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F. W. PAFFEN ET AL

2,470,835

YARN PACKAGE SUPPORT

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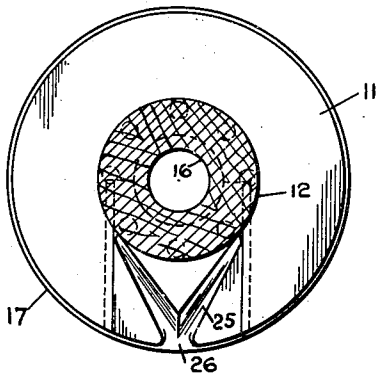


Fig. 1

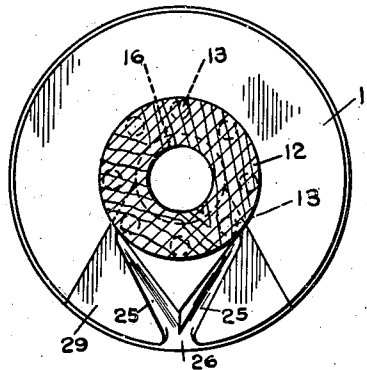


Fig. 5

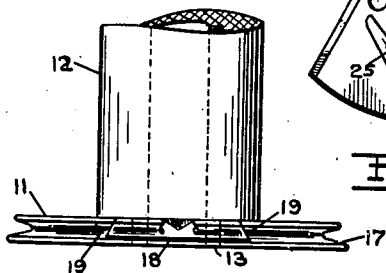


Fig. 2

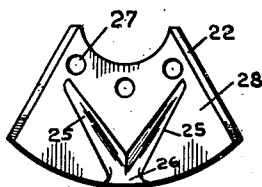


Fig. 4

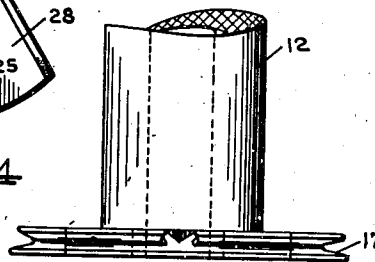


Fig. 6

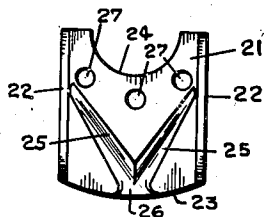


Fig. 3

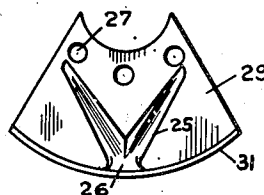


Fig. 7

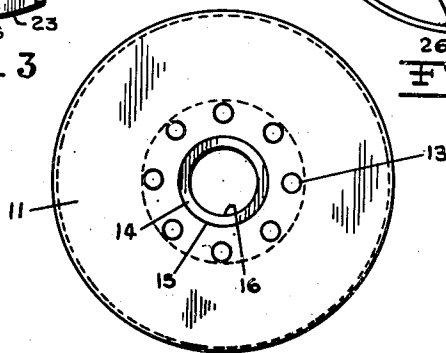


Fig. 8

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YARN PACKAGE SUPPORT

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21 Claims. (Cl. 242—118)

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This invention relates to yarn package supports, and relates more particularly to yarn package supports adapted to receive a magazine wrap or transfer tail.

In Patent No. 2,298,357 to Elvin et al., there is described a yarn package support of a type with which this invention is concerned. The patented yarn package support comprises a base flange, usually made of pressed fiber, attached to a cylindrical barrel which is adapted to receive the spindle of a suitable yarn winding machine. The top of the barrel is usually also provided with a flange. The base flange is provided with a peripheral groove, and its upper plane surface is provided with one or more grooves positioned tangentially to the barrel and communicating with the peripheral groove.

In use the yarn package support referred to above is highly satisfactory. However, the manufacture of the package support, particularly the preparation of the grooved base flange, is uneconomical. Heretofore, the base flange was made from a pressed fiber disk of suitable dimension by employing a lathe to machine the peripheral groove and hand tools to cut the tangential grooves and to smooth and round off the edges of said tangential grooves. The manual operations involved in preparing the tangential grooves are time consuming and costly.

It is an important object of this invention to provide a yarn package support, adapted to receive a magazine wrap or transfer tail, having a novel base flange which may be readily prepared and at low cost.

Another object of this invention is the provision of a yarn package support, adapted to receive a magazine wrap or transfer tail, having a base flange in which the tangential grooves are present in a preformed insert and held in position in said base flange.

A further object of this invention is the provision of a novel base flange for a yarn package support, wherein there is provided a recess having therein a preformed insert.

Other objects of this invention, together with certain details of construction and arrangement of parts, will appear from the following detailed description and drawing.

In the accompanying drawing, wherein certain preferred embodiments of this invention are shown,

Figure 1 is a plane view of a yarn package support, partly in section showing one form of a base flange made in accordance with this invention,

Figure 2 is a fragmentary front elevational view of the yarn package support shown in Figure 1, showing an end view of the insert,

Figure 3 is a plane view of the insert shown in the flange in Figures 1 and 2,

Figure 4 is a plane view of another form of in-

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sert which may be employed in the yarn package support shown in Figures 1 and 2 in place of the insert shown in Figure 3,

Figures 5, 6 and 7 are views similar to those shown in Figures 1, 2 and 3, respectively, but showing another modification of this invention, and

Figure 8 is a bottom view of the base flange of the yarn package support of the modification shown in Figures 1 and 2.

Like reference numerals indicate like parts throughout the several views of the drawing.

Referring now to the drawing, and particularly to Figures 1, 2, 3 and 8, there is shown a yarn package support having a base flange 11 which is attached to a barrel 12 of the conventional type for the reception of a spindle adapted to rotate the yarn package support in the usual manner. Nails or screws 13 are employed to secure the base flange to the barrel 12. A plug 14 of hard wood or other suitable material is fitted through opening 15 in the base flange into the bore of the barrel, the bore 16 of the plug 14 registering with the bore of the barrel 11 to form a bearing member for said yarn package support. The upper part of the barrel usually is also provided with a flange.

The base flange 11 of the present invention is prepared from a disk of any suitable material such as pressed fiber, wood or synthetic plastic material but preferably of pressed fiber. A peripheral groove 17 is first machined completely around the circumference of the base flange 11. A portion of the upper plane surface of the base flange is then cut away to form a recess 18 having inwardly tapering side walls 19. The size and shape of the recess should be such as receive substantially exactly insert 21. The side edges of the insert are provided with inwardly tapering edges 22 to correspond with tapered side walls 19 of the recess 18. One end 23 of the insert is grooved and curved to correspond to the configuration of the peripheral groove 17 and the other end 24 is indented on a radius corresponding substantially to the radius of plug 14. The upper surface for insert 21 is provided with grooves 25 meeting to form a slot 26 in end 23. The arrangement of the grooves 25 is such that when the insert is in position in recess 18 the grooves are at a tangent to barrel 12. Preferably, the insert is provided with holes 27 spaced so that certain of the nails or screws 13 passing through the base flange 11 into the barrel 12 will also pass through the insert and retain the same in position therein.

In Figure 4, there is shown an insert 28 formed substantially similar to insert 21 except that its configuration is that of a sector of a circle of substantially the same diameter of base flange 11. The recess for receiving said insert 28 should, of

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course, be made to conform to the shape of said insert 28.

In Figures 5, 6 and 7 is shown another modification of this invention, wherein the base flange 11 is first provided with a peripheral groove 17 and then cut through both plane surfaces to remove therefrom a sector substantially corresponding in shape to insert 29, shown in Figure 7. Insert 29 should exactly correspond in configuration to the sector removed from the base flange 11 and groove 31 in the end of said insert should be coextensive with peripheral groove 17.

The inserts 21, 28 and 29 may be made of any material which may be stamped, cast or molded. For example, they may be stamped or cast from any suitable metal such as brass or aluminum, or they may be molded from any suitable synthetic plastic material such as cellulose acetate or other derivative of cellulose or from synthetic resins. Since the stamped, cast or molded inserts require no more than a buffing or polishing operation to prepare the same for use, the time and expense of making tangential grooves 25 is substantially reduced and the cost of the finished yarn package support is considerably lowered, yet the advantage of employing a base flange of pressed fiber is retained.

It is to be understood that the foregoing detailed description is merely given by way of illustration and that many variations may be made therein without departing from the spirit of our invention.

Having described our invention, what we desire to secure by Letters Patent is:

1. A yarn package support having a barrel and a base flange attached thereto, said base flange comprising a disk having a peripheral groove in the circumference thereof and a recess extending inwardly of said disk from said peripheral groove, and an insert, having on the plane surface thereof a groove extending into said peripheral groove, mounted in said recess.
2. A yarn package support having a barrel and a base flange attached thereto, said base flange comprising a disk having a peripheral groove in the circumference thereof and a recess extending inwardly of said disk from said peripheral groove, and an insert of substantially the same dimensions as said recess mounted in said recess, said insert having on the plane surface thereof at least one groove extending into said peripheral groove.
3. A yarn package support having a barrel and a base flange attached thereto, said base flange comprising a disk having a peripheral groove in the circumference thereof and a recess in the upper plane surface of said disk and extending inwardly of said disk from said peripheral groove, and an insert of substantially the same dimensions as said recess mounted in said recess, said insert having on the plane surface thereof at least one groove extending into said peripheral groove.
4. A yarn package support having a barrel and a base flange attached thereto, said base flange comprising a disk having a peripheral groove in the circumference thereof and a recess having the configuration of a sector and extending inwardly of said disk from said peripheral groove, and an insert of substantially the same dimensions as said recess mounted in said recess, said insert having on the plane surface thereof at least one groove extending into said peripheral groove.
5. A yarn package support having a barrel and a base flange attached thereto, said base flange comprising a disk having a peripheral groove in

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the circumference thereof and a recess in the upper plane surface of said disk, said recess having the configuration of a sector and extending inwardly of said flange from said peripheral groove, and an insert of substantially the same dimensions as said recess mounted in said recess, said insert having on the plane surface thereof at least one groove extending into said peripheral groove.

6. A yarn package support having a barrel and a base flange attached thereto, said base flange comprising a disk having a peripheral groove in the circumference thereof and a recess extending inwardly of said disk from said peripheral groove, and an insert of substantially the same dimensions as said recess and of different material from said disk mounted in said recess, said insert having on the plane surface thereof at least one groove extending into said peripheral groove.

7. A yarn package support having a barrel and a base flange attached thereto, said base flange comprising a pressed fiber disk having a peripheral groove in the circumference thereof and a recess extending inwardly of said disk from said peripheral groove, and an insert of substantially the same dimensions as said recess and of different material from said disk mounted in said recess, said insert having on the plane surface thereof at least one groove extending into said peripheral groove.

8. A yarn package support having a barrel and a base flange attached thereto, said base flange comprising a disk having an opening therein, a peripheral groove in the circumference thereof and a radial recess in the upper plane surface thereof, said recess extending from said peripheral groove to said opening and having the configuration of the sector, and an insert of substantially the same dimensions as said recess and of different material than said disk mounted in said recess, said insert having on the plane surface thereof at least one groove extending into said peripheral groove.

9. A yarn package support having a barrel and a base flange attached thereto, said base flange comprising a disk having an opening therein, a peripheral groove in the circumference thereof and a radial recess in the upper plane surface thereof, said recess extending from said peripheral groove to said opening and having the configuration of the sector, and a metallic material insert of substantially the same dimensions as said recess, said insert having on the plane surface thereof at least one groove extending into said peripheral groove.

10. A yarn package support having a barrel and a base flange attached thereto, said base flange comprising a pressed fiber disk having an opening therein, a peripheral groove in the circumference thereof and a radial recess in the upper plane surface thereof, said recess extending from said peripheral groove to said opening and having the configuration of the sector, and an insert of substantially the same dimensions as said recess and of different material than said disk mounted in said recess, said insert having on the plane surface thereof at least one groove extending into said peripheral groove.

11. A yarn package support having a barrel and a base flange attached thereto, said base flange comprising a disk having a peripheral groove in the circumference thereof and a recess having inwardly tapering side walls extending inwardly of said disk from said peripheral groove, and an insert of substantially the same

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dimensions as said recess and having inwardly tapering edges mounted in said recess, said insert having on the plane surface thereof at least one groove extending into said peripheral groove.

12. A yarn package support having a barrel and a base flange attached thereto, said base flange comprising a disk having a peripheral groove in the circumference thereof and having in the upper plane surfaces thereof a recess having inwardly tapering side walls extending inwardly of said disk from said peripheral groove, and an insert of substantially the same dimensions as said recess and having inwardly tapering edges mounted in said recess, said insert having on the plane surface thereof at least one groove extending into said peripheral groove.

13. A yarn package support having a barrel and a base flange attached thereto, said base flange comprising a disk having a central opening, a peripheral groove around the circumference of said disk and a radial recess extending from said opening to the periphery of said disk and an insert of substantially the same dimensions as said recess mounted in said recess, said insert having at least one groove which when the insert is in position in said recess is at a tangent to said barrel and extends into said peripheral groove.

14. A yarn package support having a barrel and a base flange attached thereto, said base flange comprising a pressed fiber disk having a central opening, a peripheral groove around the circumference of said disk and a radial recess extending from said opening to the periphery of said disk and an insert of substantially the same dimensions as said recess and of different material from said disk mounted in said recess, said insert having at least one groove which when the insert is in position in said recess is at a tangent to said barrel and extends into said peripheral groove.

15. A yarn package support having a barrel and a base flange attached thereto, said base flange comprising a disk having a central opening, a peripheral groove around the circumference of said disk and a radial recess extending from said opening to the periphery of said disk and a metallic insert of substantially the same dimensions as said recess mounted in said recess, said insert having at least one groove which when the insert is in position in said recess is at a tangent to said barrel and extends into said peripheral groove.

16. A yarn package support having a barrel and a base flange attached thereto, said base flange comprising a disk having a central opening, a peripheral groove around the circumference of said disk and a radial recess extending from said opening to the periphery of said disk and a synthetic plastic insert of substantially the same dimensions as said recess mounted in said recess, said insert having at least one groove which when the insert is in position in said recess is at a tangent to said barrel and extends into said peripheral groove.

17. A yarn package support having a barrel and a base flange attached thereto, said base flange comprising a disk having a central opening, a peripheral groove around the circumference of said disk and a radial recess extending from said opening to the periphery of said disk and a cellulose acetate insert of substantially the

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same dimensions as said recess mounted in said recess, said insert having at least one groove which when the insert is in position in said recess is at a tangent to said barrel and extends into said peripheral groove.

18. A yarn package support having a barrel and a base flange attached thereto, said base flange comprising a disk having a central opening, a peripheral groove around the circumference of said disk and a radial recess extending from said opening to the periphery of said disk and a synthetic resin insert of substantially the same dimensions as said recess mounted in said recess, said insert having at least one groove which when the insert is in position in said recess is at a tangent to said barrel and extends into said peripheral groove.

19. A yarn package support having a barrel and a base flange attached thereto, said base flange comprising a pressed fiber disk having a central opening, a peripheral groove around the circumference of said disk and in the upper plane surface a radial recess having inwardly tapering side walls extending from said opening to the periphery of said disk and a metallic insert of substantially the same dimensions as said recess and having inwardly tapering edges mounted in said recess, said metallic insert having at least one groove which when the insert is in position in said recess is at a tangent to said barrel and extends into said peripheral groove.

20. A yarn package support having a barrel and a base flange attached thereto, said base flange comprising a pressed fiber disk having a central opening, a peripheral groove around the circumference of said disk and in the upper plane surface a radial recess having inwardly tapering side walls extending from said opening to the periphery of said disk and a synthetic plastic insert of substantially the same dimensions as said recess and having inwardly tapering edges mounted in said recess, said insert having at least one groove which when the insert is in position in said recess is at a tangent to said barrel and extends into said peripheral groove.

21. A yarn package support having a barrel and a base flange attached thereto, said base flange comprising a pressed fiber disk having a central opening, a peripheral groove around the circumference of said disk and in the upper plane surface a radial recess having inwardly tapering side walls extending from said opening to the periphery of said disk and a cellulose acetate insert of substantially the same dimensions as said recess and having inwardly tapering edges mounted in said recess, said insert having at least one groove which when the insert is in position in said recess is at a tangent to said barrel and extends into said peripheral groove.

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The following references are of record in the file of this patent:

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