D. M. Cummings,

Cutting Shingles.

No. 2,614. Patented May 7, 1842

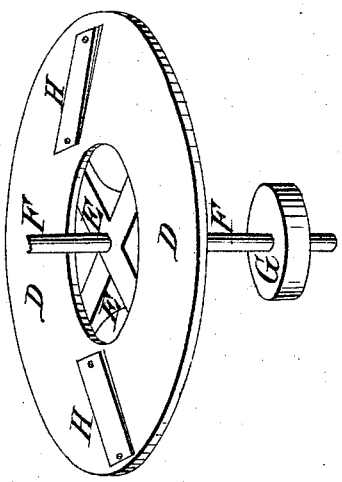

Fig. 2.

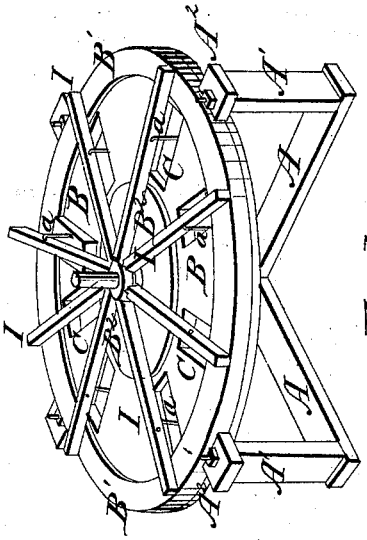

Fig. 1.

UNITED STATES PATENT OFFICE.

D. M. CUMMINGS, OF EAST LEBANON, NEW HAMPSHIRE.

MACHINE FOR CUTTING SHINGLES.

Specification of Letters Patent No. 2,614, dated May 7, 1842.

To all whom it may concern:

Be it known that I, DANIEL M. CUMMINGS, of East Lebanon, in the county of Grafton and State of New Hampshire, have invented a new and useful Machine for Cutting Shingles; and I do hereby declare that the following is a full and exact description thereof.

In the accompanying drawing, Figure 1, is a perspective representation of my machine, and Fig. 2, a view of the revolving table which carries the knives or cutters.

In describing this machine I will give the measurement of certain parts thereof taken from one which I have constructed; but these measurements may, of course, be departed from without in any way affecting its general construction, all that is important in this particular being that the whole should be made with great strength and firmness, without which it will fail to effect the desired object. I have also represented the machine as made principally of wood, but it may be constructed, with the frame and tables, of cast-iron, and will when so constructed be more permanent, and in all respects better, than when made of wood.

A, A^1, A^2, is the frame of the machine.

A, A, and A^2, A^2, are two crosses of timber halved together at their middles. These crosses are made of pieces of stuff eight feet seven inches long, eight inches wide, and three inches thick. A′, A′, are posts, of the same width and thickness, thirty four inches long, framed into the four ends of the two crosses, and held firmly in place by iron rods, and screw nuts. The upper cross of the frame constitutes a part of a stationary table B, B′, having through it eight openings C, C, which constitute boxes within which the blocks or bolts are to be placed from which the shingles are to be cut. These openings, or boxes, may be fifteen inches in length and five in width, more or less.

B′, B′, is a rim, or ledge, surrounding, and firmly united to, the stationary table, there being a similar rim on its lower side, to strengthen it and to allow room for the operation of the revolving knives, or cutters, to be presently described. The circle B^2, B^2, of wood, or iron, is made fast to the center of the table and serves also to give to it the required firmness and stability.

D, D, Fig. 2, is the revolving table, which may be made of four quadrant pieces of cast iron, affixed firmly to a cross E, E, which is attached to the shaft F. This table may be made to revolve beneath the stationary table, in any convenient mode, as by means of a whirl G, or by a sweep attached to its upper end, above the stationary table B, or by gearing operating at its periphery; in any case, it is to be carried around by a slow but firm and steady motion.

H, H, are two knives, or cutters, which are bolted to the table D, D. These are so arranged as that one of them only shall be in action at the same time, and this may be effected by so placing them that their edges shall, in measuring around the circle, be in one direction one hundred and fifty eight degrees and in the other two hundred and two degrees apart. They are also so arranged that one of them shall cut the thin end of a shingle nearest the shaft, and the other to cut the thick end in the same position. They are to be placed on such angles with the radii of the wheel as that their edges shall pass from corner to corner of the block, diagonally, when cutting a shingle of the size above named. They must, of course, be so raised above the table as to correspond with the thickness of the shingle to be cut. In further illustration I will remark that when the knives come in contact with the rest, or side of the box that supports the block while cutting, should form an angle whose perpendicular shall be one inch to three inches base, calling the rest the base, each cutter is to commence cutting the thin end of the shingle first, and consequently one cutter should form an outward and the other an inward angle on the line of the rest, which is a line falling three inches to the right or left of the center of the shaft, and the thin part of the shingle is to be left free and elastic in the process of cutting.

I, I, Fig. 1, are levers which are, at their inner ends, jointed to a hub J, allowing them to rise and fall freely, there being one such above each of the openings C, C. A dog or pointed bolt *a*, *a*, descends from each of these levers, and bears upon the block to be cut, a weight, say of eight or ten pounds, being suspended from the outer end of each lever. Each of the blocks is thus forced down until the lever rests upon the rim B′, B′, at which time the block will have the last shingle cut from it.

It will be manifest that the number of

boxes for containing the blocks from which shingles are to be cut may be varied and that corresponding changes may be made in other parts of the apparatus, while the general construction may remain unchanged. I do not, therefore, intend to limit, or confine, myself in particulars of this kind to the precise form or number of parts above designated, but to vary these as I may think proper or find convenient; but

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

The particular manner in which I have combined and arranged the respective parts of my machine, as above described; that is to say, I claim the combining of the stationary, horizontal table, having eight openings, or boxes, more or less, with the revolving table furnished with two knives so located as that one only shall be in action at any one time, and on such angles as will enable them to commence and cut the thin end of each shingle of the above dimensions off before the cutter begins on the thick end, and with the system of weighted levers for holding the blocks in their places; the whole being formed and operating substantially as herein set forth.

DANIEL M. CUMMINGS.

Witnesses:

CALEB MAISTRD, JR.,

GEORGE WASHBURN.