J. ROLSTON.

LOCK FORMING DEVICE FOR WIRE HOOPS.

APPLICATION FILED SEPT. 22, 1909.

954,886. Patented Apr. 12, 1910.

2 SHEETS—SHEET 1.

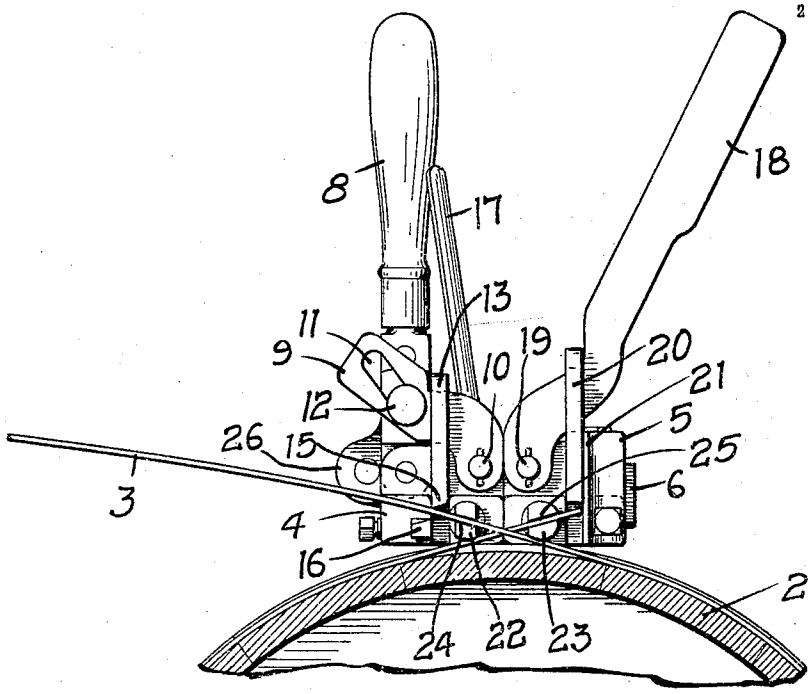

Fig 1.

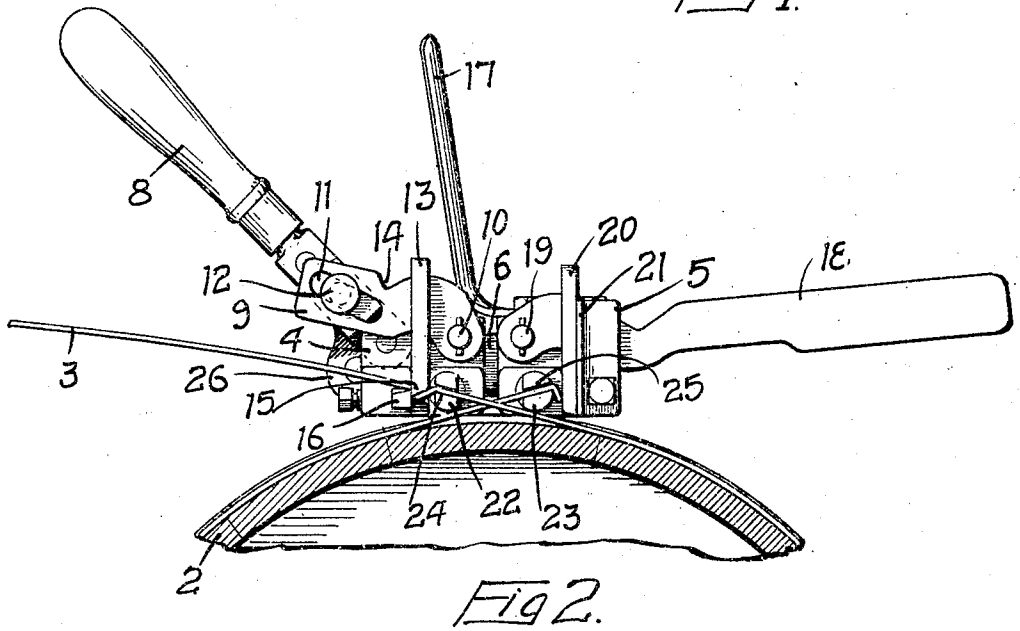

Fig 2.

WITNESSES

J. A. Byington.

INVENTOR

JOHN ROLSTON

BY Paul & Paul

ATTORNEYS

J. ROLSTON.

LOCK FORMING DEVICE FOR WIRE HOOPS.

APPLICATION FILED SEPT. 22, 1909.

954,886. Patented Apr. 12, 1910.

2 SHEETS—SHEET 2.

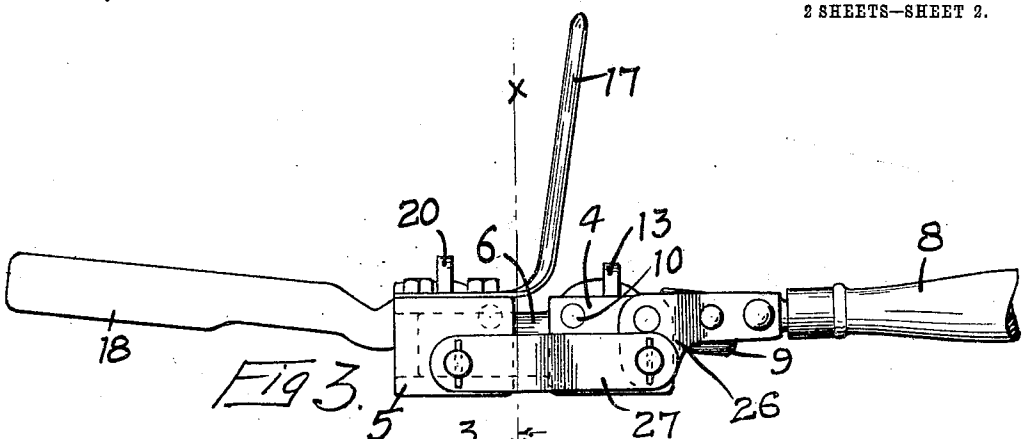

Fig 3.

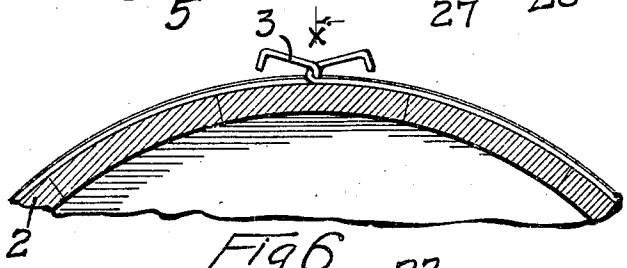

Fig 6.

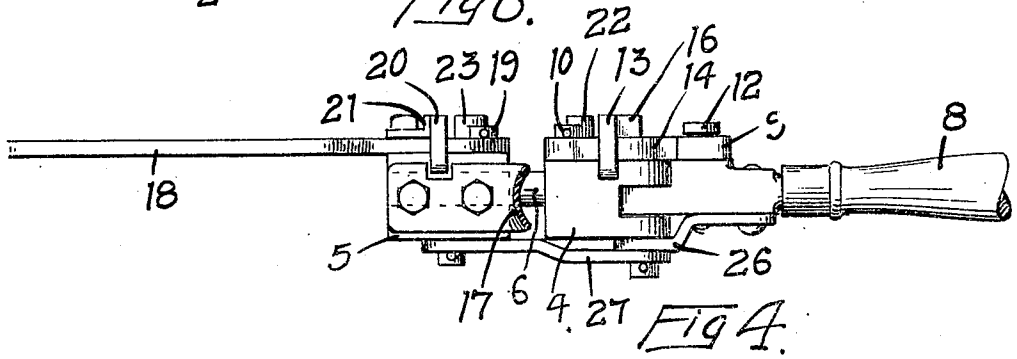

Fig 4.

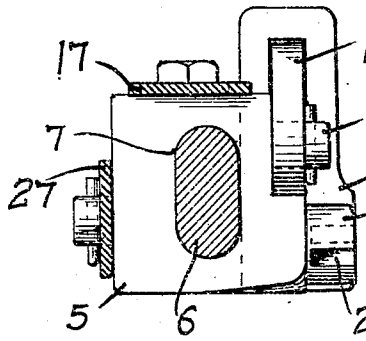

Fig 5. X-X

WITNESSES

INVENTOR
JOHN ROLSTON
BY Paul & Paul
ATTORNEYS

UNITED STATES PATENT OFFICE.

JOHN ROLSTON, OF MINNEAPOLIS, MINNESOTA, ASSIGNOR TO EDWARD F. BOUSFIELD, OF MINNEAPOLIS, MINNESOTA.

LOCK-FORMING DEVICE FOR WIRE HOOPS.

954,886. Specification of Letters Patent. Patented Apr. 12, 1910.

Application filed September 22, 1909. Serial No. 519,040.

To all whom it may concern:

Be it known that I, JOHN ROLSTON, of Minneapolis, Hennepin county, Minnesota, have invented certain new and useful Improvements in Lock-Forming Devices for Wire Hoops, of which the following is a specification.

My invention relates to tools for tightening and locking wire hoops on pails or similar articles and the object of the invention is to provide a simple, durable tool by means of which the tightening and locking operation can be quickly and easily performed.

The invention consists generally in various constructions and combinations, all as hereinafter described and pointed out in the claims.

In the accompanying drawings forming a part of this specification, Figure 1 is a view illustrating the tool in use preparatory to bending ends of the hoop. Fig. 2 is a similar view illustrating the severing portion and the manner of bending the hoop ends, Fig. 3 is a side view of the tool, illustrating its open position, Fig. 4 is a top view of the same, Fig. 5 is a sectional view of the line X—X of Fig. 3, Fig. 6 illustrates the twisted interlocked ends of the hoop showing the bent portions which are driven into the stave.

In the drawing, 2 represents a portion of a pail, 3 the wire from which the hoop is formed. The tool consists of blocks 4 and 5, the former having a shank 6 which is slidable within a socket 7 in the latter. A lever 8 is pivoted on the block 4 on one side thereof and an arm 9 is pivoted at 10 on the block 4 and has an inclined slot 11 therein, in which a pin 12, mounted on the lever 8, is adapted to slide. A severing knife 13 is carried by the arm 9 and is adapted to drop into a recess 14 in the upper edge of said arm when it is elevated. The severing knife has a beveled lower end 15, one edge of which cooperates with a fixed cutter 16 on the block 4, the wire from the reel being supported on the cutter 16 and severed between it and the descending knife 13. A hand grip 17 is mounted on the block 4 in position to be grasped by the operator when the lever 8 is raised to a vertical position. By means of this hand grip the operator can hold the tool stationary during the operation of bending one end of the hoop. The block 5 is provided with a lever 18 pivoted at 19 and carrying a plate 20 that is adapted to slide vertically on a flange 21, which projects from one side of the block 5. The blocks are provided with stationary jaws 22 and 23, having inclined slots 24 and 25 therein, which are adapted to receive the wire hoop, the flange 21 projecting into the path of the end of the hoop and acting as a stop therefor. The stationary jaws are spaced suitably from the flange 21 and from the cutter 16 and in these spaces the severing knife 13 and the plate 20 are vertically movable when the levers are operated. The severing knife will first cut the wire and its beveled end bearing on the hoop will force down the extreme end of the hoop until it is at right angles to the main portion thereof. A corresponding bend will be formed at the other end of the hoop by the descent of the plate 20.

The lever 8 has a lug 26 thereon, pivotally connected by a link 27 with the block 5 and the eccentric connection of the lever 8 with the opposite block will cause a separation of the blocks when the said lever is swung down to a horizontal position. The separation of the blocks takes place when the initial bends have been formed in the ends of the hoop after the wire is severed and the effect of said separation is to draw the wire snugly into the annular groove in the surface of the pail or other article to be hooped. When the ends of the hoop are bent and the wire placed under tension, the tool is then turned a half revolution, twisting the crossed ends of the wire upon one another, as shown in Fig. 6. The hoop will then be locked securely on the pail and when the tool is removed the bent ends may be driven into the stave, thereby completing the hooping operation and presenting a neat, finished appearance to the pail or other package. It will be noted in this case that the jaws in which the wire is inserted are stationary and the wire is held therein by bending its ends and tension is obtained on the hoop by the separation of the blocks in which the jaws are mounted.

I claim as my invention:

1. A device of the class described, comprising relatively movable blocks having slots therein adapted to receive a wire hoop,

the ends of the hoop projecting beyond said slots, and means for bending the projecting ends of the hoop and separating said blocks to put the hoop under tension, substantially as described.

2. A device of the class described comprising two blocks, one having a shank slidable within a socket in the other, stationary jaws mounted on said blocks and having slots therein to receive a wire, the wire projecting through said slots and beyond said jaws and means for bending the projecting ends of the wire and separating said jaws to put the wire under tension.

3. A device of the class described comprising blocks, stationary jaws mounted therein and having slots adapted to receive a wire hoop, the wire extending through said slots beyond said jaws, means mounted on said jaws for severing the wire and bending the extended ends of the hoop to lock it in said jaws, and levers mounted on said blocks and arranged to operate said bending and severing means, substantially as described.

4. A device of the class described, comprising relatively movable blocks, jaws thereon having slots to receive a wire hoop, the ends of the hoop projecting beyond said slots, means arranged to sever the wire and to bend the ends of the hoop, levers operatively connected with said means, and means provided in connection with one of said levers for separating said blocks when said lever is operated, for the purpose specified.

5. A device of the class described, comprising blocks, jaws mounted thereon and having slots to receive a wire hoop, levers pivoted on said blocks, a stationary cutter carried by one of said blocks, a severing knife operated between said cutter and the stationary jaw of that block, and a pivoted arm supporting said severing knife and having a sliding connection with one of said levers.

6. A device of the class described, comprising blocks, one having a shank to enter a socket in the other and slide therein, stationary jaws carried by said blocks and having slots to receive a wire hoop, wire severing and bending means arranged to engage and bend the ends of the hoop against the surfaces of said jaws, and levers pivoted on said blocks respectively and operatively connected with said severing and bending means, the lever of one block having an eccentric connection with the other block, whereby at a predetermined point in the movement of the lever said blocks will be separated and the wire put under tension.

7. A device of the class described, comprising relatively movable blocks having slotted jaws adapted to receive the ends of a hoop, means for bending the ends of the hoop in said jaws, levers pivoted on said blocks respectively, the lever of one block having an eccentric connection with the other block, whereby at a predetermined point in the movement of said lever said blocks will be separated and the hoop put under tension.

8. A device of the class described, comprising blocks, slotted jaws carried thereby and adapted to receive a wire hoop, means for bending the ends of the wire, and a lever mounted on one block and having an eccentric connection with the other block, whereby at a predetermined point in the movement of the lever said blocks will be separated to put the hoop under tension.

In witness whereof, I have hereunto set my hand this 14th day of September 1909.

JOHN ROLSTON.

Witnesses:

RICHARD PAUL,

G. E. SORENSEN.