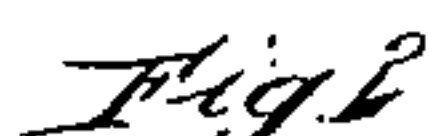


H. G. RICHARDSON.
SHINGLE EDGER.

Patented May 12, 1896.



WITNESSES:

INVENTOR

BY

ATTORNEYS.

UNITED STATES PATENT OFFICE.

HARVEY G. RICHARDSON, OF TACOMA, WASHINGTON.

SHINGLE-EDGER.

SPECIFICATION forming part of Letters Patent No. 560,147, dated May 12, 1896.

Application filed April 23, 1895. Serial No. 546,897. (No model.)

To all whom it may concern:

Be it known that I, HARVEY G. RICHARDSON, of Tacoma, in the county of Pierce and State of Washington, have invented a new and Improved Shingle-Edger, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved shingle-edger which is comparatively simple and durable in construction and arranged for cutting the shingles accurately to any desired width and without danger of the operator being liable to be injured by the saws.

The invention consists principally of a feed-carriage for feeding the shingles to the saws and rollers for drawing the shingles through the saws after the feed-frame is at the end of its inward movement.

The invention also consists of certain parts and details and combinations of the same, as will be fully described hereinafter, and then pointed out in the claim.

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 both the figures.

Figure 1 is a side elevation of the improvement with part broken out, and Fig. 2 is a plan view of the same.

The improved shingle-edger is provided with a suitably-constructed frame A, in which is journaled a transversely-extending arbor B, carrying the saws C, separated one from the other by collars D, the several collars being fastened in place by a nut E screwing on one end of the arbor B. The latter is provided with the usual pulley B', connected by belt with suitable machinery for imparting a rotary motion to the arbor and the saws C in the direction of the arrow α' .

Directly in front of the saws C is arranged a shaft F, mounted to turn in suitable bearings in the sides of the frame A, the said shaft being adapted to receive the thin end of the shingles, while the butt-ends thereof rest on a carriage G, fitted to slide longitudinally on suitable guideways G', attached to the frame A. The carriage G has a horizontal portion, on which the rear portion of the shingle may rest, and a vertical portion to engage the butt-end of the shingle. It will be seen that the shaft F and the carriage G form the sole

support for a shingle forward of the saws. In the rear of the saws C are arranged two feed or draw rollers H and H', located one above the other and both journaled in suitable bearings in the sides of the frame A. The shingles, after being cut by the revolving saws C, pass between the rollers H and H', so as to draw the cut shingles rearward out of the saws and from the carriage G, the latter being at this time at or near the end of its inward movement.

The shaft F, as well as the draw-rollers H and H', are rotated by a pulley B² on the arbor B by means of a belt I, which passes under the said pulley B² and over the pulleys F' H², secured on the shaft F and roller H', respectively. The belt I also passes over a large pulley I', secured on a shaft I², journaled in suitable bearings in the lower part of the frame A, and on this shaft I² is secured a cone-pulley I³, connected by a belt I⁴ with a large cone-pulley J, secured on a transversely-extending shaft J', journaled in suitable bearings on the frame A.

On the shaft J' is secured a pinion J² in mesh with a large gear-wheel K', attached to a shaft K, journaled on the frame A and carrying an oval-shaped cam L, adapted to engage a friction-roller N' on a lever N, fulcrumed at its lower end at N² on the frame A.

The upper end of the lever N is pivotally connected by a link N³ with the carriage G, so that a swinging motion is given to the lever N by the cam L and causes a forward movement of the carriage G to feed the shingles over the shaft F to the saws C to edge the shingles. A stop O on the frame A supports the lever N at its return stroke, it being understood that the frame G can be either moved back by hand or by a suitable weight or other means.

It is understood that when the arbor B is rotated, as previously explained, the shafts I², J', and K are rotated to cause the cam L to impart a forward swinging motion to the lever N and push the carriage G forward at a comparatively slow rate of feed, so as to properly feed the shingles to the saws. It is further understood that the butt-ends rest squarely on the vertical part of the carriage G, which serves as a gage, so that the saws C edge the shingles accurately—that is, the

sides of the shingles stand at right angles to the butt-ends. It is also understood that by the machine described dimension shingles are produced—that is, shingles of uniform width
5 in each bundle, in contradistinction to random shingles—that is, shingles of various widths in a bundle.

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

In a shingle-edger, the combination with a frame and a gang of saws thereon, of a pair of feed-rollers rearward of the saws, a rotary shaft mounted on the frame forward of the
15 saws, a carriage mounted to slide on the frame

forward of the shaft, and comprising a horizontal portion and a vertical portion, the said horizontal portion with the rotary shaft forming the sole support for a shingle forward of the saws, and the said vertical portion being
20 adapted to receive the butt-end of the shingle whereby the shingle edges may be cut by the saws at right angles to the butt-end, and mechanism substantially as described for operating the carriage and saws, substantially
25 as specified.

HARVEY G. RICHARDSON.

Witnesses:

JAMES H. PARKER,
JAMES GARVEY.