(No Model.)

# C. A. TARRAGON.

## SHINGLE MACHINE.

No. 304,469. Patented Sept. 2, 1884.

Fig: 1.

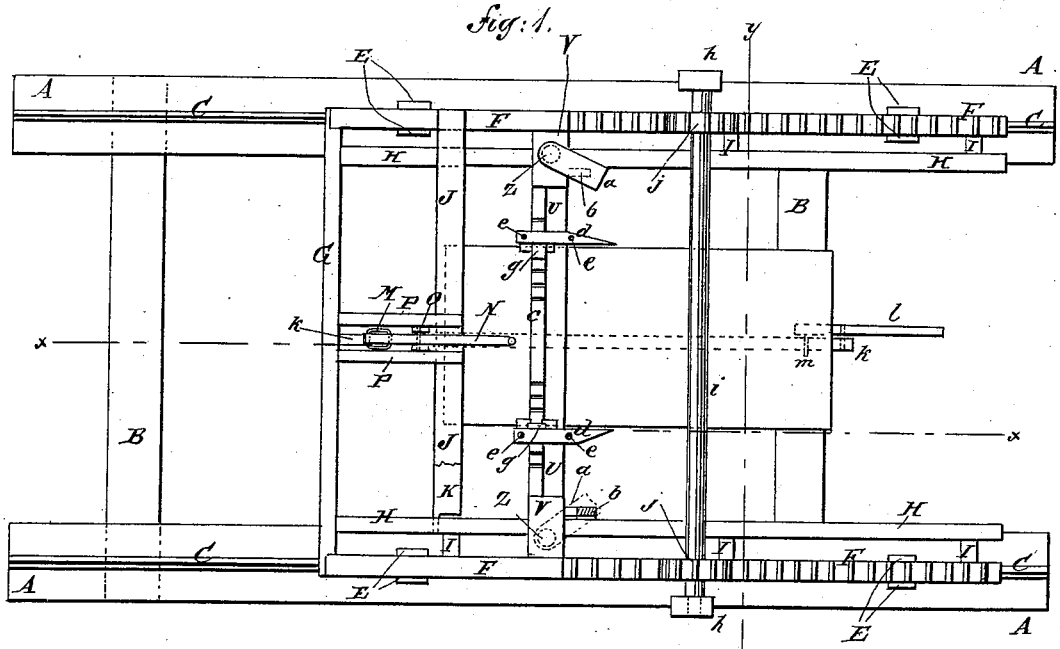


Fig: 2.

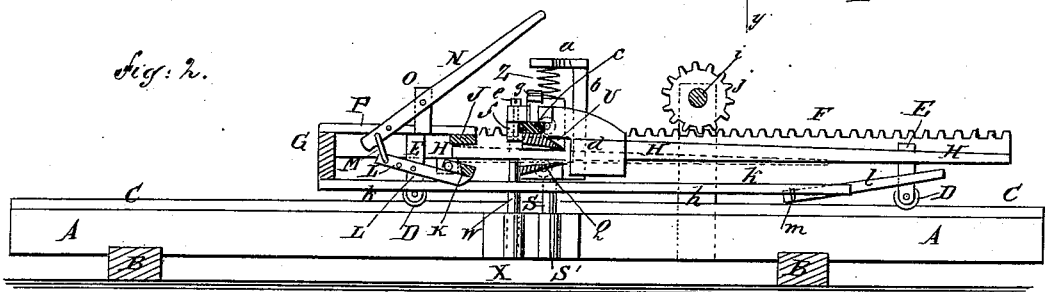
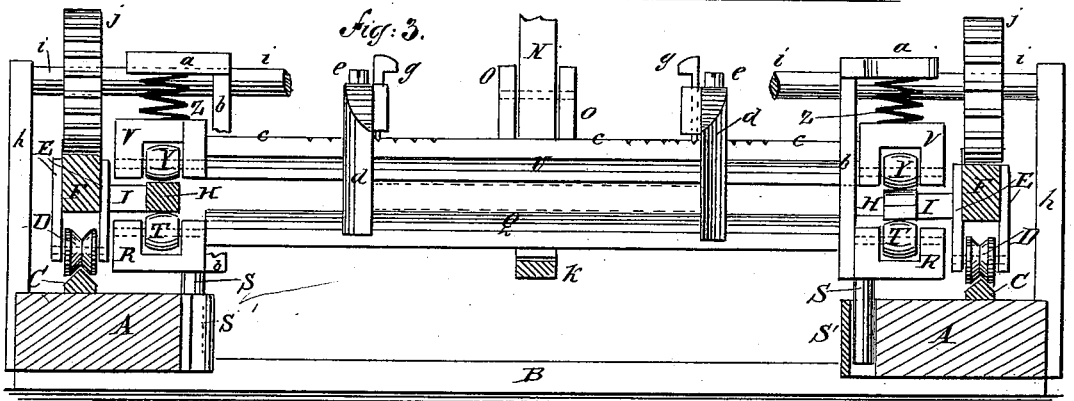


Fig: 3.



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# UNITED STATES PATENT OFFICE.

CHARLES AUGUSTE TARRAGON, OF PORTLAND, OREGON.

## SHINGLE-MACHINE.

SPECIFICATION forming part of Letters Patent No. 304,469, dated September 2, 1884.

Application filed May 19, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES AUGUSTE TARRAGON, of Portland, in the county of Multnomah and State of Oregon, have invented certain new and useful Improvements in Shingle-Machines, of which the following is a full, clear, and exact description.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a plan view of my improved machine. Fig. 2 is a sectional side elevation of the same, taken through the broken line *x x*, Fig. 1. Fig. 3 is a sectional end elevation of the same, taken through the line *y y*, Fig. 1, and in larger size.

The object of this invention is to facilitate the tapering and edging of shingles.

The invention consists in a shingle-machine constructed with sills having rails carrying rack-bars having wheels, and connected by a cross-bar with each other, and engaging with gear-wheels fixed to a shaft, whereby the said rack-bars are made to move forward and back evenly. With the rack-bars and their connecting cross-bar are connected tapered gage-bars, passing between opposite spring-pressed knives, whereby the shingles will be tapered as they are drawn between the said knives. With the rack-bars the tapered gage-bars and their connecting cross-bar are connected clamping-plates—one stationary and the other eccentrically pivoted—and provided with an operating-lever, whereby the shingles can be clamped and drawn between the knives. The knives are provided with rollers pressed against the upper and lower sides of the tapered gage-bars by springs, also connected with the said knives, to lessen the friction as the said gage-bars move forward and back. To the top of the upper knife is attached a plate having a rearwardly-projecting edge, to which are secured, by clamping screws and blocks, the recessed shanks of the edging-knives, whereby the said knives will be securely held and can be readily adjusted.

To the cross-bar connecting the forward ends of the rack-bars and tapered gage-bars is rigidly attached a bar having a lever pivoted to its free end, to adapt the said lever to be used as an assistance in pushing the shingles forward between the knives, as will be hereinafter fully described.

The base-frame of the machine consists of two sills, A, connected by two or more cross-bars, B. To the upper sides of the sills A are secured rails C, to form a track for the wheels D, journaled to supports E, attached to the rack-bars F, which are connected at their forward ends by a cross-bar, G.

To the rack-bars F are secured, by bolts or other suitable means, the gage-bars H, which are kept at a suitable distance from the said rack-bars F by blocks I, interposed between them and the said rack-bars. The gage-bars H are made of the exact taper required for the shingles. The butt of the shingle is held while the said shingle is being tapered by the clamping plates or jaws J K, the upper one, J, of which is stationary, and is secured, by bolts or other suitable means, to the rack-bars F and the gage-bars H at a little distance from the forward ends. The lower plate, K, is eccentrically journaled at its ends to the lower parts of the gage-bars H, or to bearings attached to the said gage-bars. To the middle part of the pivoted clamping-plate K is rigidly attached an arm, L, to the outer end of which is connected, by a clevis or link, M, or other suitable connection, one end of a lever, N. The lever N is pivoted to supports O, attached to bars P, which are secured at one end to the cross-bar G, and at their other ends to the stationary clamping-plate J.

Q is the lower knife, to the ends of which are attached, or upon it are formed, heads or blocks R.

To the blocks R are attached rods S, placed in sockets S′, secured to the sills A, to keep the knife from being drawn back by the pull of the shingle.

To the blocks R ~~are~~ have pivoted wheels T, to rest against the lower sides of the gage-bars H and lessen the friction as the said gage-bars move forward and back. The gage-bars H, the rack-bars F, the cross-bar G, and the clamping-plates J K form the carriage of the machine.

U is the upper knife, to the ends of which

are attached, or upon them are formed, heads or blocks V.

To the blocks V are attached rods W, placed in sockets X, attached to the sills A.

To the blocks V are pivoted wheels Y, which rest upon the upper sides of the gage-bars H and lessen the friction as the said bars move forward and back.

Upon the blocks V rest the lower ends of spiral springs Z, to hold the wheels Y down upon and the wheels T up against the gage-bars H, so that the knives U Q will gradually approach each other as the gage-bars H move forward to give the desired taper to the shingles. The upper ends of the spiral springs Z rest against the under sides of arms *a*, attached to or formed upon the upper ends of bars *b*, the lower ends of which are attached to the blocks R of the lower knife, Q.

To the upper side of the upper knife, U, is attached a bar, *c*, the rear edge of which projects beyond the rear edge of the said knife U, and which has a scale of division-marks formed upon its upper side.

*d* are the edging-knives, the rear parts of which are recessed, so that the lower edges of the said knives may extend below the knife Q, to bring the cutting-edges of the said knives *d* into such positions as to shave the edges of the shingles as they are being drawn between the knives U Q. The lower edges of the shanks of the edging-knives *d* are rabbeted to form a shoulder to rest against the forward edge of the gage-bar *c*, so that the said gage-bar will sustain the push of the knives *d*.

To the lower edge of the rear ends of the shanks of the edging-knives *d* are secured, by screws *e*, the small L-shaped clamping-blocks *f*, which extend beneath the projecting rear edge of the gage-bar *c*, so as to fasten the said edging-knives in place securely and adjustably. The edging-knives *d* are held from lateral movement by keys *g*, sliding in dovetailed grooves formed in the sides of the knife-shanks, or by cleats attached to the said sides. The lower ends of the keys *g* engage with cross-grooves in the upper side of the gage-bar *c*, so that the edging-knives can be readily adjusted to edge shingles of any desired width.

To standards *h*, attached to the sills A, is journaled a shaft, *i*, to which are rigidly attached two equal gear-wheels, *j*, the teeth of which mesh into the teeth of the rack-bars F, so that the said rack-bars and the gage-bars H, connected with them, will move evenly.

To the center of the cross-bar G, that connects the rack-bars F and gage-bars H, is attached the forward end of a bar, *k*, to the rear end of which is pivoted a lever, *l*, at a point a little distance from the end of the said lever. The short arm of the lever *l* is provided with a hook or pin, *m*, to engage with the bar *k*, and prevent the said lever from swinging down too low. The lever *l* is designed to be swung up against the end of the shingle being operated upon, so that it can be used to assist in pushing the shingles between the knives U Q.

In using the machine the butts of the shingles are passed between the edging-knives *d d* and the tapering-knives U Q, and are clamped between the plates J K, and the carriage is then moved forward, drawing the shingle through the knives *d d* and U Q, and bringing the said shingle to the desired taper and width.

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

1. A shingle-machine constructed substantially as herein shown and described, and consisting of the sills A, the movable rack-bars F, gage-bars H, and clamping-plates J K, the opposite spring-pressed knives U Q, the adjustable edging-knives *d*, and the shaft and gear-wheels *i j*, said gage-bars being interposed between the ends of the knife-supports, as set forth.

2. In a shingle-machine, the combination, with the sills A, having rails C, of the rack-bars F, having wheels D traveling upon said tracks, the connecting cross-bar G, and the shaft *i* and fixed gear-wheels *j*, substantially as herein shown and described, whereby the said rack-bars are made to move forward and back evenly, as set forth.

3. In a shingle-machine, the combination, with the sills A, the rack-bars F, and the cross-bar G, of the tapered gage-bars H and the opposite spring-pressed knives U Q, bearing upon the upper and lower sides of said gage-bars, substantially as herein shown and described, whereby the shingles are tapered as they are drawn between the said knives, as set forth.

4. In a shingle-machine, the combination, with the rack-bars F, the gage-bars H, and the cross-bars G, of the clamping-plates J K and an operating-lever, N, the plate K being eccentrically connected or pivoted to the lower side of said gage-bars and linked to said lever, substantially as herein shown and described, whereby the shingle will be clamped and drawn between the knives, as set forth.

5. In a shingle-machine, the combination, with the knives U Q and the tapered gage-bars H, of the rollers T Y and the spring Z, said gage-bar being interposed between said rollers, substantially as herein shown and described, whereby the said knives can be held against the lower and upper sides of the said gage-bars without causing an undue amount of friction, as set forth.

6. In a shingle-machine, the combination, with the upper knife, U, of the bar *c*, having a rearwardly-projecting edge, the edging-knives *d*, having recessed shanks, and the clamping-screws and blocks *e f*, substantially as herein shown and described, whereby the said edging-knives will be securely held and can be readily adjusted, as set forth.

7. In a shingle-machine, the combination,

with the cross-bar G, connecting the rack-bars F, and the gage-bars H, of the bar *k* and the lever *l*, pivoted thereto, said lever resting bodily upon the shingle when holding the latter in place, substantially as herein shown and described, to adapt the said lever to be used as an assistance in pushing the shingles forward between the knives, as set forth.

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Witnesses:
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