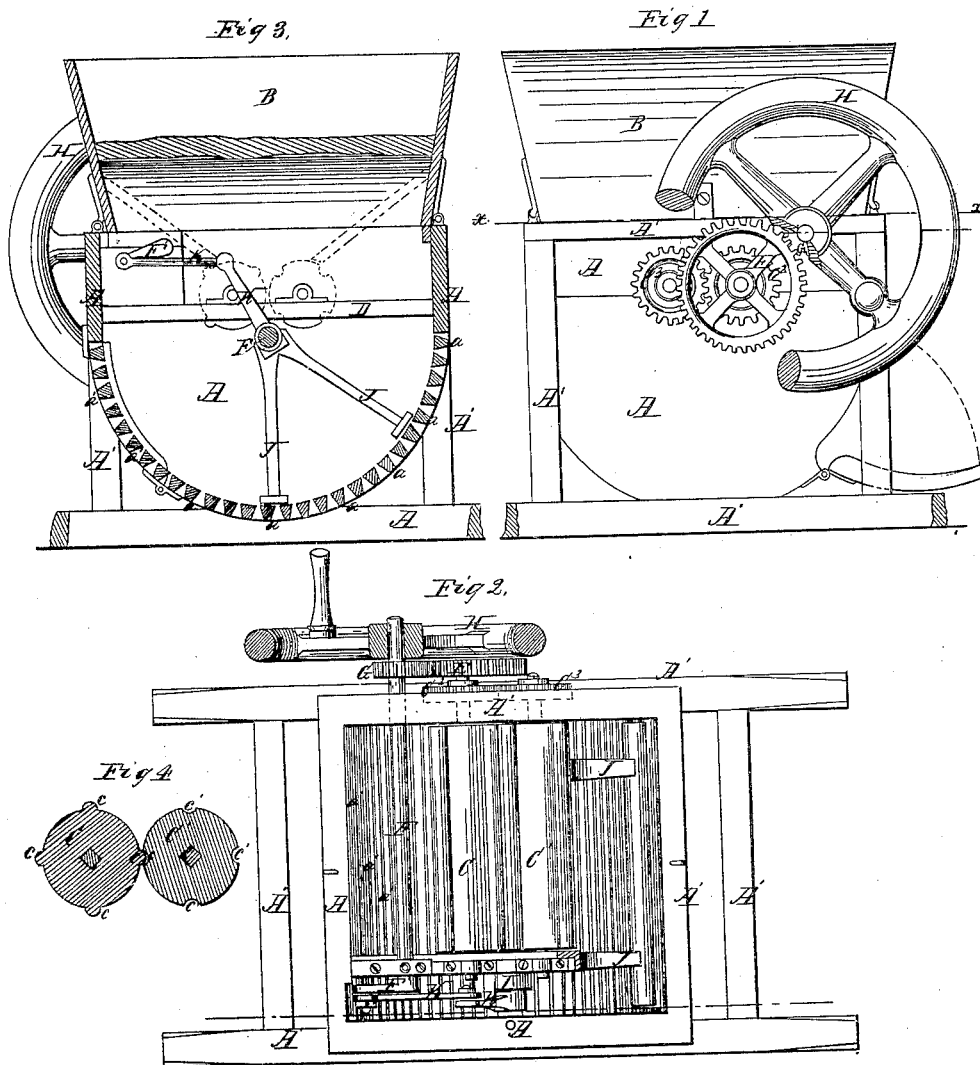


A. HEMMINGER.
GRAPE MILL.

No. 45,156.

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Witnesses
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UNITED STATES PATENT OFFICE.

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IMPROVEMENT IN GRAPE-MILLS.

Specification forming part of Letters Patent No. **45,156**, dated November 22, 1864.

To all whom it may concern:

Be it known that I, AMANDUS HEMMINGER, of Sandusky, in the county of Erie and State of Ohio, have invented a new and Improved Grape-Mill; and I do hereby declare the following to be a full and exact description of the same, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a side elevation of my improved mill. Fig. 2 is a horizontal section in the line *x x*, Fig. 1, this view being intended to exhibit the compressing rolls with their appurtenances. Fig. 3 is a vertical section in the line *y y*. Fig. 4 is a detached sectional view of the compressing-roller, which will be hereinafter more particularly referred to.

Similar letters of reference indicate corresponding parts in the several figures.

The subject of my said invention is an apparatus in which grapes are squeezed and compressed between rolls to extract the greater part of the juice before submitting the pulp to the action of a press.

The invention consists in novel and improved means for detaching and separating the stems, the object being to prevent the stems from getting into the vat with the pulp and juice and the consequent admixture with the latter of the bitter element of said stems, which would be eliminated by the action of the press.

In order that others skilled in the art to which my invention appertains may be enabled to fully understand and use the same, I will proceed to describe its construction and operation.

In the accompanying drawings, *A a'* represent a concave fixed within a frame, *A*, and *B* is a hopper secured upon the top of said concave in such a way that it may be removed when desired. The bars *a'* are attached to pieces *A²*, which, being hinged to the ends *A* of the concave, may be turned down with the bars *a'*, for the object hereinafter mentioned.

C C' are rolls placed side by side, and having their bearings in one of the ends *A* of the concave and in the supporting-piece *D*. The roll *C* is formed with longitudinal ribs *c*, each of which takes into a corresponding groove, *c'*, in the roll *C'* when the mill is in operation, for the purpose to be explained. The journals of

the rolls, which have their bearings in the end *A*, extend through the latter, and project therefrom to admit of the attachment of gear-wheels *C² C³*, and the journal of the roll *C* projects to a sufficient extent to carry also a larger gear-wheel, *E*. The wheels *C² C³* gear with each other, and the wheel *E* receives motion from a rotating shaft, *F*, through the medium of a pinion, *G*, the shaft *F* being driven by a crank-wheel, *H*, operated by hand or otherwise. The crank-wheel *H* may be of the requisite weight to make it perform the function of the common fly-wheel—that is, by its momentum to increase the power as its rotation continues. The rotation of the wheel *E* being communicated to the gears *C² C³*, the rolls *C C'* are rotated at a high pressure.

I is a shaft journaled in the ends of the concave, and to this shaft are attached oscillating frames *J J*, which move in close proximity with the bars *a a'*, the latter being so disposed as to leave narrow intervening spaces, as shown in Fig. 3. Motion is imparted to the shaft *I* from the shaft *F* through the medium of a toggle-lever, *K K*, loosely jointed to a crank, *F'*, on one end of said shaft *F*.

The following will explain the operation: The hopper *B* is filled with unstemmed grapes, and the wheel *H* put in motion so as to rotate the rolls *C C'* in the manner described. The grapes, crowding down between the rolls as they rotate, are caught between the ribs *c* and grooves *c'*, and the pulp or fleshy part of the grape is squeezed out of the skin, and the whole then pass through into the concave *A a'*. Any juice which may be expressed from the pulp in passing between the rolls flows directly through the concave and into the vat below. The spaces between the bars *a a'* are too narrow or limited to permit the passage of the stems or skins, but the pulp, by the action of the oscillating frames *J J*, is forced through and falls into the vat, to be subsequently submitted to the action of a press, whereby the juice is eliminated. The skins and stems are thrown away from the center of the concave by the action of the arms *J J*, and when a sufficiently large quantity has accumulated the bars *a'* may be turned down and a rake introduced to withdraw the stems and skins.

It is well known by wine-makers that when the stems are in the press with the pulp the

bitter element of the former commingles with the juice and impairs the quality of the wine; hence the utility of the above described expedient for separating the stems.

Having thus described my invention, the following is what I claim as new therein and desire to secure by Letters Patent:

1. The oscillating separator J J, employed in connection with the grated concave A a' for removing the stems and skin from the pulp previously to the latter being submitted to the

action of a press, substantially as and for the purpose set forth.

2. The combined arrangement of the ribbed and grooved rolls C C' and separator J J, when employed in connection with the grated concave A a', substantially in the manner described.

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Witnesses:

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