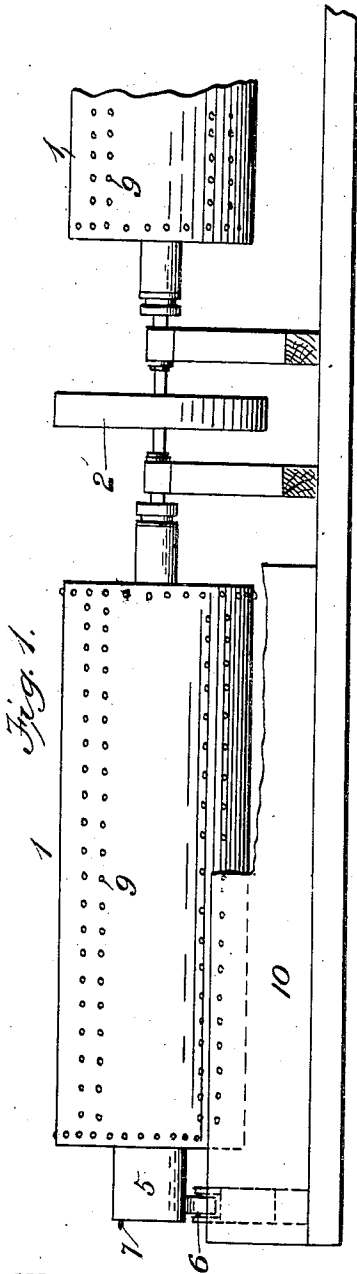


A. V. BILLS.
OLIVE GRINDING MACHINE.
APPLICATION FILED MAY 22, 1906.

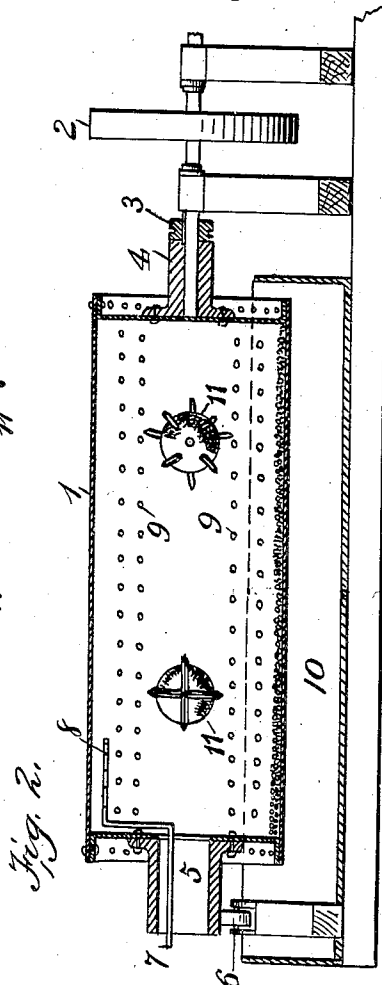
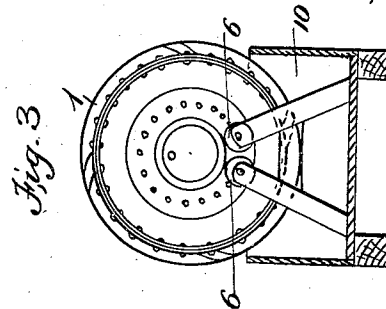
946,196.

Patented Jan. 11, 1910.



WITNESSES:

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INVENTOR

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Attorney

UNITED STATES PATENT OFFICE.

ALBERT V. BILLS, OF SAN DIEGO, CALIFORNIA.

OLIVE-GRINDING MACHINE.

946,196.

Specification of Letters Patent.

Patented Jan. 11, 1910.

Application filed May 22, 1906. Serial No. 318,145.

To all whom it may concern:

Be it known that I, ALBERT V. BILLS, a citizen of the United States, residing at San Diego, in the county of San Diego and State of California, have invented certain new and useful Improvements in Olive-Grinding Machines, of which the following is a specification.

My invention relates to olive-grinding machines, for the purpose of extracting the oil from the same; and the object thereof is to so construct the same that the oil will be extracted without crushing the kernel or pit, and thus a finer quality of oil than has been manufactured up to the present time, is the result.

In the drawings forming a part of this specification, and in which like symbols of reference represent corresponding parts in the several views:—Figure 1 is a longitudinal side view of the device, with a section of a second cylinder, illustrating the machine for operating two cylinders; Fig. 2 is a longitudinal section of the machine; Fig. 3 a front view; and, Figs. 4 and 5 are views of the grinding balls.

1 represents the cylinder of the device; 2 the driving pulley; 3 a clutch, by means of which the device may be thrown into or out of operation; 4 the shaft of the machine; and 5 the hollow casting or opening for loading or emptying the machine.

6 are pulleys for front bearing to operate upon; 7 water-pipe for delivering water to the interior of the machine, the same provided with perforations 8; 9 holes in cylinder to permit escape of oil into tank; and 10 tank at bottom of machine to catch oil and pulp.

11 are balls for cutting and tearing the flesh of the olive. I have shown two forms of these balls, which I preferably use in

combination; one of the same shows knives quartering the sphere, and the other a series of points for tearing the flesh. These two forms may, if desired, be combined in one ball; but I preferably use them in combination, as shown.

The operation of the device will be apparent from the foregoing:—When it is desired to use the machine, the clutch is locked, and the cylinder revolved by the application of any suitable power; causing the balls to tear and cut the flesh of the olives, without crushing the seed of the same, the water in the meantime is directed into the machine, and the pulp and oil is carried into the tank beneath the device. By the water running in the mill the grinding is facilitated, and the weight of the same forces the oil and pulp out through the orifices 9 in the cylinder.

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

1. In an olive-grinding machine, the combination with the main cylinder for the fruit, of means for operating the cylinder, and balls provided with cutting knives adapted to operate upon the fruit.

2. In an olive-grinding machine, the combination with a main cylinder formed with perforations in its sides and having an opening in its head, of means for rotating the cylinder, means for delivering water into the interior of the cylinder, a set of balls provided with cutting knives, and a set of balls provided with tearing points.

In testimony whereof I affix my signature in presence of two witnesses.

ALBERT V. BILLS.

Witnesses:

FRANK A. KIMBALL,
J. G. ROUTSEN.