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HAND REEL

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Fig. 1.

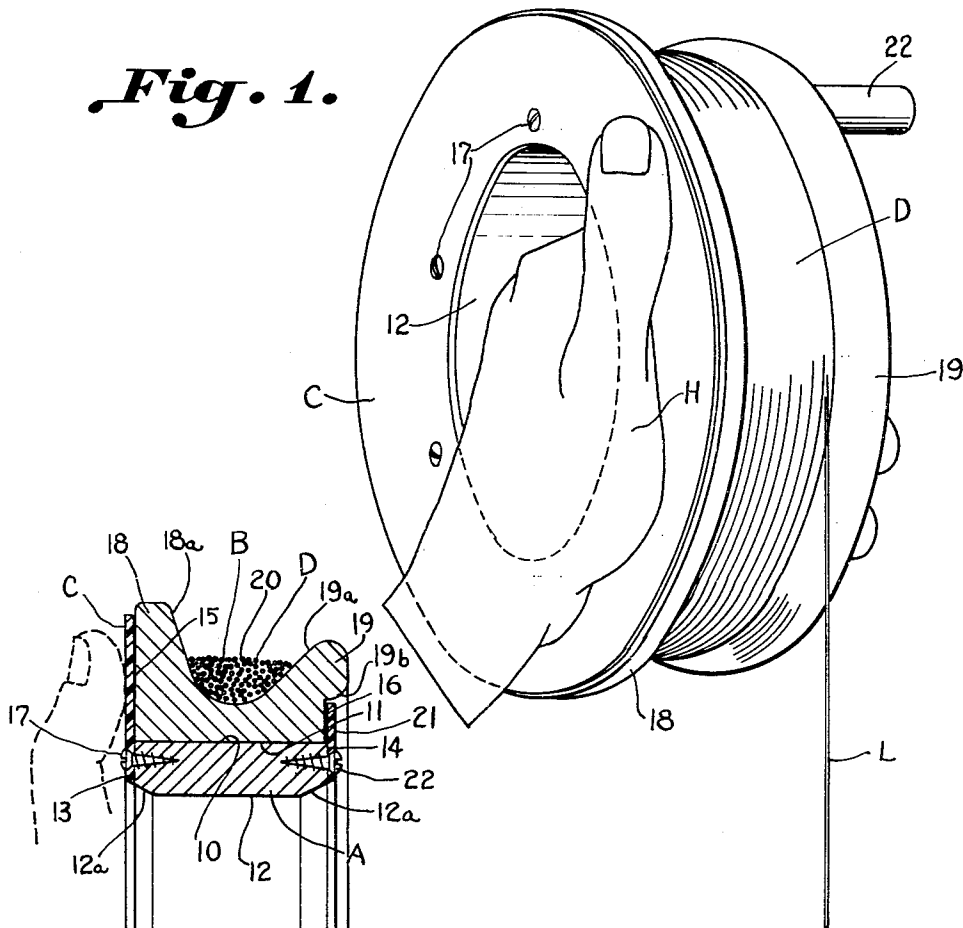
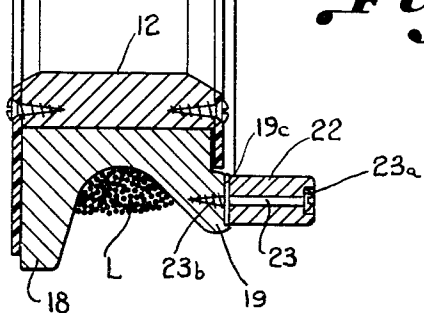


Fig. 2.



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HAND REEL

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2 Claims. (Cl. 242-96)

This invention relates to an improved hand reel.

Hand reels have heretofore been constructed for a number of purposes such as for laying cables and the like, carrying measuring tape, and fishing lines and the like. Reels of the type known as "spinning reels" are constructed with movable parts for laying the line on the reel and feeding the line from the reel when casting. Rather complicated mechanical mechanisms have also been employed using movable elements for supply braking means for the reel. Means for holding the reel has usually been supplied in the form of a handle projecting from the reel thus adding to the bulk of the reeling device.

Accordingly, it is an object of this invention to provide an improved hand reel structure for use in a variety of operations which will be in the form of a simple unitary structure.

An important object of this invention is the provision of a hand reel in which means are provided for feeding the line directly off the side of a stationary reel.

Another important object of the invention is the provision of improved braking means in the form of a flexible disc carried by the stationary reel support so that friction may be applied by pressure at any point on the disc.

Still another object of this invention is the provision of a reel of unitary structure which provides means for holding the reel which does not project from the reel so that the force encountered in reeling is applied along the axis of the reel.

The construction designed to carry out the invention will be hereinafter described, together with other features thereof.

The invention will be more readily understood from a reading of the following specification and by reference to the accompanying drawing forming a part thereof, wherein an example of the invention is shown and wherein:

FIGURE 1 is a perspective view of a hand reel constructed in accordance with the present invention, and

FIGURE 2 is a transverse sectional view of the reel shown in FIGURE 1.

The example of the invention shown in the drawing generally includes an annular support A for carrying a reel B in rotatable relation thereto. A flexible disc C is carried by the support and overlies one side of the reel B. It will be especially noted that the support A is provided with an annular bore of sufficient size to accommodate the entire hand of the user so that the entire reel structure may be readily supported in one hand of the user. The disc C also has a corresponding bore and pressure may be applied at any point along this flexible disc in order to provide a braking action between the reel support A and the reel B. A yarn channel D is formed by a substantially vertical flange carried adjacent one edge of the periphery of the reel and a second outwardly tapering flange carried by the other edge of the reel so as to form an outwardly tapering channel so that yarn may be readily fed off of the reel when desired without turning the reel.

The annular support A may be constructed of any suitable material but preferably one which will provide an outer surface 10 having a relatively low coefficient of friction to prevent excessive friction between this surface and the inner surface of the reel 11. If desired anti-friction means such as ball bearings might be provided to reduce the friction between these two surfaces. It is

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evident that the fit between the reel and its support should be such as to prevent excessive friction between these parts. The inner bore 12 of the support A is provided with tapering edges 12a to provide a gripping surface for the hand of the user. The support A has a flat side 13 and a second flat side 14 which are parallel with a plane running transversely of the reel.

The reel B also has a flat side 15 which is aligned with the flat side 13 of the support A. A second flat side 16 is provided in substantial alignment with the second flat side 14 of the support A. The sides 15 and 16 of the reel B are preferably spaced slightly inwardly of the corresponding sides 13 and 14 of the support A so that means projecting upwardly from the support A will confine the reel B on the support A for rotation thereon.

The disc C, which may be constructed of any suitable flexible material, is secured to the support A by any suitable fastening means such as the screws 17. It is evident that the disc C overlies a substantial portion of the side 15 of the reel B so that pressure may be readily applied by the thumb of the hand H as well as any other portion of the hand contacting the disc when it is desired to provide braking action between the reel and the support. Such braking action would be desirable if the reel be used as a fishing reel and the amount of braking action which would be needed to successfully play the fish could be readily adjusted by pressure applied by the hand to the disc C.

It is desirable to provide a yarn channel for the reel which will be effective in feeding the yarn readily off of the reel while the reel is in a stationary position with respect to the support A. This yarn channel D is formed by a substantially vertical flange 18 which is carried adjacent one edge of the periphery of the reel B. The vertical flange 18 has a downwardly tapering surface 18a. An outwardly projecting flange 19 is carried by the other edge of the reel B and has an outwardly tapering surface 19a so that the surfaces 18a and 19a together with a concave portion 20 form an outwardly tapering line channel D.

In order to rotatably confine the reel B on the support A, a second disc 21 is carried by the other edge 14 of the support A. The second disc 21 may be constructed of any suitable material, which may or may not be flexible, and is secured to the edge 14 of the support by any suitable means such as spaced screws 22. The second disc 21 is of lesser diameter than the inner diameter of the flange 19 and overlies the side 16 of the reel B and is carried within the overhanging portion 19b of the flange 19. A handle 22 is also carried by a flat surface 19c of the flange 19 and is rotatably secured thereto by a shank portion 23 which forms a shaft therefor. The shank 23 has a head 23a which is countersunk within the handle 22 and on the other end the shank 23 is threaded as at 23b to the flange 19. The handle is thus suitably rotatably secured to the reel B.

In operation the entire reel is held within the hand of the user as best shown in FIGURE 1. It is evident that the hand may be accommodated by the bore formed by the support A and the discs C and 21. If the reel is used in an operation such as fishing the line may be cast by turning the reel sideways with respect to the user and casting the line directly from the reel without turning the reel. This is greatly facilitated by the outwardly tapering yarn channel D. In the event a large fish strikes the line the reel may be allowed to rotate subject to such braking action as is desired to be applied by the hand by means of the disc C. The handle 22 may be used to turn the reel B with respect to the support A to thus reel in the line and at the same time the braking action may be relieved from the reel by gripping the reel opposite the side 13 of the support A. It is to be understood that the present invention may be used not only for

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fishing but also for any desirable purpose where an efficient reel constructed in a unitary manner would be desirable.

While a preferred embodiment of the invention has been described using specific terms, such description is for illustrative purposes only, and it is to be understood that changes and variations may be made without departing from the spirit or scope of the following claims.

What is claimed is:

1. A hand reel including, a relatively large annular support of substantial thickness having a bore therein of sufficient size to accommodate the hand of the user, said support of substantial thickness having a bearing surface on the periphery thereof, an annular rotatable reel member having a bore therein sufficiently large to be received upon the bearing surface of the support, a substantially vertical flange carried by the periphery of said reel adjacent one of the edges thereof, an outwardly and upwardly directed flange carried by the periphery of said reel adjacent the other edge thereof, said flanges defining a yarn channel which tapers outwardly on one side to permit yarn to feed freely off of the reel without turning of the reel, and a flexible annular disc having a bore therein of sub-

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stantially the same size as the bore in said support carried by one edge of said support overlying a substantial portion of said reel member for increasing the friction thereon by pressure applied at any point thereof.

2. A hand reel as set forth in claim 1, in which a second annular disc having a bore therein of substantially the same size as the bore in said support is carried by the other edge of said support for confining said reel on said support, the inner diameter of said second disc being less than the inner diameter of said outwardly and upwardly directed flange, and in which a handle is carried by said outwardly projecting flange for turning the reel with respect to the support.

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