(12) **United States Patent**
Flagg

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(54) **SHINGLES & STAVES, HEADING, &C.**

(76) Inventor: **David Jr. Flagg**

David Flagg Junr

Letters Patent

The Schedule referred to in these Letters Patent and making part of the same, containing a description in the words of the said David Flagg Junr himself of his improvement in the Machine for making Shingles &c.

Be it known that I, David Flagg Junr of the City, County, and State of New York, have made an improvement in the Machine for making Shingles, Staves, headings &c. which is described as follows This Machine consists of a frame to support the Machinery; a gate working horizontally with a prow or knife to cut the shingle from the bolt a vibrating beam attached to the gate and to a crank shaft to work the prow up and down a gallows or frame to support the vibrating beam at its centre two knives to shave the shingles with wedges to graduate their distance apart and to secure them a driver working horizontally, to drive the bolt through between the knives, which driver being attached to the wrist of the crank shaft by a pitman a channel or casing in which the shingles pass, lined with knives to secure them a rest or table to receive the shingle bolt and a band shaft to which the power is applied to work the Machine. The frame consists of a solid foundation of timber, or frame work, into which are mortised three posts supporting a long piece of timber forming the principal part of the frame. Two other posts are let into the foundation supporting a shorter piece of timber, than the one last mentioned, placed parallel to, and at a short distance from it, and connected by cap pieces, between these two pieces of timber is placed the band wheel hereafter mentioned. The two posts at the left hand end of the machine (in looking towards the front) extend above the long piece of timber, having mortises

or recesses cut in the front side thereof into which a broad thin piece of wood forming the back of the channel or casing hereafter to be described. This piece of wood is keyed tight by wooden keys or wedges. The gate working vertically within fender posts, is formed by two pieces of scantling placed parallel with each other, and connected at top by a cap piece of timber and at bottom by a broad plate of iron or steel brought to a sharp edge, prow or knife, which cuts the shingle from the block or bolt. The fender posts are let into the foundations and locked to the long timbers before described. The vibrating beam is a stout piece of timber nearly the length of the whole frame vibrating on a strong bolt passing through its centre, and the top of the gallows, its left end is connected to the gate by a pitman, and its right hand end to the wrist of the crank shaft by another pitman or connecting rod. The gallows or frame supporting the vibrating beam, consists of four posts Mortised into the foundation timbers at a convenient distance apart, say two feet, and nearly meeting at top connected together by ties or braces. The knives to shave the shingles are made of steel and brought to a sharp edge, having a slight depression or cavity on its sides near each end from the points of the regulating screws. These knives are placed in shaving at an angle of about 100 degrees with gradating wedges between them at top and bottom, the one at bottom being thicker than the one at top in order to set the knives wide apart at bottom to form the butt, and close together at top to form the point of the shingle. The regulating screws for securing the knives pass through female screws in the ends of the straps of iron (which secure the casing or channel to be hereafter described) between these the knives are placed, the points of the screws being in the cavities before mentioned. The shaver is a rectangular piece of timber having an iron plate fastened on its front at the end which

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comes in contact with the shingle. This plate has a groove on its outer edge. There are also two shafts of iron secured to the front end of the drivers to keep the shingle in place. The driver is connected with the wrist of the crank shaft by a pitman and it slides in grooves or ways formed by four pieces of timber set edgewise, secured to the frame by bolts and screws. The channel or casing through which the shingles pass is formed by the broad board keyed into the left hand posts before mentioned, and which forms the back, the front being formed by two thin boards placed at a short distance from the back board, having thin strips of wood between them and the back at top secured by screw bolts passing through the irons, shafts and through the boards. The inside of this channel or casing is lined with horizontal strips of iron or steel placed in parallel lines part of each strip being plain and part being cut into saw teeth to score the shingle as it passes through the channel previous to its meeting the knives. Two iron guides or bars are placed in the lower part of the open space of the casing against which the shingle bolt rests. The upper part of this open space is a saw to score the shingle near its point where split. The rest or table to receive the shingle bolt is a thick piece of timber resting on the ends of two vertical springs keyed to the face of the footed posts and brought immediately before the open part of the casing. Between the springs is a horizontal anti friction roller. The crank shaft to which the power is applied and by which the Machine is worked is placed across the frame at the right hand end of the same; its journals turning in bores in the longitudinal parallel pieces of the frame before mentioned. The driving pulley is put on this shaft, and a balance wheel is also put on it to steady the motion of the machine. Operation. The Machine being put in Motion the shingle bolt is placed on the rest against the guide plates, and as the crank shaft revolves the

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end of the vibrating beam is brought down, whilst its other end ascends with the gate, and frow or knife which cuts off a shingle, and the next half revolution of the crank forces forward the shiver with the shingle causing it through the casing between the dooring saws and knives where it is shaped and shaved. The next half revolution brings back the shiver, and causes up the frow cutting off another shingle which is shaved as before. and in this manner the operation is continued. To the vibrating beam may be attached several saw gates with saws for sawing boards &c. likewise to saw the timber into shingle bolts.

A cylindrical wheel with knives on its periphery is attached to and worked by this Machine for jointing the shingles. For a further illustration of my invention I refer to the Model and drawing of the same deposited in the Patent office. What I claim as my invention and for which I solicit Letters Patent is the before described Machine for making shingles, staves, headings &c. particularly the gate with the frow or knife, the application of the vibrating beam to work the gate; the manner of regulating and dressing the knives by the screws and wedges, the peculiar construction of the shiver, and the channel or casing lined with saws to shave the shingles.

Done at the City of Washington this 15th day of December 1820.

Witnesses
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Chas. Bulfinch Jun.

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