

(No Model.)

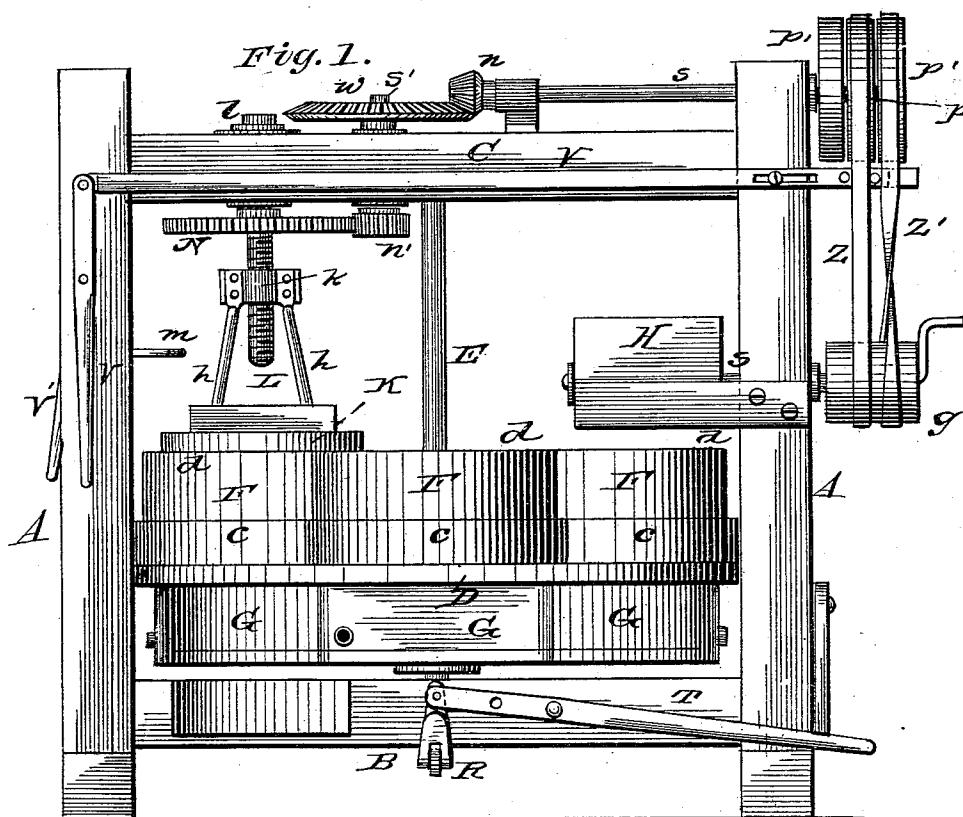
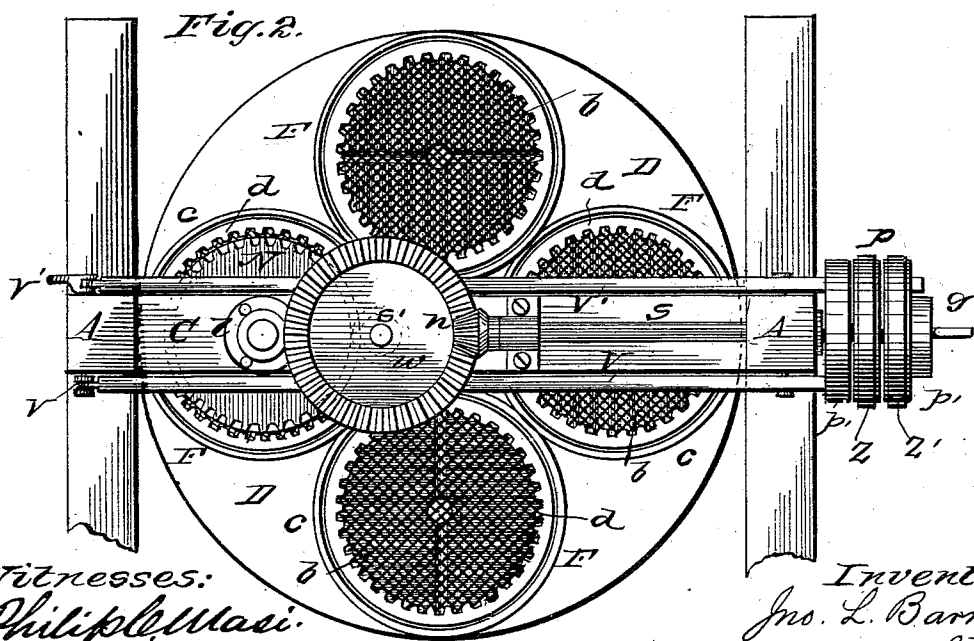
2 Sheets—Sheet 1.

J. L. BARNES.

CIDER PRESS.

No. 277,195.

Patented May 8, 1883.



Witnesses:
Philip Masie.
E. B. Bates.

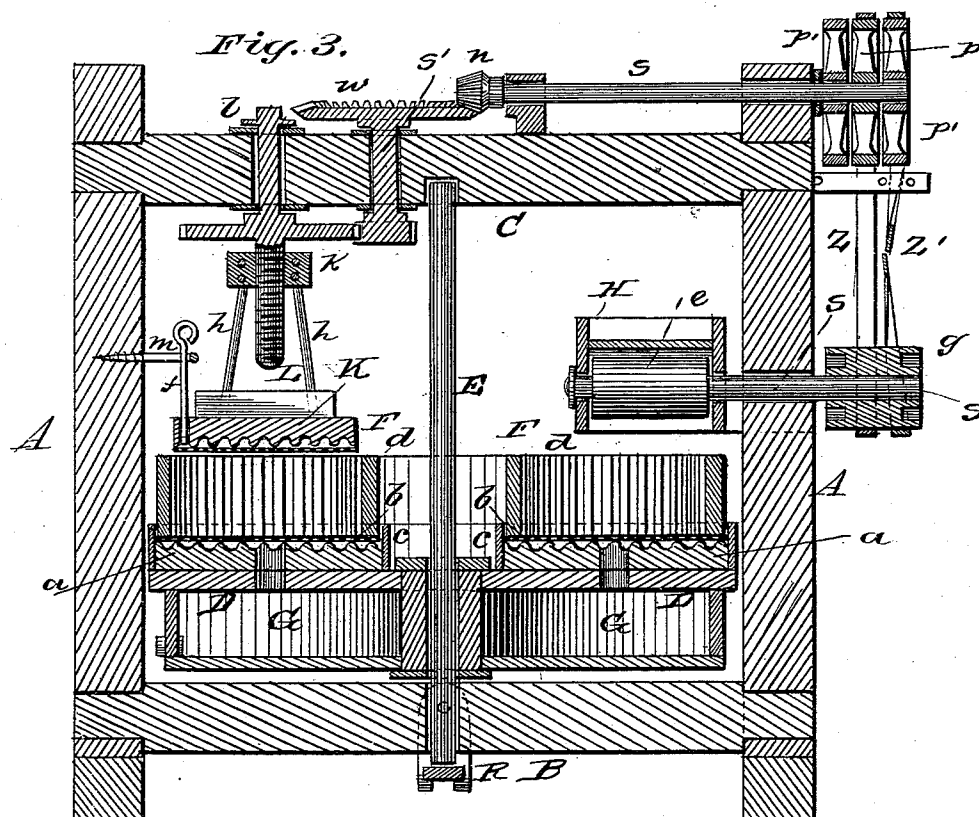
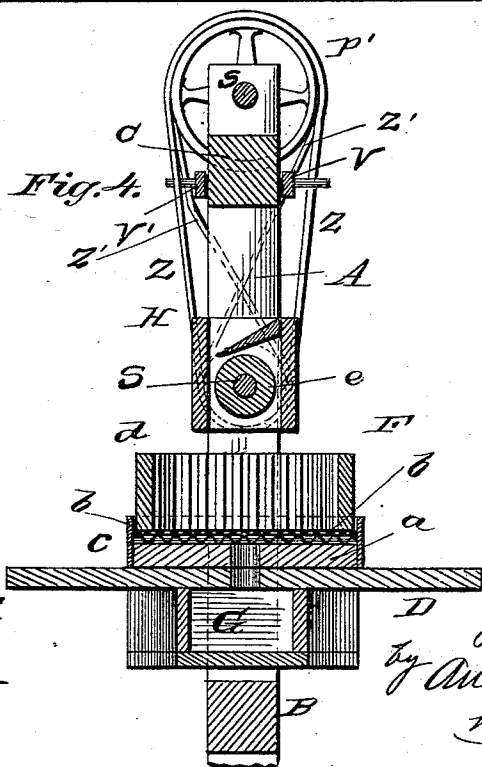
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UNITED STATES PATENT OFFICE.

JOHN L. BARNES, OF HECLA, INDIANA.

CIDER-PRESS.

SPECIFICATION forming part of Letters Patent No. 277,195, dated May 8, 1883.

Application filed February 24, 1883. (No model.)

To all whom it may concern:

Be it known that I, JOHN L. BARNES, a citizen of the United States, residing at Hecla, in the county of Whitley and State of Indiana, have invented certain new and useful Improvements in Cider-Presses; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a side view of my device. Fig. 2 is a top view of the same. Fig. 3 is a vertical sectional view, and Fig. 4 is a vertical cross-sectional view.

This invention has relation to cider-presses; and it consists in the revolving centrally-pivoted frame carrying the press-boxes on the circumferential portion of the frame, and in the combination therewith of the grinding devices and press-follower, operating at the same time in connection with independent press-boxes; in the construction and novel arrangement of the press-boxes, sieves, and receivers in relation to the rotary frame, and in the general combination of the rotary frame carrying the press-boxes, the independently-operating grinding device and press-follower, and the operating mechanism, all as hereinafter set forth.

In the accompanying drawings, the letter A designates a strong frame, having a base sill or support, B, and an upper transverse bar, C.

D indicates a rotary frame, adapted to turn with or on a central vertical shaft, E, or arranged to travel circularly around a central point on a circular track. On the circumferential portion of the rotary frame, at equal distances from its pivotal center, are arranged the press-boxes F. In the construction illustrated each press-box is located over a receiving box or tank, G, and communicates therewith by an opening in the slatted or ribbed bottom *a* of the press-box. On the bottom *a* is laid the strainer *b*, and a flange, *c*, is placed around the bottom and extends above the strainer sufficiently to hold the removable box-wall *d* in position.

H indicates the grinding-box, which is se-

cured to the frame A, projecting inward over the outer or circumferential portion of the rotary frame, so that when in operation it will discharge into a press-box below. In the box is the grinding-cylinder *e*, the shaft of which is provided with a pulley, *g*.

K represents the press-follower, which is located on the opposite side of the frame A, or in such position that it will be centered over one of the press-boxes when the grinding-box is in position above another of said press-boxes. The follower K is provided with strong brace-arms *h*, which are secured to a threaded box or bearing, *k*, which engages a vertical screw, L, to the upper portion of which is keyed a toothed wheel, N. The screw L is pivoted by its upper end in a bearing, *l*, of the main frame. By means of the toothed wheel and connecting-gearing the screw L is turned, causing the follower to descend in the box or to rise therefrom. The follower may be kept from turning by means of a stay-rod, *f*, passed through a bearing, *m*, and entering a perforation in the follower.

In bearings on the main frame A is arranged a horizontal shaft, *s*, carrying at one end a tight pulley, *p*, and on each side of said tight pulley a loose pulley, *p'*. The other end of the shaft is provided with a pinion, *n*, which engages a cog-wheel, *w*, on a shaft, *s'*, carrying a pinion, *n'*, which engages the toothed wheel N of the screw L.

Z represents a belt extending upward from the pulley *g* and engaging the pulley *p*. Z' indicates a reversing-belt, also extending upward from the pulley *g* to one of the idle-pulleys *p'*.

When the shaft S of the grinding-cylinder is turned, the gearing operates to turn the screw L, causing the follower to descend into the press-box below it. In order to reverse the movement of the screw, the belt Z is unshipped from the tight pulley *p* and the belt Z' is shipped thereon by means of suitable belt-shippers, V V', so that this operation can be accomplished without stopping the action of the grinding-cylinder.

The lower end of the main stem of the rotary frame is arranged above an adjustable bearing, R, which can be raised by means of a lever, T, or other common device for the

purpose, in such a manner as to elevate the stem and rotary frame, so that it can be turned to bring the press-boxes in succession under the follower and grinding device. When the rotary frame is let down it rests on the sill or base of the main frame, so that the press-box, which is below the follower, is solidly supported to receive the pressure of the follower in its descent.

10 Having described this invention, what I claim, and desire to secure by Letters Patent, is—

15 1. In a cider-press, a rotary frame carrying the press-boxes on its circumferential portion at equal distances from the axial center of the frame, substantially as specified.

20 2. In a cider-press, a vertically-adjustable rotary frame carrying the press-boxes on its circumferential portion, substantially as specified.

25 3. The combination, with a rotary frame carrying the press-boxes at equal distances from the axial center, of grinding devices, and a press-follower operating at the same time in connection with independent press-boxes, substantially as specified.

4. A rotary frame having a central stem and circumferential press-boxes, consisting of ribbed or slatted bottoms, strainers thereon, surrounding flange-walls, and removable walls seated within said flange-walls, and the tanks or receivers under the bottoms of the press-boxes, substantially as specified. 30

5. The cider-mill consisting of a main frame carrying the grinding devices, and press-follower, and mechanism for operating the same, and a rotary frame carrying the press-boxes on its circumferential portion, substantially as specified. 35

6. In a cider-mill having independent grinding and pressing devices, the combination, with the shaft of the grinding-cylinder and the rotary follower-screw, of the cog-wheels *N w*, pinions *n n'*, shafts *s s'*, pulleys *g p*, idle-pulleys *p'*, and belts *Z Z'*, substantially as specified. 40 45

In testimony whereof I affix my signature in presence of two witnesses.

JOHN LAKE BARNES.

Witnesses:

MARTIN W. MUMOM,
J. WARREN COLEMAN.