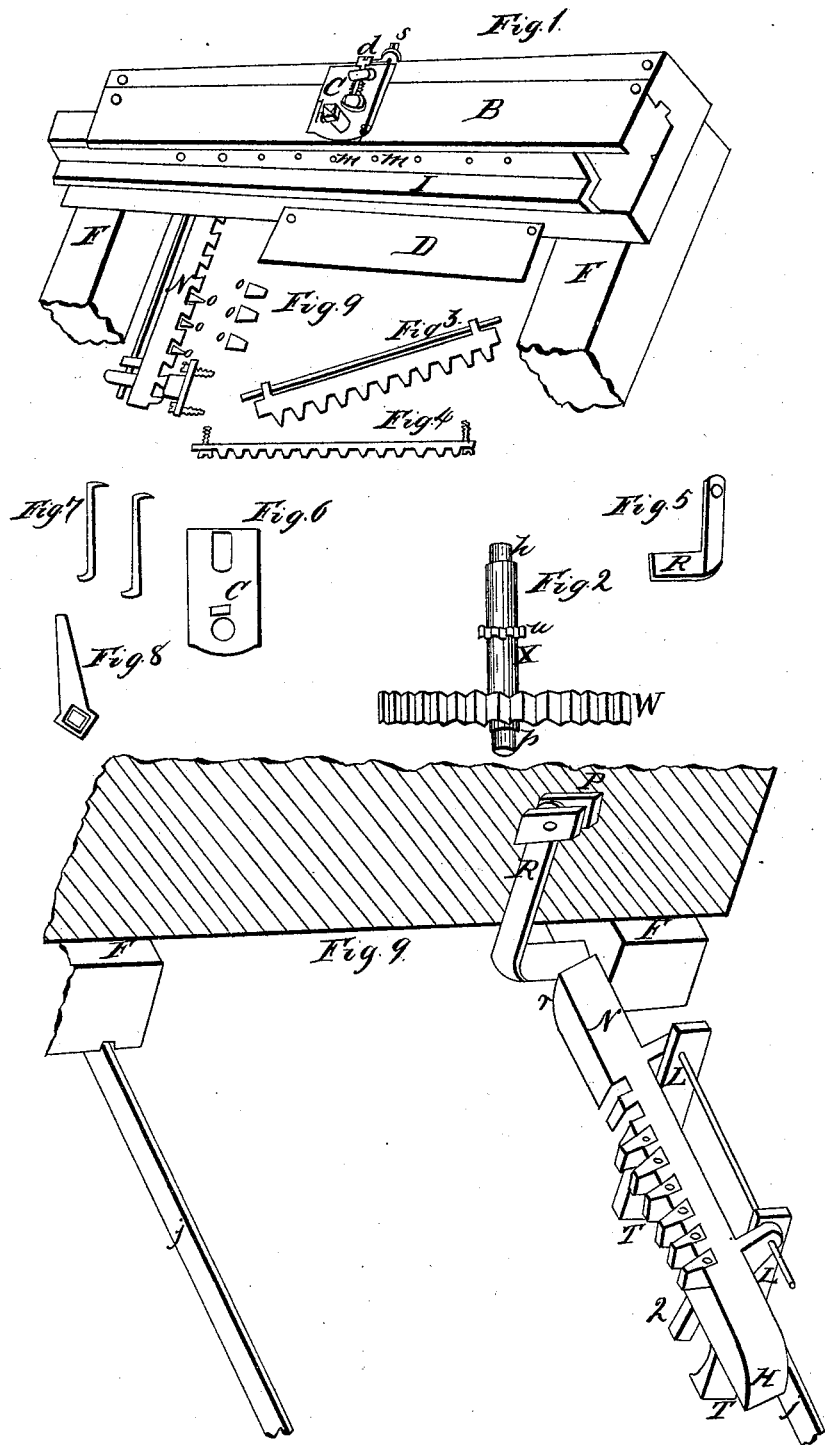


*H. Merrell,*  
*Saw-Mill Head-Block.*  
*N<sup>o</sup> 4,739.                      Patented Sep. 3, 1846.*



# UNITED STATES PATENT OFFICE.

HORACE MERRELL, OF WHEATLAND, NEW YORK.

## SETTING SAW-LOGS.

Specification of Letters Patent No. 4,739, dated September 3, 1846.

*To all whom it may concern:*

Be it known that I, HORACE MERRELL, of Wheatland, county of Monroe, and State of New York, have invented a new and useful

5 Improvement on Self-Setting Tail-Blocks for Saw-Mills; and I do hereby declare that the following is a full and exact description of the construction and operation of the same, reference being had to the annexed  
10 drawings, making a part of this specification, in which—

Figure 1, represents a perspective view of the improved block connected with a section of the carriage marked F F. A convenient  
15 size for the block is about 5 feet long 1 foot 8 inches wide and 8 inches thick. B, plate of cast or wrought iron, I, slide on which the log lies, C sliding box, *d*, screw, *h*, gudgeon of shaft X seen in Fig. 2. *e* flange projecting over the edge of slide I to secure it  
20 in its position, *k*, tongue fastened in the bed of the block plays in a match groove on the under side of the slide I, *m m* holes for the dogs seen in Fig. 7, to secure the log to slide  
25 I. D a plate of metal projecting down in front and under wheel W, seen in Fig. 2, and secured to the back side of the block, to the plate is secured a box for gudgeon *p*. N is a rack about 2 feet 6 inches long containing dovetailed mortises for the purposes  
30 hereinafter described.

Fig. 4 is a rack 36 inches long secured to the slide I so as to gear in pinion *u*, seen in Fig. 2.

35 Fig. 5 is a lever connected to the back side of the block so as to run over the rack N, in the forward movement of the carriage and under the rack when the carriage is gigged back.

40 Fig. 3 is a rack which may be substituted in place and stead of rack N, only that a plurality of such racks will be necessary of different lengths of gear, and by changing the movable racks vary the thicknesses of  
45 the sawed lumber, as is done by the removing or inserting the cogs *o* herein described as adapted to rack N. Fig. 6 a sliding box, *d* a screw, *s* pointer that directs the workman in placing the log, *h* gudgeon to shaft  
50 X, Fig. 2 squared at the upper end so that it may be turned by a wrench represented at Fig. 8.

Fig. 9 is a perspective view of a section

of the back side of the block showing the lever R, and the rack N and their fastenings 55 in place. L L, posts to which the rack is hung which are fastened to the mill floor or timbers at T T.

P represents the fastening of the lever R to the block which consists of a brace joint, 60 the block being the fulcrum to lever R, when the carriage is gigged back the foot of the lever passes under the beveled end of the rack N, at Z and raises it up to a level on the forward movement of the carriage the 65 foot of the lever strikes the beveled end of rack N at H and passes over the rack. *j j* rails on which the carriage slides. 2, block or pin to regulate the distance of the fall of rack N, when the lever R passes from it. 70

*Construction.*—Wheel W, Fig. 2 runs under the block, shaft X runs up through the block vertically so that pinion *u* is brought into gear with the rack connected to slide I. Rack N is confined by its gud- 75 geons in boxes that are fastened to the mill floor or timbers in such a manner that it has a vertical movement. Sliding box C answers the double purpose of tightening the gudgeon *h*, and thereby prevent slide 80 I, from slipping, and bringing the gearing into closer mesh and thereby prevent any variableness in the feed.

Operation: By the gigging back of the carriage the lever R Fig. 5th (and 9th) runs 85 under the rack N, and raises it vertically so as to bring it into gear with wheel W; the revolving of shaft X and pinion *u* moves the slide I, and the log is set, the distance of the movement depends on the number of 90 movable cogs that are in the rack N, or the length of gear in the movable racks heretofore described, on the forward movement of the carriage the lever R runs over the rack.

Now what I claim as my invention or discovery is— 95

The application of the vibrating rack N, together with the movable cogs, and the movable racks as described connected to the mill floor or timbers in combination with 100 the lever R, wheel W, and the other appendages in the manner above described.

HORACE MERRELL.

Witnesses:

H. W. WELLS,  
JAMES HILL.