

H.C. Boardman

Sawing Mach.

N^o 99,071.

Patented May 18, 1869

Fig. 1.

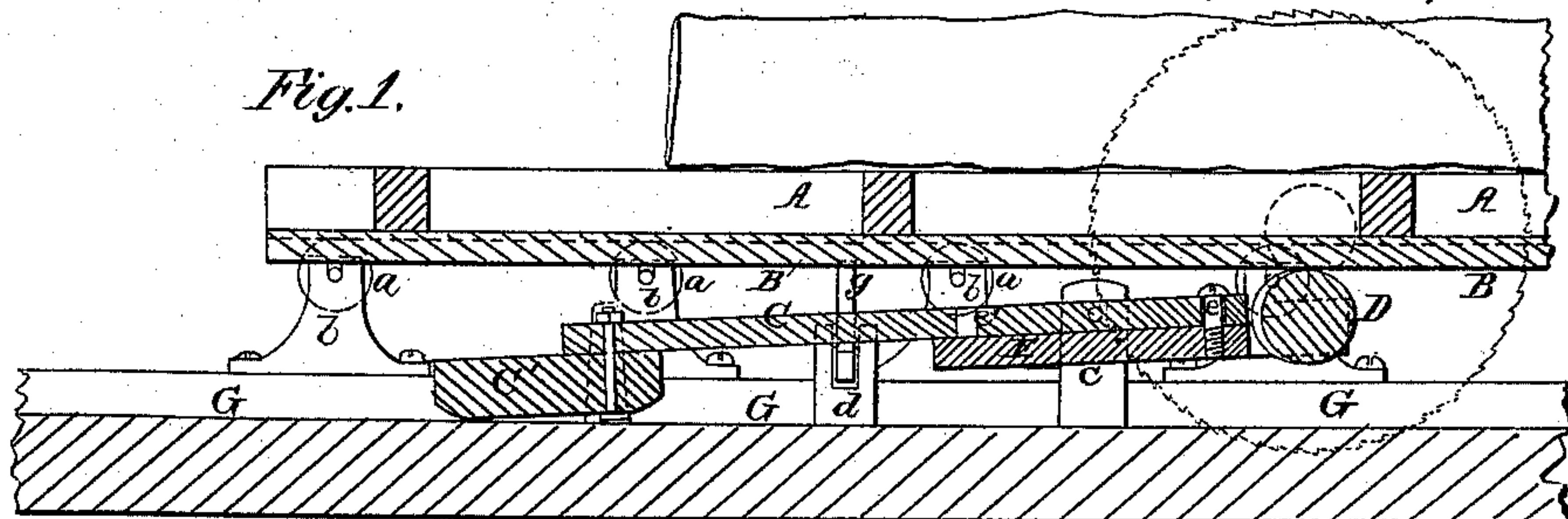


Fig. 2.

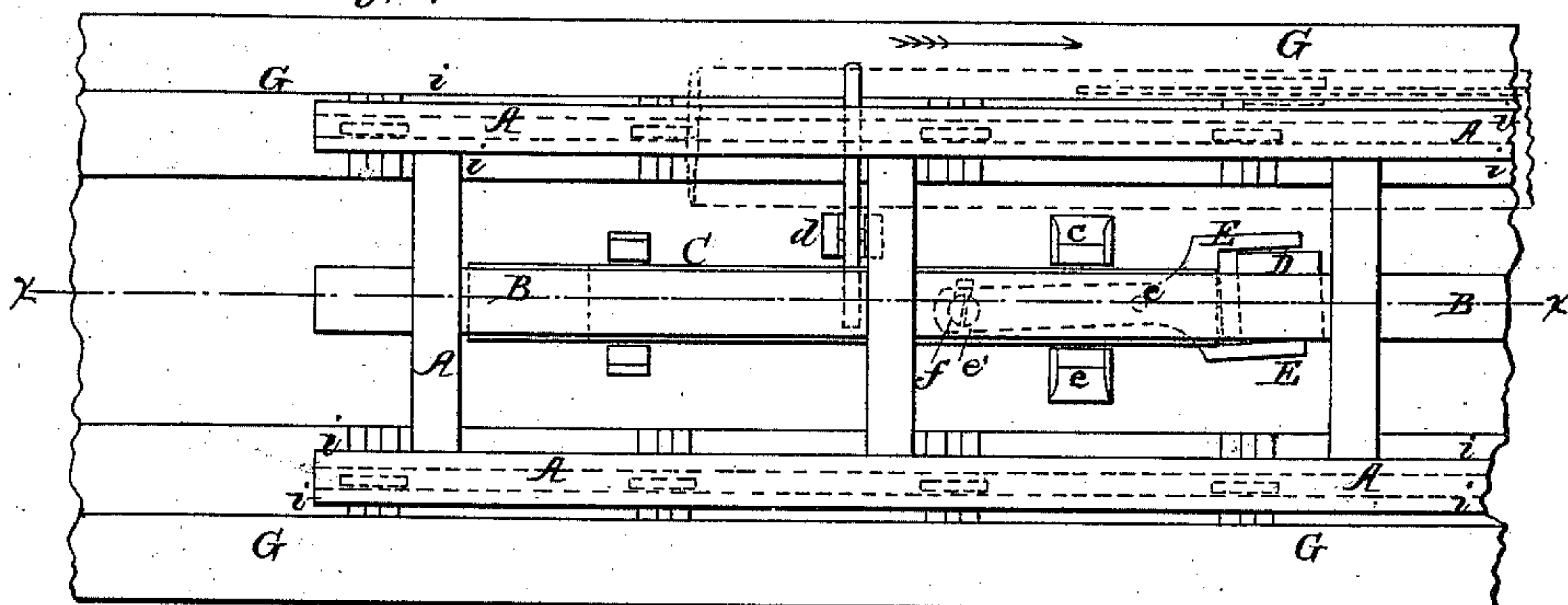


Fig. 3.

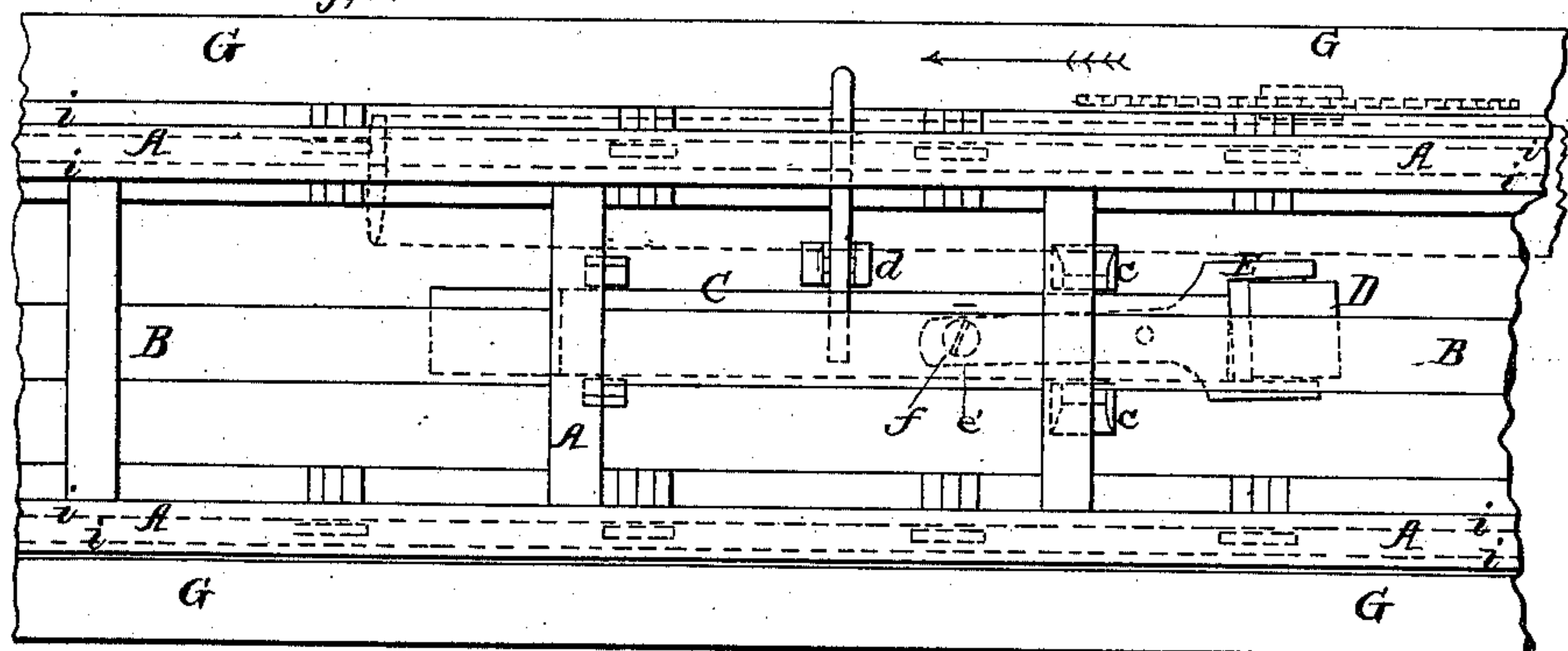


Fig. 4.

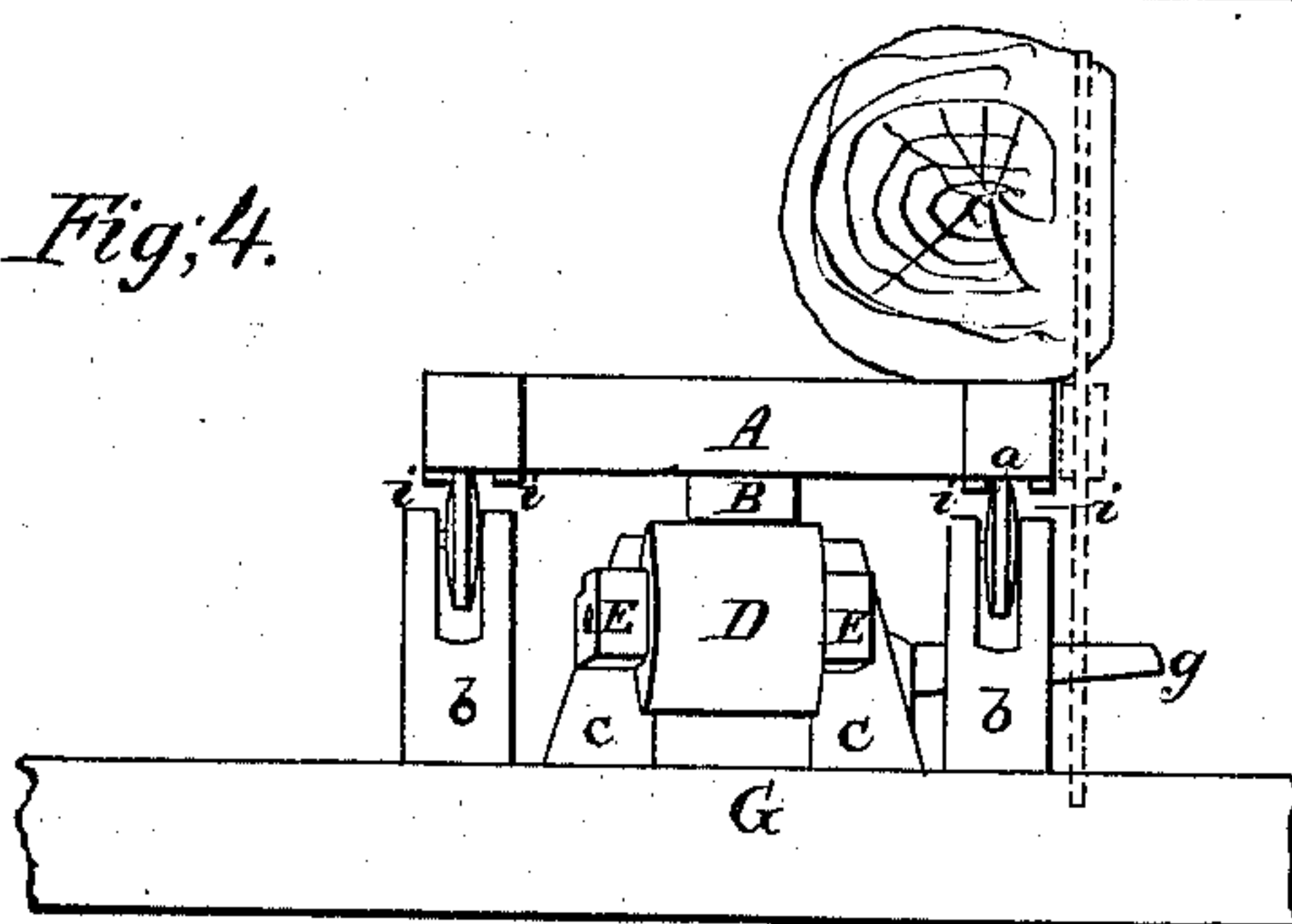
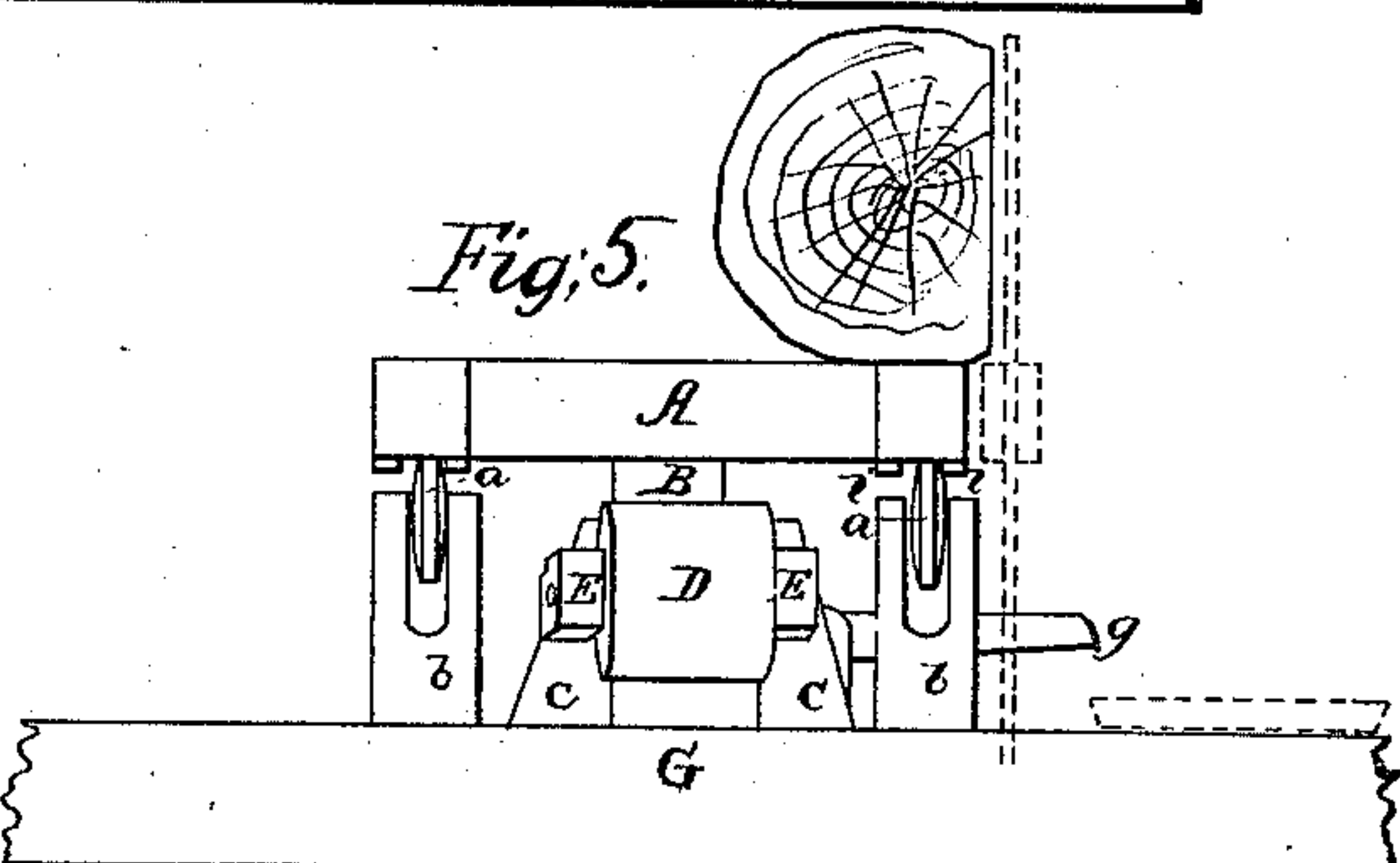


Fig. 5.



Witnesses.

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HERVEY C. BOARDMAN, OF MORRISVILLE, VERMONT.

Letters Patent No. 90,071, dated May 18, 1869.

IMPROVEMENT IN LOG-SAWING MACHINE.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, HERVEY C. BOARDMAN, of Morrisville, in the county of Lamoille, and State of Vermont, have invented a new and useful Improvement in Log-Sawing Machines; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1, sheet 1, is a longitudinal section; taken in a vertical plane through the centre of the log-carriage and its bed, indicating the saw and a log in red lines.

Figure 2, sheet 1, is a plan view, indicating the carriage in the act of feeding a log up to its work.

Figure 3, sheet 1, is a similar view of the same parts shown in fig. 2, indicating the log-carriage in the act of receding after the operation of sawing a slab from a log.

Figure 4, sheet 2, is an end elevation of the parts shown in fig. 2, showing them in the same position as in the figure.

Figure 5, sheet 2, is a similar view, representing the parts in the position as indicated in fig. 3.

Similar letters of reference indicate corresponding parts in the several figures.

The object of this invention and improvement in saw-mills for sawing logs into slabs or boards, is to prevent wear and injury to the teeth of a saw by its contact with a log, during the act of gigging back the log, preparatory to commencing another cut.

It is well known among practical sawyers that the set of the teeth of a circular saw, as well as their cutting-edges, is very rapidly impaired, in consequence of allowing the face of a log to run close to the saw, while gigging back the log.

To obviate this objection, the nature of my invention consists in allowing the log-carriage to have a bodily lateral play upon its rollers, or guide-wheels; also, in providing beneath said carriage a friction-roller, which has its axis arranged obliquely to the length of the carriage, and which is caused to press upward against a longitudinal central rail of said carriage by a weight, or its equivalent, and to operate in such manner, that while gigging back the carriage, the face of the log, from which a board was last sawed, will be moved free from the saw, as will be hereinafter explained.

To enable others skilled in the art to understand my invention, I will describe its construction and operation.

In the accompanying drawings—

A represents a horizontal reciprocating log-carriage, which is mounted upon rollers, or wheels *a a*, that have their bearings in standards *b b*, upon a suitable foundation, G.

The carriage A should be provided with any of the well-known means for moving it forward and back-

ward, and it should also be furnished with transversely-adjustable head-blocks, constructed, applied, and operated in any suitable or well-known manner.

On the bottom side of each longitudinal beam of the log-carriage A, are two parallel rails, or flange-guides, *i i*, having a space between them somewhat greater than the thickness of the perimeters of wheels, or supporting-rollers *a a*, as clearly shown in figs. 4 and 5, sheet 2.

As the grooves, or spaces, between each pair of guides, *i i*, are wider than the rollers *a a*, which turn therein, it is obvious that the carriage A can be moved bodily, in a lateral direction, a distance equal to the difference between the width of the said rollers and the spaces between the guides *i i*.

This lateral movement need not be more than the fraction of an inch, or just sufficient to allow the face of a log from which a board has been sawed to clear the saw while being gigged back.

Along the longitudinal centre of the carriage A, and secured rigidly to the bottom thereof, is a beam, or narrow bar, B, having a flat or plain-bottom surface, which is parallel to the horizontal surface of the carriage.

Beneath this bar B, and arranged near the saw, as shown in figs. 1, 2, and 3, is a roller, D, which may be made of wood, or other substance that will afford considerable friction, while pressing upwardly against the bar B.

The axis of this roller D is oblique to the length of the carriage, and so arranged that in the act of moving the carriage backward, as indicated by the course of the arrow in fig. 3, it will move the carriage laterally away from the saw, so that the teeth of the saw will not strike the log, or be worn thereby.

After the carriage has been moved back the length of the log, when it is started forward again, and just before the saw begins to cut, the oblique friction-roller D will move the carriage and log laterally up to the work.

For the purpose of supporting the self-adjusting roller D, I prefer to employ a vibrating lever, O, which has its fulcrum on standards *c c*, and which carries on its longest arm a weight, O', suitable for giving the required pressure of roller D against the bar B of the log-carriage, as shown in fig. 1.

If, at any time, it is found desirable to give more or less obliquity to the self-adjusting roller D, this may be done by applying the latter to the forked end of a laterally-adjustable arm, E, on the shortest arm of lever O.

This arm E is pivoted to lever O, at *e*, and secured fast thereto, at any desired angle, by means of a set-screw, *f*, passed through an oblong slot, *e'*, made through arm E, and fastened into said lever, as shown on sheet 1.

Under certain circumstances, such as sawing very

hard wood, it may be desirable to relieve the carriage from the lateral pressure of the roller D, which can be readily done by raising the longest arm of lever C.

To do this, I have applied a transverse lever, *g*, to a standard, *d*, and arrange this lever, so that by pressing down upon its long arm, roller D will be depressed free from bar B.

While I prefer to support and arrange the self-adjusting roller D, as I have herein described, I do not confine myself to this precise manner of arranging and supporting it.

I do not wish to be understood as setting forth, in any part of my foregoing specification, that I am the first one who has provided for a lateral movement of the log-carriage away from the saw, during the operation of gigging back said carriage, as this is done in patents granted to William M. Ferry, November 29, 1859, and to J. Orm, September 1, 1868.

Having described my invention,

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination of the obliquely-arranged friction-roller D with the carriage A and wheels *a a*, and flanged rails, or guides *i i*, substantially in the manner described.

2. The combination of the oblique roller D and the lever C, substantially as and for the purpose described.

3. The combination of the oblique roller D, bearing E, and lever C, substantially as and for the purpose described.

HERVEY C. BOARDMAN.

Witnesses:

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