(No Model.)

O. KROMER.

WINE OR CIDER PRESS.

No. 328,850. Patented Oct. 20, 1885.

Fig. 1

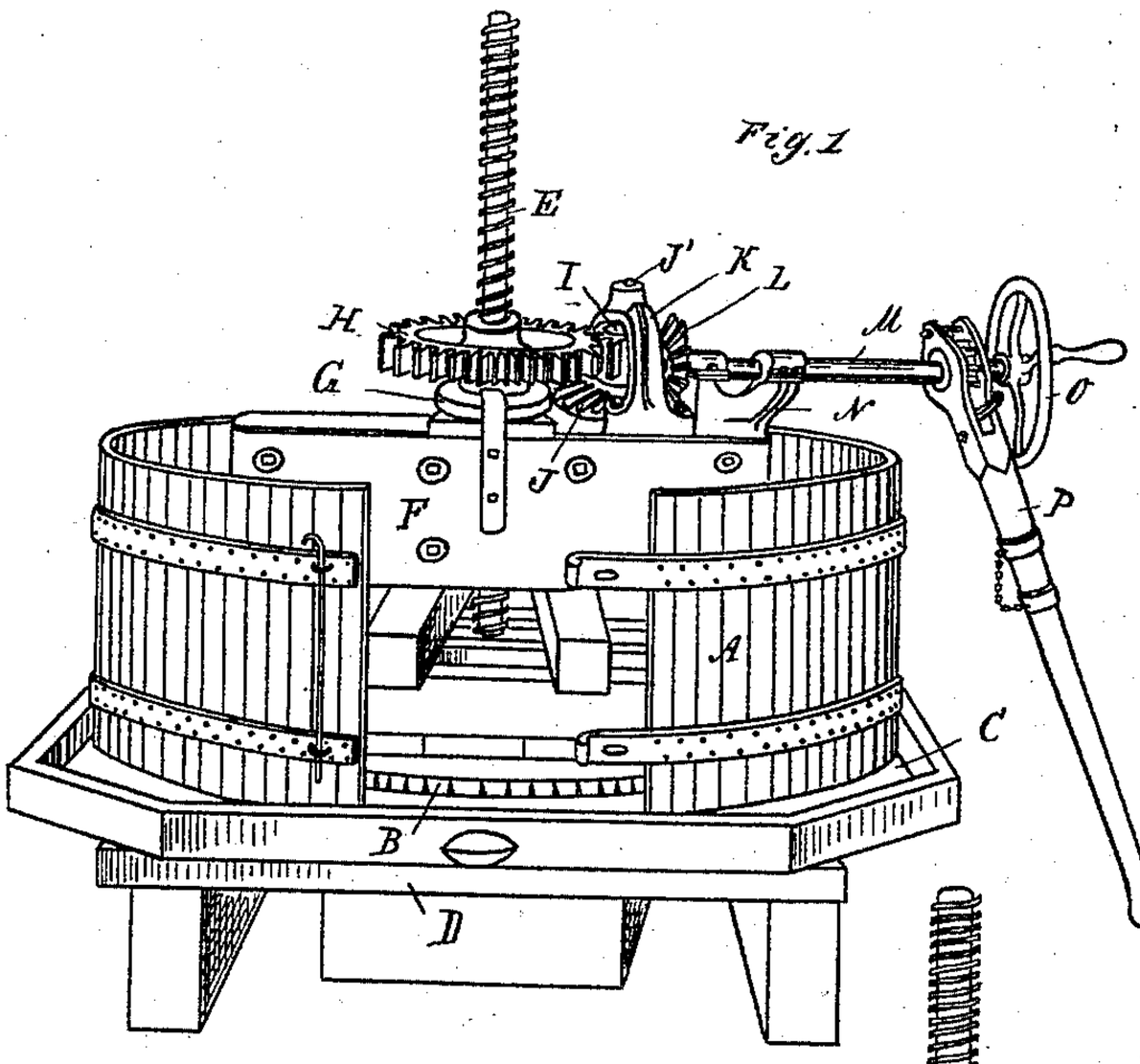


Fig. 3

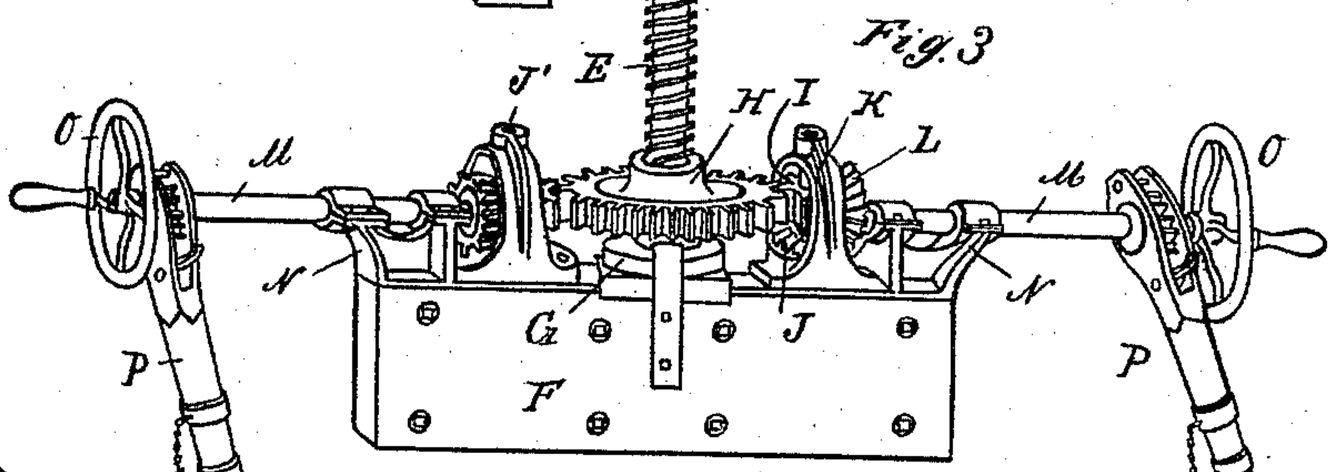


Fig. 4

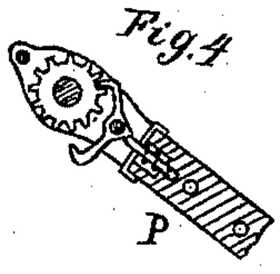
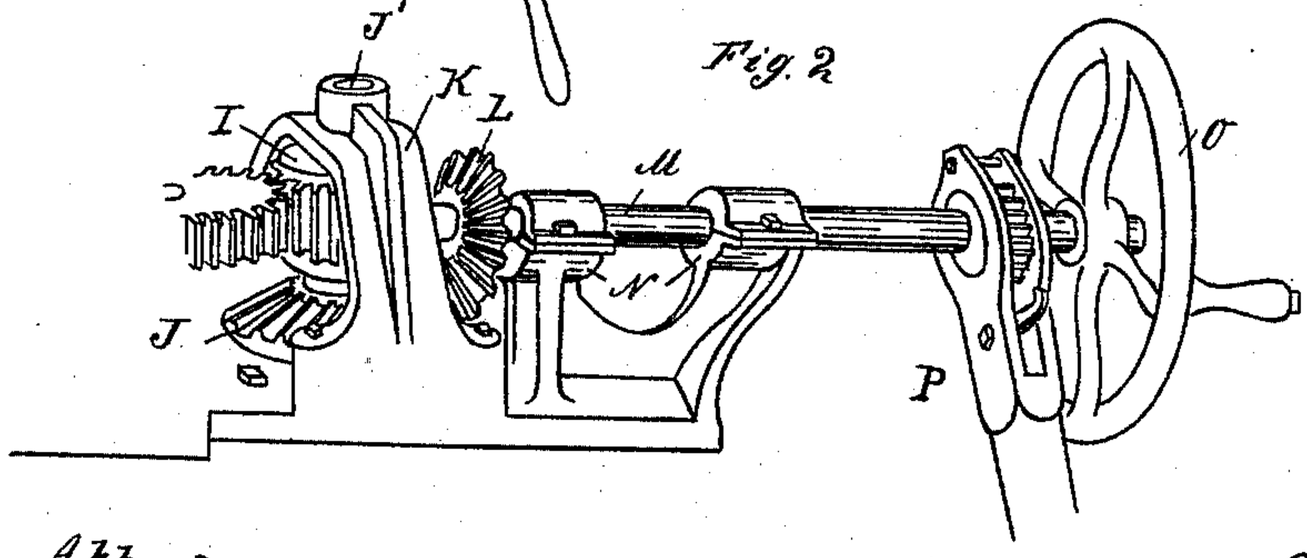


Fig. 2



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OTTO KROMER, OF SANDUSKY, OHIO.

WINE AND CIDER PRESS.

SPECIFICATION forming part of Letters Patent No. 328,850, dated October 20, 1885.

Application filed May 13, 1885. Serial No. 165,301. (No model.)

To all whom it may concern:

Be it known that I, OTTO KROMER, of Sandusky, in the county of Erie and State of Ohio, have invented new and useful Improvements in Wine and Cider Presses; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to a new and useful improvement in wine and cider presses; and my improvement has special reference to that class of presses known as "screw-presses."

My invention consists in the peculiar construction and arrangement of the gearing for operating the press, all as hereinafter described.

In the drawings which accompany this specification, Figure 1 is a perspective view of my improved press. Fig. 2 is a detached and enlarged perspective view of the gearing. Fig. 3 is a detached perspective, showing a duplicate arrangement of my improved gear. Fig. 4 is a section through the ratchet-lever.

A is the curb made in two semicircular halves, with the slats secured to wrought-iron bands, which latter are provided with latches, so that the curb may be opened, as shown in the drawings.

B is a bottom slatting for the juice to run through.

C is a platform provided with a raised edge for collecting the juice, and with a discharge-spout.

D is the bed upon which the press is supported.

E is a fixed vertical screw secured in the center of the curb.

F is the top member of the follower, to which the gearing is secured.

G is a nut engaging with the fixed screw E. It is permanently secured to the follower F in any suitable manner which will allow it to revolve. The nut G is revolved by the master-wheel H, of which the nut forms the hub. This master-wheel H is a spur-gear wheel, and engages with the spur-pinion I, which, together with a bevel gear-wheel, J, is secured upon the pinion-shaft J′, journaled vertically in the arched frame K. The bevel gear-wheel J engages with a bevel-pinion, L, secured to one end of the crank-shaft M, which latter is journaled in suitable bearings, N. The crank-shaft M projects beyond the curb, and is provided at its outer end with the crank-wheel O and ratchet-lever P, which latter can be operated freely on the side of the curb. The ratchet-lever P is reversible, as shown in Fig. 4, so that it may be worked from either side, as convenience and space will permit, and its handle is detachably secured, which permits of its being temporarily taken out of the way.

This same arrangement of gearing may be duplicated on the other end of the follower, as shown in Fig. 3, thus duplicating the power and balancing the follower.

By means of the crank-wheel and the ratchet-lever two powers are obtained. The crank-wheel gives a faster motion with less power, while the ratchet-lever gives great power with a relatively slower motion.

In practice the pomace is introduced from the top, after which a plank cover and suitable blocking is put over it to form a follower, of which the block F is the top member. Then the master-wheel H is run down on the screw by means of the crank-wheel O, and subsequently by means of the ratchet-lever P. When the pressing is completed, the top member of the follower is run up by hand.

As the press is especially designed and adapted to be built on a large scale, it was the main object of my invention to arrange the gearing with a special view to prevent the least obstruction on top of the curb, to place the crank and ratchet-lever in such positions that they may be operated from the floor on the side of the curb from any available point of the circumference thereof, and to choose such an arrangement of gear which overcomes the liability of the cogs getting forced out of gear or binding when the follower does not press down quite even. To accomplish these objects, I have made use of a comparatively small master-wheel, and have arranged all the other parts so as to gain an unobstructed access to the top of the curb. The lever is brought in a handy position on the side of the press. It is worked vertically instead of horizontally, and can be worked from either side with the

operator standing on the floor, or anywhere he finds it convenient, as the lever has an unobstructed circular sweep, which also permits him to work the follower down low.

The crank is in the same handy position as the lever, and also works in a horizontal plane.

By making the master-wheel a spur-gear wheel, instead of the usual crown or bevel gear-wheel, and meshing it with a vertical pinion, I obviate all danger of the cogs losing their mesh or pinching each other if the follower works uneven.

The bearings of the pinion-shaft and crank-shaft I preferably cast in one piece, as shown in Fig. 2. This arrangement keeps those parts of the gear always in proper alignment.

What I claim as my invention is—

1. In a wine or cider press having its follower operated by a fixed screw, a master-wheel engaging thereon, a crank-shaft and intermediate gear operated by the crank-shaft, the ratchet-lever P, secured to said crank-shaft and operating in a vertical plane beside the press, all arranged substantially as described.

2. In a wine or cider press, in combination, the fixed screw E, the master-wheel H, having a spur-gear, the pinion-shaft J′, the spur-gear pinion I, the bevel gear-wheel J, the crank-shaft M, the bevel gear-pinion L, and the reversible ratchet-lever P, and crank-wheel O, arranged to work in a vertical plane on the side of the press, all arranged as described.

3. In a wine or cider press, in combination, the fixed screw E, the master-wheel H, having a spur-gear, the pinion-shaft J′, the pinion I, the bevel gear-wheels J L, the crank-shaft M, the bearings K N, cast in one piece, and the reversible ratchet-lever P and crank-wheel O, arranged to work in a vertical plane on the side of the press, all substantially as described.

OTTO KROMER.

Witnesses:
FR. HATSEN,
C. MILLER.