

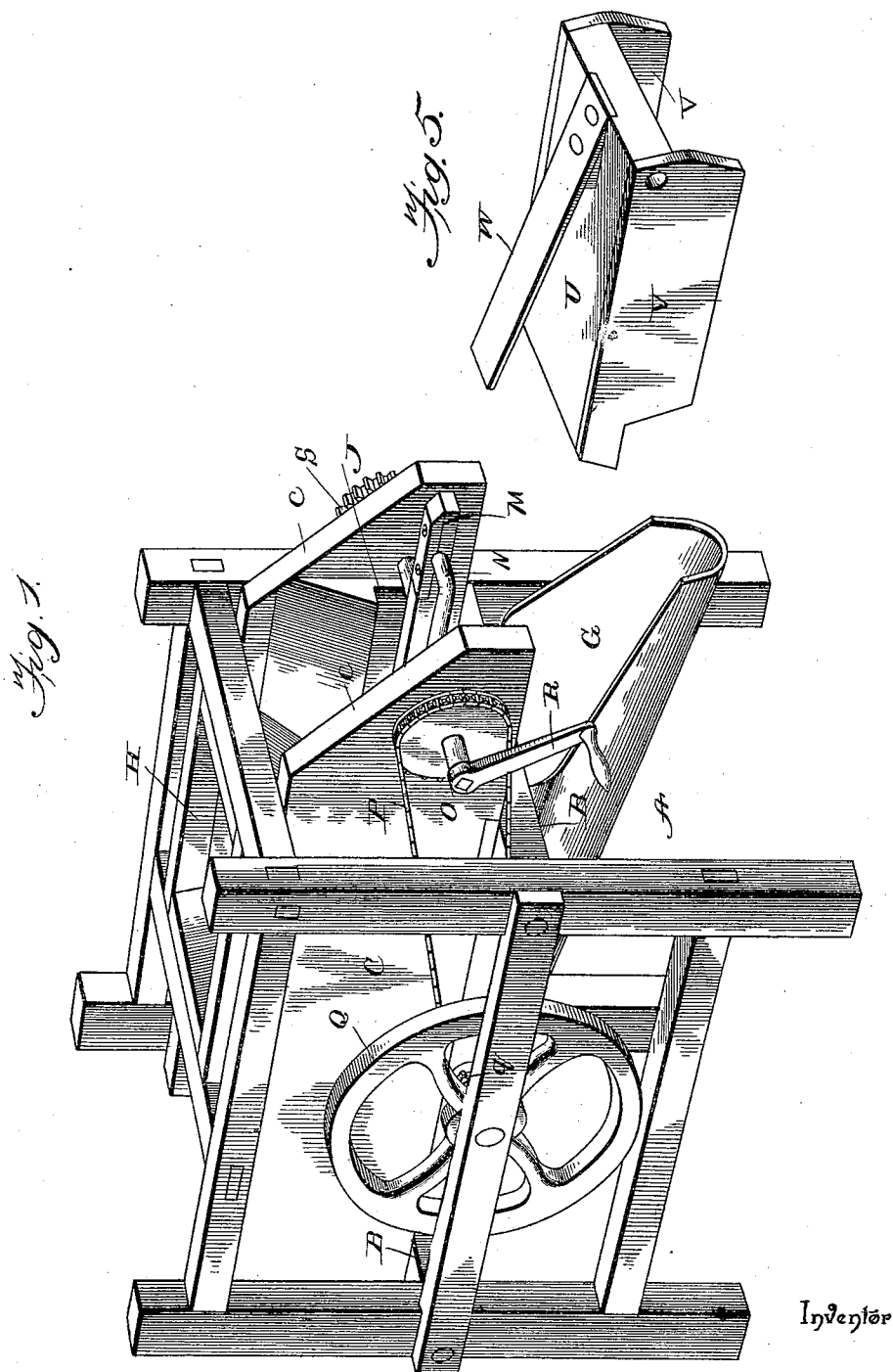
(No Model.)

2 Sheets—Sheet 1.

S. B. DONZE.
CIDER PRESS.

No. 511,761.

Patented Jan. 2, 1894.



Inventor

Witnesses

John C. Shaw.
D. F. Holhauser.

By *W. S. Allorneys,* *Seraphim B. Donze.*

Ca Snow & Co.

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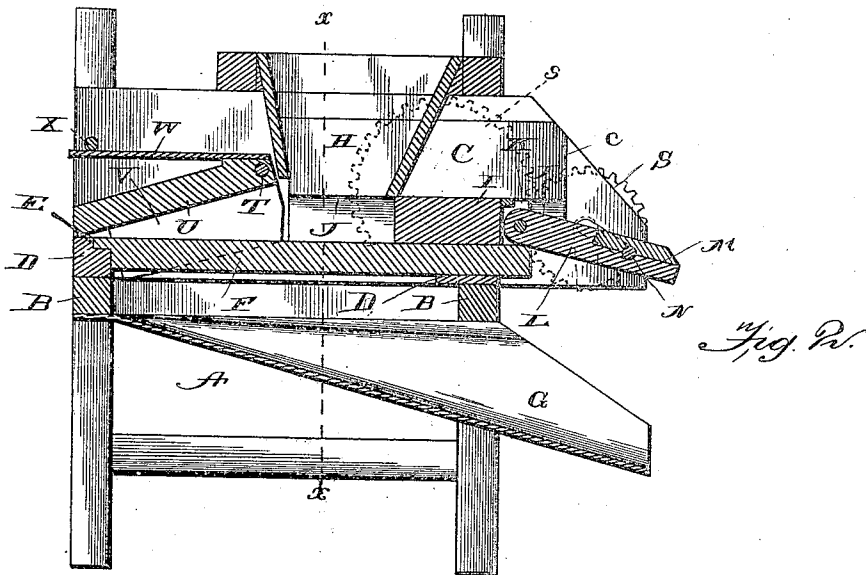


Fig. 3.

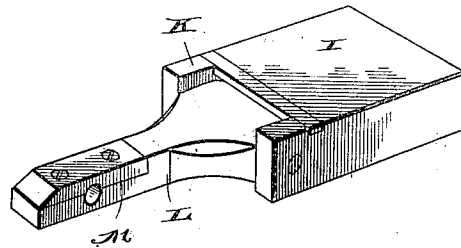
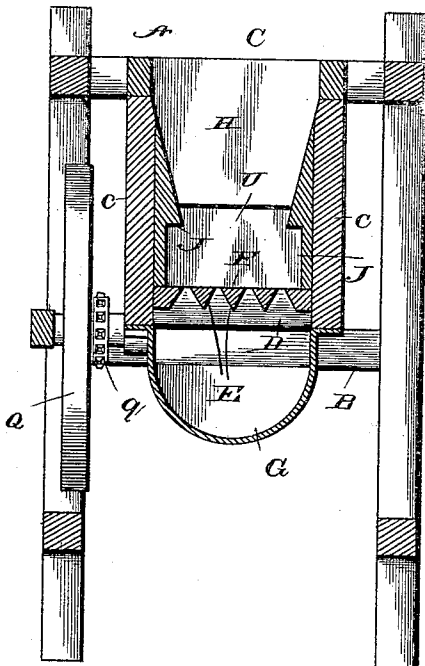


Fig. 4.

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UNITED STATES PATENT OFFICE.

SERAPHIM B. DONZE, OF WEINGARTEN, MISSOURI.

CIDER-PRESS.

SPECIFICATION forming part of Letters Patent No. 511,761, dated January 2, 1894.

Application filed August 25, 1893. Serial No. 484,047. (No model.)

To all whom it may concern:

Be it known that I, SERAPHIM B. DONZE, a citizen of the United States, residing at Weingarten, in the county of Ste. Genevieve and State of Missouri, have invented a new and useful Cider-Press, of which the following is a specification.

This invention relates to cider presses; and it has for its object to provide an improved press of this character which is adapted to be used as an attachment for any ordinary cider mill in connection with which the same may be employed.

To this end the main and primary object of the present invention is to provide an improved press, simple in construction while very efficient in operation to press or squeeze out all the juice from the milled fruit before the fruit pomace is ejected, and thereby preventing any wasting of the material.

With these and other objects in view which will readily appear as the nature of the invention is better understood, the same consists in the novel construction, combination and arrangement of parts hereinafter more fully described, illustrated and claimed.

In the accompanying drawings:—Figure 1 is a perspective view of a cider press attachment constructed in accordance with this invention. Fig. 2 is a central vertical longitudinal sectional view thereof. Fig. 3 is a central vertical sectional view on the line $x-x$ of Fig. 2. Fig. 4 is a detail in perspective of the horizontally sliding plunger block and its connecting arm. Fig. 5 is a similar view of the pivoted presser board.

Referring to the accompanying drawings, A represents a suitable frame on top of which, or at a suitable point in close proximity thereto, is arranged any ordinary cider mill in which the fruit, from which the juice is to be squeezed, is milled or cut up before being introduced into the pressing devices. The said frame A, is provided at its opposite ends with the transverse supporting bars B, on which is mounted the elongated press box C. The elongated press box C, comprises the opposite parallel side pieces c , connected at opposite ends of the frame by the bottom connecting bars D, provided at their upper inner edges with the triangular notches E, which receive the opposite ends of the triangularly

shaped floor slats F. The floor slats F, are regularly spaced apart to leave drain spaces therebetween and have their upper bases flush with each other to form a flat slatted floor for the press box, so that the milled fruit can be readily worked out of one end of the press box, while at the same time yielding up its juice, which runs through the drain spaces between the slats and drips onto the inclined juice trough or spout G, which is secured to the bottom of the press box and extends the entire length thereof so as to conduct the cider to any suitable receptacle designed for its reception.

The elongated press box C, is provided at a point intermediate of its ends with the intermediate or centrally arranged hopper or feed box H, having inclined sides which project into the press box and terminate short of the slatted floor thereof, and said hopper is designed to receive the milled fruit from the milling devices, and feed such fruit onto the slatted floor of the press box, along which it is shoved or moved by the horizontally sliding plunger block I. The plunger block I, is preferably formed of one solid piece and is adapted to have its opposite side edges slide in the opposite guides or guide grooves J, formed at the inner lower edges of the press box sides c , and extending from one open end of the press box up to an intermediate point including the bottom opening of the hopper, so that the said plunger block has a sliding movement from one side of the hopper, under the bottom opening thereof, to a point slightly beyond the other side of the hopper, and said plunger block is provided with an outer bifurcated end K, in which is pivoted the inner end of the connecting arm L, the outer end of which is provided with a box M, loosely embracing the central crank of the crank drive shaft N. The crank drive shaft N, is journaled in one extremity of the opposite side of the press box, and carries on one end thereof the sprocket wheel O, from which leads a sprocket chain P, to communicate motion to the side balance wheel Q, the shaft of which is journaled at one side of the frame A, and is provided with a sprocket hub q , over which passes the inner portion of said sprocket chain or belt. One extremity of the shaft N, at one side of the wheel O, has

attached thereto a crank R, by means of which the press can be readily operated by hand if so desired, and on the opposite extremity of said crank shaft is arranged a cog wheel S, meshing with an adjacent cog wheel s, and both of said cog wheels may be employed, if so desired, to communicate motion to a suitable mill which may be arranged on top of the frame A, over the hopper of the press.

At one side of the hopper H, is arranged the pivot rod T extending transversely across the press box and forming a pivot for the upper inner end of the substantially U-shaped pivoted presser board U. The pivoted presser board U, is provided at its opposite sides with the depending side wings V, which are adapted to work in the bottom spaces at the opposite inner sides of the presser box, and serve to confine all the fruit between the same so that the juice will be thoroughly extracted therefrom, as such fruit is forced beneath and beyond the presser board by reason of the reciprocation of the plunger block I. The presser board U, is normally held against the outer end of the slatted floor of the press box by means of the leaf spring W, secured at one end to the upper end of the presser board and having its other free end resting under the stationary rod X, arranged transversely of the press box at the discharging end thereof. Now from the foregoing it will be apparent that as fast as the milled fruit is fed onto the slatted floor of the press box at an intermediate point thereof, the plunger block comes along and forces the fruit into the space between the inclined presser board and the slatted floor of the press box. As this operation continues, the fruit is compressed strongly by the spring pressed presser board so that it readily yields up its juice which drains through the slatted floor and runs off through the juice trough or spout G, and the pomace extracted of its juice is finally worked out of one end of the press box, the outer free end of the presser board lifting up to accommodate the discharge of the pomace, which is ejected by reason of the reciprocations of the plunger block which continues to move the fruit along beyond the hopper or feed box.

Changes in the form, proportion and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

Having thus described the invention, what is claimed, and desired to be secured by Letters Patent, is—

1. The combination of an open press box having a slatted floor, an intermediate hopper, a horizontally moving plunger block sliding in the press box below said hopper, a stationary rod arranged transversely of the press box at its discharging end, a self-ad-

justing substantially U-shaped presser board pivoted at one end within said discharging end of the press box, and a leaf spring secured fast at one end to the pivoted end of the presser board and having its other free end engaging under said stationary rod to normally hold the free end of the presser board in contact with the floor of the press box, substantially as set forth.

2. In a cider press, the frame, an elongated press box supported within said frame and having a slatted floor, an inclined juice trough or spout secured to the bottom of the press box below the slatted floor thereof, a self-adjusting presser board pivoted at one end within one end of the press box and having depending side wings working through the slatted floor, means for normally holding the free end of the presser board in contact with the press box floor, a centrally arranged hopper, and a horizontally moving plunger block sliding within the press box on the floor thereof, substantially as set forth.

3. In a cider press, the frame, the elongated press box supported within the frame and having a slatted floor extending from end to end thereof, opposite guides extending in from one end thereof, and an intermediate hopper box, a horizontally reciprocating plunger block sliding in said guides and under said hopper box, an inclined presser board pivoted at its upper inner end at one side of the hopper box and provided with depending side wings working through the slatted floor, a stationary rod arranged transversely of the press box at its discharging end, and a leaf spring secured at one end to the inner end of the presser board and having its other free end resting under said stationary rod, substantially as set forth.

4. In a cider press, the combination with the frame, having inner guide grooves and the press devices mounted within the frame and having a sliding plunger block moving in said grooves and provided with a bifurcated end; of a suitably arranged crank shaft having a sprocket drive wheel at one end, a connecting arm pivoted at its inner end in the bifurcation of the plunger block and provided at its outer end with a box loosely embracing the crank of said shaft, a suitably arranged balance wheel, the hub of which is provided with sprockets, and a sprocket chain or belt passing over the hub sprockets and said sprocket wheel on one end of the drive shaft, substantially as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

SERAPHIM B. DONZE.

Witnesses:

HENRY DONZE,
JOSEPH A. MUESSIG.