

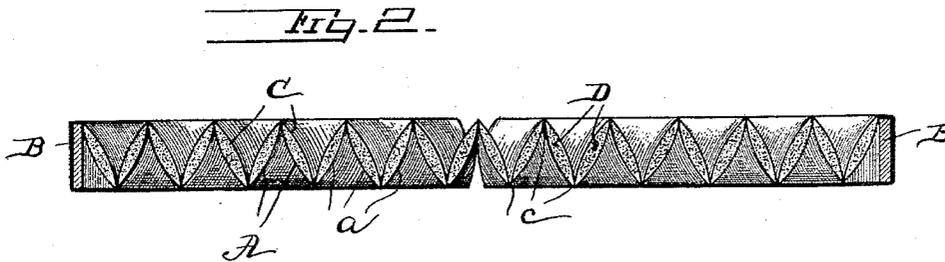
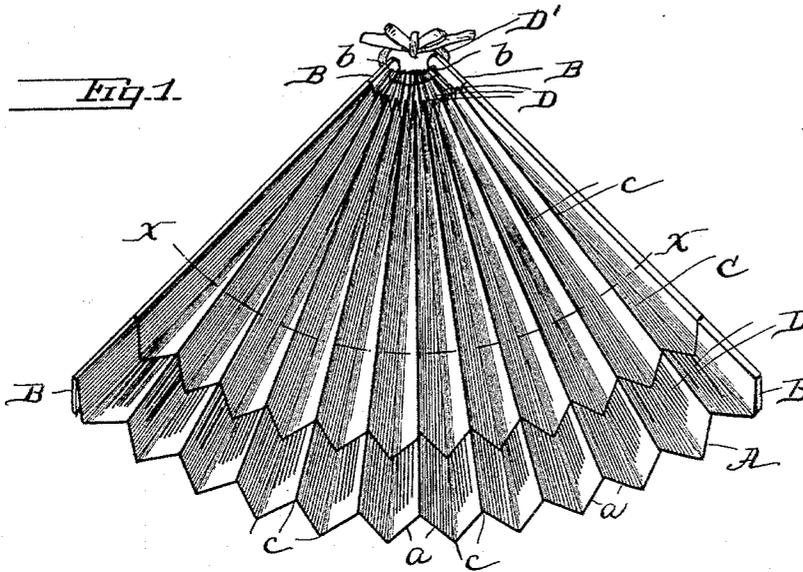
(No Model.)

3 Sheets—Sheet 1.

F. E. HALL.  
THREAD PACKAGE.

No. 597,165.

Patented Jan. 11, 1898.



Witnesses.

*Jesse B. Heller,*  
*Carol A. Deshorgs*

Inventor.

*Fred E. Hall*

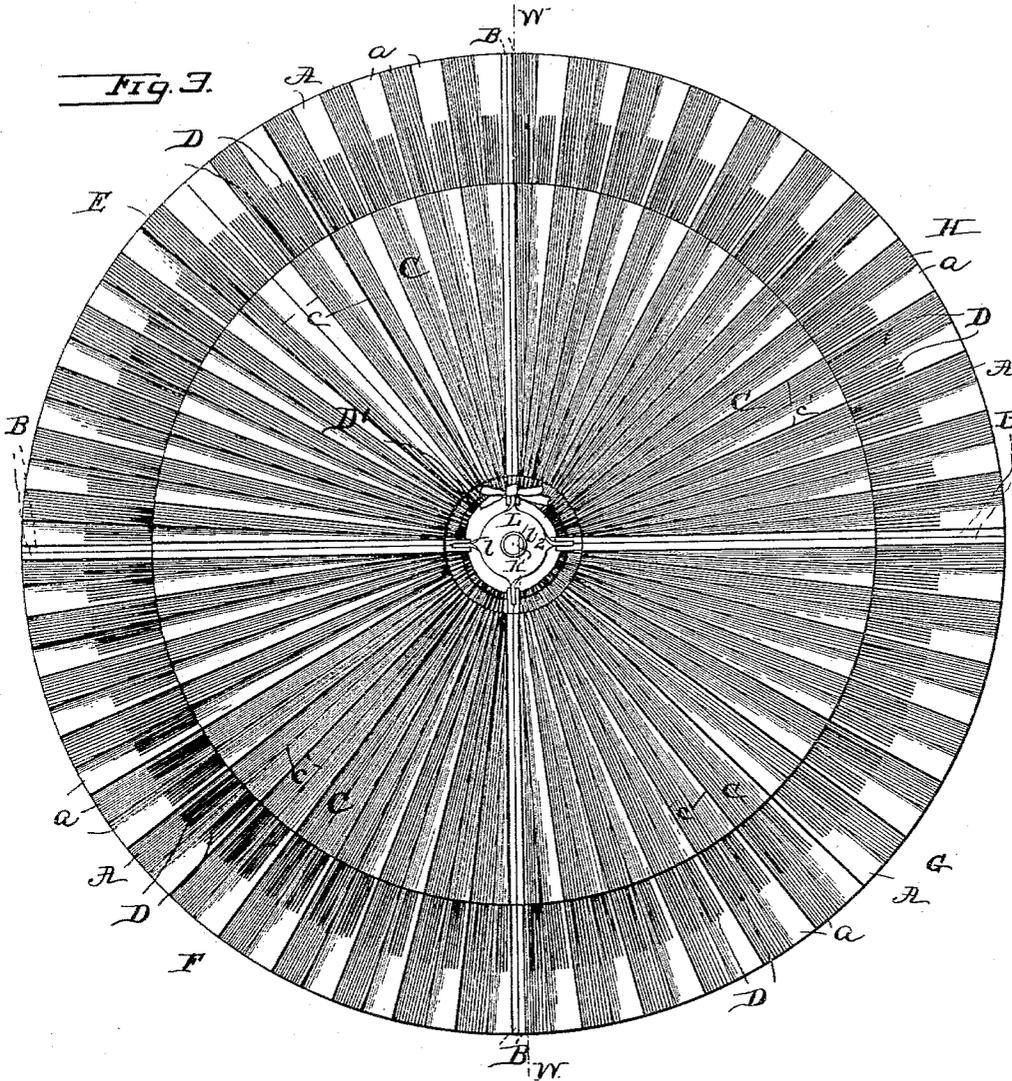
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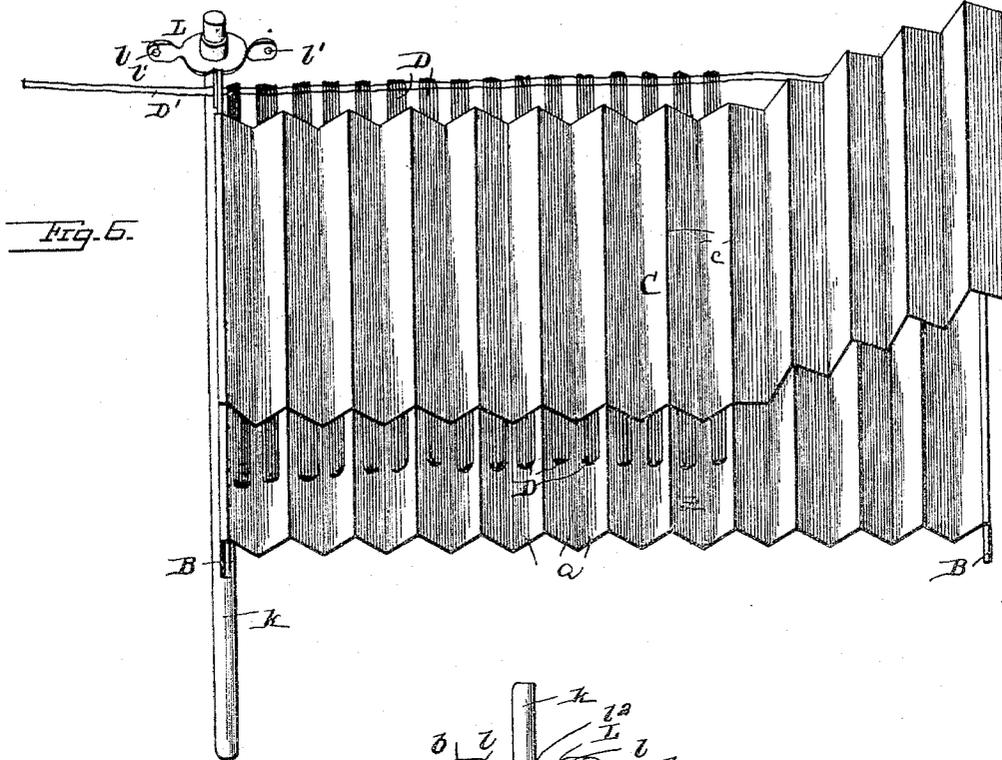


Fig. 6.

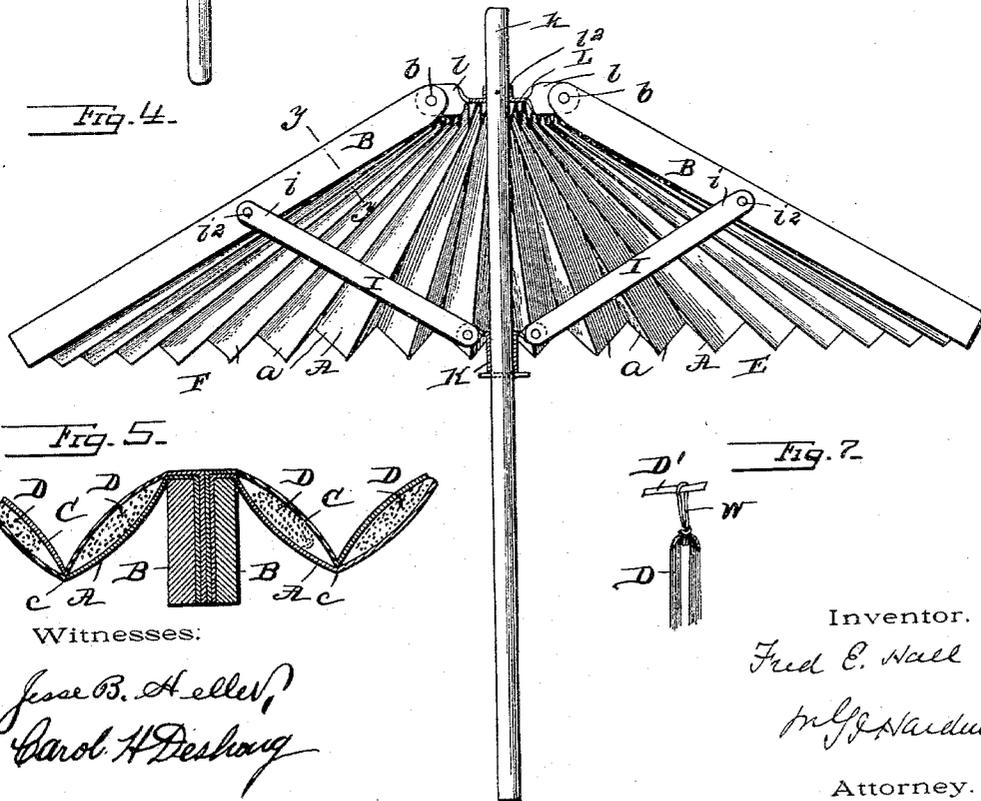


Fig. 4.

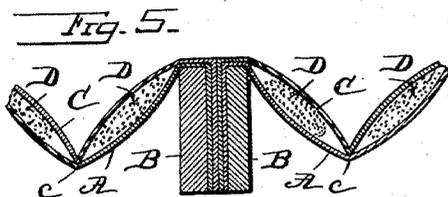


Fig. 5.

Witnesses:

Jesse B. Allen,  
Carol H. DeLong

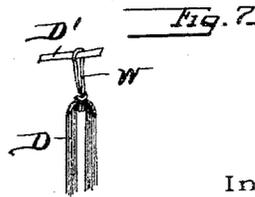


Fig. 7.

Inventor.

Fred E. Hall

My Attorney

Attorney.

# UNITED STATES PATENT OFFICE.

FRED E. HALL, OF PHILADELPHIA, PENNSYLVANIA.

## THREAD-PACKAGE.

SPECIFICATION forming part of Letters Patent No. 597,165, dated January 11, 1898.

Application filed February 23, 1897. Serial No. 624,580. (No model.)

*To all whom it may concern:*

Be it known that I, FRED E. HALL, a citizen of the United States, residing at Philadelphia, county of Philadelphia, and State of Pennsylvania, have invented a new and useful Improvement in Thread-Packages, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, which form a part of this specification.

The object of my invention is to provide a simple and effective device for holding links or skeins of thread which will protect the contents from becoming snarled or tangled and which will permit the same to be neatly packed and readily exhibited or examined and which when utilized will allow the ready removal of one or more threads of the skein without disarranging the remaining contents.

It further consists in the formation of a thread-package in which a large number of skeins, say of silk, may be placed and securely held in separated compartments and yet the whole package be capable of being folded into a small compass for carrying from place to place or when not in use. To that end essentially I form a package having separated compartments so connected together as to be capable of being folded one upon the other, so as to fold into a small compass, the skeins being placed in these pockets and a band run through the loops of all the packages, so that it forms a bearing for the thread at the loop portion. This band further has a bearing upon the package, so that the package is held securely together and may be drawn into the shape desired. In the preferred form of embodiment of my invention I either so connect the pockets by this band that the series of pockets may be opened and closed like a fan or the band is connected to a fixed bracket and the pockets to a movable bracket, so that they may be opened and closed like an umbrella. However, I desire it understood that while I will describe these two forms in the specification and have illustrated them in the accompanying drawings I do not intend to limit myself to these particular forms, except as they may be specifically claimed.

I will first describe the embodiment of my invention illustrated in the accompanying

drawings and then point out the invention in the claims.

In the drawings, Figure 1 is a perspective view of one form of embodiment of my invention. Fig. 2 is a section on the line  $xx$ , Fig. 1. Fig. 3 is a plan view of another form of embodiment of my invention. Fig. 4 is a sectional view, on the line  $ww$  of Fig. 3, of the frame used with the construction shown in Fig. 1. Fig. 5 is a detail view on line  $yy$  of Fig. 4. Fig. 6 is a perspective view of either the package of Fig. 1 or Fig. 3, with securing-block of type used in the construction shown in Fig. 3. Fig. 7 is a perspective view showing a different mode for holding the skein.

A is a blank bent upon itself to form a series of folds  $a$ . To the ends of this blank are secured the stays or blocks B, which, as shown in Fig. 1, extend beyond the paper blank and are provided with orifices or eyes  $b$ . C represents a second blank bent to conform to the blank A and having its ends secured to the blocks or stays B and overlying the folds of the blank A. Between the blanks A and C is placed the thread, as shown at D, Fig. 2, so that the loop ends project beyond the blanks, as may be seen in Fig. 1. The blanks A and C are secured together at the apexes  $c$  of the folds either by sewing or by gluing or in any manner desired. Lastly, a band of flexible material D' is passed through the projecting loops of the thread and through the orifices or eyes  $b$  of the block or stay B, thus securing the whole together loosely. The skeins have a bearing on the band D'. The whole may be folded as a fan is folded, and a large number of pockets are formed which may be folded into a small compass. It is not necessary that the blank C shall extend entirely from the upper to the lower part of the blank A. The thread should preferably be placed in the fold of blank A before blank C is secured thereto, as otherwise it would be necessary to use a wire or the like to place the skein or thread in the pocket.

In Figs. 3, 4, 5, and 6 I show a form in which the principle of the umbrella is used. With this construction as shown I use four blank-sections EFGH, each formed of blanks similar to A and C, Figs. 1 and 2, each having at its end a stiffening piece or block B,

the blanks being secured to the blocks, as in Fig. 2, the end of each blank-section overlapping its own block, and the contiguous blank-sections lie side by side between the blocks.

5 The blocks B in pairs are secured together by means of the arms I, having the bifurcated outer end *i*, which incloses a pair of blocks, and a pin *i*<sup>2</sup> passes through the bifurcated end *i* and the two blocks B. The inner ends

10 of arms I are pivotally connected to a bracket K, loosely mounted on standard *k*. The upper ends of the blocks B are provided with eyes or orifices *b*, as in the former construction. L is a cap having a hollow barrel *l*<sup>2</sup> and

15 projecting lugs *l*, provided with orifices *l*<sup>1</sup>. This cap is secured to the top of standard *k* and the lugs *l* bent so that the orifices *l*<sup>1</sup> come in alinement with the orifices or eyes in the blocks B. The skeins are placed in the pockets

20 formed between the blanks A and C of each section E, F, G, and H and a flexible band D run through the loops of the skein, the orifices *l*<sup>1</sup>, and the orifices or eyes *b*. Thus the whole is loosely connected together and may

25 be opened out or closed like an umbrella and contains securely a large amount of thread skein reduced to a small compass.

The upper and lower blank of the sections E, F, G, and H can each be made in one piece,

30 having at the points where they are shown the blocks B, one block corresponding to each section being sufficient in this.

If desired, and in order to facilitate the replacement of thread in one pocket without

35 displacing the whole package, the thread of each pocket may be supported by the band D' through the medium of separate contacting bands, each of which passes through the loop of the thread in a pocket and around the

40 band. This is shown in Fig. 7, in which the connecting-bands are lettered W. To replace the thread of one of the pockets, all that is necessary is to disconnect its connecting-

45 band, place the new thread in the pocket, and again connect this band. All of this may be done without affecting the threads of any of the other pockets or the band D'.

Having now fully described my invention, what I claim, and desire to protect by Letters

50 Patent, is—

1. A thread-package formed of a plurality of pockets containing looped end threads, and a band passing through the loops forming a bearing for the thread, and the band having

55 itself a bearing upon the package, a standard, a movable bracket on said standard, extension-arms connecting said bracket and the package, a fixed bracket on said standard, the band being connected with said fixed bracket.

60 2. A thread-package formed of a plurality of pockets containing the looped end threads, and a band passing through the loops forming a bearing for the thread and passing through orifices in the package, a standard, a movable

65 bracket on said standard, extension-arms connecting said bracket and the package, a fixed

bracket on said standard the band being connected with said fixed bracket.

3. A thread-package consisting essentially of a blank provided with grooves, a second 70 blank of corresponding shape and correspondingly bent overlying the first blank, blocks at the ends of said blanks to which said blanks are secured the thread being adapted to rest in the pockets formed between the blanks and 75 the flexible band passing through the loops of the thread and having a bearing on said blocks.

4. A thread-package consisting essentially of a blank provided with grooves, a second 80 blank of corresponding shape and correspondingly bent overlying the first blank, blocks at the ends of said blanks to which said blanks are secured there being orifices in said blocks, the thread being adapted to rest in the pockets 85 formed between the blanks, and a flexible band passing through the loops of the thread and through the orifices in the blocks.

5. A thread-package consisting essentially of a blank provided with grooves, a second 90 blank of corresponding shape and correspondingly bent overlying the first blank, the two blanks being secured together at the apexes of the folds, blocks at the ends of said blanks to which said blanks are secured, the threads 95 being adapted to rest in the pockets formed between the blanks and the flexible band passing through the loops of the thread and having a bearing on said blocks.

6. A thread-package consisting essentially 100 of a blank provided with grooves, a second blank of corresponding shape and correspondingly bent overlying the first blank, the two blanks being secured together at the apexes of the folds, blocks at the ends of said blanks 105 to which said blanks are secured, there being orifices in said blanks, the thread being adapted to rest in the pockets formed by the blanks, and a flexible ribbon passing through the loops of the thread and the orifices in the 110 blocks.

7. A thread-package consisting essentially of a blank provided with grooves and divided into sections by blocks, a second blank of corresponding shape and correspondingly bent 115 overlying the first blank, both blanks being secured to the blocks, a standard, a bracket movable upon said standard, arms pivotally secured to said bracket, the outer ends of said arms being pivotally secured to contiguous 120 blocks, a cap secured at or about the top of said standard, said cap provided with orifices equal in number and corresponding to the blocks, the thread being adapted to rest in the pockets formed between the pairs of 125 blocks, and a flexible band having a bearing on the blocks and passing through the orifices in the cap and through the loops of the thread.

8. A thread-package consisting essentially of a blank provided with grooves and divided 130 into sections by blocks, a second blank of corresponding shape and correspondingly bent

overlying the first blank, the blanks being secured together at the apexes of the folds and to the blocks, a standard, a bracket movable upon said standard, arms pivotally secured to said bracket, a cap secured at or about the top of said standard, said cap provided with orifices equal in number and corresponding to the blocks, the thread being adapted to rest in the pockets formed between the pairs of blocks, and a flexible band having a bearing on the blocks and passing through the orifices in the cap and through the loops of the thread.

9. A thread-package consisting essentially of a blank provided with grooves and divided into sections by blocks, a second blank of corresponding shape and correspondingly bent overlying the first blank, both blanks being secured to the blocks, there being orifices in said blocks, a standard, a bracket movable upon said standard, arms pivotally secured to said bracket, the outer ends of said arms being pivotally secured to contiguous blocks, a cap secured at or about the top of said standard, said cap provided with orifices equal in number and corresponding to the orifices in the blocks the thread being adapted to rest in the pockets formed between the pairs of blanks, and a flexible band passing through the loops of the thread, through the orifices in the blocks and the orifices in the cap.

10. A thread-package consisting of two correspondingly-folded blanks, each blank being folded alternately to the right and left, one blank being shorter than the other and adapted to overlie and fit upon the other blank, the two blanks being secured together at the apex of the folds whereby compartments are formed approximately equal in number to the folds of each blank, blocks at the ends to which the two end folds of each blank are secured, the blocks projecting beyond the blanks at one end thereof, thread in the compartments provided with loops which project beyond the compartments at that end of the blanks beyond which the blocks project and the opposite ends whereof project from the other end of said compartments and lie upon the face of the folds of the larger blank, orifices in the projecting ends of the blocks, the projecting ends of the blocks being adapted to be brought toward each other, and a flexible band passed through the orifice in the blocks and the loops of the threads.

11. A thread-package consisting of two correspondingly-folded blanks, each blank being folded alternately to the right and left, one blank being shorter than the other and adapted to overlie and fit upon the other blank, the two blanks being secured together at the apex of the folds whereby compartments are formed approximately equal in number to the folds of each blank, blocks at the ends to which the two end folds of each blank are secured, the blocks projecting beyond the

blanks at one end thereof, thread in the compartments provided with loops which project beyond the compartments at that end of the blanks beyond which the blocks project and the opposite ends whereof project from the other end of said compartments and lie upon the face of the folds of the larger blank, the projecting ends of the blocks being adapted to be brought together, and a flexible band passing through the said loops and having a bearing on said blocks.

12. A thread-package consisting of two correspondingly-folded blanks, each blank being folded alternately to the right and left, one blank being shorter than the other and adapted to overlie and fit upon the other blank, the two blanks being secured together at the apex of the folds whereby compartments are formed approximately equal in number to the folds of each blank, blocks at the ends to which the two end folds of each blank are secured, thread in the compartments which project beyond the compartments at one end thereof and lie upon the face of the folds of the larger blank and provided with loops at the other end of the blanks, the blocks at that end of the blanks at which the loops of the threads are located being adapted to be brought toward each other, and a flexible band passing through the said loops and having a bearing on said blocks.

13. A thread-package consisting of two correspondingly-folded blanks, each blank being folded alternately to the right and left, one blank being adapted to overlie and fit upon the other blank, the two blanks being secured together at the apex of the folds whereby compartments are formed approximately equal in number to the folds of each blank, blocks at the ends to which the two end folds of each blank are secured, the blocks projecting beyond the blanks at one end thereof, thread in the compartments provided with loops which project beyond the compartments at that end of the blanks beyond which the blocks project and the opposite ends of which project from the other end of said compartments, the projecting ends of the blocks being adapted to be brought together, and a flexible band passing through the said loops and having a bearing on said blocks.

14. A thread-package consisting of two correspondingly-folded blanks, each blank being folded alternately to the right and left, one blank being adapted to overlie and fit upon the other blank, the two blanks being secured together at the apex of the folds whereby compartments are formed approximately equal in number to the folds of each blank, blocks at the ends to which the two end folds of each blank are secured, thread in the compartments which project beyond the compartments at one end, and provided with loops at the other end of the blanks; the blocks at that end of the blanks at which the loops of the threads are located being adapted to be brought toward each other, and a flexible band passing

through the said loops and having a bearing on said blocks.

15. A thread-package consisting of two correspondingly-folded blanks, each blank being  
5 folded alternately to the right and left, one blank being adapted to overlie and fit upon the other blank, the two blanks being secured together at the apex of the folds whereby compartments are formed approximately equal in  
10 number to the folds of each blank, thread in the compartments which project beyond the compartments at one end, and provided with

loops at the other end, of the blanks; the ends of the several compartments at which the loops of the threads are located being adapted  
15 to be brought toward each other, and a flexible band passing through the said loops.

In testimony of which invention I have hereunto set my hand.

FRED E. HALL.

Witnesses:

M. F. ELLIS,

FRANK S. BUSSER.