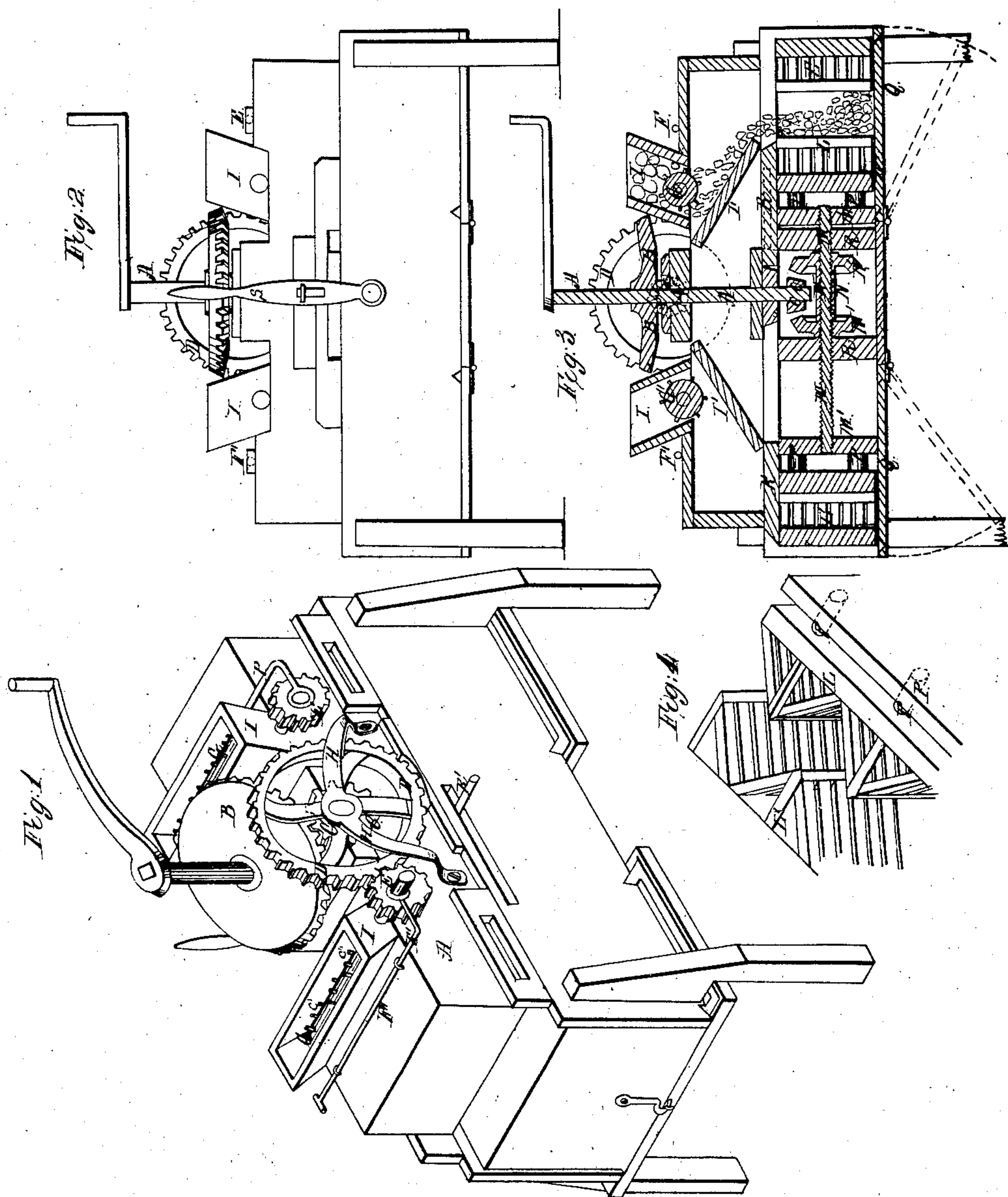


*L. Wilson,  
Cider Mill.*

*N<sup>o</sup> 62,585.*

*Patented Mar. 5, 1867.*



Witnesses:  
*Edw. Wilson*

Inventor  
*Lionel Wilson*  
*By H. H. H. H. H. H.*  
*his Atty -*



# United States Patent Office.

LEVI WILSON, OF SPRINGFIELD, OHIO.

*Letters Patent No. 62,585, dated March 5, 1867.*

## IMPROVEMENT IN CIDER-MILLS.

The Schedule referred to in these Letters Patent and making part of the same.

### TO ALL WHOM IT MAY CONCERN:

Be it known that I, LEVI WILSON, of Springfield, in the county of Clark, and State of Ohio, have invented a new and useful Improvement in Cider-Mills and Presses; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making part of this specification, in which—

Figure 1 is a perspective view.

Figure 2 is a side elevation.

Figure 3 is a vertical longitudinal section.

Figure 4 is a perspective view of the slatted press-heads.

In the several figures the same letters are employed in the indication of identical parts.

My invention consists in constructing a mill for grinding fruit with two sets of grinding apparatus, so connected with the driving mechanism that they may be driven at the same time, or separately, as desired. Also in the arrangement of a sliding floor under the hoppers and over the presses in such manner that the pomace may be supplied to the presses as desired. Also in constructing the press-heads with slatted prismatic heads working against similarly constructed beds. Also in so arranging the press-heads that they may be advanced and retracted alternately by attaching them to opposite ends of the same screw driven from the middle. Also in the arrangement of the gearing by which a reciprocating motion is given to the screw and press-heads. Also in driving the said screw by the same power that drives the mill, by placing the connecting shaft and the mill on a sliding frame placed on the frame of the press. Also in arranging, in combination with the press, falling doors for the convenient removal of the pomace.

To enable others skilled in the art to construct and operate my improved mill and press, I will more particularly describe the same.

The power is communicated through the vertical shaft A, on which is placed the bevel-wheel B, with its face down, which drives the bevelled pinion C, placed upon a horizontal shaft, the bearings of which are respectively on the frame and on the brace H attached to the frame. The spur-wheel D on the same shaft drives the pinions E and E' on the shafts of the toothed rollers G, which run in the hopper, grinding the fruit. These rollers may be fitted in any usual and convenient way for doing their work. I have represented a set of spirally arranged teeth; but other forms may be used in forming the grinding apparatus. The shafts of the rollers project beyond the pinions at least the width of the hub of the same, and the pinions slide in and out of gear on the shaft with which they are connected when in gear by a projection on the shaft fitting into a slot in the hub. The pinions are slid on to the shaft by the bent rods F and F', formed with a yoke in the end, embracing a grooved collar on the sleeve of the pinion. The pomace, when ground, falls from the hopper I upon an inclined board, I', by which it is either directed into the press-chamber, or delivered upon the sliding-board K, which lies over the press-chambers, and being less in length than the entire frame by the depth of one of these chambers, always should cover one or the other, being moved from end to end by the pin K' passing through a slot in the frame. The vertical shaft A passes through a longitudinal opening in the middle of the board K. There are two spaces, which I have spoken of as press-chambers, formed at each end of the press-frame by the space between the press-heads L and the beds L'. The heads L are prismatic in form, presenting a series of wedge-formed faces, matching into corresponding faces in the beds. Both of said parts are formed of slats laid close enough together to permit the juice to flow between them, but not wide enough apart to permit the pomace to pass. The press-heads are respectively attached to the ends of the screw M, by which they are alternately advanced and retracted, by reversing the motion of the screw derived from the female screw cut on the inside of the sleeve N. The sleeve N is revolved by the action of two bevel-wheels, setting face to face, attached to the opposite ends thereof. These bevel-wheels are alternately driven by the bevel-pinion O on the end of the shaft A. The space between the wheels N' must be a little more than the entire diameter of the pinion O, so that it may be placed intermediately so as not to touch either. The screw M does not connect directly into the heads, but into an intermediate sliding-frame, M', against the ends of which the heads are connected by the springs P, which give an elasticity to the action of the heads, required, in the first place, to diminish liability to breakage, and secondly, to give a continued pressure to the pomace after the action of the



screw has been stopped. The backs of the hubs of the wheels N' rest against the braces R, which are strongly attached to the main frame, and prevent any lateral motion to the sleeve N. The pinion O is thrown into or out of gear with each of the wheels N' by moving the frame of the grinding-mill lengthwise upon the frame of the press, carrying with it the shaft A and all other parts of the mill. This movement is effected by the lever S, pivoted on the lower frame. The doors Q form the bottom of the press-chambers. They are grooved to receive and concentrate the expressed juice, and hinged so that they may be dropped to withdraw the pomace after being pressed.

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

1. In combination with a mill for grinding fruit, and a press placed below the same, I claim the intermediate sliding-board K, arranged to operate independently of the motion of the press, and substantially as set forth.

2. The mill for grinding fruit, and a press for the same, when the two are built with separate frames, and the mill placed over the press in such manner that the mill-frame and mechanism may be moved on the press-frame, connecting or disconnecting the mechanism of the mill and that of the press, substantially in the manner set forth.

3. The arrangement of the adjustable shaft A, bevel-pinion O, wheels N', sleeve N, screw M, and press-heads L, substantially as set forth.

4. The heads L and beds L' of the press, when respectively constructed with correspondingly inclined faces and with open slats in each, through which the juice may freely flow with the action of the press, substantially as set forth.

5. The combination of the screw M, intermediate sliding-frame M', springs P, and press-heads L, arranged to operate substantially in the manner and for the purpose set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

LEVI WILSON.

Witnesses:

JAMES TAYLOR,  
A. K. ROOTS.