Nov. 12, 1935. C. H. COWAN, JR 2,021,048

SWIFT

Filed June 28, 1934

Fig. 1.

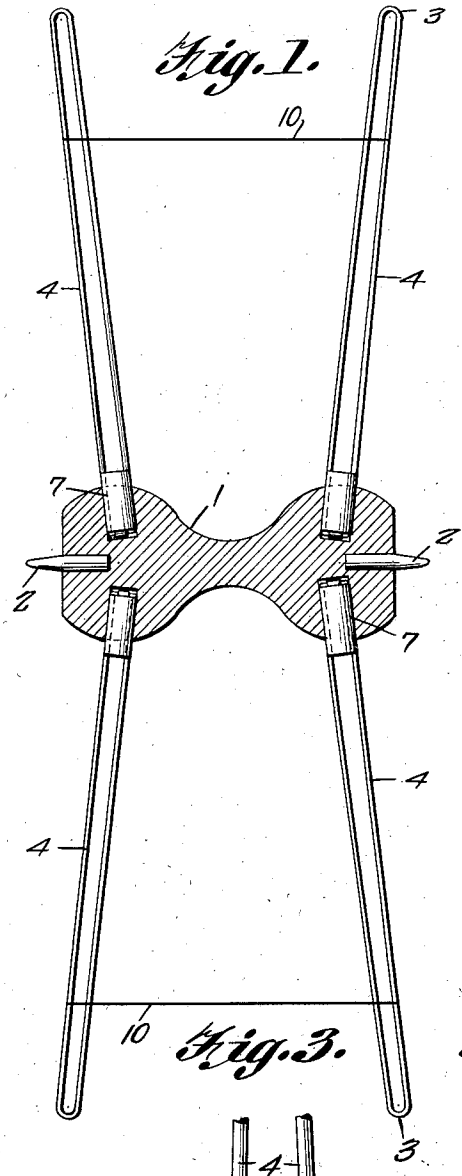


Fig. 2.

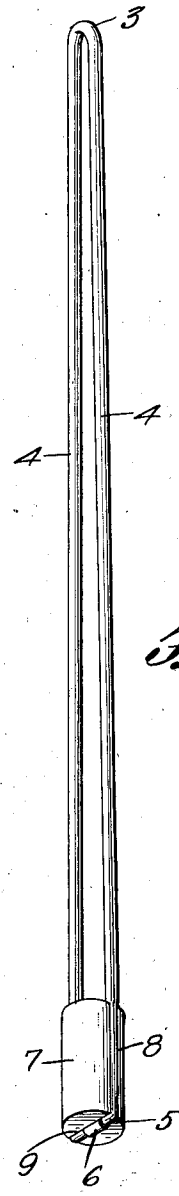


Fig. 5.

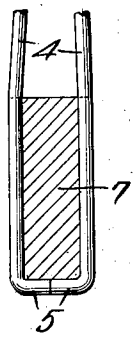


Fig. 3.

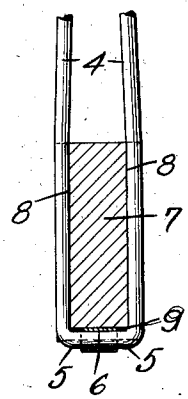
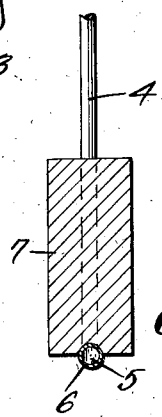


Fig. 4.



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WITNESS:

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SWIFT

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Application June 28, 1934, Serial No. 732,907

3 Claims. (Cl. 242—77)

This invention relates to swifts for winding machines and its general object is to provide a swift including wire spokes or arms, that are formed from a single strand of wire, with means for securing the same in the hub of the swift in a manner whereby casual removal or displacement thereof is reduced to a minimum and due to the one piece wire construction of the spokes, they are practically indestructible for the purpose intended.

A further object of the invention is to provide a swift including wire spokes or arms, that is simple in construction, inexpensive to manufacture and extremely efficient in use and service.

This invention also consists in certain other features of construction and in the combination and arragnement of the several parts, to be hereinafter fully described, illustrated in the accompanying drawing and specifically pointed out in the appended claims.

In describing my invention in detail, reference will be had to the accompanying drawing wherein like characters denote like or corresponding parts throughout the several views, and in which:

Figure 1 is a view illustrating a swift constructed in accordance with the present invention with the hub thereof in cross section.

Figure 2 is a perspective view of one of my novel spokes.

Figure 3 is a sectional view taken vertically through the hub plug and illustrates the relative position of the wire arm thereto.

Figure 4 is a similar view taken at right angles to Figure 3.

Figure 5 is a view similar to Figure 3 of a slightly modified form of the invention.

Referring to the drawing in detail, the reference numeral 1 indicates the hub of my swift, it being noted that the hub includes enlarged end portions having bores arranged about the peripheries thereof, and extending at a slight outward inclination, as clearly shown in Figure 1. The hub has extending from its opposite ends pins 2 that act in the capacity as trunnions for rotatably mounting the swift, as will be apparent.

My invention lies essentially in the spokes or arms for the swift, and each of the arms is formed from a single strand of wire bent midway its ends to provide a looped outer end 3, and substantially parallel portions 4 which in fact extend in diverging relation with respect to each other in order to provide what may be termed a tapered formation, as clearly shown in Figure 2. The inner ends of the portions 4 are bent at right angles upon themselves as at 5, and these right angled bent portions terminate in end to end engagement, with a sleeve 6 secured thereto.

In order to fixedly associate the spoke or arms with respect to the hub, I provide a plug 7 for each arm, and the plug has arranged upon diametrically opposite sides thereof longitudinally disposed grooves 8 to accommodate the remote ends of the portions 4, and the inner end of the plug is provided with a groove 9 across the diameter thereof to receive right angled bent portions 5, as well as the sleeve 6, as clearly shown in Figure 2.

In Figure 5 I have illustrated a slightly modified form of the invention, in that the sleeve 6 is dispensed with, and in both forms of the invention, the spokes or arms are inserted in the bores of the hub by driving the plugs therein, which of course will set up frictional contact with the bores, with the result casual removal or displacement of the spokes or arms is practically impossible.

By providing wire spokes or arms, it will be obvious that they are practically indestructible, and they have many advantages over the wooden spoke now in general use, in that they retain their smooth surface, and cannot become broken. The usual wires, cords or bands which hold the skein are indicated by the reference numeral 10, and can be secured to the portions 4 in a manner to prevent slipping.

It is thought from the foregoing description that the advantages and novel features of my invention will be readily apparent.

I desire it to be understood that I may make changes in the construction and in the combination and arrangement of the several parts, provided that such changes fall within the scope of the appended claims.

What I claim is:

1. A spoke assembly for a swift and including a single strand of wire bent upon itself to provide portions disposed in diverging relation with respect to each other to present a tapered formation, means received between the remote ends of the portions for securing the spoke to the hub of the swift.

2. A spoke assembly for a swift and including a single strand of wire looped upon itself to provide portions arranged to present a tapered formation, right angle bent portions at the ends of said wire, a plug grooved to receive the first mentioned portions and right angle bent portions respectively, and said plug being adapted to secure the spoke to the hub of the swift.

3. A swift comprising a hub having bores there-

in, a plurality of spokes, each including a single strand of wire looped upon itself to provide portions arranged to present a tapered formation, the remote ends of said portions being bent inwardly at right angles for disposal in end to end relation, a sleeve secured to and surrounding the bent ends, a plug for each spoke for securing the same in the bores of the hub, each plug being provided with diametrically oppositely disposed longitudinally arranged grooves to receive the portions therein, and a groove across the diameter of one end of each plug to receive the bent ends and the collar thereof.

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