G. A. ROBERTS.

PACKAGE TIER.

APPLICATION FILED JAN. 15, 1913.

1,079,882. Patented Nov. 25, 1913.

Fig. 1.

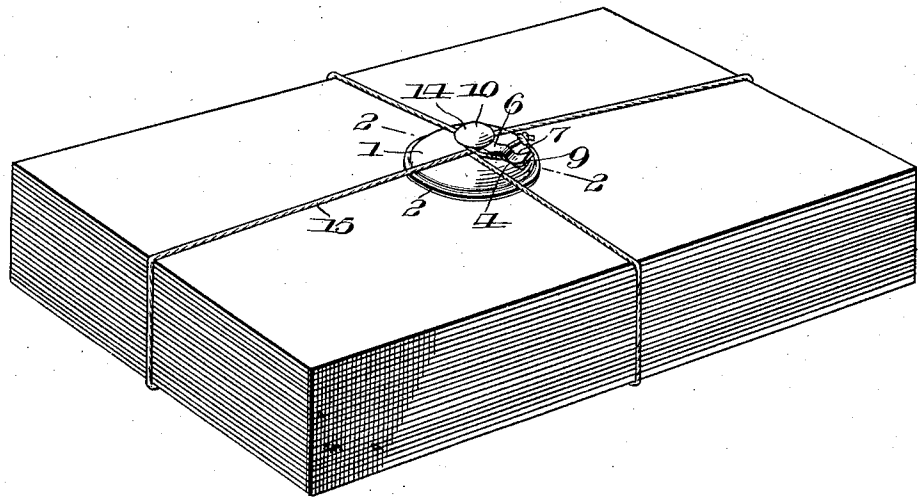
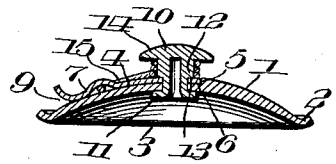


Fig. 2.



Witnesses

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PACKAGE-TIER.

1,079,882. Specification of Letters Patent. Patented Nov. 25, 1913.

Application filed January 15, 1913. Serial No. 742,242.

To all whom it may concern:

Be it known that I, GEORGE A. ROBERTS, a subject of the King of Great Britain, residing at Wollaston, in the county of Norfolk and State of Massachusetts, have invented new and useful Improvements in Package-Tiers, of which the following is a specification.

This invention relates to package tiers or analogous binders; and it has for its object the provision of a device of this character which will include a locking disk and a flexible binding element, the latter being associated with the former in such manner that it may be conveniently wrapped about the package and then finally connected with the disk so as to positively prevent said flexible binder from casual derangement or disconnection from the disk.

Another object of the invention is to provide a device of this character which will facilitate arranging documents, letter-sheets, sample cards or the like to be readily bound in package form and in such manner that the package can be quickly opened when desired.

Another object of the invention is to provide a terminal locking element on the disk and means for maintaining a fixed position of said element so as to insure its proper presentation to the free end of the binding element.

With these and other objects in view, the invention consists of certain novel features of construction, combination and arrangement of parts, as will be hereinafter described and claimed.

In the accompanying drawings:—Figure 1 is a perspective view of the binder, showing the application of the same to a package; and Fig. 2 is a section on line 2—2 of Fig. 1.

The device comprises a disk 1 of concavo-convex configuration, the marginal edge of the disk being up-turned as at 2, so as to present a lower curved smooth surface 3, which is adapted to lie in direct contact with the package. The disk is disposed with its convex-surface uppermost and as illustrated said disk is provided with a depression 4 having straight side walls and a vertical stop shoulder 5. This depression accommodates the inner terminal 6 of a retaining element of spring 7. The spring is provided with a portion 8 which is curved away from the adjacent convex-surface of the disk, so as to provide an outwardly flared entrance passage 9. The inner end or terminal 6 lies in contact with the shoulder 5 whereby a definite position of the spring is maintained upon the disk. A rivet 10 is extended through the terminal 6 of the spring and through the central portion of the disk and then upset at 11 against the concave-surface of the disk. Said rivet is provided with an enlargement 12 terminating at its inner end in a shoulder 13 which is engaged directly against the upper surface of the spring terminal 6. The rivet terminates in a guard head 14, as illustrated.

The clamping element 15 is preferably in the form of a single strand of cord or like flexible material which is wrapped around the enlarged portion 12 of the rivet and confined between the head or button 14 and the adjacent surface of the convex-surface of the disk. Said binding element may be of any suitable length whereby it may be wound one or many times around the package to provide right angularly disposed leads and to permit the free knotted terminal 16 to be associated with the locking terminal of the spring 7 and securely confined against the convex-surface of the disk. It is of course understood that during the operation of winding the binder in opposite directions around the package, the portion 12 serves as a fulcrum post, around which the binder may be wound and then extended in any desired direction around the package.

The rivet, as described, positively holds the inner terminal 6 in the recess whereby the spring is effectually held against rotary movements upon the disk. In this manner the binder receiving end of the spring is held in proper receiving proximity relatively of the windings of the binder so as to effectually receive the free end of said binder.

From the foregoing description, taken in connection with the accompanying drawings, the construction and operation of the invention will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion and the minor details of construction may be resorted to without departing from the

principle or sacrificing any of the advantages of this invention, as claimed.

Having thus described my invention, what I claim is:—

A package binder comprising a concavo-convex disk having a central passage therein and a radial recess formed on the convexity of the disk and terminating at its inner end around said central passage and terminating at its outer end onto the disk at a point within the marginal edge thereof, a sheet-metal spring curved to conform with the convex-surface of the disk and having a portion seated in the recess and having its free end curved outwardly away from the convex-surface at a point beyond the outer end of the recess, a rivet having a reduced portion extending through the inner end of the spring and through the central passage in the disk and up-struck against the walls of the concave-surface of the disk and having an upper enlargement extending above the convex-surface of the disk centrally of the latter and terminating in a relatively broad head lying in spaced relation with the convex-surface of the disk and having a shoulder seated directly against the spring whereby to confine the latter in the recess and thereby hold the spring against moving around the rivet and a flexible member having one of its terminals secured to said rivet at a point above the convex-surface of the disk.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE A. ROBERTS.

Witnesses:
ALBERT M. BLAKE,
GEORGE B. LORING.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."