I. Hart,

Saw-Mill Head-Block.

No. 45,824. Patented Jan. 10, 1865.

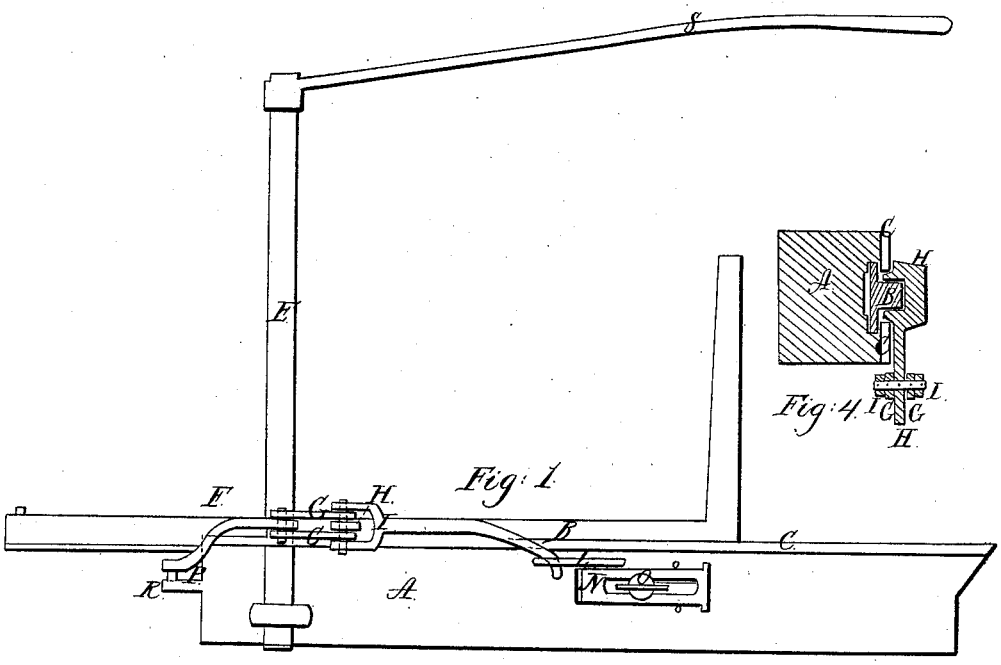


Fig: 1.

Fig: 4.

Fig: 2.

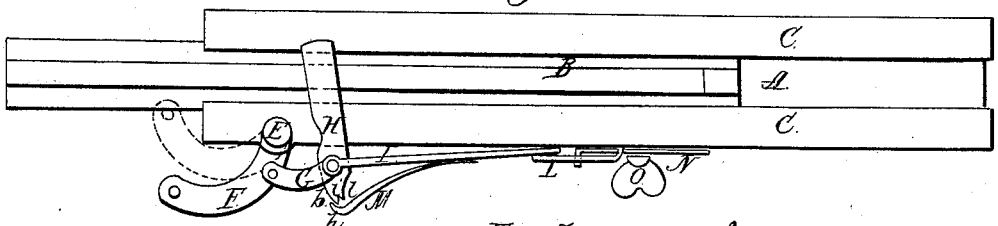
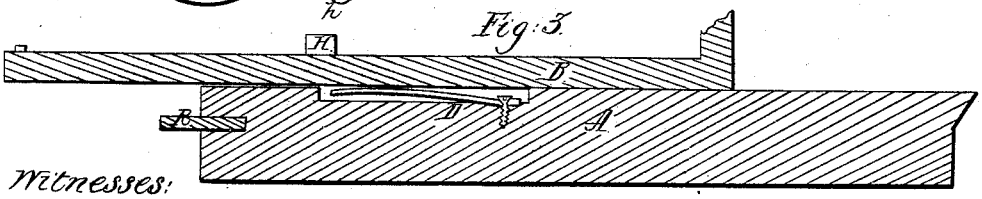


Fig: 3.



Witnesses:
Lloyd Lowndes
Walter Eliot

Inventor:
Ira Hart

UNITED STATES PATENT OFFICE.

IRA HART, OF CLARKSBURG, WEST VIRGINIA.

IMPROVEMENT IN HEAD-BLOCKS FOR SAW-MILLS.

Specification forming part of Letters Patent No. **45,824**, dated January 10, 1865.

To all whom it may concern:

Be it known that I, IRA HART, of Clarksburg, in the county of Harrison and State of West Virginia, have invented a new and Improved Saw-Mill Head-Block; and I do declare hereby that the following is a full and accurate description thereof, reference being had to the accompanying drawings and the letters of reference marked thereon, in which—

Figure 1 is a plan; Fig. 2, a side view; Fig. 3, a vertical section lengthwise through the center, and Fig. 4 a transverse section through the clamp H.

The nature of my invention consists in a new and simple device, whereby every adjustment necessary to the rapid manufacture of lumber can be had with the least possible delay.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

The knee B is made to move freely in properly-constructed guides or grooves, as shown by A B C, Fig. 4, the precise form of which is not material. The vertical shaft E, operated by the lever S, Fig. 1, has an arm curved and depressed at the end, as shown at F, Figs. 1 and 2, to which is connected by the link G the clamp H, which operates the knee B. To the guide I, jointed at one end with the clamp H and the link G, and the other end sliding in the staple L, is attached the spring M, hooked, as shown at *h*. This spring holds the clamp H in either of the three positions described as follows:

First. Square across the sliding knee B, when the hook *h* is in the notch *i*. In this position the clamp H communicates no motion to the knee B, and permits it to be moved at will in either direction by hand.

Second. Oblique to the left, as represented in Fig. 2, and so held by the hook *h*, pressing against the side of the point of the clamp H, as shown at K, Fig. 2, and when thus held turning the shaft E to the left causes the clamp H to grip firmly the sliding knee B, and carry it along with itself. On reversing the motion of the shaft E the spring M yields enough to permit the clamp H to relax its grip on the sliding knee B, and to slide back toward the shaft E, preparatory to taking a new hold.

Third. Oblique to the right across the sliding knee B, held there by the hook *h*, pressing at L. When held in this position, its action on the sliding knee B is reverse from what it is when held in the second position above described.

The arm F is bent, as represented in the drawings, in order that a connecting-rod resting on the support R, with the pin P passing through it, and connecting with a similar pin the other head-block, can communicate a similar motion to said other head-block. In fact, both ends may be set from either end of the log, or either from either end or one end forward and the other backward at the same time by operating the lever S on either head-block, the sawyer standing in his proper position on the same side of the log as the saw.

The clamp H and all its attachments can be removed by raising the shaft E out of its socket. Then, by removing the knee B, a log can be rolled on from either side of the carriage.

The fixture for adjusting the clamp H, the dog for holding the log in place, the index, &c., are not shown, not being parts of this invention, and the gage N is not properly shown.

The spring D is useless on the full-size head-blocks.

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

1. The sliding knee B and clamp H, in combination with the link G and shaft E, or their equivalents, when constructed substantially as and for the purpose specified.

2. The combination of the clamp H, guide I, and spring M, when constructed substantially in the manner and for the purpose specified.

IRA HART.

Witnesses:

LLOYD LOWNDES,
WALTER EHRET.