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R. SARDESON

2,992,789

REELS

Filed Jan. 20, 1958

FIG. 1

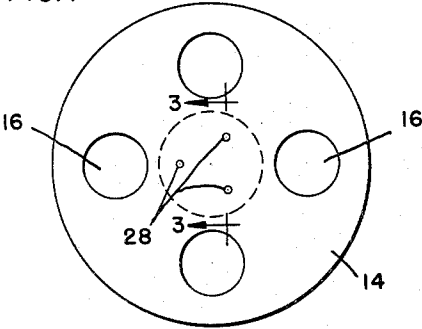


FIG. 2

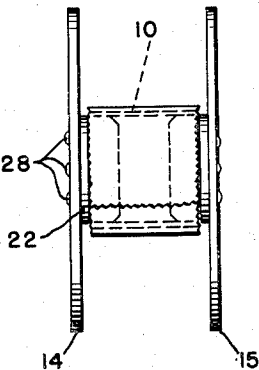


FIG. 3

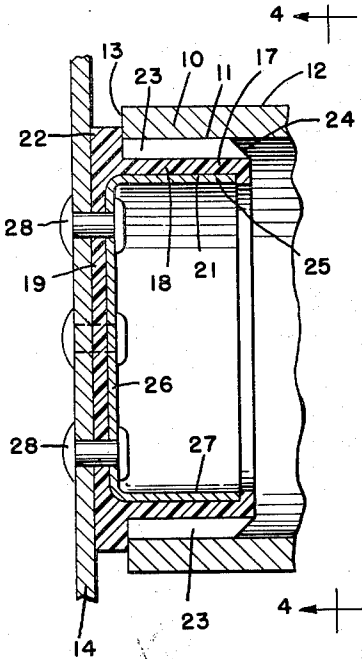
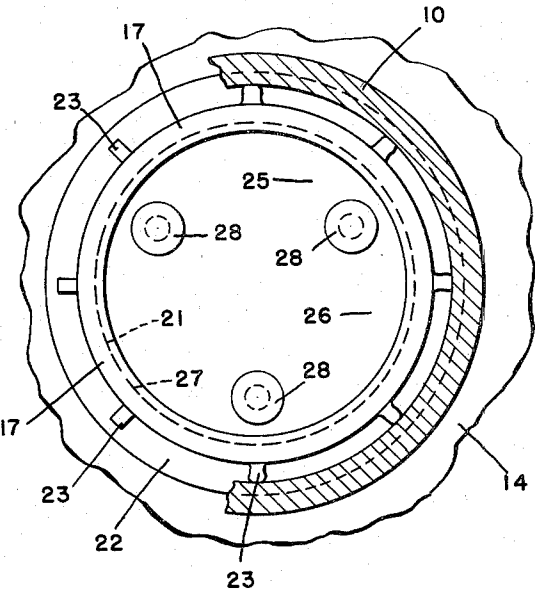


FIG. 4



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2,992,789
REELS

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The herein disclosed invention relates to reels and has for an object to provide a reel having a core with end plates readily attached to and detachable therefrom.

An object of the invention resides in providing a reel particularly adaptable for use in storing photographic films and prints in strip form.

In the sale of photographic printing paper, the paper is furnished in strip form and is wound on a paper core which is subsequently discarded. The instant invention provides reel end plates which may be utilized in conjunction with such cores to form reels for supporting the prints or films when required.

Another object of the invention resides in providing an end plate having a boss thereon formed of flexible, resilient material adapted to frictionally engage the inner surface of the core and to be detachably mounted thereon.

An object of the invention resides in constructing the boss annular in form with an outwardly opening cavity therein and having a cylindrical body portion with a flange at the end thereof and overlying the end plate.

A still further object of the invention resides in constructing the boss with a collar disposed at the end thereof adjacent said end plate and projecting radially outwardly therefrom and of a diameter somewhat less than the outer diameter of said core.

A feature of the invention resides in providing on said boss ribs extending longitudinally thereof and up to said collar, said ribs being constructed of flexible, resilient material adapted to engage the inner surface of the core to hold the reel and plates attached to the core.

Other objects of the invention reside in the novel combination and arrangement of parts and in the details of construction hereinafter illustrated and/or described.

In the drawings:

FIG. 1 is an end elevational view of a reel illustrating an embodiment of the invention.

FIG. 2 is a side elevational view of the reel.

FIG. 3 is a fragmentary sectional view of the reel taken on line 3—3 of FIG. 1 and drawn to a greater scale.

FIG. 4 is a fragmentary sectional view taken on line 4—4 of FIG. 3 and drawn to the same scale as FIG. 3.

The invention consists of a core 10 constructed of paper board which is tubular in form and which has a bore 11 extending through the same. This core is formed with a cylindrical outer surface 12 and with ends 13 which are planiform and at right angles to the axis of the core. Photographic printing paper used for making photographic prints is usually wound on such cores which may be conveniently used as the core of the instant invention.

Mounted on the two ends of the core are end plates 14 and 15 which are constructed of rigid material such as fiber board or metal. Both of these end plates are identical in construction and only the end plate 14 and attached structure, which has been shown in detail in FIGS. 3 and 4, will be described. The end plate 14 is circular in form and is provided with openings 16 which lighten the same and which serve as windows through which the amount of material rolled on the reel can be ascertained.

Attached to the reel end plate 14 at the center thereof is a boss 17 constructed of rubber or some other suitable, flexible, resilient material. This boss is annular in form and has a cylindrical body portion 18 with a flange 19 integral therewith. This construction forms a cylindrical cavity 21 in the boss 17 open at the outer end of the body

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portion 18. Extending outwardly from the body portion 18 at the end of the boss 17 adjacent end plate 14 is a collar 22 which is of lesser diameter than the outer diameter of the surface 12 of core 10. This collar spaces the end 13 of said core from the end plate 14 and is formed integral with and constitutes a part of the boss 17. Also formed as part of the boss 17 and integral therewith are a number of longitudinally extending ribs 23 which extend up to said collar and are integral therewith. These ribs have tapered ends 24. The said ribs form a cylinder the diameter of which is slightly greater than the diameter of the bore 11 of core 10. These ribs are adapted to frictionally engage the inner surface of the core 10 at bore 11 and to hold the boss detachably secured to said core.

The boss 17 is attached to the core by means of a metal cup-shaped insert 25 which has a circular back 26 and an annular rim 27 extending axially therefrom. This insert is received in the cavity 21 with the back 26 overlying flange 19 and with the rim 27 contacting the inner surface of the cylindrical body portion 18. The boss 17 may be cast on the insert 25 and thus bonded to the same, or said boss may be separately cast and the insert applied thereto. For securing the insert in position, rivets 28 are employed which extend through the plate 14, the flange 19 and the back 26, and which are riveted over said back.

The use of the invention is obvious. When desired for use, the end plates 14 and 15 are applied to the ends of the core 10 by merely pressing the bosses 17 into the bore 11 of said core. This compresses the ribs 23 and said ribs frictionally engage the surface of the core at said bore and hold the end plates firmly attached to the core. When not in use, the end plates may be removed and the end plates and core separately stored to economize on storage space. At the same time, the cores may be stored with film or printed paper thereon in the customary manner.

The advantages of the invention are manifest. The device is extremely economical, utilizing as the core of the reel the cores usually furnished with photographic printing paper and ordinarily discarded. Prints may readily be wound on the reel in one department of the print shop and delivered to another department for further processing. The invention is exceedingly inexpensive to manufacture and will operate for an exceedingly great length of time.

Changes in the specific form of the invention, as herein described, may be made within the scope of what is claimed without departing from the spirit of the invention.

Having described the invention, what is claimed as new and desired to be protected by Letters Patent is:

1. A reel comprising a tubular core, an end plate overlying one end of the core and constructed of a rigid material, an annular boss of a different and flexible material overlying said end plate and projecting axially therefrom and received in one end of said core, said boss having a cylindrical cavity therein forming in said boss an annular body portion and an end flange extending across the end thereof adjacent said end plate and engaging said end plate, a cup-shaped insert of rigid material received within said cavity and formed with a back substantially parallel with said end plate and overlying said flange and a rim extending axially therefrom and following along the inner surface of said body portion, fasteners extending through said back, flange and plate and securing said flange and back to said plate, and means on said boss disposed between said core and body portion and frictionally engaging the inner surface of said core to hold said end plate detachably mounted on said end of the core and a second end plate attached to the other end of the core.

2. A reel comprising a tubular core, an end plate overlying one end of the core and constructed of a rigid material, an annular boss of a different and flexible material overlying said end plate and projecting axially therefrom

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and received in one end of said core, said boss having a cylindrical cavity therein open at one end and forming in said boss an annular cylindrical body portion, and a flange extending across the same and overlying said end plate, a collar on said body portion at the portion thereof adjacent said end plate and of lesser diameter than the external diameter of said core and extending outwardly of said core, said collar being disposed between the end of the core adjacent said end plate and said end plate, a cup-shaped insert of rigid material received within said cavity and formed with a back substantially parallel with said end plate overlying said flange and with a rim extending axially therefrom and following along said body portion, fasteners extending through said back, flange and end plate and securing said boss and insert to said end plate, and means on said boss frictionally engaging the inner surface of said core to hold said end plate detachably mounted on said end of the core, and a second end plate attached to the other end of the core.

3. A reel comprising a tubular core, an end plate overlying one end of the core and constructed of a rigid material, an annular boss of a different and flexible material overlying said end plate and projecting axially therefrom and received in one end of said core, said boss having a cylindrical cavity therein open at one end and forming a cylindrical body portion and a flange extending across the same and overlying said end plate, a collar on said body portion at the portion thereof adjacent said end plate and of lesser diameter than the external diameter of said core, said collar being disposed between the end of the core adjacent said end plate and said end plate, a cup-shaped insert of rigid material received within said cavity and formed with a back substantially parallel with said end

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plate and overlying said flange and with an annular rim extending axially therefrom and engaging said body portion, fasteners extending through said back, flange and end plate and securing said boss and insert to said end plate, flexible ribs on said body extending longitudinally thereof and up to the collar, said ribs frictionally engaging the inner surface of said core to hold said end plate detachably mounted on said end of the core and a second end plate attached to the other end of the core.

4. A reel comprising a tubular core, an end plate overlying one end of the core and constructed of a rigid material, an annular boss of a different and flexible material overlying said end plate and projecting axially therefrom and received in one end of said core, said boss having a collar at the end thereof contacting said end plate and extending radially outwardly therefrom, said collar being of lesser diameter than the outer diameter of said core, said collar being disposed between the end of the core adjacent said end plate and said end plate and spacing the end of the core from said end plate, said boss frictionally engaging the inner surface of said core to hold said end plate detachably mounted on said end of the core and a second end plate attached to the other end of the core.

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