

Henry Lightner Cider Mill.

PATENTED AUG 8 1871

117898

Fig. 1.

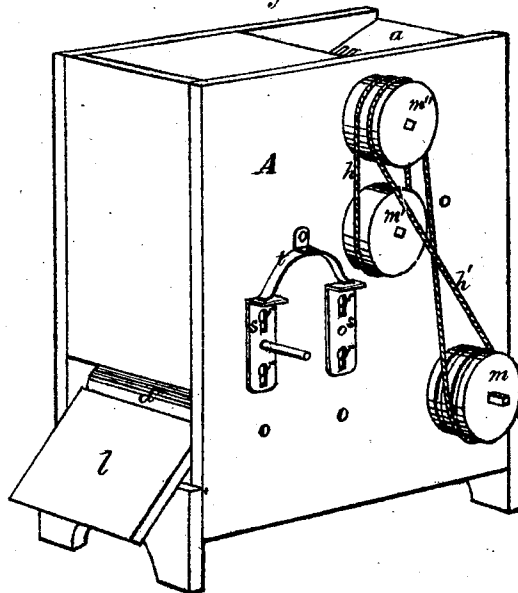


Fig. 3.

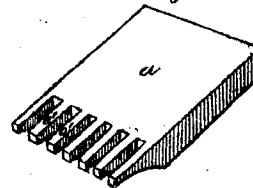
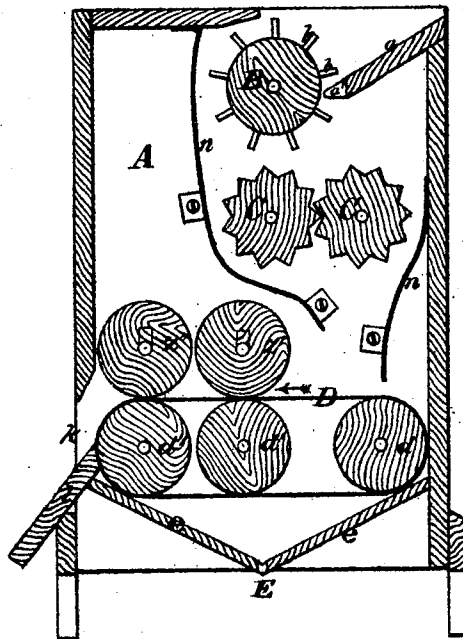


Fig. 2.



WITNESSES

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UNITED STATES PATENT OFFICE.

HENRY LIGHTNER, OF NEFF'S MILLS, PENNSYLVANIA.

IMPROVEMENT IN CIDER-MILLS.

Specification forming part of Letters Patent No. 117,898, dated August 8, 1871.

To all whom it may concern:

Be it known that I, HENRY LIGHTNER, of Neff's Mills, in the county of Huntingdon and State of Pennsylvania, have invented a new and valuable Improvement in Cider-Mills; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawing making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawing is a representation of my invention in perspective. Fig. 2 is a central vertical section of the same. Fig. 3 is a detached view of comb.

My invention relates to cider-mills; and consists mainly in the construction and novel arrangement of devices designed to express the juice from apples in an efficient manner and to deliver the pomace and cider at separate points.

A of the drawing designates the case. The apples are placed on the hopper or inclined plane *a*. B designates the crushing-wheel, having a number of spokes or beaters, *b b*, secured into its cylindrical surface and arranged to pass between the teeth *a' a'* of the inclined plane *a*. The fruit, having been broken up by the action of this roller against the teeth *a' a'*, falls on the escaloped or toothed rollers C C', between which it is thoroughly mashed. Being guided by the partitions *n n*, the mashed fruit and juice fall on the belt D made of canvas or other strong cloth and arranged to pass continuously, in the direction indicated by the arrow in the drawing, around the guiding-rollers *d, d'*, and *d''*. The cider flows off the belt at the end and each side, falls on the inclined planes *e e* of the bottom, and is delivered at E. The mashed apples are carried between the first pair of rollers *d' z'* by the action of the endless belt D, and the

juice still further expressed from them; thence through the second pair *d'' z''*, whence the pomace passes out through the opening *k* and over the inclined plane *l*, having a beveled end, arranged to clean the belt. The rollers *z' z''* bear in seats formed in the metal plates *s s*, slotted to receive the guide-pins *r r*. Slots are cut in the case A, through which the shafts of these rollers pass. The sliding plates *s s* are bent outward at the top to form ledges or bearing-surfaces for the bent spring *t*. By means of this arrangement the rollers *z' z''* are made to give when any hard substance passes between them and their fellow rollers *d' d''*, immediately springing back to their proper places when relieved. To the ends of the shafts of the rollers B, C, and *d* are fastened the pulleys *m, m'*, and *m''*, over which the cords or chains *h h'*, which communicate motion to these rollers, are passed, in the manner shown.

The rollers are all put in motion by a cord or chain passing over a second groove in the pulley *m*, by which power is communicated.

I do not claim as new the several parts of the machine here shown, nor any general combination of the same; but

What I claim as my invention is—

In the cider-mill herein described, the arrangement of the toothed crushing-roller B, comb *a*, mashing-rollers C C, partitions *n n*, endless belt D, squeezing-rollers *z z* having spring bearings, when said parts are constructed and arranged substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

HENRY LIGHTNER.

Witnesses:

JAMES F. THOMPSON,
J. A. MARTIN.