

I. R. Harman
Sawing-Machine.

N^o 73000

Patented Jan. 7, 1868.

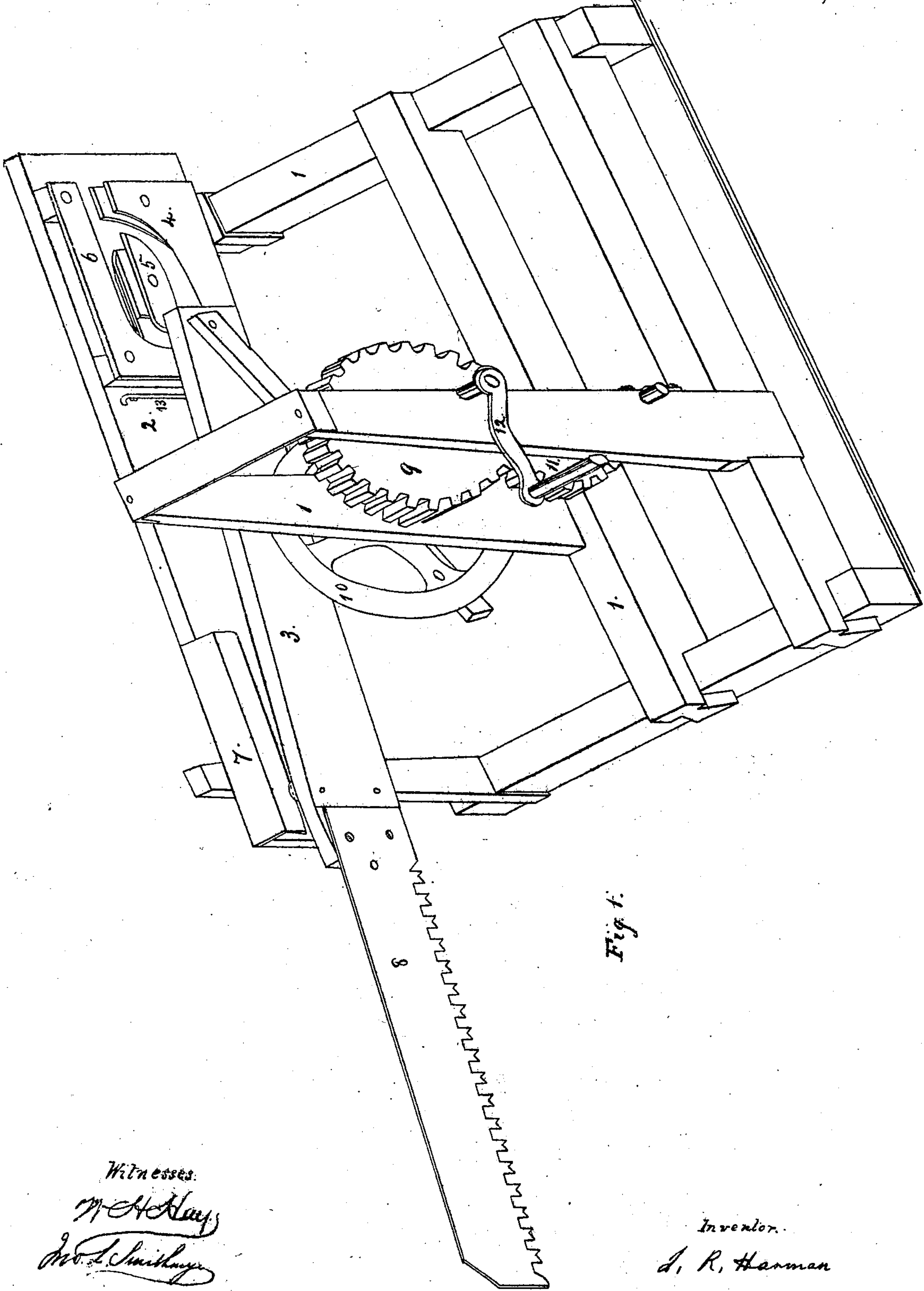


Fig. 1.

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M. H. May
J. L. Smith

Inventor.
I. R. Harman

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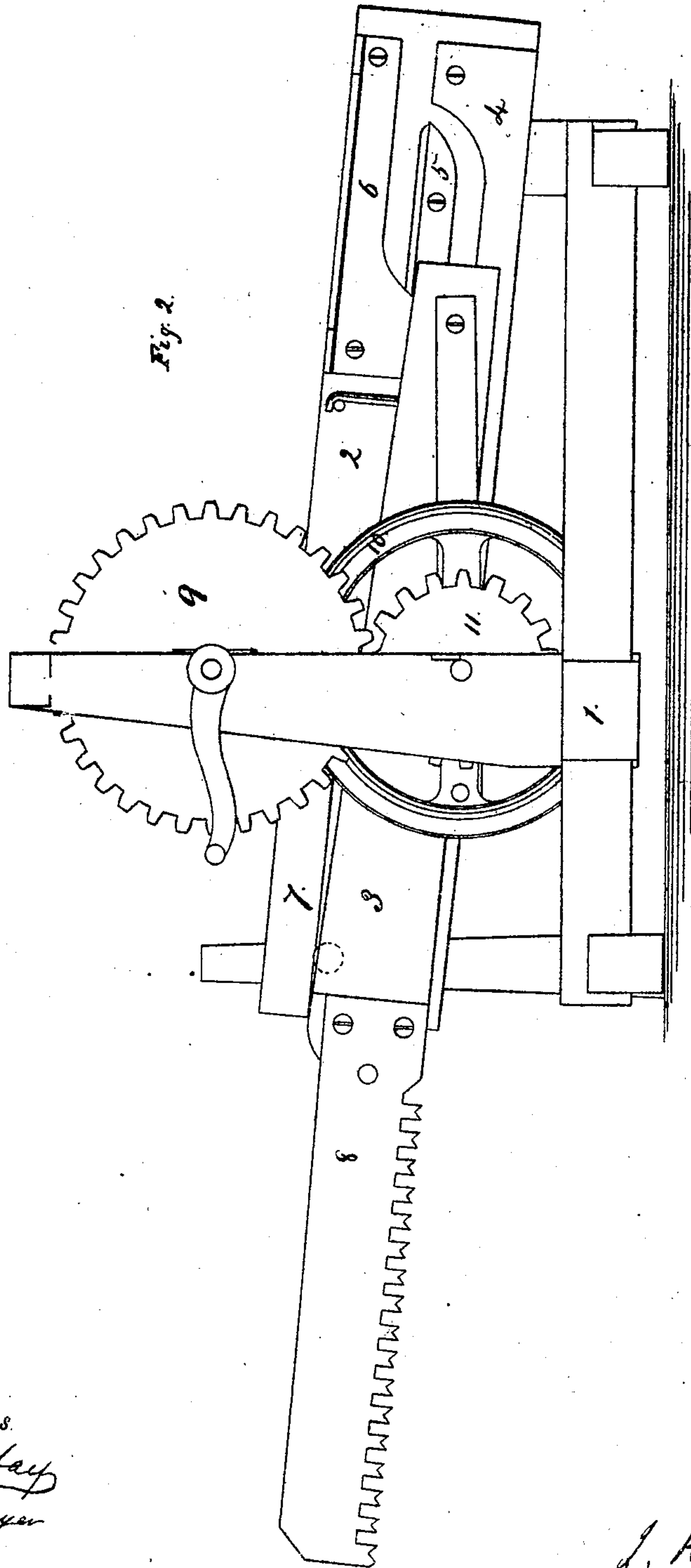


Fig. 2.

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Fig. 3.

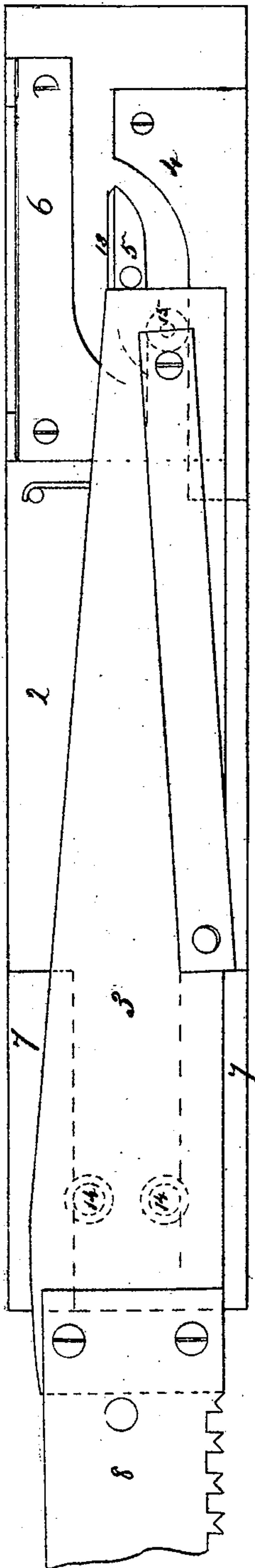


Fig. 4.

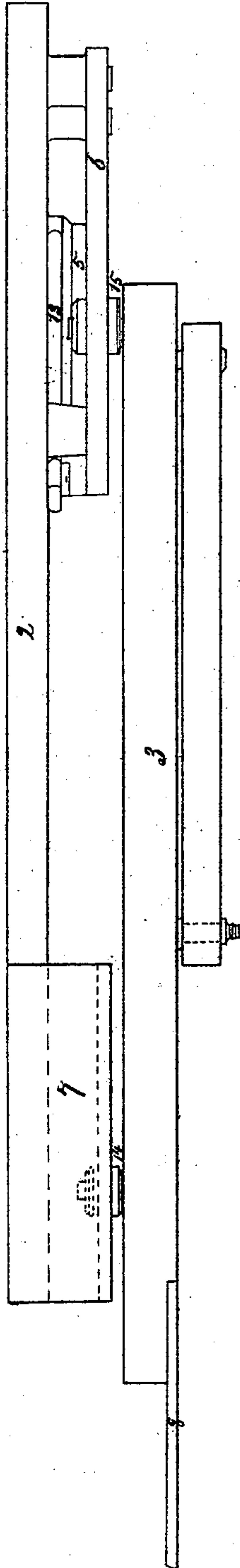


Fig. 6.

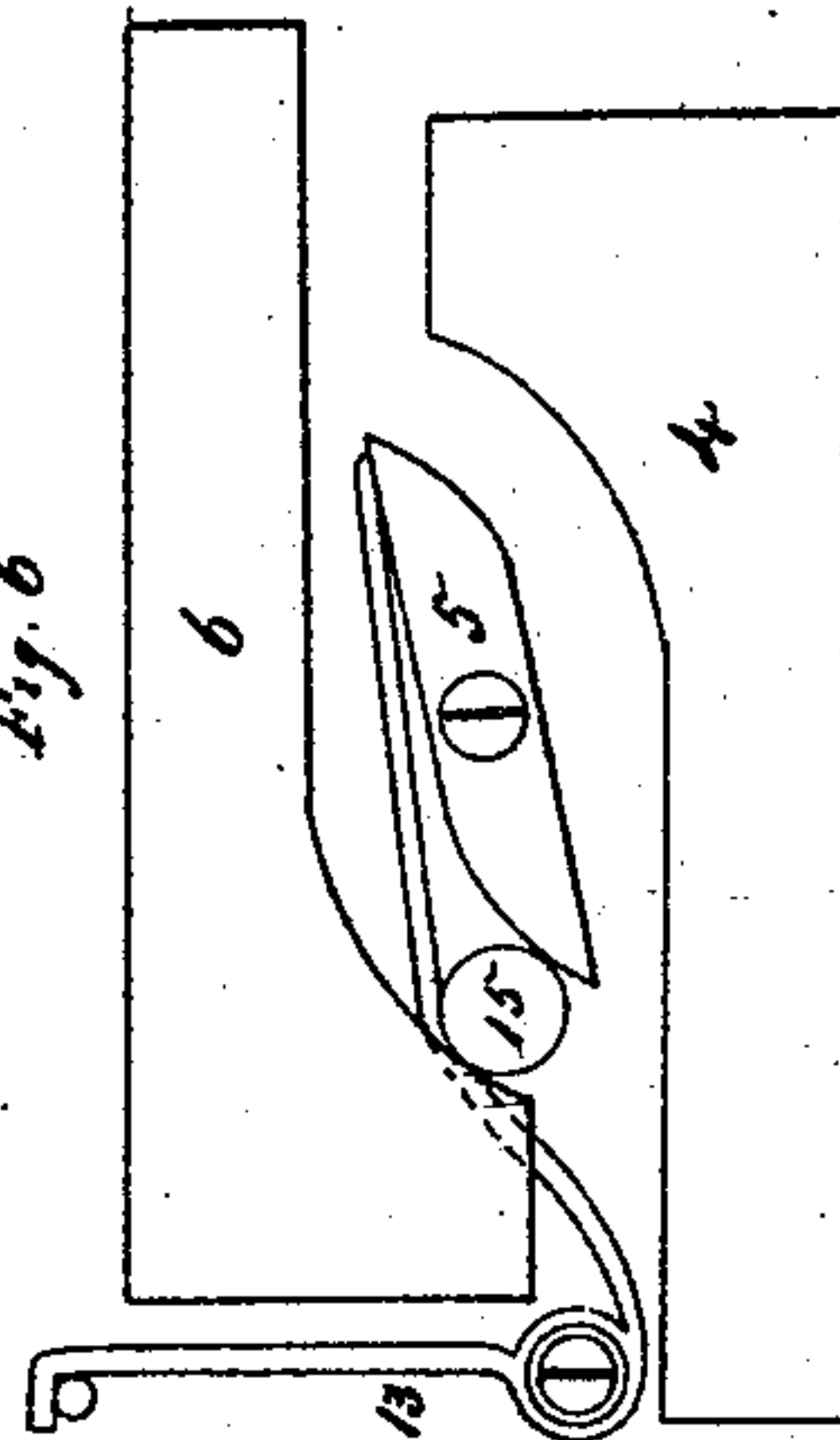
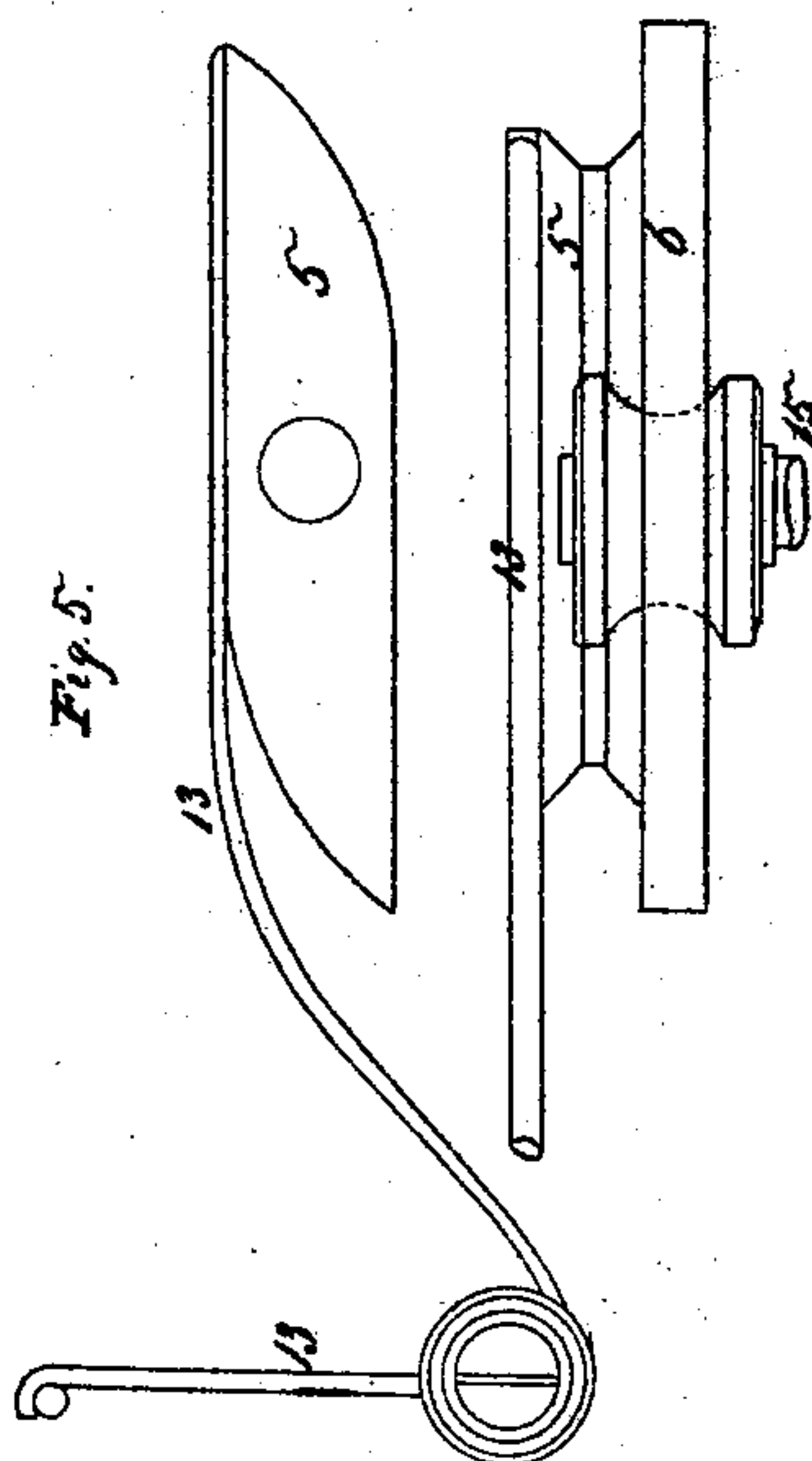


Fig. 5.



Witnesses.
H. A. Hay,
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Inventor
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United States Patent Office.

I. R. HARMAN, OF WHITESTOWN, INDIANA, ASSIGNOR TO HIMSELF AND
THOMAS J. MEGINNIS, OF THE SAME PLACE.

Letters Patent No. 73,000, dated January 7, 1868.

IMPROVEMENT IN SAWING-MACHINES.

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, I. R. HARMAN, of Whitestown, Boone county, and State of Indiana, have invented a new and useful Improvement in Drag-Saws; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, in which—

Figure 1 is a perspective view,

Figure 2 is a side elevation, and

Figures 3, 4, 5, and 6, sections in detail.

The nature of my invention consists in the use of an eccentric-cam, in combination with a movable centre, at one end of the shaft, with slides at the other end of the same shaft, with friction-rollers combined with said shaft, as hereinafter fully described.

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

In the construction of my invention, (numericals are used instead of letters of the various parts, and the same figures designate like parts in each of the drawings,) fig. 1, the frame of the machine; fig. 2, the adjustable guide, which works on a pivot, attaching it to portion of the frame at the rear end, and having at the front end attached a staple, slipping down over a small post of the frame, to keep it in place in rising and lowering in the act of sawing. Figs. 4, 5, and 6 form an eccentric, in which a friction-roller, attached to the end of the saw-guide, operates, to give a vibrating motion to the saw, and by which means a reciprocating motion is obtained in running the saw. Figures 7 7 are slides, in which the two friction-rollers play, which are attached to the front end of the saw-guide. Figure 8, the saw. Fig. 3, the reciprocating saw-guide, to which the saw is attached, the rear end of which operates on a cam, to obtain the reciprocating motion of the saw. 3', the piston-rod, connecting guide 3 to the crank-wheel. 10, the crank or fly-wheel. 11, the bevel-gear wheel, on the same shaft with the fly or crank-wheel. Figure 9, the driving-wheel, to which the power is attached by a crank or otherwise. In figs. 3, 4, 5, and 6, in Drawing III, 13 is the spring to replace the cam 5. 14 14, the friction-rollers, operating on the slides 7 7, for guiding the saw, and 15 the friction-roller operating on cams 4, 5, and 6, to produce reciprocating motion in running the saws.

In the operation of my invention, motion is given to it by means of the crank or other power, which is communicated to the saw-guide (fig. 3) by means of the piston-rod 3', causing it to move forward the length of the piston-rod, being guided in its course by the friction-rollers working in the slides 7 7, and the cam-slide 6 6, and the spring-cam, marked 5, as friction roller 15, in running forward, descends the inclined plane on spring-cam 5, and between it and the upper cam-slide 6, until the length of the stroke brings it to the lower end of the spring-cam, which is then relieved of its weight, and the roller rests on the lower cam-slide 4, allowing the spring-cam to be operated by the spring 13, thus changing its relative position to the lower and upper cam-slides 4 and 6. The roller then, in the backward stroke of the piston, rests on the lower slide until the length of the stroke is made, causing the spring-cam to oscillate as the roller ascends the inclined plane of the lower cam-slide until it rises on a line parallel to the top side of the spring-cam, when the said cam is again operated on by the spring 13, pressing it down to receive the friction-roller 15 in again making its forward stroke, as before described, thus operating the saw, and giving to it the motion required.

It will be seen that by means of the staple attached to the guide 2, the saw is raised and lowered to suit the size of the piece of timber to be sawed.

Having thus fully described the nature of my invention, what I desire to secure by Letters Patent, is—

The combination of the movable centre 15 with slides 7 and 7, 4 and 6, and eccentric-cam 5, and spring 13, all constructed and operating substantially as set forth.

I. R. HARMAN.

Witnesses:

JONATHAN MOORE,

NELSON MOORE.