

*P. M. Cummings,*

*Head Block.*

*No. 110,119.*

*Patented Dec. 13, 1870.*

Fig. 1

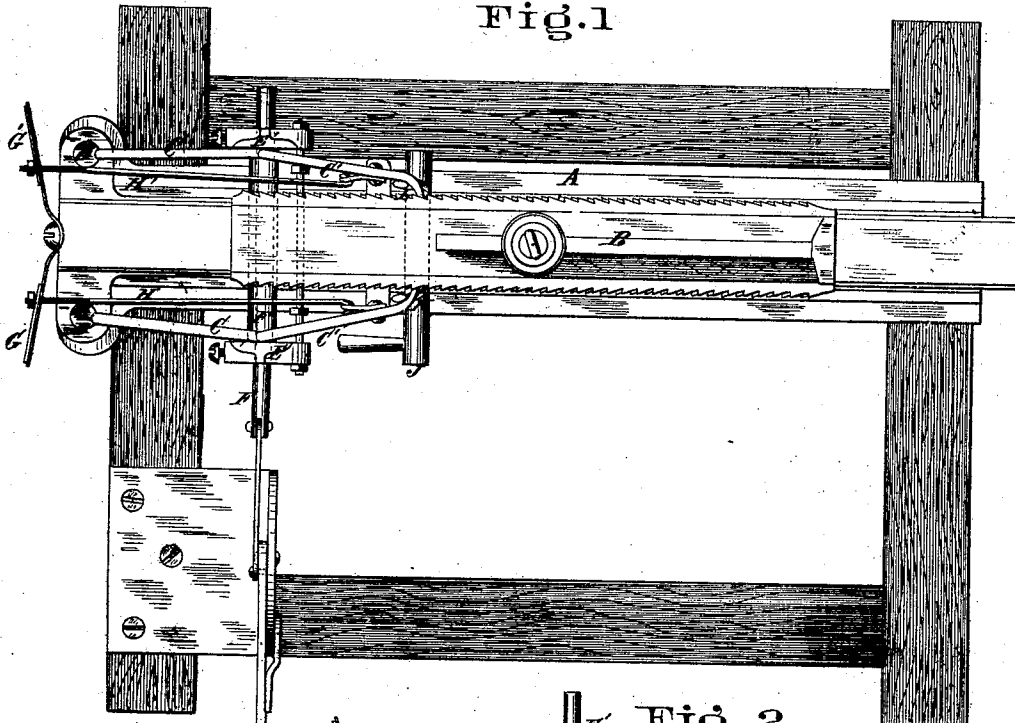


Fig. 2

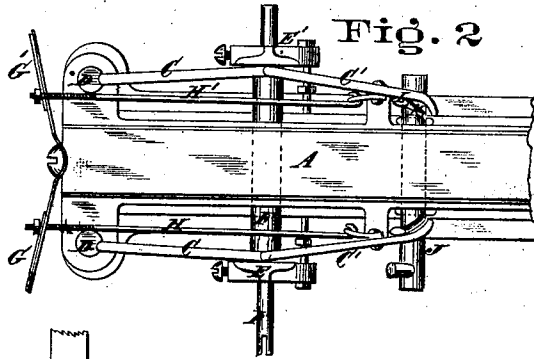


Fig. 3

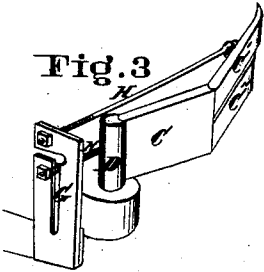


Fig. 4

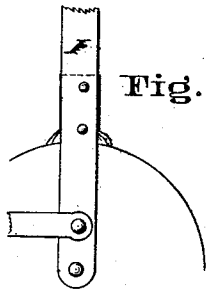
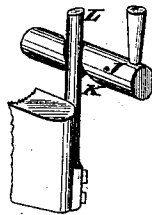


Fig. 5



Attest  
*By my hand*  
*E. F. Dayman*

Inventor  
*Perley M. Cummings*  
*By F. Millward*  
*Attorney*

# United States Patent Office.

PERLEY M. CUMMINGS, OF CINCINNATI, OHIO, ASSIGNOR TO HIMSELF  
AND JOSEPH D. CLARK, OF ERIE, PENNSYLVANIA.

Letters Patent No. 110,119, dated December 13, 1870.

## IMPROVEMENT IN HEAD-BLOCKS.

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, PERLEY M. CUMMINGS, of Cincinnati, Hamilton county, State of Ohio, have invented a certain new and useful Improvement in Head-Blocks for Saw-Mills; and I do hereby declare the following to be a sufficiently full, clear, and exact description thereof, reference being had to the accompanying drawing making part of this specification.

### *Nature and Objects of Invention.*

My invention consists of a peculiar device for operating the knee of the head-block, by successive steps, in such a way that the adjustment of the knee is rendered perfectly accurate for all degrees of movement and no slack motion or torsion of rods between the operating lever and the moveable knee has to be taken up before a movement of the knee can be effected.

My invention further consists of a peculiar device for throwing out the feeding mechanism to permit the retraction of the knee.

### *Description of Accompanying Drawing.*

Figure 1 is a plan of a head-block embodying my invention.

Figure 2 is a plan of the same with the sliding knee removed.

Figure 3 is a perspective view of the operating pawls and retracting springs.

Figure 4 is an elevation showing the lever connection.

Figure 5 is a perspective view of the device for throwing the pawls out of gear.

### *General Description.*

A is the stationary part of an ordinary head-block, and  
B, the sliding or adjustable knee.

The sides of the knee B are constructed with the customary feeding notches, which may be in two sets, offsetted, as shown in fig. 1, or one set wide enough for the operation of two pawls.

Toggle-joint pawls C C' are arranged on each side of the knee, as shown, although in some cases pawls on one side only may be used.

The inner ends of the pawls C rest against the columns D, and the outer ends engage the notches in the knee.

The joint between the pawls C, and C', C'', is of the "ball and socket" description, and the joints are kept in connection by means of the jaws E E' on the sliding bar F, in conjunction with the springs G G' on the ends of the block and the connecting-rods H H'.

By oscillation of the bar F by means of the lever I, the knee B can be advanced to any degree, even to the extent only of a quarter notch, the pawls being of different lengths for this purpose.

The twisting shaft J, provided with spiral grooves K and arms L, is designed to throw out the pawls to enable the knee to be retracted.

### *Claims.*

1. In connection with the notched knee A, the reciprocating bar F E E' and toggle-joint pawls C C' C'', the latter being kept in gear by springs, as described, and for the purpose specified.

2. In connection with the elements of the preceding clause, the spirally-grooved shaft J K and arms L, as and for the purpose described.

In testimony of which invention I hereunto set my hand.

PERLEY M. CUMMINGS.

Witnesses:

E. F. LAYMAN,  
J. L. WARTMANN.