S. C. CARY.

WIRE PACKAGE BINDER.

APPLICATION FILED MAR. 31, 1922.

1,419,110. Patented June 6, 1922.

FIG. 1

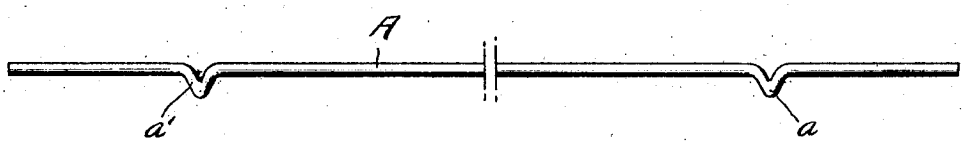


FIG. 2

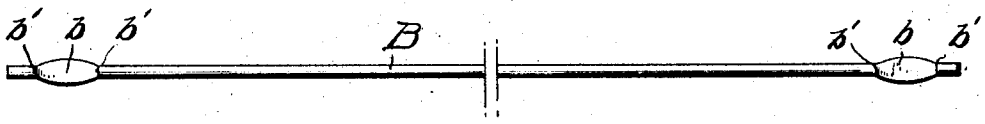


FIG. 3

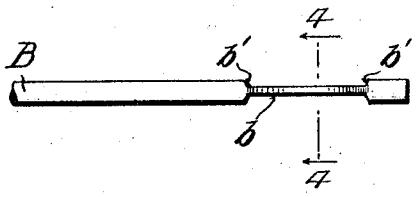


FIG. 4

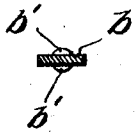
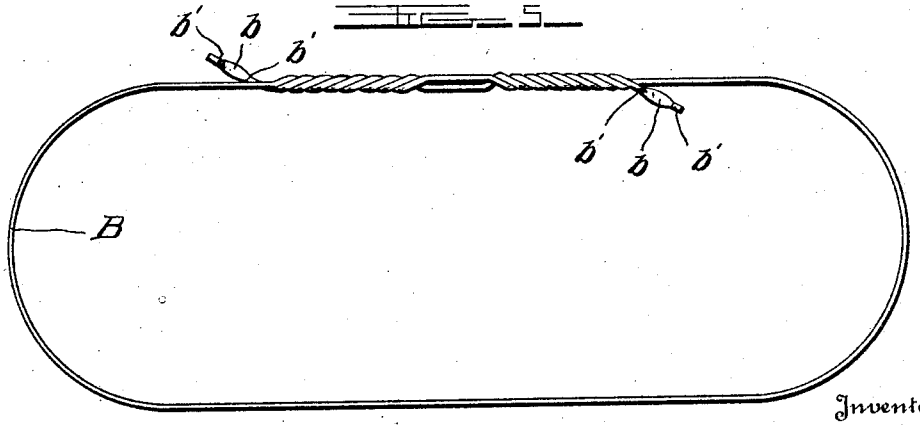


FIG. 5



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WIRE PACKAGE BINDER.

1,419,110. Specification of Letters Patent. **Patented June 6, 1922.**

Application filed March 31, 1922. Serial No. 548,500.

To all whom it may concern:

Be it known that I, SPENCER C. CARY, a citizen of the United States, residing at the city of New York, borough of Brooklyn, county of Kings, and State of New York, have invented a certain new and useful Wire Package Binder, of which the following is a specification.

This invention is a wire package binder, which is so applied to a package as to embed the wire in the material composing the package or its enclosing case, with a view to compensating for shrinkage, and to prevent the binder from slipping off the package or its enclosing casing, thus obviating the requirement for the use of staples, or other fasteners, to preclude the binder from displacement from said package in case of shrinkage.

In the art of binding packages with wire it is desirable, if not essential, that the wire binder shall be placed under tension, but it is found that the wire has a tendency to slip in the tensioning means and thus defeat the object of sufficiently tensioning the binder.

My purpose is to provide a binder of novel construction which is held or gripped in such a way as to preclude slipping of said binder in the direction of its length while being put under tension, and insuring its being thus held while the ends of the binder are united.

The invention consists of a wire binder composed of a length of wire having a portion adjacent an end deflected out of the plane of the wire to produce a shoulder, said shouldered part of the wire serving in conjunction with an abutment of an appropriate tensioning means to positively restrain the binder from slipping during the operation of applying tension to said binder.

In the drawings—

Figure 1 is an elevation of a wire binder embodying this invention.

Figure 2 is a similar view of another form of the wire binder.

Figure 3 is an enlarged detail of an end portion of the binder shown in Figure 2.

Figure 4 is a cross section on the line 4—4 of Figure 3.

Figure 5 is a view of the wire binder with its ends united.

The purpose of my invention as above outlined may be accomplished in a variety of ways, two of which are shown in the drawings.

In Figure 1 the wire binder A is provided with a shoulder *a*, or with a plurality of shoulders *a a'*, said shoulders being offset from the plane of the wire. When a single shoulder is used, it is formed on the wire near one end portion thereof, but in case two shoulders are used as at *a a'*, they are provided near the respective ends of the binder. These shoulders are preformed, and they are produced by any means suitable for the purpose. Said shoulders perform the function of abutments, and they are adapted to co-operate with abutments of suitable tensioning means by which the wire binder is put under tension after having been placed around the package. It is necessary to apply very considerable tension to the wire binder in order to embed said binder in the corners of the package with a view to preventing the binder from slipping off the package in case of shrinkage; in fact, it is not sufficient in applying binders to packages to merely draw the wire taut, but subsequently to the operation of taking up slack in the wire so as to place it in a taut condition, it is desirable to apply such further tension to the binder as to cause it to be embedded in the corners of the package. By the use of my wire binder the shoulders of which are in abutting relation to co-operative abutments of the tensioning means the wire is held against slipping, not only while being tensioned, but after having been put under the requisite tension and while the ends of the wire binder are being united.

The wire B shown in Figures 2, 3 and 4 is shouldered by flattening the wire to deflect it out of the plane of the wire proper as seen at *b*. This deflection of the wire produces shoulders *b'* serving as abutments and co-operative with abutments of a desired tensioning means, for the same purpose as the shoulders seen in Figure 1.

When used in conjunction with means for applying tension to the binder at one of its end portions only, the shoulder at the other end may co-operate with any suitable means for holding the said end against slipping during the tensioning operation.

It is to be noted that in both forms of the shouldered wire there is a recess with an intervening space forming separated shoul-

ders, but an essential feature of the invention is the formation of the wire to produce an abutting shoulder with a terminal portion of the wire extending freely beyond said shoulder.

Figure 5 shows a wire binder as it appears after having been placed around a package, tensioned, and united by twisting the ends together, the package not being shown. If desired, the protruding end portions of the wire may be cut off close to the twisted parts, the shouldered portions having served their function.

Having thus fully described the invention, what I claim as new and desire to secure by Letters Patent is:

1. A wire package binder recessed and shouldered adjacent an end and producing an abutment to prevent endwise movement of the binder when put under tension.

2. As a new article, a wire package binder preformed to produce a recess and an abutment to prevent endwise slipping of the binder when put under tension.

3. As a new article, a wire package binder having a portion adjacent an end deflected out of the plane of the wire and producing a recess and an abutment to serve with a coacting abutment to prevent endwise slipping of the binder when the latter is placed under tension.

4. A wire package binder formed intermediate its ends with an abutting shoulder, the portion of the wire forming said shoulder being offset from the median line of the wire with the end of the wire extended freely beyond said shoulder.

5. A wire package binder recessed adjacent an end portion and producing a shoulder adapted to resist slipping when tension is applied thereto.

6. A package binder comprising a length of wire deflected adjacent an end portion thereof and producing a shoulder adapted to resist slipping when tension is applied thereto, one end portion of the wire extending freely for an appreciable distance beyond said shoulder.

7. A wire package binder deflected at a point adjacent an end portion and provided with a plurality of shoulders separated by an intervening space, said shoulders operating to prevent slipping when tension is applied to the wire.

In testimony whereof I have hereto signed my name this 30th day of March, 1922.

SPENCER C. CARY.