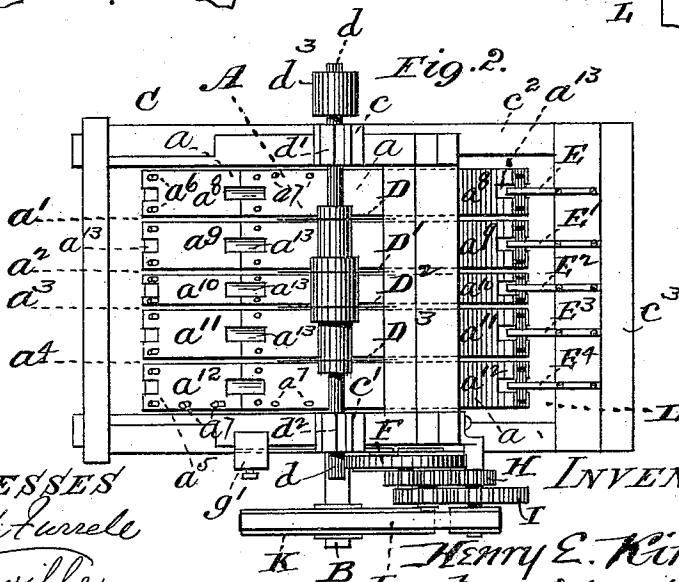
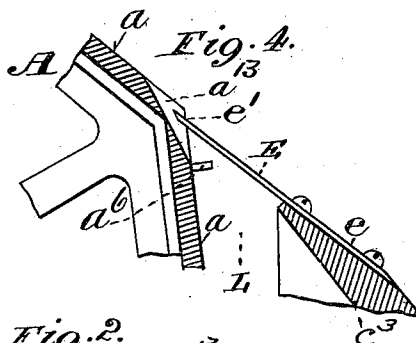
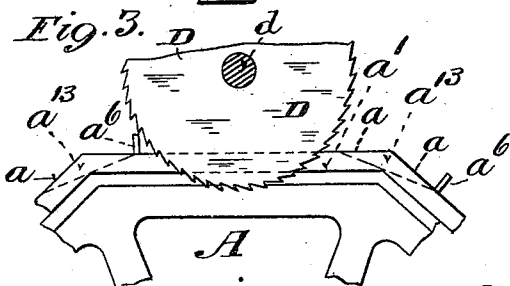
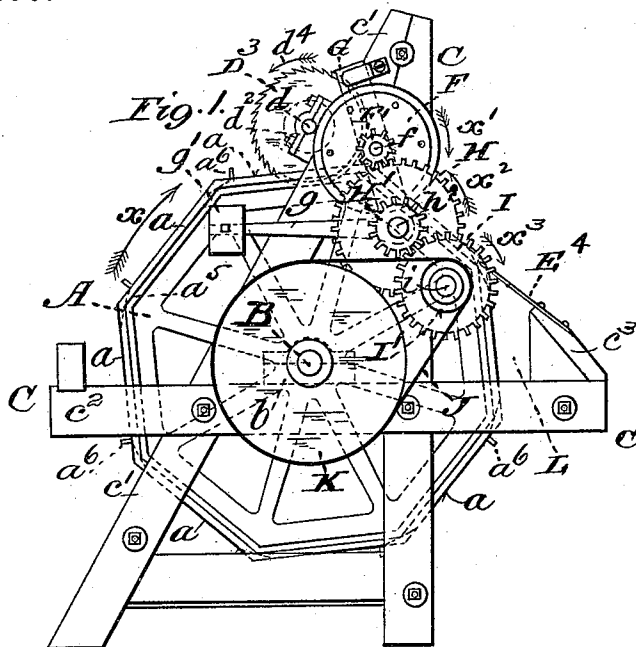


(No Model.)

H. E. KINGSLEY.
SHINGLE EDGING MACHINE.

No. 471,180.

Patented Mar. 22, 1892.



WITNESSES
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HENRY ERASTUS KINGSLEY, OF SWEET HOME, ARKANSAS.

SHINGLE-EDGING MACHINE.

SPECIFICATION forming part of Letters Patent No. 471,180, dated March 22, 1892.

Application filed May 28, 1891. Serial No. 394,345. (No model.)

To all whom it may concern:

Be it known that I, HENRY ERASTUS KINGSLEY, of Sweet Home, Pulaski county, Arkansas, have made a new and useful Improvement in Shingle-Edging Machines, of which the following is a full, clear, and exact description.

The present improved machine is designed for edging dimension shingles. A revolving polyhedral drum is employed, in combination with a system of saws, the shingles being applied to the drum-faces as they, in the rotation of the drum, come successively into position to receive the shingles and the shingles being carried by the drum past the saws and thereby edged and then discharged from the drum, substantially as is hereinafter set forth and claimed, aided by the annexed drawings, making part of this specification, in which—

Figure 1 is a side elevation of the improved machine; Fig. 2, a plan of the same; and Figs. 3 and 4 details, Fig. 3 being a vertical longitudinal section through the drum in the plane of one of the saws, and Fig. 4 a similar section in the plane of one of the shingle-dischargers.

The same letters of reference denote the same parts.

A represents the drum, whose faces a a constitute an endless series of bed-plates for supporting the shingles in their passage through the machine. The drum is attached to the shaft B, which is journaled in suitable bearings b , supported in or upon the frame C of the machine. Said frame consists, preferably, of the uprights c c' at the sides, respectively, of the machine and the horizontal portion c^2 , which connects with the uprights at a suitable level for supporting said shaft-bearings. Said drum may be of any suitable diameter and width, and it may have any desirable number of faces a so long as said faces in height and width are adapted to support and carry the work which is being operated upon. In the present instance the drum has eight faces a .

D D' D² D³ represent a system of circular saws secured to the arbor d , which in turn is journaled in bearings d' d^2 , attached, respectively, to the uprights c c' , substantially as is shown.

The drum-faces a a are correspondingly grooved or divided, substantially as is repre-

sented at a' a^2 a^3 a^4 , to receive the peripheral portion of said saws, respectively—that is, each groove or division a' a^2 , &c., extends circumferentially around the drum and to a sufficient depth therein to admit the saw, as described. Said saws and said grooves or divisions, correspondingly, are suitably spaced apart to suit the various dimensions it is desired the shingles to have. The drawings illustrate the preferred spacing.

Each drum-face a , at what might be styled the “lower end” a^5 thereof, is provided with a shoulder—say in the form of the pins a^6 —against which the butts of the shingles are supported while upon the drum. Shoulders, preferably in the form of the pins a^7 , are also provided at or near the sides, respectively, of the drum-faces for supporting the work at the side edge or edges thereof while upon the drum.

An additional feature of the construction is what might be termed the “dischargers” E E' E² E³ E⁴. Their function is to lift the points of the shingles after they have been edged, so as to separate the shingles from the drum-face and cause them to be discharged from the drum and machine into any suitable receptacle. (Not shown.) To this end and as the most desirable construction therefor the dischargers consist of flat strips of spring-steel fastened at one end e to some fixed part c^3 of the frame C and extending thence to enable their free ends e' to come beneath the points of the shingles as they are carried around upon the drum to the point at which it is desired to discharge the shingles and cause them to be slipped from the drum-face onto said strips. Each drum-face, by means of the described grooves or divisions a' a^2 , &c., is subdivided into the parts a^8 a^9 a^{10} a^{11} a^{12} , and said dischargers are arranged, respectively, in line with said subdivisions of the drum-face, and to enable the end e' of the discharger to readily come beneath the shingle upon the drum-face division to which that discharger belongs said division is notched or slotted, substantially as shown at a^{13} , to receive said end e' , substantially as shown.

In operating the machine the shingle or shingles to be edged are placed upon a face of the drum with the lower end or butt thereof against the pins a^6 and with the side or sides

against the pins a^7 —that is, a single shingle upon the drum-face may be supported at one side edge only, and if two shingles are placed side by side upon the drum-face they may be
 5 respectively supported laterally by the pins a^7 at the sides, respectively, of the drum. Motion being imparted to the saw-arbor—say by means of a belt leading to the pulley d^3 , attached to said arbor—the saws are rotated in
 10 the direction indicated by the arrow d^4 , and the drum is rotated in the direction indicated by the arrow x . Any suitable means may be adopted for imparting said motion to the drum, and the drum motion may be derived
 15 from the saw-arbor motion, and in such case any suitable means may be employed to suitably transmit the motion. A desirable means is indicated in the drawings.

F represents a friction-wheel journaled at
 20 f in an arm G. Said arm is journaled upon a shaft h , and it is extended at g to sustain a weight g' , and thereby cause the periphery of the wheel F to bear against the arbor d . The shaft of said wheel F is provided with a pinion
 25 F' , which engages with a gear H upon the shaft h . Said last-named shaft is also provided with a pinion H' , which engages with the gear I upon the shaft i . Said last-named shaft is provided with a pulley I' , from which
 30 a belt J leads to a pulley K upon the drum-shaft B. The motion of the saw-arbor by this means and as indicated by the arrows x' x^2 x^3 is communicated to said shaft B and the drum is rotated in the described direction.
 35 The shingles are carried in the rotation of the drum past the saws, and are thereby properly edged, and the edged shingles are

ultimately delivered onto the strips E E', &c., and thence from the machine, and the waste incident to the described edging is dropped
 40 through the space L between the drum and the part c^3 of the frame C. The drum motion is necessarily much slower than the saw-arbor motion, and the operative is enabled to apply the shingles to the drum-faces as they
 45 successively in the rotation of the drum come into position in front of the saws to receive the shingles.

The drum can be constructed in any suitable manner to enable the divisions a' a^2 , &c.,
 50 to be formed, and the saws may be secured to the arbor in any suitable manner, substantially as described.

I claim—

1. The combination of the drum and the system of saws, said drum having faces a and grooved and divided to receive the peripheral portion of the saws and the shoulder a^6 a^6 and slotted at a^{13} a^{13} , with the dischargers E E', &c., substantially as described.
 60

2 The combination of the system of saws and the revolving drum having the faces a and slotted, as described, with the dischargers E E', &c., substantially as described.

3. The combination of the revolving drum
 65 having the faces a and the shoulders a^6 a^7 and slotted at a^{13} a^{13} , a system of saws, and the dischargers, substantially as described.

Witness my hand this 19th day of May, 1891.

HENRY ERASTUS KINGSLEY.

Witnesses:

CHRIS LEDWIDGE,
 U. H. FORLOW.