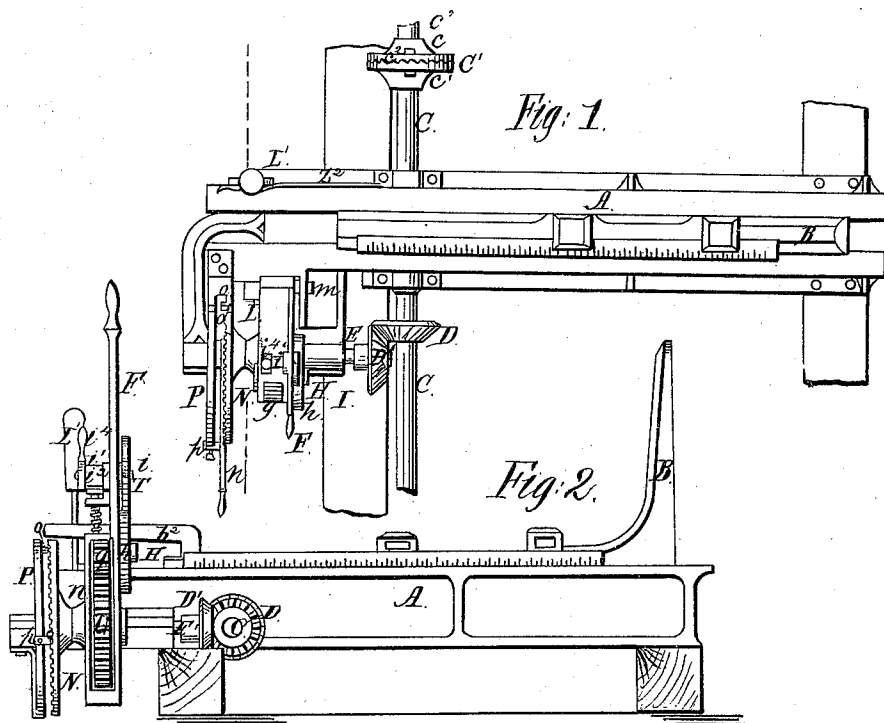
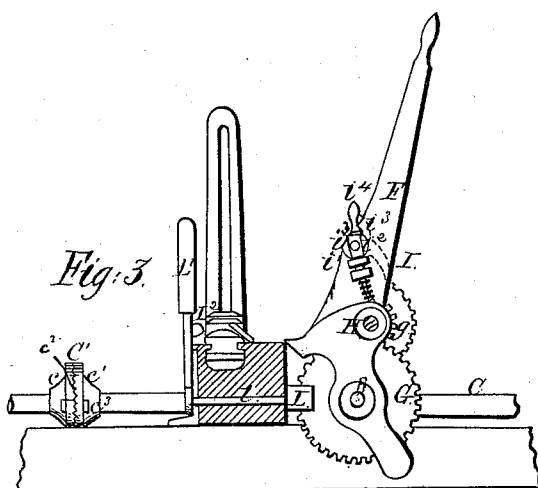
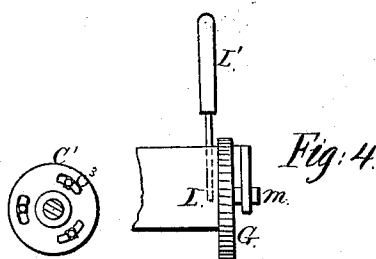


D. Parkhurst

Head Block for Saw Mills.

N^o 91,767.

Patented Jun. 22, 1869.



Witnesses:

Robert Burns

William W. Hertel

Inventor:

Darius, Parkhurst.

United States Patent Office.

DARIUS PARKHURST, OF ST. LOUIS, MISSOURI.

Letters Patent No. 91,767, dated June 22, 1869.

IMPROVEMENT IN HEAD-BLOCK 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, DARIUS PARKHURST, of St. Louis, in the county of St. Louis, State of Missouri, have made certain new and useful Improvements in Saw-Mill Head-Blocks; and I do hereby declare that the following is a full and clear description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

This invention relates to the head-blocks used in sustaining logs, so that they may be properly adjusted to the saws; and the nature of said invention is,

First, in the construction of the ratchet-devices for operating the gearing propelling the knees or slide-rests against which the logs are held;

Secondly, in the arrangement of a dial for regulating the movement of the knees aforesaid;

Thirdly, in the arrangement of a friction-cam or dog for retaining the propelling gear-wheels in any required position, and preventing a return movement of the knees, when logs are thrown against them, or otherwise, and to influence such a return movement; and

Lastly, the nature hereof is in the arrangement of the shaft-coupling of the shaft operating the several head-blocks, so that adjustments may be made of said head-blocks with regard to one another, and thus greater accuracy is achieved when long logs are sawed, as in the usual pinery-blocks.

To enable those herein skilled to make and use my said improvements, I will now more fully describe the same, referring to

Figure 1 as a plan, representing the features of this invention in their usual form of application; to

Figure 2 as a side elevation; to

Figure 3 as a sectional elevation at the line $x y$ of the plan; and to

Figure 4 as a detail view, hereafter referred to more especially.

I form the head-blocks A generally in the usual form and material, supporting thereon the knee or sliding rests B, which abut against the logs or timber, in the usual manner, and which, being actuated by the devices now to be described, press the logs forward, as may be required, in sawing.

The knees B will be arranged with tooth-racks, or similar devices, and be actuated, to a forward or backward motion, by a pinion, or other proper devices, this being in the manner now used.

The driving-pinion, thus acting, will be secured upon the main shaft C, which extends longitudinally with the carriage upon which the several head-blocks rest, and connects the several head-blocks, and thus causes a simultaneous action of all thereof at the discretion of the operator.

In order that a proper adjustment of all head-blocks may be made, to cause the knees to be one vertical plane, I have arranged the adjustable coupling C', the

same being formed of two disks, $c c'$, one being secured to each of the adjoining shaft-ends. Said disks have radial pyramidal ridges, c'' , so that the disks may be placed against each other, and secured against movement relative to each other under torsion by the said ridges. In adjusting, the operator will loosen the retaining-screw c^3 , and move, by hand, one disk relative to the other, as may be needed, whereupon the retaining-screw c^3 is again tightened. To allow for this adjustment-movement, the screw c^3 will move in a proper slot in one of the said disks.

On the shaft C, I arrange the bevel-wheel D, engaging with the wheel D' upon the counter-shaft E, this being the shaft which carries the ratchet-lever F, by which the operator moves the knees B, as heretofore indicated.

The shafts C and E will have proper bearings in or connection with the head-block A.

The lever F may turn freely on said shaft E, except when connected and secured therewith by the ratchet and wheel-devices, now to be described.

On the shaft E, I secure, by keys or otherwise, the spur-wheel G. This is in engagement with the spur-wheel g , secured to the shaft H, carried in the lever F. On the outer end of said shaft H is the ratchet-wheel h , which operates with the double-pronged pawl I. Said pawl turns freely, when moved by hand, upon the pivot i , secured movably in the said lever F.

The inner end of said pivot i has the bearing-surfaces i^1 , i^2 , and i^3 , formed by cutting said pivot into rectangular faces. Against the said surfaces, (or either thereof,) in accordance with the position of the pivot i , a spring, K, presses, thus acting to hold the pivot i in any of the three positions of its action or non-action.

To operate the pivot i and its pawl I, the handle i^4 is used. By turning this handle and the pivot i , the pawl may be thrown forward, or back, or lifted off from any engagement with the ratchet-wheel h , and the spring K will firmly hold the pawl in the position thus given, by its action upon one of the surfaces i^1 , i^2 , or i^3 .

When the pawl is in the position shown in fig. 3, (its rear prong being on the ratchet-wheel,) the wheel h , being then carried back in moving the lever F back by hand, then, in moving the lever F forward, the wheel h , being prevented from turning by the pawl, the gear-wheel g will turn the spur-wheel G and its shaft B from left to right, and thus move the shaft C and the knees B forward, and a reversed position of the said pawl will similarly run the knees B back.

In order, that during the time that the lever F does not act to propel the intermediate devices and the knees B, said devices, and especially said knees, shall be stationary and fixed in their respective positions, I arrange the friction-cam L (see fig. 4) on the shaft l ,

which is secured in proper bearing in the head-block A. A weighted lever, L^1 , is used to operate said cam or dog L, and a detent-spring, L^2 , holds the lever L^1 in the position given to it by the operator.

When the lever L^1 stands vertically, the cam L will be out of engagement with the spur-wheel G, and the pawl I being raised off from the ratchet-wheel h , the operator may then easily move back the knee B, by power of hand, to such position as may be desired for adjusting a new log or block of timber on the head-block.

When the lever L^1 is moved from its vertical position to the right or left, the cam L will press against the spur-wheel G, and thus hold the said wheel, to prevent it from turning in one or the other direction, in accordance with the position of said cam and lever; and thus, whether the knees are being moved forward or moved back, by the operator using the lever F, he is enabled, by placing said lever L^1 , to prevent a return motion of the spur-wheel G and the knee, which would cause a loss of a portion of the movement of the knee desired.

To prevent the spur-wheel G from being deflected, under pressure of the cam L, a set-screw, m , will be arranged to bear against the other side of said spur-wheel. Said set-screw m will be secured suitably in the flanges of the pillow-block supporting the counter-shaft E.

As it is generally necessary to cut logs into slabs of uniform thickness, and also for convenience in determining the exact size of the cut slab, I arrange the dial N on the shaft E, secured thereto firmly.

Said dial has serrations, into which a lever, n , may be pressed by the operator. Said lever turns upon the shaft E, and is arranged, by its shape, to spring into and remain in any of the serrations desired.

When said lever is to be thrown out of use, it is sprung into the niche o , and when, in its action, the lever reaches its point of rest, (forward end of stroke,) it slides into the rest-niche o' .

Concentric with the dial N, I arrange the guard P, upon which are divisions, which indicate the movements of the knees B under action of the lever F.

A stop, p , may be adjusted at any of the division-marks on said guard, by proper set-screw.

If, then, the operator places the stop p at a division-mark, such as "2," and he thereupon moves the lever n back closely against the said stop p , and into the serration of the dial N corresponding to this position, upon use of the shaft E the knees B will then move forward, say two inches, and similarly for any other position of the stop p and lever n .

Having thus fully described my invention,

What I claim, is—

1. The pawl I, arranged on the pivot i , having the bearing-surfaces i^1 i^2 , (or either thereof,) and combined with the spring K, substantially as and for the purposes set forth.

2. The method of controlling the movement of the shaft E and its dial N, by the spring-lever n , stop p , and guard P, said guard being arranged with division-marks, substantially as and for the purposes set forth.

3. The gear-wheel G, cam L, and weighted lever L^1 , when operating substantially as set forth.

4. The coupling C', formed of ridged disk c c' , connected by a set-screw, c^3 , to allow for adjustment of the parts of the shaft thereby connected, substantially as set forth.

DARIUS PARKHURST.

Witnesses:

GEO. P. HERTHEL, Jr.,
ROLLIN CLARK.