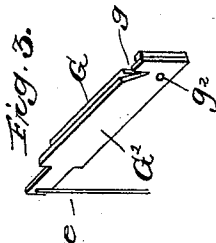
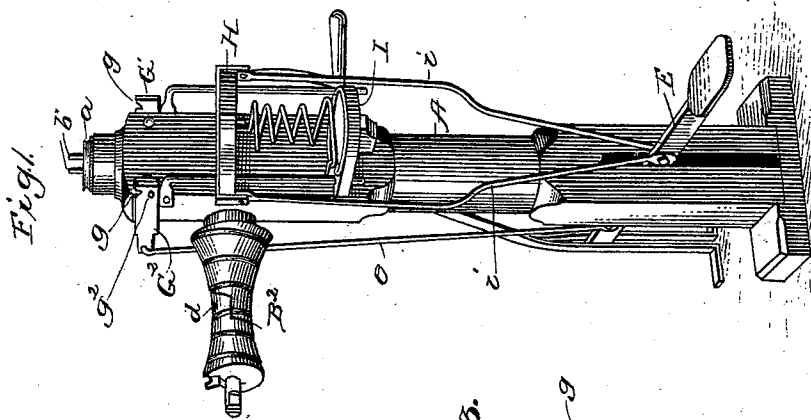
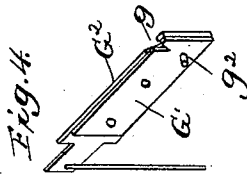
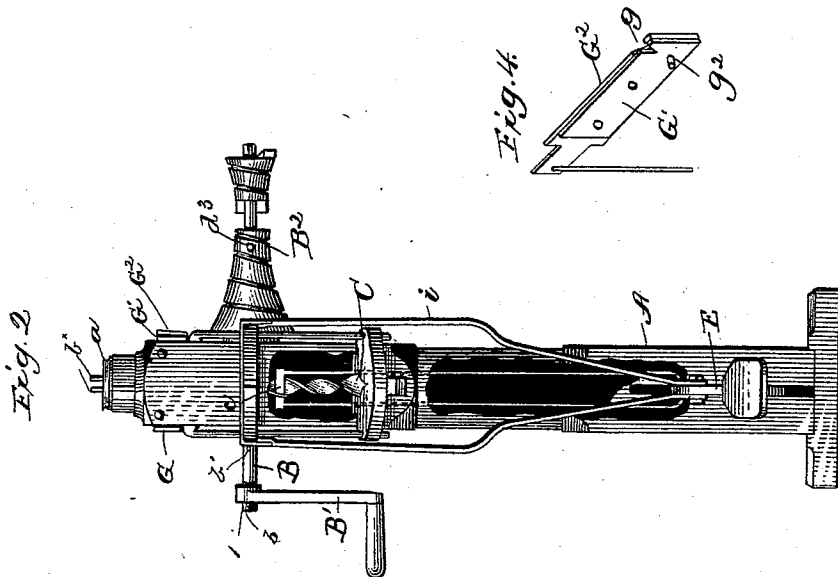


(No Model.)

G. W. CROWDER.
WIRE COILING MACHINE.

No. 527,144.

Patented Oct. 9, 1894.



Witnesses:

J. M. Crowder Jr.
J. T. Keale.

Inventor:
Geo. W. Crowder

By *A. H. Evans*
Attorneys.

UNITED STATES PATENT OFFICE.

GEORGE WASHINGTON CROWDER, OF GOLDTHWAITE, TEXAS.

WIRE-COILING MACHINE.

SPECIFICATION forming part of Letters Patent No. 527,144, dated October 9, 1894.

Application filed June 23, 1894. Serial No. 515,490. (No model.)

To all whom it may concern:

Be it known that I, GEORGE WASHINGTON CROWDER, a citizen of the United States, residing at Goldthwaite, in the county of Mills and State of Texas, have invented certain Improvements in Wire-Coiling Machines, of which the following specification contains a full, clear, and exact description, reference being had to the accompanying drawings, forming part thereof, and in which—

Figure 1 is a perspective of the machine arranged for a right-handed operator. Fig. 2 is a side elevation the machine arranged or adjusted for a left-handed operator; and Figs. 3 and 4 are details of the cutters.

The invention relates to that class of wire coiling machines shown in the patent to Wildermuth, No. 296,806, granted April 15, 1884.

The object of the invention is to render the patented machine capable of operation by left-handed as well as right-handed operators.

The invention consists of making the mandrel shaft reversible so that its crank may be brought to either side of the machine to receive at its other end the interchangeable oppositely grooved sectional mandrels, also in providing the upper end of the post at opposite sides with stationary cutter blades and a single movable cutter adapted to be shifted for operation with either one of the said fixed cutters.

A, is the vertical hollow post in which is mounted the twisted bit C, its operating nut c and connecting rods d, pivotally connected at their lower ends to the foot lever E, which extends through the lower slotted end of the post and is pivoted to a bracket exterior to the post. The upper end of the bit is provided with the grooved top plate a and pins b^x.

H, I, represent the former or spring compressor connected with the foot lever E, by rods i.

All of the above described parts are constructed and operate just as in the patent referred to, and a further description of them is deemed unnecessary.

B, is the mandrel shaft mounted in a transverse bearing in the post and squared at one end to receive the crank B'; a pin b being passed through the shaft at the outer side of the crank to hold it in place. A second pin

b' is passed through the same end of the shaft adjacent to the side of the post to prevent longitudinal movement of the shaft.

At the opposite side of the post the shaft is provided with the two-part mandrel B² through which and the shaft is passed a pin d³, the two pins b' and d³ thus holding the shaft against longitudinal movement in either direction. Two of these mandrels B² are provided and they are just alike except that their spiral grooves proceed in opposite directions, and these mandrels operate exactly like those shown in the patent cited, and the mandrel end of the shaft is also notched just as in said patent and in patent to Wildermuth, No. 245,683, granted August 16, 1881.

G, G', are the two stationary cutters secured to opposite sides of the upper end of the post and projecting beyond that side of the post on which the former H I, is placed; the upper edges of these projecting portions being provided with notches g.

G², is the movable cutter the removable pivot bolt g² of which passes through an aperture in one or the other of the fixed cutters just below their notches g, and the upper edge of the movable cutter is provided with a notch to register with the notches of the fixed cutter to which said movable cutter is pivoted. The free end of the movable cutter is connected with the foot lever E, by means of a rod e.

When the machine is adjusted as shown in Fig. 1, the crank will be operated by a right-handed operator whose left hand will manipulate the wire.

In order to adjust the machine for a left-handed operator, the pins b b' are removed as is also the crank. The conical mandrel will now be removed by withdrawing the pin d³ and the shaft B will be withdrawn to the left from its bearing in the post A, and inserted again therein with its ends reversed, or arranged oppositely to the position they occupy in Fig. 1. The crank and pins b b' are replaced and the other mandrel is applied to the shaft. The movable cutter will now be transferred from the left hand side of the post to the right hand side, and the machine will be ready for use as shown in Fig. 2 by a left-handed operator.

Having thus described my invention, what

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

1. In a wire coiling machine of the character described, the combination with a post
5 and its reversible mandrel shaft, of the oppositely grooved interchangeable mandrels, substantially as herein described.

2. In a wire coiling machine of the character described, the combination with a post
10 and its reversible mandrel shaft, removable crank, and pins *b b'*, of the oppositely grooved interchangeable mandrels, and a pin for removably securing them to the shaft, substantially as herein described.

3. In a wire coiling machine of the character described, the combination with a post,
15 its reversible mandrel shaft, and the oppositely grooved interchangeable mandrels, of the fixed cutters at opposite sides of the upper end of the post, and a movable cutter adapted for operation with either one of the

fixed cutters, and a foot lever connected with said movable cutter, substantially as herein described.

4. In a wire coiling machine of the character described, the combination with a post,
25 its reversible mandrel shaft, and the oppositely grooved interchangeable mandrels, of the fixed cutters at opposite sides of the upper ends of the post and having notched upper edges and pivot apertures below the
30 notches, the movable cutter having a notched upper edge, and a pivot to connect it removably with either one of the fixed cutters, a foot lever, and a connection between the foot
35 lever and the movable cutter, substantially as herein described.

GEORGE WASHINGTON CROWDER.

Witnesses:

I. G. ABNEY,
M. C. HUMPHRIES.