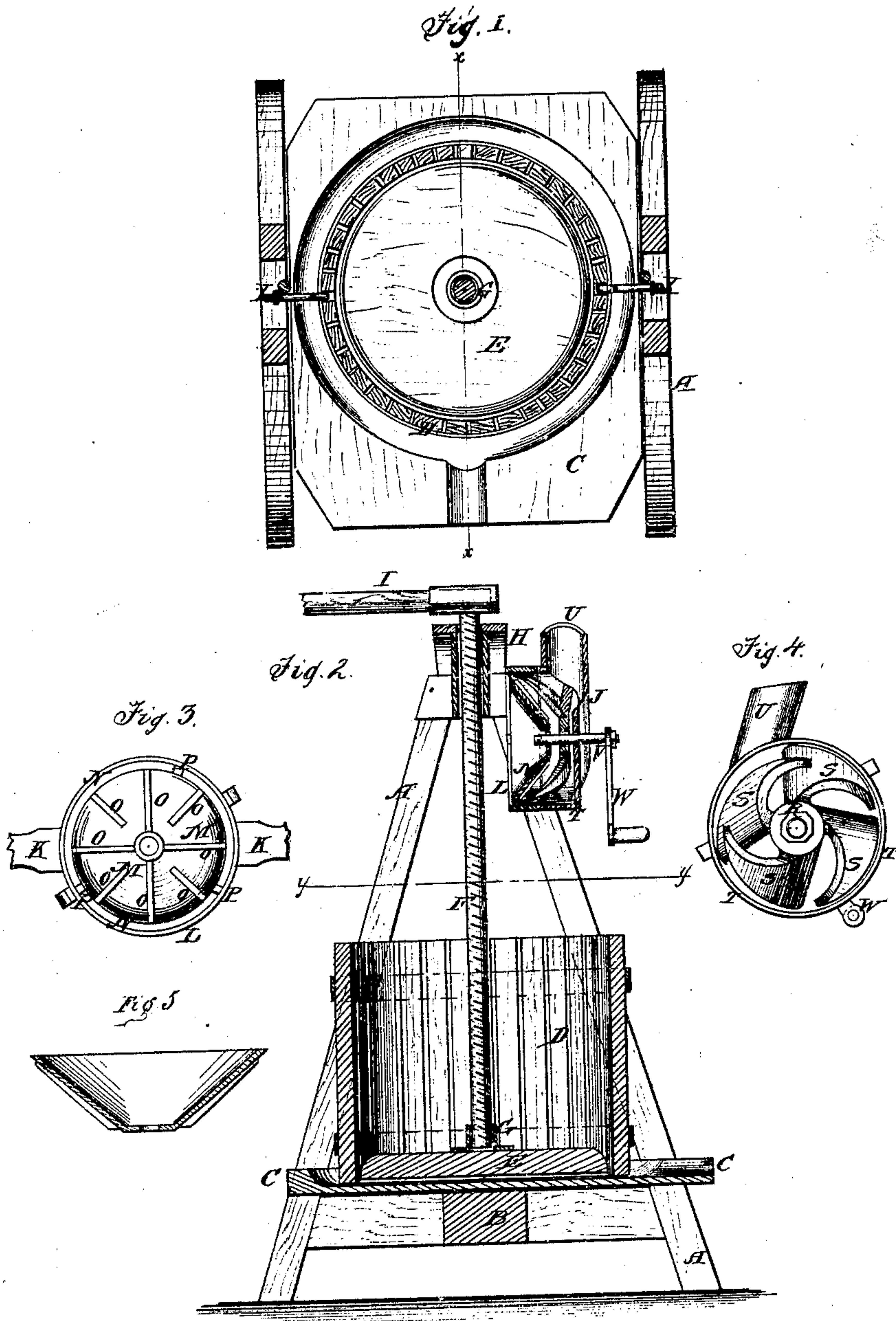


J. H. Kraiser,

Cider Press.

No. 113778.

Patented Apr. 18. 1871.



Witnesses:
P. C. Dieterich.
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DANIEL H. KRAUSER, OF POTTSVILLE, PENNSYLVANIA, ASSIGNOR TO HIMSELF AND JOSEPH C. BRIGHT, OF SAME PLACE.

Letters Patent No. 113,778, dated April 18, 1871.

IMPROVEMENT IN COMBINED CIDER-MILLS AND PRESSES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, DANIEL H. KRAUSER, of Pottsville, in the county of Schuylkill and State of Pennsylvania, have invented a new and useful Improvement in Combined Cider-Mill and Press; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification.

My invention relates to a "new way" of crushing apples to the requisite fineness preparatory to expressing the juice therefrom; and consists in passing them, by a winding motion, between surfaces which gradually increase in proximity until the desired result is attained.

In the accompanying drawing—

Figure 1 represents a plan view looking down from the line *y y* of fig. 2.

Figure 2 is a vertical section of the mill taken on the line *x x* of fig. 1.

Figures 3 and 4 show the parts of the grinder or crusher detached and separated, the former being the stationary hollow cone, and the latter the revolving crusher-wheel which works over the cone.

Figure 5 is a diametrical section of the stationary grinder, showing the ribs *O* decreasing in altitude from apex to base thereof.

Similar letters of reference indicate corresponding parts.

A is the frame upon the cross-timber *B*, on which the platform *C* is supported.

D is the tub, resting in a cavity in the platform, formed of staves, without bottom, and with narrow spaces between the staves, or in the ordinary manner.

E is the follower, which is forced down onto the crushed apples or pomace by the screw *F*.

The lower end of this screw is kept in place on the center of the follower by the step *G*, seen in fig. 2.

H is a cap-piece or girder, which connects the parts of the frame and forms the top or cap of the frame.

The screw *F* works down through the cap or through a nut.

I is a lever on the upper end of the screw, by which the latter is turned in either direction. When the tub is to be filled or partly filled with pomace the screw is turned up above the tub and the follower is removed.

J represents the grinder or crusher, which is attached to the side of the frame by bolts or screws through the arms *K K*.

L is a short cylinder, to which the arms are attached, and which incloses the stationary cone and also a portion of the revolving crusher-wheel.

M is the stationary cone, the base of which is smaller in diameter than the cylinder *L*, so that the crushed fruit or pomace is allowed to escape through the annular space *N* and drop therefrom into the tub.

O represent ribs on the outside of the cone, which diminish in size from near the apex to the base.

The base of the cone is provided with more or less lugs, *P*, by means of which it is fastened to the rear portion of the cylinder, as seen in fig. 3.

R is the crusher-wheel, which is something in the form of a propeller-wheel, having four (more or less) angular curved blades, *S*, radiating from a central hub, each blade being placed at an angle of about forty-five degrees with the axis.

T is a cylindrical case corresponding in diameter with the cylinder *L*, having the hopper *U* attached thereto.

The two cylinders *L* and *T* are connected together by sliding connections, or in any other manner which will allow them to be separated readily.

V is the shaft, to which the crusher-wheel is attached. The inner end of this shaft is supported by the apex or center of the stationary cone. The outer portion passes through and is supported by the cylinder *T*.

The position of the grinding-wheel in regard to the stationary cone is seen in the section, fig. 2.

It will be seen that the apples (or other fruit) are subjected to the action of the blades from the central hub to the points of the blades. The blades acting upon the fruit, in connection with the ribs on the stationary cone, reduces the fruit to a pulp in the most perfect and expeditious manner.

The grinding or crushing-wheel is revolved by hand or other motive power, the former being applied to the crank *W*. The latter may be applied to a pulley on the shaft instead of a crank.

The tub is fastened down to the platform by hooks, as seen at *x x*, fig. 1.

This is a most compact and convenient mill for making cider and for similar purposes, and its advantages will be obvious to all.

Having thus described my invention,

I claim as new and desire to secure by Letters Patent—

The rotary crusher *R*, having spirally-curved wings *S*, combined with ribs *O*, diminishing in height from apex to base, for the purpose specified.

DANIEL H. KRAUSER.

Witnesses:

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