

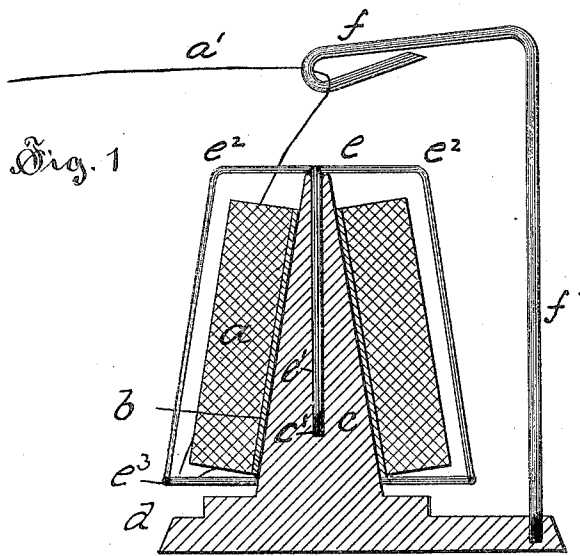
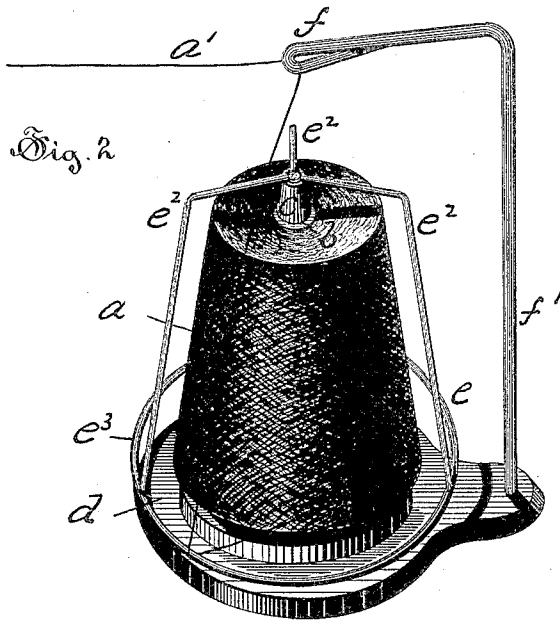
(No Model.)

M. V. PALMER.

THREAD UNWINDER FOR SEWING MACHINES.

No. 446,465.

Patented Feb. 17, 1891.



Witnesses:

A. R. Williams.

A. W. Jenkins

Inventor,

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UNITED STATES PATENT OFFICE.

MARO VIRGIL PALMER, OF WILLIMANTIC, ASSIGNOR TO THE WILLIMANTIC LINEN COMPANY, OF HARTFORD, CONNECTICUT.

THREAD-UNWINDER FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 446,465, dated February 17, 1891.

Application filed February 23, 1888. Serial No. 264,951. (No model.)

To all whom it may concern:

Be it known that I, MARO VIRGIL PALMER, of Willimantic, in the county of Windham and State of Connecticut, have invented certain new and useful Improvements in Unwinders for Thread and the Like, of which the following is a full, clear, and exact description, whereby any one skilled in the art can make and use the same.

My invention relates to the class of devices adapted to be used in unwinding from a cone, spool, or bobbin the thread that has been wound thereon, my improved unwinder being especially adapted for use in unwinding thread as it is used in sewing or in the manufacture of knitted or woven fabrics.

The object of my invention is to provide a device that will secure a more uniform tension on the thread or yarn as it is unwound, and will also tend to prevent its breaking in the unwinding.

To this end my invention consists in the combination of the several parts making up the device as a whole, as more particularly hereinafter described, and pointed out in the claims.

Referring to the drawings, Figure 1 is a view in central vertical longitudinal section of a standard fitted with my improved unwinder. Fig. 2 is a detail perspective view illustrating the operation of the unwinder.

In the use of thread or yarn for sewing or for making various fabrics the mass of thread, whether in a "cone" or on a spool or bobbin, is supported in a position from which it can be conveniently unwound, the thread being led through a suitable guide. Unless something in the nature of what I term an "unwinder" is used the thread is liable to catch under the edge of the spool or mass and often an uneven and varying tension and often breaking the thread. This difficulty is experienced with soft-finished thread and is increased with hard-finished, as the latter is apt to throw off in coils that drop to the base of the spool or mass.

In the accompanying drawings, the letter *a* denotes a mass of thread wound into a form that is called a "cone" on a tapered hollow

bobbin *b*, that is usually made of paper or straw-board. Such a cone is placed on the post *c*, that rises from a base or support *d*, that is of any convenient shape and material. The stem *e'* of the unwinder *e* is inserted in the hollow *c'* of the post *c*, and from it the arms *e''* branch outward and then downward to the annular base *e³* of the unwinder, that occupies in its normal state a position in a plane a little below the bottom of the mass of the cone or spool. This unwinder is supported on the post by means that leave it free to rotate as well as to rise and fall under the pull of the thread *a'*, that in the proper position for utilizing the unwinder passes down and under the annular base of the unwinder, and then upward and through the guide *f*; that is usually fixed directly over the end of the post by means of a standard *f'*.

By the use of my improved unwinder the breaking of thread or yarn is prevented and a greater uniformity of tension on the thread gained.

As shown in the drawings, the unwinder is made of wire in the form of a frame-work, with a central stem and three spreading arms that support the annular base; but I do not limit myself to the precise construction or material so long as the device consists of the central stem supported on the standard with the pendent ring hung near the plane of the base of the mass of thread.

I claim as my invention—

1. In combination with the post *c*, fixed on a base or support and having a central opening for the reception of the unwinder-stem, the unwinder *e*, having a stem *e'* projecting downward from the crosswise arms on the upper part of the unwinder, and also an annular base *e³*, located near the bottom of the post and below the normal position of the under part of a mass of thread when the latter is supported on the post, all substantially as described.

2. In combination with the central post *c*, rising from a base *d*, a thread-guide *f*, supported above the upper end of the base, the central opening in the base to receive the

stem of the unwinder, the unwinder e , having a pivotal stem e' , arms e^2 , that branch from the central stem and turn downward at the sides and connected with an annular
5 base e , the said unwinder being loosely supported in the hole in the post, and the annular base of the unwinder lying near the level

of the bottom of the mass of thread supported on the post, all substantially as described.

MARO VIRGIL PALMER.

Witnesses:

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E. S. BOSS.