July 11, 1950 V. J. FORGETT 2,514,853

HOLDER FOR REELS OF DEVELOPED PHOTOGRAPHIC PAPER

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FIG. 1.

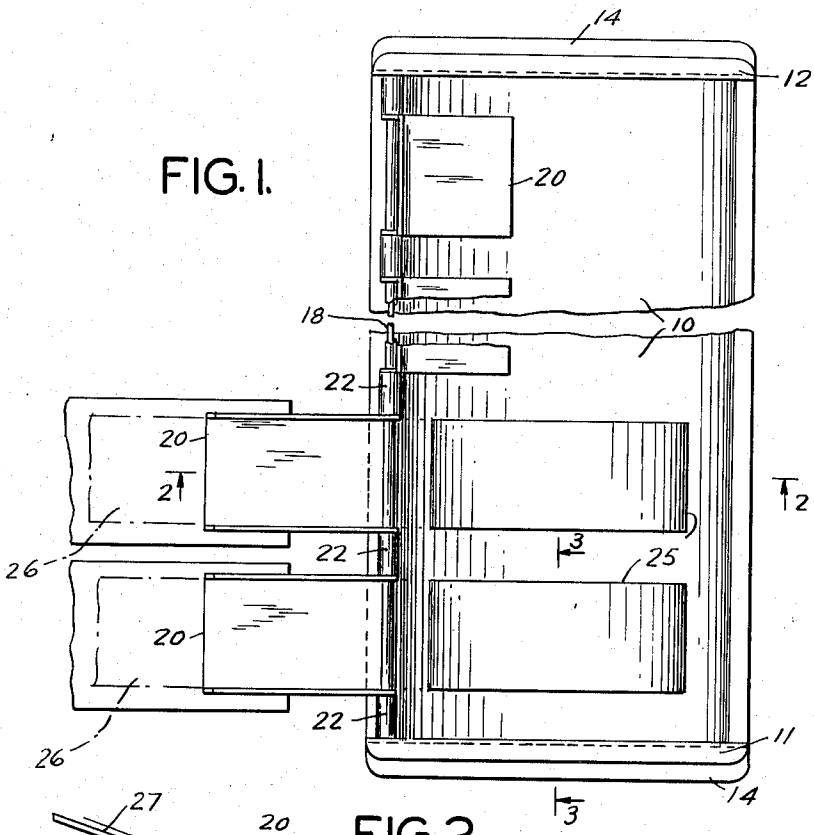


FIG. 2.

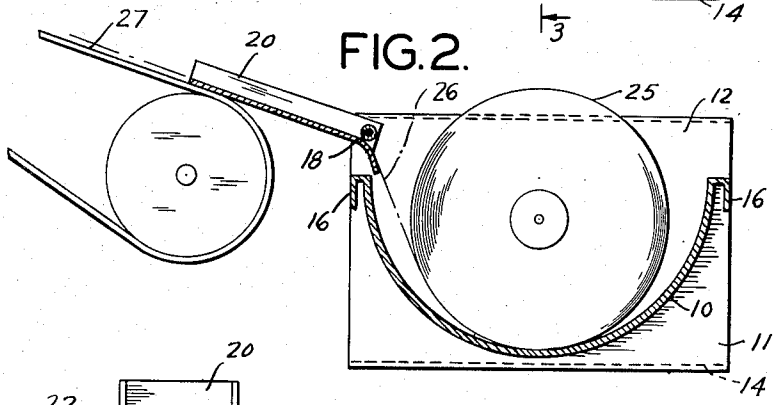
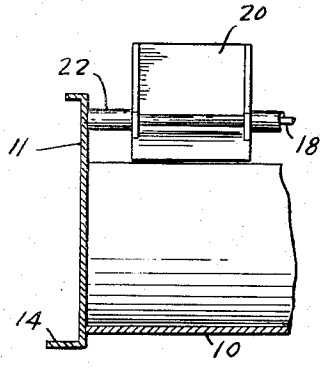


FIG. 3.



INVENTOR.
Valmore J. Forgett.
BY Emery, Vanney, Whittemore & Dix
ATTORNEYS.

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HOLDER FOR REELS OF DEVELOPED PHOTOGRAPHIC PAPER

Valmore J. Forgett, Ridgefield, N. J.

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3 Claims. (Cl. 95—94)

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This invention relates to apparatus for holding reels of photographic paper after they come from a continuous strip developer. The reels are wet and they are passed through a dryer before the individual pictures on the strip are cut apart and sorted.

It is an object of this invention to provide improved apparatus for holding one or more of the wet reels and for maintaining the desired tension on the paper as it is fed to the dryer.

Another object of the invention is to provide such a reel holder with guides that enable it to serve equally well for holding a single reel or a plurality of reels; and it is a feature of the invention that the apparatus is simple, inexpensive to manufacture, and that it is convenient to use, there being no adjustments required regardless of the number of reels with which it is used and regardless of the diameter of the respective reels.

In order to avoid possible damage to pictures as the result of convolutions of the paper becoming partially dry while reeled up and in the holder, this invention includes means for keeping the paper wet while in the holder.

Other objects, features, and advantages of the invention will appear or be pointed out as the description proceeds.

In the drawing, forming a part hereof, in which like reference characters designate corresponding parts in all the views,

Figure 1 is a top plan view of a reel holder embodying this invention,

Figure 2 is a transverse sectional view taken on the line 2—2 of Figure 1,

Figure 3 is a longitudinal sectional view on the line 3—3 of Figure 1.

The reel holder comprises a trough having a substantially semi-cylindrical bottom 10 connected to end walls 11 and 12. These end walls are soldered or otherwise integrally connected with the opposite ends of the bottom 10, and the end walls extend a slight distance below the bottom 10 and have outwardly turned flanges 14 which serve as legs for supporting the holder on a table or other surface.

The bottom 10 and the end walls 11 and 12 are preferably sheet metal. The bottom extends upward to beads 16 formed by turning over the side edges of the sheet metal from which the bottom is constructed. These beads 16 provide additional strength along the edges of the trough.

The end walls 11 and 12 extend for a substantial distance above the beads 16, and support a rod 18 that extends for the full length of the trough. This rod is held against endwise displacement by walls 11 and 12.

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Guides 20 are supported from the rod 18. Each of these guides 20 is a channel-shaped element, preferably of sheet metal; and the rod 18 extends through the opposite sides of each channel and supports the guides 20 for angular movement about the axis of the rod.

The guide 20 nearest to the end wall 11 is spaced from the end wall by a bushing 21 on the rod 18. The guides 20 are spaced from one another by similar bushings 22 on the rod 18, and the guide 20 nearest the other end wall 12 is likewise spaced from the end wall by a sleeve or bushing 21.

The drawing shows reels 25 of photographic paper resting on the bottom 10 and with paper from the outer convolutions paying out through the adjacent guides 20 and held against lateral displacement by these guides 20. The run of the paper passing from each of the reels 25 to a dryer (not shown) is indicated by the reference character 26. The paper passes under the rod 18 and along the guide 20 to a feed belt 27 of the dryer. The upper end of the guide 20 rests on the belt 27. There is preferably a separate belt 27 for each reel. By preventing transverse displacement of the run of the paper being withdrawn from each reel, the guides 20 keep the reels themselves in spaced relation to one another. No matter how small the diameter of the reel becomes, the run of the paper 26 passing along the channelled guide 20 holds the reel against transverse displacement in the trough.

The drawing shows the trough of the reel holder with a semi-cylindrical bottom, and this shape of bottom is preferred. The curve of the bottom 10 can be less than 180°, but it is a feature of the invention that the sides of the trough are steep enough to prevent the reel 25 from rolling up the side of the trough as the paper is drawn from the reel. A radius of curvature for the bottom of the trough somewhat greater than the original diameter of the reels 25 is preferred. This shape of bottom makes the reels pay out evenly with very little friction, and without danger of becoming scratched.

It is also advantageous to have the trough deep enough to immerse a substantial portion of the reels 25 in water because the buoyancy of the water decreases the weight of the reels and reduces the friction of the reels on the bottom 10.

The curved shape of the bottom 10 facilitates washing of the reel holder, but it will be understood that shapes other than a semi-cylindrical shape can be used. Other changes and modifications can be made, and some features of the invention can be used alone or in different com-

binations without departing from the invention as defined in the claims.

I claim as my invention:

1. Apparatus for holding reels of photographic paper, said apparatus including a substantially semi-cylindrical bottom and end walls forming a trough for holding water in which the reels are at least partially submerged when in the holding apparatus, said bottom comprising the support for reels within the apparatus and the radius of said semi-cylindrical bottom being somewhat greater than the radius of the fully wound reels with which the apparatus is intended to be used, and said end walls extending to a level above the top edges of the semi-cylindrical bottom and extending to a level below the bottom to provide feet to stably support the apparatus, a rod located above one of said top edges and supported by said end walls, a plurality of guides extending within the trough and spaced from one another lengthwise of the trough, each of said guides having sides spaced from one another by a distance slightly greater than the width of one of the reels, a bearing on the end of each guide surrounding said rod and angularly movable on the rod about the axis of the rod, said bearings being located high enough on the sides of each guide to leave clearance for the passage of the photographic paper between the rod and the guide, and spacer sleeves on the rod spacing the guides from one another and spacing the end guides from the end walls.

2. Apparatus for holding reels of photographic paper, said apparatus including a substantially semi-cylindrical bottom and end walls forming a trough for holding water in which the reels are at least partially submerged when in the holding apparatus, said bottom comprising the support for reels within the apparatus and the radius of said semi-cylindrical bottom being somewhat greater than the radius of the fully wound reels with which the apparatus is intended to be used, a plurality of guides connected with one side of the trough and spaced from one another lengthwise of the trough and each of which extends within the trough at one end, each of said guides having sides spaced from one another by a distance slightly greater than the width of one of the reels, the connection of each guide with the trough including a bearing on which the guide is movable about an axis extending substantially parallel with the length of the trough.

3. Apparatus for holding reels of photographic paper, said apparatus including a substantially semi-cylindrical bottom and end walls forming a trough for holding water in which the reels are at least partially submerged when in the holding apparatus, said bottom comprising the support for reels within the apparatus and the radius of said semi-cylindrical bottom being somewhat greater than the radius of the fully wound reels with which the apparatus is intended to be used, a plurality of guides connected with one side of the trough and spaced from one another lengthwise of the trough and each of which has upstanding sides spaced from one another by a distance slightly greater than the width of one of the reels and forming a channel through which paper payed out from the reel passes, each of said channels having one end communicating with the trough and having its length extending outward from the trough in a direction substantially normal to the length of the trough.

VALMORE J. FORGETT.

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