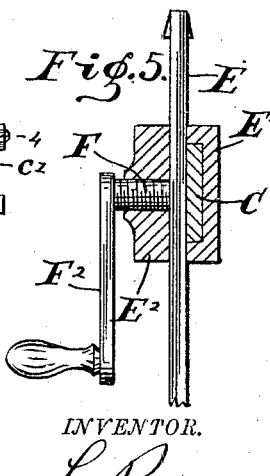
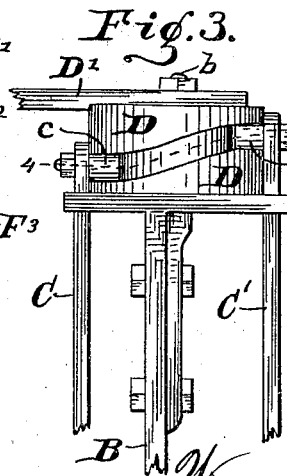
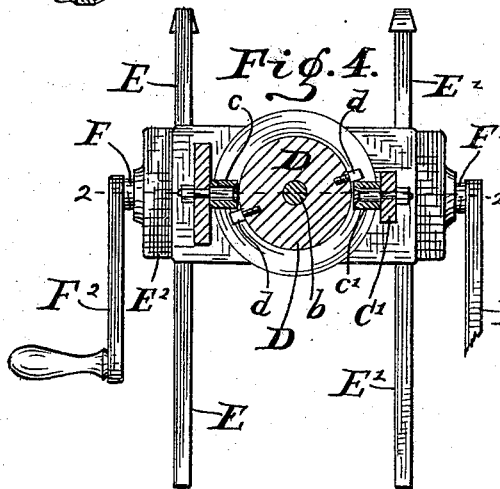
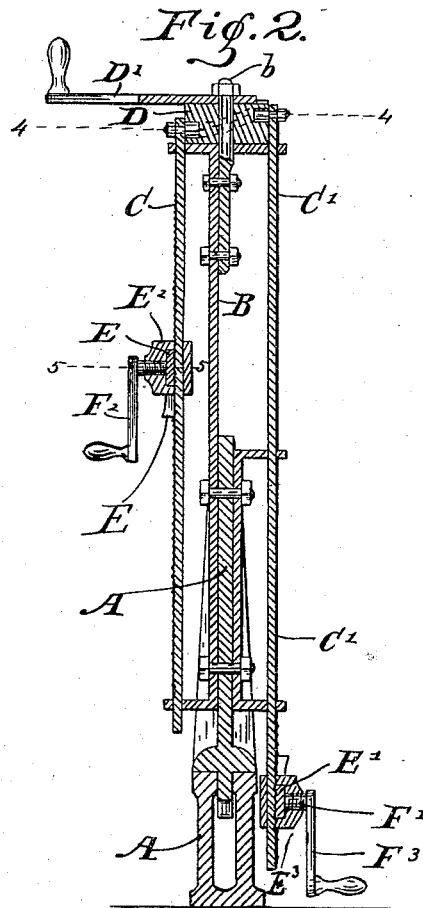
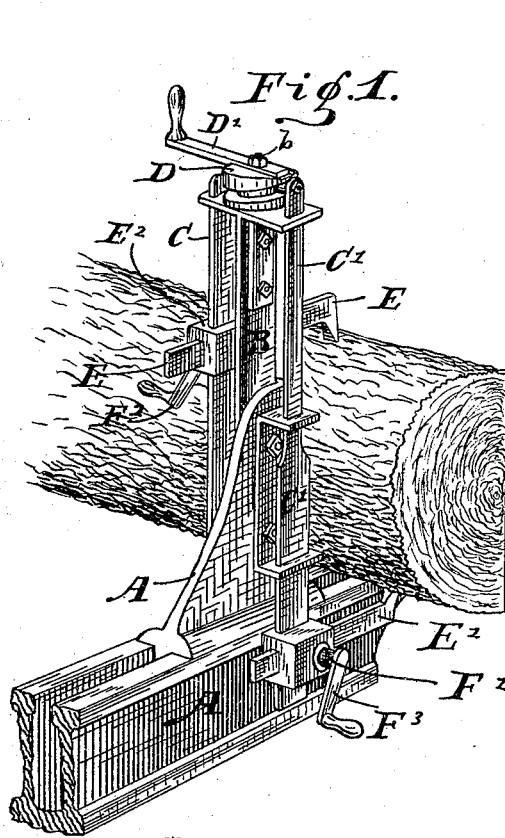


(No Model.)

W. L. RAYNES.
SAW MILL DOG.

No. 371,786.

Patented Oct. 18, 1887.



WITNESSES.

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WARREN L. RAYNES, OF MONTEZUMA, INDIANA.

SAW-MILL DOG.

SPECIFICATION forming part of Letters Patent No. 371,785, dated October 18, 1887.

Application filed May 10, 1887. Serial No. 237,695. (No model.)

To all whom it may concern:

Be it known that I, WARREN L. RAYNES, of the town of Montezuma, county of Parke, and State of Indiana, have invented certain new and useful Improvements in Saw-Mill Dogs, of which the following is a specification.

My said invention relates to that class of devices known as "saw-mill dogs," by which logs or sticks of timber are securely held upon the carriage and against the head-blocks of a saw-mill while being cut into lumber.

Said invention consists in certain details of construction whereby the dogs may be quickly and easily operated, as will be hereinafter more particularly described and claimed.

Referring to the accompanying drawings, which are made a part hereof, and on which similar letters of reference indicate similar parts, Figure 1 is a perspective view illustrating in a general way the construction and use of my improved dog; Fig. 2, a vertical sectional view; Fig. 3, a detail elevation on an enlarged scale, showing the construction of the upper end of the device more plainly; Fig. 4, a horizontal sectional view, looking downwardly from the dotted line 4 4, also on an enlarged scale; and Fig. 5, a similar view looking downwardly from the dotted line 5 5, particularly illustrating the method of securing the dog proper to the bar which carries it.

In said drawings, the portions marked A represent the head-block and carriage of a saw-mill; B, a standard bolted to the knee or upright of said head-block, and carrying the supports for the dog or dogs; C C', bars mounted in bearings on said standard, and adapted to be moved vertically therein, which serve as such supports; D, a cam by which said bar or bars may be operated; E E', the dogs proper, and F F' the screws by which said dogs are clamped in position on said bars.

The parts A may be of the shown or any desired construction, my invention being adapted for use with any of those commonly used in saw-mills.

The standard B is an upright containing bearings for sliding bar or bars C C'. If a single bar is used, it projects to one side only and contains bearings for the single bar only. This is a common construction and entirely operative; but I have illustrated said standard as

containing bearings for two bars, thus providing a duplex dog, or a dog to enter the timber from below as well as from above. This, as will be readily understood by those skilled in the art, is not always necessary, though commonly desirable, and the single dog entering from the top is frequently used alone. I therefore do not desire to confine myself to the use of the double or duplex dog, but may use a single dog without departing from my invention.

The bar C is mounted in bearings in or attached to the standard B, and is intended to be moved vertically in said bearings by means of the cam D, as will be presently described. It is preferably a plain straight bar, except that it may, if desired, be serrated, as shown, to afford a more certain bearing for the dog proper, as will be hereinafter described. The bar C', when used, is substantially a counterpart to the bar C. As will be readily understood by an inspection of the drawings, the bar C' is moved by the cam D at the same time it moves the bar C, but in the opposite direction, thus forcing both dogs toward or from each other and into or out of the wood at one movement.

The cam D is a wheel mounted on a stud-shaft, b, extending up from the bar B, with a cam-groove formed in its periphery, into which a stud on the bar C (and also a corresponding stud on the bar C' when the latter is used) will enter. Thus by turning this cam said bars C and C' are forced up and down and the dogs driven into or withdrawn from the log or timber. The studs which enter this groove should be provided with anti-friction rollers c c', as shown, for the ordinary purposes of such rollers. Said cam D is provided with a handle, D', by which it is conveniently operated, and there should be in the bottom of the groove, at appropriate points, studs d, which limit the movement of the cam, and thus prevent the handle from being moved so as to project out over the log or timber, where it might come in contact with the saw.

The dog E is in itself of an ordinary and well-known construction, and is adapted, as shown, to enter the log or timber and secure it in position. It passes through a socket, E', which is mounted upon the bar C, where it is held by the screw-clamp F. The side which comes in contact with the bar C may, if desired, be ser-

rated, as shown, and said bar also serrated, by which a more certain securing of the dog in position on said bar is rendered possible. Said socket E² is mounted on the bar C and carries
 5 the dog E, and, when the screw-clamp F is loosened, moves easily up and down on said bar, thus raising or lowering said dog. The socket E³, when the duplex construction is employed, operates in a similar manner.
 10 The screw-clamp F is a strong bolt provided with a crank-handle, F², by which it is operated. It passes through a screw-threaded hole in the socket E² and bears against the side of the dog E, and is loosened or tightened by moving
 15 said handle. The screw-clamp F' is operated in a similar manner, except that the screw-thread should run in the opposite direction—*i. e.*, one having a "right-hand," the other should have a "left-hand" thread.
 20 The operation is as follows: When the log or timber is placed upon the carriage against the head-block, the dogs are suitably set on the bars C and C' by loosening the screw-clamps F and F' and moving said dogs to the desired
 25 position, where they are secured by tightening said clamps. The dogs are then forced into the wood by turning the cam D by means of its handle D', and the sawing is proceeded with. Each time the log or timber is to be
 30 moved the cam D is turned in the reverse direction, which withdraws the dogs from the wood, which permits the desired adjustment to be effected, when the dogs are again inserted by a movement of the cam corresponding to
 35 that by which they were first inserted.

Having thus fully described my said invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination of the standard B, the vertically-sliding bar C, mounted in bearings
 40 on said standard, the dog E, mounted on said bar, the wheel D, mounted on a stud-shaft on the top of said standard and provided with a cam-groove in its face, and a horizontal stud on the top end of said bar C, which engages with
 45 said groove, substantially as set forth.

2. The combination of the standard B, the sliding bar C, provided with a stud at its top, the wheel D, formed with a cam-groove in its face, with which said stud engages, said wheel
 50 being mounted on a stud-shaft on the top of said standard, the socket E², adjustably mounted on said bar C, and the dog E, adjustably mounted in said socket, substantially as set forth.
 55

3. The combination, in a saw-mill dog, of vertically-movable bar or bars carrying the dogs, and a grooved cam-wheel for operating said bar or bars, said cam-wheel being provided
 60 with stops *d*, for limiting its movement, substantially as and for the purposes set forth.

In witness whereof I have hereunto set my hand and seal, at Indianapolis, Indiana, this 5th day of May, A. D. 1887.

WARREN L. RAYNES. [I. S.]

In presence of—

C. BRADFORD,
 CHARLES L. THURBER.