

W. A. DURRIN.
Shingle-Machines.

No. 158,050.

Patented Dec. 22, 1874.

Fig 1

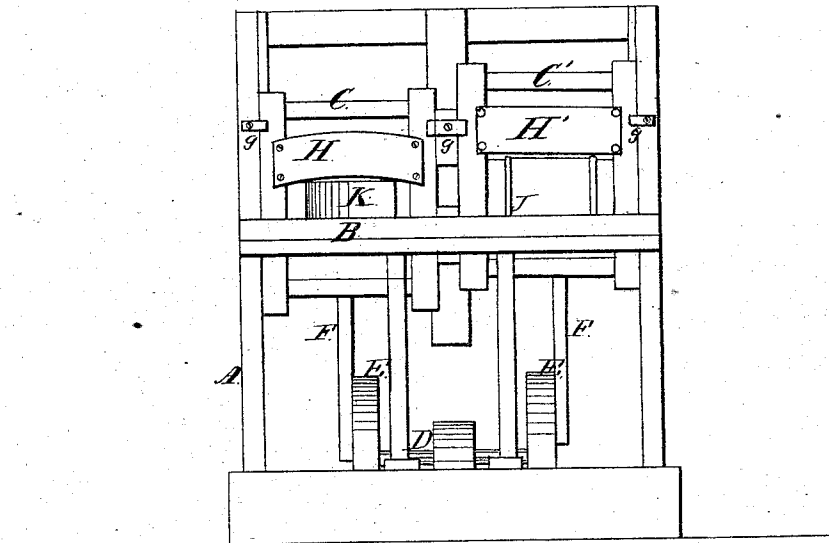


Fig 2

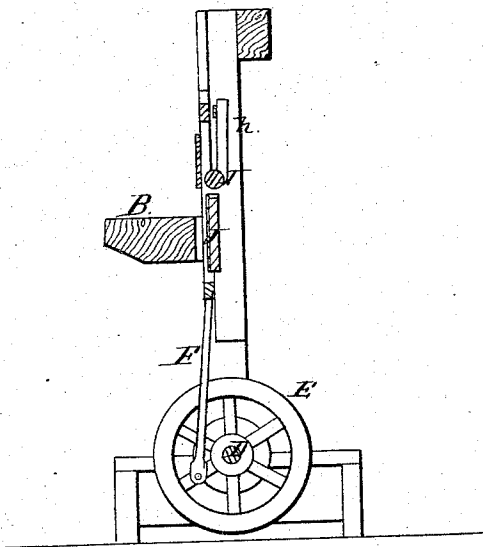
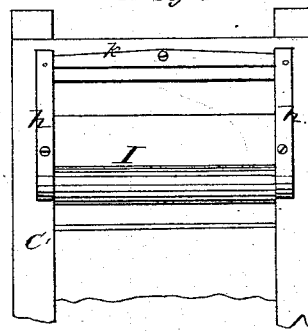


Fig 3



Witnesses
J. B. Connolly
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By

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UNITED STATES PATENT OFFICE.

WARREN A. DURRIN, OF WILSON, WISCONSIN.

IMPROVEMENT IN SHINGLE-MACHINES.

Specification forming part of Letters Patent No. **158,050**, dated December 22, 1874; application filed July 11, 1874.

To all whom it may concern:

Be it known that I, W. A. DURRIN, of Wilson, in the county of St. Croix and State of Wisconsin, have invented certain new and useful Improvements in Shingle-Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification, in which—

Figure 1 is a front elevation of my invention. Fig. 2 is a vertical transverse section, and Fig. 3 a detail view.

This invention has relation to shingle-machines; and consists in the combination, with the reciprocating knife and with the roller arranged upon spring-bearings which will yield properly, of a pivoted plate through which the usual taper is given to the shingle, said plate being so arranged that the shingle may be tapered toward either end, or each alternately, of the block or bolt, all as hereinafter more fully described and specifically claimed.

Referring to the accompanying drawings, A designates an upright frame, to the face of which is attached a suitable work-table, B, behind which work the vertically-reciprocating cutter-frames C C', with their attachments, motion being conveyed to the same from a common horizontal power-shaft, D, through the medium of the balance, crank-wheels E E, and pitmen F F. G is a pulley or belt-wheel, arranged upon the shaft D, between the wheels E E. The connection of the pitmen with the crank-wheels is such that the cutters are made to operate alternately, the one rising while the other falls, and vice versa. The cutter-frames move between guides, and are held in place by buttons g, which may be turned to permit the removal of the frames. H H' designate the blades, of different degrees or shapes, adapting them to their respective functions, the former being employed to cut off the knots, grit, and other excrescences from the bolt or block, while the latter is used solely for the purpose of cutting out the clean shingle.

It is manifest that in the use of the two knives, constructed and relatively arranged and operating as described, there is a great saving of labor, time, and material, which could not be obtained in the use of a single

blade, or even in the use of two blades of similar quality, while in the employment of a distinct blade to perform the coarse work the smoothness and keenness of the shingle-blade proper is preserved.

I designates the roller, located behind the blade H', and supported by the yielding bearings h h, the upper ends of which are connected to the ends of an elliptic or equivalent spring, k, which effects a pressure of the roller toward the blade. According as the shingles are cut they pass upward between the back of the blade and the roller, and hence no "checking" results. J designates a rocking plate attached to the frame of the cutter, and designed to insure the usual taper to the shingle, which may be toward either end of the block. K is a concave plate, attached to the frame C and designed for use in the cutting of staves and other articles, to which work the machine, with slight modification, without departing from the essential features of my invention, may be adapted.

While there is an apparent duplication of parts in the employment of two knives, I do not claim their combination, broadly, being well aware that the mere duplication of parts involves no invention. I consider the merit of that part of my invention which embraces the employment of two knives to be in their difference of construction and their relative arrangement, which leads to substantially different results.

I am also aware that the employment of a roller to prevent "checking" is not new, broadly.

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

The combination, with the yielding roller I and knife blade H', of the centrally-pivoted rocking plate J, arranged as described, so as to be freely adjusted and adapted to the taper of the shingles, the sides of which converge alternately toward opposite ends of the block, as and for the purpose specified.

In testimony that I claim the foregoing I have hereunto set my hand this 20th day of June, 1874.

WARREN A. DURRIN.

Witnesses:

WILLIAM RANDOLPH,
PATRICK KIRBY.