

Jonathan Holbrook's Improvement in Screw Presses.

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PATENTED JUL 18 1871

Fig 1

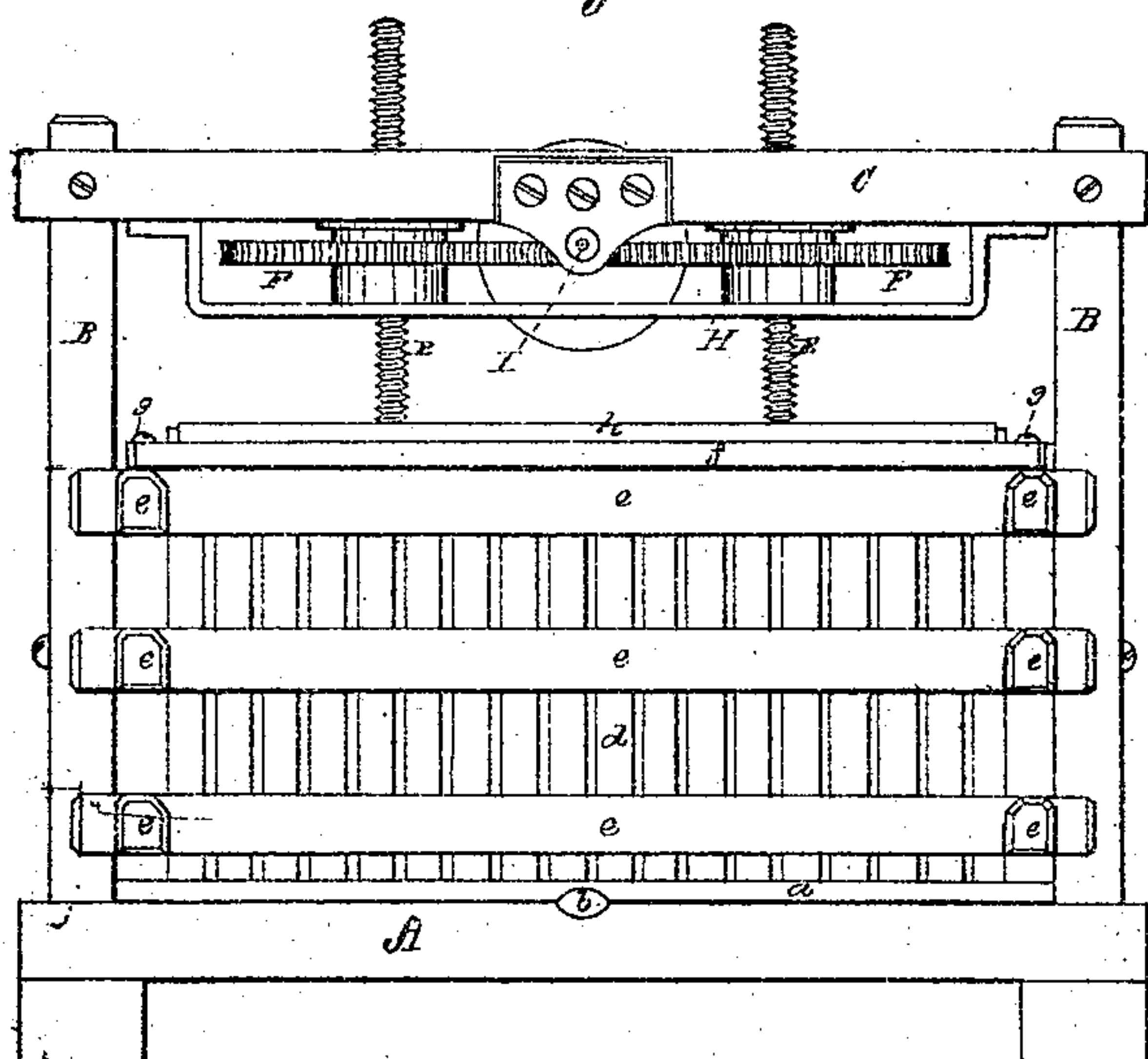


Fig 4

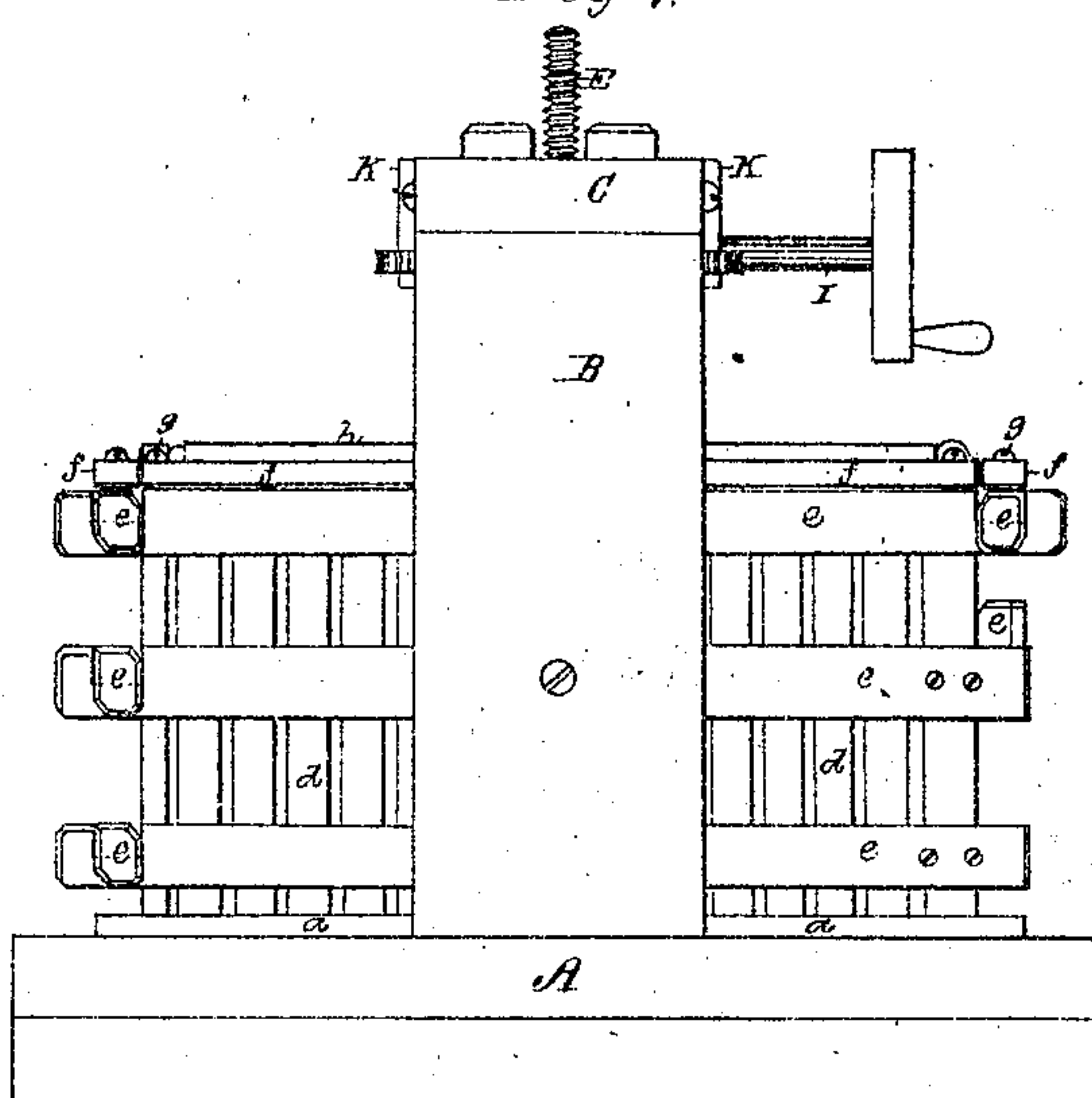


Fig 2

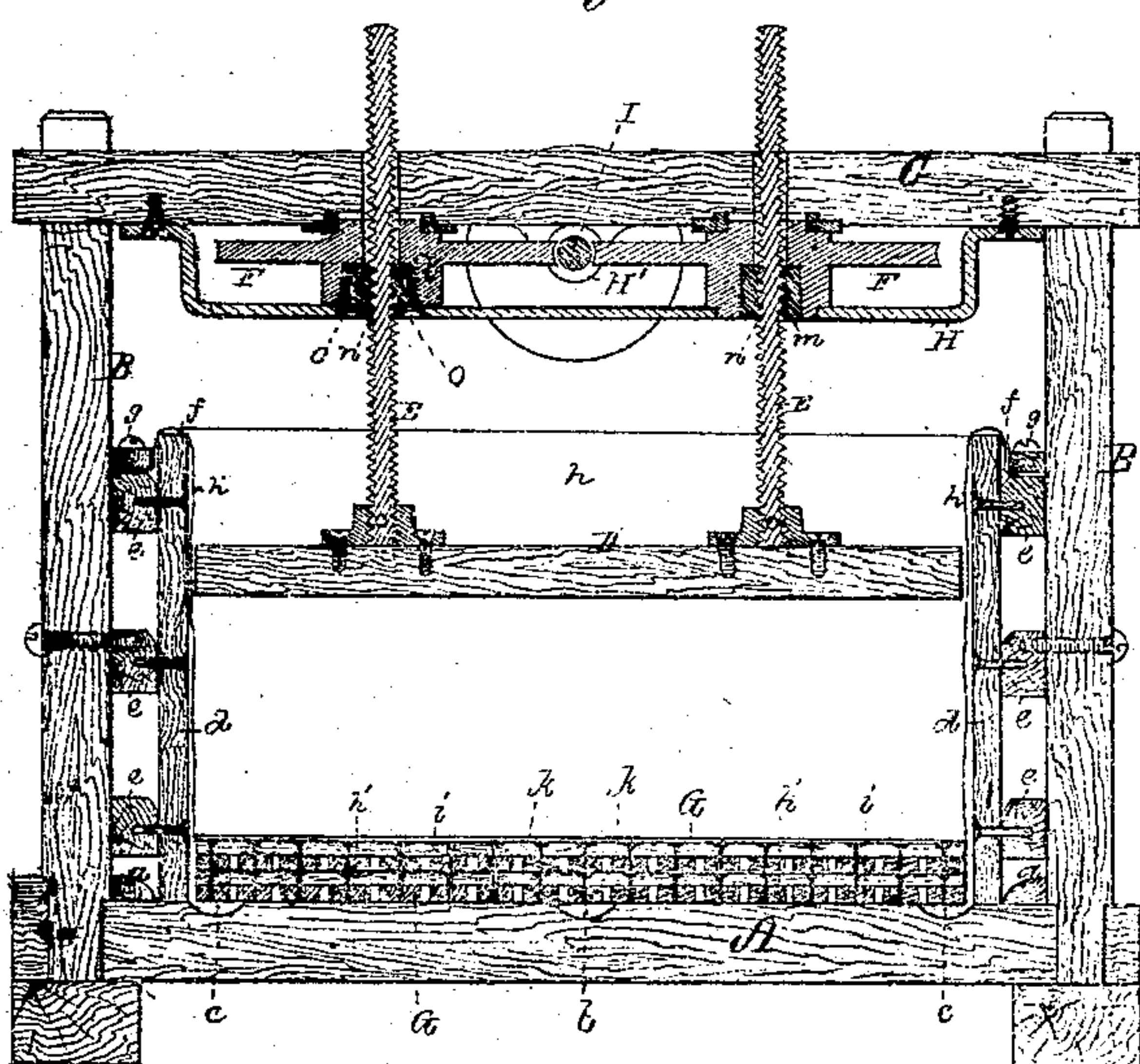
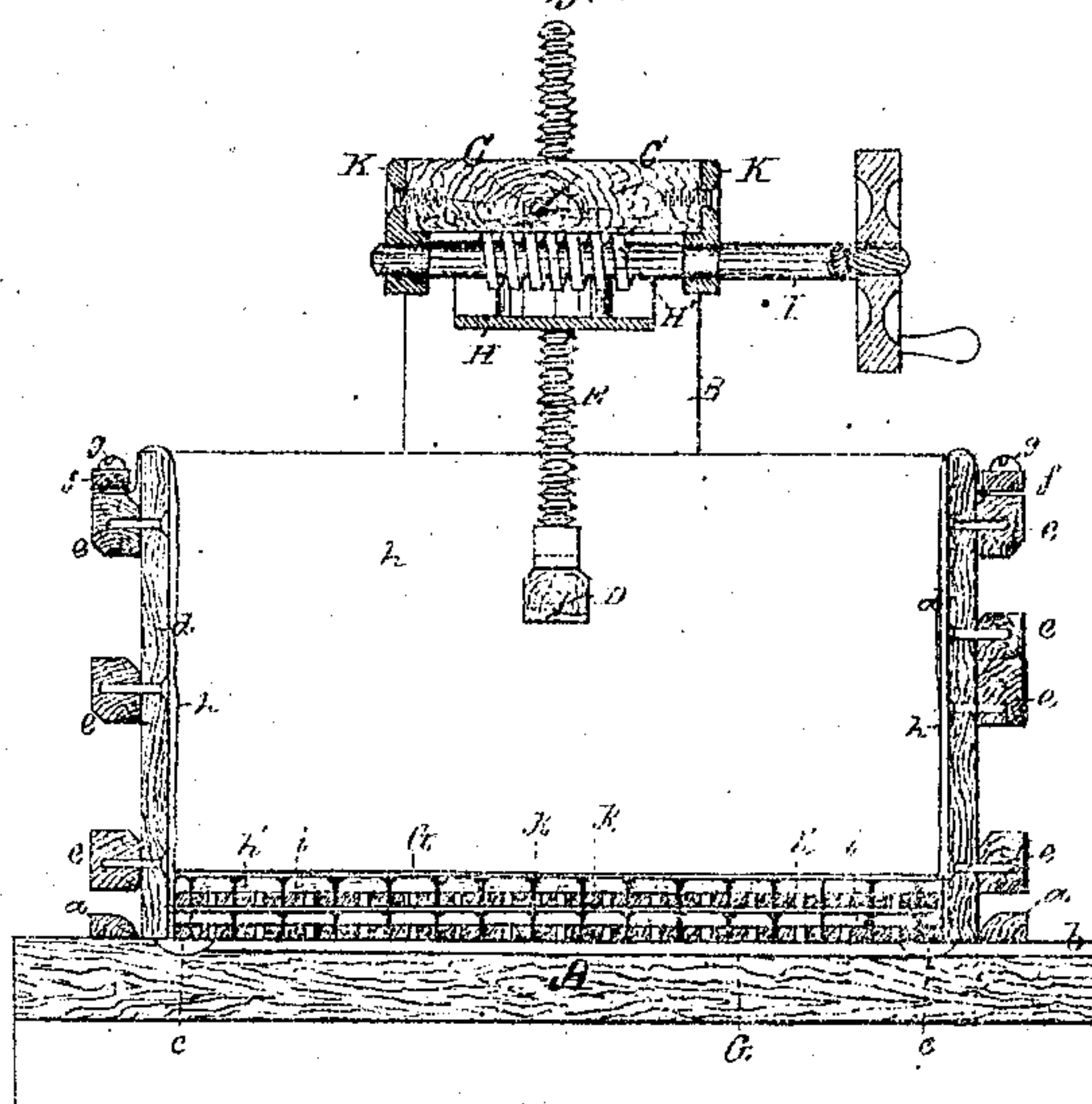


Fig 3



Witnesses.

S. N. Piper

J. R. Snow

J. Holbrook.

by his attorney

R. L. Clegg

UNITED STATES PATENT OFFICE.

JONATHAN HOLBROOK, OF SHERBURNE, MASSACHUSETTS.

IMPROVEMENT IN CIDER-PRESSES.

Specification forming part of Letters Patent No. 117,075, dated July 18, 1871.

To all whom it may concern:

Be it known that I, JONATHAN HOLBROOK, of Sherburne, of the county of Middlesex and State of Massachusetts, have invented a new and useful Improvement in Presses for expelling the juice from Apples and other fruits; and do hereby declare the same to be fully described in the following specification, and represented in the accompanying drawing, of which—

Figure 1 is a front elevation, Fig. 2 a longitudinal section, and Fig. 3, a transverse section of my improved press. Fig. 4 is an end elevation of it.

In such drawing, A denotes the bed of the press, provided with two posts, B B, and a cross-bar, C, the latter being extended from the upper part of one post to that of the other and fixed to both, as shown. Furthermore, the bed has a ledge, *a*, projecting from its upper surface and carried around parallel with the sides and ends of the bed, so as to form, with the bed, a shallow receiver or trough, out of which there is led an educt, *b*, such educt being made to open out of a series of grooves, *c c*, made across the upper surface of the bed. Resting on the bed, and within the receiver formed by the ledges, and against such ledges, are four series of vertical slats, *d*, each series being fastened to a series of horizontal timbers or bars, *e e e*. The bars *e* at the ends of the press are arranged at right angles with those of the sides, and are scarped or locked upon them or fastened to them so as to form, with the base, a receptacle for holding the matter to be pressed. One side of the receptacle should be applied so as to be capable of being removed from the rest. The upright bars and their horizontal bars of each series constitute a frame, there being to the top bar of each frame a cap-bar, *f*, provided with screws *g g*, which go through it near the ends and screw into the top bar, the same serving to hold in place a cloth, *h*, there being one of such cloths arranged against the inner side of each frame, the whole being as shown. With the press-receiver so made there is to be employed a series of lattice-work partitions, G G, each being composed of two series of slats, *h i*, those of such series being arranged parallel and at short distances apart, and at right angles to the other series, they being riveted or otherwise secured together. These divisional partitions are to be of a size to fit within the receiver, and,

when used, there is to be one or more layers of cloth, *k*, placed on the top of each of them. Arranged within the receiver is a cross-bar, D, from which two screws, E E, project upward, in manner as shown, and screw through the hubs of two large worm-gears, F F, arranged just beneath the bar C, and supported on a rest-plate, H, fastened thereto, and arranged as represented. These worm-gears mutually engage with a screw or worm, I, arranged between them and fixed on a shaft, I, arranged in hangers K K extended down from opposite edges of the bar C. The threads of the screws are to be pitched in opposite directions, as shown, and the screws extend up through the bar C without being screwed into it. On revolving the shaft I both of the worm-gears will be simultaneously revolved, so as to either raise or depress the screws and their connecting bottom bar. I would observe that the hub of each worm-gear is socketed or chambered from its lower end upward, as shown at *l*, to receive a cylinder or block, *m*, in which the female screw *n* is cut to operate with the male screw E, the block *m* being held in place and from revolving in the hub by two screws, *o o*, screwed partly into the hub and partly into the block. This construction of each of the worm-gears and combination with it of the separate nut is very advantageous, as such admits of the ready removal of the nut when worn and the substitution of another or fresh one.

In using the said press-boards or planks are to be laid on the top of the mass to be pressed, and crosswise underneath the bar D. In charging the press with apples or fruit there are to be alternate layers of such and the partitions G G. After the pile may have been completed and the top plank may have been duly arranged, the shaft of the pressing machinery may be put in revolution in a manner to cause the screws E E to descend and force the bar D down upon the pile, in consequence of which the fruit will be crushed and the juice be expressed through the filtering-cloths or shams, and will run in various directions through the channels of the partitions and out through the lateral or vertical filters or straining-cloths, and from thence down through the channels between the vertical side bars, and thence into the shallow receiver or trough of the base, and finally escape through the educt thereof.

The construction of the press-box enables it

to be readily taken apart at any time for being cleaned, in order to prevent the formation of mold or must.

This press has been found to be remarkably efficient in expressing the juice of apples for the conversion of such into cider or vinegar, it being ejected in strained state, fit for being at once put into casks.

I make no claim to the combination and arrangement of the bar D, the two screws E E, the nuts, the worm-gears, and the worm and its shaft; nor

do I claim the nuts and gears as constructed and applied, as set forth.

I claim as my invention—

The arrangement of the base A, ledge *a*, educt *b*, slats *d d*, horizontal bars *e e*, cap-bar *f*, and straining-cloths *h h*, all substantially as and for the purpose as set forth.

JONATHAN HOLBROOK.

Witnesses:

R. H. EDDY,

J. R. SNOW.