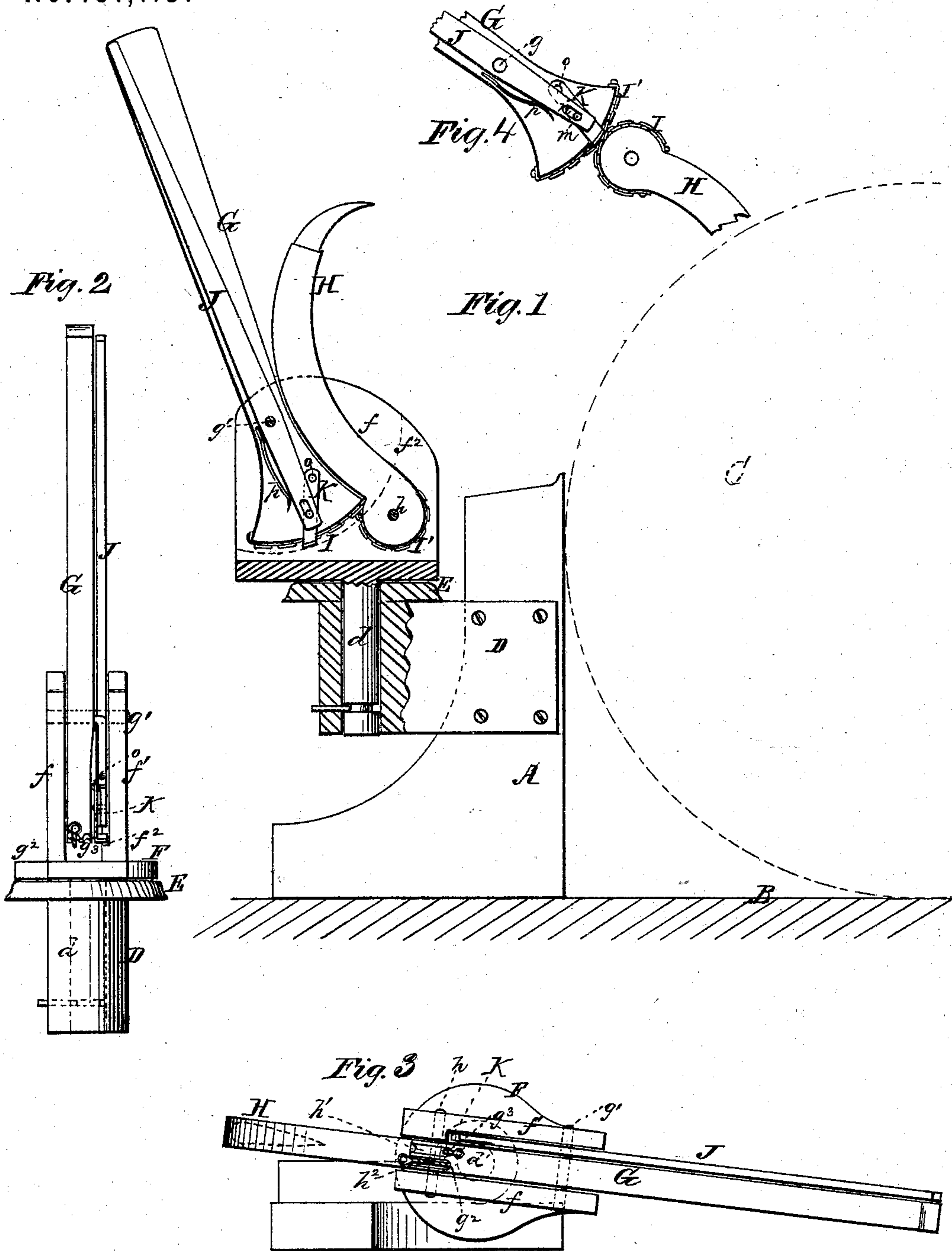


Saw-Mill Dogs.

No. 151,115.

Patented May 19, 1874.



Witnesses.
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UNITED STATES PATENT OFFICE.

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IMPROVEMENT IN SAW-MILL DOGS.

Specification forming part of Letters Patent No. 151,115, dated May 19, 1874; application filed November 13, 1873.

To all whom it may concern:

Be it known that I, LEVI P. GILBERT, of Fort Atkinson, in the county of Jefferson and State of Wisconsin, have invented a new and useful Improvement in Saw-Mill Dogs; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings making part of this specification, in which—

Figure 1 is a side view, partly in section and partly in elevation, of a saw-mill knee with my improved dog applied to it. The dog-tooth is not biting into the log. Fig. 2 is a rear elevation of the dog detached from the knee, the dog-tooth being still out of action. Fig. 3 is a top view of the parts shown in Fig. 1, the dog-tooth being in its biting position. Fig. 4 is a side view, showing a portion of the lever and dog-tooth, and also the locking device. The dog-tooth is in the same position as in Fig. 3.

Similar letters of reference indicate corresponding parts in the several figures.

My improvement relates to dogs applied on knees of saw-mills. The nature of my invention consists in the lever with a segment on its short end, and the dogging-tooth with a segment on its pivoted end, geared together and combined with a saw-mill knee, the combination being such that the dog-tooth is forced in and drawn out of the log by a vibrating motion of the lever. It also consists in a slotted lever placed alongside the dogging-lever, in combination with a swinging cramping-shoe and a curved ledge for the cramping-shoe to bind against, the said parts being used with the hereinafter-specified dog-tooth and lever which operates it, and serving to lock the dog-tooth in the log after it has been forced home. It further consists in the combination of the dogging-tooth, lever, cramping-shoe, locking-lever, and swivel, all arranged upon the saw-mill knee, as will be hereinafter described.

To enable others skilled in the art to make and use my invention, I will describe the same with reference to the drawings.

A is the saw-mill knee. B is intended to show the saw-mill carriage, and C, in dotted lines, the log upon the carriage and brought up against the knee ready to be dogged. D

is a bracket screwed on the side of the knee. This bracket has a cylindric passage, *d*, through it, and also has a circle-plate, E, mounted upon its top in rear of the upper narrow portion of the knee. F is another circle-plate placed on top of the plate E, and connected to the same by a swiveling pin, *d'*, as shown. The plate F has two side jaws, *f*, *f'*, extending up vertically from it. The jaw *f'* is constructed with a curved shoulder or ledge, *f''*. (Shown in Fig. 1 by dotted lines and by full lines in the other figures of the drawings.) The shoulder *f''* is concentric with the axis of a lever, which will now be described. G is a lever, pivoted at *g'* between the jaws. The lower end of this lever is in form of a segment of a circle, and its circumference has two grooves, *g''*, *g'''*, formed in it. H is a dogging-tooth, pivoted at *h* between the jaws and forward of the lever. The pivoted end of this tooth is segmental in shape, and in the circumference of the segment two grooves, *h'*, *h''*, are formed. The grooves *g''*, *g'''* are in line with those *h'*, *h''*. I, I' are chains, which lie in the grooves just mentioned. The chain I is connected by one end to the rear end of the segment of the lever, and by its other end to the upper forward end of the segment of the tooth, and the chain I' is attached to the front end of the segment of the lever and to the lower forward end of the segment of the tooth. By this arrangement a reciprocation of the lever produces a positive reciprocation of the tooth. Cogs on the dog and lever might be used in place of the chains and grooves, but I prefer the latter. The point of the tooth is to be made of steel, and inserted into the stock, so that in case of breaking the point of the tooth a new point may be substituted for the broken one. J is another lever, hung to the side of the lever G on the axis *g'*, and K is an angular cramping-shoe connected to the lower end of the lever by means of a pin, *m*, and slot *n*, and is also pivoted to the lever at *o*, as shown. *p* is a spring attached to the lever G, and bearing against the lower end of the lever J. The spring *p* causes the cramping-shoe to bind upon the ledge *f''* and hold the dogging-tooth in the log after the lever G has been drawn backward. The lever J serves as a means by which to lift the cramping-shoe from off the

legs f^2 . This lever acts upon the shoe by an upward movement, and therefore, by placing one finger under it while the hand is holding and ready to lift the lever G, the shoe can be released and held so while the lever G is being raised and the dogging-tooth forced up out of the log.

The slot permits the connecting-pin between it and the cramping-shoe to play freely during the unlocking and relocking movement.

The swivel-pin permits the dogging-tooth to be thrown down on either side of the knee, according as the log may be long or short.

The dogging implement herein described can be used for holding a round log or cant as well as the last board, and it is compact, simple, and effective.

I am aware that it is not new to mount a dogging-tooth upon a swiveling support; also, that it is not new to gradually force such tooth into a log by a worm feeding device, and to withdraw the same by a reverse movement of the said feeding device; but I am not aware that the lever arrangement, as described and shown by me, and whereby a quick insertion and withdrawal of the tooth can be effected,

has ever been devised before. I do not claim the swivel-support, broadly; nor do I claim a shaft with a worm-screw in combination with a tooth which has a toothed segment on its pivoted end; but

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

1. The lever with segment on its short end, and the dogging-tooth with segment on its pivoted end, geared together, as described, and combined with a saw-mill knee, all substantially as set forth.

2. The spring-lever J, in combination with the swinging cramping-shoe K, curved ledge or shoulder f^2 , lever G, and dog-tooth H, substantially in the manner and for the purpose described.

3. The combination of the dog-tooth H, lever G, cramping-shoe K, lever J, swivel-pin d' , and saw-mill knee A, substantially as described.

LEVI P. GILBERT.

Witnesses:

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