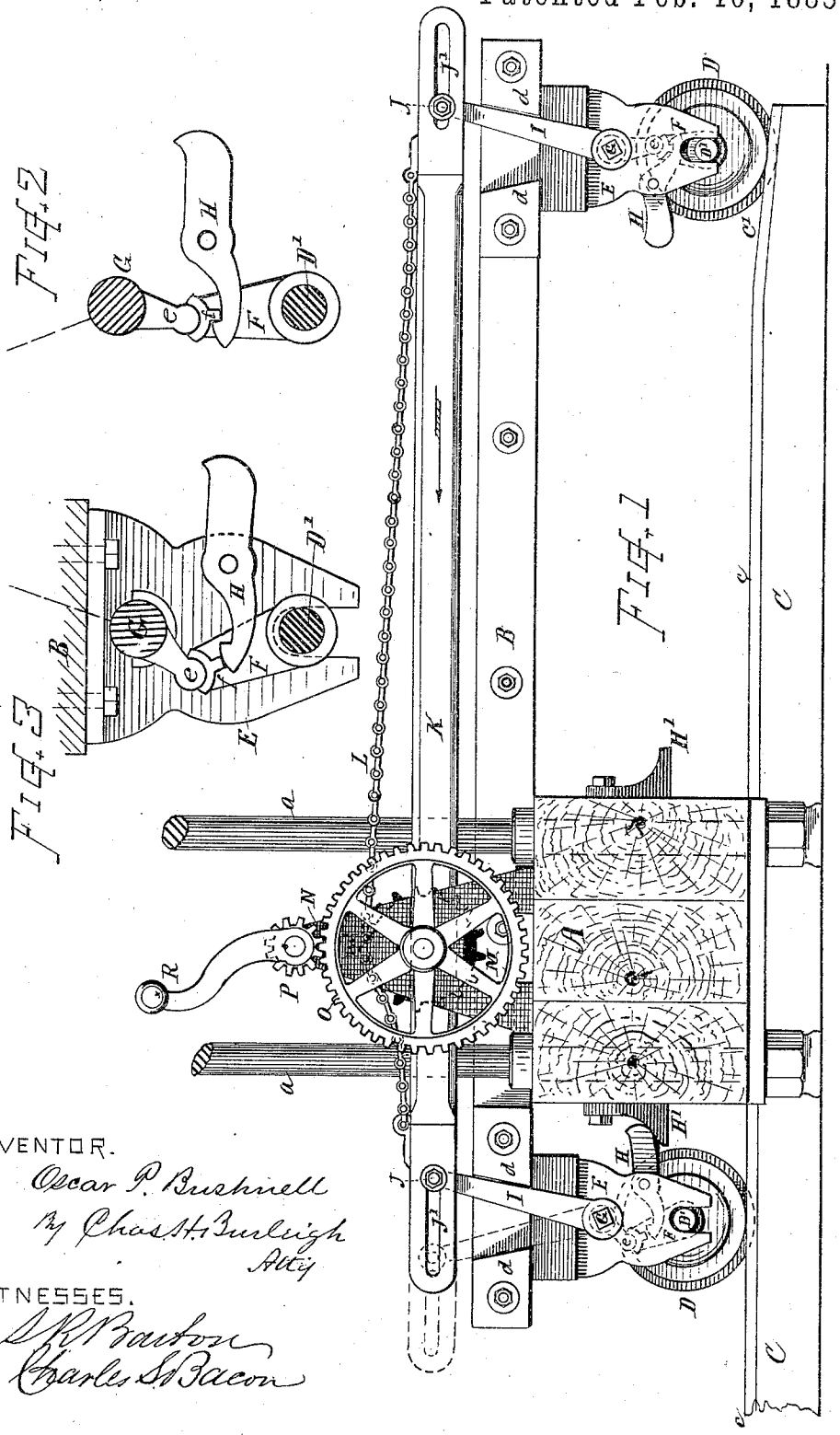
(No Model.) 2 Sheets—Sheet 1.

O. P. BUSHNELL.

DOUBLE PLATFORM AND PLATFORM SHIFTING MECHANISM.

No. 311,956. Patented Feb. 10, 1885.



INVENTOR.

Oscar P. Bushnell
by Chas. H. Burleigh
Atty

WITNESSES.

A. P. Barton
Charles S. Bacon

N. PETERS. Photo-Lithographer, Washington, D. C.

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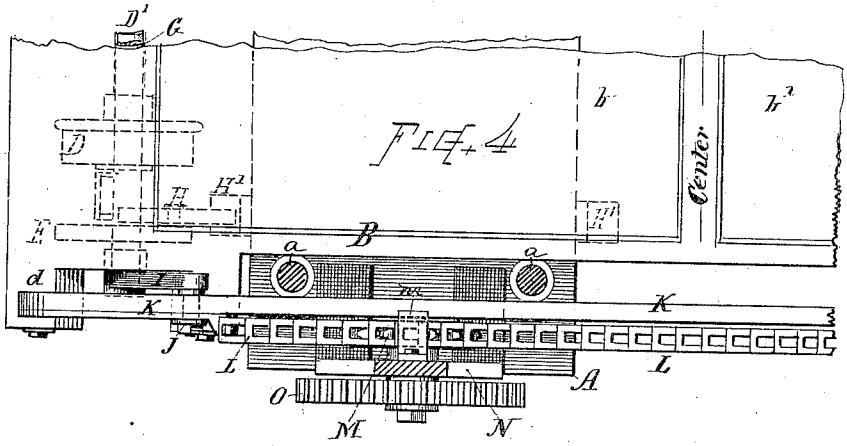


Fig. 4.

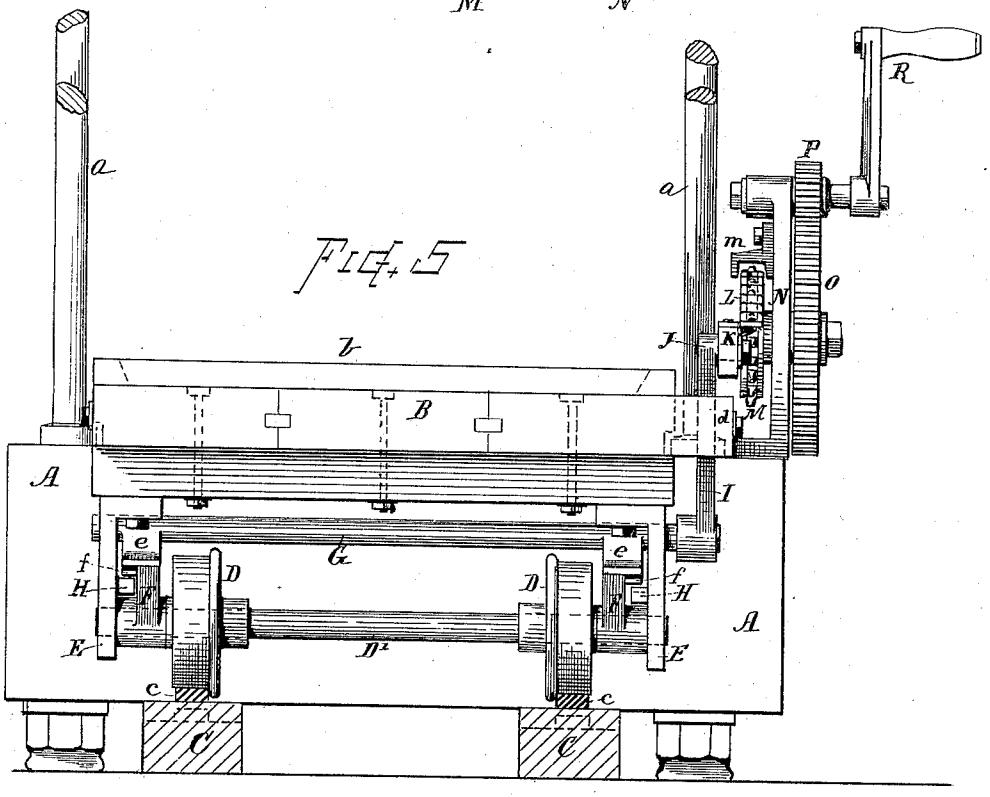


Fig. 5.

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UNITED STATES PATENT OFFICE.

OSCAR P. BUSHNELL, OF WORCESTER, MASSACHUSETTS.

DOUBLE PLATFORM AND PLATFORM-SHIFTING MECHANISM.

SPECIFICATION forming part of Letters Patent No. 311,956, dated February 10, 1885.

Application filed November 8, 1884. (No model.)

To all whom it may concern:

Be it known that I, OSCAR P. BUSHNELL, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Double Platforms and Platform-Shifting Mechanism for Presses; and I declare the following to be a description of my said invention, sufficiently full, clear, and exact to enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

The object of my present invention is to provide a double movable platform for presses, the shifting mechanism of which is arranged so as to automatically raise the platform from the bed of the press while it is being moved or shifted, and to automatically lower the platform upon the bed of the press when it is brought to position beneath the press-follower, as more fully hereinafter described. This object I attain by mechanism the nature, construction, and operation of which is illustrated in the drawings and herein described, the particular subject-matter claimed being hereinafter definitely specified.

In the drawings, Figure 1 is a side view of a double platform and shifting mechanism constructed in accordance with my invention. Fig. 2 is a detail view of one of the elevating devices in position of elevation. Fig. 3 is a detail view of the elevating devices in position of depression. Fig. 4 is a plan view of a portion of the platform, press-bed, and shifting-gear. Fig. 5 is an end view of the platform, press-bed, and shifting devices.

In my improved apparatus the platform is mounted on wheels or trucks which run on suitable tracks, and combined with said wheels or trucks is apparatus for changing the relative height of the platform-supports by the action of devices automatically actuated by the mechanism that imparts the shifting movement, and a suitable tripping mechanism is provided for letting down the elevating devices when the shifting movement is completed and the platform has reached the proper working position, this operation being effected at either end of the platform, accordingly as the platform is moved either to the right or left.

In the references, A designates the bed of the press, which press may be of ordinary construction or such as described in my former Letters Patent No. 266,967.

B indicates the shifting platform, which is made with two pressing-tables, *b b'*, to receive the pomace-cheese or material to be pressed.

C indicates tracks or tramways, extending outward at either side of the press-bed A for a distance sufficient to accommodate the movement of the platform. Said tracks are in the present instance formed of timbers, with a top plate, *c*, of metal, on which the wheels D, that support the platform, run. The axle D' of the wheels D are retained in slotted hangers E, fixed to and dependent from the platform-frame, and are allowed sufficient vertical action in the hangers to permit the requisite elevation of the platform B. Sleeves or hubs are arranged upon the wheel-axles D', carrying arms F, provided with socketed ends or knuckles that engage with lugs, arms, or projections *e*, formed upon or connected with shafts G, which latter are supported in the hangers E, parallel with and above the respective axles upon which the wheels D are mounted. The weight of the platform B is borne on the shafts G, and is thence transferred to the axle D' and wheels D through the arms or knuckles *e* F, so that when the knuckles or arms *e* and F are straightened, as in Fig. 2, the platform will be supported at a higher position than when the knuckles are swung toward one side, as in Fig. 3. Latches or dogs H are arranged in connection with the arms F, which catch onto lugs *f* on the parts F when the knuckles are straightened, (see Fig. 2,) and thus retain them until the latch is tripped by its end being brought in contact with the trip-pieces H', connected with the bed A of the press, or otherwise stationed at the proper position for depressing the platform. The latch-dogs H' are pivoted to the hangers E, and their projecting ends are made with sufficient preponderance to cause them to drop into engagement with lugs *f* when the arms are brought into upright position.

On the front ends of the shafts G are fixed levers or arms I, by means of which the shafts

can be rocked or partially rotated for working the knuckles *e* F. The upper ends of the arms I are connected, respectively, to a bar, K, by means of crank-pins or studs J, that pass through longitudinally-disposed slots J′, formed through the ends of said bar, as illustrated. The bar K extends from one arm, I, to the other along the side of the platform, parallel with the direction of its movement. The length of the slot J′ is equal to or slightly greater than the movement of the arm-studs J, the swing or action of the arms I being limited between lugs or projections *d d*, arranged on the side of the platform B, as indicated. The length of the bar K between the slots is such that the movement of the bar will press forward one of the arms, while the other is left free in the slot, and vice versa. The bar K is supported by the arms I, and it is free to move longitudinally independent of the platform B to the limit of the slots J and swing of the arms I.

For the movement of the bar K and platform B, I employ a drive-chain, L, having its ends connected with the ends of the bar K, which chain passes over a sprocket-wheel, M, mounted on a suitable supporting-frame, N, fixed upon the end of the press-bed A, outside the rods or press-standards *a a*. Connected with said sprocket M, and mounted on frame N is a revolving gear, O, pinion P, and crank R, as illustrated, whereby the shifting of the platform B can be easily and conveniently effected. A guard, *m*, is provided to prevent the chain from being thrown from the sprockets by any accidental occurrence. The outer ends of the tracks C are inclined downward or beveled off, as indicated at C′ on Fig. 1, so the end of the platform farthest from the press-bed will be lowered when the trucks or wheels D reach that position.

In the operation of shifting the platform to bring the respective pomace-tables *b* and *b′* into position beneath the press-follower, the attendant turns the crank R, thereby imparting, through the aid of the gears, sprocket, and chain L, a longitudinal movement to the bar K in direction corresponding with that in which the platform B is to be moved. (See index-arrow on Fig. 1.) This movement of the bar K brings a strain or pressure onto the arm I of the outgoing truck devices, and before this pressure is transmitted to the platform the shaft G is rocked over sufficiently to straighten up the knuckle devices *e* and F, which action causes the end of the platform to be lifted from the press-bed A, so that it will pass forward without contact with said bed. The latch H swings and catches the lug *f* of the arm F as it moves away from the trip-piece H′ and retains it in elevated position until it again returns to the starting position. The incoming truck raises the outmost end of the platform as it runs up on the incline C′, and when it reaches the bed A, so that the latches H make contact with the trip-dogs H′, said latches are thrown off, and the knuckles *e* F swing outward and permit the incoming end of the platform to drop upon the bed A in position for receiving the pressing action on the pomace-cheese or material on that end of the platform. The slot J′ permits the arm I to swing forward with the dropping action of the knuckles *e* F, and thus bring the stud J of said arm into position to receive the pressure of the bar K when the movement is imparted in opposite direction. The shifting of the platform in the other direction is performed in similar manner by turning the crank R in opposite direction. It will thus be seen that for shifting the platform it is simply necessary to turn the crank R in the direction required, and the lifting and dropping of the platform from and to the bed A is automatically effected by the same apparatus by which the platform or table is moved without any further attention of the attendant.

This apparatus is of great utility and convenience in connection with presses for making cider and wine, and for extracting juices or liquids, or for any purposes where it is desired to unload and fill one pomace-table while material upon another is being pressed.

What I claim as of my invention, and desire to secure by Letters Patent, is—

1. The combination, with a press for extracting liquids and other similar purposes, of a shifting double platform mounted on traveling trucks, and adapted for longitudinal adjustment across the bed of the press, an operating mechanism for moving said platform, and means for automatically raising said platform free of the press-bed at the start, and for lowering it upon said bed at the completion, of its shifting action.

2. The combination, with the platform B and its supporting-trucks and shifting mechanism, of tracks C, having inclines or depressions at their outer ends, C′, for the purpose set forth.

3. The combination, with the press-bed A of the platform B, provided with double pomace-tables *b b′*, and mounted on trucks D for longitudinal shifting action, of a knuckle-joint elevating device, as F *e*, and means for automatically operating said knuckles to elevate and depress said platform at the commencement and conclusion of its shifting action, substantially as set forth.

4. The slotted bar K, the arms I, the shaft G, knuckles *e* F, and lugs *d d*, in combination with the shifting platform and its supporting mechanism, for the purpose set forth.

5. The combination, with the platform B and press-bed A, of the hangers E, the truck-shafts D′, retained in slots in said hangers and carrying the knuckle-arms F, the shaft G, journaled in said hangers, and provided with knuckle-plates *e*, the arms I, and connecting-bar K, substantially as and for the purposes set forth.

6. The combination, with the bed A and platform-supporting mechanism provided with knuckle-arms *e* and F, of the latch-dogs H and tripping-lugs H′, for the purposes set forth.

7. The combination of the shifting platform, mounted for longitudinal adjustment on trucks D D, the elevating-knuckles *e* F, the arms I, the slotted bar K, the chain L, sprocket-wheel M, the operating-gears O P, and crank R, substantially as and for the purposes set forth.

Witness my hand this 17th day of December, A. D. 1883.

OSCAR P. BUSHNELL.

Witnesses:
CHAS. H. BURLEIGH,
CHARLES S. BACON.