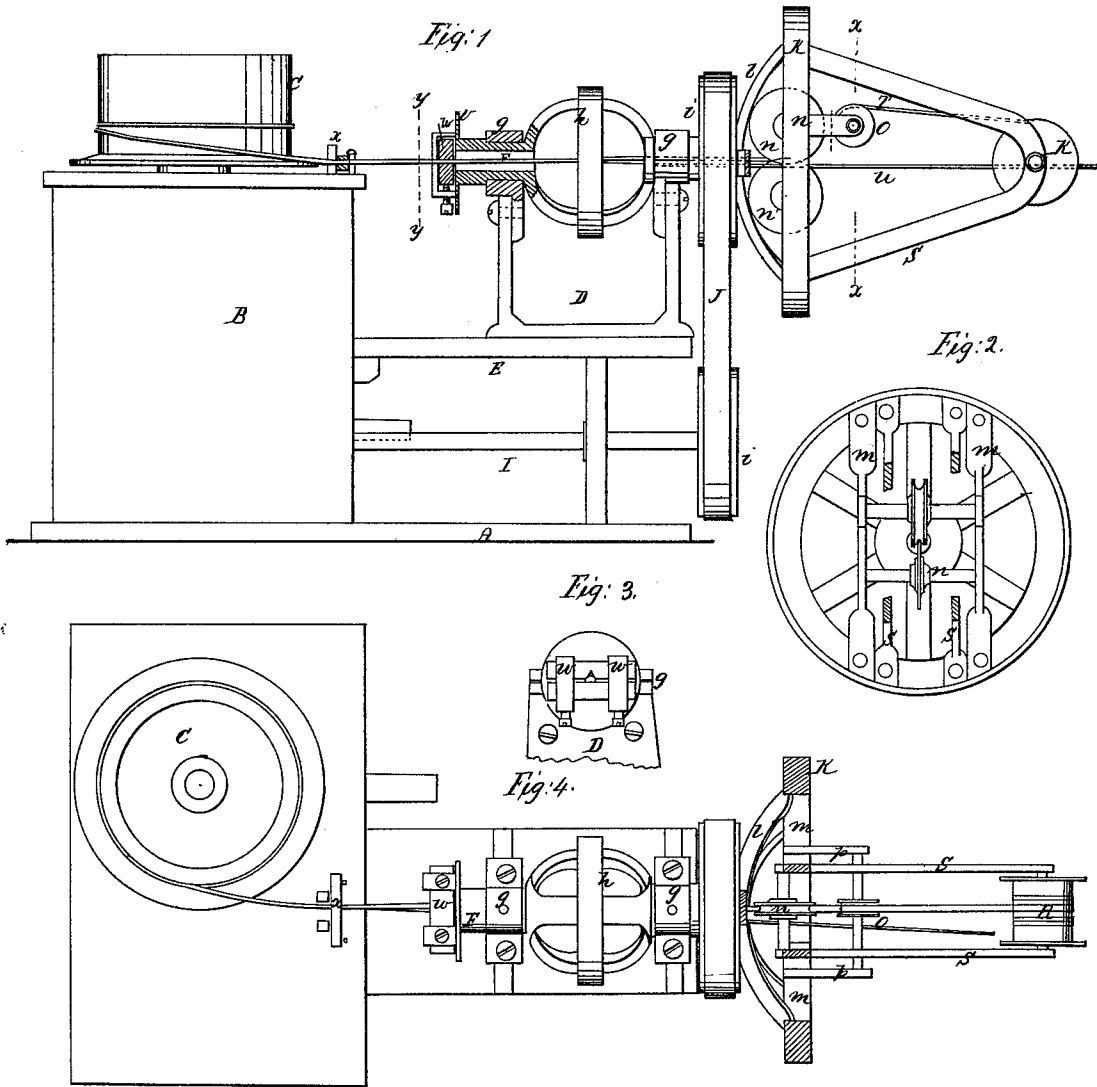


H. Cary.

Mach. for Making Compound Telegraph Wire.

N^o 91,417.

Patented Jun. 15, 1869.



Witnesses;
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ALANSON CARY, OF NEW YORK, N. Y., ASSIGNOR TO THE AMERICAN COMPOUND TELEGRAPH-WIRE COMPANY, OF SAME PLACE.

Letters Patent No. 91,417, dated June 15, 1869.

IMPROVED MACHINE FOR MAKING COMPOUND TELEGRAPH-WIRE.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, ALANSON CARY, of the city, county, and State of New York, have invented a new and improved Machine for Manufacturing Compound Telegraph and other Wire; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming a part of this specification.

This invention relates to a machine for covering or sheathing steel, or other wire, with copper, or other material, or for manufacturing or drawing compound wire; and

It consists in so constructing and arranging the parts of the machine, and operating the same, that steel or other wire is covered or sheathed with copper, or other material, in the manner hereinafter described.

Figure 1 is a vertical longitudinal elevation of the machine, partly in section.

Figure 2 is a vertical cross-section through the line *x x* of fig. 1.

Figure 3 is a sectional view of fig. 1, looking from the line *y y*.

Figure 4 is a top or plan view of the machine.

Similar letters of reference indicate corresponding parts.

A is the bed-plate of the machine.

The gearing which conveys motion from the engine or other power is contained in the space marked B.

O is the ordinary drum or "block" of the common wire-drawing machine.

D is a stand resembling an ordinary lathe-head, which is supported upon an elevated plate, E.

This stand D supports a hollow shaft, F, in boxes, the journals being covered by caps in the usual manner, as seen at *g g*.

h is a part of the hollow shaft F, and is made open, as seen, for the purpose of allowing the sheathing, in connection with the wire, as it is drawn through the shaft, to be seen or inspected.

I represents a shaft, from which motion is imparted to the shaft F by means of the belt J and pulleys *i i*.

K is a hand-wheel on the shaft F, having curved arms *l*, by which the rim of the wheel is made to overhang, as seen in the drawing.

Within the rim, and rigidly attached thereto, are two bars, *m m*, which stand parallel with each other, and support, on suitable shafts or arbors, two die-wheels, *n n'*.

The face or periphery of *n* is concave, and the face or periphery of *n'* is convex.

The metallic ribbon or sheathing is drawn between these wheels, and crimped or grooved into the form of a gutter.

The ribbon is guided into these die-wheels by the flanged pulley O, which is supported on arms *p*, which arms project from the bars *m m*.

R is a drum, upon which the ribbon (copper or other

material) is wound, and from which it is fed through the machine.

This drum is supported, by the hand-wheel K, on a double bracket, S, as seen in the drawing.

T represents the metallic ribbon.

U represents the wire, which is drawn through the machine simultaneously with the ribbon, but to which only a longitudinal motion is imparted, as in ordinary wire-drawing.

The copper or metallic ribbon T is revolved, while it is being drawn through the machine, by the revolution of the shaft F, as it will be seen that the ribbon is confined between the die-wheels while being drawn in, which wheels revolve with the hand-wheel and shaft, while they are also revolved on their own axes by the longitudinal motion of the ribbon.

There is a face-plate, *v*, on the inner end of the shaft F, to which two jaws, W, are attached, by clamps or otherwise.

These jaws are formed of wood or other suitable material, and the sheathing, with the wire enclosed, is drawn between them.

One of these jaws has a channel or groove to fit the convex side of the gutter-formed sheathing. The two edges of the gutter are in contact with the flat side of the other jaw.

As before stated, the wire is enclosed by the sheathing or confined in the gutter.

While the sheathing or covering is thus spirally enclosing the wire, they are both drawn through a die, *x*, of suitable gauge.

The wire leaves the die perfectly covered with a smooth and even coating of copper or other material, and adapted to various uses.

By this method of sheathing wire, although the edges of the sheathing, where they come in contact, are not soldered or welded together. The spiral form of the joint prevents its opening when the compound wire is kinked or bent.

Having thus described my invention,

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination of the device for folding the sheathing upon the wire with the device for drawing the compound wire, substantially as described.

2. In a machine for simultaneously grooving and twisting sheathing upon wire, the employment, in combination with the rotating device F, of die-wheels N N', or other equivalent device, substantially in the manner and for the purpose set forth.

3. The method of making telegraph-wire by twisting about the common wire a sheathing of metallic ribbon, and drawing them both through a suitable die in the manner specified and shown.

The above specification of my invention signed by me, this 3d day of July, 1868.

Witnesses:

ALANSON CARY.

FRANK BLOCKLEY,
ALEX. F. ROBERTS.