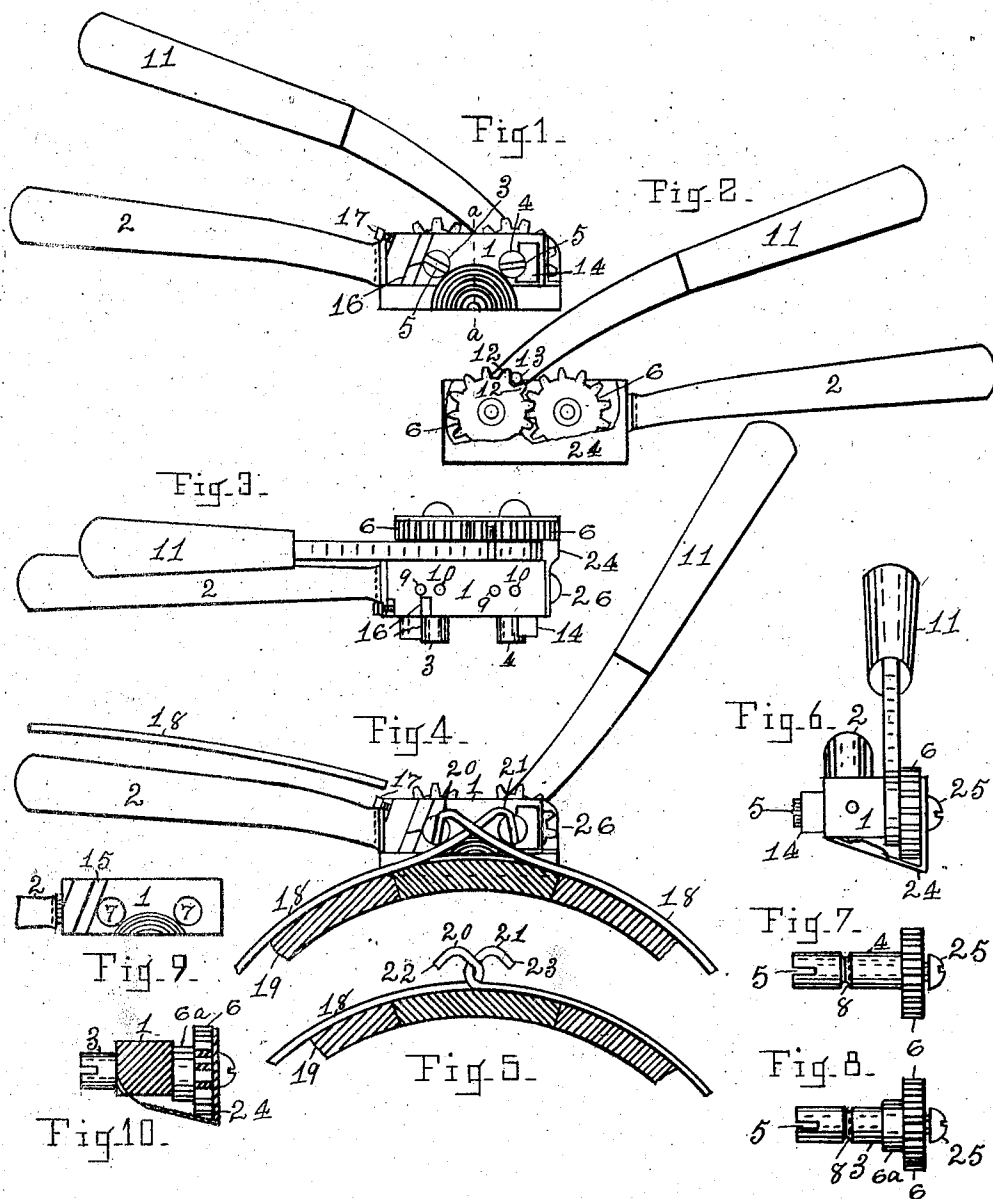


No. 823,556.

PATENTED JUNE 19, 1906.

H. S. SMITH.
WIRE HOOP LOCK FORMING DEVICE.

APPLICATION FILED JAN. 2, 1906.



WITNESSES:

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HENRY S. SMITH, OF NEENAH, WISCONSIN.

WIRE-HOOP-LOCK-FORMING DEVICE.

No. 823,556.

Specification of Letters Patent.

Patented June 19, 1906.

Application filed January 2, 1906. Serial No. 294,134.

To all whom it may concern:

Be it known that I, HENRY S. SMITH, a citizen of the United States, residing at Neenah, in the county of Winnebago and State of Wisconsin, have invented a new and useful Improvement in a Wire-Hoop-Lock-Forming Device, of which the following is a specification.

My invention relates to a device or tool for cutting off a wire from a coil of wire when said wire is placed around a pail, bucket, tub, or other article to which it is desired to secure said hoop, forming a bend near each end of the piece cut off, twisting said two ends around each other, and thereby drawing said wire tightly around the article upon which the hoop is being placed and at the same time leaving the extreme ends of the bends in each end of the wire hoop in a suitable position for being driven into the wood of the article being hooped, the construction of the device being shown in the accompanying drawings, in which—

Figure 1 is a front edge view of the tool-stock with the handles thereto in the position they occupy when the tool is to be placed upon a pail or other article of turned ware that is to be hooped. Fig. 2 is a rear edge view of the tool with its handles in the same position as in Fig. 1, its housing for covering its cog-wheels being broken away for showing said wheels. Fig. 3 is a top view of the tool with its handles as in Figs. 1 and 2. Fig. 4 is a front edge view of the tool applied upon the outside of a section of a round vessel, the wire for the hoop being around the vessel and its ends cut off from the coil and engaged by the tool and a bend formed near each end of the wire. Fig. 5 shows a section of a round vessel having the two ends of the wire as in Fig. 4 and twisted around each other with their extreme ends in position for being driven with a hammer into the stave of the vessel, the tool having been removed. Fig. 6 is an end view of the right-hand end of the tool, Figs. 1 and 3. Fig. 7 is an elevation of one of the spindles of the tool with its cog-wheel thereon. Fig. 8 is an elevation of the other spindle and cog-wheel. Fig. 9 is a front edge view of the tool-stock. Fig. 10 is a vertical section through the tool-stock and its housing upon the line *a a* of Fig. 1.

Similar numerals indicate like parts in all of the views.

1 indicates the stock of the tool; 2, a han-

dle integral with or firmly secured thereto. 3 and 4 are nearly similar spindles, each one having an open-ended slot 5 across one end and a cog-wheel 6 integral with or firmly secured upon the other end, the spindle 60 Fig. 8 having a collar or enlargement 6^a for holding the spindle from entering too far into the tool-stock, said stock having two bores 7 of a like diameter for receiving the spindles. The spindles may be held from endwise movement in any convenient manner. In the present case it is by forming a half-round groove 8 in the spindles and inserting a round pin 9 through the stock, so as to engage with the grooves. 10 represents oil-holes in the top 70 side of the tool-stock for lubricating the spindles. The spindles being inserted in their respective bores in the tool-stock and secured therein with the pins 9 their cogs will engage, so that the two spindles will simultaneously 75 turn either toward or from each other. For turning said spindles a lever-handle 11 is mounted upon one of the spindles and firmly held from turning thereon. In the present case it is by inserting in the handle and between two of the cogs 12 a pin 13. Each 80 spindle has a slot 5 of the proper width for receiving a wire of the gage being used. At the right of the right-hand spindle, Fig. 1, a stop 14 is fixed for gaging the length of wire 85 which can enter the slot in the spindle. At the left of the left-hand spindle into a channel 15 (see Fig. 9) a shear-knife 16 is inserted, which may be held therein in any suitable manner, as by the set-screw 17. This shear 90 is in position for causing the wire 18 after it has been carried from the coil of wire at the left of the operator (the coil not being shown, only a piece 18) through the slot 5 in the left-hand spindle, around the arti- 95 cle to be hooped, and its free end inserted into the slot in the right-hand spindle to be cut off from the wire of the coil by the operator in turning the lever-handle 11 from its position in Fig. 1 to its position in Fig. 4 100 substantially a quarter-turn, said turning of the handle also making the bends 20 and 21. The tool is then turned one-half round in a horizontal plane—that is, the operator standing in front of the tool swings the handle 2 105 from him around to the right a half-circle and twists the two ends of the hoop inside of the bends around each other, as they are in Fig. 5. The tool is then to be taken off of the hoop ends, after which the ends 22 and 23 110

are to be driven with a hammer into the wood of the article being hooped, the bends 20 and 21 flush with outer circumference of the hoop.

Upon the lower side of the tool-stock at its ends and rear is a housing 24 for protecting the article being hooped from being defaced by the cogs upon the rear ends of the spindles. The housing is secured to the tool-stock by means of screws 25, which are inserted into the rear end of the spindles and by means of the handle 2, and also, if necessary, by a screw 26 at the right-hand end of the tool-stock. Upon the front of the tool-stock and between its spindles it is cut away, as is shown in Figs. 1, 9, and 10, for providing room for the twisting of the two ends of the hoop around each other.

In applying a wire hoop to a pail, tub, or other article of turned ware a groove a little larger than half of the diameter of the wire to be used is formed around said article at the places in which the hoop is required, into which the wire is drawn in placing it around said article, so that the wire can be drawn tightly around said article by the operator before it is cut to the proper length.

Having described my invention, what I claim, and desire to secure by Letters Patent, is—

30 1. In a device for forming a lock upon a wire hoop, a tool-stock, a handle fixed to one end thereof, two spindles geared together for a simultaneous movement toward and from each other, mounted for revolution transversely of, and extending through and beyond said stock, means for preventing their endwise movement, an open-ended slot across each of said extending ends adapted for receiving a wire, a stop arranged outside and adjoining one of said extending ends, a shear-knife arranged outside of and adjoining the other extending end, a lever-handle upon one of said spindles for turning the spindles a part of a revolution and thereby severing the wire from a coil of wire, making a substantially quarter-bend near each end of the severed wire and holding said ends in position for being twisted around each other, inside of said bends, by a half-turn of said tool in a horizontal plane and leaving the extreme ends of the wire of each bend in position for being driven into the wood of the article being hooped, substantially as described.

2. In a device for forming a lock upon a

wire hoop, a tool-stock, a suitable handle therefor, two spindles spaced apart, arranged transversely of said stock for a simultaneous movement toward and from each other, each spindle extending through and outside of said stock, means for preventing their endwise movement, an open-ended slot in each extending end adapted to receive a wire, a stop arranged outside of and adjoining one of said ends, a shear-knife arranged outside of and adjoining the other of said ends, a lever-handle arranged for turning the spindles a part of a revolution and thereby severing the length of wire necessary for a hoop from a coil of wire, making a substantially quarter-bend near each end of the severed wire and holding said bent ends in position for being twisted around each other at a point inside of said bends by a half-turn of said tool in a horizontal plane and leaving the extreme ends of the wire of each bend in position for being driven into the wood of the article being hooped, substantially as set forth.

3. In a device for forming a lock upon a wire hoop, a tool-stock, a suitable handle therefor, two spindles spaced apart, arranged transversely of said stock for a simultaneous movement toward and from each other, each spindle extending through and outside of said stock, means for preventing their endwise movement, an open-ended slot in each extending end adapted to receive a wire; a stop arranged outside of and adjoining one of said ends, a shear-knife arranged outside of and adjoining the other of said ends, a lever-handle arranged for turning the spindles a part of a revolution and thereby severing the length of wire necessary for a hoop from a coil of wire, making a substantially quarter-bend near each end of the severed wire and holding said bent ends in position for being twisted around each other at a point inside of said bends by a half-turn of said tool in a horizontal plane and leaving the extreme ends of the wire of each bend in position for being driven into the wood of the article being hooped, and a housing partially covering the cogs or other mechanism for preventing the defacement of the article being hooped, substantially as described.

HENRY S. SMITH

Witnesses:

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