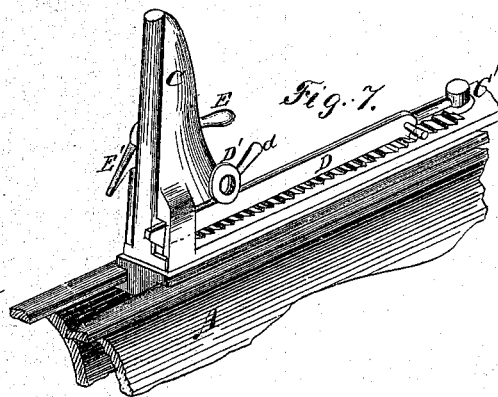
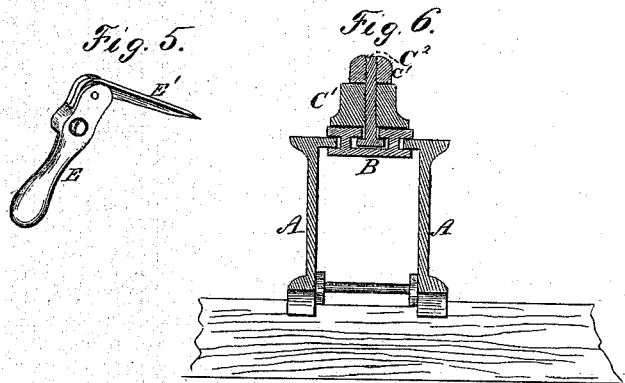
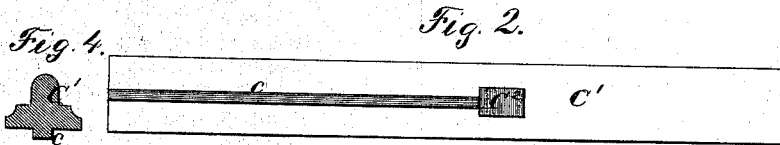
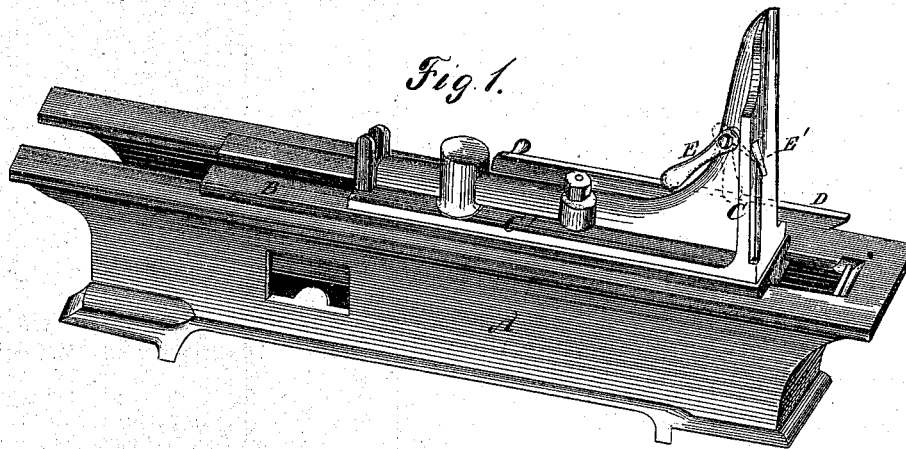


W. A. L. KIRK.  
HEAD BLOCK FOR SAWMILLS.

No. 112,257.

Patented Feb. 28, 1871.



Witnesses:  
A. Ruppert,  
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Atty.

# United States Patent Office.

WILLIAM A. L. KIRK, OF HAMILTON, OHIO.

Letters Patent No. 112,257, dated February 28, 1871.

## IMPROVEMENT IN HEAD-BLOCKS FOR SAW-MILLS.

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, WILLIAM A. L. KIRK, of Hamilton, in the county of Butler and State of Ohio, have invented certain Improvements in Head-Blocks for Saw-Mills; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the annexed drawing making part of this specification, in which—

Figure 1 is a perspective view of a head-block embodying my improvements.

Figure 2 is a bottom view of the sliding adjustable knee, detached from the slide.

Figure 3 is a transverse section of the slide to which the adjustable knee is secured.

Figure 4 is a transverse section of the horizontal part of the knee.

Figure 5 is a perspective view of the auxiliary dog, detached.

Figure 6 is a transverse vertical section of the head-block shown in fig. 1.

Figure 7 is a perspective view of the head-block, seen from the side opposite to that shown in fig. 1, to bring into view the pushing-bar and devices acting in connection therewith.

The same letters are used in all the figures in the designation of identical parts.

The invention consists in the employment of a bar of metal, which is placed upon the upper surface of the horizontal position of the knee of the head-block, such surfaces being serrated or notched to receive a projection upon the bar, the forward end of which passes through a groove or slot in the knee, so that when a log is placed upon the head-block the bar may be pushed through such slot until it reaches the surface of the lower portion of the log, and thus, as the knee is moved forward, prevent the tendency to roll such log, the bar being held in its advanced position by a cam or eccentric.

The last part of this invention consists in arranging the knee adjustably upon the slide of the head-block, in such a manner that it may be slid back upon the slide when the latter has been moved away from the saw through its entire range, thus increasing the distance between the saw and the knee of the head-block and the capacity of the latter for feeding up logs of large diameter.

The frame or carriage A of the head-block is constructed in the ordinary manner, with a longitudinal slot in its upper face, the edges of which form ways for the slide B.

The latter is, in practice, constructed with a rack upon its under side, so that it may be moved by a pinion in the ordinary manner. This rack is not shown. This slide usually terminates at its forward end in the knee, which bears against the log.

The knee O in this head-block does not form a constituent part of the slide B, but is arranged upon the latter adjustably.

For this purpose the upper side of the slide has a longitudinal slot, *b*, beginning at the rear end but terminating some distance from the forward end, and having the form of an inverted L, as shown, in which slot a rib, *c*, of the horizontal part O' of the knee is fitted to maintain the knee in line with the slide, to which it may be secured at any required point by a bolt, C<sup>2</sup>.

The head of the latter, passing into the larger part of the slot *b*, will draw the knee firmly to the slide on tightening the nut *c* upon its upper screw-threaded end and bearing upon a boss on the knee.

D refers to a sliding bar, which passes through the slot 1 in the vertical portion of the knee; its outer end being provided with a projection adapted to engage the teeth formed upon one side of the horizontal part O' of the knee, as shown in fig. 7, and with a handle by which to move it in and out.

D' refers to an eccentric or cam, which is pivoted to the knee, and is so arranged with reference to the sliding bar that when the handle *d*, by which it is operated, is borne down, the full part of the eccentric will be made to press upon the bar and cause the projection upon its rear end to enter one of the notches in the knee, and thus it will be held in any position in which it may be desirable to place it.

The office of said sliding bar is to press against the lower portion of the log after it has been placed upon the head-block, so that, as it is pushed forward toward the saw, all tendency to turn or roll the log may be avoided, in order that when a vertical section has been formed upon such log by the saw the same shall always remain in such vertical position, and thus insure the cutting of the timber of equal thickness upon both of its edges.

E refers to a lever, which is pivoted to the vertical portion of the knee O, its upper or outer end being made to receive and hold a dog, soon to be described, while its opposite end serves as a lever for forcing said dog into the timber upon the head-block.

E' refers to the dog above alluded to, it being pivoted to the short arm of lever E, and so arranged as to pass through a slot formed in the knee O at an angle of one hundred and twenty degrees, more or less, to the vertical face thereof. This dog is straight in its general outline, except where it enters the lever E and upon its outer or lower end, which is sharpened so as to enable it to enter the timber with facility, its office being to enter and hold any thin pieces of lumber, which it is difficult, if not impossible, to hold with the usual fastenings.

Having thus described my invention,

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

1. The sliding bar D, in combination with the sliding knee of a head-block of a saw-mill, and an eccentric or cam for holding the bar in position, substantially as and for the purpose set forth.

2. The serrated or toothed rack upon the sliding knee, when used in combination with the sliding bar D, substantially as and for the purpose set forth.

3. The adjustable knee of a head-block, when com-

posed of the parts B and C, arranged in the manner and for the purpose specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WM. A. L. KIRK.

Witnesses:

J. CURTIS,

ISRAEL WILLIAMS.