

No. 741,109.

PATENTED OCT. 13, 1903.

S. J. CAROLAND.
HOOP COILING MACHINE.
APPLICATION FILED APR. 13, 1903.

NO MODEL.

Fig. 1.

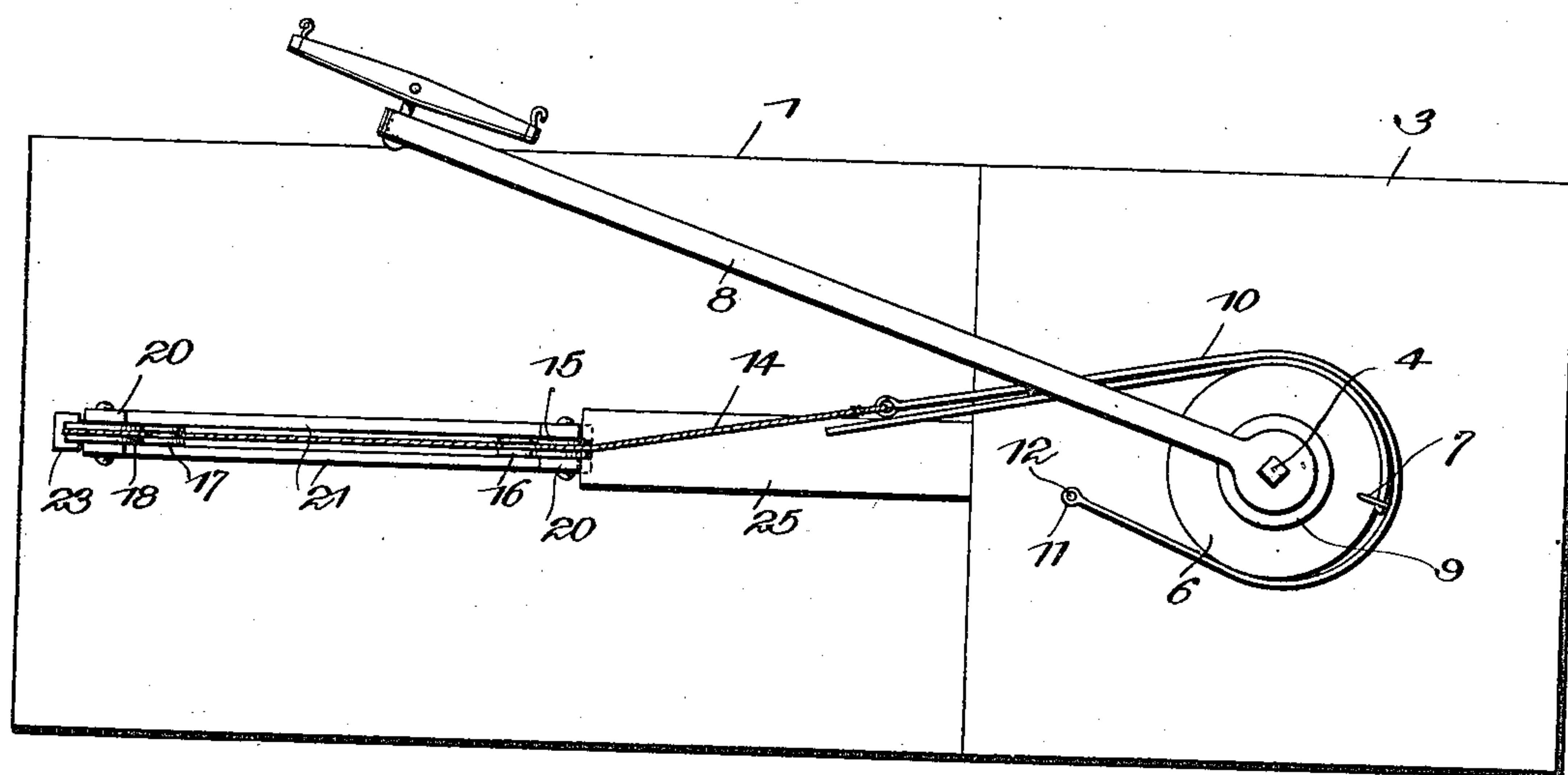
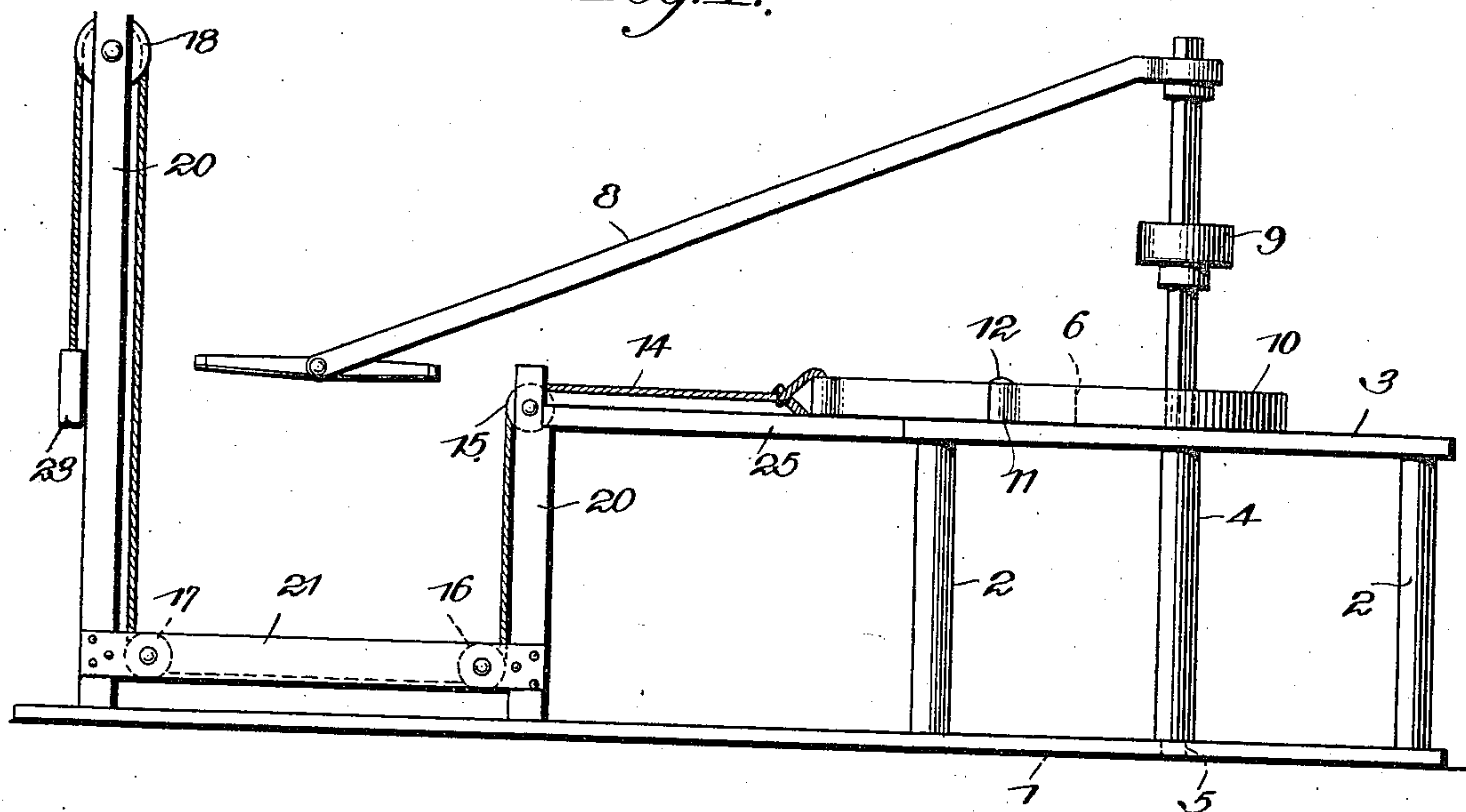


Fig. 2.

Witnesses
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UNITED STATES PATENT OFFICE.

STONEWALL J. CAROLAND, OF CLARKSVILLE, TENNESSEE.

HOOP-COILING MACHINE.

SPECIFICATION forming part of Letters Patent No. 741,109, dated October 13, 1903.

Application filed April 13, 1903. Serial No. 152,364. (No model.)

To all whom it may concern:

Be it known that I, STONEWALL J. CAROLAND, a citizen of the United States, residing at Clarksville, in the county of Montgomery and State of Tennessee, have invented a new and useful Hoop-Coiling Machine, of which the following is a specification.

This invention relates to hoop-coiling machines, and more especially to machines for coiling hoops for hogsheads which are ordinarily made from split poles of suitable length and which are bent to the proper degree of curvature.

The object of the invention is to provide a machine of simple construction and thoroughly efficient action by means of which hoops for hogsheads may be rapidly bent into the proper form and assembled in coils containing a plurality of hoops, in which coils the hoops are secured and handled collectively.

With the object above stated and others in view, which will appear when the invention is better understood, the same consists in the combination of parts of a hoop-coiling machine, hereinafter fully described, illustrated in the accompanying drawings, forming a part of this specification, and having the novel features thereof pointed out in the appended claim.

In the drawings, Figure 1 is a view in side elevation of the machine. Fig. 2 is a plan view.

In the drawings corresponding parts are designated by the same characters of reference throughout both views.

Referring to the drawings by reference characters, 1 designates a base, upon which are supported in upright position four posts 2 2 2 2, on the upper ends of which is firmly fastened a table 3, upon which the coiling operation is carried on. If desired, however, the posts 2 may be driven into the ground instead of being secured upon a base, as shown. Extending downward through the center of the table 3 is a shaft 4, the lower end of which rests in a socket 5, provided in the base 1, in which the shaft is rotatable. The upper end of the shaft 4, which projects above table 3, is squared, preferably, and has securely fastened thereto a drum 6, upon which the hoops are coiled. The drum 6 has mounted there-

on near its periphery a hook 7, the free end of which is bent downward, so as to lie parallel to the curved surface of the drum, and serves a purpose which will presently be explained.

To the upper end of the shaft 4 is attached a sweep 8, which is preferably inclined downwardly at its outer end and forms means for rotating the drum by use of a horse or other draft-animal. Below the sweep 8 is provided a pulley 9, over which a belt from any suitable motor may be run when desired to drive the machine with mechanical power.

In order to hold the hoops in contact with the outer surface of the drum, there is provided a strip of strap-iron 10, one end of which is formed into an eye 11, which encircles a pin 12, secured upon the upper surface of table 3, as shown. The strip 10 passes from its point of attachment to the pin 12 around the drum and is bent back upon itself, as shown, the free end being connected with a cord 14, which passes over rolls 15 and 18, provided at the top of posts 20, and under rolls 16 and 17, mounted between the cross-bars 21. At the end of cord 14 is provided a weight 23 of any suitable magnitude.

Between the table 3 and the post 20 which lies nearest thereto is placed a rest 25, upon which the hoops are supported as they are fed into the machine for coiling.

The operation of the machine is as follows: A hoop being placed upon the table 3 and rest 25, the end thereof entering the machine is passed under the hook 7, and the drum is caused to rotate, carrying with it the hoop, which is held in contact with the drum by means of the strip of iron 10, the degree of pressure exerted upon the hoop by the strip of iron being dependent upon the size of the weight 24, by means of which the strip 10 is kept under tension. As the hoop passes into the machine and is wound on the drum another hoop is placed in position for introduction into the machine, and just before the first hoop is completely wound on the drum the forward end of the second hoop is introduced between the rear end of the first hoop and the periphery of the drum, and the continued motion of the drum causes the second hoop to be wound on the drum outside of the first hoop. As the second hoop is wound upon the drum

a third hoop is placed in readiness, and just before the rear end of the second hoop is brought into contact with the drum the forward end of the third hoop is introduced between the rear end of the second hoop and the drum and the winding operation continued. In this way any number of hoops desired may be wound upon the drum one outside of another, forming a coil in which the separate hoops may be conveniently secured by any desired means and be kept from uncoiling as long as may be desired. Hoops coiled in this way do not have to be used at once, as they are given the form which is necessary to make them fit approximately to the outer surface of the hogsheads upon which they are to be used, and the stiffening of the hoop by seasoning of the material of which it is made does not in any way interfere with the usefulness of the article.

It will be noted that the machine as shown with all the operating parts thereof mounted upon a suitable base is readily portable from place to place; but when portability is not a desideratum the base may be dispensed with, the posts 2 and 20 may be driven directly into the ground, and the shaft 4 may have a socket provided for it in another post driven into the ground beneath the lower end of the shaft. The posts 20, with cross-bars 22, are provided in order to adapt the machine for operation by horse-power, the cord 14 being passed downward under the rolls supported between the cross-bars 21 in order to remove it from the horse's path, the cross-bars 21 being placed low enough for the horse to step over them without pausing in his walk. When the machine is constructed for opera-

tion by means of an engine or other mechanical motor, the outer post 20, the cross-bars 21, and all but one of the rolls over which the cord 14 passes may be done away with, the weight being then suspended alongside of the post 20 which lies nearest to the table upon which the hoops are coiled.

Having thus described the construction and operation of my invention, what I claim as new, and desire to secure by Letters Patent, is—

The combination in a machine of the class described, of a table, a vertical shaft rotatably mounted in the center of the table, a drum fixed upon said shaft above the table, a curved flexible hoop-guide encircling said drum and having one end secured to the table, a hoop-support extending laterally from the table, a standard upon which the end of said hoop-support rests, a roll at the top of said standard, a second standard at a short distance from the first standard, cross-bars connecting said standards near the bottom, rolls between said cross-bars, a roll at the top of the second standard, a cord having one end attached to the flexible guide passing over the rolls on said standards and under the rolls between said cross-bars, a weight attached to the other end of said cord, and a sweep for attachment of a draft-animal rigidly attached to the upper end of the shaft.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

STONEWALL J. CAROLAND.

Witnesses:

W. J. SMITH,
F. G. GILBERT.