

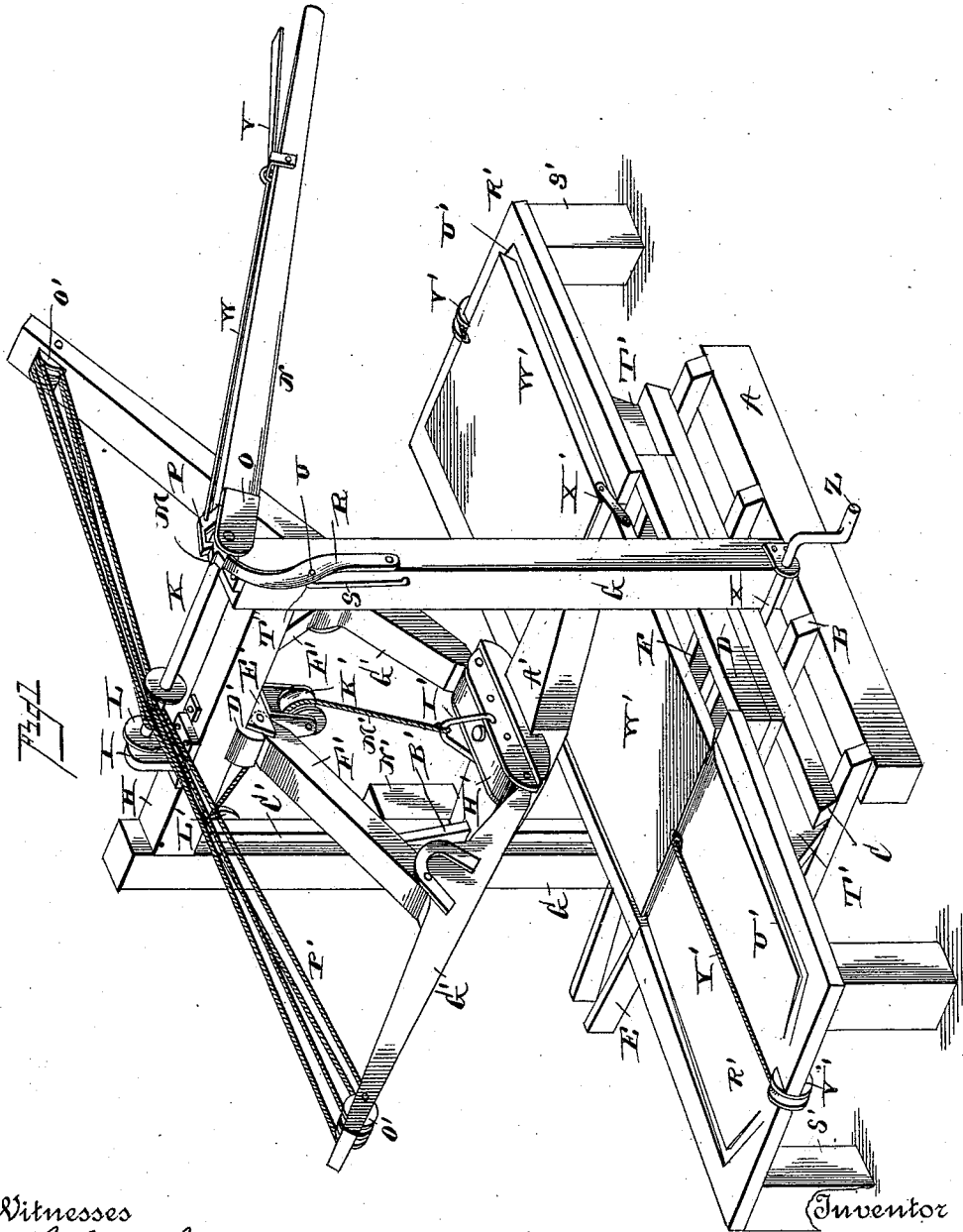
(No Model.)

2 Sheets—Sheet 1.

E. W. ROOT.
CIDER OR WINE PRESS.

No. 415,126.

Patented Nov. 12, 1889.



Witnesses

John Smirle
J. Colman

Inventor

Emanuel W. Root

By His Attorneys

11 Attorneys
Chas. H. Snow

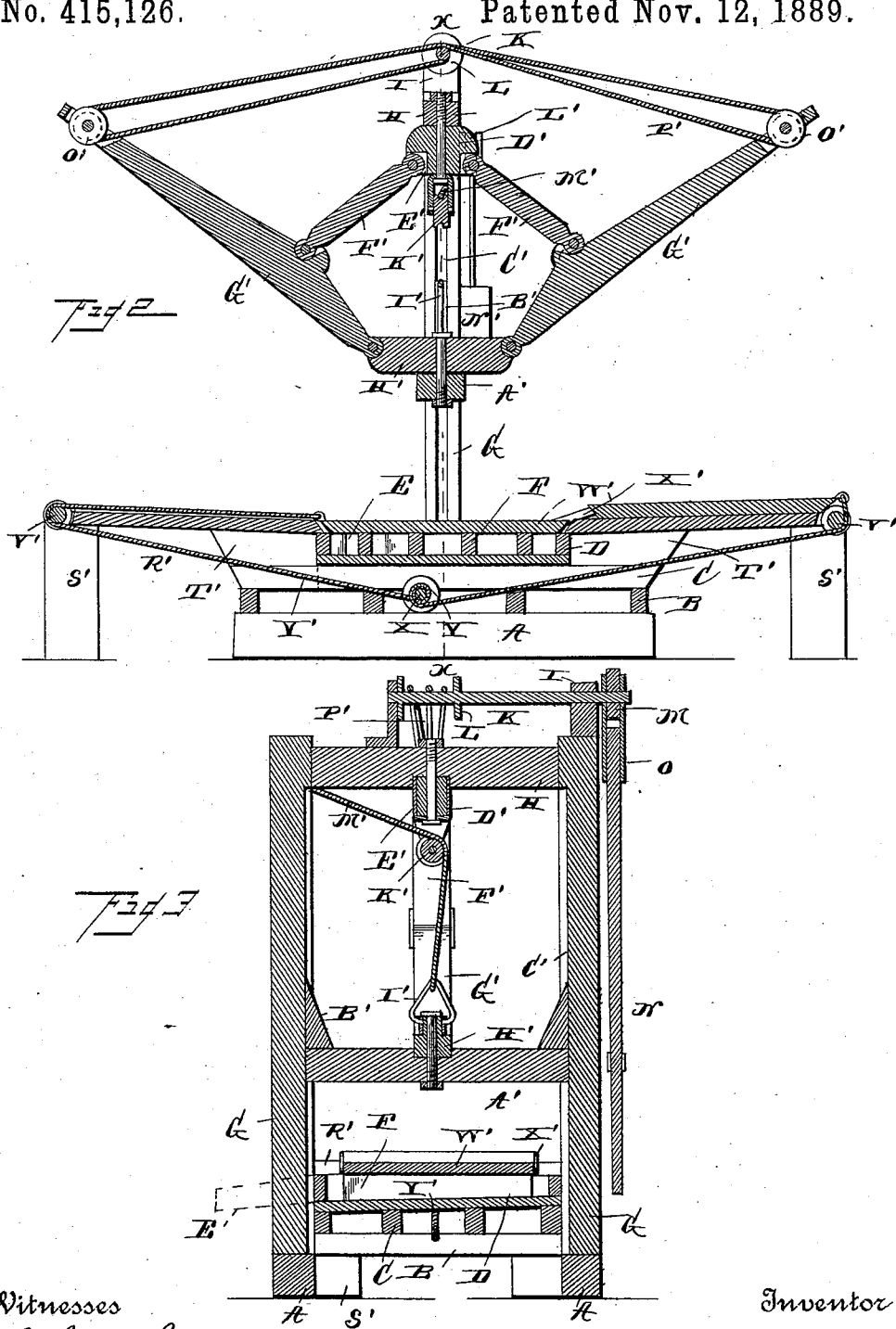
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Ch. Snowdon

UNITED STATES PATENT OFFICE.

EMANUEL W. ROOT, OF WHEATFIELD, INDIANA.

CIDER OR WINE PRESS.

SPECIFICATION forming part of Letters Patent No. 415,126, dated November 12, 1889.

Application filed February 28, 1889. Serial No. 301,480. (No model.)

To all whom it may concern:

Be it known that I, EMANUEL W. ROOT, a citizen of the United States, residing at Wheatfield, in the county of Jasper and State of Indiana, have invented a new and useful Improvement in Cider or Wine Presses, of which the following is a specification.

My invention relates to an improvement in cider or wine presses; 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.

In the drawings, Figure 1 is a perspective view of a press embodying my improvements. Fig. 2 is a vertical longitudinal sectional view of the same. Fig. 3 is a vertical transverse sectional view taken on the line *xx* of Fig. 2.

A represents a pair of sills, on which are secured a series of transverse connecting-bars B. On the upper sides of the latter are arranged and secured bars C, which are at right angles thereto, the said bars being of unequal thicknesses, whereby their upper sides are arranged in inclined planes. On the upper sides of the said bars is an inclined trough D, which is rectangular in plan, and is provided at its lowermost corner with a discharge-spout E. A series of transverse partition ribs F are arranged on the upper side of the trough at regular distances apart. The width of the trough is less than the length of the bars B, and the ends of the latter and the outermost bars B are beyond the sides of the trough, as shown.

G represents a pair of vertical posts, which rise from the centers of the sills and are connected together, near their upper ends, by a cross-beam H. The said post and cross-beam constitute a frame, on the upper side of which are a pair of knees or standards I, having bearings in which is journaled a shaft K. A drum L is secured to the shaft at a point above the center of the cross-beam, and to the outer projecting end of the shaft is secured a ratchet-wheel M.

N represents a lever, which has a pair of plates O at its inner end, the said plates being arranged on opposite sides of the ratchet-wheel and pivoted to the shaft K. A spring-pressed dog P is pivoted between the said

plates, and is adapted to engage the ratchet-wheel when the lever N is operated, and thereby rotate said ratchet-wheel, and consequently turn the shaft, as will be readily understood. A detent R is pivoted to one of the posts G, and is adapted to engage the ratchet-wheel and prevent retrograde rotation thereof, and a spring-arm S is secured to the said post and has its upper end bent outward at right angles, as at T, and adapted to be inserted in an opening U in the detent to maintain the latter in engagement with the ratchet-wheel and admit of the detent being disengaged from the ratchet-wheel and swung downward on its pivot by first disengaging the spring-arm therefrom. A hand-lever V is pivoted near the outer end of the lever N, and is connected to the dog by a rod W, whereby the dog may be readily tripped from the ratchet-wheel when desired.

X represents a windlass-shaft having its bearings near the lower ends of the posts G and arranged below the trough, and said windlass-shaft is provided at its center with a drum Y, and has a crank Z at one end.

A' represents a cross-head having vertical guide-knees B' at its ends, which work in vertical grooves C' on the inner sides of the posts. A bar D' is bolted transversely under the center of the cross-beam H, and to the sides of said bar are bolted plates E', and between the ends of the said plates are pivoted the upper end of a pair of toggle-levers F'. The lower ends of the said toggle-levers are pivotally connected to a pair of sweep-levers G', which in turn have their lower ends pivoted on a block or beam H', arranged transversely on the center of the cross-head. A loop I' is attached to the center of the said block, and from the center of the bar D' is suspended a guiding-pulley K'.

L' represents a guide-pulley, which is mounted on a bolt or spindle projecting from one of the posts G. A rope or chain M' is passed over the guide-pulleys K' L', and has its lower end attached to the loop I', and to the free end of said rope or chain is attached a weight N', the gravity of which is sufficient to cause the cross-head to move upward in the frame, and thereby cause the outer end of the sweep-levers to move from each other.

Said sweep-levers are provided in their free upper ends with pulleys O', and ropes P' are attached to the drum L and pass over the said pulleys, whereby when the shaft K is rotated by operating the lever N in the manner before described the said ropes will be coiled on the drum L and cause the upper ends of the sweep-levers to be moved toward each other, and thereby said sweep-levers and toggle-levers will force the cross-head downward with a sufficient degree of force to extract the juices from grapes or apples or to press cheese or bale hay or other commodities.

As soon as it is desired to raise the cross-head the dog and the detent are disengaged from the ratchet-wheel, and the weight will then immediately elevate the cross-head in the manner before stated.

R' represents a pair of wing-platforms, which have their outer ends supported beyond opposite sides of the press by legs S', and have their inner ends supported on the side ledges of the trough by knees or cleats T', secured on their under side. The said winged platforms have in their upper sides near their edges grooves or gutters U', the function of which is to drain fruit-juices into the trough, and in the outer edges of the said winged platforms are mounted pulleys V'.

W' represents a pair of presser-boards of suitable size, which have their inner opposing edges connected together by links X'. The said presser-boards are arranged and adapted to slide longitudinally on the upper sides of the winged platform over the trough and under the cross-head. A rope Y' has its central portion coiled a few times on the drum Y, and has its ends passed over the pulleys V' and attached to the ends of the presser-boards. By this means, when the windlass-shaft is rotated, the presser-boards may be moved back and forth over the winged platforms. The substance to be submitted to pressure will be placed on one of the presser-boards, while the latter is on one of the winged platforms, and while the other presser-board is on the rib-partitions of the trough and being subjected to pressure. As soon as the cross-head has been raised the drum-shaft will be rotated to cause the board which has been subjected to

pressure to move from the trough onto one of the winged platforms, where it can be again loaded, while the other presser-board is drawn across and arranged on the trough in position under the cross-head.

Having thus described my invention, I claim—

1. The combination, in a press, of the drum-shaft L, arranged longitudinally along the cross-beam of the frame, having the rigid ratchet-wheel, the lever N, provided with plates O, pivoted to the shaft and arranged on each side of the ratchet-wheel, the dog pivoted to the lever and adapted to engage and operate the ratchet-wheel, the detent pivoted to the side of the frame and provided with a recess and adapted to engage the ratchet-wheel, and the spring-arm adapted to be engaged with and disengaged from said recess of the detent, substantially as described.

2. A press having the trough or platform, the side winged platforms on opposite sides thereof, provided with grooves or gutters, and the presser-boards connected together and adapted to move on the side winged platforms and over the trough, whereby one of said presser-boards will be arranged over the trough, while the other is arranged on one of side winged platforms, substantially as described.

3. A press having the trough or platform, the side winged platforms on opposite sides thereof, and the presser-boards connected together and adapted to move on the side winged platforms and over the trough, whereby one of said presser-boards will be arranged over the trough, while the other is arranged on one of the side winged platforms, the windlass-shaft arranged under the trough, the rope on said windlass-shaft having its ends attached to the presser-boards, and the guiding-pulleys for said rope, substantially as described.

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

EMANUEL W. ROOT.

Witnesses:

J. A. HOLLETT,
EVRETT FINNEY.