

T. Van Kannel,

Cider Mill.

N^o 66,427.

Patented July 2, 1867.

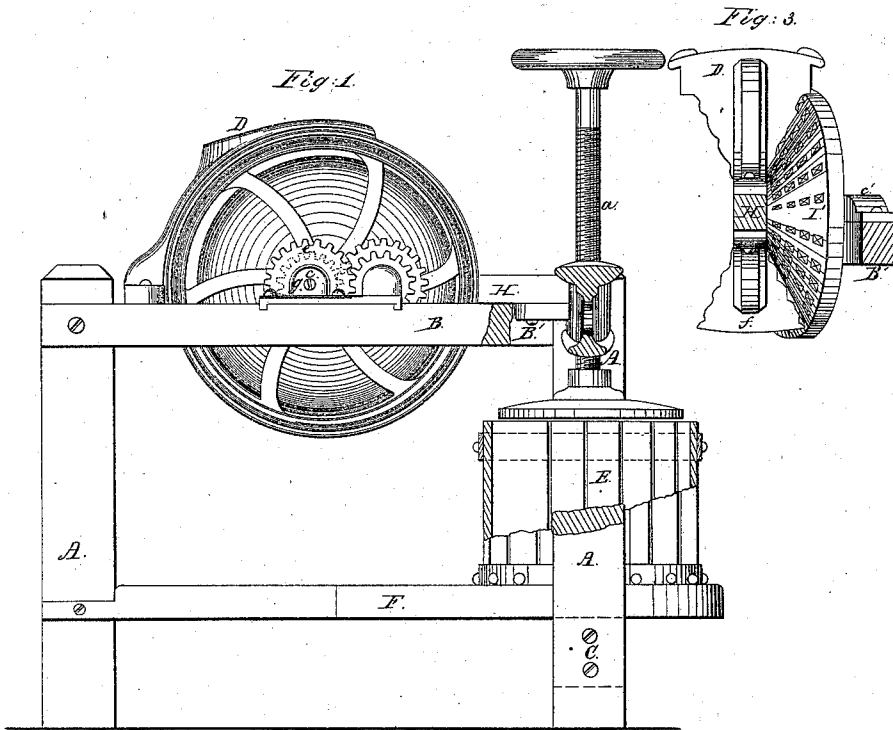
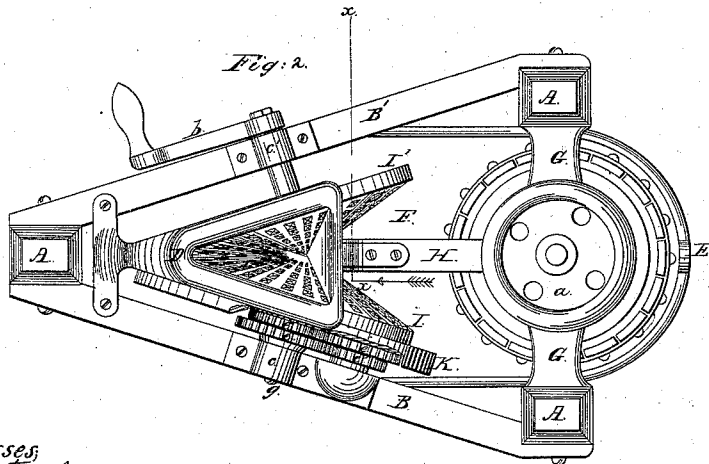
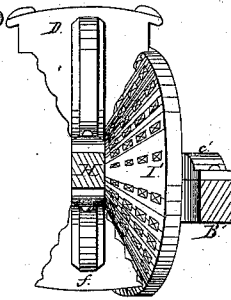
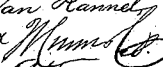


Fig. 3.



*Witnesses
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THEOPHILUS VAN KANNEL, OF CINCINNATI, OHIO.

Letters Patent No. 66,427, dated July 2, 1867.

IMPROVEMENT IN CIDER-MILLS.

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, THEOPHILUS VAN KANNEL, of Cincinnati, Hamilton county, and State of Ohio, have invented a new and useful Improvement in Cider-Mills; 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 drawings, forming part of this specification, in which—

Figure 1 is an elevation.

Figure 2 is a plan.

Figure 3 is a detached part taken in the line *x x*, fig. 2.

Similar letters of reference indicate like parts.

This invention relates to the construction of a mill for crushing apples and other fruits into a pomace for extracting the juices by pressure, and consists in coupling two cones or bevelled disks, face to face, to revolve against each other within a triangular hopper. In the bevelled faces of the disks is set a series of concentric circles of teeth, which fit into corresponding cavities in each other, and perform the double office of gearing and crushing. The hopper, the disks, and other parts of the mill are made of cast iron, and are fastened to a triangular frame, forming, together, a strong, simple, and compact cider-mill.

A A A are three stout upright timbers, connected by cross-timbers B B' on each side above, and below by the shorter cross-timber C, forming a triangular frame for supporting the mill. Belonging to the mill, and supported on its frame, is an ordinary screw-press E, placed on the platform F and under the cross-head G, through which passes the compressing-screw *a*. From the cross-head G runs a centre-timber H, to the hopper D, which is bolted to it on one side, and also to the timbers B B' on the opposite side. The cones or bevelled disks I I' are placed face to face on one side within the hopper D, so that a series of concentric circles of teeth on each shall mesh or gear into a corresponding series of cavities in the other; and by means of the crank *b* rotary motion is imparted to the disk I'. Both disks are supported by and revolve on shafts, which have their outside bearings in boxes *e e'* on the timbers B B', and on the inside in a box on the end of the centre-timber H. On the shaft of disk I is placed a fly-wheel, K, which receives a fourfold velocity by means of a set of spur-wheels *e e* and pinions *e' e'*. Below the centre-timber H, and bolted to it, a triangular cast-iron pomace-scraper *f* (fig. 3) is fitted between the disks I I', corresponding to one side of the hopper D that lies between disks above, and is bolted to the same supporting-timber H. These parts in large-sized mills would be cast in one piece, including the centre-box or bearing of the shafts. It will be observed that the faces of the two disks I I' form a very acute angle at their point of contact, and lie together, very nearly, while they diverge widely above; thus at once providing for the introduction of large-sized fruit into the hopper, and complete crushing into fine pomace without any intermediate or additional apparatus. The disks are set up and adjusted by means of a set-screw *g* in the box *e*, which bears against the end of the shaft on the disk I. The fly-wheel K has curved arms setting in close to the disk I, to save room and give space within the framing for the gearing, and is guarded by a flanged rim of the hopper D.

The operation of the mill is obvious, and the pressing of the pomace is managed in the ordinary way.

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

Providing the cones or bevelled disks I I' with a series of concentric circles of teeth, meshing or gearing into a corresponding series of cavities upon each, as herein set forth, for the purpose specified.

THEOPHILUS VAN KANNEL.

Witnesses:

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