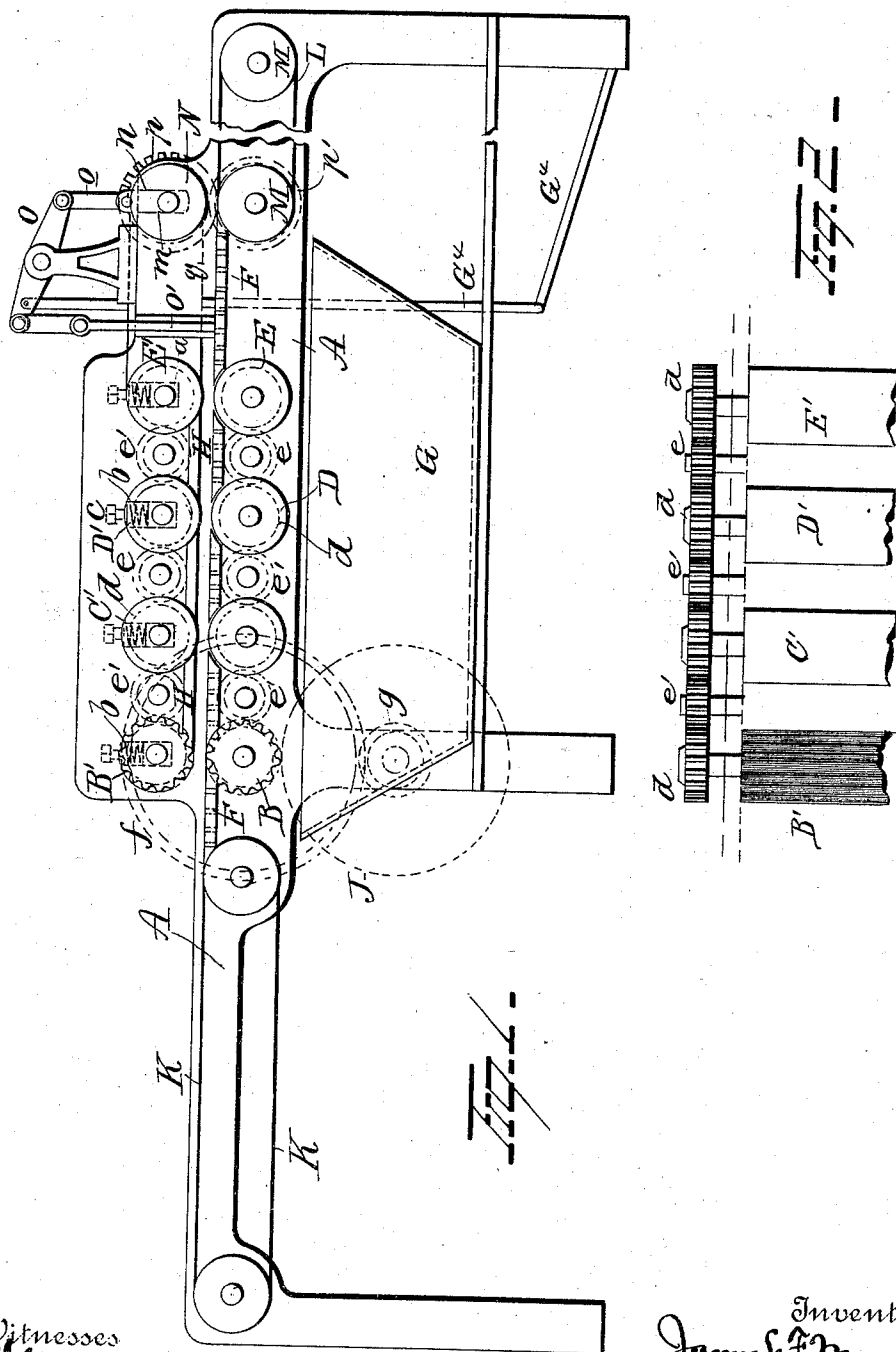


(No Model.)

J. LE F. MYERS.
ROLLER COMPRESSOR.

No. 476,233.

Patented May 31, 1892.



Witnesses
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JAMES LE FEVRE MYERS, OF BOSTON, MASSACHUSETTS.

ROLLER COMPRESSOR.

SPECIFICATION forming part of Letters Patent No. 476,233, dated May 31, 1892.

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To all whom it may concern:

Be it known that I, JAMES LE FEVRE MYERS, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Roller Compressors; 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 appertains to make and use the same.

My invention relates to an improvement in roller compressors.

The object is to provide a system of rollers arranged to receive tapering fleshy leaves, so as to yieldingly impinge equally, or nearly so, throughout the length of the leaves, pressing the juice out of them preparatory to stripping and cleaning the fibers.

With this end in view my invention consists in certain features of construction and combinations of parts, as will be hereinafter described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a side elevation, and Fig. 2 is a plan view.

A represents a frame of any suitable construction. In this frame two distinct sets of rollers are journaled, one set preferably in a horizontal plane in fixed journal-boxes and the other set immediately above the latter with their axes in a slightly-inclined plane, so that at one end the rollers in the two sets touch or nearly touch each other, while at the opposite end of the series they are quite a distance apart, and the distance between intermediate rollers varying gradually and successively from one extreme to the other.

B B' represent the rollers at one end of the series. These rollers are corrugated and near to each other. C C' represent the next pair, D D' the next, and E E' the next, and so on indefinitely, until as many as are needed are employed, they varying in number, usually, to correspond with the length of the leaves that the machine is designed to operate upon. The rollers C C', D D', and E E' are all plain rollers, and may be of wood, but preferably are sleeved or faced with brass or other non-corrosive material. The journal-boxes *a* of the upper series of rollers are located in elongated slots *b*, having spring-cushions back of them, which allow them a gentle yielding up-and-down motion with the passage of the

leaves, the set-screws *c* regulating the tension of the springs. The spindles carrying the rollers are each provided with gear-wheels *d*, and between these pinions *e e'* are meshed, so that the motion of all the rollers in each series is the same. Filling the spaces between the lower rollers are the perforated plates *F*, which allow the juice as it is squeezed out of the leaves to pass off into a receptacle *G* beneath. Suitable plates *H* are preferably located in corresponding position above the perforated plates.

On the shaft carrying the corrugated roller *B* a gear-wheel *f* is secured. A pinion *g* on the main drive-shaft meshes with this gear-wheel *f*, and the shaft is driven by a belt through the pulley *J*. After leaving the rollers the material is carried off on conveyer-belt *K*.

At the opposite end of the machine the feed-belt *L* is mounted on the rollers *M*, the inner one of which is provided with a gear-wheel *p'*, which latter is adapted to be engaged by the gear-wheel *p* on roller *N* when the latter is in its lowered or operative position. The roller *N* is located over its mating roller *M*, and is mounted in sliding boxes *m*, seated in the elongated bearings *n*. These boxes *m* are connected to the pivoted levers *O* (one on each side) by links *o*, and the levers are connected to the movable stop-board *O'* by suitable links. The stop-board and roller *N*, together with the connecting mechanism, are so arranged that when one is depressed the other is elevated, and hence when the roller *N* is lowered, so that the gear-wheel *p* thereon meshes with the wheel *p'* on its mating roller *M*, the stop-board *O'* is elevated, and hence permits of the passage of the material fed through by the feed-rollers. When the stop-board is in a depressed position, the roller *N* is elevated, and, since belt *L* is operated by roller *E'* through chain *g*, it follows that when roller *N* is elevated the feed-belt is stopped. When the parts are in this position, the material to be operated upon can be evened up against the stop-board.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination, with a system of compression-rollers arranged in pairs, the rollers

of the several pairs being spaced vertically at different distances apart, of feeding-rollers and a vertically-movable stop-board located between the feeding-rollers and first pair of compression-rollers, substantially as set forth.

2. The combination, with a system of compression-rollers arranged in pairs, the rollers of the several pairs being spaced vertically at different distances apart, of feed-rollers, a stop-board located between the feed-rollers and compression-rollers, and a lever connecting the stop-board and the driving feed-roller, substantially as set forth.

3. The combination, with a system of compression-rollers arranged in pairs, the rollers of the several pairs being spaced vertically at different distances, of perforated plates located and filling the spaces between the lower rollers and plates located and filling the spaces between the upper rollers, substantially as set forth.

4. The combination, with a series of rollers journaled in fixed boxes in a horizontal plane and a similar series in spring-cushioned boxes in an inclined plane, of feed-rollers and a stop-board located between the feed-rollers and compression-rollers, substantially as set forth.

5. The combination, with two series of rollers, one in a horizontal and the other in an inclined plane, the nearest in the series being corrugated, and gearing for driving and communicating motion of feed-rollers, of a stop-board located between the feed-rollers and compression-rollers and a conveyer-belt, substantially as set forth.

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

JAMES LE FEVRE MYERS.

Witnesses:

CORNELIUS B. SULLIVAN,
CLARENCE B. LOUD.