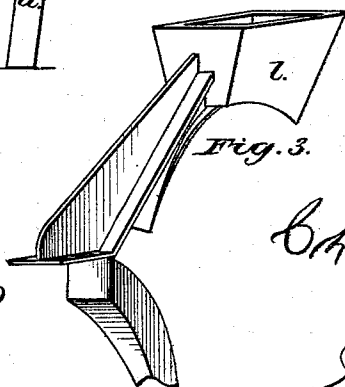
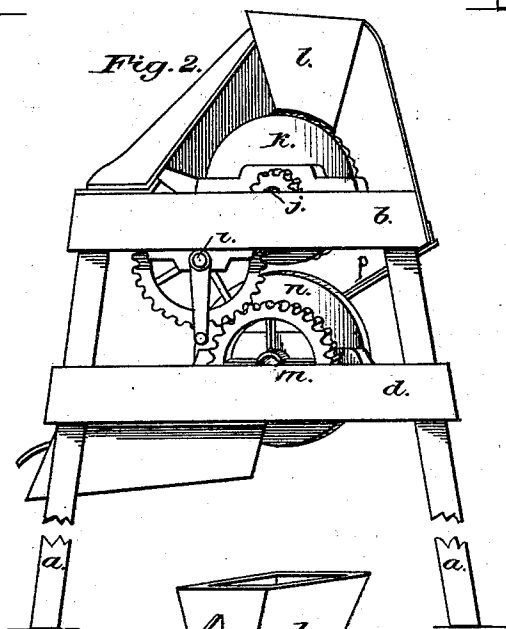
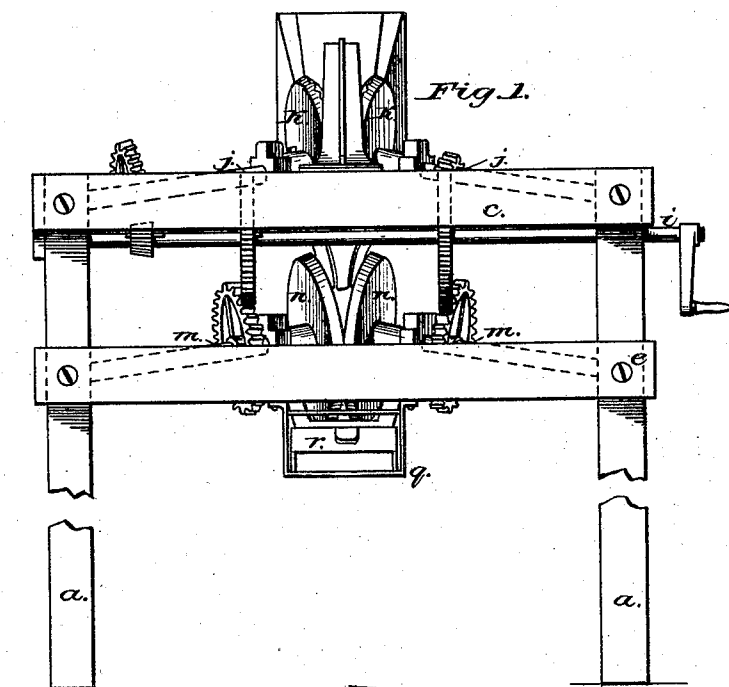


C. W. SCHWANENGEL & P. HABERSTICH.

CIDER MILL AND PRESS.

No. 172,055.

Patented Jan. 11, 1876.



Witnesses:

Joseph Hinger
C. P. Baumgardner

Inventors:

Charles William
Schwanengel
Philip Habersicht

UNITED STATES PATENT OFFICE.

CHARLES W. SCHWANENGEL AND PHILIP HABERSTICH, OF DAYTON, OHIO.

IMPROVEMENT IN CIDER MILLS AND PRESSES.

Specification forming part of Letters Patent No. **172,055**, dated January 11, 1876; application filed June 26, 1875.

To all whom it may concern:

Be it known that we, CHARLES WILLIAM SCHWANENGEL and PHILIP HABERSTICH, of the city of Dayton, county of Montgomery and State of Ohio, have invented a new and useful Combined Cider Mill and Press; and we do hereby declare that the following is a true, full and clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings making a part of this specification, in which drawings—

Figure I is a perspective front view of the combined cider mill and press. Fig. II represents parts of the machinery of the mill and press, and Fig. III a detail view of hopper and attachments.

The cider mill and press are of the figure and shape as represented in Fig. I, upon a square frame composed of four legs (marked in the drawings *a a a a*) combined at the top by stretchers *b b* on the sides, and stretchers *c c* in front and rear, respectively, and also by stretchers *d d* on the sides, and stretchers *e e* in front and rear, respectively, said stretchers *d d* and *e e* being fastened to legs *a a a a* some distance below the top of the frame. From the center of the front stretcher *c* there run two cross-pieces slanting outwardly to the rear stretcher *c*, and from the front stretcher *e* there are also two cross-pieces slanting outwardly to rear stretcher *e*. Near the top, and running in boxes fastened in or to stretchers *b b*, there is a main shaft, *i*, moved by power. Said main shaft *i* is provided with cog-wheels so arranged as to move two slanting shafts, *j j*, proceeding, respectively, from stretchers *b b* inwardly and upwardly and at a small angle backwardly to the central cross-pieces running in boxes on stretchers *b b*, and on such cross-pieces. These two slanting shafts are attached to, and move, two slant-faced wheels, *k k*, placed nearly perpendicularly between the cross-pieces moving in forward direction at different rates of speed, with their slanting faces toward each other, and pressing together toward the front part of the mill, and feeding, crushing, and grinding by means of the different rates of speed of said slant-faced wheels, the sides of said slant-faced wheels being corrugated or provided with projections on the faces toward each other, thus feeding, crushing, and grinding the apples that fall between them from a hopper, *l*, above

said slant-faced wheels *k k*. Below the main shaft *i*, and running respectively from the stretchers *e e* at a slight angle upward and backward to the lower central cross-pieces, respectively, and running in boxes in said stretchers *e e* and such cross-pieces, there are two shafts, *m m*, moved by cog-wheels attached to main shaft *i*, moving two slant-faced wheels or rollers, *n n*, so arranged as to turn simultaneously between the cross-pieces, with the slanting faces pressing toward each other on the forward and downward side. These slanting faces are provided with a coating of rubber or other elastic material, and turn forward, and are so placed to express the juice from the pulp falling between them from the crushing and grinding wheels *k k*. Between the wheels *n n*, on the forward side, there is a guide, so arranged and placed to properly guide the pulp falling from the crushing and grinding wheels *k k* into the pressing-surface of the wheels *n n*. On the rear side, between the wheels *n n*, there is a wedge-shaped rubber, *p*, so placed as to throw off the expressed pulp which passes through said wheels *n n*. Below the wheels *n n* there is a box-slide, *q*, with the open end toward the front, containing a movable box strainer or purifier, with perforated bottom, and provided with a rubber at the rear end projecting at a slant backwardly and upwardly, and cut or intersected in such a way as to clean and scrape the outer side of the wheels *n n*. The wheels *k k* and *n n* are so arranged that the grinding and pressing surfaces may be moved and set at a greater or less distance from each other by means of bolts, screws, washers, or otherwise.

We claim—

1. The spout containing the detachable perforated strainer, having the rear flexible scrapers.

2. The upper grinding and lower expressing pair of disks, having the wedge shape flexible scraper, in combination with the spout and its detachable perforated strainer.

In testimony whereof we have hereunto set our hands and seals at Dayton, Ohio, this 21st day of June, A. D. 1875.

CHARLES WILLIAM SCHWANENGEL.

PHILIP HABERSTICH.

Witnesses:

JOSEPH UNGER,
C. L. BAUMANN.