

(No Model.)

E. CHRISTMAN.
SAWMILL DOG.

No. 470,289.

Patented Mar. 8, 1892.

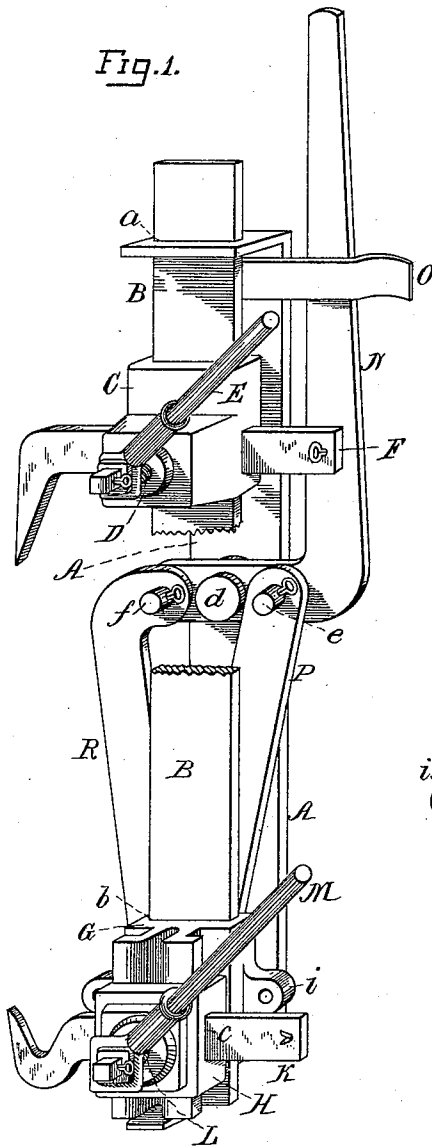


Fig.1.

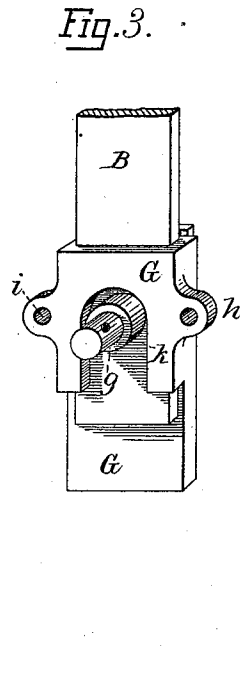


Fig. 3.

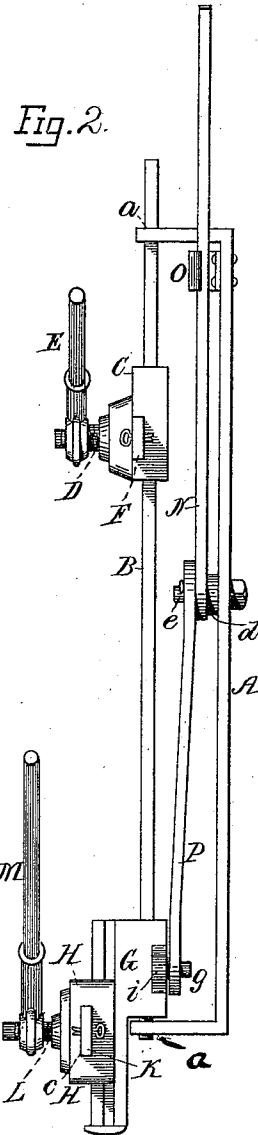


Fig. 2.

Witnesses:
W. C. Jirdinston.
George Aidmar.

Inventor
Edward Christman
by Stewart Allen
Attorneys

UNITED STATES PATENT OFFICE.

EDWARD CHRISTMAN, OF LOUISVILLE, KENTUCKY, ASSIGNOR TO THE BRENNAN & COMPANY SOUTH WESTERN AGRICULTURAL WORKS, OF SAME PLACE.

SAW-MILL DOG.

SPECIFICATION forming part of Letters Patent No. 470,289, dated March 8, 1892.

Application filed August 20, 1891. Serial No. 403,188. (No model.)

To all whom it may concern:

Be it known that I, EDWARD CHRISTMAN, a citizen of the United States, residing at Louisville, in the county of Jefferson and State of Kentucky; have invented certain new and useful Improvements in Saw-Mill Dogs, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My improvements relate to dogs for the fastening of logs on saw-mill carriages; and they consist of a certain novel construction and arrangement of parts, to be hereinafter more particularly pointed out and claimed.

In the drawings, Figure 1 is a front perspective view of my saw-mill dog. Fig. 2 is a side elevation of same. Fig. 3 is a rear perspective view of the lower sliding block.

Like letters indicate identical parts in all the figures.

A is an upright standard which is bolted to the head-block knee of the log-carriage in the usual way. The ends of this standard are bent at right angles and are provided with the slotted bearings *a a*, to receive the slide-bar B, and through which the slide-bar is moved up and down. At the upper part of this slide-bar and surrounding the same is the block or head C, adjustable up and down on the bar B, and held at any desired position by the screw D, operated by the hand-lever E. A horizontal slot is cut through the block C just in front of the bar B, and through this slot the upper beak F of the dog is passed. The screw D bears against a small pinch-plate in the head and against the horizontal shaft of the beak F, so that when the screw D is tightened the beak will be pressed firmly against the slide-bar B, and thus both the beak and head-block C will be held firmly in place at any position they may be respectively set—a very simple and effective arrangement, whereby a single screw holds both the upper beak and the head-block in the positions to which they may have been respectively adjusted, and thus the number of parts is reduced to a minimum.

Sliding on the bar B at its lower end is a lower block G, the bar B working through a

slot *b* in the same. This block G is mortised vertically on its front face and carries the head H, adapted to slide vertically thereon. This head H, like the upper head-block C, is provided with a horizontal slot *c* immediately in front of the mortised face of the lower block G, while through this slot the lower beak K of the dog is passed, and a screw L, operated by hand-lever M, bears against a pinch-plate in the head and against the horizontal shaft of this lower beak, pressing same against the mortised face of the block G, so that here again a single screw holds in adjustment both the lower beak and its retaining-block. It will be therefore seen that both the beaks F and K may be adjusted to or away from each other by the operation of the hand-levers E and M.

Pivoted at or near the central part of the standard A on the pivot-pin *d* is an operating-lever N, which is held up normally by the spring O, screwed to the standard. On opposite sides of this pivot *d* are pivoted to the lever N, on the pivot-pins *e* and *f*, the arms P and R. The lower end of the arm P is pivoted to the slide-bar B by the stud *g*, secured thereto, while the lower end of the other arm R is pivoted to the block G, through the ear or lug *h* thereon, the block G being provided with ears *h* and *i* on opposite sides, so that the arm R may be secured at either side of the block, in order that the dogs may be changed from right to left hand sides when desired. The block G is cut away at *k*, as shown in Fig. 3, in order to allow the proper movement of the slide bar and block G.

It will be manifest from the above description that in order to embed the spurs of the beaks in the log all that it is necessary to do is to pull down the operating-lever N. This movement will push down the arm P, which being secured to the slide-bar B will draw down the head-block C, and with it the upper beak, driving its spur into the log, while the same movement of the lever will pull up the arm R, and with it the blocks H and G, and the lower beak K, and drive its spur into the under surface of the log being operated upon, thus effectively grasping and holding the log. This movement of the lever N will also then

bring the pivots *e* and *f* of the arms P and R and the pivotal point of the lever into a perpendicular line, and thereby securely lock the lever down with the beaks embedded in the log. Both the beak-carrying heads are secured to a single slide-bar, thereby much simplifying the parts and increasing the efficacy of the device, while the connecting-arms P and R are both attached at the lower end of the dog, thereby much improving the working.

I am aware that it is old in saw-mill dogs to employ a single slide-bar with one beak secured thereto and the other to a block sliding thereon, and to operate said beaks by means of a lever and connecting-links; but in such older constructions these links are connected to their operating parts at opposite ends of the dog, a method of construction which is apt to prove defective with very dry logs where great pressure is required, the pressure often causing the slide-bar to bend and bulge out to a considerable extent, thus weakening and damaging the parts. With my construction, in which the connecting links or arms are connected with their operating parts both at the lower end of the dog the strain on the parts is found to be very much less. In handling large logs it is also of great advantage that both beaks should be adjustable to and from each other, a result that is obtained in my construction by securing the lower beak in a head which is capable of a vertical adjustment upon the lower block. Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a saw-mill dog, the combination, with a main standard and vertically-sliding bar therein, of a block adjustably secured thereto and carrying a beak, a second vertically-mov-

able block through which said sliding bar passes, and a vertically-adjustable head sliding on said second block and carrying a second beak, substantially as shown and described.

2. In a saw-mill dog, the combination, with the main standard and sliding bar therein, of a pair of beak-carrying blocks, one vertically adjustable on said sliding bar, the other vertically adjustable on a vertically-movable block through which said sliding bar passes, beaks horizontally adjustable through slots in said blocks, immediately in front of said sliding bar and block, respectively, and screws pressing said beaks against said bar and block, whereby the horizontal adjustment of the beaks and vertical adjustment of the beak-carrying blocks are sustained by single screws, substantially as shown and described.

3. In a saw-mill dog, the combination, with a main standard and vertically-sliding bar therein, of a block adjustably secured thereto and carrying a beak, a second block through which said sliding bar passes, and a vertically-adjustable head sliding on said second block and carrying a second beak, lever pivoted to said standard, and connecting-arms pivoted on opposite sides of said lever-pivot, and both connected at the same end of the dog, one with the sliding bar, the other with the second block, whereby the operation of the lever will cause said beaks to approach each other and throw the pivotal points of the lever and connecting-arms into a perpendicular line to lock said lever, substantially as shown and described.

EDWARD CHRISTMAN.

Witnesses:

W. A. KINNEY,
R. N. BUCKLEY.