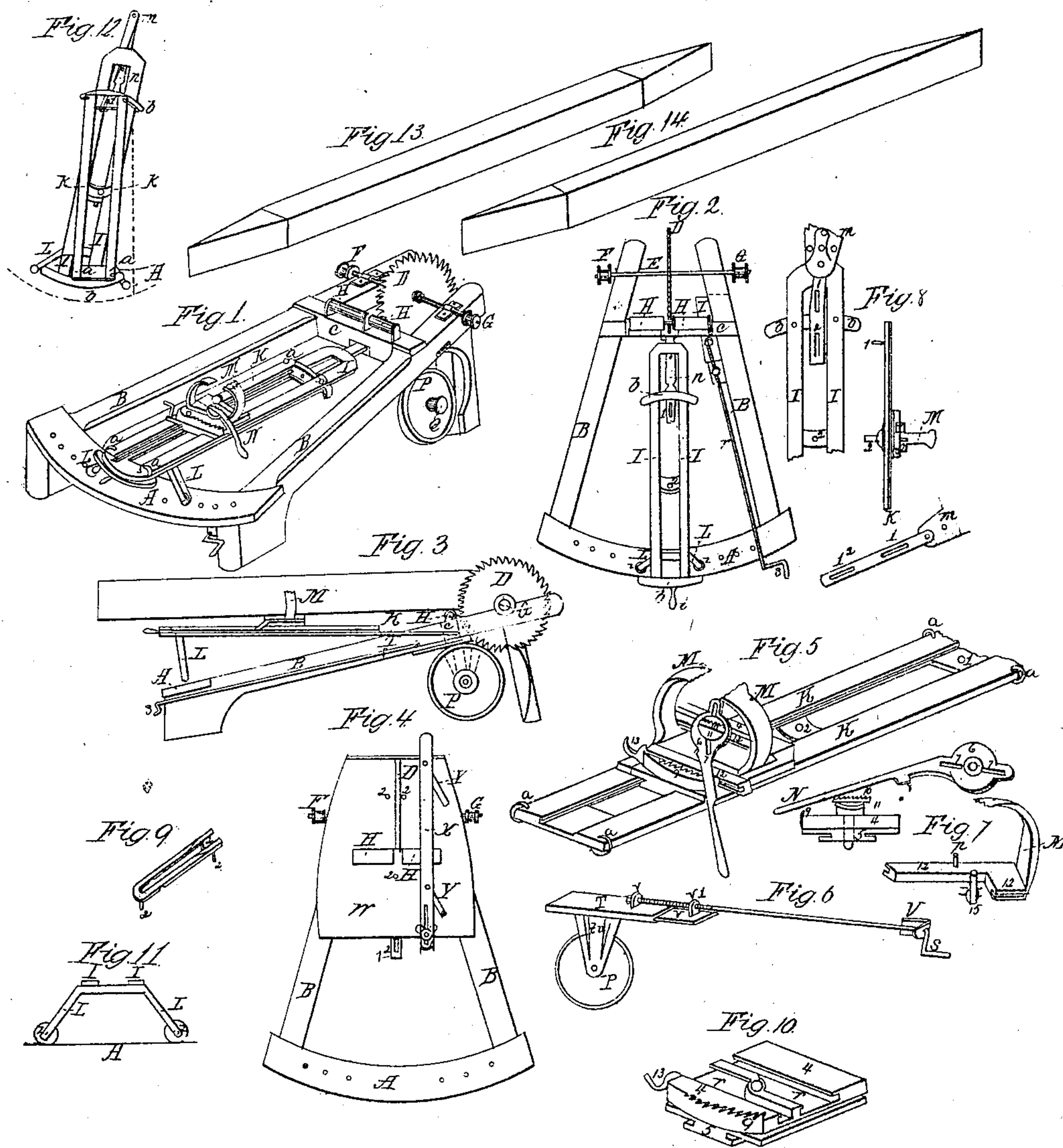


C. YOST.
COMBINED RAIL POINTING MACHINE.

No. 29,030.

Patented July 3, 1860.



Witnesses
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UNITED STATES PATENT OFFICE.

CHRISTIAN YOST, OF INTERCOURSE, PENNSYLVANIA.

MACHINE FOR POINTING FENCE-RAILS.

Specification of Letters Patent No. 29,030, dated July 3, 1860.

To all whom it may concern:

Be it known that I, CHRISTIAN YOST, of Intercourse, in the county of Lancaster and State of Pennsylvania, have invented a new and useful Machine for Pointing Rails, Posts, and the Like, in Combination with a Circular Saw; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1, is a perspective view of the frame work, gearing and mounting of the machine for the purpose of pointing rails &c.

Fig. 2, is a horizontal or top view, of the same, (with Fig. 5, removed from the carriage bars I, I); *i*, the moving handle; L the supports, with their pulleys Z, (end view shown by Fig. 11). The carriage bars I, I, have a projecting end by which it is pivoted, by a removable pin, in the rear of the cross piece C, of the machine, and traverses on the top, of the front, curved piece, A, of the machine, on its supports and pulleys aforesaid.

Fig. 3, is a side elevation of the machine, with a rail held in the jaws M.

Fig. 5, is a somewhat enlarged view of the grooved combined parallel bars, K, K, having friction rollers *a, a, a, a*, on each side of both end, which are made to traverse on the circular segments *b, b* which are attached on top of the carriage bars I, I. The grooved, connected bars K, have a central pivot 2, which fits through a hole 2, in the central connection of the bars I, I. There is also a pivot or peg to the rear cross piece, beneath, in each pair of connected bars. These pivots respectively enter the slots, in the double-slotted, independent tongue 1, 1, pivoted to *m*, (Fig. 8). Thus, while the two pair of bars I, I, and K, K are centrally pivoted together, their movements are counter one to the other. As the center of motion to the carriage bars I, is farther back, it imparts motion in its movements, to the independent tongue 1, 1², by its pin in the rear slot 1, which consequently moves the pin in its forward slot, 1², which pin is connected with the rear end of the bars K, gives them a motion as shown by Fig. 12.

Figs. 7 and 10 illustrate the, combined sliding, swivel jaws, M, in detail, (mounted

on the grooved bars K, in Fig. 5). Each jaw M has a projecting end 12, with a peg *p*. These, ends and sides move in and out in grooves *r*, of the base 4, (Fig. 10). This base is provided on one side with ratchet teeth 9, and a turn fastener 13, and is centrally pivoted to the sliding piece 5, which fits into the grooved bars, K, K (Fig. 5). Around the central pivot of the base 4, is the lever N, (Fig. 7). This lever has two slots, 7, 7, in its axis 6. The pegs *p*, on the projections 12, of the jaws respectively, enter the slots, 7, by which device the jaws are opened or closed by the motions of the lever N. This lever has a click end 8, to fasten it in the ratchet 9, for retaining the grip of the jaws. Over the center between the jaws is also a cap 11, and toothed holdfast, 10, on which latter the rail, &c., to be sawed, is also secured from sliding.

Fig. 6 illustrates the device for operating the fly-wheel P, to throw it in or out of gear with the strap from the pulley G to the pulley Q on the axle of the fly or balance wheel P. The wheel P, is supported on the sliding piece U, by *t u*. This piece has a screw bur V¹, and slides under the piece T, which latter is attached beneath the frame B, of the machine inside (Fig. 2,) a rod *r*, with its handle *s*, having a screw end, fitting to the bur V¹, and supported by *v*, on T, with its head, as also in front at *v*, near the handle *s*. By turning the rod in its supports *v, v*, the sliding piece U, with the wheel P, is drawn to or from the rear, and necessarily tightens or slackens the strap, connecting the aforesaid pulleys, G, Q.

Fig. 13 illustrates the pointing of chestnut rails on both sides of each end.

Fig. 14, is a pine rail beveled on one side only as is customary.

Fig. 4 shows the applicability of converting the machine into an ordinary circular saw, by removing the carriage and its appurtenances and placing on the table W, adapted to receive the saw D, and rollers H, with its gage X, made adjustable for the purpose of sawing laths, clapboards, &c. This platform or table W has also three holes *z*, into which the pegs *z*, of Fig. 9, are inserted for the purpose of sawing fuel. The fly wheel P, is only used when sawing posts or heavy timber, and the machine is driven by any ordinary power applied to the strap pulley F, Figs. 1 and 2.

Having now described the various parts

and their operations in detail, fully illustrated by the figures referred to, it remains only to notice the handling of the material operated upon in the jaws M of the machine.

5 The rail or post being clamped fast between the jaws, taking a central grip, is presented to the action of the saw with one of its ends, by sliding the jaws and obtaining the desired angle, by moving the carriage. It is fed forward until the one side is cut as desired, drawn back, in its fastening, moved over on the car, to present the opposite side to the saw, and operated in like manner. When the one end is cut, the rail is turned in the
15 swivel, sliding jaws clearly around, without unfastening the grip or change, and the other end is pointed in like manner. The curved cross piece A of the machine has a series of holes, so that a peg can be inserted
20 on each side, to obtain the same bevel to each piece sawed, by arresting the pulleys Z in their motions. The counter motion of the bars I, I, and K, K stated, is requisite to prevent the saw from being choked, as by its
25 means, the bevel to be sawed off a rail, presents a parallel face to the blade of the saw, while it is being fed forward against the teeth of the revolving saw on its stationary

axis E, by means of the sliding jaws M and the grooved bars K, aforesaid.

This machine is highly desirable where extensive fencing is used, and much time and labor saved in pointing the rails, usually pointed with the ax or drawing knife. When converted into the ordinary circular
35 saw, it is equally useful on a farm, for the various purposes the same is usually employed, or for sawing fire wood and the like. I am aware however, that there is no novelty in my machine considered as a mere circular
40 saw, nor do I claim such. The table W, with its appliances, are in common use, as also the rollers H, H. I mention this feature merely in connection with its proper design for pointing rails, &c.

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

The traversing carriage I, I, combined with the pivoted and grooved bars K, K, and sliding swivel jaws M, M, constructed, arranged and operating in the manner set forth.

CHRISTIAN YOST.

Witnesses:

S. G. MUSSER,
JACOB STAUFFER.