(No Model.)

# J. E. LAYCOCK.

## MACHINE FOR TRIMMING FENCE POSTS.

No. 362,638. Patented May 10, 1887.

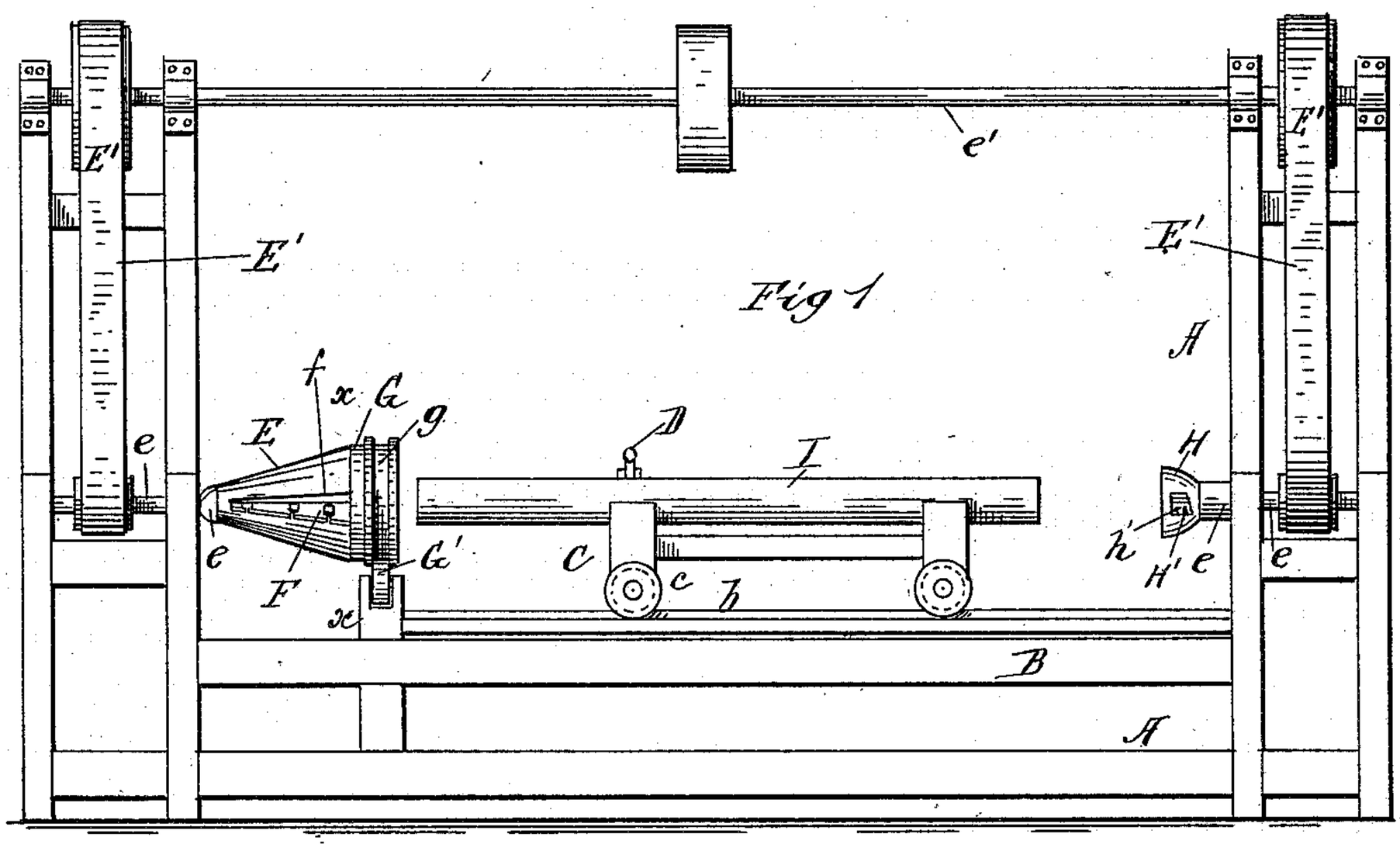



Fig 1

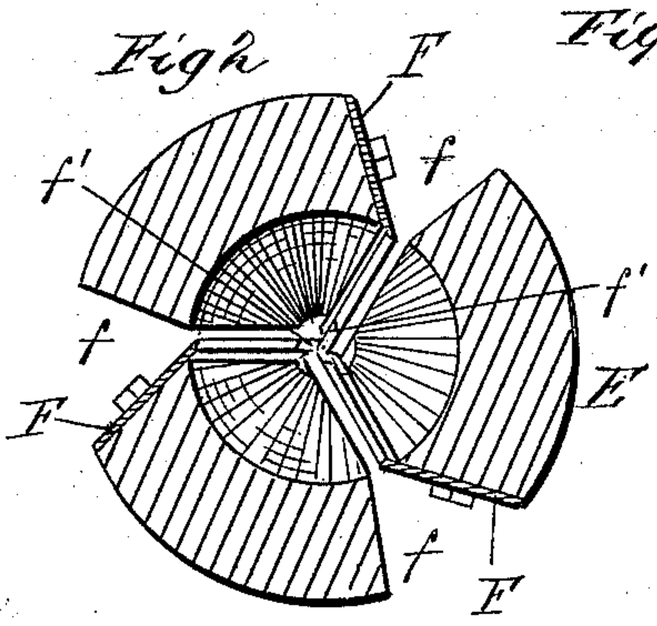



Fig 2

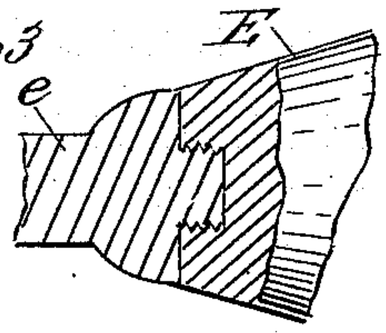



Fig 3

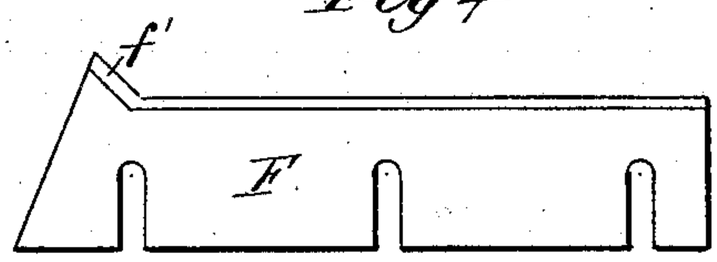



Fig 4

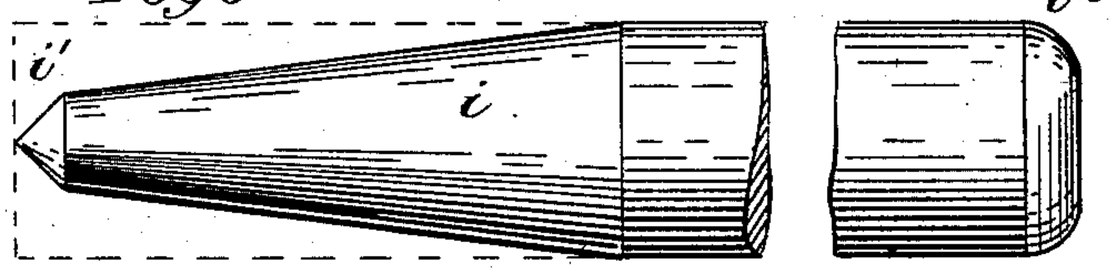



Fig 6

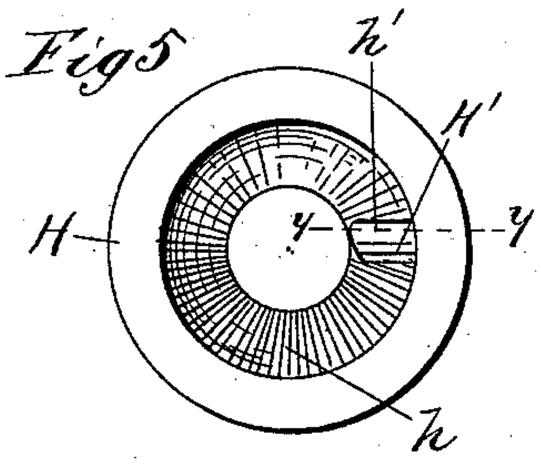
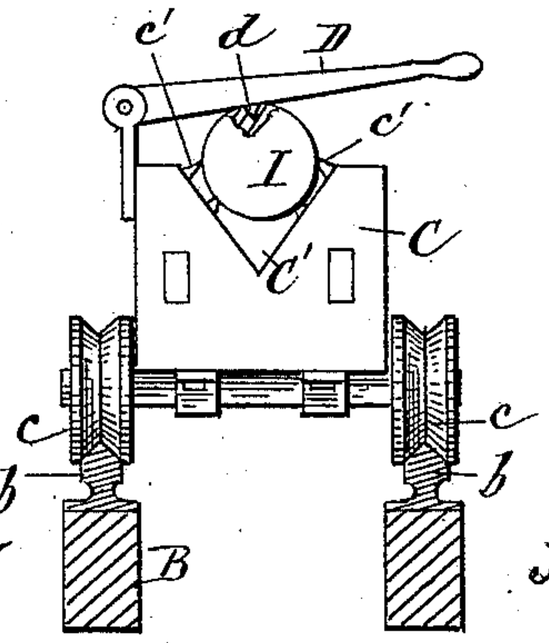



Fig 5



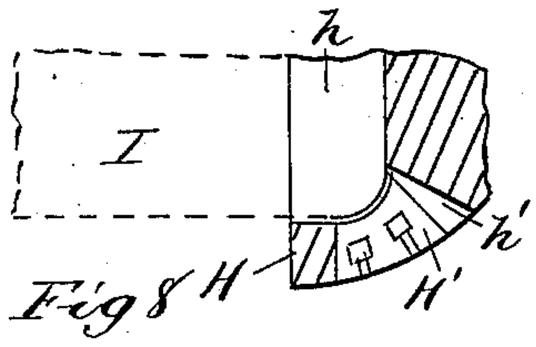




Fig 8

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# UNITED STATES PATENT OFFICE.

JOSEPH E. LAYCOCK, OF STEPHENSON, MICHIGAN.

## MACHINE FOR TRIMMING FENCE-POSTS.

SPECIFICATION forming part of Letters Patent No. 362,638, dated May 10, 1887.

Application filed November 18, 1885. Serial No. 183,251. (No model.)

*To all whom it may concern:*

Be it known that I, JOSEPH E. LAYCOCK, a citizen of the United States, and residing at Stephenson, in the county of Menominee and State of Michigan, have invented a certain new and useful Improvement in Machines for Trimming Fence-Posts, which is fully set forth in the following specification, reference being had to the accompanying drawings, in which—

Figure 1 represents a side elevation of a machine embodying my invention; Fig. 2, a detail sectional view of the same, taken on the line *x x* of Fig. 1; Fig. 3, a detail view, partly in section, showing the manner of mounting the cutter on its mandrel; Fig. 4, a detail view of one of the knives of the large cutter detached; Fig. 5, a face view of the small cutter; Fig. 6, a view of the finished fence-post; Fig. 7, an end view of the carriage, and Fig. 8 a detail sectional view taken on the line *y y* of Fig. 5.

Like letters refer to like parts in all the figures of the drawings.

My invention relates to machines for finishing fence-posts, its object being to provide a machine whereby fence-posts of cedar or other wood may be readily and rapidly finished from the rough condition by pointing them and properly shaping their heads; and to these ends my invention consists in certain novel features, which I will now proceed to describe, and will then point out in the claims.

In the drawings, A represents a frame-work of any suitable construction, and B a way or track secured thereto in any suitable manner. Upon the track B is mounted the carriage C, which is provided with wheels *c*, grooved, as shown, to fit the rails *b* of the track B. The frame of the carriage C is of any suitable construction, it being provided at each end with a V-shaped notch or seat, C′, to receive the article to be operated upon, as shown in Figs. 1 and 7 of the drawings. The walls of this seat are provided with projecting points *c′*, upon which the fence-post rests.

D indicates a lever pivoted to the carriage, and extending across the same, being provided with one or more projecting points, *d*, to bear upon the fence-post, as shown in Fig. 7. By pressing upon the lever D the fence-post will be firmly held in position upon the carriage by means of the points *c′* and *d*, thereby preventing the post from slipping or rotating while subjected to the action of the cutters, as hereinafter described.

At each end of the track B is arranged a cutter, at a height corresponding to the position of the fence-post when in place on the carriage. The cutter E, at one end, is mounted upon a mandrel, *e*, connected by a belt, E′, to the drive-shaft *e′*, which receives its power from any suitable source. The cutter E is preferably connected to the mandrel *e* by being screwed thereon in the manner shown in detail in Fig. 3 of the drawings, so that the cutter may be readily removed and replaced when desired. The general form of the cutter E is that of a hollow cone, it being provided with slots *f*, extending, as shown, nearly from its apex to its base. In the slots *f* are arranged the knives F, secured in position in the usual manner, and projecting slightly into the interior of the cone. That end of each knife F which is next to the apex of the cone is provided with a small projection, *f′*, of its cutting-edge, for the purposes hereinafter stated. At the base of the conical portion of the cutter E is a cylindrical extension, G, provided with a groove, *g*, to receive a supporting-roller, G′, by means of which the end of the cutter is supported while in operation. Two or more of these supporting-rollers may be used, if desired, and they may be arranged at various points around the extension G, so as to bear upon the same and hold the cutter firmly in position.

At the end of the track B, opposite the cutter E, is arranged a smaller cutter, H, which is also mounted on a mandrel, *e*, connected by a belt, E′, to the driving-shaft, *e′*, in the same manner in which the cutter E is mounted and driven. This cutter is connected to its mandrel in the same manner as the cutter E, and is provided in its face with a recess, *h*, to receive the end of the fence-post. One or more knives, H′, mounted in slots *h′* in the body of the cutter, extend into the recess *h*, being provided with a curved cutting-edge, as shown in Fig. 8 of the drawings.

Heretofore in the manufacture of fence-posts of cedar or other wood it has been customary to deliver them to the consumer merely sawed to the proper length, the consumer being

obliged by hand labor to point the posts and otherwise finish them preparatory to driving them into position in the ground.

The object of my invention is to provide a machine for accomplishing this purpose, so that the posts may be delivered to the consumer all ready for driving.

The operation of the machine is as follows: The fence-post to be finished, being placed upon the carriage C and held in position by the lever D, as hereinbefore described, is fed up to the cutter E, its end entering into the interior cone of the cutter, where it is operated upon by the knives F as it is fed up, until it is finally given the shape shown in Fig. 6 of the drawings. The tapering surface *i* of the post I if carried out uniformly to the end of the post would put too fine a point upon it, so that the point would be liable to be broken off while it is being handled. For this purpose the projection *f* of the cutting-edge of the knives F is provided, the said projection terminating the tapering portion *i* somewhat abruptly at *i'* in Fig. 6. The point of the post having been finished in this manner, the carriage is then fed in the opposite direction, where the other end of the post is operated upon by the cutter H, which rounds off the edge of the head of the post, as shown at $i^2$ in Fig. 6. If this edge were not rounded off in the manner shown, the post would be liable to split from the blows given to it while driving it into the ground. The finished post may now be removed from the carriage, and another placed in position and operated upon in the same manner, the posts being finished with great rapidity and ease, as well as accuracy, and at a cost much less than that of the hand labor necessary to finish them with an ax or other similar hand tool.

Instead of feeding the carriage C by hand, any approved form of automatic-feeding mechanism may be applied thereto. It is obvious, also, that various modifications in the details of construction and arrangement of the parts may be made without departing from the principle of my invention, and I therefore do not wish to be understood as limiting myself strictly to the precise details of construction hereinbefore described and shown in the drawings.

I am aware that conical and rounding cutters are old and have been used for like purposes, being shown, for instance, in Letters Patent No. 15,530, granted August 12, 1856, to E. O. Smith, and Letters Patent No. 93,269, granted August 3, 1869, to S. V. Barnes.

I am also aware that it is not new to tenon the opposite ends of a stick with cutters of a similar character, as shown, for instance, in Letters Patent No. 14,289, granted February 19, 1856, to J. H. Palmer; nor is it new to bore holes in the opposite ends of sticks, which are clamped in seats upon a reciprocating carriage, by means of augers placed at the ends of the movement of said carriage, such a construction being shown, for instance, in Letters Patent No. 176,116, granted April 11, 1876, to McClintock Young. I therefore do not wish to be understood as claiming, broadly, such a construction.

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

1. In a machine for trimming fence-posts, the combination, with the longitudinally-movable carriage adapted to hold the fence-post, of the revolving conical cutter E, arranged at one end of the line of travel of the carriage to trim the point of the post, and the revolving hollow cutter H, having a curved blade, as described, and arranged at the other end of the line of travel of said carriage to trim the edge of the head of the post, substantially as and for the purposes specified.

2. In a machine for trimming fence-posts, the combination, with the longitudinally-movable carriage, having seats C′ to receive the post, and a lever, D′, to hold the post in position in said seats, the said seats and lever being provided with projecting points *c'* and *d*, to prevent the rotation of the post, of the revolving hollow conical cutter E, arranged at one end of the line of travel of the carriage to trim the point of the post, and the revolving hollow cutter H, having curved blade, as described, and arranged at the other end of the line of travel of said carriage to trim the edge of the head of the post, substantially as and for the purposes specified.

3. In a machine for trimming fence-posts, the combination, with the longitudinally-movable carriage adapted to hold the fence-post, of the revolving hollow conical cutter E, provided with the inclined knives F, for imparting a tapering shape to the end of the post, said knives being provided with the projections *f'*, for giving a more abrupt taper to the extremity of the post, and the revolving hollow cutter H, having curved blade, as described, and arranged at the other end of the line of travel of the carriage to trim the edge of the head of the post, substantially as and for the purposes specified.

JOSEPH E. LAYCOCK.

Witnesses:
NORWOOD BOWERS,
W. H. ROBINSON.