

Albert M. Dexter's Improved Box-Board Machine.

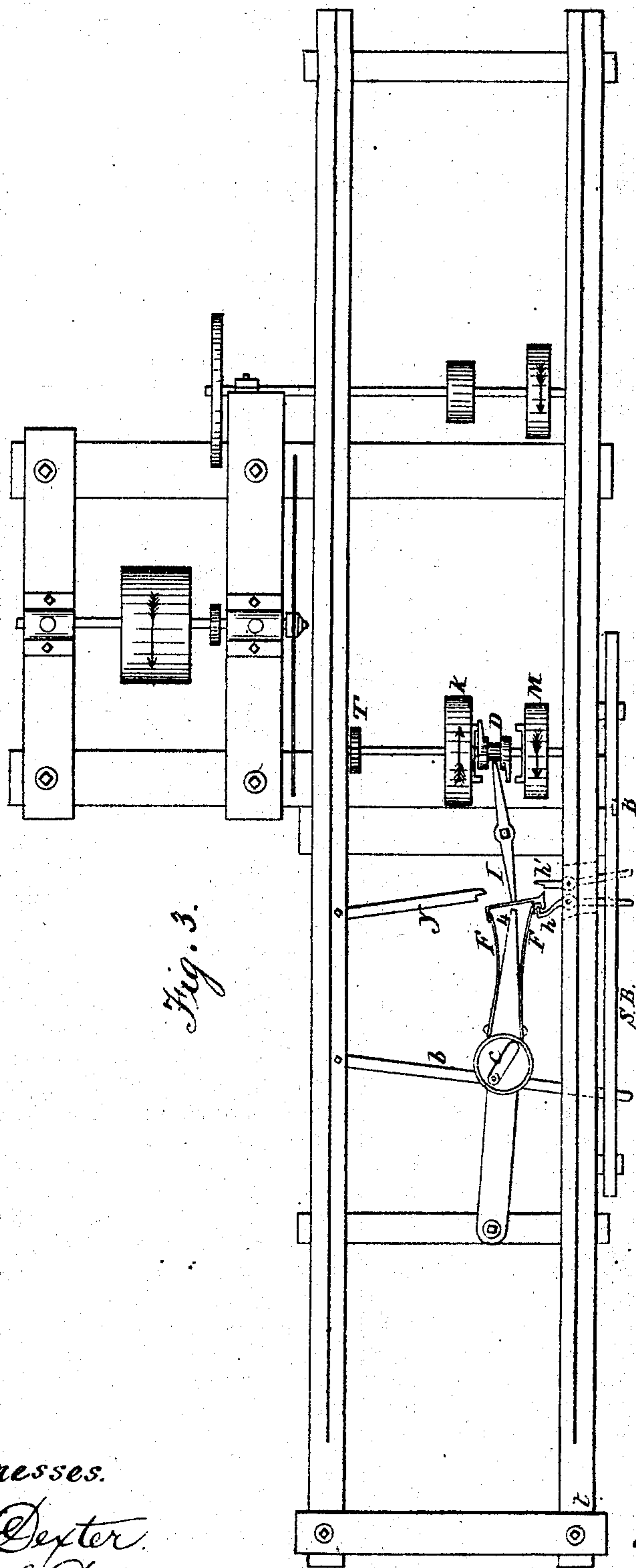


Fig. 3.

Witnesses.
E. L. Dexter.
G. H. Dexter.

Inventor.
Albert M. Dexter.

Albert M Dexter's Improved Box-Board Machine.

116569

PATENTED JUL 4 1871

Fig. 1.

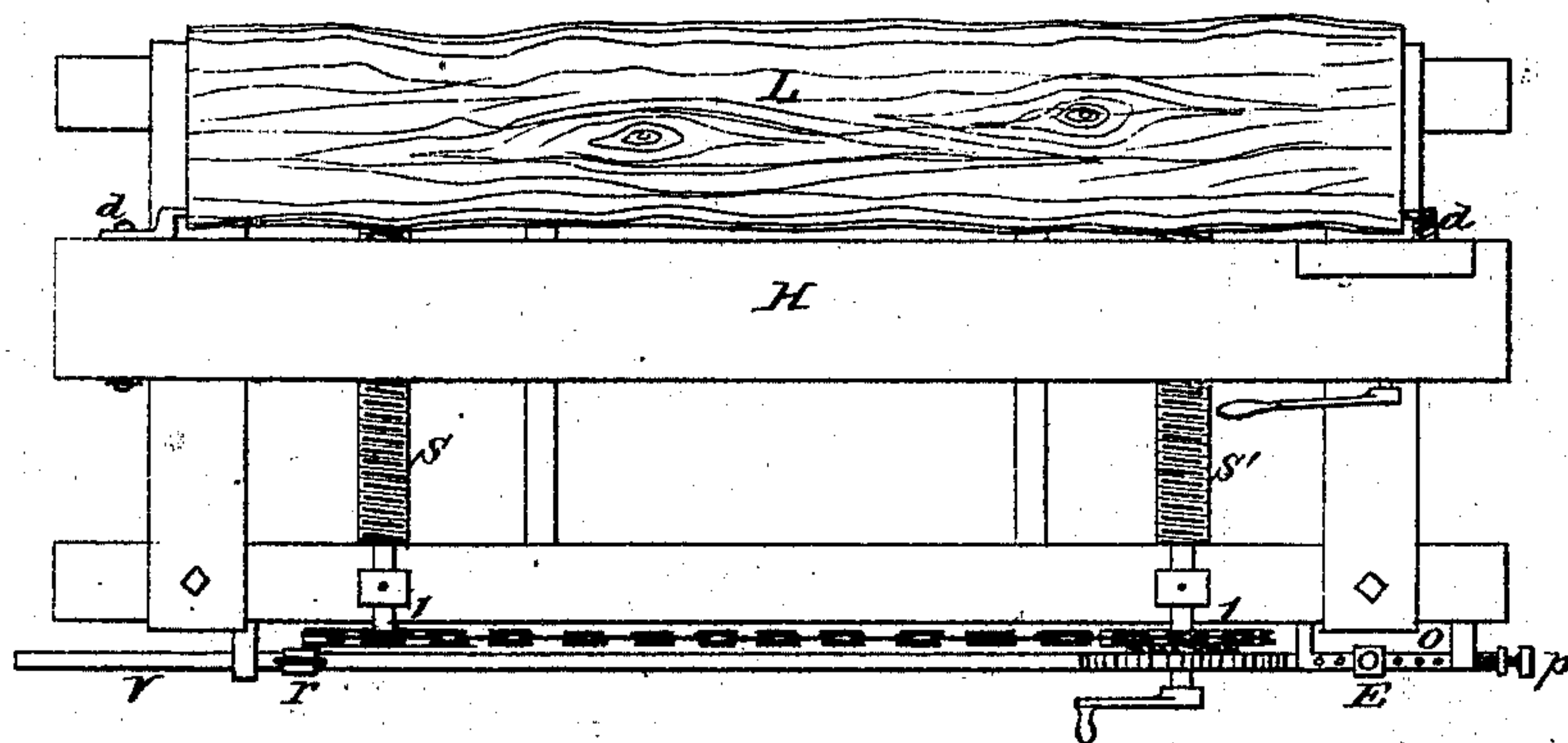


Fig. 2.

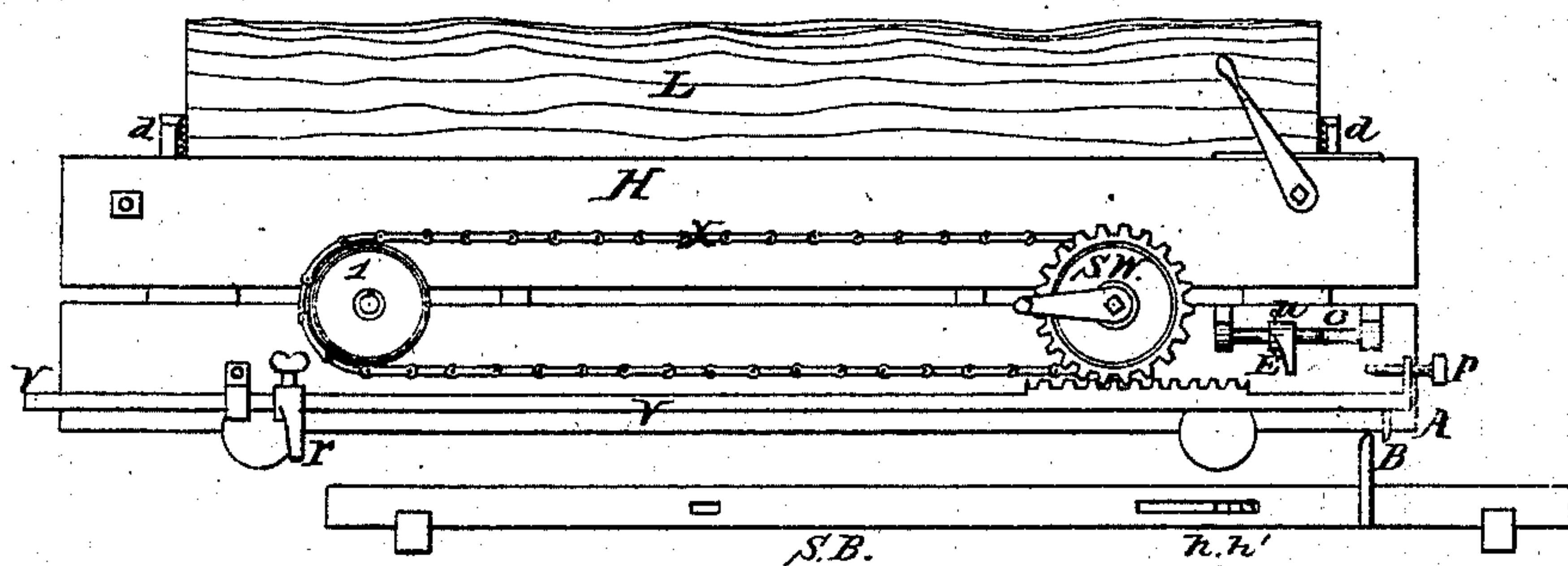
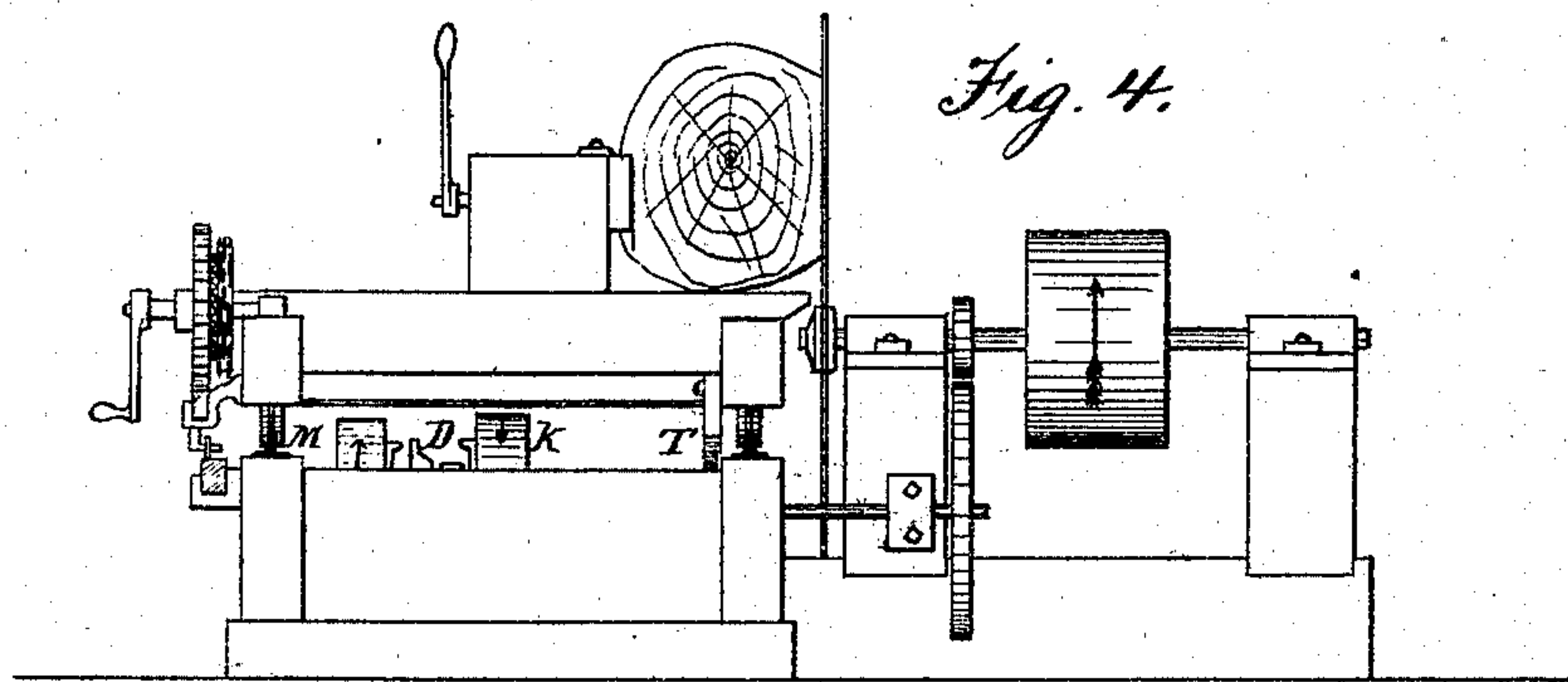


Fig. 4.



Witnesses.

E. L. Dexter.
G. H. Dexter.

Inventor.

Albert M. Dexter.

UNITED STATES PATENT OFFICE.

ALBERT M. DEXTER, OF MATTAPOISETT, MASSACHUSETTS.

IMPROVEMENT IN SAW-MILLS.

Specification forming part of Letters Patent No. 116,569, dated July 4, 1871.

To all whom it may concern:

Be it known that I, ALBERT M. DEXTER, of Mattapoisett, in the county of Plymouth and State of Massachusetts, have invented certain Improvements in Box-Board Machines, of which the following is a specification:

The first part of my invention relates to the manner of setting the log toward the saw so as to saw various thicknesses; and the second part relates to the manner of running the carriage forward and backward, the whole being entirely self-operating when set running with the log in place.

Figure I is a plan of the carriage, showing the log in place. Fig. II is a side elevation, showing the log in place, the carriage, set-works, and shipper-bar. Fig. III is a plan of the frame, showing the several devices which carry the carriage forward and backward. Fig. IV is a vertical transverse section, showing the carriage in its working position with the log in place.

H is the head-stock, to which the log L is secured by the dogs *d d*. S S are the screws by means of which the setting is accomplished, and, as they are connected by the chain *x* and sprocket-wheels 11, turn simultaneously. S W is the set-wheel, which meshes into the rack 3 on set-rod V, making only a part of a revolution, and is provided with a pawl, which acts on the side teeth of the sprocket-wheel 1 (Fig. IV) in such a manner as to allow the set-rod V to be drawn back till the screw at *p* strikes the slide E, and, on being driven into the position now seen, will carry the screws S S such a part of a revolution as to set the log L enough for the required board. Now, as the thickness of the boards to be sawn is determined by the distance which the set-rod V may be drawn back, I have provided the machine with the bar O, on which the slide E may be fixed and held by the pin *u*, which passes through the slide and one of the several holes in the bar O. Now, by means of the bar O, the slide E, the pin *u*, and the screw *p*, I am enabled to control the exact distance which the set-rod V may be drawn back, and hence the thickness of boards to be sawn within the limits of the machine, which is generally one-eighth to one inch in thickness. Now, as the carriage advances, and just as the board is sawn from the log, the stop *r* strikes the horn B, on shipper-bar S B, and the

set-rod V is drawn back till the screw *p* strikes the slide E, which distance then gives a certain thickness of board, and at this point the shipper-bar S B is carried forward till a change is made in the feed-works, when the carriage runs back, the set-rod V is driven in by striking the butt-block at *t*, and the horn on the carriage at A draws the shipper-bar S B back, (as seen in Fig. II,) when the carriage advances again as before. Now to enable others skilled to understand the manner in which the carriage (Figs. I and II) is carried forward and backward, I refer to Figs. III and IV. On the feed-shaft R is a pinion, T, which meshes into the rack on the carriage, seen at T in Fig. IV.

Motion is given to the operating parts in the usual way, except to the loose pulley *k*, which is made to turn in the direction of the arrow by means of a cross-belt, not seen in the drawing. When the clutch D is in the position seen in Fig. III the pulley *k* carries the shaft R and pinion T forward; and when the clutch D is shifted over close to loose pulley M, the order of motion is reversed and the carriage runs backward. The shifting of the clutch D from loose pulley *k* to loose pulley M and back, is accomplished as follows: Fastened to the bar *b* is a roll, which plays in the diagonal slot *c* as the bar *b* moves forward and backward. By means of the shipper-bar S B the bar *b* is carried forward, as before shown, and by the action of the roll in slot *c* the lever 4 is carried over toward the spring F', thus compressing the spring; and at this point the latch *h'* is let off by the end of the mortise in shipper-bar, (seen at *h h* in Fig. II,) and the spring shifts the clutch D over so as to lock it into loose pulley M, when the latch *h'* springs on and holds the clutch D in that position till the carriage runs back and the horn or carriage at A, Fig. II, carries the shipper-bar S B backward and lets off the latch *h*, when the spring F will shift the clutch D back to its position now seen, and so on till you wish to stop the carriage, when it is only necessary to move the bar *y* back till the lever I strikes into the notched end and holds the clutch D midway between the loose pulleys *k* and M.

Thus, with this arrangement and combination of old devices, I am able to produce the most complete box-board machine ever known. I

have not described the more common parts of such machines, as those skilled may see at once their nature and use.

I do not claim the several devices separately, as they have been long in use; but

What I do claim as my invention, and desire to secure by Letters Patent, is—

1. The slide E and pin *u*, in combination with

with the bar O and screw *p*, as and for the purpose hereinbefore set forth.

2. The springs F F' and latches *h h'*, in combination with the levers I and 4, substantially as and for the purpose herein specified.

Witnesses: ALBERT M. DEXTER.

E. L. DEXTER,

G. H. DEXTER.