J. J. FLANIGAN.

PACKAGE.

APPLICATION FILED SEPT. 8, 1917.

1,288,401.

Patented Dec. 17, 1918.

Fig. 1.

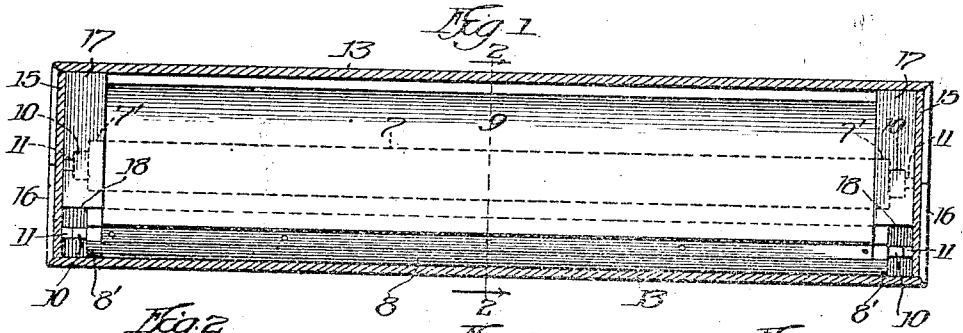


Fig. 2.

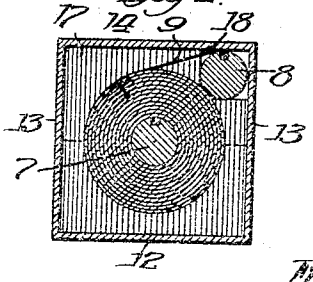


Fig. 3

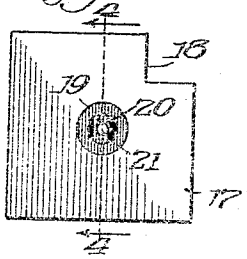


Fig. 4

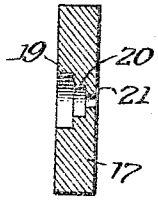


Fig. 5.

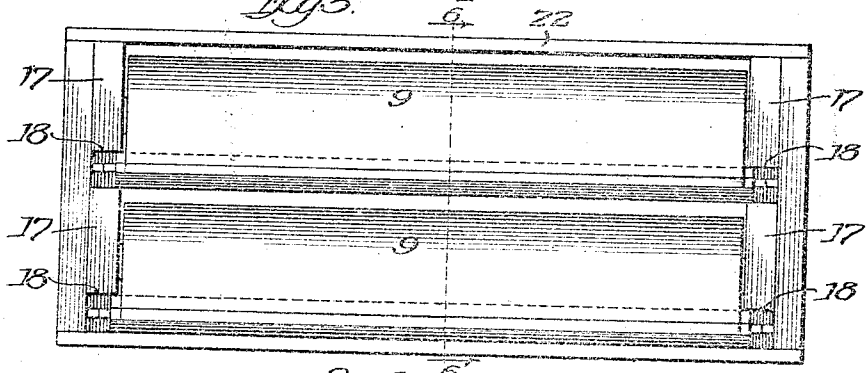
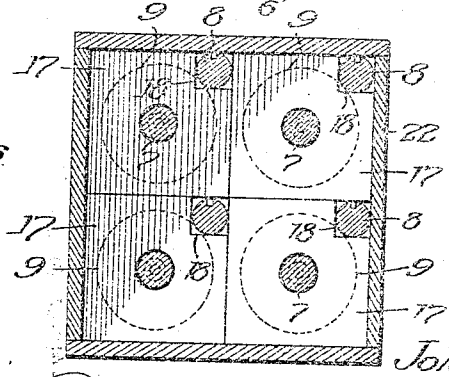


Fig. 6.



Witness:

E. L. Morrison

Inventor

John J. Flanigan,

By Pond & Wilson

Attys

THE ROBBS PATENT CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JOHN J. FLANIGAN, OF CHICAGO, ILLINOIS, ASSIGNOR TO DUPLICATOR MANUFACTURING COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF WEST VIRGINIA.

PACKAGE.

1,288,401. Specification of Letters Patent. Patented Dec. 17, 1918.

Application filed September 8, 1917. Serial No. 190,290.

To all whom it may concern:

Be it known that I, JOHN J. FLANIGAN, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Packages, of which the following is a specification.

This invention relates to improvements in packages, and has reference more particularly to a special package or receptacle for containing the so-called "rolls" of multiple copying machines or hectographs, each of such rolls comprising a pair of spindles and a gelatin apron or band that is wound in the form of a roll on one of said spindles and has its two ends connected to said spindles respectively. These spindles are of the general type and construction illustrated in Figure 17 of my former Patent No. 965,887, dated August 2, 1910, except that, as now manufactured by me, they omit the end flanges or heads shown in said patent, but they are formed at their ends with squared portions for engaging a winding chuck and with reduced rounded portions for engaging journal bearings of the machine in which they are used.

Owing to the rather fragile and delicate nature of the gelatin duplicating band great care has to be exercised in the packaging and shipping of these rolls to prevent injury thereto; and the main object of the present invention is to provide a simple and inexpensive receptacle in which these rolls may be packaged and shipped or stored without liability of mashing, distorting, scratching, tearing or otherwise injurying the band, or breaking or otherwise injuring the spindles. Another object of the invention is to provide a package which shall be of such a construction as to maintain the wound band always in true unwinding position on the spindle and prevent it from slipping, sliding or skewing lengthwise of the spindle in either direction.

Other objects and advantages of the invention will be apparent to those skilled in the art from the following detailed description, taken in connection with the accompanying drawing forming a part of this specification wherein I have illustrated a practical and preferred embodiment of the invention, and in which—

Fig. 1 is a top plan view, with the top wall cut off, of a loaded package adapted to contain but a single roll, and embodying my present improvements.

Fig. 2 is a cross-section on the line 2—2 of Fig. 1.

Fig. 3 is a detail view, showing in inner side elevation one of the blocks which support the ends of the spindles.

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

Fig. 5 is a top plan view, with the top wall omitted, of a loaded package adapted to contain a plurality of rolls, and illustrating the application of my present improvements to such a package.

Fig. 6 is a cross-section on the line 6—6 of Fig. 5.

Referring to the drawing, 7 and 8 designate the two spindles, which are duplicates of each other, and 9 designates the gelatin printing band that, in the packing and shipping condition of the outfit is wound in the form of a cylinder or roll on one of the spindles, for instance, the spindle 7. The spindles in this instance have a length but slightly exceeding the width of the band, the entire portion thereof that projects at each end beyond the end of the wound band or roll comprising a short section 7′ or 8′ of the body of the spindle, the squared chuck-engaging portion 10 and the reduced round bearing portion 11.

The single-roll receptacle shown in Figs. 1 and 2 consists of a rectangular box or carton preferably made from a single sheet of plain or corrugated pasteboard or cardboard suitably cut, bent and folded to provide a bottom wall 12, side walls 13, a top wall 14, and double end flaps or closures 15 and 16, all as usual in this type of carton.

Positioned in each end of the box is a block 17,—preferably a solid block of wood or similar light material of sufficient strength and rigidity to support one-half the

weight of the complete roll. This block just fits the interior height and width of the box, except for a rectangular notch 18 formed at one of the upper corners thereof for a purpose to be later described, and its outer face lies snugly against the end wall of the box. The block is further formed with a central stepped hole or aperture, comprising a portion 19 lying next to the inner face of the block and of a diameter to receive the short projecting section 7′ or 8′ of the spindle body, an intermediate portion 20 of a diameter to receive the squared chuck-engaging portion 10 of the spindle, and a portion 21 lying next to the outer face of the block and of a diameter to receive the reduced bearing portion 11 of the spindle. The shouldered end of the spindle body by engaging the bottom of the recess 19 prevents the block from being crowded over the spindle far enough to injure the band.

By reference to Fig. 1 it will be seen that the inner faces of the two blocks 17 are spaced apart such a distance as to permit the cylindrical roll of the band to fit nicely between them, while the short projecting end portions of the spindle on which the band is wound rest in the central holes of the blocks in the manner above described. The other spindle 8 lies in the upper portion of the box alongside the roll 9, being supported at its ends in the corner notches 18 of the blocks, in the manner clearly shown in Fig. 2, and securely confined against rattling or lateral shifting by the opposite side and top walls of the box.

The same structural principle is embodied in the multiple-roll receptacle illustrated in Figs. 5 and 6. Here a rectangular box, preferably made of wood and designated as an entirety by 22, is of a cross-sectional size to accommodate a plurality (in this instance four) blocks 17 disposed edge to edge. In this arrangement it will be observed that the spindles and rolled bands are all supported and locked entirely out of contact or possibility of contact with each other, the bottom or side edges, or both, of contiguous blocks serving to confine the ends of the empty spindles 8 within their respective notches 18 of the blocks, and the several blocks mutually confining each other in fixed positions within the box.

Among the advantages secured by my improved construction may be mentioned the following. The roll or cylinder 9 is maintained in perfect form, since the blocks 17 obviously prevent its slipping or skewing lengthwise of the spindle even when the package is stood on end. The weight is wholly carried by the blocks through the ends of the spindles, so that no pressure is applied to the rolled band through the walls of the box or otherwise. The spindles themselves are so supported and confined as to prevent them from rattling or shifting either lengthwise or widthwise of the box. The two spindles are always maintained parallel with each other, thus eliminating any tendency to tear the band or disconnect it from the spindles. The blocks 17, being singly or collectively the full height and width of the interior of the box, serve to reinforce and strengthen the latter transversely, to that extent further protecting the roll or rolls from injury due to external lateral pressure on the box.

In a companion application filed concurrently herewith, Serial No. 190,291, I have disclosed and claimed a package or carton specially designed to accommodate a roll having a somewhat narrower duplicating band but employing spindles of the same length as those of the present case. The package shown and claimed herein is designed for the accommodation of the larger and heavier maximum width rolls,—that is, rolls wherein the band has a width approximately equal to the length of the spindles.

It is believed that the nature and advantages of my improved package will be easily understood from the foregoing without further description. Without limiting the invention therefore to the exact details shown,—

I claim:

1. A package designed to contain a pair of spindles and a duplicating band wound in the form of a roll on one of said spindles, comprising a rectangular box, and a pair of loose blocks located in the ends of said box respectively, said blocks at their edges contacting with the longitudinal walls of said box and having holes in their inner opposed faces to receive and support the projecting end portions of the spindle on which the band is wound, and said inner opposed faces of the blocks being spaced apart a distance substantially equal to the width of said band.

2. A package designed to contain a pair of spindles and a duplicating band wound in the form of a roll on one of said spindles, comprising a box, and a pair of blocks located in the ends of said box respectively, said blocks having substantially central holes in their inner opposed faces to receive and support the projecting end portions of the spindle on which the band is wound and marginal notches to accommodate the end portions of the other spindle, and said inner opposed faces of the blocks being spaced apart a distance substantially equal to the width of said band.

3. A package designed to contain a pair of spindles and a duplicating band wound in the form of a roll on one of said spindles, comprising a rectangular box, and a pair of

rectangular solid blocks located in the ends of said box respectively, said blocks having substantially central holes in their inner opposed faces to receive and support the projecting end portions of the spindle on which the band is wound and marginal corner notches to accommodate the end portions of the other spindle, and said inner opposed faces of the blocks being spaced apart a distance substantially equal to the width of said band.

JOHN J. FLANIGAN.

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