(No Model.) 2 Sheets—Sheet 1.

W. GOWEN.

SAW MILL DOG.

No. 369,517. Patented Sept. 6, 1887.

Fig. 1

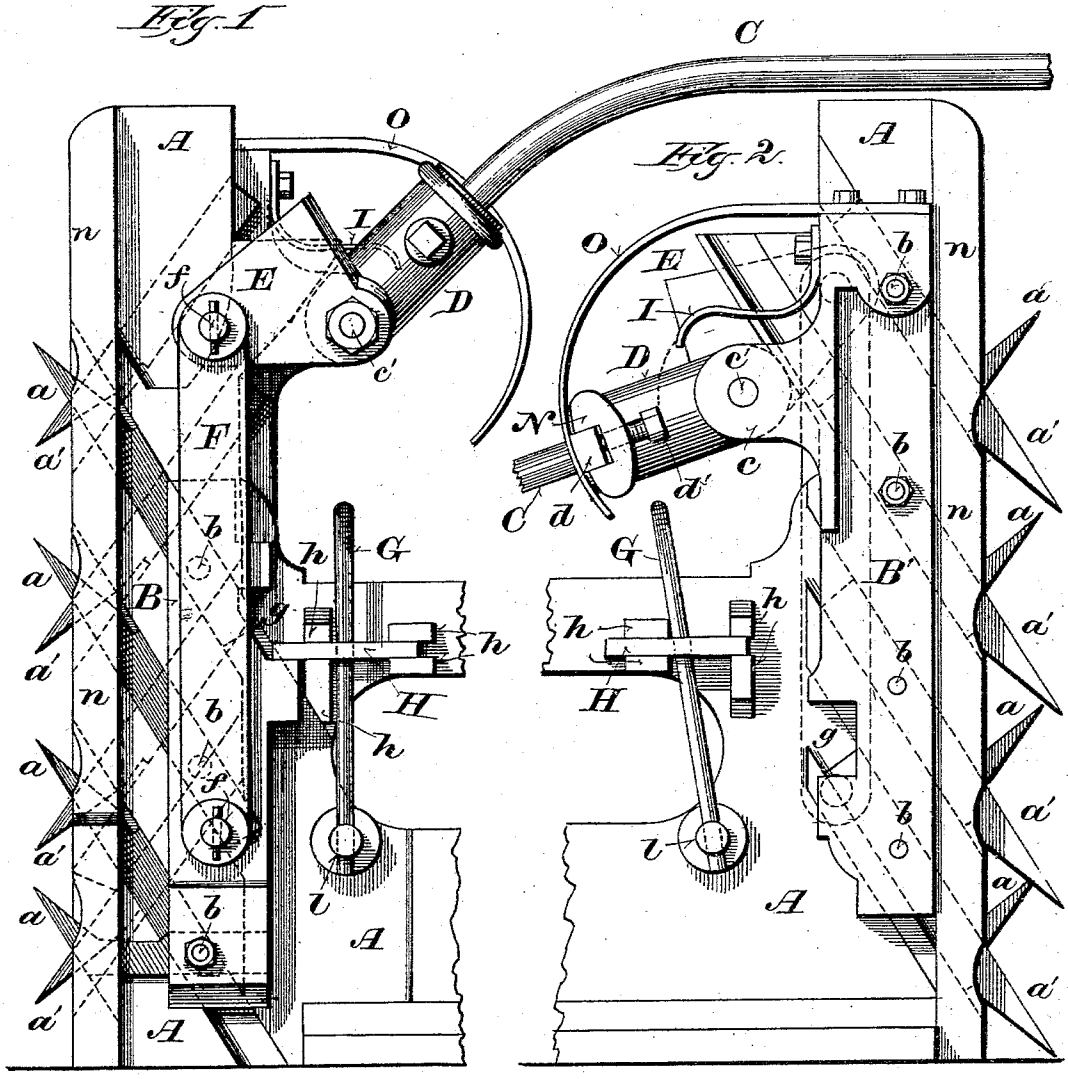

Fig. 2.

Witnesses:
Chas. E. Goss.
August Lindemann.

Inventor:
William Gowen,
By [illegible]
Attorney.

(No Model.) 2 Sheets—Sheet 2.

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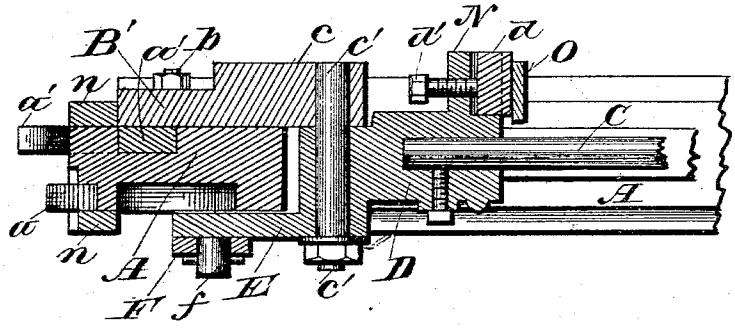
Fig. 3.



Witnesses:
E. G. Siggers
Chas. B. Goss

Inventor:
William Gowen,
By E. G. Siggers
Attorney.

UNITED STATES PATENT OFFICE.

WILLIAM GOWEN, OF WAUSAU, WISCONSIN.

SAW-MILL DOG.

SPECIFICATION forming part of Letters Patent No. 369,517, dated September 6, 1887.

Application filed July 6, 1886. Serial No. 207,257. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM GOWEN, of Wausau, in the county of Marathon and State of Wisconsin, have invented certain new and useful Improvements in Saw-Mill Dogs; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

The objects of my invention are, first, to grasp and securely hold a log, cant, or board to the standard; second, economy of power and facility of operation, and, third, to limit the protrusion of the dogs beyond the face of the standard, as desired, for dogging the last board.

It consists, essentially, of two sets of dogs arranged to work in opposite directions in oblique slots or grooves formed in the opposite faces of the standard, of an actuating-lever pivoted to one dog-bar and connected by means of a projecting arm or ear with the other dog-bar, of a double catch for locking both dog-bars in the proper position for dogging the last board, and of certain other details hereinafter described.

In the accompanying drawings like letters designate the same parts in all the figures.

Figure 1 is a side elevation of my improved device. Fig. 2 is a like view of the reverse side of the same, and Fig. 3 is a horizontal cross-section through the axis of the pivot-pin upon which the actuating lever is fulcrumed.

A represents the knee or standard, formed on its opposite sides with oblique slots or grooves, those on one side being inclined upwardly to the face of the standard, and those on the other side being inclined downwardly thereto.

a a a are chisel-dogs inserted and working in the upwardly-inclined slots of standard A, and *a' a' a'* are similar dogs working in the downwardly-inclined slots on the opposite side of said standard. The several dogs *a a'* are provided with pins *b b*, brazed or otherwise suitably fastened therein and projecting outwardly into corresponding perforations in the dog-bars B B', through which they are operated. The dogs *a a'* are retained in place by the plates *n n*, attached to standard A flush with its face, and by the dog-plates B B' and pins *b b* engaging therewith.

C is the operating-lever provided with the cast-iron shank D, by means of which it is pivoted to the ear *c*, formed on dog-bar B', by means of the bolt *c'*. The shank D of said lever is formed or provided on the side opposite the ear *c*, to which it is pivoted, with the forwardly-projecting arm or ear E, with which the dog-bar B is connected by means of the bar F, pivoted at or near its ends to each by means of the pins *f f*. The inner face of the forwardly-projecting arm or ear E, bearing against the adjacent face of the standard A, holds the lever C firmly in the plane of its movement and retains the dog-bar B', which is secured to said lever by the pivot-bolt *c'*, snugly against the opposite face of said standard, and prevents the downwardly-working dogs *a' a'*, which are secured to said dog-bar by bolts *b b*, from being moved laterally in the grooves in said standard and from binding against the adjacent face-plate *n*.

The shank D of the actuating-lever is provided at the end in which said lever is secured with a lateral projection, N, having a horizontal recess or groove, in which is inserted a friction-block or gib, *d*, so located and arranged as to bear against the inner side of the curved spring O, secured to the dog-bar B', as seen in Fig. 2. The desired amount of resistance to the movement of the dogs and actuating-lever C is secured by means of the adjusting-bolt *d'*, which presses against the opposite face of gib *d*, causing it to bear with more or less friction, as desired, against spring O. To hold the lever in its upper position, and thus retain the dogs out of their working position back of the face of standard A, I provide the auxiliary spring I, attached to dog-bar B', underneath the spring O, in the proper position to engage the head of bolt *d'* when the lever C is lifted to its upper position. To arrest the advance of the dogs *a' a'* at the desired point in front of the face of standard A for dogging the last board and to clear the saw, I form the dog-bars B B' with notches *g g* in their inner edges and provide on each side of standard A catches H H, work-

ing horizontally in guides *h h*, formed on said standard and arranged to be simultaneously operated by the rod or bail G, which passes through perforations formed in each of said catches, and is secured at its ends on each side of said standard in the transverse rod or yoke *l*, upon which it swings.

It will be observed that the fulcrum *c'* of the actuating-lever C is not fixed in position with reference to standard A, but that when said lever is depressed the downwardly-working set of dogs *a' a'* will be acted upon first, while the upwardly-working dogs *a a* remain quiescent until said first-mentioned dogs *a' a'* meet with sufficient resistance to overbalance the force necessary to operate said upwardly-working dogs *a a*. The two sets of dogs *a a* and *a' a'* working against each other in opposite directions, the entire force applied to lever C will be exerted upon said dogs to force them into the log, &c.

To dog the last board and prevent the dogs *a a'* from projecting sufficiently to interfere with the saw, the catches H H are advanced by means of the bail G into engagement with the notches *g g* in the dog-bars B B'. The bail G, being sprung into the yoke *l*, presses the catches H H against the faces of standard A sufficiently to retain them in whatever position they are left by the operator. The actuating-lever C, and consequently the dogs which are controlled by its movement, are retained in whatever position they are left in by the operator by the spring O bearing, as before described, against the gib *d;* and to insure the retention of said lever in its upper position and the dogs back of the face of the standard out of their working position the supplemental spring I engages the head of the adjusting-bolt *d'* when said lever is brought into that position. The dogs *a a'*, cut down and formed with shoulders at the beginning of their beveled edges, as shown most clearly in Fig. 1, clear the grooves in which they work of dirt, sawdust, &c., and prevent their binding.

The details of construction of my improved dog may be variously modified without departing from the principle of its operation or the spirit of my invention.

I claim—

1. The combination of the standard A, provided on opposite sides with oblique slots, the dogs *a a'*, arranged to work in opposite directions in said slots, dog-bars B B', and lever C, pivoted to one of said dog-bars and provided with an arm, E, by which it is connected with the other, substantially as and for the purposes set forth.

2. The combination of the standard A, provided on opposite sides with oblique grooves or guides, dogs *a* and *a'*, arranged to work in said grooves, dog-bars B B', to one of which each set of said dogs is pivoted, lever C, pivoted to one of said dog-bars and provided with an arm, E, and rod F, connecting the said arm E with the other dog-bar, substantially as and for the purposes set forth.

3. The combination of the standard A, having oblique grooves or guides in its opposite sides, two sets of dogs arranged to work in opposite directions in said grooves, dog-bars B B', lever C, pivoted to one of said dog-bars and provided with an arm, E, by which it is connected with the other, spring O, gib *d*, and adjusting-bolt *d'*, substantially as and for the purposes set forth.

4. The combination of a standard, A, dogs *a a'*, arranged to work in opposite directions, dog-bars B B', connected therewith and having notches *g g*, catches H H, and the spring-bail G, arranged to operate said catches and retain them in place, substantially as and for the purposes set forth.

5. The combination of standard A, oppositely-working dogs *a* and *a'*, dog-bars B B', connected therewith, lever C, pivoted to one of said dog-bars and provided with an arm, E, by which it is connected with the other, and spring O, arranged to retain said lever in its upper position, substantially as and for the purposes set forth.

6. The combination, with the standard and two sets of dogs, one working upwardly and the other downwardly, and each connected by a dog-bar, of a lever fulcrumed to and movable with one dog-bar and connected with the other and provided with a projection which bears against one side of said standard, and thereby holds the dog-bar and its dogs on the opposite side thereof in their proper working positions, substantially as and for the purposes set forth.

7. The combination, in a saw-mill dog, of the standard having oblique grooves and dogs working therein, and formed with abrupt shoulders at the commencement of the bevel forming their cutting-edges, whereby said grooves are cleared and kept free from dust, &c., substantially as and for the purposes set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

WM. GOWEN.

Witnesses:
CHAS. L. GOSS,
GEORGE GOLL.