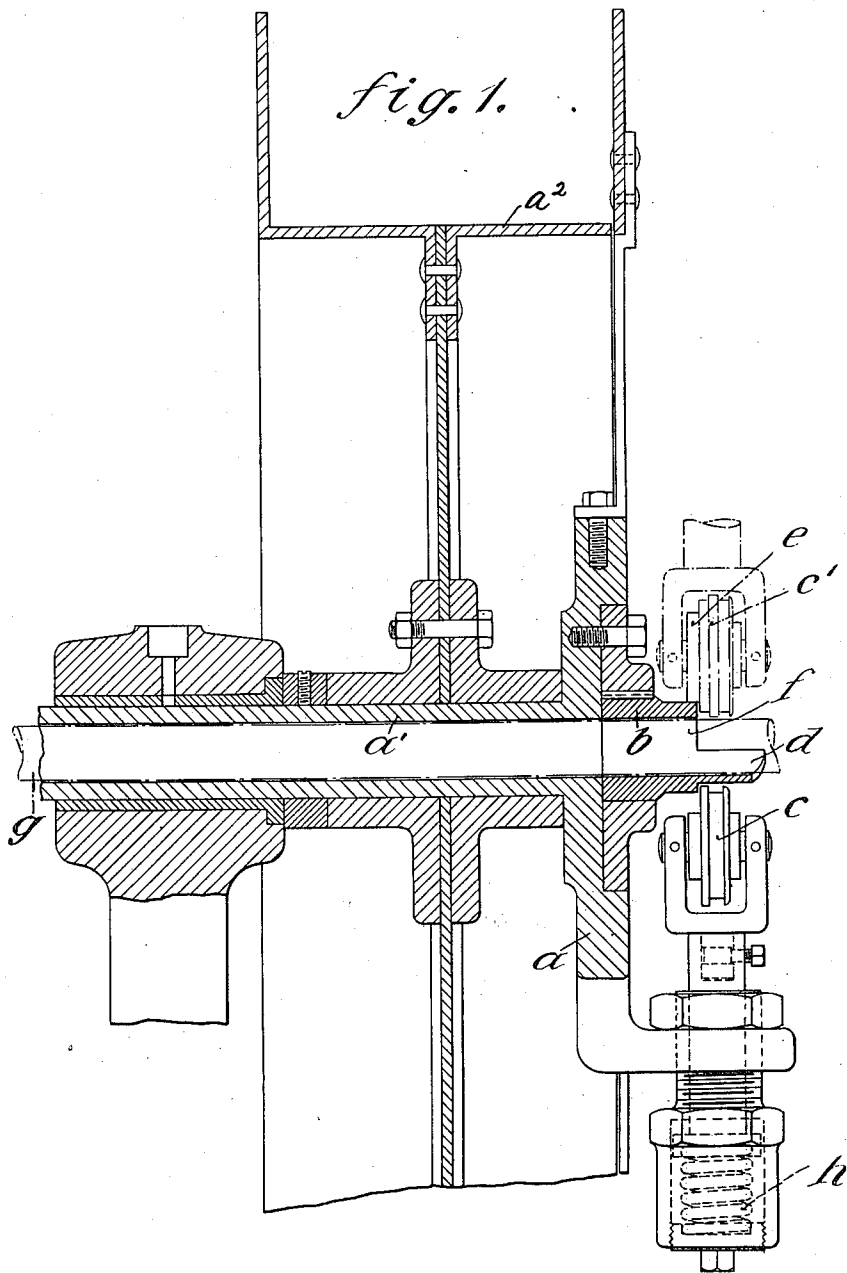


E. WITZENMANN.
WINDING HEAD FOR ARMORING CABLES AND THE LIKE.
APPLICATION FILED MAR. 30, 1909.

962,186.

Patented June 21, 1910.

2 SHEETS—SHEET 1.



Witnesses:
P. F. Nagler.
H. G. Dietrich

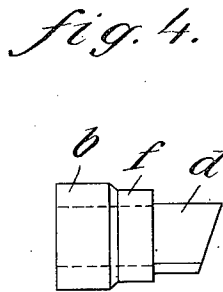
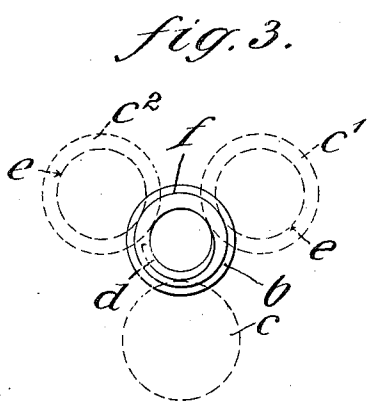
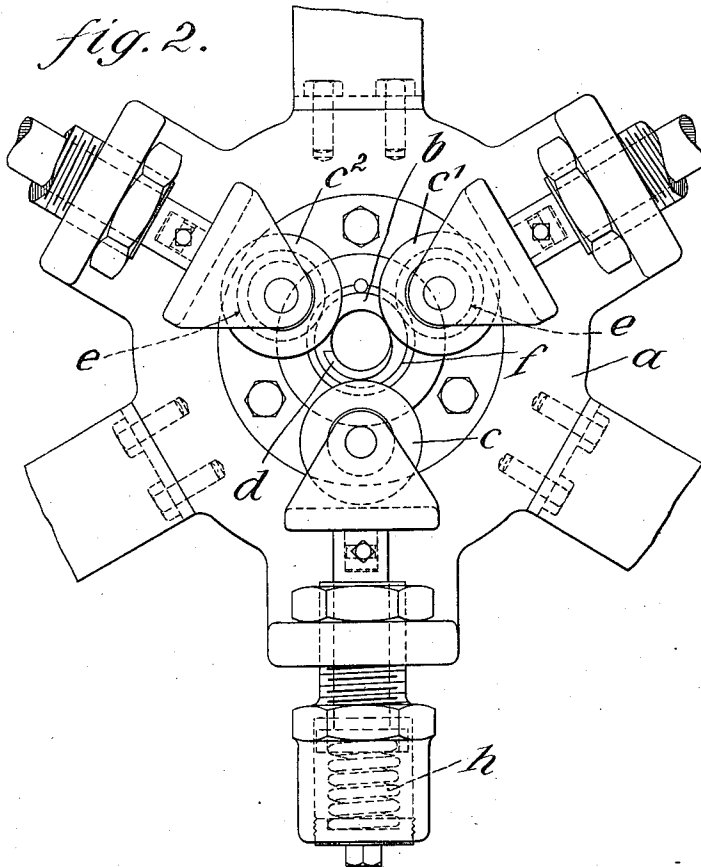
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2 SHEETS—SHEET 2.



Witnesses:
P. F. Nagle.
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UNITED STATES PATENT OFFICE.

EMIL WITZENMANN, OF PFORZHEIM, GERMANY.

WINDING-HEAD FOR ARMORING CABLES AND THE LIKE.

962,186.

Specification of Letters Patent. Patented June 21, 1910.

Application filed March 30, 1909. Serial No. 486,759.

To all whom it may concern:

Be it known that I, EMIL WITZENMANN, manufacturer, a subject of the Grand Duke of Baden, residing at No. 48, Holzgartenstrasse, Pforzheim, German Empire, have invented new and useful Improvements in Winding-Heads for Armoring Cables and the Like, of which the following is a specification.

10 The present invention relates to improvements in winding heads for armoring cables and the like with spiral metallic hose. The metal tape used for forming the hose is of figured section and is wound spirally upon
15 itself, in a well known manner, and the feature of my invention is that in winding the tape a rigid member is introduced between the winding-rollers and the cable. In this manner the cable is relieved of the pressure of the roller acting upon the portion
20 of the tape being wound on, whereby the cable is protected from injury.

Apparatus suitable for carrying out my invention is illustrated in the accompanying drawing, and it is assumed that a metallic hose winding machine is employed in
25 in which the so-called winding-head revolves upon itself in a well-known manner, the cable that is to be armored being fed
30 through it.

Figure 1 is an elevation and part section showing so much of the winding-head as is requisite for the disclosure of the present invention. Fig. 2 is a fragmental end elevation of the winding head. Fig. 3 is an
35 end elevation and Fig. 4 a plan of the device for relieving the cable of pressure, hereinafter designated the "winding-tongue."

a is the winding-head, which is driven by the hollow shaft a^1 , and which presents a drum a^2 adapted to receive the metal tape which is to be spirally wound. The tape passes from the drum a^2 to the winding-rollers c , c^1 , c^2 , which may be under resilient pressure, for instance acted upon by springs
45 h in a well-known manner. The central aperture of the winding-head a receives a tubular member b (Figs. 3 and 4), which rotates with the head a and presents a suitably bent terminal projection d , which
50 extends up to the plane of motion of the winding-rollers and which I designate the "winding-tongue." This tongue d serves as a sup-

port for the roller c which guides the piece of tape being wound onto the cable g , so
55 that this roller c does not bear directly against the cable, but merely against the tongue d .

To provide support for the two supplementary rollers c^1 and c^2 , the latter are furnished with discoidal cheeks e , which bear
60 upon the cylindrical portion f of the tubular member b .

By means of my new device it is obvious that injury to the cable or the like by the
65 metal tape being wound on is wholly obviated, despite the fact that the armor can be wound as tightly as is possible around the cable, so that shifting of the cable and its armor relatively to each other is practically
70 impossible.

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

1. In combination a winding head with
75 winding rollers thereon for spirally winding metal bands on cables, a hollow shaft in the winding head, one or more rigid supporting members directly in front of the hollow shaft and introduced between the cable and
80 the winding rollers for supporting the rollers as the metal bands are wound on to the cable and thereby relieving the cable of the pressure of the rollers and preventing the cable being damaged thereby.

2. In a machine for armoring cables and the like with spiral metallic hose, a centrally perforated rotatable winding-head, a tape-guiding roller, and supplementary rollers each presenting a cheek, mounted on the
90 head and rotating also on their own axes, and a tubular member fitting the hole in the head and presenting a bent tongue projecting into the plane of motion of said rollers and adapted to receive the pressure of the
95 tape-guiding roller and also presenting a part on which the cheeks of the supplementary rollers bear, substantially as described.

In witness whereof I have hereunto signed my name this 8th day of March 1909, in the
100 presence of two subscribing witnesses.

EMIL WITZENMANN.

Witnesses:

B. WITZENMANN,
K. HAFUR.