C. Auborn,

Cheese Press.

No. 31,940. Patented Apr. 9, 1861.

Fig. 2

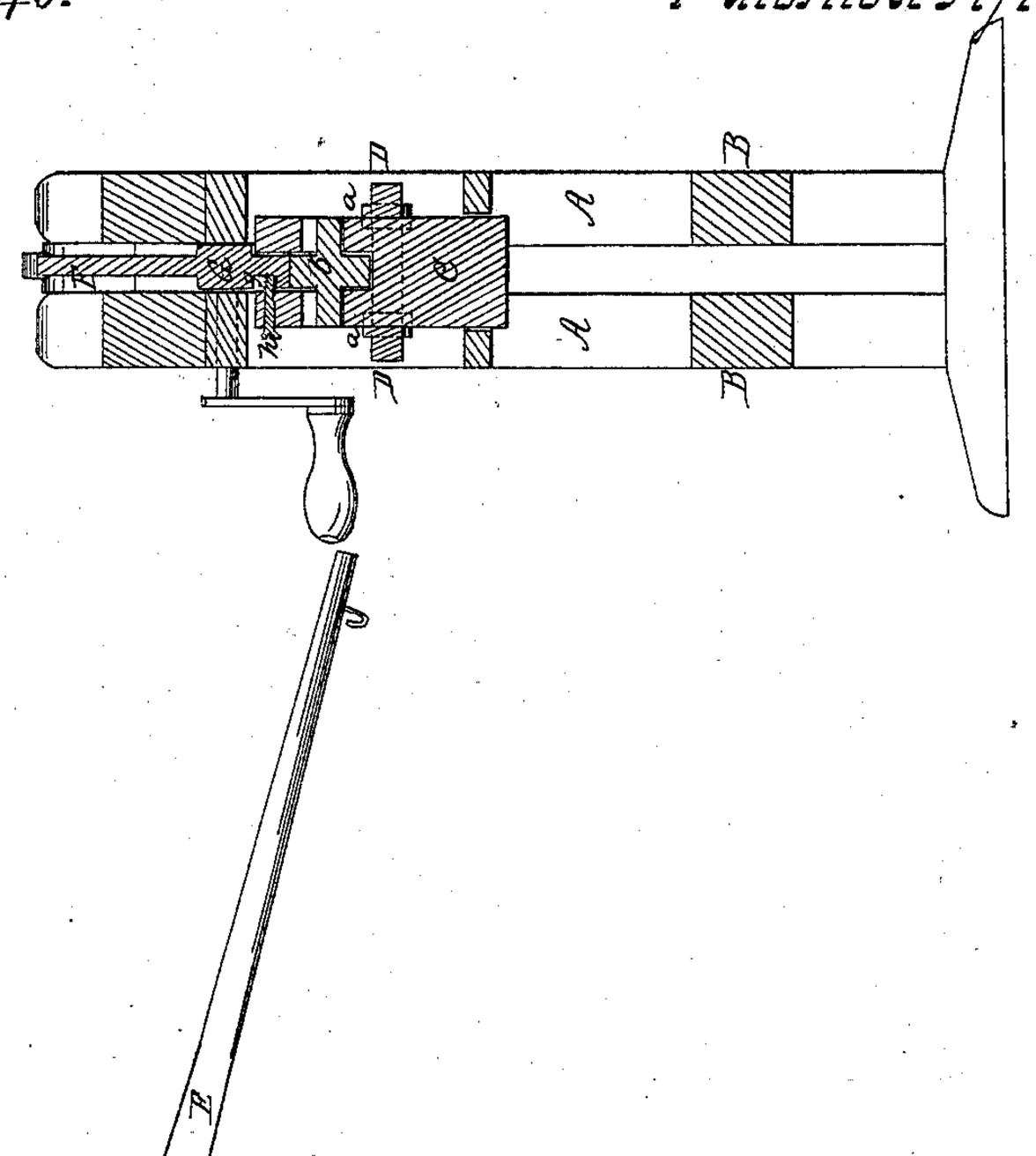
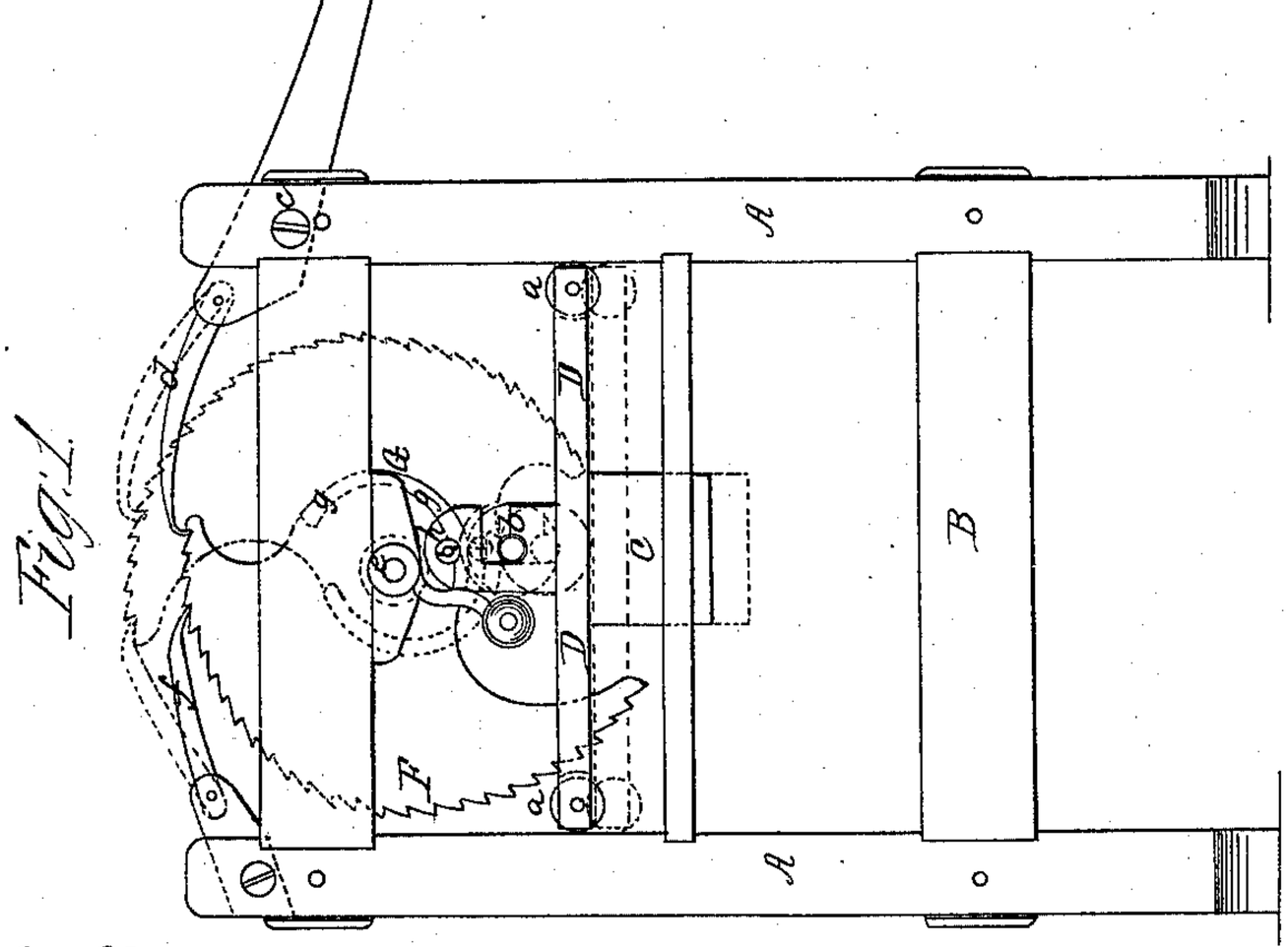


Fig. 1



Witnesses
Jas. D. Allan
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Inventor.
Calvin Auborn by
A. Pollok his atty

UNITED STATES PATENT OFFICE.

CALVIN AUBORN, OF WATERTOWN, NEW YORK.

CHEESE-PRESS.

Specification of Letters Patent No. 31,940, dated April 9, 1861.

To all whom it may concern:

Be it known that I, CALVIN AUBORN, of Watertown, in the county of Jefferson and State of New York, have invented a new and useful Improvement in Cheese and other Presses; and I do hereby declare that the following, taken in connection with the accompanying drawing, which forms part of this specification, is such a full and clear description thereof as to enable others skilled in constructing and making cheese and other presses to make and use this my improvement.

In the accompanying drawing, Figure 1 represents a side elevation of a press constructed according to my improvement and as applicable to pressing cheese; and Fig. 2 a transverse section thereof.

Cheese and other presses have been so variously constructed that any improvement upon them must necessarily include devices which are common to many or all. Thus, the employment of the lever as a handle whereby to operate the platen by or through the intervention of a ratchet wheel acted on by a pawl, and cam or cams to produce a gradual and heavy pressure, also antifriction rollers to lessen wear and reduce the labor of working the press, involves of itself or of themselves, separately considered and apart from peculiar construction or arrangement, no novelty. But in presses as in most machines it often happens that greater simplicity is attained and practical utility enhanced, either by certain peculiarities in construction or a novel combination or arrangement of such devices. Such is the case with my present improvement which I shall now proceed to describe by referring to the accompanying drawing, wherein—

A represents the frame of the press constructed in any suitable manner.

B, is the bed or bottom on which the article to be pressed is placed, and C the pressing block or platen that may be steadied and guided by working up and down between cross pieces in the frame and be further held and directed by its connection with a cross up and down sliding frame D, carrying rollers *a*, *a*, on opposite sides of it which work against or between the uprights of the frame and, in connection with a roller *b*, mounted on the pressing block or platen, materially tend to lessen lateral pressure consequent upon the application of the pressing force and to reduce friction.

E, is the operating lever or beam, pivoted at *c*, and the short arm of which has jointed or pivoted to it a pawl *d*, that engages with a ratchet sector or segment F, in such manner as that on pulling down on the operating lever E, said pawl moves or works the segment which rocks on or is connected with a shaft *e* that is hung or works in suitable bearings and which is concentric to the toothed periphery of the segment. On raising the lever E, the pawl *d* slips or rides over the tooth or teeth of the segment, and another pawl *f* connected to the frame on the opposite side of the shaft *e*, may be used to lock the segment from working back during such upward movement of the operating lever and to retain the pressing force given out to the press, as well understood in the application of such locking contrivances.

Around the bottom and unoccupied side of the shaft *e* to that on which is arranged the concentric toothed segment, and eccentric to said shaft, is a cam G, so shaped and disposed and arranged over the mounted roller *b*, of the platen as that on giving motion to the toothed segment by the operating lever as described, said cam gradually acts on the roller *b* to depress the platen. In this way is the pressing force produced, every downward pull of the operating lever, in the up and down reciprocation of the latter, causing the cam to give an additional downward thrust to or action of the platen throughout the range of the toothed segment. Said cam may be shaped to give at first a quicker and afterward a slower and more powerful movement to the platen as the resistance in pressing increases. In such arrangement there is no pitman or connecting rod to break or bend, and the operating segment and platen-pressing cam forming as combined but one device and both lying over the central portion of the platen or platen roller, where a roller instead of a stationary surface is used for the cam to act against, construction is simplified, the hanging of the one device in its place includes the hanging of the other, and objectionable lateral strain or longitudinal tip of the cam shaft is avoided, also the tendency of parts to loosen or disconnect, reduced.

To run the platen up or back, the cam G is grooved or formed with a rim *g*, on one or both sides of its periphery into or on which gears or rests a projection, pin or roller, or pins or rollers *h* connected with the platen or its bracket at the top, so that on releasing the pawls which gear with the segment and turning the latter back which may be done by crank or handle on its shaft, the cam quickly elevates the platen.

Having now described my improvement, I claim—

1. The toothed operating segment or sector and platen pressing cam, combined to form but a single device and the one being concentric and the other eccentric to or with the shaft which carries them and otherwise peculiarly constructed for operation by a lever and pawl to communicate pressing force to the platen essentially as shown and described.

2. The combination of the peculiarly constructed and combined toothed operating segment and platen driving cam, with the rollers which serve to guide the platen at its sides or ends and the roller interposed between the cam and platen and against which the cam is made to bear, all for operation together as herein set forth.

In testimony whereof I have signed my name to this specification before two subscribing witnesses.

CALVIN AUBORN.

Witnesses:
JN. WESLEY HORR,
ELIJAH HORR.