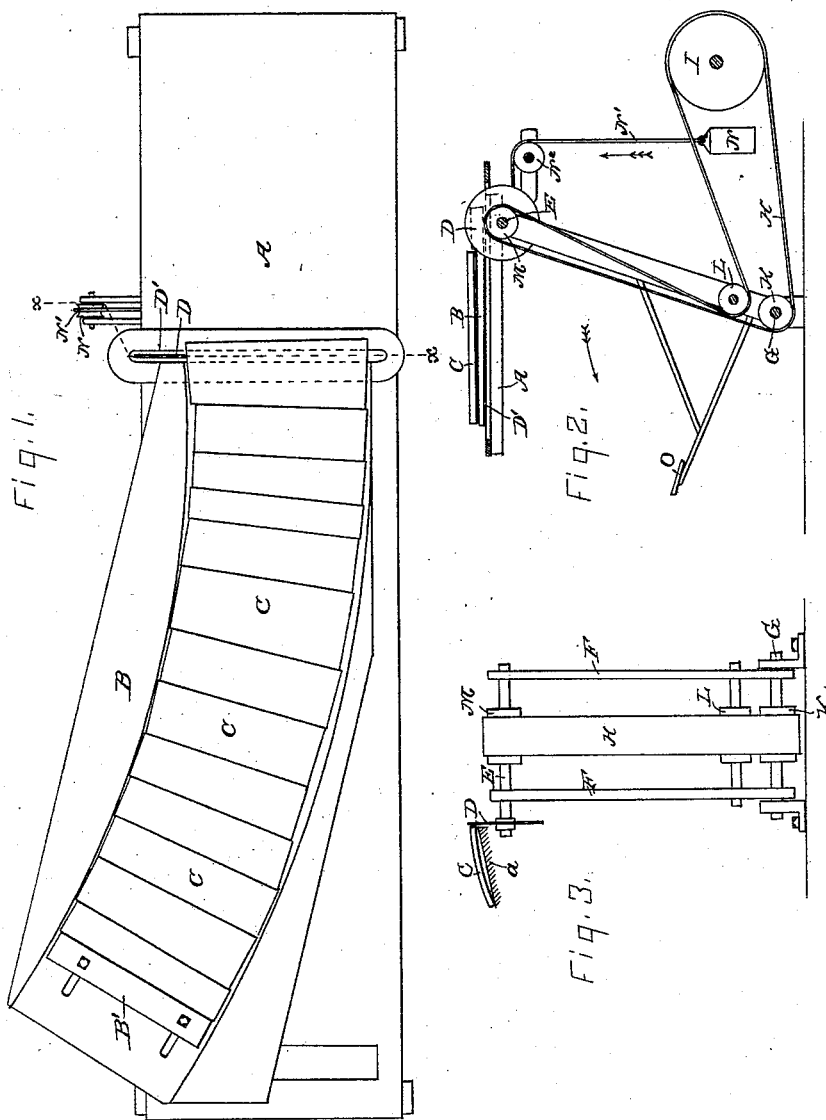


(No Model.)

G. W. PACKER.
BARREL MAKING MACHINE.

No. 347,372.

Patented Aug. 17, 1886.



WITNESSES—

Charles H. Roberts.
Robert Clark.

INVENTOR—

George W. Packer
by Mannheim & Ward
attys.

UNITED STATES PATENT OFFICE.

GEORGE W. PACKER, OF ROCK FALLS, ILLINOIS.

BARREL-MAKING MACHINE.

SPECIFICATION forming part of Letters Patent No. 347,372, dated August 17, 1886.

Application filed February 15, 1886. Serial No. 191,914. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. PACKER, a citizen of the United States, residing at Rock Falls, in the county of Whiteside and State of Illinois, have invented certain new and useful Improvements in Barrel-Making 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 appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

My invention has reference to barrel-making machines, and pertains especially to certain improvements in the matter of gaging or determining the quantity of staves to enter into each barrel or cask.

Heretofore in determining the number or extent of staves with which to construct a given cask a board was provided, and there was indicated thereon in some manner the circumference of such cask. The staves were laid side by side until their aggregate lateral width equaled the circumference of such cask as indicated on such board. As the truss-hoops are made with reference to certain sized casks, it was and is essential that the aggregate width of the staves, as above, shall precisely equal the circumference, previously determined, of the cask, no more nor no less. This made the selection of the last stave a tedious affair. The problem was to select from a mass of staves of variant widths one having the exact width of the remaining interval. This was often impossible to find, and two or three previously-placed staves would be discarded and a new interval created. Again, this was light work, and generally allotted to boys by the piece. The delay and difficulty of finding the last stave was often a successful temptation to use a stave somewhat too narrow or too wide, which would result in a leaky or misshaped vessel. In my invention the size of the vessel is uniformly and accurately determined and attained by cutting or sawing, in the manner substantially as hereinafter described, the last stave longitudinally at and to the exact line which marks the circumference of the cask, and thus entirely obviates the de-

lay and trouble of seeking a stave to fit such last interval.

As my invention is designed to be attached to the machine for which Letters Patent of the United States were allowed me for improvements in barrel-making machines, on application No. 184,350, filed November 30, 1885, and as the construction can be varied to suit different circumstances, I do not deem it essential to show or describe the machine further than to exhibit the relation and operation of my invention.

In the drawings, Figure 1 is a plan view of a machine embodying my invention. Fig. 2 is a cross-section in the deflected line $x x$ of Fig. 1. Fig. 3 is a partial front elevation.

A is the general frame or table of the machine, designed to afford room for the set-up mechanism shown in my aforesaid patent.

B is a gage-board provided at its outer end with the adjustable cross-gage B', and thus rendered capable of holding staves for variant-sized casks. The staves C are laid on the board B, beginning next the gage-board B', and at the point on the frame A distant, from the inner face of the gage B', the circumference of the cask to be made, the saw kerf or path D' is formed in the board B or frame A as long or longer than the longest stave, and with the same angle as the gage B'.

In the kerf D' a small circular saw, D, is seated on a shaft, E, the latter being journaled on the upper ends of the vertical arms F F. These latter arms are pivoted at their lower ends on a horizontal pin or shaft, G. The saw D is thus adapted to be oscillated in the kerf D'. The lower ends of the arms F are pivoted, as aforesaid, below the middle of the kerf D', so that while the saw D projects the farthest through the table A at the center of such kerf it yet extends far enough above the table A to cut or rip the last stave C on the line of such kerf.

The saw D is driven by a belt, H, from the line or counter-shaft pulley I, which belt H is carried under the pulley K, seated on the shaft G, and under the pulley L, seated on the arm F, and rotates the shaft E, which carries the saw D, by means of a pulley, M, seated on the latter shaft. A weight, N, hung behind the saw-frame to the upper end of the arm F, and

suitably attached thereto by a cord, N', passing over the pulley N², serves to hold the saw D back out of the way when not in use. A pedal or lever, O, attached to one of the arms F, serves as a means of drawing the saw D through the kerf D'; but the saw may be drawn forward by a handle attached to the arms F, or in any other suitable way. I consider the pedal O preferable, as its use leaves the hands of the operator free to hold and handle the staves C.

It is obvious that the saw D might remain stationary, and the board B, moving in ways, carry the staves to the saw D. As the bevel on the sides of the staves C must be retained, a ledge, a, is formed on the outside of the kerf D', so as to hold the outer edge of the last stave C slightly upward, that the saw-cut may be oblique to the sides of such staves, and preserve such bevel. The kerf D' may be in the board B, or at the end of the latter.

The advantages of my invention are that the gage B' being set on the board B a distance from the kerf D' equal to the circumference of the cask desired, staves C are filled against such gage, and when the last stave extends beyond the kerf D' the circumference of the cask can be obtained at once by moving the saw through the last stave C. If the piece cut off is of any width, it can be utilized as a stave in the next cask. Thus not only are the time, trouble, and uncertainty of finding a stave of the required width to fill the last space avoided, but the precise size wanted is obtained.

Those familiar with the worry and loss of time heretofore experienced in seeking for the last stave can appreciate the importance and value of my invention. The gage B' is required to be so adjusted to the board B that

its inner face shall converge, in common with the edges of the staves, to the same point beyond the upper margin of the board B. The last stave on the board B is presented to the saw D in such angle that the path of such saw shall also be a line pointing to this common center. The degree of convergence varies with the diameter and flare of different casks.

What I claim as my invention, and desire to secure by Letters Patent of the United States, is—

1. In a barrel-making machine, a curved guideway having an adjustable gage at one extremity, which way receives and supports a series of staves in such position with respect to the line of movement of a traveling saw that the last stave and the blade of the saw shall have the same convergence as the edges of the staves, in combination with such traveling saw, whereby the series of staves may be exactly gaged for a required size of barrel, substantially as set forth.

2. In a barrel-making machine, a curved guideway having an adjustable gage at one extremity, which way receives and supports a series of staves in such position with respect to the cut of a saw that the last stave and the blade of the saw shall have the same convergence as the edges of the staves, in combination with such saw, whereby the series of staves may be exactly gaged for a required size of barrel, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE W. PACKER.

Witnesses:

WALTER N. HASKELL,
W. W. KNOWLES.