

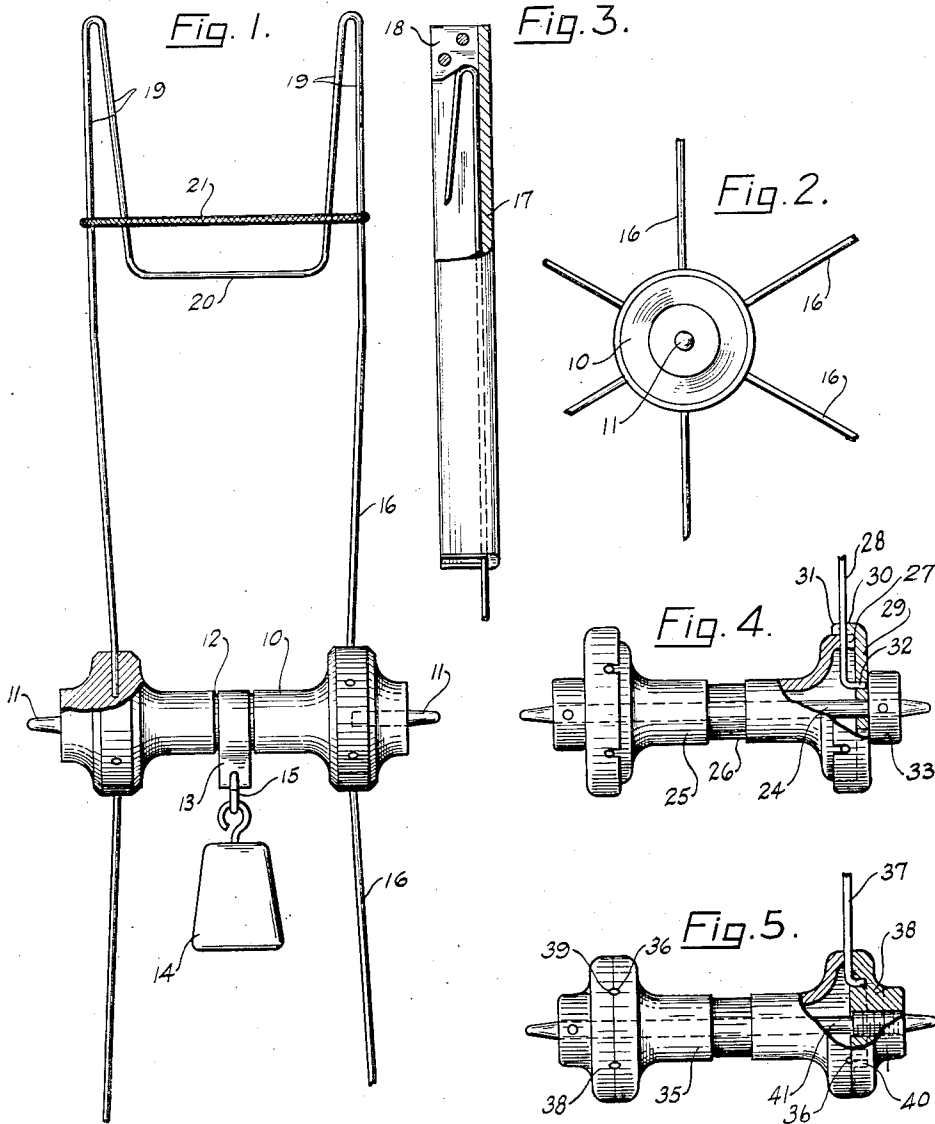
July 17, 1934.

I. R. ROWE

1,966,685

WINDING SWIFT

Filed Feb. 23, 1932



INVENTOR
IRVING R. ROWE

BY *Joseph H. Schofield*
ATTORNEY

UNITED STATES PATENT OFFICE

1,966,685

WINDING SWIFT

Irving R. Rowe, Stonington, Conn., assignor to
The Atwood Machine Company, Stonington,
Conn., a corporation of New Jersey

Application February 23, 1932, Serial No. 594,445

2 Claims. (Cl. 242—77)

This invention relates to winding swifts particularly for textile yarn machines.

An object of the present invention is to provide a simple and inexpensive rotatable skein holder for winding machines, etc., that will be rigid and has improved resilient metal spokes that may be fixedly secured to a hub of either wood or metal.

Another object of importance is that the spokes are formed of separate lengths of wire bent upon themselves and having their opposite ends drivingly or otherwise secured within the hub.

And finally it is an object to provide skein retaining side flanges on the spokes formed of integral portions of the wire forming the spoke, a skein engaging member being adjustable along the flanges and being retained thereon by the resiliency of the bent wire forming the side flanges of the spokes.

With the above and other objects in view my invention includes the features of construction and operation set forth in the following specification and illustrated in the accompanying drawing.

In the accompanying drawing annexed hereto and forming a part of this specification, I have shown my invention embodied in a freely rotatable winding swift or skein holder for textile winding machines but it will be understood that the invention can be otherwise embodied and that the drawing is not to be construed as defining or limiting the scope of the invention, the claims appended to this specification being relied upon for that purpose.

In the drawing:

Figure 1 is a front view of a winding swift forming the present invention, one spoke only being shown in full.

Fig. 2 is a side elevation of the hub portion of the swift shown in Fig. 1.

Fig. 3 is a side elevation partly in section of an implement for driving the spokes into the hub of the swift shown in Figs. 1 and 2.

Fig. 4 is a side elevation partly in section of a hub formed of metal parts retained in operative relationship by a central shaft extending axially therethrough, and

Fig. 5 is a view similar to Fig. 4 showing a modified form of hub construction.

In the above mentioned drawing I have shown several embodiments of the invention which are now deemed preferable, but it is to be understood that changes and modifications may be made within the scope of the appended claims without departing from the spirit of the invention.

Briefly, and in its preferred aspect, my inven-

tion may include the following principal parts: first, a hub either of wood or metal; second, bent wire spokes secured in said hub and radially extending therefrom; third, resilient upwardly extending portions on said spokes forming lateral skein supporting portions; and fourth, adjustable flexible skein engaging members adjustable on said spokes and retained thereon by the resilient action of the wire forming the spoke.

Referring more in detail to the figures of the drawing, and particularly to Figs. 1, 2 and 3, I provide a central hub member 10 with short gudgeons or journals 11 at opposite ends. In the form of the invention shown in Figs. 1 and 2 the hub 10 is made of a single piece of wood formed as shown and into which the journals 11 may be driven. Centrally of the hub 10 is a depression 12 within which may be supported a friction weight holding strap 13. The weight 14 supported therefrom may be attached to the strap 13 by a suitable bent wire or other form of hook 15 so that different weights 14 may be readily mounted or removed therefrom. By the recess or depression 12 formed in the hub 10 the weight 14 is maintained centrally between the gudgeons 11.

Disposed radially relatively to the hub 10 are spokes 16, these being made as shown of resilient wire, the opposite ends of which are fixedly secured within the hub 10. Preferably and as shown in the form of the invention illustrated in Figs. 1 and 2, ends of the wire forming a spoke 16 may be driven directly into radial holes provided in the hub 10. For this purpose an implement 17 shown in Fig. 3 may be used. This member 17 is U shape in cross section and fits about the wire 16. As shown in the sectioned part of Fig. 3 an end abutment 18 closes one end of the lengthwise opening. This abutment 18 may engage over the outer end of a spoke 16 and retain the spoke in proper position while the implement may be hammered. By making the length of the implement 17 of the proper length between the abutment 18 and opposite end the spoke 16 may be driven a predetermined distance into the hub. The implement 17, therefore, forms a gage for determining the length of the spokes 16 extending outwardly from the hub 10.

The spokes 16 as shown clearly in Fig. 1 are each made of a single length of metal such as steel wire. This length of wire is bent upon itself on opposite sides to form looped portions 19. These portions 19 provide lateral skein retaining flanges spaced apart by a short length 20 of the wire disposed parallelly to the axis of rotation of the swift. The height of the flanges 19 relative to

the central portion 20 of the spoke 16 is such that a skein may readily be mounted on the swift over the spokes 16. To support the skein centrally upon the swift and properly distended for unreeling operations adjustable means 21 may be mounted on the spokes 16. These means may be bands of flexible material such as cord or tape engaging the spoke around the lateral flanges 19. The length of this loop of tape 21 is such that it draws the flanges 19 inwardly and is held in adjusted position thereon by engagement with the opposite flanges, the resiliency of these portions retaining the member 21 taut and in any predetermined but readily adjusted position therealong. In lieu of the integral wooden hub 10 shown in Figs. 1 and 2, suitable hubs may be built up of metal. Two such hubs are shown in Figs. 4 and 5. These figures both show hubs made up of pressed metal forms, the parts of which are held in place by a central rod 24 or 41 extended on opposite sides to form gudgeons. In Fig. 4 a central hollow hub portion 25 is shown having a depression 26 for the same purpose and in the same position as that shown in Fig. 1 at 12. Opposite ends of this member 25 are expanded and their faces are notched or recessed at 27, a relatively deep notch 27 being provided for each spoke 28. Fitting against the outer faces of this hub member 25 are cap members 29, one at each end. Outer annular flanges 30 on these cap portions preferably fit over and enclose the ends of the hub 25. These flanges are notched as shown at 31 similarly to the end faces of the hub 25. The spokes, one only of which is shown at 28, may therefore be retained firmly between an end of the hub member 25 and the cap members 29. Preferably the inner ends 32 of the spokes 28 are bent outwardly and engage within spaced openings or recesses within the cap members 29. Thick collars 33 formed either separate from the cap members 29 or as hubs thereof are pinned or otherwise secured in position on the rod 24. The cap members 29 and the spokes 28 are therefore retained in fixed assembled position, the spokes 28 being tightly clamped therebetween.

In the modification shown in Fig. 5 a hub portion 35 is provided similar to hub 25 shown in Fig. 4 except that notches 36 for the spokes 37 are less deep than the notches 27. End flanges or hubs 38 abut against the end faces of hub portions 35 and may be notched at 39 similarly to the faces of hub portion 35. Between the ends of

the hub portion 35 and flanges 38 are clamped the spokes 37. The inner ends of the spokes 37 may be bent at right angles similarly to spokes 28 and may engage within an annular recess 40 formed in the inner faces of the cap or end members 38.

A rod 41 engaging the oppositely disposed cap members or flanges 38 serves to retain the assembled hub members in operative position. One cap member 38 may be pinned directly to this rod 40 and the other cap member 38 threaded thereto so that the parts may be drawn tightly together. The cap or flange member threaded to the rod is without notches 39 so that the member 38 can be rotated relative to the hub member 35. When drawn together the spokes 37 are clamped rigidly in position within the notches 36 in the hub portion 35, the depth of which permits clamping of the spokes 37 whether the flange members 38 are notched or not.

I claim:

1. A winding swift comprising in combination, a central hollow metal hub portion, flange members abutting against and closing opposite ends of said hub portion, a rod extending centrally through said hub portion and flange members and extending from opposite ends thereof for supporting said swift for free rotation with said rod, metal spokes radially extending from said hub portion, each spoke being bent upon itself and positioned between said hub portion and flanges at opposite ends of the hub portion, said flange members having recesses into which the ends of said spokes extend, and means to secure said flange members to said hub portion and retain said spokes rigidly in position therebetween.

2. A winding swift comprising in combination, a central hollow metal hub portion, flange members engaging against opposite ends of said hub portion, a rod extending centrally through said hub portion and flange members and extending from opposite ends thereof for supporting said swift for free rotation with said rod, wire spokes radially extending from said hub portion, the wire of each spoke being bent upon itself and having portions adjacent its ends positioned between said hub portion and flanges at opposite ends of the hub portion, the ends of said wires engaging within recesses within said flange members, and means on said rod to clamp said hub and flange members rigidly together and to hold said spokes rigidly in position therebetween.

IRVING R. ROWE.

55

133

60

135

65

140

70

145

75

150