(No Model.)

O. PRESTON.

MACHINE FOR MAKING HOLLOW WIRE CABLE.

No. 475,889. Patented May 31, 1892.

Fig. 1.

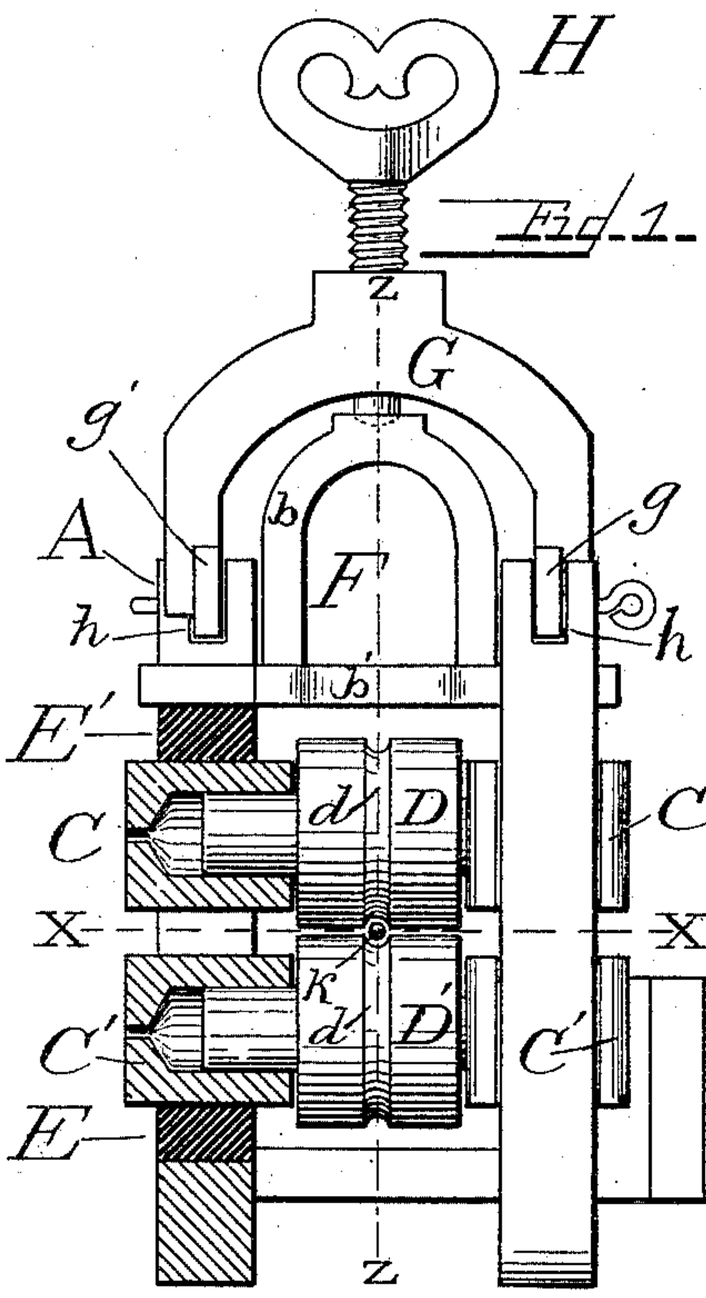

Fig. 2.

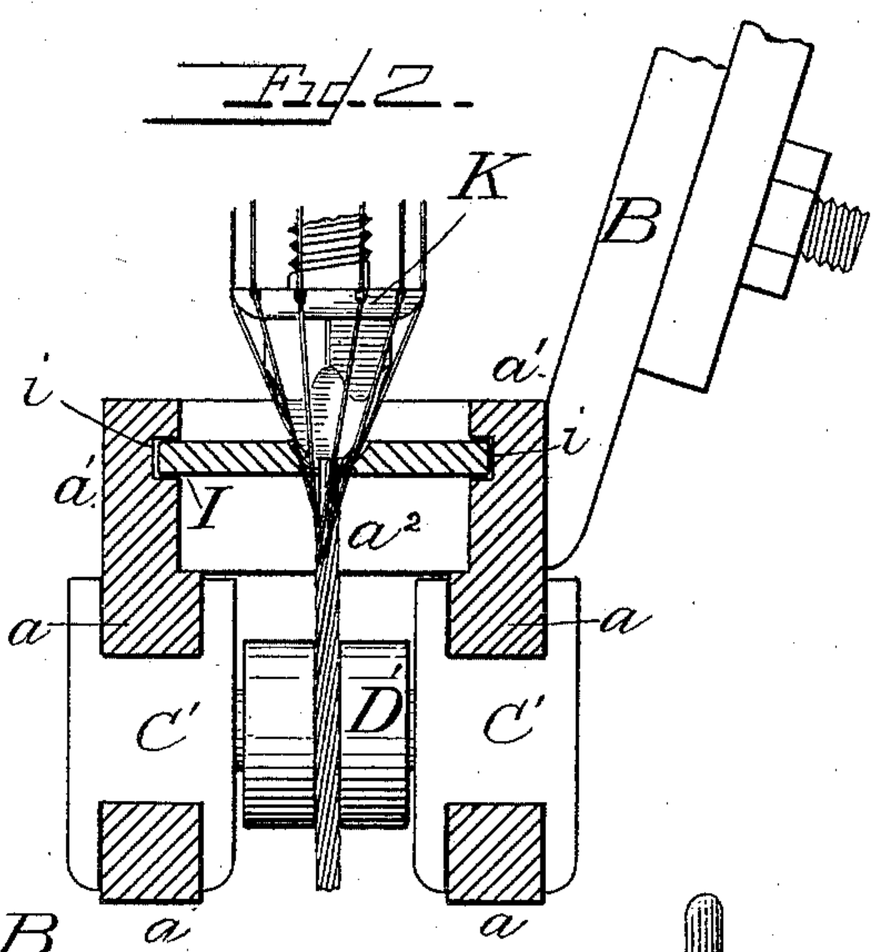

Fig. 3.

Fig. 4.

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MACHINE FOR MAKING HOLLOW WIRE CABLE.

SPECIFICATION forming part of Letters Patent No. 475,889, dated May 31, 1892.

Application filed September 12, 1891. Serial No. 405,456. (No model.)

To all whom it may concern:

Be it known that I, OTHNIEL PRESTON, a citizen of the United States, residing at Hornellsville, in the county of Steuben and State of New York, have invented certain new and useful Improvements in Machines for Making Hollow Wire Cable; 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.

My invention relates to improvements in machines for making hollow wire cable; and it consists, mainly, in an attachment adapted to receive the cable from the twisting-head as it is delivered therefrom upon the core or mandrel and to compress together the strands forming the shell into a close fabric around said mandrel or core, whereby its exterior surface is rendered smooth and compact and its interior opening regular throughout.

In the accompanying drawings, Figure 1 is a front elevation of my attachment partly in section. Fig. 2 is a horizontal section through the line $x\ x$ of Fig. 1. Fig. 3 represents a section of a completed hollow wire cable produced by my machine. Fig. 4 is a vertical section of my device through the line $z\ z$ of Fig. 1, showing the twister-head and mandrel entire.

Referring more particularly to the drawings, A represents a metallic frame composed of two U-shaped side pieces a, each having on one edge a forward extension a', both united at the bottom by a horizontal bar or plate a^2. To one of the vertical pieces a' is secured an arm B. This with the parts a, a', and a^2 are preferably cast in a single piece and compose the frame A.

C C′ are H-shaped journal-boxes adapted to fit and slide within the openings of the side pieces a, as shown in Fig. 2.

D D′ are a pair of grooved rollers journaled in the boxes C C′ within the frame.

E E′ are elastic cushions, one of which E is interposed between the journal-box C′ and the closed end of the side pieces a of the frame, and the other E′ bears against the outer side of journal-box C. Similar cushions may also be interposed between the journal-boxes, if desired.

F is an auxiliary frame consisting of the staple or U-shaped part b, having its points secured to a cross-bar b'. This auxiliary frame is placed within frame A above the rollers, the ends of the cross-bar b' resting upon the elastic cushions E′, and is held in place by another arch-shaped frame G, extending over it. To the feet or points of this arched piece G are secured transverse bars g g', adapted to fit and be secured within transverse slots h in the open ends of the side pieces a of the frame A.

H is a set-screw extending through a threaded opening at the apex of the arch-piece G and bearing upon the auxiliary frame F, by means of which a pressure may be exerted upon the elastic cushions E′, interposed between it and the rollers.

I is a plate loosely fitted in slots i of the frame-pieces a'. (Shown in Figs. 2 and 4.) This plate is provided with a central opening, through which projects the mandrel or core of the twister-head, around which the hollow cable is formed, and serves to concentrate and confine the strands around the core as they are delivered from the twister-head.

K is the twister-head, and k is its mandrel or core.

The rollers D D′ are provided with a central vertical groove d, which register with each other and together form a central opening between them. Into this opening extends the core or mandrel k, as shown in Figs. 1 and 4.

The strands forming my cable are made to pass over the twister-head and concentrated around the core or mandrel by the opening in the plate I, then carried into the groove between the rollers D D′, where they are tightly and closely compressed around the point of the mandrel by the rollers, whereby are formed even, smooth, and regular exterior and interior surfaces of the shell composing my cable, and a more compact and perfect fabric is formed than without the aid of this device.

The arm B is provided with slots $s\ s'$, whereby it is made adjustable in its attachment to a cable-twisting machine. It will also be observed that by reason of the elastic cushions E E′ and the set-screw H the rollers are automatically and mechanically adjustable, and any desired amount of pressure may be exerted upon the exterior surface of the cable as it is delivered from the twister-head.

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

1. In a hollow-wire-cable machine, the combination, with the revolving twister-head and its projecting core, upon which the tubular twist is formed, of the adjustable grooved rollers adapted to receive the completed cable and the core within the groove between the rollers, constructed substantially as and for the purpose specified.

2. The combination, with the frame carrying the adjustable rollers having the circumferential grooves, of the revolving twister-head provided with the core or mandrel upon which the completed cable is formed, said core projecting within the groove between the rollers, substantially as described.

3. The combination of the twister-head adapted to revolve and its core forming part of said twister-head with the frame A, having grooved rollers mounted therein designed to receive the tubular cable and the core, and the perforated concentrating or guide plate I, arranged substantially as and for the purpose described.

4. In a hollow-wire-cable machine, the combination, with the revolving twister-head and its core, upon which the hollow twisted cable is formed, of the frame A, carrying the grooved adjustably-arranged rollers, the perforated concentrating guide-plate I, and the adjustable arm B, constructed substantially as and for the purpose described.

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

OTHNIEL PRESTON.

Witnesses:

J. E. B. SANTEE,

CHARLES CADOGAN.