(No Model.)

A. M. ZIEGLER.

ELASTIC COVERED CORD.

No. 590,199. Patented Sept. 14, 1897.



Fig. 1.



Fig. 2.

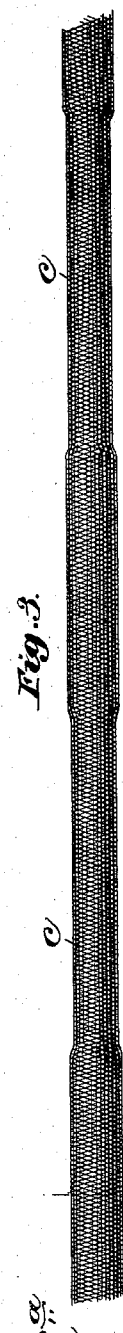


Fig. 3.



Fig. 4.



Fig. 1a.



Fig. 2a.



Fig. 3a.

Witnesses:
Walter E. Lombard.
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UNITED STATES PATENT OFFICE.

ALFRED M. ZIEGLER, OF BOSTON, MASSACHUSETTS.

ELASTIC COVERED CORD.

SPECIFICATION forming part of Letters Patent No. 590,199, dated September 14, 1897.

Application filed March 10, 1897. Serial No. 626,726. (No model.)

To all whom it may concern:

Be it known that I, ALFRED M. ZIEGLER, of Boston, county of Suffolk, State of Massachusetts, have invented an Improvement in Elastic Covered Cords, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

Prior to this invention an elastic core has been covered with a tubular covering formed on it, the threads of the covering during its formation having their angle of presentation to the core so changed as to bind some portions of the elastic core more tightly than other portions, the portions wound more tightly yielding to a less degree than the looser-covered portions, as in United States Patent No. 487,042, dated November 29, 1892, granted to me.

In this my present invention I have devised a novel elastic cord.

My novel cord is composed of a core made up of one or a plurality of india-rubber or elastic strands which when stretched are both wound tightly and spirally and also covered with a braided or woven covering.

The manner in which I prefer to produce my novel core is to first stretch the core, and while stretched wrap it closely and spirally at intervals with a suitable thread or threads and to thereafter braid or weave about the stretched and wound core a continuous tubular covering, the covering in each instance inclosing and hiding the spiral winding. When finished and released from tension, the unwound part of the core assumes its normal condition. This cord when distended will stretch especially at the spaces where it is not wound.

Figure 1, in elevation, shows a plurality of stretched strands of india-rubber; Fig. 1^a, a section thereof. Fig. 2 shows the said strands wound spirally at intervals; Fig. 2^a, a section thereof. Fig. 3 shows the stretched and wound core covered; Fig. 3^a, a section thereof, and Fig. 4 shows the covered cord of Fig. 3 released from tension.

I first take a suitable india-rubber core, as *a*, it being composed, preferably, of a plurality of india-rubber strands, and stretch the same. Then with a suitable winding apparatus I wind a thread *b* spirally about the core at suitable distances apart, as shown in Fig. 2, the extent of the windings and their distance apart varying according to the degree of elasticity required for the finished cord, and while yet in this stretched condition I apply about the core so wound, at intervals, a braided or woven tubular cover *c*. When this cord is released from tension, the portions of the core which are surrounded only by the cover will contract freely, while the wound and covered portions will contract but slightly, and when this cord is subjected to strain it will stretch freely at its portions surrounded only by the cover, and its wound and covered portions will stretch to a much less degree, that depending upon the fact whether or not the strain the cord is subjected to in use is in excess of the strain to which the core was subjected when it was being wound. When this cord is put into use in suspenders, it will be cut transversely through the portions where it is spirally wound, and that part of the cord will have applied to it a suitable clamp.

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

1. An elastic cord composed of an elastic core, portions of which are wound at intervals and covered with a tubular covering, substantially as described.

2. The herein-described elastic cord having portions tightly wound thereon at intervals to limit the elasticity of the cord, substantially as described.

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

ALFRED M. ZIEGLER.

Witnesses:

GEO. W. GREGORY,

MARGARET A. DUNN.