue and prevent clogging of the machine.

Having thus described our invention, we claim:—

1. In a grinding and juice expressing machine of the class described the combination of a screw, means to rotate the same, a screen in which the screw revolves and means to permit yielding longitudinal movement of the screw from the screen to prevent clogging.

2. In a machine of the class described a body having a hopper and a cylindrical chamber into which the hopper discharges, a shaft mounted in a bearing in the body and extending through the center of said chamber, a screw having a cylindrical portion in said chamber and a tapered portion extending outwardly from said chamber, said screw being mounted on said shaft for rotation therewith and longitudinal movement thereon, a frusto-conical screen in which the tapered portion of the screw revolves, means to detachably secure the screen to the body which is in communication with said chamber, and a spring acting to force the screw normally outwardly in the screen and permit the screw to move inwardly therefrom to prevent clogging.

3. In a machine of the class described a body having a hopper and a cylindrical chamber into which the hopper discharges, a shaft mounted in a bearing in the body and extending through the center of said chamber, a screw having a cylindrical portion in said chamber and a tapered portion extending outwardly from said chamber, said screw being mounted on said shaft for rotation therewith and longitudinal movement thereon, a frusto-conical screen in which the tapered portion of the screw revolves, an annular nut to detachably secure the screen to the body and in communication with said chamber, and a spring arranged around the shaft and in a bore of the screw acting to force the screw normally outwardly in the screen and permit it to move inwardly therefrom to prevent clogging.

In testimony whereof we affix our signatures in presence of two witnesses.

JOSEPH MOLINA.
HENRY ASOR.

Witnesses:
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