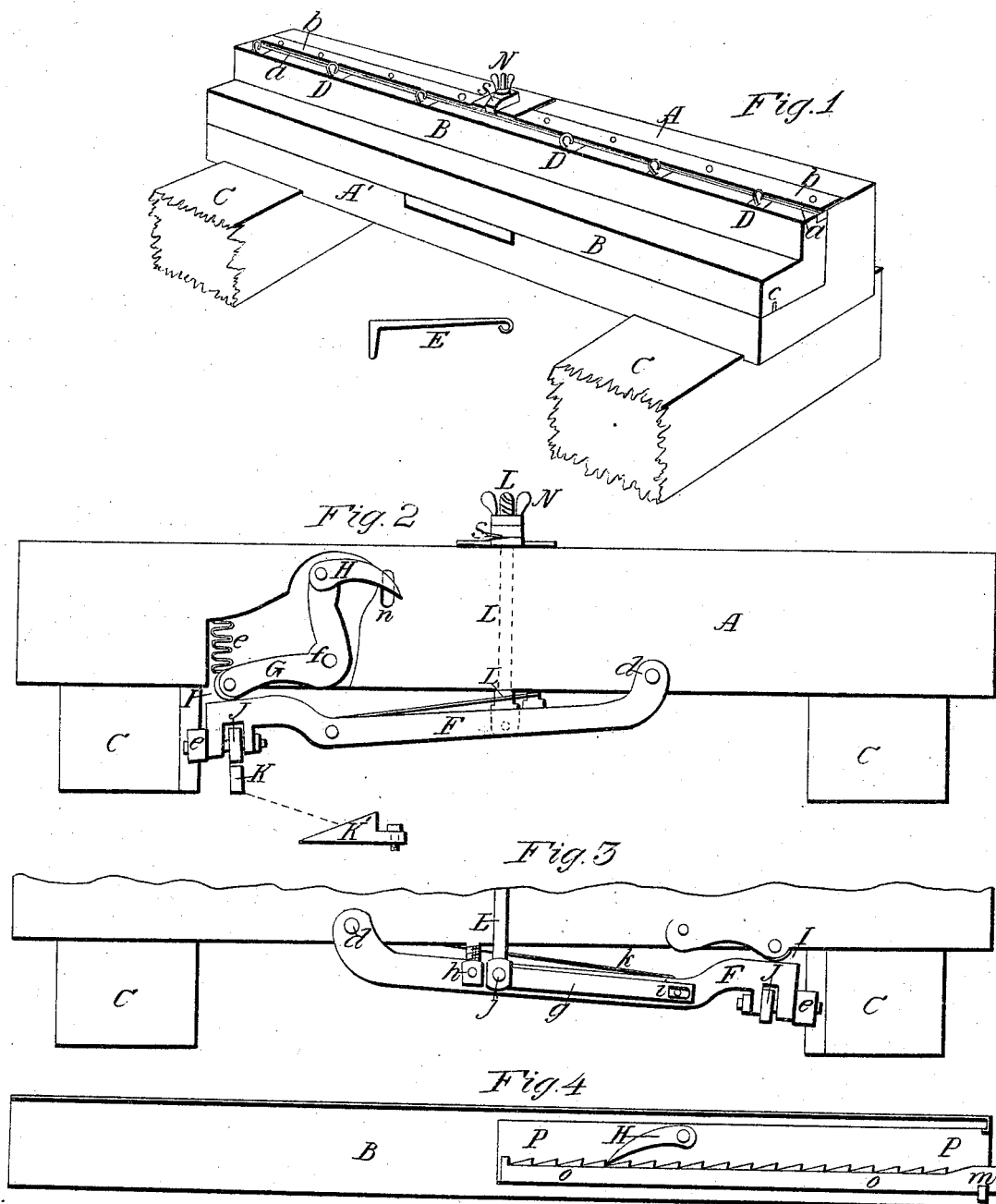


*C. D. Wright,*  
*Saw-Mill Head-Block.*  
*N<sup>o</sup> 2,791.      Patented Sep. 30, 1842.*



# UNITED STATES PATENT OFFICE.

CHARLES D. WRIGHT, OF COLCHESTER, CONNECTICUT.

## TAIL-BLOCK OF SAWMILLS FOR SETTING LOGS.

Specification of Letters Patent No. 2,791, dated September 30, 1842.

*To all whom it may concern:*

Be it known that I, CHARLES D. WRIGHT, of Colchester, in the county of New London and State of Connecticut, have invented a new and useful Manner of Constructing the Apparatus for Setting Logs on the Tail-Blocks of Sawmills; and I do hereby declare that the following is a full and exact description thereof.

In the accompanying drawing Figure 1, is a representation of the improved tail block, with its slide in place. A, A', is the tail block, B, B, the slide, and C, C, a part of the carriage upon which the tail block rests; these parts, so far, not differing from such as are in common use. D, D, are eye bolts which are made of round iron, and pass vertically into the slide, within which they are capable of swiveling around. E, is a dog which is made with an open loop at one end, by which it can be hooked on to the eye of either of the bolts D, D. This manner of attaching the dogs to the eye bolts admits of their being more readily driven into the end, or the sides of the log than under the usual construction. Along the back edge of the slide, as at *a, a*, I affix a strip of hoop iron, and along the top of the tail block, as at *b, b*, I affix a similar strip, which overlaps the strip *a, a*, and performs the office of a rabbet, holding the slide down in its place, while it, also, prevents the entrance of sawdust between the slide and the block, and protects the edges of the block and slide from injury. A groove, also, is formed on the under side of the slide, as shown at *c*, into which an iron tongue, attached to the block, is received, serving to guide the slide correctly, and allowing it to move easily. In forming the tail block, I prefer to make it of two pieces of timber bolted together. In this case, I take a piece about 4 feet 8 inches long, 12 inches wide, and 3 inches thick; and another piece of the same length, and  $5\frac{1}{2}$  inches square; this latter I bolt to the face of the former, so that it shall stand even with one of its edges, thus forming a block the base of which is 12 inches wide, and which is about  $8\frac{1}{2}$  inches high on the rear side; this mode of construction leaves a proper recess, or rabbet, to receive the slide B, and also renders it convenient for the inserting of the apparatus by which the log is to be set, and which I will now proceed to describe.

Fig. 2, represents the face of the tail block,

as seen when the slide, and the part A', on which it rests, are removed. F, is an iron arm, which, in an apparatus constructed by me, is  $32\frac{1}{2}$  inches long, and about  $1\frac{1}{2}$  inches square. The arm is hung to the block by a joint pin at *d*, and extends along under it to the carriage side C, into which a notch, or vertical groove, is made, to receive a friction roller *e*, on the outer end of the arm, which serves to check all lateral motion, and to guide it up and down. G, is a kneed lever which works on a joint pin at *f*, and carries at its upper end a feed hand, or pawl, H, which takes into a ratchet on the slide shown in Fig. 4, and to be presently described. I, is a friction roller on the lower arm of the kneed lever, which friction roller rests upon the arm F, near to its outer end; and it will be evident, therefore, that the raising of the latter will cause the feed hand, or pawl, H, to move forward. I have made each arm of this lever  $5\frac{1}{2}$  inches long. J, is a friction roller attached to the arm F, and K, is an inclined plane shown in a side view at K', which is to be made fast to the floor of the mill by means of a screw bolt; allowing its place to be changed at pleasure, so that when the tail block has arrived in the proper situation for the setting of the log, the roller J, shall come into contact with said inclined plane.

The arm F, is made adjustable in the following manner. L, Figs. 2 and 3, is a screw bolt which passes up vertically through the head of the block, and it has a nut N, tapped on to its upper end, for the purpose of raising or lowering it and serving also to prevent the slide from moving endwise by the bearing of the nut N, on the hammer headed piece S, which bears upon the strip of iron *a, a*. Fig. 3, shows the side of the arm F, opposite to that shown in Fig. 2; *g*, is a second arm, which is hung on a joint pin at *h*, passing through a stud attached to the under side of the tail block; said arm is connected to the arm F, by a pin rising from it, and passing through a slot *i*, in the arm *g*; to this latter arm the bolt L, is jointed at *j*; the proximity of the joints *h*, and *j*, will cause the outer end of the arm F, to pass through a considerable range with but little motion in the bolt L. A spring *k*, is made to bear on the upper side of the arm F, which, with its own weight, will always insure its descent, and aids in preventing the end motion of the slide; and a spiral, or

other, spring *l*, is made to bear upon the outer end of the kneed lever *G*, to keep the roller *I*, in contact with *F*. The lever *G*, is let into the face of the tail block, so as to be flush with it, but the feed hand, or pawl, *H*, stands out from the face of the block, and is received within a recess in the slide, where it acts upon the rack placed there for that purpose.

Fig. 4 shows the vertical face of the slide, which, when in place, is in contact with the vertical face of the tail block. *O, O*, is an iron rack which is received within a recess *P, P*, in the slide; this rack I have made thirty inches long. I prepare several racks of this description, say six or seven, having teeth of different sizes adapting them to the setting of stuff to be sawed of different thickness; not that it is necessary to have a separate rack for every thickness, as the feed hand, or pawl, may be made to pass over two, three, or more teeth in one setting, and may serve therefore, for two, three or more thicknesses. The racks are easily slipped out and changed, as they merely slide into the recess *P, P*, and have a notch on their under sides near their outer ends, which receives a fixed iron stud, as shown at *m*. When the feed hand, or pawl *H*, is raised, the rack also can be raised, and slid out, and another, if required, inserted in its stead; *n*, Fig. 2, is a hole made through the block, in the manner of a key-hole, for the insertion of a rod to raise the feed hand; this, however, may be effected in other ways; whenever it is desired to move the slide back, it will be necessary to raise the feed hand. If preferred, a ratchet may be placed on the underside of the slide, which may be operated on by a pinion and winch, for moving the slide back; other

known devices may be employed in combination with the apparatus which I have described, according to the habit, or the judgment, of the person using my tail block.

I usually put the rack into its place after the log is placed on the carriage; selecting one of the notches in which will suit the thickness of the stuff to be sawed, by the passing of the feed hand over either one, two, or more, teeth. The inclined plane is then to be fixed on that part of the floor which suits the length of the log, and the iron arm *F*, so adjusted as that by passing over said plane, it will cause the feed hand to force the slide to the proper distance. When the arm *r*, is relieved from the action of the inclined plane, the weight of said arm and the pressure of the spring upon it will cause it to descend; and the feed hand will, at the same time, be drawn back by the action of the spring *l*, on the kneed lever.

Having thus fully described the nature of my improvement in the manner of constructing the tail blocks of saw-mills, what I claim therein as new, and desire to secure by Letters Patent, is—

The manner in which I have formed, combined, and arranged the arm *F*, the kneed lever *G*, the rack *O*, and the regulating bolt *L*, and their appendages, so that by the action of the inclined plane *K*, on the said arm, the respective parts shall coöperate in setting the log, the whole being constructed and actuated in the manner, or substantially in the manner, herein set forth.

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Witnesses:

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