2 Sheets—Sheet 1

J. SCHOEPFLIN.

CIDER AND WINE PRESS.

No. 189,658. Patented April 17, 1877.

Fig. 1.

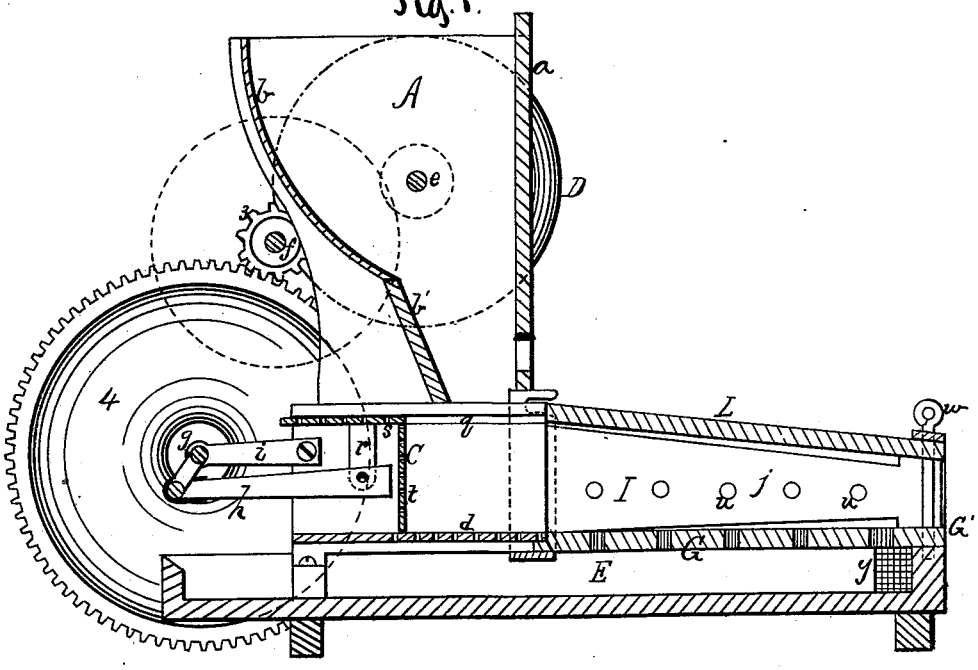
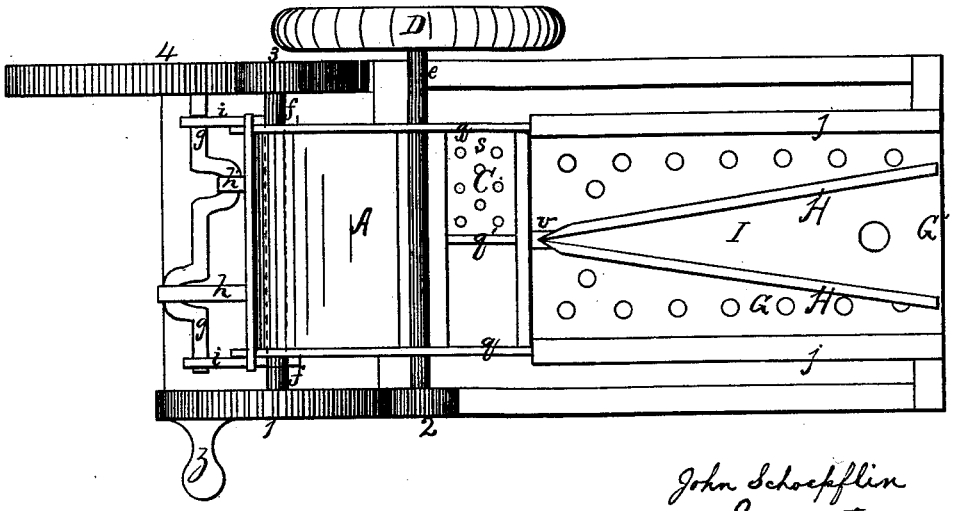


Fig. 2.



Witnesses:
J. R. Drake.
T. H. Parsons.

John Schoepflin
Inventor,
By
J. R. Drake,
atty.

2 Sheets—Sheet 2.

J. SCHOEPFLIN.

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Fig. 3.

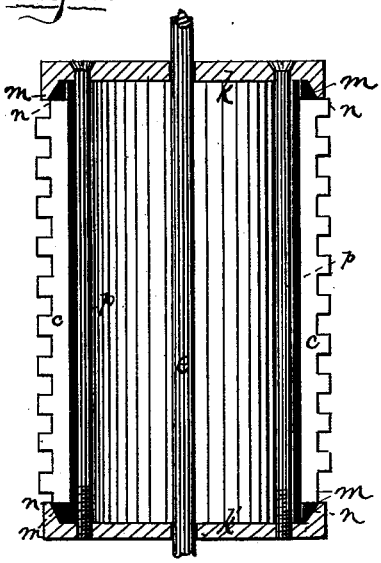
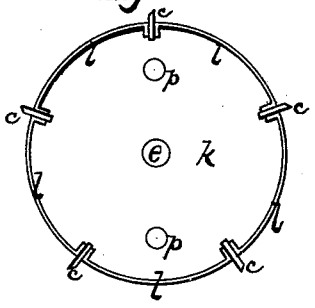


Fig. 4.



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UNITED STATES PATENT OFFICE.

JOHN SCHOEPFLIN, OF GARDENVILLE, NEW YORK.

IMPROVEMENT IN CIDER AND WINE PRESSES.

Specification forming part of Letters Patent No. **189,658**, dated April 17, 1877; application filed March 7, 1877.

To all whom it may concern:

Be it known that I, JOHN SCHOEPFLIN, of Gardenville, in the county of Erie and State of New York, have made certain Improvements in a Combined Cider Mill and Press, of which the following is a specification:

This invention not only combines in one device a hand cider mill and press, but includes improvements in the knives and the revolving knife-barrel; also, the manner of pressing the pulp, and the construction of the press, all as hereinafter fully described.

In the drawings, Figure 1 is a vertical cross-section of the combined mill and press with the grinding-barrel removed; Fig. 2, a plan, showing the arrangement of the press, &c.; Figs. 3 and 4, details of the barrels and knives.

A represents the cider-mill, having a straight front, *a*, and a curved back, *b*, so that the apples can be fed into the mill at the back, and then be acted on by the knives *c c* in the barrel B, the pulp, &c., dropping down the incline *b'*—a continuation of the back *b*—(see Fig. 1) onto the perforated bottom *d* of the mill, where it is acted on by the pressers C C. The knife-barrel or grinder B is revolved on shaft *e* by means of gear-wheels 1 2, outside the frame A, with a fly-wheel, D, on same shaft. The large gear-wheel 1 runs on shaft *f*, operated by a crank or handle, *z*, and at the other end of said shaft a small gear, 3, meshes into a large wheel, 4, on a double crank-shaft, *g*, which carries pitmen *h h'*, which operate the pressers C C. This crank-shaft *g* is held in place by horizontal hangers *i i*, or their equivalents. The pitmen *h h'* are pivoted to pendant hangers *r r*, attached to the top plate of the pressers C C. The knife-barrel B is constructed of two circular heads, *k k'*, setting on the shaft *e*. (See Figs. 3 and 4.) A number of segmental pieces, *l l l*, (see Fig. 4,) are set into the circular heads *k k'* by means of the beveled groove *m* in said heads and a corresponding bevel, *n n'*, on the ends of these segments. Between each of these segmental strips *l* is set a knife, *c*, the whole being held together by one or more long screw-rods, *p p*, (see Fig. 3,) the screw-head at one end, in one circular head, *k*, and the screw end holding in the opposite head *k'*. This, when tightened by means of the bevels *m* and *n*, holds the knives and segments firmly, making the knives removable, also, when desired.

By this construction these knives *c c* can be set deeper into or farther out, according to the grinding, and are easily removed to sharpen or replace. These knives are made of a single piece of metal, with square teeth, the ends of which are beveled off toward the back *b* of the mill A, and are so set in the barrel that the open spaces of one knife come gradually opposite the teeth of the next, and so on, so as to leave no space for the pulp to escape, being thoroughly cut.

The pressers C C are two rectangular pieces of metal, consisting of a top, *s*, and front plate *t*, both perforated to let the juice run through, the bottom frame-plate *d* being also perforated for the same purpose, the juice escaping into the trough E below. The top plate of the presser slides in grooves *q q* of the side pieces of the frame of the mill with a central partition, *q'*, to divide the pressers, which are alternate in their action. In small mills one presser will be enough; larger ones may have two or more.

In front of the mill A, and near the bottom, is attached the press, which is constructed with the bottom trough E, extending the whole length of, and forming a bottom to, the whole. Above this, and in a line with the perforated bottom *d* of the mill, is a pulp-box, I, with a slightly-slanting bottom, G, with side pieces *j j*, which converge toward the end G'. These side pieces have slits or holes *u u* (either or both) for the escape of the juice into the bottom. Their upper edges are also beveled and tapered down toward the front end G'. Two perforated partitions, H H, or extra sides, are set in this box I, the inner ends meeting against the partition *q'*, or are set in a groove, *v*, as shown in Fig. 2; the outer ends converge, as shown, forming two compartments, leading from each presser, and in which the pulp is forced into gradually-narrowing space in each until finally discharged at the outer end G', and the juice, constantly expressed from it through all the slits and perforations at the sides and bottom, dropping into the trough E and discharging at *y* through a sieve set in the discharge-opening.

A cover, L, is set on the top of the pulp-box

I, and is fastened down by a long screw, *w*, so as to resist the pressure of the mass inside, and is removable to clean out the press. The cover slants down gradually from the mill to the discharge end G′. This gives a gradually-narrowing space on three sides, insuring a thorough expressing of the juice.

This machine will also press grapes, by putting rollers in place of knives.

I claim—

1. In a cider-mill, the grinding-barrel B, constructed with the longitudinal segmental pieces *l l*, holding the knives *c c* between each, and having the beveled ends *n n*, and the heads *k k′*, with the beveled circles *m m* therein, all held together by the screw or screws *p*, substantially as and for the purpose specified.

2. In combination with the mill A B, the perforated pressers C C, operated by the crank-shaft *g*, all arranged and operating substantially as and for the purpose hereinbefore specified.

3. In combination with the mill A B, pressers C C, and trough E′, the perforated pressing pulp box I G G′ *j j*, the converging and diverging partitions or sides H H, and cover L, with the tightening-screw *w*, substantially as and for the purpose hereinbefore set forth.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

JOHN SCHOEPFLIN.

Witnesses:
J. R. DRAKE,
CHAS. SCHOEPFLIN.