Dec. 16, 1947. C. JOSEPH 2,432,904

YARN HOLDER SUPPORT

Filed March 21, 1947

FIG. 1.

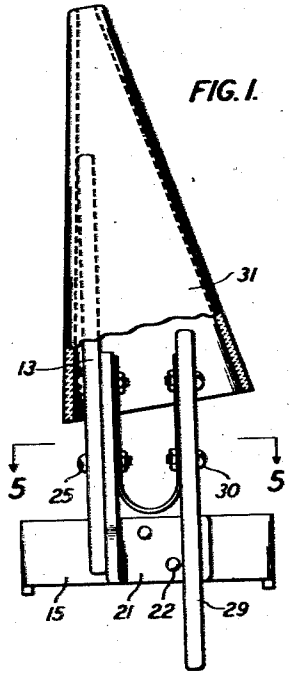

FIG. 2.

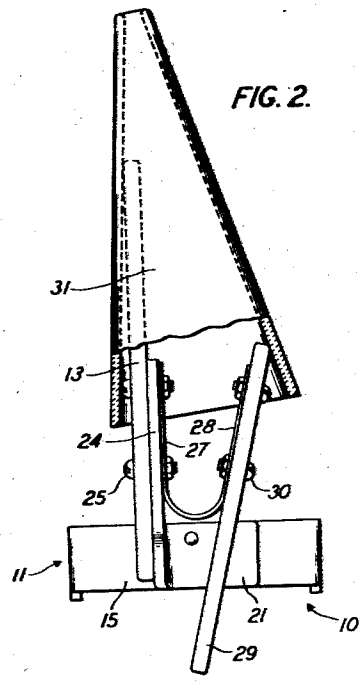

FIG. 3.

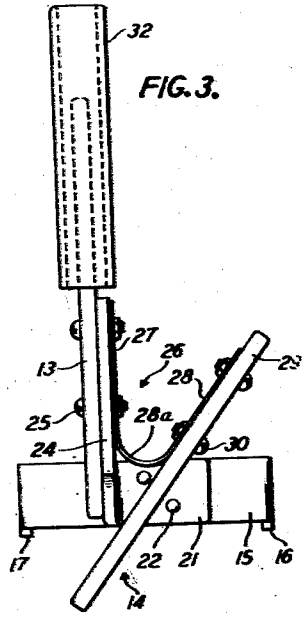

FIG. 4.

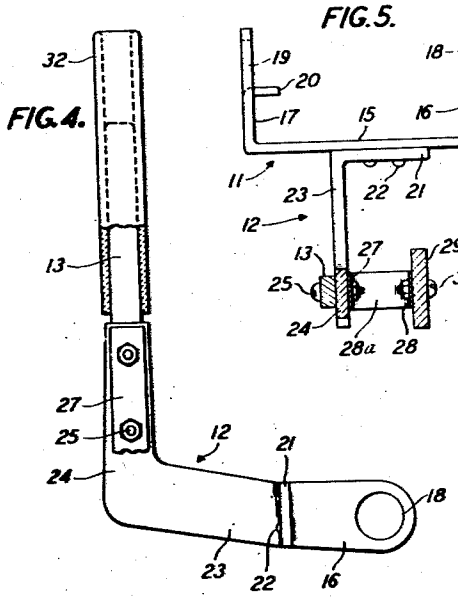

FIG. 5.

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YARN HOLDER SUPPORT

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4 Claims. (Cl. 242—130)

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This invention relates to a device for supporting yarn holding cones or tubes.

Yarn holders usually are in the form of paper or fiber cones. Inasmuch as the cones vary as to the diameter of their bases as well as their pitches there has been the problem of providing supports for the cones which would be adaptable to different cones irrespective of their dimensions. Heretofore, supports have been provided which are restricted to use with a cone of specific dimensions or in some cases may be adapted to cones of some variation in dimensions but the range of dimensions for which any particular support may be used has been rather limited. Accordingly, it is an object of this invention to provide a support which may be used in conjunction with yarn holders of widely varying base diameters, pitches and shapes.

Supports previously provided in the art which take the form of a V-shaped spring wire element, are somewhat difficult to manipulate since they require the application of pressure on the nose of the cone in placing the cone on the support. Therefore, a further object of this invention is to provide a support wherein the manipulation of its elements to receive the yarn holder is relatively simple and requires a minimum amount of effort.

A further disadvantage of the wire type cone supports resides in its inability to accommodate itself to a wide variation in cone sizes. When the cone size is changed substantially, either the spring wire element must be changed, the spring wire is reshaped, or an adapter must be used. Therefore, another object of this invention is to provide a device of the character described which is adaptable to a wide range of cone sizes and shapes without the need for modifying the device.

Yet another object of this invention is to provide a device of the character described which will accommodate tubular types of yarn holders by using a portion of the same device which is used to support the cone type of yarn holder.

Still a further object of this invention is to provide a strong, durable, compact device of the character described which shall be relatively inexpensive to manufacture, easy to manipulate and yet practical and efficient to a high degree in use.

Other objects of this invention will in part be obvious, and in part hereinafter pointed out.

The invention accordingly consists in the features of construction, combinations of elements, and arrangement of parts which will be exemplified in the construction hereinafter described, and of which the scope of application will be indicated in the following claims.

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In the accompanying drawing, in which is shown various possible illustrative embodiments of this invention,

Fig. 1 is a front elevation view of the yarn holder support showing the initial position of parts of the support relative to the yarn holder;

Fig. 2 is a front elevational view of the support showing the final disposition of the parts of the support relative to the yarn holder;

Fig. 3 is a front elevational view of the support showing its use in conjunction with a tubular type of yarn holder;

Fig. 4 is a partial side elevational view of the support corresponding to the view shown in Fig. 3; and

Fig. 5 is cross sectional view taken on the line 5—5 of Fig. 1.

Referring now in detail to the drawing, 10 designates the yarn holder support embodying the invention. The same comprises a channel shaped mounting bracket 11, an offset bracket 12 secured thereto and which in turn has mounted thereon a fixed arm or bar 13 and a spring supported bar 14.

The mounting bracket 11 comprises a web 15 and flanges 16 and 17 extending from the ends thereof and at right angles thereto. Flange 16 is formed with a through opening 18 and flange 17 is formed with a through opening 19 which is in substantial alignment with opening 18. The flange 17 further comprises a tongue 20 struck out therefrom and extending inwardly of said flange and adjacent opening 19. The mounting bracket 11 is adapted to be removably received to suitable portions of textile machinery in a manner well known in the art.

Extending from the mounting bracket 11 is the offset bracket 12 which comprises a wall 21 secured in contact with web 15 of mounting bracket 11 by means of rivets 22 or the like. Extending from wall 21 and at right angles thereto is a wall 23 and extending upwardly therefrom and at right angles thereto is a wall 24. Removably mounted on one side of the wall 24 is the arm 13 by means of screws 25 or the like. The arm 13 comprises a rectangular shaped bar having one end thereof substantially coextensive with the adjacent end portion of wall 24 and the other end extending beyond the upper end of wall 24 as shown in Fig. 1.

The spring supported member 14 is also secured to the wall 24. The same comprises a resilient,

straplike spring member 26 bent to form arm portions 27, 28 and an interconnecting portion 28a. The arm portion 27 is secured to the wall 24 by means of the screws 25 and the arm portion 28 is removably secured to a rectangular shaped bar 29 by screws 30 or the like. The lower portion of bar 29 extends below the mounting bracket 11 as well as the lower portion of arm 13. The bar 29 in its normal position is inclined with respect to arm 13 as shown in Fig. 3. The upper end portion of the bar 29 extends above the upper edge of the mounting bracket 11 and substantially as far as the end portion of the wall 24 of the offset bracket 12. The spring member 26 normally maintains the bar 29 in a position inclined with respect to the bar 13 as shown in Fig. 31. The lower portion of the bar 29 constitutes a handle for the purpose hereinafter described. When the device is to be used to support a cone shaped body 31, pressure is applied against the handle portion of bar 29 causing the bar 29 to move against the action of spring member 26, thereby bringing the upper portion of bar 29 into proximity to the bar 13. While holding the bar 29 in such a position, the cone body 31 is placed with its open bottom portion over the bars 13 and 29. As shown in Fig. 1, the bar 13 will extend inwardly of the cone body a substantial distance while the bar 29 will extend just within the lower portion of the cone body. Upon releasing the lower poriton of the bar 29, the action of spring member 26 will move the upper portion of the bar 29 outwardly until it contacts a portion of the cone body 31, as shown in Fig. 2. The spring member 26 will maintain the bar 29 in its cone contacting position so that the cone will be supported against ordinary movement. When it is desired to either remove the cone 31 from its support, it is only necessary to pull on the apex portion of the cone body in an upward direction thereby removing the cone from the support.

Alternatively, the application of pressure to the handle portion of the bar 29 to move the upper portion of the bar 29 inwardly, will also serve to release the cone body from the support or to permit its rotation on the support.

The upper end portions of the bars 13 and 29 serve to support and secure the cone body by bearing on the inner portion of the cone body.

It will be apparent that cones of various base diameters and pitches may be readily mounted on the device thereby eliminating the need for a series of supports to accommodate cones of different sizes.

The device embodying the invention may also be used to support yarn holders of the tubular type. As shown in Figs. 3 and 4, a tubular holder 32 may be slipped over the arm 13. The diameter of the holder 32 may vary and still be properly supported inasmuch as the arm 13 is mounted in a vertical position.

It will thus be seen that there is provided a device in which the several objects of this invention are achieved, and which is well adapted to meet the conditions of practical use.

As various possible embodiments might be made of the above invention, and as various changes might be made in the embodiments above set forth, it is to be understood that all matter herein set forth or shown in the accompanying drawing is to be interpreted as illustrative and not in a limiting sense.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

1. In a device of the character described comprising in combination a bracket, an arm secured to said bracket and extending therefrom, a bar, a bent strip spring member located between said arm and said bar, said spring having one arm thereof fixed to said bracket, the other arm of said spring member being fixed to said bar, portions of said bar extending beyond either side of said bracket.

2. A bracket, a rigid arm on said bracket and extending therefrom, a bar, and spring means interconnecting said bar with said bracket, said arm extending beyond one end of said bar, and said bar extending beyond the opposite end of said arm, said spring being located between the overlapping portions of said bar and arm, said spring comprising a strip of spring metal having one arm attached to the bracket, and a second arm attached to said bar and a portion interconnecting said arms.

3. In a device of the character described comprising a channel shaped mounting bracket, an offset supporting bracket thereon, said offset supporting bracket comprising a wall extending beyond said mounting bracket, a rigid arm secured to said wall and extending therefrom, a bar and a spring member, said spring member comprising arm portions and an interconnecting portion, one of said arm portions being secured to said wall, the other arm portion being secured to said bar, said arm extending beyond one end of said bar and said bar extending beyond the opposite end of said arm.

4. In a device of the character described, the combination of a channel shaped mounting bracket, said bracket comprising a web and ear portions extending angularly from the end portions of said web the said ears being formed with substantially aligned through openings therein, an offset supporting bracket, said supporting bracket comprising a wall in contact with the web of said mounting bracket, a second wall extending outwardly from one end of said first wall, a third wall extending upwardly from the end of said second wall, a rigid arm on said supporting bracket, said arm being secured in contact with said third wall and extending therefrom, a bar, a resilient metal spring interconnecting said bar and said third wall, said spring comprising two arm portions and an interconnecting portion, one of said arm portions being secured to said third wall and the other arm portion being secured to said bar, said arm extending beyond one end of said bar and said bar extending beyond the opposite end of said arm, said spring being adapted to permit movement of said bar to various angular positions relative to said arm.

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REFERENCES CITED

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

UNITED STATES PATENTS

Number	Name	Date
412,853	Keene	Oct. 15, 1889
1,315,764	Dowdall	Sept. 9, 1919
1,485,020	Dowdall	Feb. 26, 1924

FOREIGN PATENTS

Number	Country	Date
606,892	France	June 22, 1926