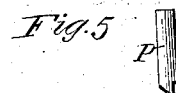
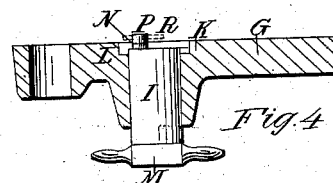
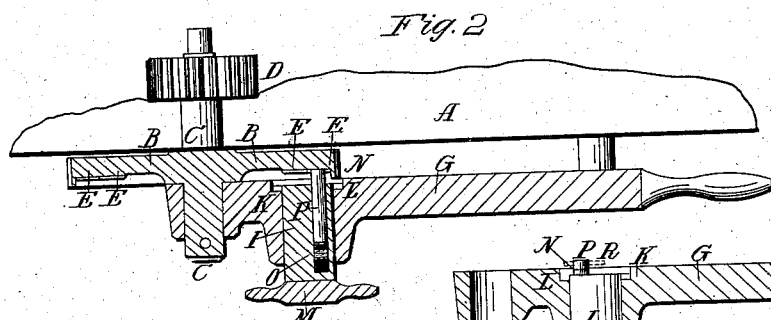
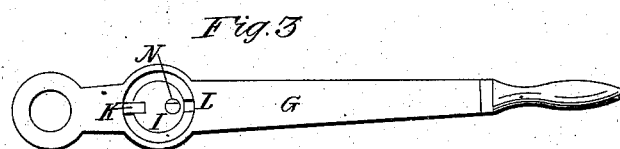
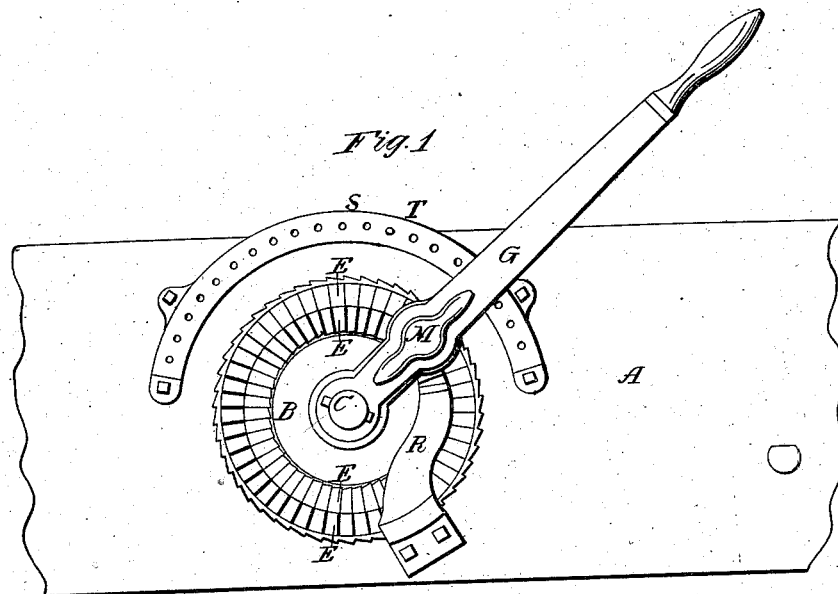


No. 7,389.

PATENTED MAY 21, 1850.

T. C. THEAKER.
APPARATUS FOR SAWMILLS.



UNITED STATES PATENT OFFICE.

THOMAS C. THEAKER, OF MANSFIELD, OHIO.

APPARATUS FOR SETTING LOGS IN SAWMILLS.

Specification of Letters Patent No. 7,389, dated May 21, 1850.

To all whom it may concern:

Be it known that I, THOMAS C. THEAKER, of Mansfield, in the county of Richland and State of Ohio, have invented a new and useful Improvement in the Hand-Setting Apparatus of Sawmills for Setting Logs, which is described as follows, reference being had to the annexed drawings of the same, making part of this specification, of which—

10 Figure 1 is a section of the back of the head or tail block, showing the attachment of the apparatus by which the log is set, and the disengaging plate; also the segment gage bar with its row of holes, and gage pin, and
15 fixed stop for the lever to rest against—the eccentric sliding dog being in the outer circle of ratchet teeth. Fig. 2, is a horizontal section of the hand lever, ratchet wheel, propelling pinion, cylindrical turning box with
20 its stop cog arms, and eccentric dog and spiral spring. Fig. 3 is a plan of the inner face of the hand lever showing the revolving cylindrical box, sliding eccentric dog and cog projecting from the cylinder and inserted into one of the notches of the arm to
25 hold the box to prevent it from turning—and the arms to turn the cylinder and the circular recess in which the holding cog turns. Fig. 4 is an external view of the cylindrical box or bearing and its arms, and
30 sliding or eccentric dog—and section of the hand lever for turning the ratchet wheel. Fig. 5 is an elevation of the sliding eccentric dog detached from the cylindrical box, showing more clearly its lower or beveled
35 end that slides over and lays hold of the teeth of the ratchet wheel, during the operation of the lever.

The nature of my invention and improvement consists in combining with the common hand setting lever, an alternate revolving cylinder and sliding dog placed eccentrically to the center of the cylinder, so that it can be changed to either of two circles of
40 teeth on the face of the ratchet wheel, whose cogs incline in opposite directions by which the motions of the ratchet wheel can be changed, by the use of one dog only and one lever.
50 Wherever the same letters occur they represent the same parts.

A, is a portion of the head or tail block to which the hand setting apparatus is affixed.

55 B, is a circular ratchet plate or wheel fixed permanently to an axle C, on which is fixed a pinion D, meshing into a rack on the

under side of the slide of head or tail block in the usual manner for setting the log—the bearing of the axle being in the head or tail block as is usual. The circular plate or
60 wheel has two concentric circles of teeth E, E, on its outer face inclining in opposite direction for the eccentric dog to act against, and cogs F, on its periphery, for the usual dog of the self setting apparatus to act upon
65 during the operation of setting the log, by the use of my self setter, heretofore patented.

G, is the setting lever the fulcrum being the axle C of the ratchet wheel.

I is a cylinder set in a round opening in the lever having a cog K projecting from its
70 periphery, at its inner end, which enters a notch or recess L in the lever to prevent the cylinder from turning when once set.

M, are the handles or cross head for turning the cylinder I. 75

N, is a cylindrical chamber or bore in this cylinder deviating from its center.

O, is a spiral spring placed in the bottom of the bore. 80

P, is the sliding and turning dog placed in said bore or chamber against the spiral spring O. The end of this dog that comes in contact with the teeth of the ratchet wheel or plate B, is beveled as seen in Fig. 5 so
85 that it shall slip over the teeth and contract the spring while slipping over the teeth in order to take a new hold.

When the cylinder is in the position represented in Fig. 2, the eccentric dog will be in
90 the outer circle of teeth; but when the cylinder is turned a semicircle it brings the eccentric dog in contact with the inner circle of teeth. To effect this change the cylinder must be first pushed toward the ratchet
95 plate until the cog K is disengaged from the lever G. It must then be turned half around, or until the cog enters the notch L in the opposite side of the opening in the lever. This movement will bring the dog P,
100 on the opposite side of the circle in which it turns. It is secured by the action of the spiral spring O, pressing the dog P, against the face of the ratchet wheel B which causes the cylinder to recede from the ratchet wheel
105 B until the cog of the cylinder I, enters the notch L, in the lever G; then by vibrating the lever the motion of the ratchet plate will be reversed—the teeth inclining in opposite directions, so that it will be seen that by the
110 use of this dog and cylinder combined with the vibrating lever, that the ratchet wheel

B and shaft C can be turned to the right or left for the purpose of setting the log on the head or tail block in either direction by the use of the same dog and lever.

5 The manner of operating the apparatus by which this result is produced is as follows: When the lever G is vibrated on its fulcrum or central pin C the sliding dog P moves from and toward the teeth of the
10 ratchet wheel B by the action of the inclined surfaces of the cogs and the spiral spring—the dog taking hold of the teeth on the descent of the lever, and turning the ratchet wheel to the right and with it the propelling
15 pinion meshing into the rack on the slide of the head or tail block. Now when it is desired to reverse the motion of the ratchet wheel and pinion, the cylinder (I) must be moved toward the ratchet wheel about a
20 quarter of an inch which will remove the cog K from the notch as shown in Fig. 3—the cylinder I must then be turned a half circle and drawn outwardly which will bring the cog into the opposite notch on the
25 diameter of the circle as seen in Fig. 4—this motion will change the position of the sliding dog P removing it from the outer to the inner circle of teeth—then by vibrating the lever G as before the ratchet wheel will
30 turn in an opposite direction. Now in order to disengage the sliding dog P, of the hand lever G from the teeth of the ratchet wheel, that the self setting apparatus (formerly patented to me) may act, I fasten a disengaging plate R to the tail block and extend
35 it over, and in front of a segment of the inner circle of cogs, without touching them,

as shown in Fig. 1, and by dotted lines in the section Fig. 4, so that when the setting lever G is brought down upon the stop or
40 rest after the ratchet wheel has been turned as many degrees as required, the inclined side of the dog will strike against the disengaging plate R and pass up over and upon it and be thus disengaged from the ratchet
45 wheel. The self setting apparatus can then act without any danger of breaking the teeth of the ratchet wheel.

The gage plate S and pin T for determining the thickness of boards to be sawed
50 may be made in the manner represented in the drawing, Fig. 1, or in any convenient and suitable way.

Having thus described the nature of my invention and improvement, what I claim
55 and desire to have secured to me by Letters Patent is—

The combination of the alternating cylinder I, eccentric sliding dog P, cog K, notch L, and spiral spring O, with the common
60 vibrating hand lever G and concentric circles of teeth E inclining in opposite directions for turning the ratchet wheel B on the end of the pinion axle C, to the right or to the left for moving the log on the head or
65 tail block, either to the right or left, toward, or from the saw, as before described.

In testimony whereof I have hereunto signed my name before two subscribing witnesses.

T. C. THEAKER.

Witnesses:

WM. P. ELLIOT,
A. E. H. JOHNSON.