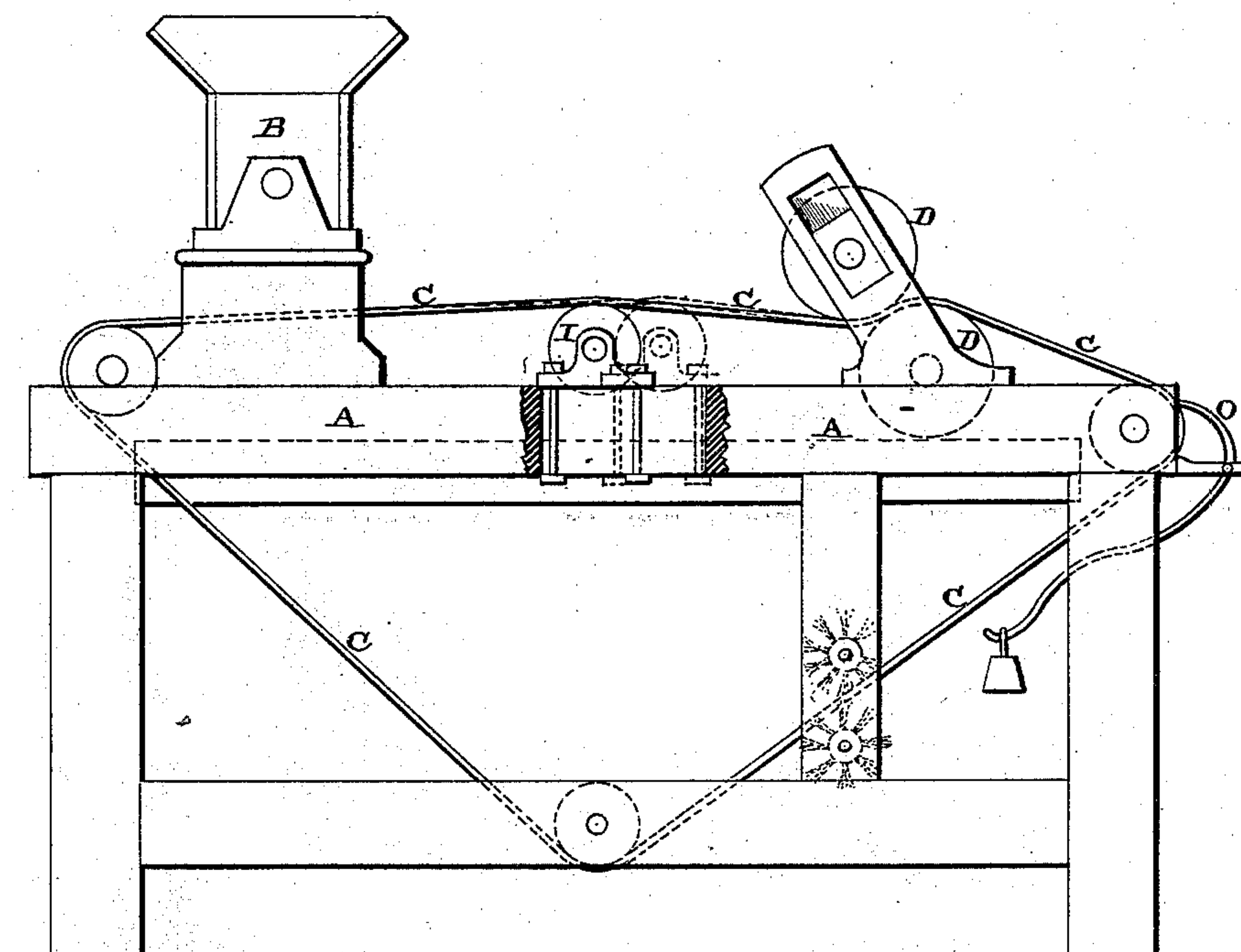


(No Model.)

H. A. KING.
Cider Presses.

No. 235,685.

Patented Dec. 21, 1880.



Witnesses.

Wm W. Mortimer.
A. C. Kistadden.

Inventor.

H. A. King.
per
F. W. Lehmann,
Atty

UNITED STATES PATENT OFFICE.

HERM A. KING, OF SALEM, WISCONSIN, ASSIGNOR OF ONE-HALF TO O. J. FOSTER, OF SAME PLACE.

CIDER-PRESS.

SPECIFICATION forming part of Letters Patent No. 235,685, dated December 21, 1880.

Application filed November 15, 1880. (No model.)

To all whom it may concern:

Be it known that I, HERM A. KING, of Salem, in the county of Kenosha and State of Wisconsin, have invented certain new and useful Improvements in Cider-Presses; and I do hereby 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 pertains to make and use it, reference being had to the accompanying drawing, which forms part of this specification.

My invention relates to an improvement in cider-presses; and it consists, first, in placing the two pressure-rollers at an oblique angle to each other, so that the upper roller will begin to exert its pressure upon the pomace which is passed upon the endless apron in advance of the second roller, and thus exert a longer and more continuous pressure upon the pomace, so as to obtain a larger amount of cider from it; second, in a horizontally-adjustable carrier-roller, by means of which the tension of the apron is regulated and the pressing-surface increased or decreased at the will of the operator, as will be more fully described hereinafter.

The object of my invention is so to construct a cider-mill that a longer and greater pressure is applied to the pomace than can be done where the two pressing-rollers are placed one immediately over the top of the other, whereby a much larger quantity of cider can be expressed from the pomace.

The accompanying drawing represents a side elevation of my invention.

A represents a suitable frame-work, upon one end of which is secured a grinding-mill, B, of any suitable construction, in which the apples are ground to pomace. After the apples have been reduced to pomace they drop upon the endless wire apron C, and are carried by this apron toward the two pressure-rollers, D, and these two rollers, instead of being placed one immediately over the other, as has heretofore always been the case, are here placed at an oblique angle to each other, as shown, so that the upper roller will begin to exert a pressure upon the pomace before the lower roller is brought into action. The bearings for these two rollers are placed at an an-

gle, as shown, and their pressure upon the pomace can be increased or decreased at the will of the operator, and both of the rollers are covered with rubber or any other suitable substance. By placing these two rollers at the angle shown, it will be seen that the endless apron is curved or bent downward at a point just in advance of the top of the lower roller, and that the upper roll, by being placed at an angle to the lower one, exerts a constant pressure upon the pomace until after it has passed through both rollers. By thus beginning to exert its pressure upon the pomace in advance of the lower one a greater portion of the cider is forced down through the meshes of the endless wire apron, and thus only a portion of the juice is left to be expressed by the combined action of both rollers.

Upon the top of the frame, at a suitable distance in advance of the two pressure-rollers, is a horizontally-adjustable carrier-roll, I, over the top of which passes the endless belt C. This roll extends upward sufficiently far to bear with any desired degree of force against the under side of the apron, and by being moved in the direction of the two pressure-rollers will raise the apron upward, so as to form an incline from the top of this roller to the under side of the upper one. The nearer this roller is adjusted to the two pressure-rollers the greater will be the angle which this apron assumes, and the greater the angle the greater the pressing-surface which the roller exerts upon the apron, and therefore the greater and the longer continued is the pressure which is exerted upon the pomace. By adjusting this movable carrier-roll away from the two pressure-rollers the pressing-surface of the upper roll upon the endless apron will be decreased, so that the upper roller will exert but very little pressure in advance of the lower one. When it is so desired this movable carrier-roll can be adjusted back and forth by suitable clamping-bolts, which pass through slots in the frame, or in any other way which may be preferred.

Upon the end of the frame is pivoted a scraper, O, which is provided with a suitable weight at its lower end, so that it always bears against the apron with considerable

pressure, so as to scrape off the pomace from which the juice has been expressed, and which can give before any undue pressure, should any occur at any time.

5 Placed above and below the endless belt, at any suitable point beyond the scraper, are the two revolving brushes, which act upon opposite sides of the apron and thoroughly clean away any pomace which may have caught in
10 the meshes of the apron.

Having thus described my invention, I claim—

1. In a cider-mill, the combination of an endless apron and the two pressure-rollers, the
15 two rollers being placed at an angle to each other, so that the upper one begins to exert its pressure upon the pomace in advance of the lower one, substantially as shown.

2. In a cider-mill, the combination of the two pressure-rollers, the endless apron, and a 20 movable carrier, whereby the pressure-surface of the upper roller upon the apron can be increased or decreased at will, substantially as described.

3. The combination of the automatic weight- 25 ed scraper, the endless apron, and the two revolving brushes placed upon opposite sides of the apron, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 12th day of 30 November, 1880.

HERM A. KING.

Witnesses:

ALEX. BAILEY,
E. M. BAILEY.