

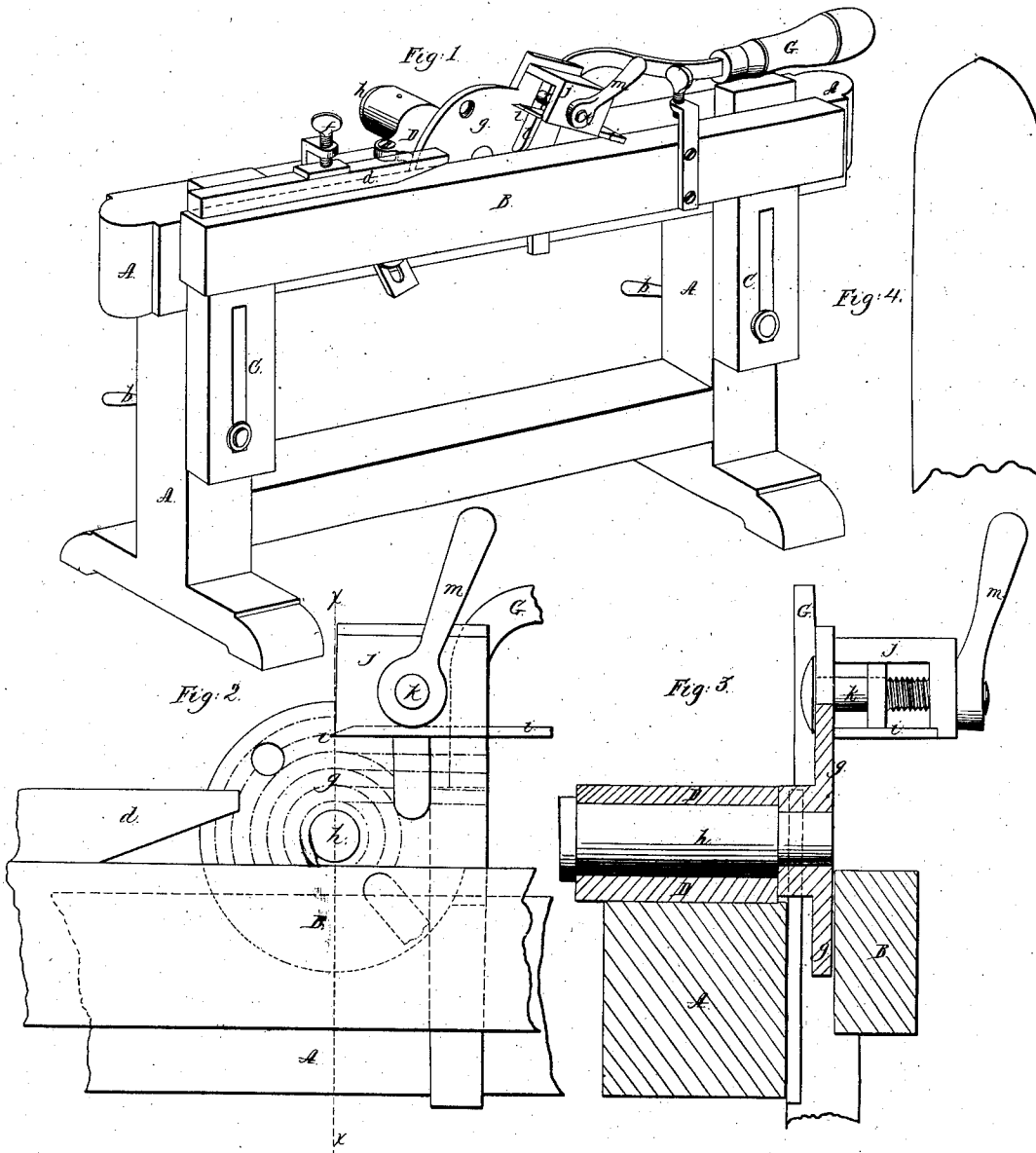
J. A. Montgomery,

25 Sheets. Sheet 1.

Making Fence Pickets.

N^o 62,355.

Patented Feb. 26, 1867.



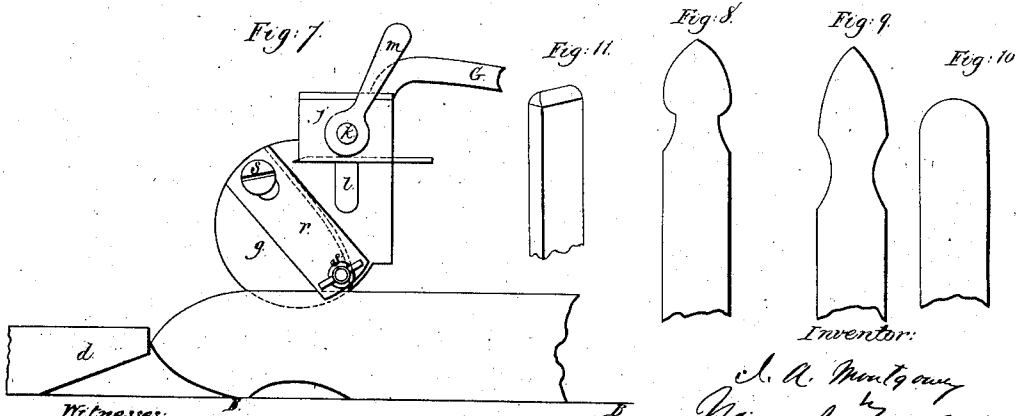
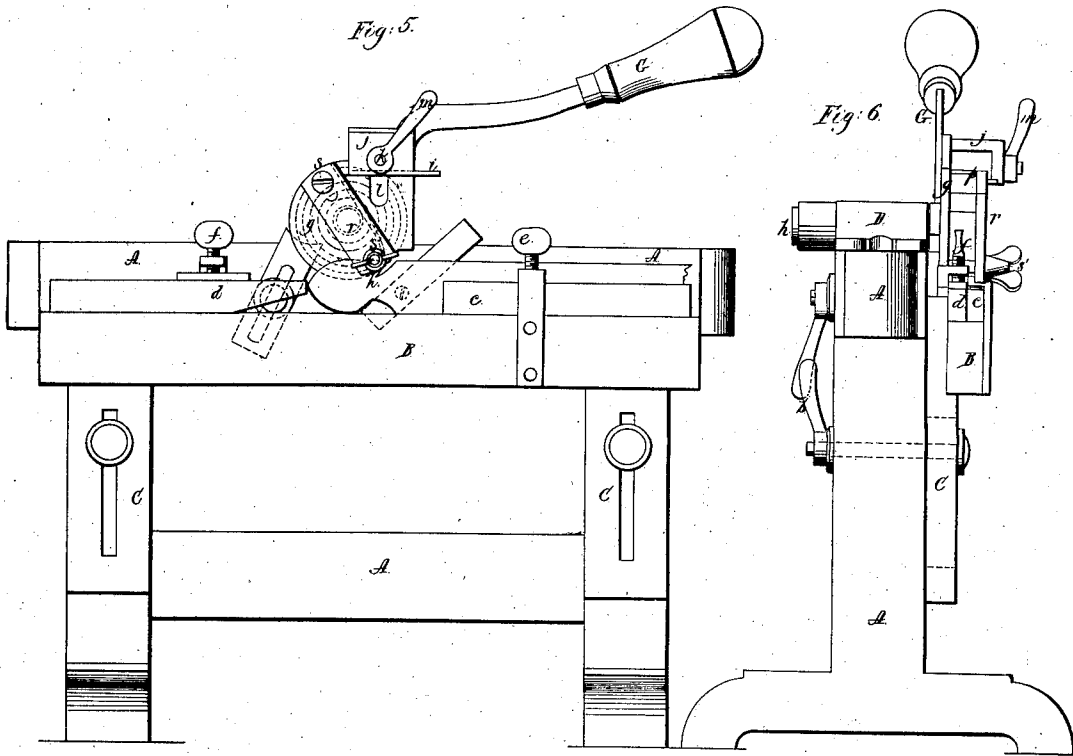
Witnesses:
Henry S. Foster.
Edw. Schreyer.

Inventor:
J. A. Montgomery
by
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J. A. Montgomery,
Making Fence Pickets.

N^o 62,355.

Patented Feb. 26, 1867.



Witnesses:
Henry G. Smith,
Edw. H. Jones,

Inventor:
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United States Patent Office

J. A. MONTGOMERY, OF COLUMBUS, OHIO.

Letters Patent No. 62,855, dated February 26, 1867.

IMPROVEMENT IN MACHINES FOR SHARPENING FENCE PICKETS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, J. A. MONTGOMERY, of Columbus, in the county of Franklin, and State of Ohio, have invented a new and useful Machine for Pointing Fence Pickets; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1, sheet 1, is a perspective view of the machine arranged for rounding the ends of pickets.

Figure 2 is an enlarged view of the cutter and its support.

Figure 3 is a vertical section through fig. 2, taken in the plane indicated by red line $x x$.

Figure 4 is a view of one form of pointed picket, as produced by the arrangement shown in fig. 1.

Figure 5, sheet 2, is a front elevation of the machine, arranged for scoring the pointed pickets.

Figure 6 is an elevation of one end of the machine, as shown in fig. 5.

Figure 7 is an enlarged view of the cutter-head, showing how the pickets can be scored.

Figures 8, 9, 10, and 11 are views of several forms of pickets.

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

The object of this invention is to point and score the ends of fence pickets by a machine which will perform the work perfectly, so that the pickets do not require subsequent dressing and smoothing. Before my invention the ends of fence pickets have been pointed and scored by reciprocating saws, and also by means of cutters, which were of the shape required of the points, and which were applied to reciprocating shafts so as to cut perpendicularly to the length of the grain, and upon the principle of a stamp. Both of these plans are objectionable where neat work is required, as in the first instance, where the work is done by sawing, the rounded and scored edges require to be dressed and smoothed; and in the latter instance the wood is liable to be splintered, and the work is imperfectly done, besides which the cutters require frequent sharpening and renewing, and are very liable to break, and to be twisted out of the required shape.

The nature of my invention consists in a machine which is adapted for pointing and scoring fence pickets by cutting them with a knife in a longitudinal direction with the length of the grain of the wood, as will be hereinafter described.

To enable others skilled in the art to understand my invention, I will describe its construction and operation.

In the accompanying drawings, A represents a frame consisting of two legs or uprights, which support a horizontal beam, upon which latter the bearing for the oscillating cutter-head is secured. Any other suitable form or frame may be employed instead of the one herein shown. In front of the frame A is a beam, B, upon which the pickets are supported while being pointed and scored; this beam is secured to the upper ends of two upright supports, C C, which are vertically slotted and secured to the legs of frame A by means of clamping bolts $a a$, that pass through the slots in the supports C C, and receive upon their rear ends lever nuts $b b$. By loosening the nuts b , the beam B can be adjusted up or down, according to the width of the pickets to be pointed. Upon the beam or table B two stop-blocks, $c d$, are clamped by means of the clamping-screws $e f$, which blocks can be adjusted lengthwise or removed from the beam. The stop-block d is not used during the operation of rounding the ends of the pickets; but it is used during the operation of scoring the pickets, as will be hereinafter explained. At or near the middle of the frame beam A is an oscillating cutter-head, which consists of a plate, g , that is secured to one end of a short shaft, h , that passes through and turns in a fixed bearing, D. The plate g , which is nearly circular, has a number of eccentric circles marked upon its front face, which serve, in conjunction with lines that are tangent to said circles, as gauges for adjusting a knife, i , to cut curves of different radii. The knife i is secured to the face of the plate g , in a plane perpendicular thereto and parallel to the top surface of the beam B, by means of a box, j , and a clamping bolt, k , which latter passes through a slot, l , through plate g , and through said box j , and receives a lever-nut, m , upon one end. By loosening the nut m the cutting edge of the knife i can be moved nearer to or set further from the axis of the plate g , as may be required. This knife i is designed more particularly for rounding or pointing the pickets, as shown in fig. 4, to effect which the pickets are adjusted, one at a time, upon the beam B, as indicated in red lines, fig. 2, and the knife i , with its plate g , forced forward by means of lever G; the picket is then turned over and the opposite edge rounded in a similar manner by forcing the knife forward again. The curves given to

the ends of the pickets will be concentric to the axis of the plate *g*, so that in order to increase or diminish the radii of such curves it will be necessary to adjust the cutting edge of the knife *i* nearer to or further from the axis of motion of the plate *g*. By adjusting the knife *i*, the beam *B*, and the stop-block *d* in a suitable manner, long or short tapering points can be made as represented in figs. 8, 9, and 11, or a rounded end, represented in fig. 10, can be cut. The movement of the knife *i*, in cutting the rounded points, is from a horizontal plane to a vertical plane, for the greatest movement, or between these two points, above the axis of the plate *g*. In rounding the pickets, as shown in fig. 10, the knife *i* will sweep through one-quarter of a circle, but in making the tapering points the arc will be much shorter. The knife *i* may be used for scoring the pickets, as shown in figs. 8 and 9, by employing an open-backed box instead of the one lettered *j*, or by cutting out the front portion of the box *j*, it will answer every purpose. Should it be desired to use a single knife for pointing and scoring the ends of the pickets, this can be done by the simple change in the box *j*; as above suggested, so that when the knife *i* is brought over and below the axis of the plate *g* for scoring, the box will not strike the picket. A separate knife, *p*, shown in figs. 5 and 7, may be used for scoring, if desired. This knife is also clamped to the plate *g* so as to move with it, by means of a plate, *r*, and set-screws, *s s'*. The arrangement of this scoring-knife is shown in figs. 5 and 7. In cutting the scores with either the knife *i* or the knife *p*, one-half of the score is cut by one movement of the knife, and the picket is reversed so as to cut the other half. This is done to prevent upward cutting and a liability of slivering the wood. In fig. 5 I show the knife *p* in the act of cutting one-half of a score or notch with the point of the picket against the stop *d*; to cut the other half of the score the picket is reversed and its point brought against the stop *c*, after which the knife *p* is brought down as before. The score on the opposite edge of the picket is cut in the same way. It will be necessary to remove the knife *p* and its clamp when the knife *i* is used, but it will not be necessary to remove the latter when the former is used.

I do not confine my invention to the use of two knives, one for pointing and the other for scoring the pickets, for it is evident that a single knife can be used for pointing and scoring both. In one case the knife works in the arc of a circle above the axis of the plate *g*, in the other case the knife is moved in the arc of a circle below said axis. It will be seen from the above description how a knife can be arranged for pointing and scoring fence pickets, so that a finished and perfectly smooth cut is made without liability of slivering the stuff, and without leaving edges or surfaces which require subsequent dressing. I do not confine my invention to any particular mode of securing the knife *p* or the knife *i* to its oscillating support, as various clamps may be adopted for this purpose; nor do I confine my invention to operating this oscillating support by hand, as it may be moved by suitable machinery.

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

1. A machine for producing curved points on the ends of fence pickets, constructed and operating substantially as described.
2. A machine which will both point and score the ends of fence pickets, constructed and operating substantially as described.

Witnesses.

J. RICHARDS,
WM. L. HEYL.

J. A. MONTGOMERY.