No. 796,378. PATENTED AUG. 1, 1905.

M. M. WATERMAN.

APPARATUS FOR MAKING ARMORED CABLES.

APPLICATION FILED JAN. 28, 1905.

Fig. 2.

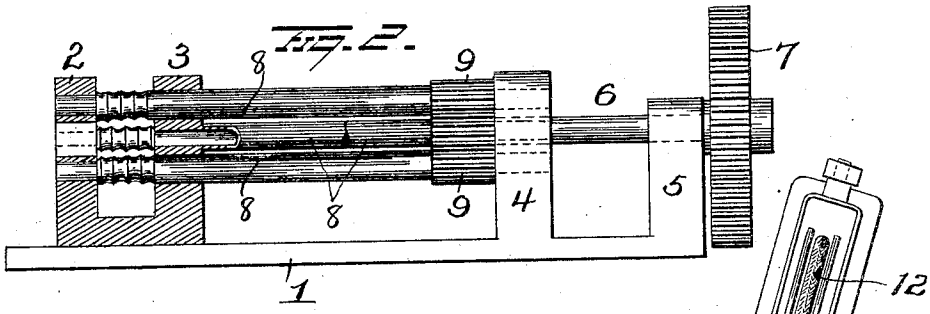


Fig. 1.

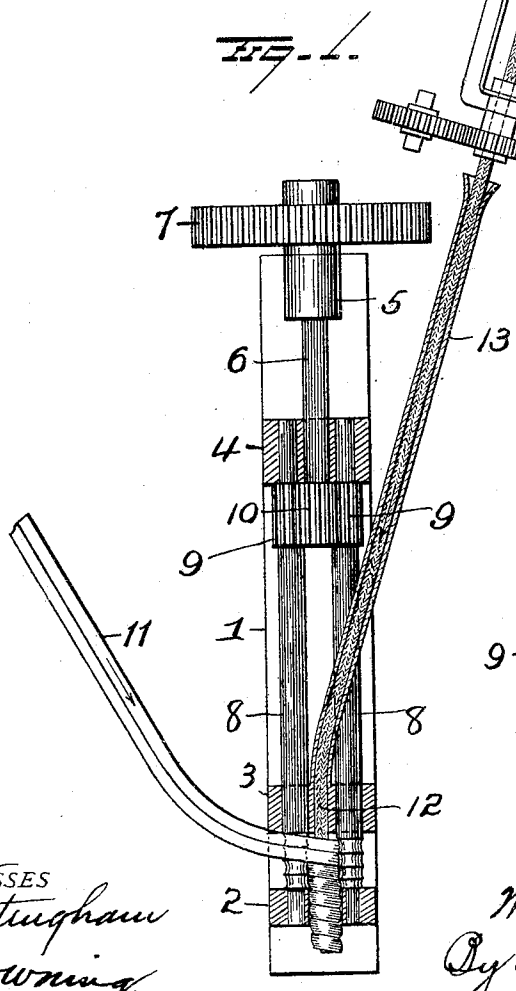
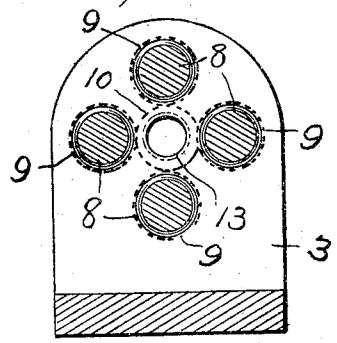


Fig. 3.



WITNESSES

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APPARATUS FOR MAKING ARMORED CABLES.

No. 796,378. Specification of Letters Patent. Patented Aug. 1, 1905.

Application filed January 28, 1905. Serial No. 243,061.

To all whom it may concern:

Be it known that I, MARCUS M. WATERMAN, a resident of Troy, in the county of Rensselaer and State of New York, have invented certain new and useful Improvements in Apparatus for Making Armored Cables; 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 an improved apparatus for making armored cables, the object of the invention being to provide an improved apparatus which will spirally wrap a metal strip tightly around a longitudinally-fed insulated conductor and overlap the convolutions of said spirally-wound metal strip, which is constructed or shaped so that when overlapped its convolutions will be interlocked, yet permit sufficient movement to allow the armored cable to be bent as may be necessary in use.

With this object in view the invention consists in certain novel features of construction and combinations and arrangements of parts, as will be more fully hereinafter described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view in horizontal section, illustrating my improvements. Fig. 2 is a view in side elevation, and Fig. 3 is an end view.

1 represents a base-plate having standards 2, 3, 4, and 5 thereon, and 6 is a drive-shaft supported in bearings in standards 4 and 5, and a drive-gear 7 is secured on said shaft and is driven by any desired source of power.

In suitable bearings in standards 2, 3, and 4 preferably four shaping-rolls 8 are mounted to revolve, and all of said rolls 8 are provided with wide gears 9, meshing with a similar gear 10 on shaft 6 and driven thereby. While I preferably use four of these shaping-rolls, a greater or less number may be employed, if preferred.

The shaping-rolls 8 between standards 2 and 3 are provided with a series of annular concave grooves, all of the grooves of the different rolls being located out of alinement and form, in effect, a conical revolving die or series of dies to shape a metal strip 11 about an insulated conductor 12, as will now be explained.

The insulated conductor 12 is fed through a tube 13 and directed in a straight line parallel with and equidistant from all the shaping-rolls 8. The metal strip 11, of suitable shape, bent or curved laterally, is shaped and fed forward by mechanism (not shown) and directed between two of the shaping-rolls 8. It is then guided around between the shaping-rolls and pressed tightly on the insulated conductor 12, the shaping-rolls serving to spirally wind the strip about the conductor and feed the same forward as it is armored, the strip being so shaped as to compel its convolutions to interlock as it is wound about the conductor.

The insulated conductor is fed from a reel which revolves to give to the forwardly-fed conductor a rotary as well as forward movement, and the conductor serves, in effect, as a revolving longitudinally-moving mandrel about which the metal strip is spirally and tightly wound to form a perfectly-armored cable.

Slight changes might be made in the general form and arrangement of the parts described without departing from my invention, and hence I would have it understood that I do not restrict myself to the precise details set forth, but consider myself at liberty to make such slight changes and alterations as fairly fall within the spirit and scope of my invention.

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

1. In an apparatus of the character described, the combination of a series of rolls constructed and adapted to spirally wind a single metal armor-strip and interlock the edges of the convoluted strip, and means for feeding a conductor longitudinally between said rolls to receive said armor as it is wound and interlocked.

2. In an apparatus of the character described, the combination of a longitudinally-movable revolving insulated conductor, and shaping-rolls adapted to spirally wind an interlocking metal armor-strip thereon.

3. In an apparatus of the character described, the combination of four grooved shaping-rolls, means for simultaneously turning said rolls, means for directing a revolving

conductor between said rolls and said rolls adapted to spirally wind a metal armor-strip around the conductor.

4. In an apparatus of the character described, the combination of revolving shaping-rolls, and a tube for directing an insulated conductor between them to receive a spirally-wound strip thereon.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

MARCUS M. WATERMAN.

Witnesses:
ALEXANDER RODGER,
MILO THOMPSON.