E. Briggs,

Making Fence Pickets,

No. 2,734. Patented July 20, 1842.

Fig: 1.

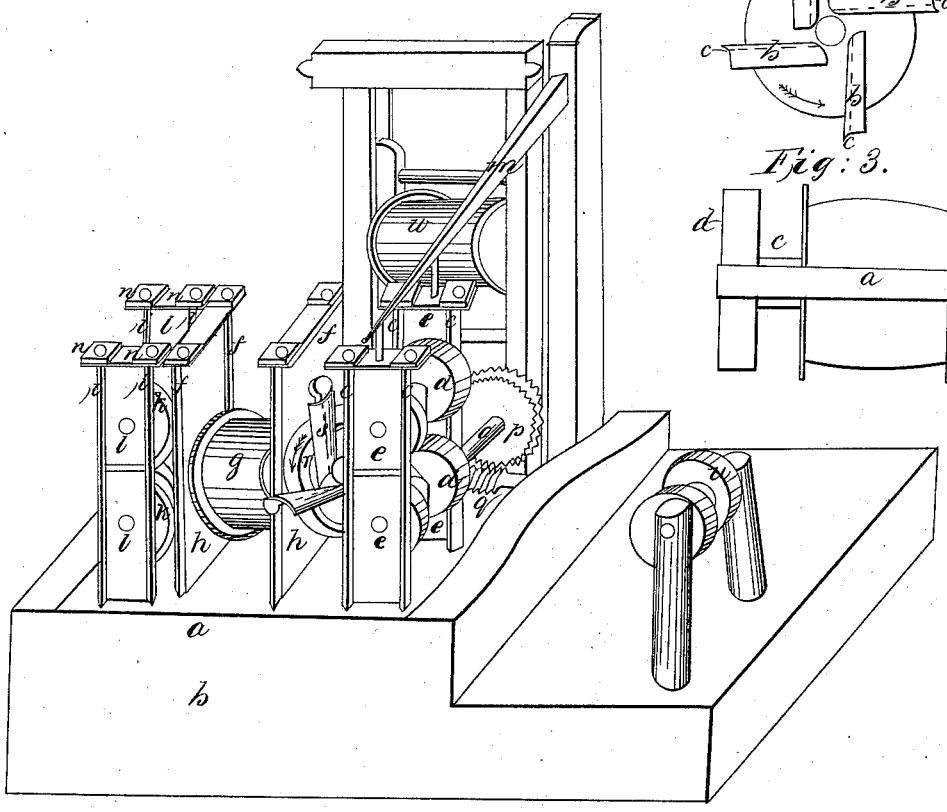


Fig: 2.

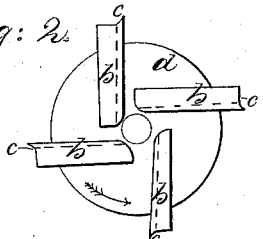
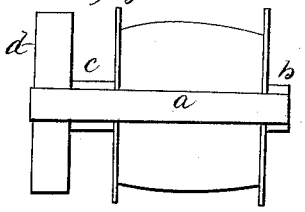


Fig: 3.



UNITED STATES PATENT OFFICE.

ELISHA BRIGGS, OF PERRY, NEW YORK.

MACHINE FOR TURNING FENCE-PICKETS AND ALL ARTICLES OF WOOD OF CYLINDRICAL FORM.

Specification of Letters Patent No. 2,734, dated July 20, 1842.

To all whom it may concern:

Be it known that I, ELISHA BRIGGS, of the town of Perry, in the county of Wyoming and State of New York, have invented a new and useful Machine for Turning Fence Pickets and all Articles of Wood of a Uniform Cylindrical Form; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the said machine, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1, is a perspective view of said machine; Fig. 2, a front view of the turning gouges, or chisels attached to the anterior end of the revolving cylinder; and Fig. 3, a longitudinal section of the revolving cylinder.

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

I construct my machine as follows: I attach a bed plate of iron (*a*, Fig. 1) to a block of corresponding width; into the iron bed plate, twelve iron standards, (*c*, *c*, *c*, *c*, *f*, *f*, *f*, *f*, *i*, *i*, *i*, *i*, Fig. 1,) are firmly inserted; the bed plate lies horizontally, and the standards are inserted perpendicularly; the standards may be round or square; if square, they must be inserted into the bed plate, diagonally; the standards are placed in pairs, on opposite sides of the bed plate near its outer edge; the two anterior pairs of standards, (*c*, *c*, *c*, *c*, Fig. 1,) are placed near the front end of the bed plate, and support two feeding rollers, (*d*, *d*, Fig. 1,) which rest on four bearing blocks; *e*, *e*, *e*, *e*, (Fig. 1;) the bearing blocks are fitted at each end to the corresponding standards. The two central pairs of standards, (*f*, *f*, *f*, *f*, Fig. 1,) support the revolving hollow cylinder, *g*, (Fig. 1,) resting on two bearing blocks, (*h*, *h*, Fig. 1,) fitted to the standards. The two posterior pairs of standards, (*i*, *i*, *i*, *i*, Fig. 1,) are placed immediately behind the revolving cylinder, near the other end of the bed plate, and support two drawing rollers, (*k*, *k*, Fig. 1,) resting on four bearing blocks, (*l*, *l*, *l*, Fig. 1,) fitted to the standards. The bearing blocks of the upper feeding roller, slide up and down the standards, to allow a larger or smaller stick, to pass between the feeding rollers, and are pressed down by a spring, (*m*, Fig. 1,) so as to apply the rollers firmly to the stick passing between them. The bearing blocks of the upper drawing roller, slide up and down the standards, and are fixed by screws and nuts, (*n*, *n*, *n*, *n*, Fig. 1,) on the top of the standards, so as to allow the stick to pass between the drawing rollers, after it has been rounded by the gouges or chisels which are attached to the front end of the revolving cylinder. One end of the shaft, (*o*, Fig. 1,) of the under feeding roller and also of the under drawing roller, passes through the bearing blocks, to a rest in a short upright standard. Between the last mentioned standard, and the bearing blocks, on each shaft, is a toothed pinion (*p*, Fig. 1,) which mashes into a perpetual screw, (*q*, Fig. 1.) Between the pinions, on the shaft of the perpetual screw, is a small drum, for turning the perpetual screw, so as to give a rotary motion to the feeding and drawing rollers. The revolving cylinder, (*g*, Fig. 1,) before mentioned, is made of cast iron; through its center, from end to end, is a circular opening, (*a*, Figs. 2 and 3,) of the same size of the picket or stick after it has been rounded. On the end of the cylinder, next to the drawing rollers, is a journal, (*b*, Fig. 3,) about half an inch in diameter, larger than the circular opening. Near the other end of the cylinder, another journal, (*c*, Fig. 3,) of the same size of the one before described, is made by a cylindrical depression in the cylinder. On these journals, the cylinder revolves, in the two bearing blocks, between the two central pairs of standards, allowing the anterior end of the cylinder, (*r*, Fig. 1, *d* Figs. 2 and 3) to project beyond the bearing block, on which it revolves, toward the feeding rollers. On this projecting end of the revolving cylinder, four curved gouges or chisels, (*s*, *s*, Fig. 1, and *b*, *b*, *b*, *b*, Fig. 2,) are attached by wedges or keys, (*t*, *t*, Fig. 1, *c*, *c*, *c*, *c*, Fig. 2,) fitted to depressions on the face of the end of the cylinder. The cutting edges of the curved gouges or chisels vary in width, and are placed around the circular opening of the cylinder, in such a manner, that the cutting edge of the widest gouge or chisel is most distant from the circular opening, and the others approach in regular gradation, till the edge of the narrowest gouge or chisel is on a line with the outside of the opening. A revolving rest, (*u*, Fig. 1,) of the same shape and height of the under feeding roller is placed on a

line with the feeding rollers, so far distant from them, as to form a convenient rest for the stick to be turned. In the middle of the revolving rest, and in the middle of each of the feeding and drawing rollers is a circular depression, of such shape as to fit a square stick, when placed diagonally between the feeding rollers.

The machine is placed upon a bench, over the drum from which it is to receive the propelling power, and is put in operation by a belt or band, which passes from the propelling drum, over the revolving cylinder, under the small drum on the perpetual screw, over a tightening pulley, (*w*, Fig. 1,) down to, and over, the propelling drum. The size of the propelling drum, and the velocity of its motion should be such as to give to the revolving cylinder about two thousand revolutions per minute. The propelling power may be water, steam, or any other, suited to the propulsion of machinery in general.

The operation of the machine is as follows: The cylinder being put in rapid revolution, a square stick of suitable size for the picket or other article desired, is placed upon the revolving rest, (*u*, Fig. 1,) and one end is then pushed between the feeding rollers, (*d*, *d*, Fig. 1,) which immediately seize and carry it along to, and through, the circular opening in the revolving cylinder, to the other end thereof, where it is grasped by the drawing rollers, and drawn completely through the cylinder. While the stick is thus passing it is rounded by the gouges or chisels on the anterior end of the cylinder. One end of the picket is then pointed, if desired, by being placed in an opening in the end of a revolving spindle, to which a chisel is adapted, diagonally, so as to cut the point of the shape desired. Any suitable materials may be used in the construction of the machine, and the proportions may be varied at pleasure.

The machine may be used for turning straight, round sticks, of any length, and of any size, not exceeding the diameter of the opening through the cylinder, for any use or purpose.

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

The arrangement of machinery, by which a stick of any length, is carried through, in combination with the revolving cylinder, with gouges or chisels on its anterior end, so arranged that the stick may be rounded while passing through the cylinder.

ELISHA BRIGGS.

Witnesses:
MASON G. SMITH,
ALBERN H. OWEN.