

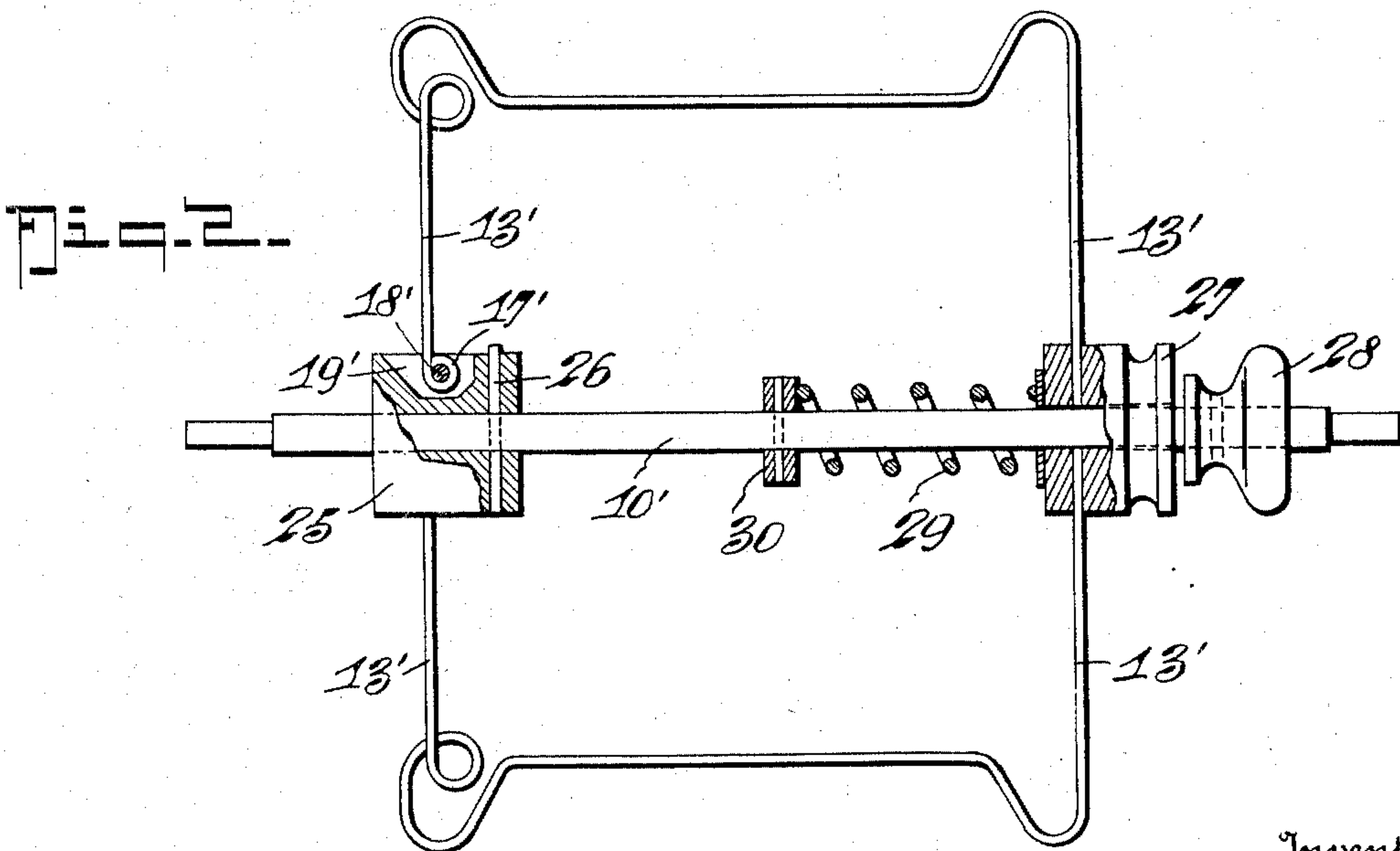
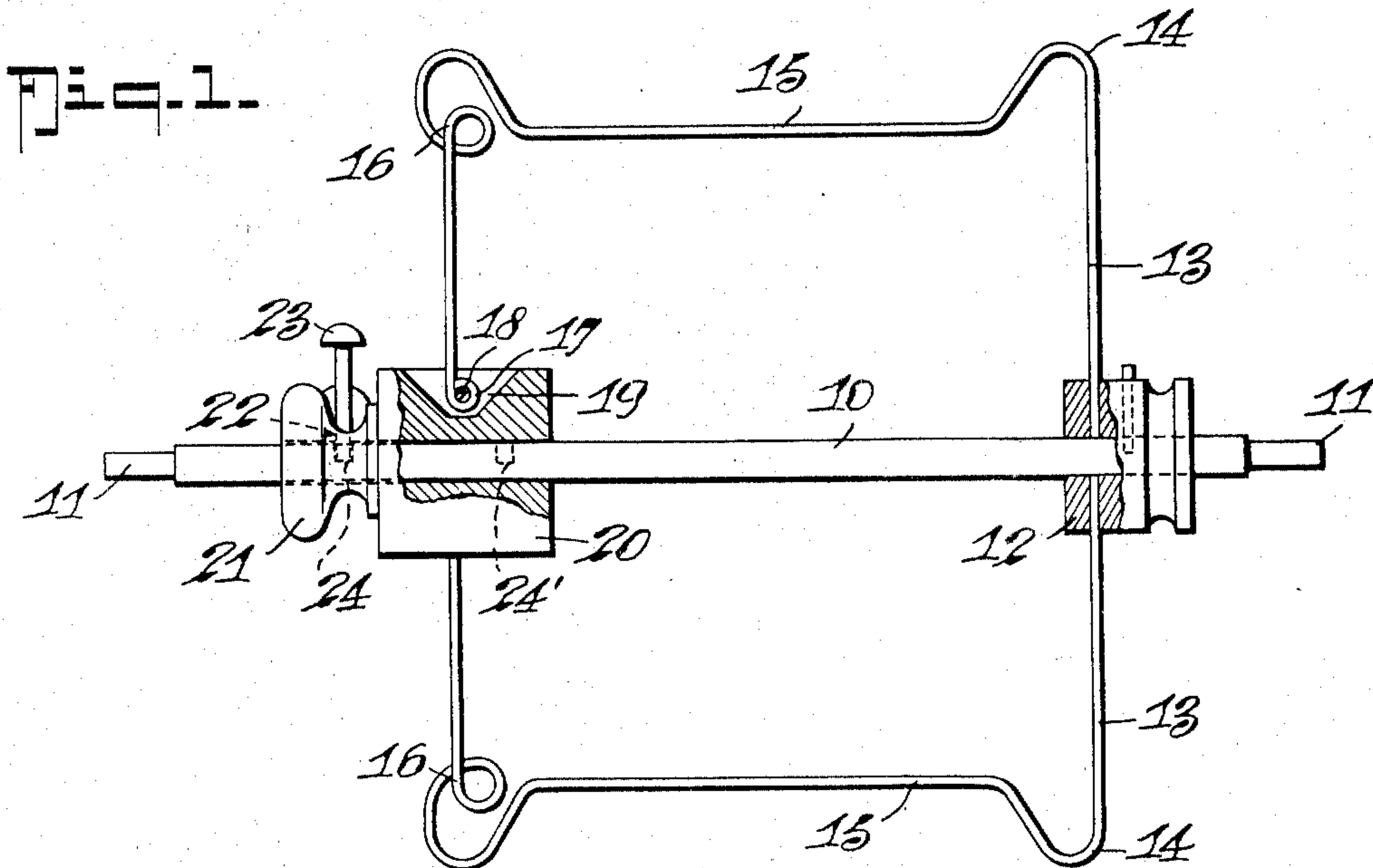
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COLLAPSIBLE REEL

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COLLAPSIBLE REEL

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This invention relates to an improved reel adapted to be used in handling skeins.

One object of this invention is to provide a reel of such a character that one end thereof may readily be collapsed to facilitate the removal of a skein therefrom.

It is another object of this invention to provide a reel having means at either end thereof which will hold a skein in position and prevent any tendency of the skein to slide or slip off the same.

It is a further object of this invention to provide a reel having means connected thereto by which one end thereof may readily be collapsed.

These and other objects of this invention will become more apparent from a perusal of the following specification and a study of the drawing in which:

Figure 1 is a side elevation of the reel certain parts being in cross-section; and

Figure 2 is a similar view of the reel, but showing a modification thereof.

Referring now to the drawing, and more particularly to Figure 1, there is shown a four-armed reel to be used in handling skeins, comprising an axle 10 adapted to be mounted on a shaft 11, and having fixedly secured thereto a hub 12. Spaced holes, preferably four in number, are provided in the hub and serve as sockets for the ends of the arms 13 of the reel. These arms project radially from the hub and are bent at right angles at 14 forming portions 15 running parallel with the axle. It will be noted that the angles 14 are so shaped that they project above the portions 15 and thus prevent the skein from slipping off that end of the reel. The arms are bent into spiral form, as shown at 16, and the hooked ends 17 thereof are fastened to pegs 18 located in sockets 19 formed in the movable hub 20. It will be noted that the spiral portions of the arms also project above the portions 15 and thus prevent the skein from slipping off that end of the reel.

The hub 20 is provided with a suitable handle 21, which in turn is provided with a bore 22 located at right angles to the axis of the axle. A pin 23 is movably mounted in

the bore and serves to hold the hub in either of two positions in the axle by virtue of the two spaced openings 24 and 24'. It will be appreciated that, when the movable hub is shifted from the position shown in Figure 1 to a position which will permit the pin 23 to be located in the opening 24', the diameter of the reel will be decreased. The spiral formation of the reel at the movable end, not only gives the reel elasticity, but also renders the collapsing of the reel easier and prevents the breakage thereof.

In the modification shown in Figure 2 the hooked ends 17' of the arms 13' of the reel are connected to pegs 18' located in sockets 19' formed in a hub 25 fixedly secured to the axle 10' by means of a pin 26. The arms are bent to form the skein holding means and are identical in construction to that disclosed in Figure 1. The other ends of the arms are rigidly secured to a hub 27 movably mounted on the axle. A handle or knob 28 is secured to the axle by means of which the axle can be drawn through the hub against the tension of a spring 29 adjustably mounted on the axle by means of a ring 30.

In operation, the hub 27 is held stationary and the axle is drawn therethrough, moving the hub 25 inwardly and hence collapsing the reel.

From the above description it will be seen that a simple and efficient collapsible reel has been provided from which the skeins may easily be removed or on which they may readily be placed.

Although the invention has been described with reference to the specific embodiments disclosed, it is to be understood that the invention is not specifically limited thereto, but may be varied in many details without departing from the spirit of the invention or the scope of the appended claims.

What is claimed is:

1. A collapsible reel comprising, in combination, an axle, a hub fixedly secured thereto and having a plurality of radially disposed sockets formed therein, a second hub adjustably secured to said axle at a distance from the first mentioned hub and having a plurality of recesses formed therein, retaining

means secured in said recesses, a plurality of carrier means extending radially from said axle, each comprising a substantially U-shaped wire having a hook formed at one end
5 secured to one of said retaining means, the other end of said wire being secured in one of said sockets.

2. A collapsible reel comprising, in combination, an axle having a plurality of openings formed therein, a hub fixedly secured thereto and having a plurality of radially disposed sockets formed therein, a second hub adjustably secured to said axle at a distance from the first mentioned hub and having a
15 plurality of recesses formed therein, retaining means secured in said recesses, means associated with said hub adapted to be positioned in the openings in said axle to hold the same in different positions on said axle,
20 a plurality of carrier means extending radially from said axle, each comprising a substantially U-shaped wire having a hook formed at one end secured to one of said retaining means, the other end of said wire being
25 secured in one of said sockets.

3. A collapsible reel comprising, in combination, an axle, a hub fixedly secured thereto, a second hub movably mounted thereon and spaced from said first mentioned hub,
30 carrier means associated with said hub, a handle rigidly secured to said axle adjacent the movably mounted hub, whereby when the handle is moved away from the movably mounted hub the fixed hub is moved toward
35 the movably mounted hub decreasing the diameter of the carrier means.

4. A collapsible reel comprising, in combination, an axle, a hub fixedly secured thereto, a second hub movably mounted thereon and spaced from said first mentioned hub,
40 carrier means associated with said hub, a handle rigidly secured to said axle adjacent the movably mounted hub, whereby when the handle is moved away from the movably
45 mounted hub the fixed hub is moved toward the movably mounted hub decreasing the diameter of the carrier means, and a spring mounted between said hub adapted to return the fixed hub to its original position.

50 In testimony whereof I affix my signature.
JOHANN JOSEPH STOECKLY.

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