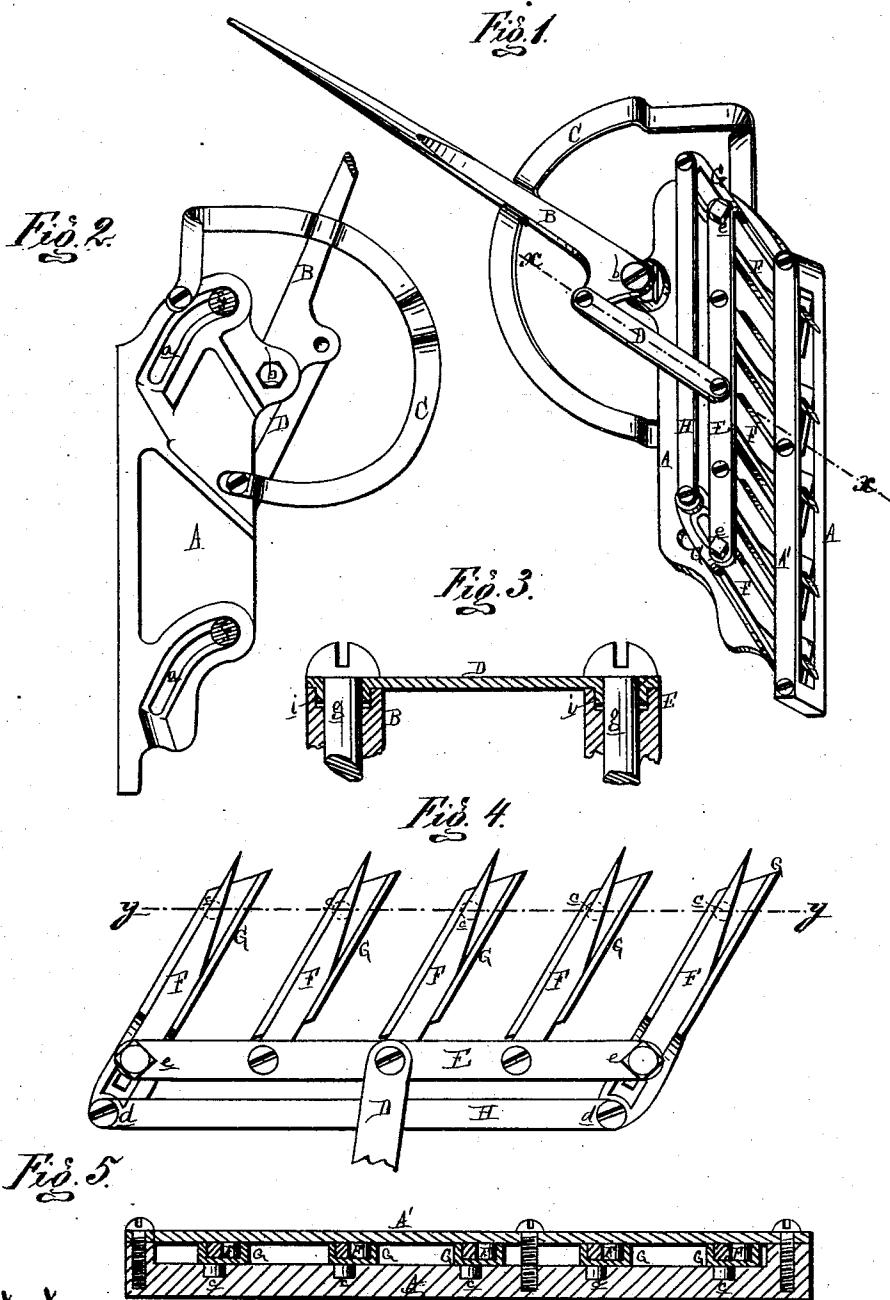


J. A. FORDON.
Saw-Mill Dogs.

No. 157,168.

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UNITED STATES PATENT OFFICE.

JOHN A. FORDON, OF BAY CITY, ASSIGNOR TO ORRIN L. JENKS, OF PORT HURON, MICHIGAN.

IMPROVEMENT IN SAW-MILL DOGS.

Specification forming part of Letters Patent No. **157,168**, dated November 24, 1874; application filed August 28, 1874.

To all whom it may concern:

Be it known that I, JOHN A. FORDON, of Bay City, in the county of Bay and State of Michigan, have invented an Improvement in Saw-Mill Dogs, of which the following is a specification:

The nature of my invention relates to an improvement in mill-dogs of that class wherein the point of each dog describes an arc of a circle as it is protruded from the standard, to cause it to hook into the face of the log or cant and draw it toward the knee of the head-block.

The invention consists in the novel and peculiar construction of the various parts, as more fully hereinafter set forth in the specification and claim.

Figure 1 is a perspective view of my improved mill-dog, looking at it from the front. Fig. 2 is an elevation of the rear or inner face of the standard-plate. Fig. 3 is a longitudinal section of the connecting-strap and its hollow bearings or studs at *x x* in Fig. 1. Fig. 4 is a plan of the dogs, box-guides, and their connecting-bars. Fig. 5 is a section of the same at *y y*, including the standard-plate.

In the drawing, A represents a standard-plate, designed to be bolted to the side of one of the knees of the carriage, and is provided with two slots, *a a*, one at the top and the other at the bottom, both curved as shown in Fig. 2. B is a lever, bent at its fulcrum-point and pivoted to the plate A by a bolt, *b*. C is a notched spring-quadrant attached to the back edge of the plate A, for holding the lever and dogs in position as desired. The short arm of the lever is connected by a strap, D, with a vertical head-bar, E, to which the inner ends of all the pointed dogs F are pivoted. These dogs slide in box-guides G lying against the side of the standard-plate, to which the outer end of each is pivoted by a stud, *e*, Figs. 4 and 5. The uppermost and lowermost box-guides are longer than the intermediate ones, and are connected by a vertical bar, H, whose ends are pivoted to the inner ends of said guides by bolts *d d*. The bolts *e e*, which pivot the uppermost and lowermost dogs to the head-bar

E, extend into the slots *a a*, where each has mounted on it a friction-roller, *f*, Fig. 2, which rolls into a countersunk recess in said slot. The lower outer edges of the dogs are sloped to a sharp point, as shown. To relieve the bolts *g g*, which pivot the ends of the strap D to the lever and head-bar, from friction and strain, under each end of said strap a hollow stud, *i*, Fig. 3, is forged, which is journaled in a socket countersunk in the face of the lever and head-bar. The bolts *g g* pass through these studs, and merely keep the strap in place.

When the lever is raised the dogs are retracted into their respective box-guides, and when depressed they are protruded by the action of the lever through the strap and head-bar, while the friction-roller studs cause them to describe an arc of a circle as they commence moving out, hooking their points into the log or cant, and thus draw the cant forcibly against the knees of the head-blocks. The dogs and guides are confined by a plate, A', bolted over them at each end to the standard-plate A.

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

1. The combination, in saw-mill dogs, of the plate A, box-guides G, dogs F, head-bar E, connecting-strap D, provided with hollow studs *i*, and eccentric lever B, constructed and arranged substantially as described and shown.

2. The plate A, provided with curved slots *a*, in combination with the friction-rollers *f*, the bar H, and the dogs, substantially as and for the purposes described.

3. The bar H, connecting the outer box-guides G, in combination with the plate A, box-guides G, and dogs F, substantially as and for the purposes specified.

4. The combination of the plate A, provided with the curved slots A, lever B, quadrant C, strap D, head-bar E, dogs F, box-guides G, bar H, bolts *e*, and rollers *f*, substantially as and for the purpose set forth.

JOHN A. FORDON.

Witnesses:

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