

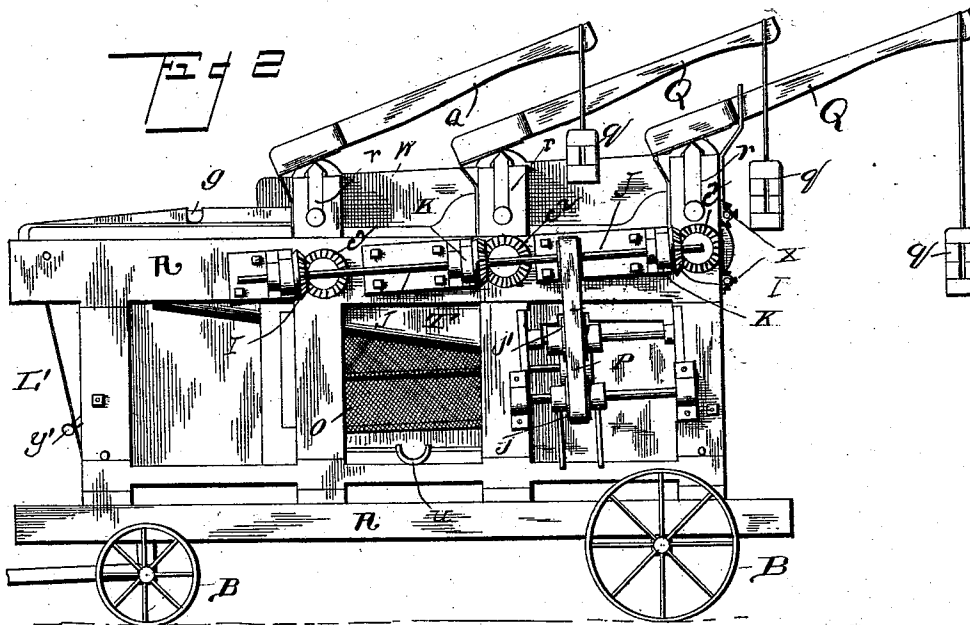
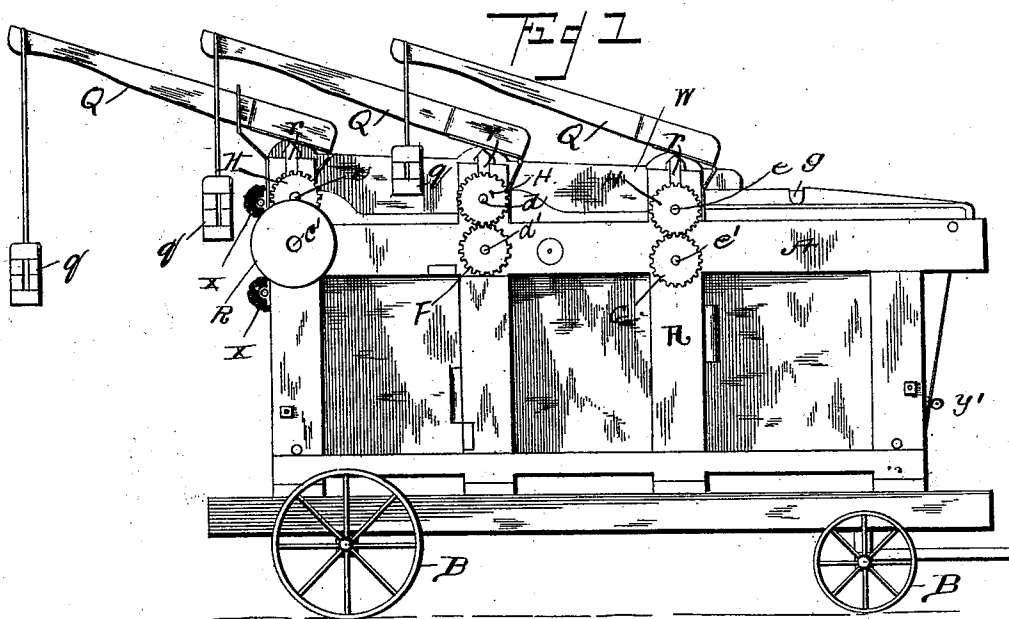
(No Model.)

2 Sheets—Sheet 1.

J. KELLY.
WINE PRESS.

No. 512,616.

Patented Jan. 9, 1894.



Witnesses

James Kelly
Geo. F. Kincaid

Inventor
James Kelly
by *John Wedderburn*
his Attorney

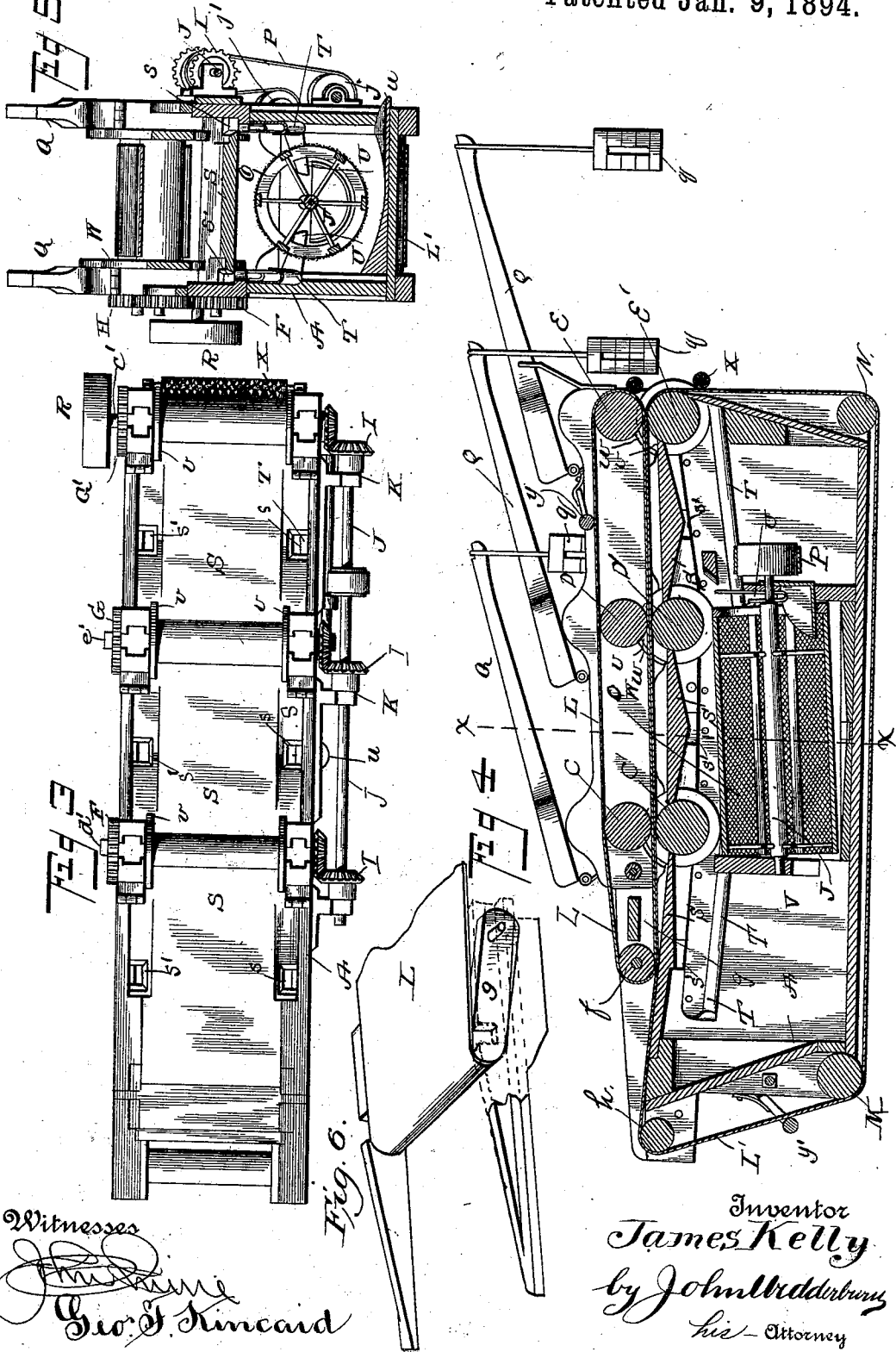
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UNITED STATES PATENT OFFICE.

JAMES KELLY, OF SAN FRANCISCO, CALIFORNIA.

WINE-PRESS.

SPECIFICATION forming part of Letters Patent No. 512,616, dated January 9, 1894.

Application filed November 12, 1892. Serial No. 451,742. (No model.)

To all whom it may concern:

Be it known that I, JAMES KELLY, of San Francisco in the county of San Francisco and State of California, have invented certain new and useful Improvements in Wine-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 appertains to make and use

the same. My invention is an improvement in wine presses designed for greater simplicity, durability, rigidity and compactness of construction and efficiency and certainty of operation, and by means of which every particle of juice which the grapes contain is extracted, while the seeds are allowed to pass through the press unrushed.

Other objects and advantages of the invention will appear in the following description, in which I have set forth fully the details of construction and the essential features thereof.

In the accompanying drawings in which similar letters of reference designate corresponding parts: Figure 1 is an elevation viewed from one side of my invention. Fig. 2 is an elevation viewed from the opposite side. Fig. 3 is a plan view with the weights and levers removed. Fig. 4 represents a vertical section and Fig. 5 is a section through the line x x Fig. 4. Fig. 6 is a detail perspective view of the adjusting mechanism for the upper conveyer.

Reference being had to the above figures A represents a frame made of wood, iron or other suitable material, the parts of which are bolted and trussed together to form a rigid body, which bears the bearings, levers, and other parts which combine to form my invention, and which are fully described hereinafter.

In order to make the press portable, thus enabling it to be transported from one vineyard to another, I have constructed the frame and press on wheels B.

Situated in the upper portion of the frame A are a series of pairs of rollers C, C' D—D' and E—E', the bearings of the lower rollers C', D', and E', stationary, while those of the upper rollers C D and E are capable of a vertical play. I do not wish to confine myself to any particular number of pairs of rollers, but the number which I have represented in

the accompanying drawings is probably the most desirable.

The ends of the shafts c' , d' , and e' , to which the rollers C', D', and E', are secured, extend beyond the sides of the frame and carry the gear wheels F, G and G', which mesh with the gears H above the same, and situated on one end of the shaft c , d and e of the rollers C, D and E, and the opposite ends of said shafts c' , d' , and e' , carry beveled gears c^2 , which mesh with similar gears I situated on the shaft J, running longitudinally along one side of the machine, and which have suitable bearings K secured to the side of the frame A.

Passing between the pairs of rollers and over the upper rollers is the endless canvas belt or band L, which is prevented from sagging by the tension roller (f) which has bearings in a pivoted frame (g).

Passing between the pairs of rollers and over rollers M and N at the base of the frame A, and tension roller (h) is a secondary endless canvas belt or conveyer L'.

Situated immediately below the rollers C'—and D' is the revolving hopper O which is slightly inclined from the horizontal. The hopper is covered with a fine wire screen, and is revolved by means of belt P which is conveyed to a belt wheel on the shaft J by means of guide wheels (j) and (j').

In order to regulate as desired, the amount of pressure on the shafts of the rollers C—D and E, I have constructed the pivoted levers Q at the remote end from the pivot of which are suspended the weights (q), and it will be readily seen from the accompanying drawings that the position of the weights on the levers, as well as the number of weights suspended, can be readily adjusted. By means of the vertically sliding blocks (r) the downward pressure of the levers is communicated to the shafts of the rollers C—D and E.

It is my intention to so adjust the weights on the levers, as to cause the pressure on the shaft of roller D to be greater than that on C and the pressure on E greater than on D.

The press is set in operation by a belt which conveys the power from a vapor-engine, electric or steam motor or by horsepower to the belt wheel R which is secured to the shaft of the roller E'. The motion of the roller E' is imparted to the rollers C, C' D, D' and E, E' and hopper O by means of the

gear and belt wheels described above. It will be readily seen that when the rollers revolve the endless canvas conveyers L and L' are caused to move in a continuous circuit.

- 5 The grapes or fruit from which the juice is to be extracted are fed on to the belt L' at a point near the roller (f). As the belts travel between the pairs of rollers C C', &c., the pulp, skins, stems and seeds of the fruit are
10 completely separated from the juice.

- In order to prevent the juice from following the endless conveyers L L', I have inclined them, together with the pairs of rollers C C', &c., slightly from the horizontal, and by
15 so doing the greater proportion of juice will pass through and over the sides of the conveyer L' in the immediate vicinity of the roller (f), from whence it is deposited on the double inclined partitions S at the sides of
20 which are holes (s) (s') through which the juice passes and enters the inclined troughs T, by means of which it is conveyed to pan U and thence to the center of the revolving hopper O from which it passes through the
25 fine wire screen described above after which it is conducted in the projecting trough (u) to bottles or other suitable receptacles, while the pulpy refuse is discharged from the lower end of the hopper, into the compartment V.

- 30 In order to prevent the juice as it is extracted from reaching the shafts of the rollers, I have constructed the lower rollers C', &c., with flanges (v) which overlap the upper rollers (c), &c., and as a further safeguard
35 against the loss of juice I have supplied the portion of the side boards or cribs W which are directly over the flanges (v) with rubber wipers (w) which rub against the upper surface of the flanges.

- 40 To prevent the crushing of the seeds and consequently the intermingling of the oil which they contain with the juice of the grape which to a considerable degree detracts from the flavor and consequently from the value of
45 the wine, I have constructed the rollers C C' D D', E E' of hard or vulcanized rubber which combined with the yielding pressure on the bearing of the upper rollers, which I have fully described above, makes the surface
50 of the rollers sufficiently elastic to allow the seeds to pass in their original form.

- In order to keep the conveyers L L' at the required tension, it is my intention to place the shaft of the rollers (h) and (f) in sliding
55 bearings, the position of which is regulated by screws, or other suitable means, or the tension may be regulated by the spring pressed roller (y) (y') shown in the drawings.

- The roller (f) situated in the pivoted frame
60 (g), is capable of being raised or lowered by being elevated bodily, as clearly shown in Fig. 6 in dotted lines, thus affording an adjustable feed mouth into which the fruit passes.

- 65 To remove and effectually cleanse the aprons after they pass between the roller E E' from skins, stems, seeds, &c., and other

pulpy matter, I have supplied the revolving brushes X the surface of which comes in contact with the surface of the endless aprons L 70 and L'.

It will be readily seen from the foregoing description that I have provided a simple, effective and continuous wine press, which is compact, durable and portable, and by the 75 use of which every particle of juice which the fruit contains is extracted and conveyed to proper receptacles.

I am aware that changes in the form and proportion of parts of the devices herein shown 80 and described as an embodiment of my invention can be made without departing from the spirit or sacrificing the advantages thereof, and I therefore reserve the right to make such changes and alterations as fairly fall 85 within the scope of my invention.

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

1. In an apparatus of the class described, a 90 main frame in combination with an inclined series of pairs of vulcanized rubber rollers, two endless belts or conveyers, adapted to pass between the upper and lower bearings of the said rollers, the bearings of the upper 95 rollers having a vertical play, a roller situated near the lower end of said series and over which said upper conveyer passes, a pivoted frame in which the latter roller has bearing, two or more revolving brushes, having 100 bearings in said main frame, and adapted to brush seeds, stems, skins, &c., from the surface of said conveyers, double inclined troughs situated beneath and at the ends of both rollers of said series, a revolving inclined 105 hopper beneath said rollers and into which the liquid is conducted by means of said inclined troughs, and a wire gauze covering for said hopper, substantially as described. 110

2. In an apparatus of the class described, a suitable frame in combination with an inclined series of pairs of vulcanized rubber rollers, two endless belts or conveyers adapted to pass between the upper and lower rollers of each pair of said rollers, the bearings 115 of the upper rollers having a vertical play, a roller situated near the lower end of said series and over which said upper conveyer passes and a pivoted frame in which the said 120 latter roller has bearing, and two or more revolving brushes having bearings in said main frame and adapted to brush seeds, stems, skins, &c., from the surface of said conveyers substantially as and for the purpose set 125 forth.

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

JAMES KELLY.

Witnesses:

HENRY S. ROBINSON,
R. H. NEILL.