No. 786,049. PATENTED MAR. 28, 1905.

E. C. NAYLOR.

HAND OPERATED WINDING APPARATUS.

APPLICATION FILED SEPT. 16, 1904.

Fig. 1

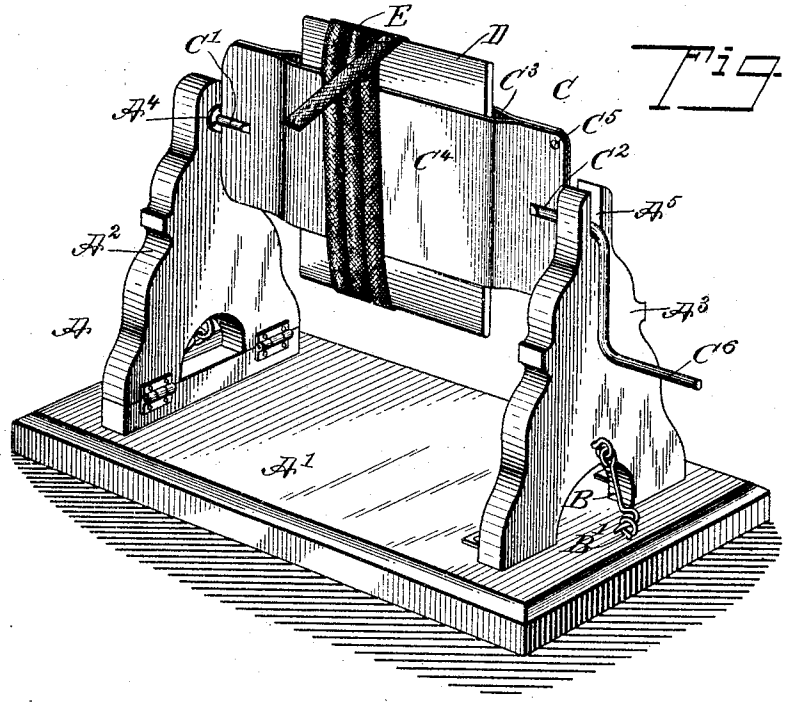


Fig. 2

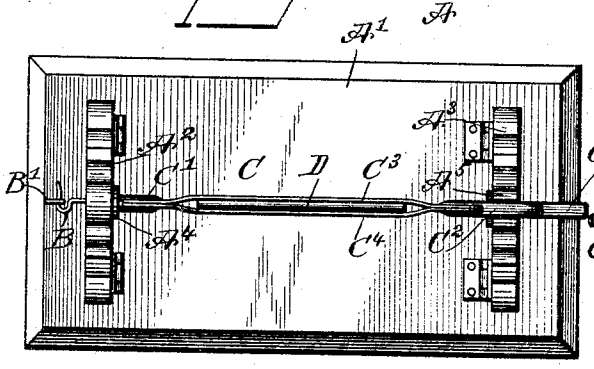
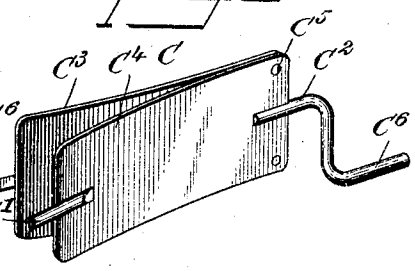


Fig. 3



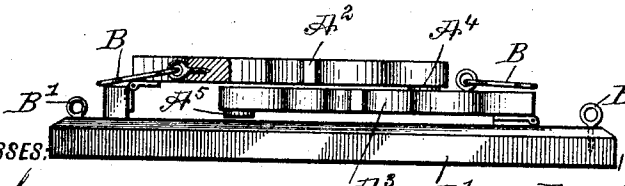


Fig. 4

WITNESSES:

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No. 786,049. Patented March 28, 1905.

UNITED STATES PATENT OFFICE.

EDWIN CHARLES NAYLOR, OF GLOVERSVILLE, NEW YORK.

HAND-OPERATED WINDING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 786,049, dated March 28, 1905.

Application filed September 16, 1904. Serial No. 224,700.

To all whom it may concern:

Be it known that I, EDWIN CHARLES NAYLOR, a citizen of the United States, and a resident of Gloversville, in the county of Fulton and State of New York, have invented a new and Improved Hand-Operated Winding Apparatus, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved winding apparatus more especially designed for use in retail dry-goods stores and like places and arranged to permit convenient and quick winding up of braids, laces, veilings, and like goods onto stiff cards or boards.

The invention consists of novel features and parts and combinations of the same, as will be more fully described hereinafter and then pointed out in the claims.

A practical embodiment of the invention is represented in the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a perspective view of the improvement. Fig. 2 is a plan view of the same. Fig. 3 is a perspective view of the winding-reel, and Fig. 4 is a side elevation of the stand in a folded position.

The improved winding apparatus is mounted on a suitably-constructed stand A, provided with a base A′ and standards A^2 A^3, preferably hinged to the base A′ to allow of conveniently folding the standards onto the base, as plainly indicated in Fig. 4, whenever it is desired to store the apparatus while not in use. The standards A^2 A^3 are adapted to be held in a vertical position by suitable devices—such, for instance, as hooks B, connected with the standards and engaging eyes or staples B′ on the base A′. The upper ends of the standards A^2 and A^3 are provided with bearings A^4 and A^5, of which the bearing A^4 is a closed bearing, while the bearing A^5 is an open bearing, as plainly indicated in Fig. 1, and the said bearings are adapted to receive the trunnions C′ and C^2 of a reel C, adapted to hold a stiff card or board D, on which the braid, lace, or like article is to be wound. (See Fig. 1.) The reel C is formed of two thin metallic clamping-plates C^3 and C^4, fastened together at one end by rivets C^5 or other suitable devices, and on this end of the clamping-plates is rigidly secured the trunnion C^2, terminating in a crank-arm C^6 and adapted to drop into the bearing A^5. The other trunnion, C′, is made in two parts, fastened to the free ends of the spring-plates C^3 and C^4, so that when the board D has been placed between the plates and the latter are pressed together to bring the parts of the trunnions C′ together and in engagement with the closed bearing A^4 then the stiff board or card D is held clamped between the plates C^3 and C^4, the stiff board or card projecting somewhat beyond the sides of the said clamping-plates C^3 and C^4, as plainly indicated in Fig. 1, to receive the braid, lace, or other article to be wound on the card or board. It is understood that after the reel is in position on the stand A and the operator turns the crank-arm C^6 then the article E can be readily wound on the stiff card or board D, and when the winding operation has been completed it is only necessary for the operator to lift the trunnion C^2 out of the bearing A^5 and then to slide the sectional trunnion C′ out of the bearing A^4 to allow the plates C^3 and C^4 to open by their own resiliency to permit the operator to slide the card or board D, with the article E wound thereon, off the open end of the reel. As the plates C^3 and C^4 are very thin, it is evident that the said plates do not interfere to any great extent with the tight winding of the article E on the stiff card or board D.

When the device is not in use, the standards A^2 and A^3 can be unlocked and folded onto the base A′ and the reel can be placed on top of the uppermost standard A^2, and then the folded apparatus can be conveniently stored away in a comparatively small space.

When it is desired to use the apparatus, it can be conveniently placed on a counter or other support to wind up the desired article in the manner above described.

The apparatus is very simple and durable in construction, can be cheaply manufactured, and is not liable to easily get out of order.

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

1. A hand-operated winding apparatus, consisting of a support formed of a base and standards hinged to the base to fold one upon the other and having bearings at their upper ends, one bearing being open and the other closed, means for holding the standards in vertical positions, and a reel comprising flat and comparatively wide spring members secured together at one end and provided at said end with a trunnion adapted to enter the open bearing, a two-part trunnion being secured to the free ends of the members at the center of width thereof and adapted to enter the closed bearing, said members clamping and holding a card or board between them when the trunnions are in their bearings, substantially as herein shown and described.

2. A hand-operated winding apparatus comprising a stand having a closed bearing and an open bearing, and a revoluble reel for holding the card or board on which the article is to be wound, the reel consisting of a pair of comparatively wide clamping-plates fastened together at one end in flat engagement, the plates being of thin spring material and even width throughout, a trunnion attached to the plates at the ends secured together and provided with a crank-arm, and adapted to engage the said open bearing, and a trunnion for engagement with the said closed bearing, said trunnion being in sections, one on each free end of the said clamping-plates, and holding the free ends of the plates in flat engagement when in its bearing.

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

EDWIN CHARLES NAYLOR.

Witnesses:
ROY EVEREST,
O. L. EVEREST.