L. B. Adams,

Saw-Mill Head-Block,

No. 14,943. Patented May 27, 1856.

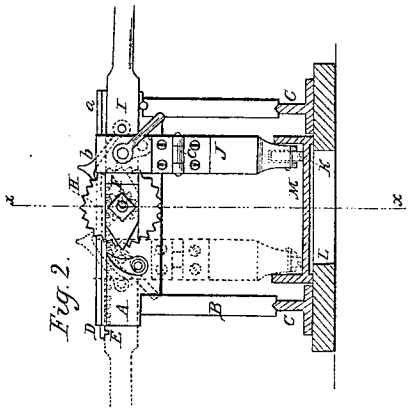

Fig. 2.

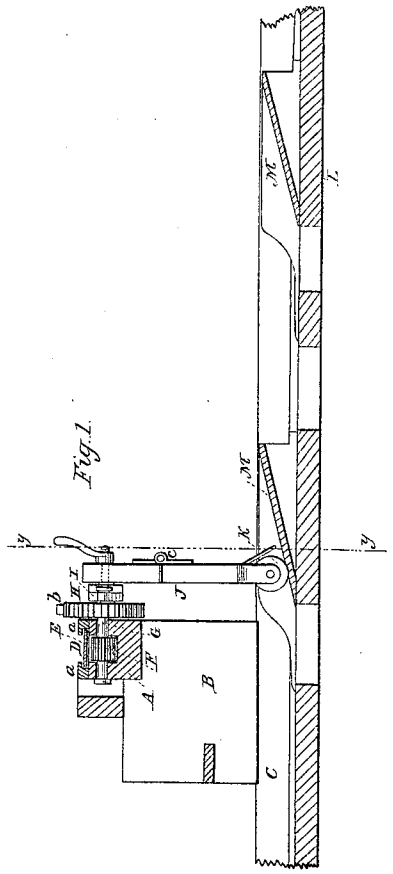

Fig. 1.

UNITED STATES PATENT OFFICE.

LUCIUS B. ADAMS, OF SMITHFIELD, PENNSYLVANIA.

METHOD OF OPERATING HEAD-BLOCKS OF SAWMILLS.

Specification of Letters Patent No. 14,943, dated May 27, 1856.

To all whom it may concern:

Be it known that I, LUCIUS B. ADAMS, of Smithfield, in the county of Bradford (Ulster post-office) and State of Pennsylvania, have invented a new and Improved Self-Acting or Self-Setting Head-Block for Sawmills; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1, is a longitudinal vertical section of my improvement, (*x*) (*x*) Fig. 2, showing the plane of section. Fig. 2, is a transverse vertical section of ditto, (*y*) (*y*) Fig. 1, showing the plane of section.

Similar letters of reference indicate corresponding parts in the two figures.

My invention consists in operating the sliding head to which the dogs are attached by means of a lever passing over inclined planes attached to the flooring, said lever being connected to a lever having a pawl secured to it, which pawl acts upon a ratchet, and turns the ratchet and a pinion which is upon the same shaft as the ratchet, the pinion above mentioned gears into a rack and moves the sliding head to which the log is secured, as will be presently shown and described.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A, represents a head block which is attached to a carriage B, constructed and operated in the usual manner, and working upon ways C, C.

D, represents a slide which is fitted horizontally upon the upper surface of the head block, said slide working between proper guides (*a*) (*a*). To the under side of the slide D, there is attached a rack E, in which a pinion F, gears, said pinion being upon a shaft G, which passes through the head block, see Fig. 1. On the outer end of the shaft G, there is placed a ratchet H.

I, is a lever the inner end of which is fitted loosely on the end of the shaft G, and (*b*) is a pawl which is attached to the inner side of the lever I, said pawl catching between the teeth of the ratchet H.

J, is a vertical lever or arm the upper end of which is attached to the lever I. The lower end of this lever has a roller K, fitted in it, and the lever J, has a joint or hinge (*c*) at about its center.

To the platform or flooring L, and between the two ways C, C, there are attached two inclined planes M, M, both are shown in Fig. 1. These inclined planes are placed at points on the flooring at the termination of the stroke or length of vibration or movement of the carriage B.

The operation will be readily understood, as the carriage B, commences its backward movement, the roller K, will pass up one of the inclined planes M, and the lever I, will be raised, the pawl (*b*) turning the ratchet H, and the pinion F, in consequence of gearing into the rack E, will move the slide D, to which the end of the log is secured by dogs. The slide being also moved in a similar manner by the other inclined plane at the termination of the backward movement of the carriage. The slide D, may be moved a greater or less distance as desired, according to the thickness of the stuff to be sawed, by adjusting the inclined planes in any proper manner, so that they may project at a greater or less height from the flooring, and as the slide D, is operated or moved at the commencement, and at the termination of the backward stroke, the log will be properly set at both ends when the carriage moves toward the saw.

The lever I, may be turned at either side of the ratchet H, as shown in red in Fig. 2, so that the log may be cut or sawed each side of its center.

I do not claim operating the slide D, by means of the ratchet, and rack and pinion for these have been previously used, but,

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

The lever I, with pawl (*b*) attached, and lever or arm J, having a roller K, at its lower end, and the inclined planes M, M, attached to the flooring L; the above parts being arranged as shown and operating in connection with the ratchet H, pinion F, and rack E, substantially as shown for the purpose specified.

LUCIUS B. ADAMS.

Witnesses:

M. MERCER,

JAMES KINSMAN.