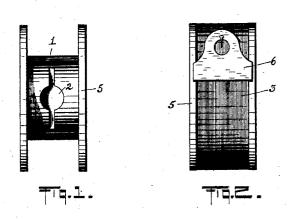
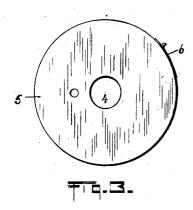
## G. E. GAY. SPOOL AND THREAD PACKAGE. APPLICATION FILED NOV. 22, 1905.





THE NORRIS PETERS CO., WASHINGTON, D. C.

George E. Gay INVENTOR

BY

ATTORNEY

## UNITED STATES PATENT OFFICE.

GEORGE E. GAY, OF MALDEN, MASSACHUSETTS, ASSIGNOR TO THE LINEN THREAD COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW JERSEY.

## SPOOL AND THREAD PACKAGE.

No. 866,855.

Specification of Letters Patent.

Patented Sept. 24, 1907.

Application filed November 22, 1905. Serial No. 288,537.

To all whom it may concern:

Be it known that I, George E. Gay, a citizen of the United States, and a resident of and whose post-office address is Malden, in the county of Middlesex and 5 State of Massachusetts, have invented certain new and useful Improvements in Spools and Thread Packages, of which the following is a specification.

My invention relates to spools and packages of thread or similar material, and especially to those 10 adapted to be assembled to form a warp beam for looms.

The objects of my invention are to provide a spool or package conveniently wound for evenly supplying a plurality of threads of even length; to provide a convenient means for holding the ends of the threads at 15 each end; to provide a convenient form for putting up a plurality of threads, and to provide a convenient element of a warp beam or other structure utilizing a plurality of threads in parallel relation. I attain these objects in the article described in the accompanying description and illustrated in the accompanying drawings, in which like numerals of reference refer to like parts throughout the respective views.

Figure 1 is a front elevation of the empty spool. Fig. 2 is a front elevation of the full spool, or package. 25 Fig. 3 is a side elevation of the spool.

In the figures, —l— is the spool; 2— a mortise or cavity in the body thereof, adapted to hold the knotted ends of the plurality of threads wound thereon; 3— represents the threads; 4— a hole in the spool which adapts it to be mounted upon the shaft; 5— the walls, faces or sides of the spool; 6— a clip or fastener for holding the outer ends of the threads in parallel relation.

In winding my complete spool, I first knot the ends of a plurality of threads and secure the knot in the 35 cavity—2—. I then wind the threads—3—in parallel relation in successive layers until the ends are reached. These ends I maintain in parallel relation and secure by a clip—6— of paper or other convenient material,

adapted to hold them in a fixed relation until required for use. This clip is adapted to be secured to the com- 40 plete package in such a manner as to prevent the unintentional unwinding of the threads.

Where I use the word "spool" I mean the reel or body on which the thread is wound to differentiate it from the "package", by which I mean the whole article as completed, including the spool, coils of thread wound thereon, and clip for holding the threads.

I do not limit myself to any particular form, material or proportion of the spool, package or clip, nor to any particular use therefor, as for looms, or means for 50 or method of winding. But

What I claim is:

1. As a new article of manufacture, a thread package comprising a spool having a cylindrical body and two substantially parallel sides; a hole through the body in line with its axis; means in said body for holding the ends of a plurality of threads; a plurality of separate threads secured at one end to said cylindrical body and wound in parallel relation in concentric layers upon the body to a diameter substantially equal to that of the parallel sides, the outside ends of the threads being secured in a clip substantially the width of said spool in parallel relation in the same plane, said clip adapted to be secured on the outside of the circumference of the package.

2. As a new article of manufacture, a circular thread package having substantially parallel outside faces, and consisting of a plurality of separate threads wound in parallel relation in successive and concentric layers, and means for securing the outside ends of the threads in parallel relation and preventing their unwinding; said means consisting of a clip substantially the width of said package; and a pin passing through said clip into said package, and engaging said clip.

Signed at New York in the county of New York and State of New York this 20th day of November A. D. 75 1905.

GEORGE E. GAY.

Witnesses:

Woolsey A. Shepard, Henry S. Reynolds.