





# UNITED STATES PATENT OFFICE.

E. K. COLLINS, OF CAMBRIDGE, MASSACHUSETTS.

## MACHINE FOR CUTTING SHINGLES FROM THE BOLT.

Specification of Letters Patent No. 18,679, dated November 24, 1857.

*To all whom it may concern:*

Be it known that I, E. K. COLLINS, of Cambridge, in the county of Middlesex and State of Massachusetts, have invented a new and Improved Machine for Riving or Splitting Staves, Shingles, and the Like; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1, is a side view of my improvement. Fig. 2, is a transverse vertical section of ditto, taken in the line (x) (x) Fig. 1. Fig. 3, is a horizontal section of ditto taken in the line (y) (y) Fig. 1.

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

This invention consists in giving the knives, which are placed in a suitable frame, a reciprocating motion by means of screw shafts which pass through the upper and lower parts of the frame and also setting the knives to the bolt by means of right and left screw rods, the bolt being centered between proper points, and the whole arranged and combined as hereinafter described whereby a bolt or log may be readily split or rived into pieces of any required thickness for the desired purpose.

To enable those skilled in the art to fully understand and construct my invention I will proceed to describe it.

A represents a platform or base having an upright B at each end, and (a) (a) are two centers the arbors of which pass horizontally through the upright B.

C is the bolt or log secured between the two centers (a) (a).

D, D, are two screw shafts, one of which is fitted between the upper parts of the uprights and the other between the lower parts, both shafts being in the same plane and each provided with journals at their ends which are allowed to turn freely in the uprights. The two screw shafts are connected at one end by gearing (b), (b), (c),—(b), (b), being pinions on the ends of the shafts and (c) being an intermediate wheel placed loosely on the arbor of one of the centers (a). The wheel (c) is provided with a handle (d) by which the wheel may be turned and motion given the shafts D, D. A crank (e) and handle (f) is also attached to one end of the upper screw shaft D.

E E, represent two bars through which the shafts D pass transversely, one through each. These bars are each slotted vertically and longitudinally and nuts (g) are fitted in these slots, two in each bar, and a nut at each side of each screw shaft. Through the two nuts of each bar E a screw rod F, passes said rods having each a right and left thread formed on them, one nut being on the right and the other on the left thread of their respective bars. Each nut has a pin (a<sup>x</sup>) passing through it, the pins of the upper nuts being at the upper and those of the lower nuts on the lower side of the bars.

G, G, are vertical knives the ends of which are secured in the nuts (g). The lower ends of the knives being secured in the lower and the upper ends in the upper nuts (g). These knives are double-edged, are parallel with each other and are placed at opposite sides of the bolt or log.

From the above description of parts it will be seen that by turning the wheel (c) the two bars E, E, with the knives G, G, will be moved and if the direction of the movement of said wheel be reversed each time the knives reach the end of the bolt a reciprocating movement will be given the knives and a slab, stave, or stick will be cut from two opposite sides of the bolt or log at each stroke or movement of the knives, the knives being fed or set to the log at the termination of each stroke by turning the screw rods F, F.

This device may be operated by human or other power, and one or more knives may be placed at each side of the bolt or log; the knives being placed side by side, at the proper distance apart corresponding of course to the desired thickness of the stuff to be cut or split.

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

The combination of the two screw shafts D, D, E E, and knives G, G, arranged relatively with each other and with the bolt C, substantially as and for the purpose set forth.

ELISHA K. COLLINS.

Witnesses:

SUMMER SARGENT,  
C. RUST.