

No. 640,501.

Patented Jan. 2, 1900.

E. E. THOMAS.

AUTOMATIC OFFSETTING FOR SAWMILL CARRIAGES.

(Application filed July 31, 1899.)

(No Model.)

2 Sheets—Sheet 1.

FIG. 1.

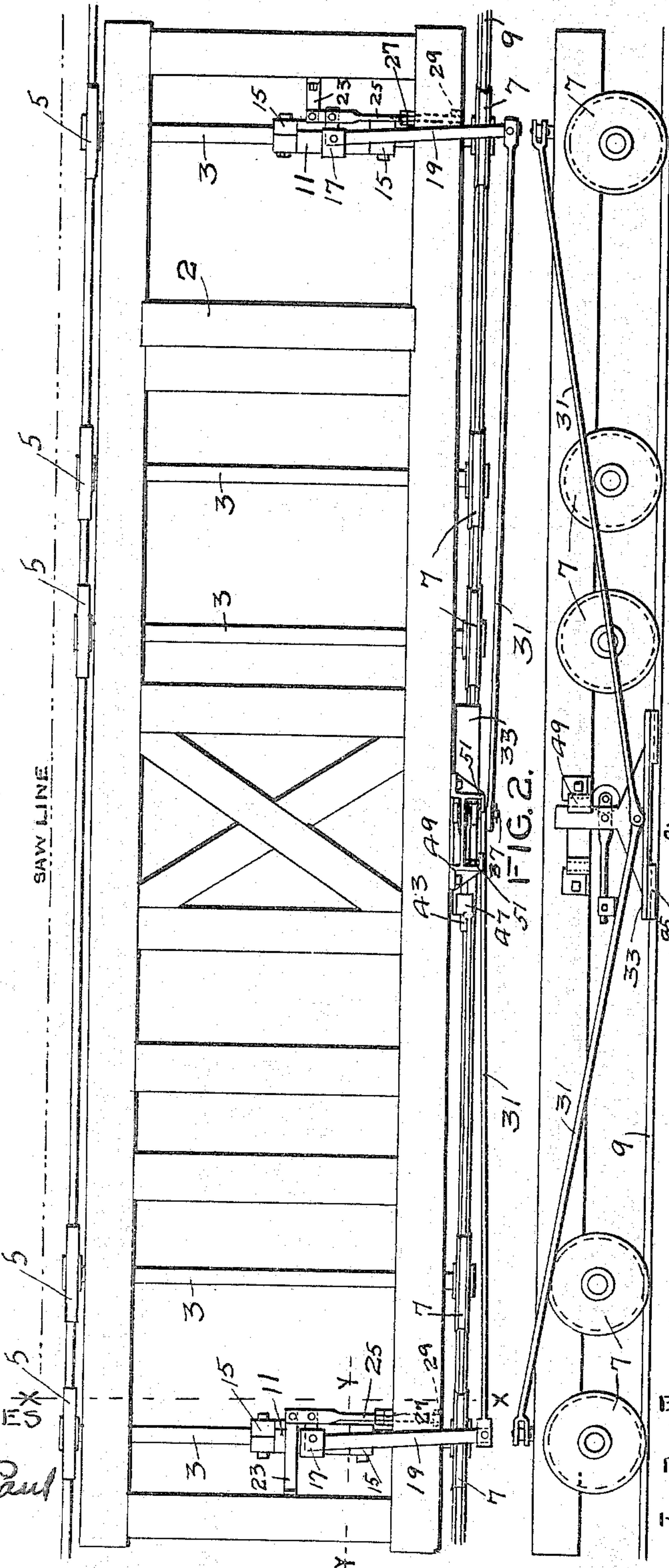


FIG. 4.

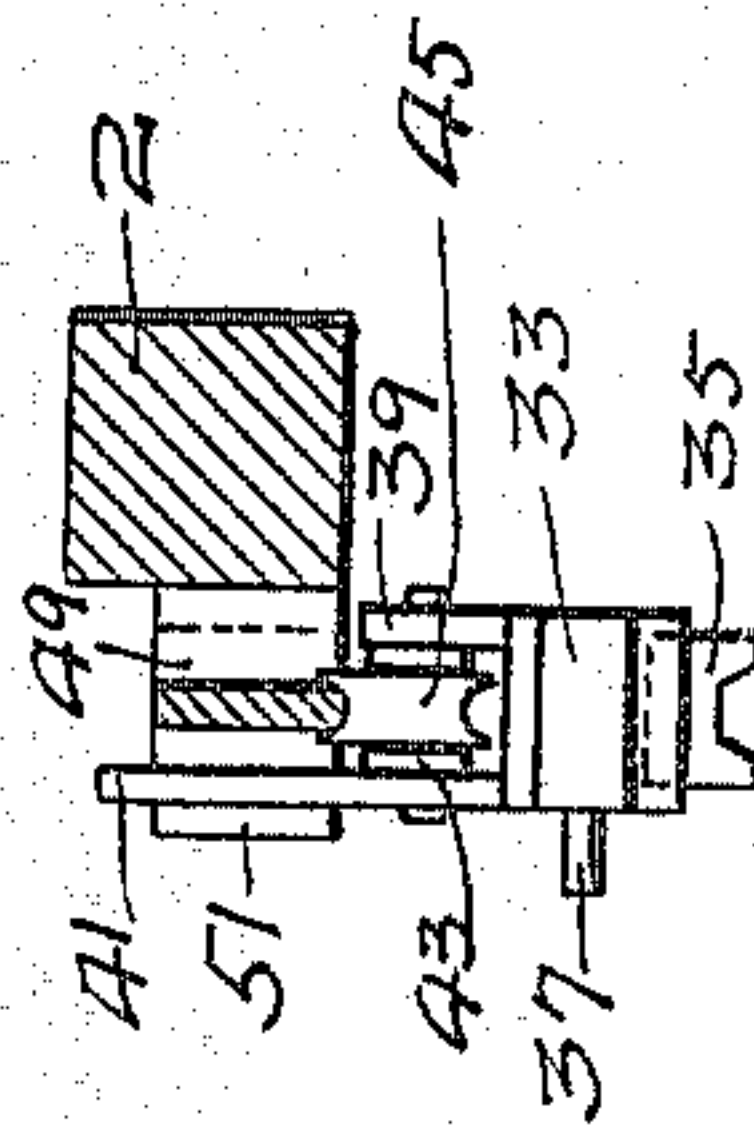
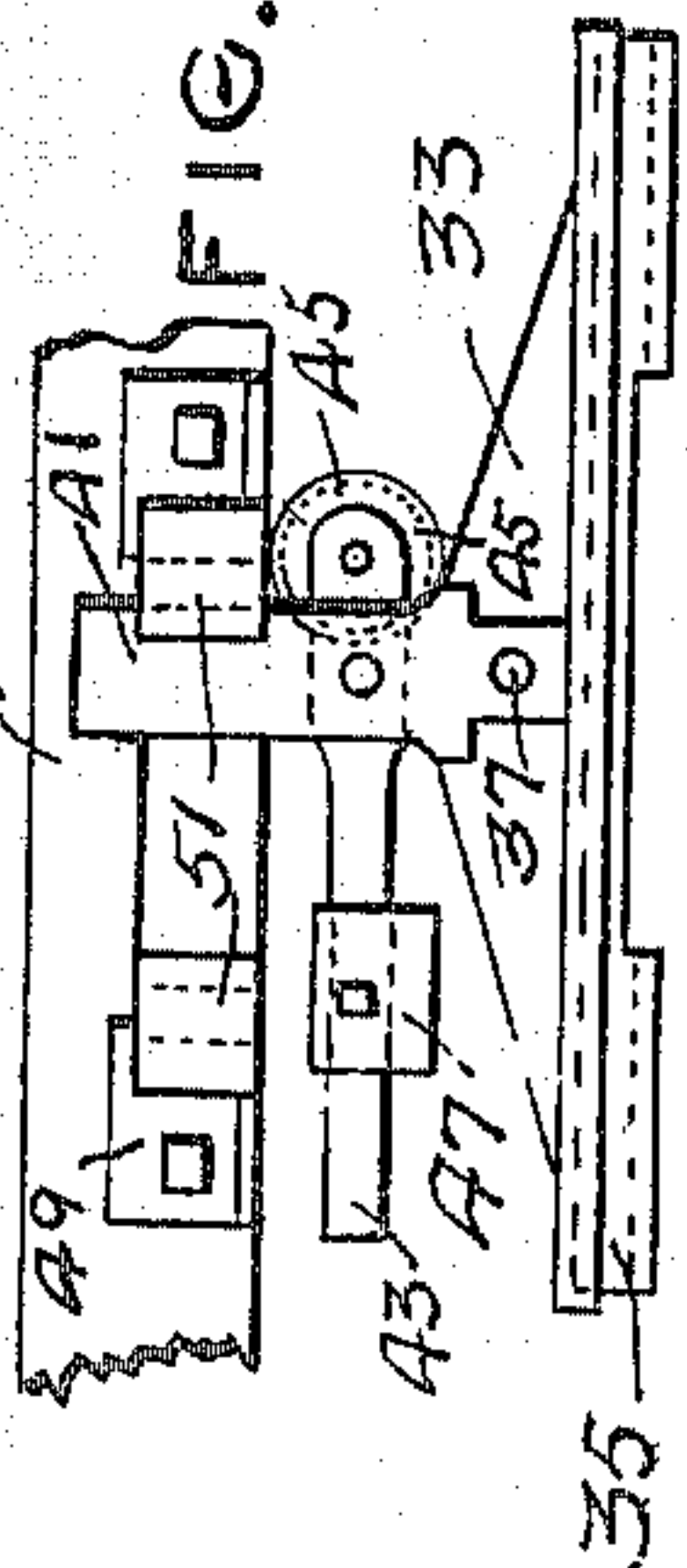


FIG. 3.



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2 Sheets—Sheet 2.

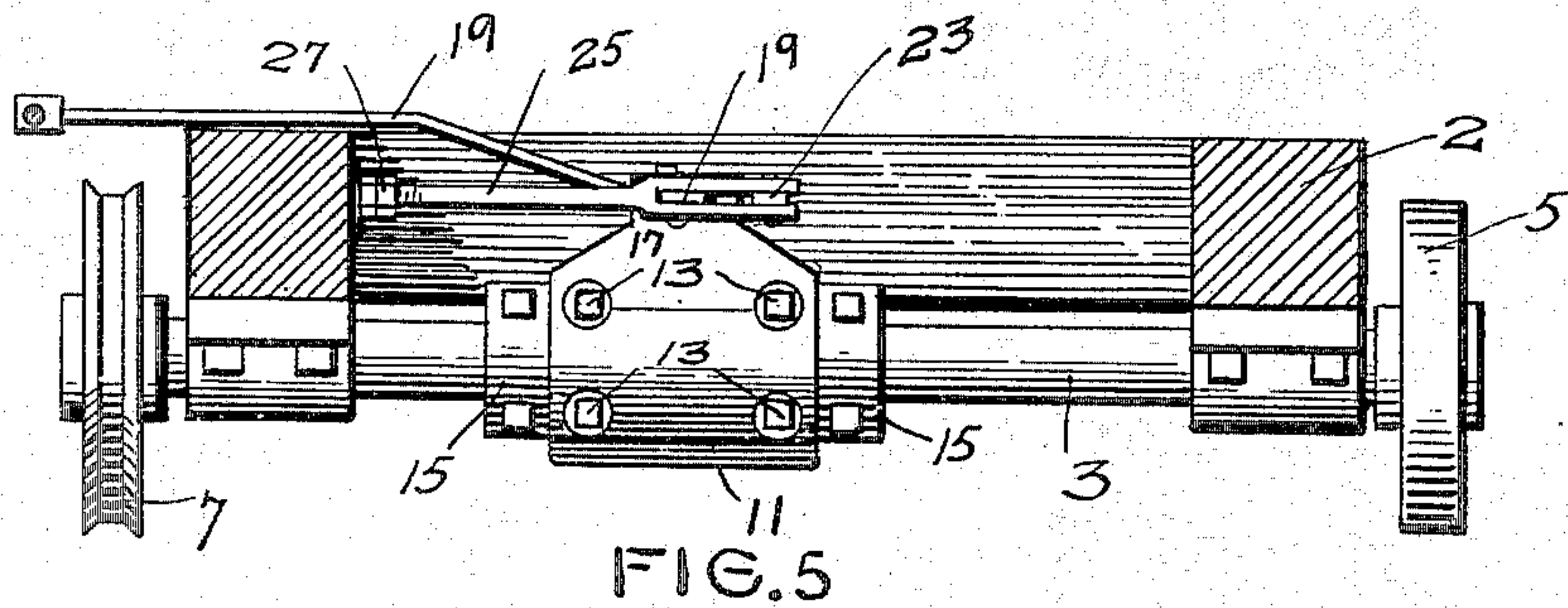


FIG. 5

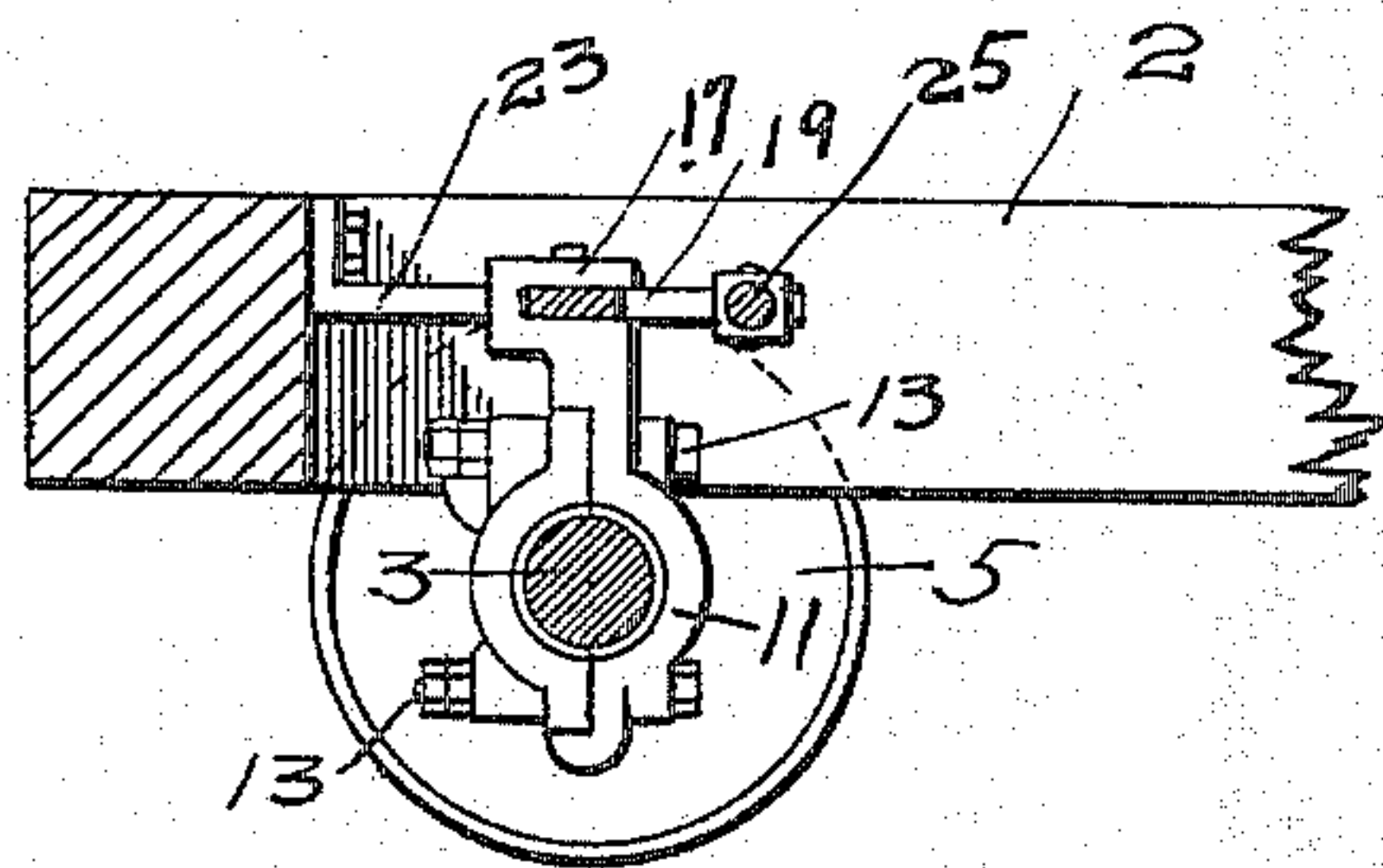


FIG. 6

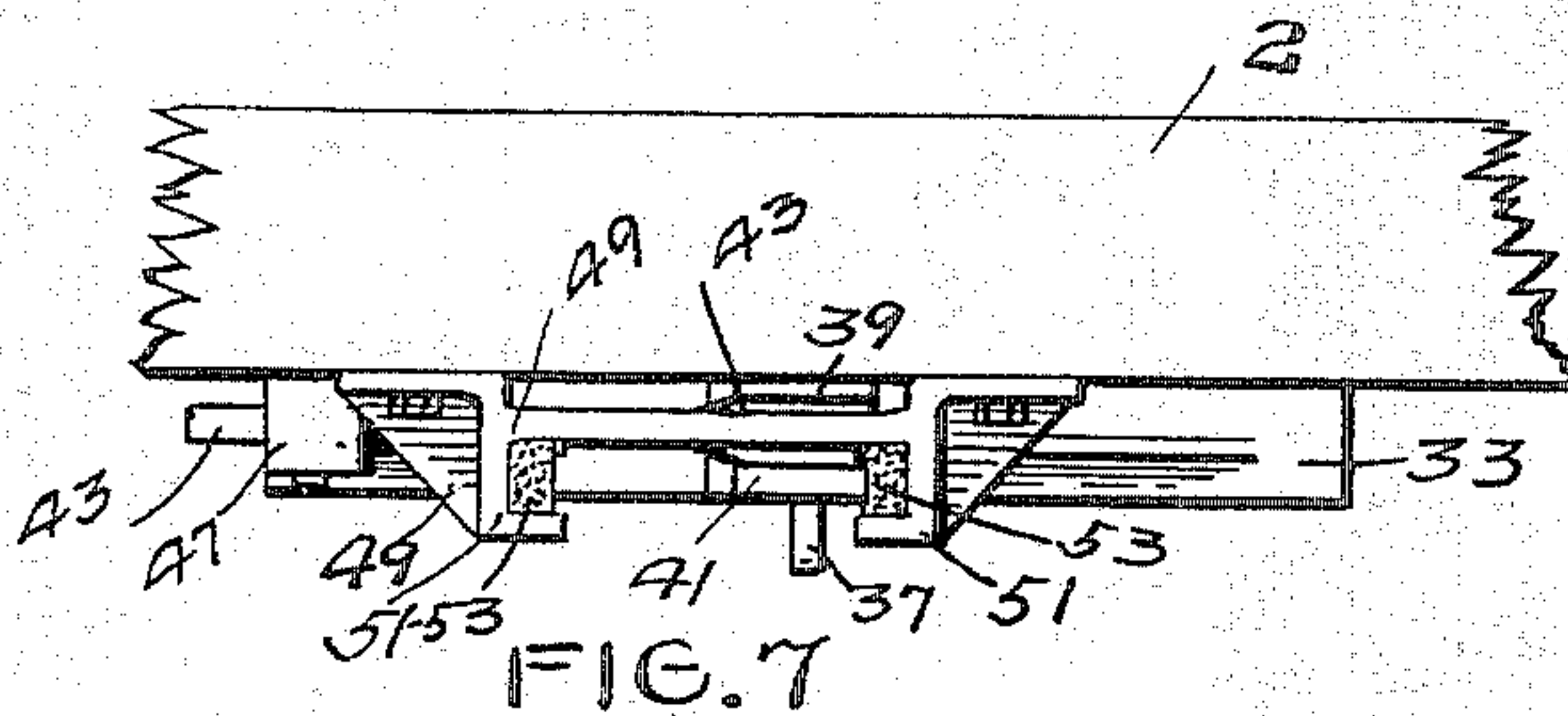


FIG. 7

WITNESSES.

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AUTOMATIC OFFSETTING FOR SAWMILL-CARRIAGES.

SPECIFICATION forming part of Letters Patent No. 640,501, dated January 2, 1900.

Application filed July 31, 1899. Serial No. 725,572. (No model.)

To all whom it may concern:

Be it known that I, EDWIN E. THOMAS, of Minneapolis, Hennepin county, Minnesota, have invented certain new and useful Improvements in Automatic Offsetting Mechanism for Sawmill-Carriages, of which the following is a specification.

This invention relates to improvements in offsetting mechanism for sawmill-carriages; and the object I have in view is to provide a simple, durable, and effective automatic device by which the carriage will be automatically offset or moved away from the saw at the beginning of the gigging or return movement of the carriage and will be again automatically moved toward the saw at the beginning of the forward movement.

As sawmill-carriages are generally constructed they are arranged to have a slight lateral movement on their supporting-axes, this movement being laterally of the line of travel of the carriage or lengthwise of the axles. The purpose of this is to permit the carriage after a cut has been made through a log supported thereon to be moved a short distance away from the saw, so that when the carriage is gigged back in order to bring the log into position for another cut the log is clear of the saw and does not come in contact therewith during this gigging movement.

My invention consists in an automatic device operated by friction between itself and the rail upon which one set of wheels upon the carriage runs and connected with the carriage, so as to automatically move it from the saw-line at the beginning of the return or gigging movement and to move it automatically toward the saw-line at the beginning of the forward movement.

The invention consists, further, in the constructions and combinations hereinafter described, and particularly pointed out in the claims.

In the accompanying drawings, forming part of this specification, Figure 1 is a plan view of a sawmill-carriage embodying my invention. Fig. 2 is a side elevation of the same. Fig. 3 is a side elevation, on an enlarged scale, of the friction-shoe. Fig. 4 is an end elevation of the same. Fig. 5 is a section of the carriage on line $x x$ of Fig. 1 looking to-

ward the left in said figure. Fig. 6 is a section on line $y y$ of Fig. 1. Fig. 7 is a plan view, on an enlarged scale, of the bracket on the sawmill-carriage, forming a stop to limit the movements of the friction-shoe, and also showing a top view of the friction-shoe.

In the drawings, 2 represents a suitable sawmill-carriage of ordinary construction mounted upon axles 3, which are provided, preferably at one end, with the plane-faced wheels 5 and at the other with the circumferentially-grooved wheels 7. The wheels 5 travel upon the usual flat-surfaced rail and the wheels 7 upon the usual guide-rail 9. The carriage 2 is capable of a limited side movement on the axles 3. This movement is from the line of the saw at the end of the forward movement of the carriage, so as to bring the log away from the saw during the return movement of the carriage, and is toward the line of the saw at the end of the backward movement of the carriage or at the beginning of the forward movement, so as to bring the log into position to be cut by the saw. As here shown, a bearing-block 11 is arranged upon one of the axles 3 at or near each end of the carriage. This block is made in two parts, as clearly shown in Fig. 6, connected together by suitable bolts 13. The axle 3 turns freely in the bearing-block 11. These blocks are kept from endwise movement on the axle by the set-collars 15. (See Fig. 5.) Each of the blocks 11 has an upwardly-projecting portion 17, which forms a bearing or pivotal support for a bell-crank lever 19. The short end of each lever 19 is connected to the timbers or frame of the sawmill-carriage by the bar 23 and rod 25. The rod 25 may, if preferred, be provided, as shown in Fig. 5, with a forked end to receive the end of the bell-crank lever 19 and also to receive the end of the bar 23, the opposite end of the bar 23 being bolted to the frame of the carriage and the end of the rod 25 being screw-threaded and passing through the longitudinal timber of the carriage and being adjustably secured in position by suitable nuts 27 and 29. The ends of the levers 19 are connected by rods 31 to a suitable shoe 33, which is preferably made of cast metal and is provided upon its lower surface with the wooden friction-block 35. The shoe 33 is

made quite light and is provided with the stud 37, to which the rods 31 are connected, and also with the vertical projections 39 and 41, the projection 41 being considerably higher than the projection 39. Between the projections 39 and 41 a lever 43 is pivoted. This lever carries at one end the roll 45 and has arranged upon it the sliding weight 47. A bracket 49 is secured upon the carriage 2, preferably about midway thereof and directly over the shoe 33. This bracket has the outwardly-projecting portions 51, each of which carries a rubber block 53, and these projections 51 on the bracket 49 extend outward over the shoe 33, and the upwardly-projecting portion 41 of said shoe stands between the two projections 51, as shown in Figs. 1, 2, and 7. The roll 45 comes directly under the lower surface of the bracket 49 and bears upon said surface. The lower surface of the shoe 33 is preferably recessed to receive the wooden shoe-block 35, as indicated by dotted lines in Figs. 3 and 4.

The operation of the device is as follows: The shoe is held upon the guide-rail by means of the adjustable weight 47 and lever 43 with any desired amount of pressure, this being regulated, as desired, by adjusting the position of the weight 47 on said lever 43. The wheel 45 bears upon the under surface of the bracket 49, and the point of contact of said wheel with said bracket forms a fulcrum for said lever. When the carriage reaches the forward point of its travel and is reversed or starts to gig back, the friction between the shoe and the rail upon which said shoe rests causes said shoe to remain stationary until its projection 41 is engaged by one of the projections 51 on the bracket 49, and as the carriage begins its return movement the bell-crank levers 19 turn upon their pivots in the bearing-blocks 11 and through the blocks 21 and the means connecting said blocks to the carriage cause the carriage to move laterally on its supporting-axles. This moves the carriage and the log carried thereby a short distance away from the saw-line, so that as the carriage is run back the log is out of contact with the surface of the saw. When the carriage completes its return movement, it is reversed and started forward. The friction between the shoe and the guide-rail now causes a reversal of the movement of the bell-crank levers, and the carriage and log carried thereby are moved toward the saw-line. The carriage is thus automatically offset at the beginning of each movement thereof. The operation depends entirely upon the frictional contact between the shoe and the guide-rail, and this may be regulated, as desired, by means of a lever and adjustable weight. The shoe

itself is very light and is easily moved over the rail. In some instances a greater amount of friction is necessary to operate the offsetting device than is required in other instances, or more friction may be required to operate one carriage than another. In these instances, however, I am enabled to make the devices for operating the offsetting mechanism all substantially alike and to regulate the friction between the shoe and the guide-rail by the adjustable weight on the pivoted lever above said shoe.

The details of the construction of this device may obviously be varied without departing from my invention. It is also obvious that the friction-shoe may be arranged to travel upon an auxiliary rail, if preferred, instead of traveling upon one of the rails upon which the carriage travels.

I claim as my invention—

1. The combination, with a sawmill-carriage capable of lateral movement upon its supporting-axles, of a friction-shoe arranged to slide upon and to engage one of the rails upon which the carriage travels, a pivoted lever and a sliding weight upon said lever for regulating the friction between said shoe and said rail, and means connecting said shoe with said carriage and causing said carriage to move laterally at the commencement of its travel in each direction.

2. The combination, with a sawmill-carriage capable of lateral movement upon its supporting-axles, of a friction-shoe arranged to slide upon and to engage one of the rails upon which the carriage travels, a pivoted lever and a movable weight upon said lever for regulating the pressure of said shoe upon said rail and thereby increasing or decreasing the friction between the shoe and the rail, and means connecting said shoe with said carriage whereby said carriage is caused to move laterally at the commencement of its travel in each direction, for the purpose set forth.

3. The combination, with the sawmill-carriage and the offsetting mechanism thereof, of the bracket 49 arranged upon said carriage and provided with projections 51, the friction-shoe connected with said offsetting mechanism, the lever 43 pivoted upon said shoe and provided with the adjustable weight 47 and with the roll 45 that is adapted to engage the under surface of the bracket 49, for the purpose set forth.

In testimony whereof I have hereunto set my hand this 26th day of July, 1899.

EDWIN E. THOMAS.

In presence of—

A. C. PAUL,
RICHARD PAUL.