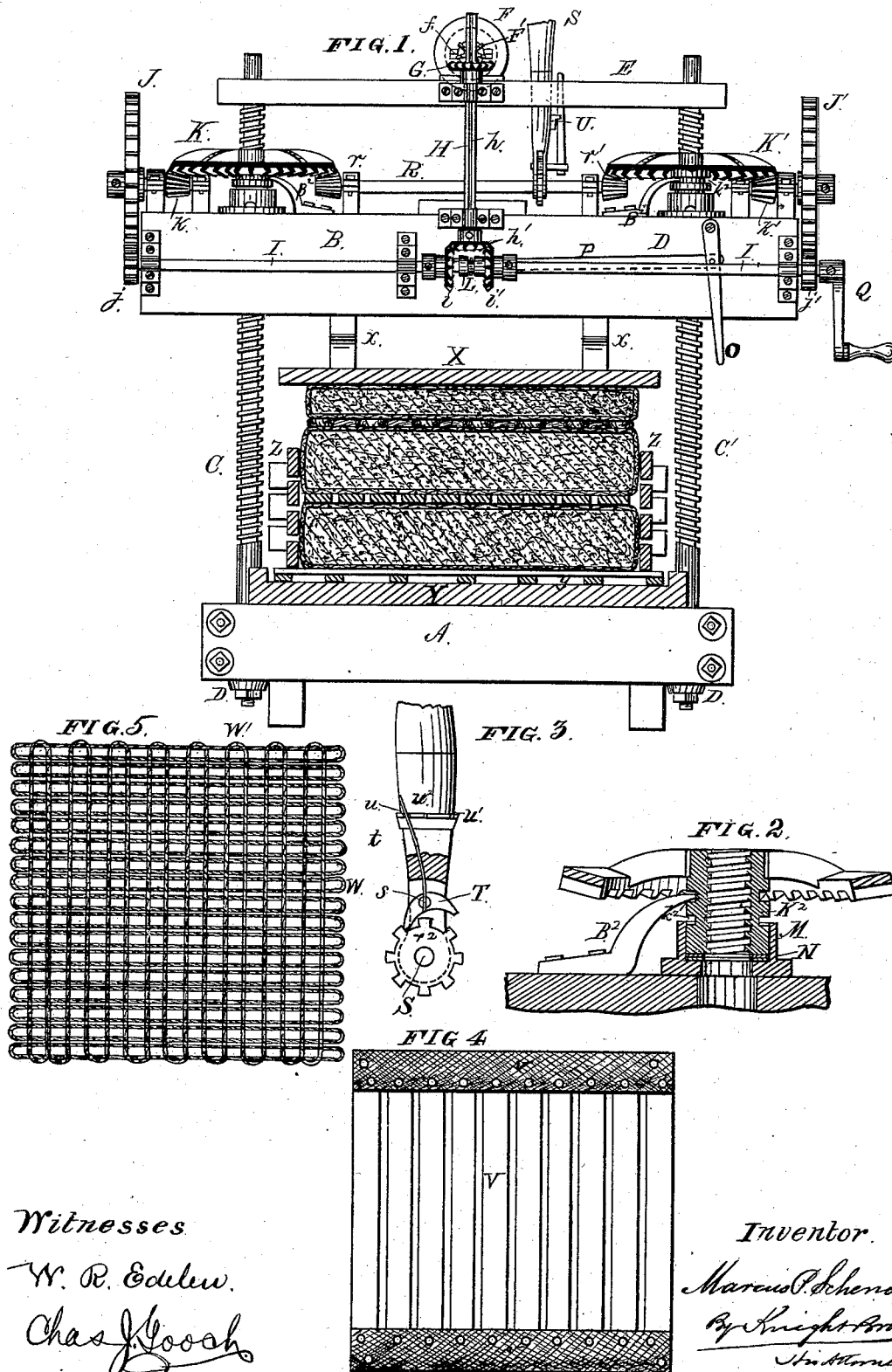


M. P. SCHENCK.  
Cider-Press.

No. 215,483.

Patented May 20, 1879.



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# UNITED STATES PATENT OFFICE.

MARCUS P. SCHENCK, OF FULTON, NEW YORK.

## IMPROVEMENT IN CIDER-PRESSES.

Specification forming part of Letters Patent No. **215,483**, dated May 20, 1879; application filed January 31, 1878.

*To all whom it may concern:*

Be it known that I, MARCUS P. SCHENCK, of Fulton, in the county of Oswego and State of New York, have invented a certain new and Improved Cider-Press, of which the following is a specification.

My press is constructed with two stationary upright screws, with right and left threads, respectively, on which are nuts operated simultaneously by gear-wheels, and bearing through anti-friction washers in suitable boxes on the press-beam. The nuts are driven by a connecting shaft or shafts, operated either by power or by hand, as required.

My improvement particularly consists in a combination of stationary screws, press-beam, wheels, nuts, recessed steps, and detached washer placed within the steps to reduce wear and friction; also, in the combination, with the aforesaid screws, beam, and nuts, of a lever-and-ratchet movement for operating the gearing, as hereinafter described.

In the accompanying drawings, Figure 1 is a front elevation of my improved press. Fig. 2 is a vertical section of one of the screw-nuts and attached gear-wheel on a larger scale. Fig. 3 is an elevation of the ratchet-lever detached. Fig. 4 is a plan view of a rack of connected slats to be interposed between the layers of material in the press. Fig. 5 is a plan of a mat made of cords transversely arranged in successive layers for a similar purpose.

A represents the base or bed of the press; B, the press-beam; C C', a pair of stationary screws having a right and left thread, respectively, both of them fixed by nuts D D to the bed A, and projecting upward through suitable apertures in the beam B.

E represents a bridge-piece extending from one to the other of the screws C C' at the top, and serving to support a driving-shaft, through which the machine is worked by means of a pulley, F, beveled pinion F', beveled gear G, and a vertical shaft, H, which is formed with either a spline or a groove, in which the hub of the gear-wheel G works, so as to impart rotary motion to the said shaft, while the latter slides freely up and down within the gear-wheel as the press-beam is raised or lowered.

At the bottom of the shaft H is a beveled pinion, h', gearing with beveled pinions i i', running loosely on the central part of a shaft, I, which is mounted in suitable bearings on the face of the press-beam B, and carries at its outer ends pinions j j, which gear with wheels J J', the shafts of which are mounted in suitable bearings on the press-beam B, and carry beveled pinions k k, which drive beveled wheels K K', the hubs of which form nuts K<sup>2</sup>, as shown on a larger scale in Fig. 2, working on the vertical screws C C', and resting in recessed steps M M on the press-beam. The recesses or chambers of the step contain steel or brass washers N, which receive and reduce the friction of the lower end of the nuts or hubs K<sup>2</sup>.

By constructing the steps with recesses to receive the said washers and the lower ends of the hubs, the hub and nut and the step and washers are all held in concentric position, so as to protect the moving parts from any chafing of the screw.

The loose pinions i i' are connected with the shaft I at the will of the operator, so as to impart rotation thereto in either direction by means of a clutch, L, operated by a lever, O, and connecting-rod P, and sliding on a suitable spline or groove in the shaft, so that when it is thrown into connection with the pinion i', as illustrated in Fig. 1, the shaft I will be driven by the shaft H in one direction, and when the said clutch is thrown into connection with the pinion i the shaft I will be rotated in the other direction, or by setting the clutch in intermediate position both pulleys i i' will run loosely, and the shaft I and nuts and press-beam will remain at rest, while the power-connections F G H may run continuously. The press-beam is thus forced down or elevated or stopped, at the will of the operator.

Q represents a crank, by means of which the press-beam may be run up or down by hand when the clutch L is disconnected with the pinions i i'.

For a hand-press the cog-gears K K' are driven by beveled pinions r r' on a horizontal shaft, R, which is rotated in either direction by a hand-lever, S, working over a ratchet-wheel, r<sup>2</sup>, on the shaft R, and turning the said

wheel in either direction by means of an adjustable pawl, T, pivoted at *s* to the lever S, and having an elastic arm or lever, *t*, which may be set in either of the notches *u*, *u*<sup>1</sup>, or *u*<sup>2</sup> on the face of the lever S, in order that the reciprocation of the said lever may turn the ratchet-wheel *r*<sup>2</sup> in either direction, so that it may be elevated or lowered or left at rest. The connections of the hand-lever are shown on a larger scale in Fig. 3.

In order to afford a bearing for the press-cloth, which will protect it from great violence or danger of tearing, and especially from forcible outward pressure, I place between the cheeses a rack constructed, as shown in Fig. 4, of slats, V, connected by a webbing, *v*, or cloth of any kind. A rack thus constructed is readily rolled up for transportation or for stowing away, and while in use not only fully protects the press-cloth, but affords perfect freedom of drainage for the cider or other liquid running from the press.

I further employ for the same purpose a mat represented in Fig. 5, consisting of cords W W', laid in alternate coils in two layers, the coils of one being transverse to the coils of the other, as shown.

X represents the customary platen or fol-

lower, upon which the press-beam rests through the medium of transverse beams *x*.

Y is the bottom board, resting on the bed A, and surmounted by the customary rack *y*. Z represents the press-curb, made of boards with notched ends locked together.

For elevating the beam and supporting it from the nuts K<sup>2</sup>, I employ brackets or arms B<sup>2</sup>, securely bolted to the top of the beam B, and engaging in grooves *k*<sup>2</sup> in the periphery of the nuts or hubs K<sup>2</sup>.

Having thus described my invention, the following is what I claim as new and desire to secure by Letters Patent:

1. The combination of the wheels K K<sup>1</sup>, nuts K<sup>2</sup>, recessed steps M, and the loose anti-friction washers N, placed in the bottom of the recessed steps beneath the nuts without attachment thereto.

2. The combination of the press-beam B, screws C C', wheels K K<sup>1</sup>, nuts K<sup>2</sup>, shafts H I, clutch L, and pinions *h'* *i'*, substantially as and for the purpose set forth.

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Witnesses:

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