Dec. 23, 1941. M. W. BECKER 2,267,071

SKEIN SUPPORT FOR SWIFTS

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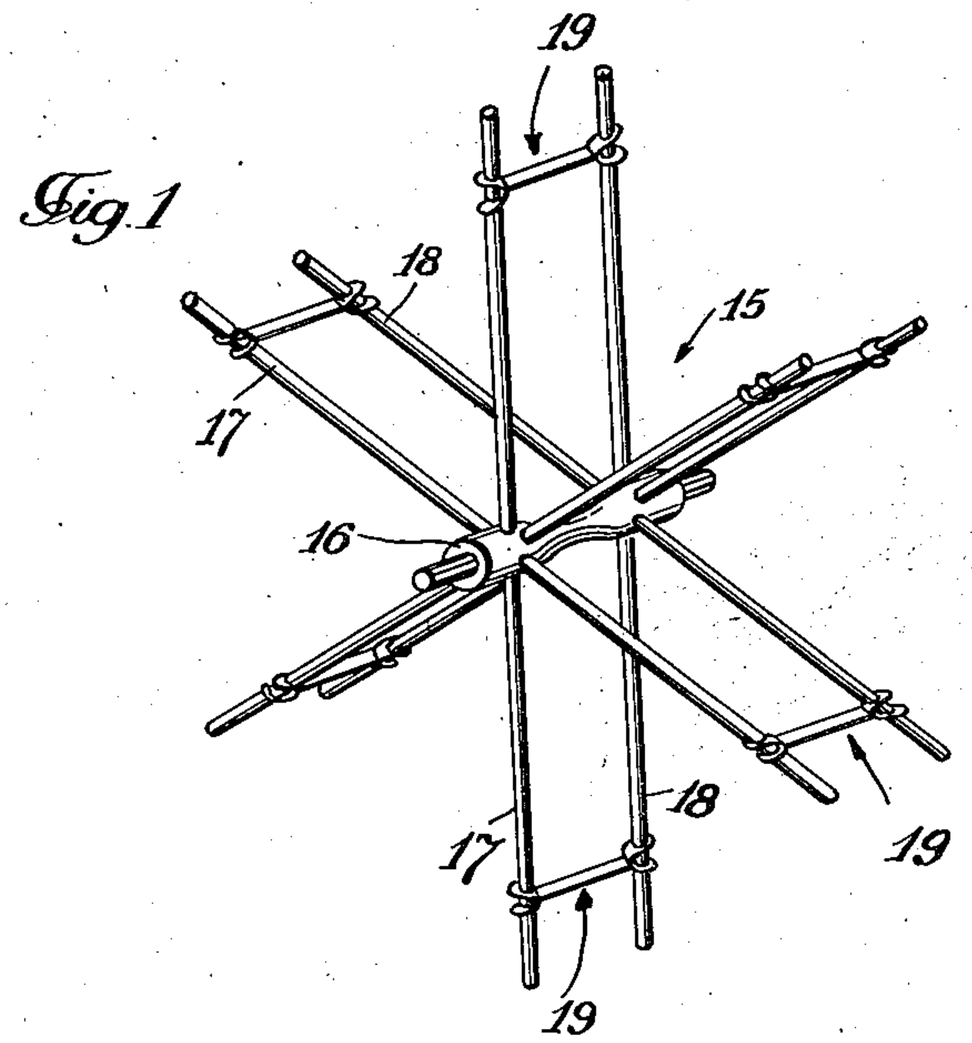

Fig. 1

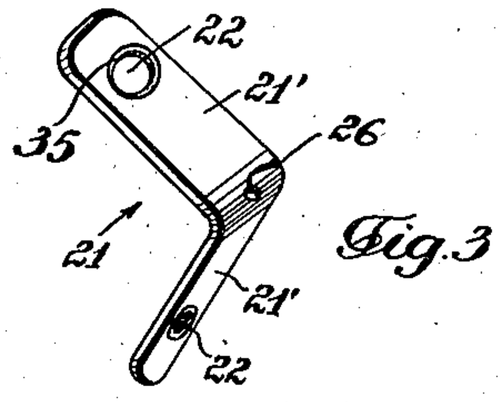

Fig. 3

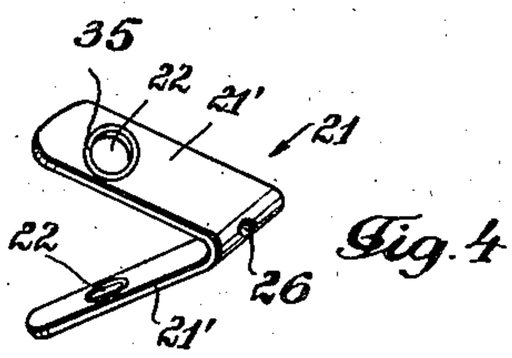

Fig. 4

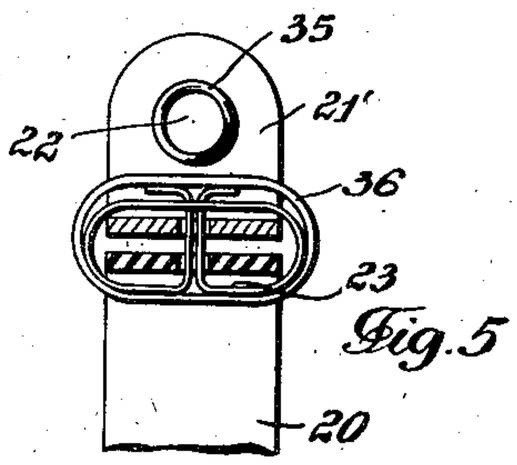

Fig. 5

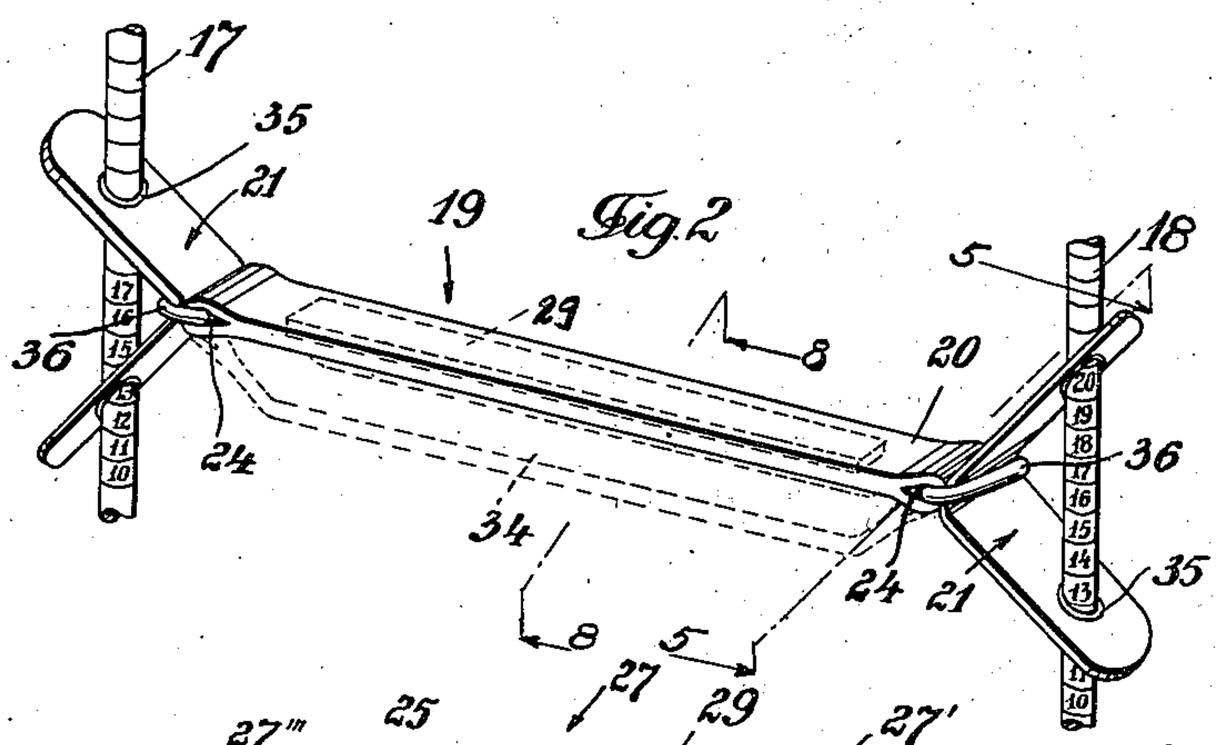

Fig. 2

Fig. 8

Fig. 10

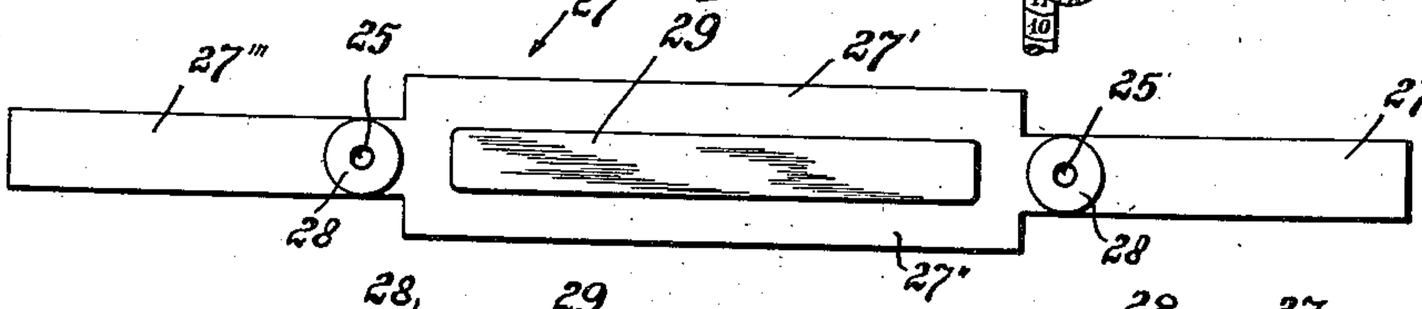

Fig. 6

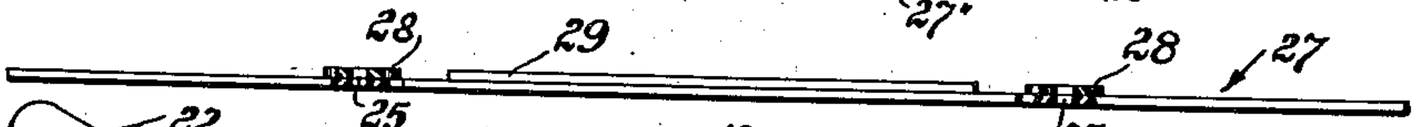

Fig. 7

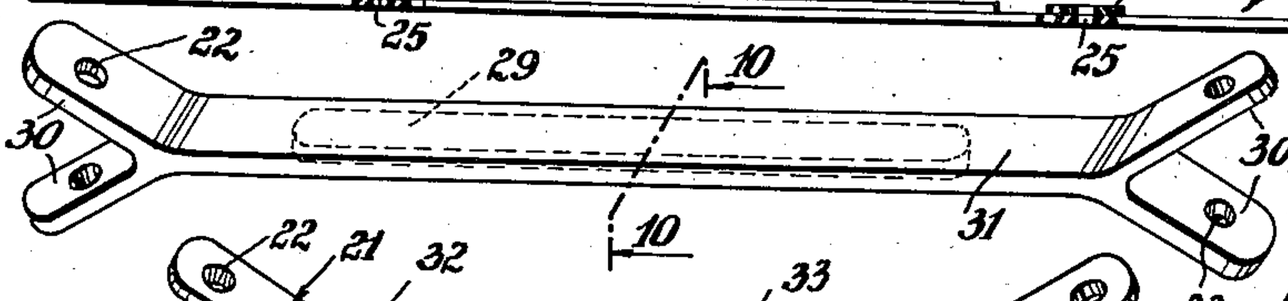

Fig. 9

Fig. 11

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SKEIN SUPPORT FOR SWIFTS

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6 Claims. (Cl. 242—114)

The present invention relates to supports on which a skein of yarn is mounted onto a swift, and more particularly to a skein support for a swift of the type comprising a hub having two spaced series of radially extending spokes or arms, set opposite in pairs; each such pair being bridged by a skein support.

Heretofore, ordinarily, each pair of spokes was spanned by a cord having its ends wound about or otherwise tied to the respective spokes and were manually slidable therealong to make adjustment for the perimeter of the skein. Much trouble however is met in the use of such cords or bands, because of their slipping along the spokes. Also, tautness of the skein is not maintained during its unwinding from the swift and the strands of the skein do not remain spread across the cord, but become bunched and entangled.

An object of this invention therefore, is to provide a skein support of novel and improved construction for use on swifts of the type mentioned, which will overcome the specific faults set forth as well as other disadvantages heretofore existing, and in which provision is particularly made for securely positioning the skein support anywhere along a pair of spokes whereby all slipping is prevented.

Another object hereof is to provide a novel and improved skein support whose position on the swift can be easily adjusted in order to adapt the swift to receive skeins of various sized perimeters.

A further object is to provide a support of the character mentioned on which the skein strands will be constantly maintained in spread condition between the pairs of spokes of the swift.

Another object hereof is to provide a novel and improved skein support which automatically maintains itself parallel to the axis of the swift.

Another object is to provide a skein support of novel and improved construction of the class set forth, which will automatically maintain the skein in taut condition during the unwinding operation.

Still another object hereof is to provide an article of the type described which is cheap to manufacture, easy to use, efficient in carrying out the purposes for which it is designed and which is adapted for use on swifts now extensively in use.

In the accompanying drawing forming part of this application, similar characters of reference indicate corresponding parts in all the views.

Fig. 1 is a diagrammatic perspective view of a swift provided with skein supports embodying the teachings of this invention.

Fig. 2 is a perspective view of a type of skein support concerned with herein.

Fig. 3 is a perspective view showing an element employed to adjustably secure an end of the skein support along a spoke of the swift.

Fig. 4 is a similar view showing the arms of said element brought towards each other in order to release the hold of said element on the spoke.

Fig. 5 is a section taken at line 5—5 in Fig. 2, showing the mode of attachment of said element to the end of the member intended to span a pair of spokes of the swift.

Fig. 6 is a development view of the components used in an embodiment of said spanning member.

Fig. 7 is a bottom view of Fig. 6.

Fig. 8 is a section taken at line 8—8 in Fig. 2.

Fig. 9 is a modified embodiment of the present invention, shown in perspective.

Fig. 10 is a section taken at line 10—10 in Fig. 9.

Fig. 11 is another modified form of this invention, shown in perspective.

In the drawing, the numeral 15 indicates generally a swift or reel comprised of a hub 16, having two spaced series of spokes or arms 17 and 18, extending substantially opposite one another radially therefrom. Each pair of spokes 17 and 18 are bridged by a skein support designated generally by the numeral 19; the ends of such skein supports being moveable along the respective spokes in order to adjust the effective perimeter of the swift to receive various sized skeins thereon over said skein supports 19.

In a preferred embodiment, skein support 19, may comprise an elongated member 20, at each end of which is a spoke engaging means as for instance the V-shaped element 21, made of resilient material as spring steel strip, each of the arms 21′ of which is provided with a hole 22 or other aperture, adapted to receive a spoke therethrough. The dimensions and position of said holes 22 shall be such that the spoke will be free to move through the arms of said element 21, when said arms are manually pressed towards each other as in Fig. 4, but upon release of said arms 21′, the spoke 17 is tightly engaged by said element. The manner of adjustment of position of said elements along the spokes is evident, and once set, will not slip therealong of their own accord. The spokes 17 and 18 may be graduated as shown in Fig. 2, for convenience to enable all of the skein supports 19, to be set an equal distance radially from the hub 16, for a balanced structure.

One manner of joining the end elements 21 to the spoke spanning member 20, is by means of a wire 23, passed first within the vertex of 21, then bent into each end of the loop 24, then out through holes 25 and 26, into the space between the arms 21′, and finally the ends of said wire 23 are bent over within the vertex of the ele-

ment 21, to prevent their loosening. The member 20 may be made of rubber ribbon cut to the form shown in Fig. 6, and specifically designated by the numeral 27, the intermediate portion of which has a flap 27′ along one side, and a similar flap 27″ along the other side thereof. Reinforcement pads 28, are provided at the holes 25. The end portions 27‴ and the flaps 27′ and 27″ are folded over the central portion of blank 27, to inbed a rigid element 29 within the resulting article, and are cemented to each other to maintain the assembly and to form the end loops 24.

Another embodiment of the teachings of this invention may be a moulded rubber member having bifurcated ends, the arms of which form the V-shaped attaching means all integral with the spanning member within which latter, is embedded the stiff element 29. In this instance the arms 30 make a one piece structure with the elongated spanning member 31. The term "inbedded" in this specification shall also stand for partial inbedment.

It is also practical to practice this invention, as for instance shown in Fig. 11, where an endless rubber band 32, surrounding and secured to a stiff element 33 of shorter length, is provided with connecting elements at its ends, as for instance those shown in Fig. 3. Of course other suitable attachment means may be provided whereby the skein support can be mounted onto a pair of spokes of the swift 15. The edge of the band 32 may be flush with the surface of the element 33, so that the strands of the skein when mounted on the swift, would lie directly on the band edge on which said stands would be non-skid.

In operation, all of the skein supports are mounted along the spokes of the swift 15 as shown in Fig. 1, substantially at equal distances from the hub 16, so that the effective perimeter of the swift so set up, shall exceed the actual perimeter of the skein (not shown) which is to be mounted for unwinding. Due to the elastic connections between the rigid element 29 and the spokes 17 and 18, a trapezoidal or flat-bottomed trough will result as indicated by position 34, for the skein strands; the altitude of the trough automatically diminishing as the skein is being unwound. It is evident that the skein's tautness will be automatically maintained during the winding operation. Because of the non-skidding property of the skein holder, the strands in contact with the elastic material along the stiff member 29, will maintain their initial spread condition whereby the strands will not bunch or tangle.

It is advisable to mount eyelets 35 through each of the holes 22 to avoid scraping the spokes 17 or 18, and facilitate easy sliding of the skein support. Such inclusion of eyelets is shown in the embodiment illustrated in Fig. 2, but may also be used in the modified constructions. Also, the wire connections at 23, may be covered or encircled by a rubber elment indicated by the numeral 36, to avoid any entanglement of the skein at such regions.

This invention is capable of numerous forms and various applications without departing from the essential features herein set forth. It is therefore desired and intended that the specific embodiments herein described shall be deemed illustrative and not restrictive and that the patent shall cover all patentable novelty herein disclosed; reference being had to the following claims rather than to the particular constructions herein illustrated to indicate the scope of this invention.

I claim:

1. In combination, a swift having a hub and a pair of spaced opposite spokes extending radially therefrom, and a skein support comprising an elongated member and means for securing the ends of said member to the spokes respectively; the central portion of said member being rigid and the ends thereof being elastic.

2. In combination, a swift having a hub and a pair of spaced opposite spokes extending radially therefrom, and a skein support comprising an elastic elongated member, a rigid element mounted onto and extending intermediate and spaced from the ends of said member and means for securing the ends of said member onto the respective spokes.

3. In combination, a swift having a hub and a pair of spaced opposite spokes extending radially therefrom, and a skein support comprising an elongated member and mean for securing the ends of said member to the spokes respectively; said member having two spaced elastic portions and a rigid portion intermediate said elastic portions.

4. A skein support for a swift having a hub and a pair of spaced opposite spokes extending radially therefrom, comprising an elastic elongated member having bifurcated ends integral therewith; each of the arms at one end of said member having an aperture therethrough to receive one of the spokes therethrough, and each of the arms at the other end of said member having an aperture to receive the other of the spokes therethrough, whereby upon bringing the related arms towards each other, said member at its respective ends, is freely slidable along the respective spokes, and upon releasing said arms, the ends of said member become secured to said spokes respectively, and a rigid element imbedded within the central portion of said elongated member and spaced from the ends of said member.

5. A skein support for a swift having a hub and a pair of spaced opposite spokes extending radially therefrom, comprising a pair of resilient, substantially V-shaped elements; each of the arms of one of said elements having an aperture to receive one of the spokes therethrough, and each of the arms of the other of said elements having an aperture to receive the other of the spokes therethrough, whereby upon bringing the related arms towards each other, said elements are freely slidable along the respective spokes, and upon releasing said arms, said elements become secured to said spokes respectively, and an elongated member connected to said elements, adapted to receive a skein thereon; the central portion of said member between the V-shaped elements being rigid and the end portions of said member being elastic.

6. A skein support as defined in claim 2, characterized in that the ends of the elongated member are fashioned into loops and the said V-shaped elements are provided with holes including wire connectors passed between the arms of an element respectively, and bent around into the loops and out through the holes respectively, and then bent over between the arms of the respective V-shaped elements.

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