Nov. 17, 1959 J. KUZARA 2,913,222

FISH TAPE REEL

Filed June 9, 1955 2 Sheets-Sheet 1

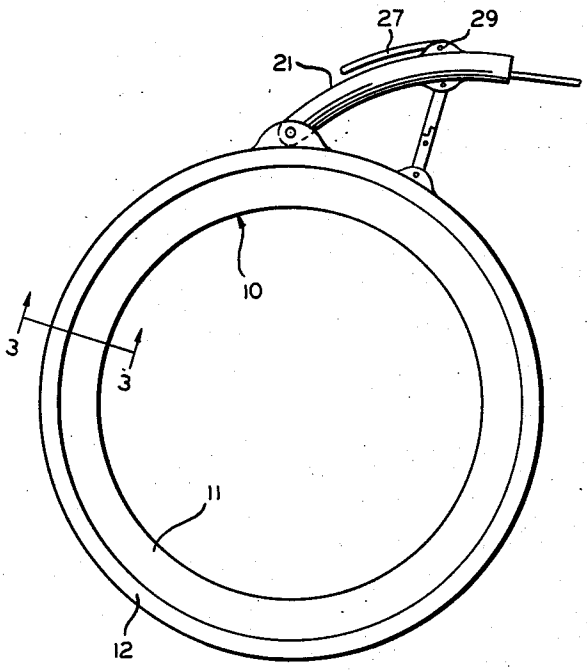


Fig. 1

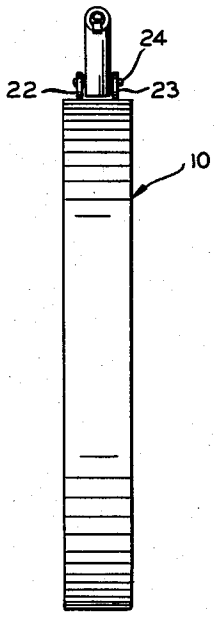


Fig. 2

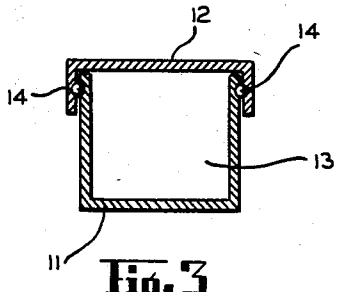


Fig. 3

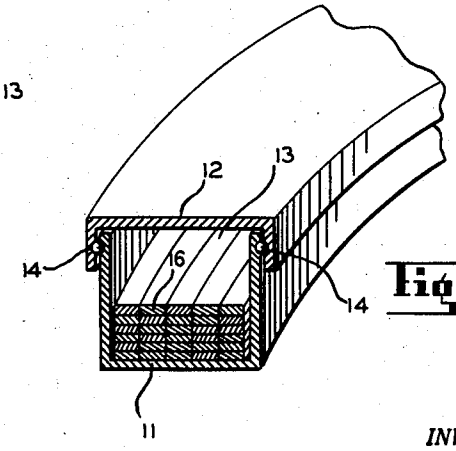


Fig. 4

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FISH TAPE REEL

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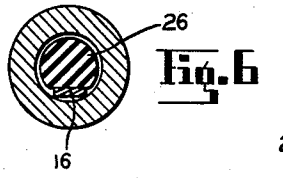


Fig. 6

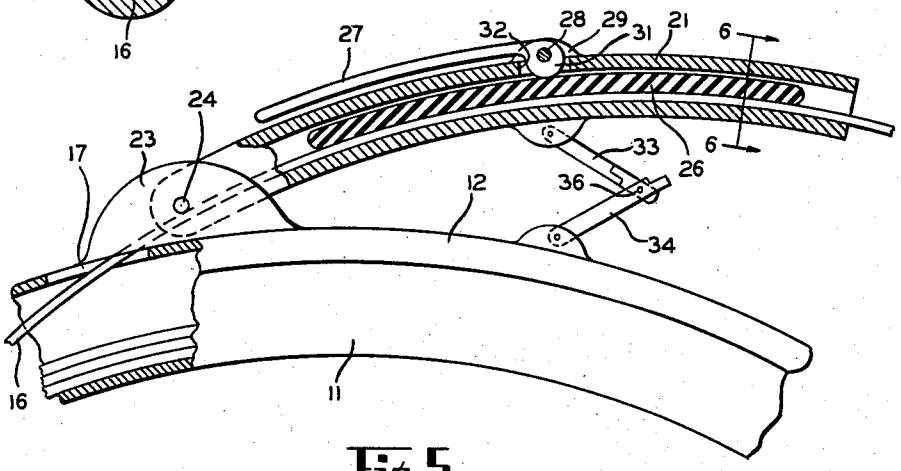


Fig. 5

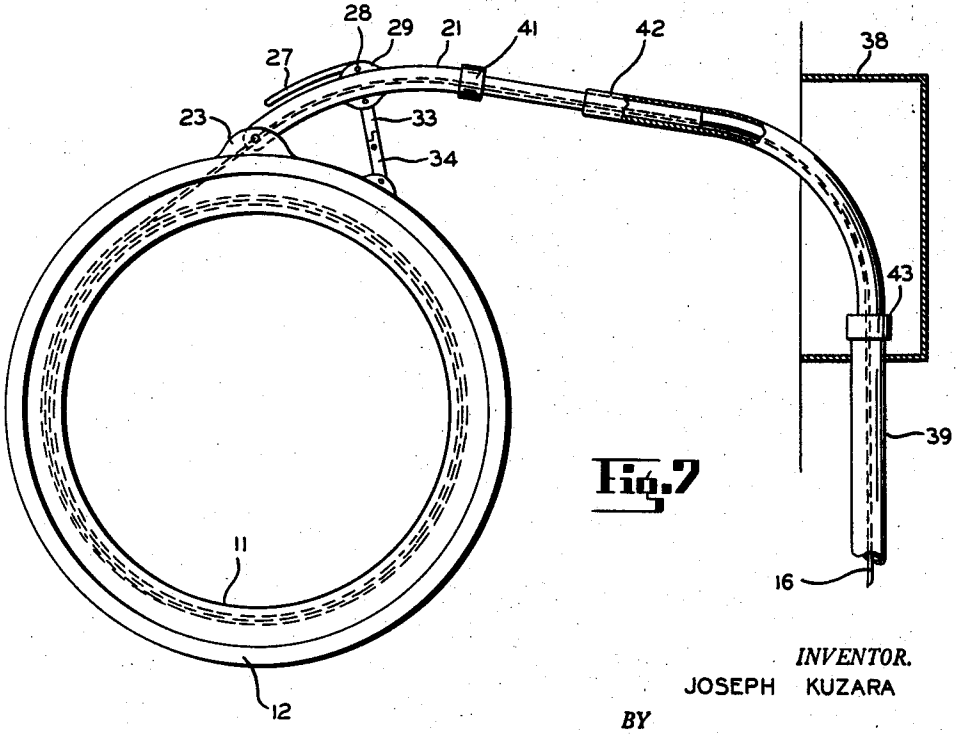


Fig. 7

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FISH TAPE REEL

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Application June 9, 1955, Serial No. 514,350

3 Claims. (Cl. 254—134.3)

The present invention is directed to improvements in reels of the type employed for feeding or storing a fish tape. The latter is a term applied to the relatively stiff steel ribbon of the type employed by electricians to feed conductors through a conduit in making electrical installations of various types.

The present invention provides a simplified, but highly effective fish tape reel with means for feeding the tape smoothly under ordinary conditions of tape travel, and also provides means for force feeding the tape if the tape should encounter some small impediment in its travel through the conduit. All these functions are achieved in a compact, readily portable, easily manufactured unit, as will hereinafter appear more fully.

An object of the present invention is to provide an improved fish tape reel assembly with improved means for playing out the tape.

Another object of the present invention is to provide an improved fish tape reel of compact construction which is easy to use, and relatively inexpensive to manufacture.

Still another object of the invention is to provide an improved brake assembly in association with an improved fish tape reel, the brake functioning to hold the tape securely in the event that additional pressure is to be put on the tape in passing it through the conduit.

These and other objects of the invention as well as additional novel features of the invention will be apparent to those skilled in the art from the following description of the attached sheets of drawings which, by way of preferred embodiment only, illustrate the improvements of the present invention.

In the drawings:

Figure 1 is a view in elevation of the fish tape reel assembly according to the present invention;

Figure 2 is a side elevational view of the assembly shown in Figure 1;

Figure 3 is an enlarged cross-sectional view taken substantially along the line III—III of Figure 1;

Figure 4 is a fragmentary isometric view, partially in cross-section, illustrating the manner in which the coil of fish tape is received within the reel;

Figure 5 is a fragmentary view in elevation illustrating more particularly the brake assembly used in conjunction with the reel;

Figure 6 is a cross-sectional view taken substantially along the line VI—VI of Figure 5; and

Figure 7 is a view in elevation illustrating one manner in which the fish tape reel of the present invention may be employed in conjunction with the feeding of a fish tape through a conduit.

As shown in the drawings:

In Figure 1, reference numeral **10** indicates generally the improved fish tape reel assembly including a pair of cooperating channel members **11** and **12** whose configuration is best illustrated in the cross-sectional view of Figure 3. As best seen in that view, the channel members **11** and **12** are generally U-shaped in cross-section and are received in such a manner that the top

channel member **12** is inverted to form a closure for the bottom channel member **11**, thereby providing an enclosure **13** for receiving the fish tape. Means may also be provided to facilitate relative rotative movement between the channel member **11** and the channel member **12**, these means preferably taking the form of a plurality of spaced ball bearings **14** which are received within suitable races provided in the two confronting portions of the channel members in which the balls **14** are received.

As best illustrated in Figure 4, a coil of fish tape **16** is received within the enclosure **13**, the dimensions of the enclosure being sufficient to accommodate several widths and thicknesses of the coiled tape. An outlet for the tape is provided in the fish tape reel assembly by providing a peripheral slot **17** in the upper channel member **12**. One end of the tape may then be continuously withdrawn from the coil by passing the end through the slot **17**, and rotating one of the channel members with respect to the other.

At times, it is desirable to apply a positive pressure on the tape as it is being fed into the conduit, as, for example, when the tape encounters some minor obstruction. For this purpose, the assembly shown in the drawings is provided with a hand operable brake including a generally circular, hollow brake housing **21** which is pivotally supported to the channel member **12** between a pair of ears **22** and **23** extending from the channel member **12**, and a pin **24** which extends through the ears **22** and **23** and provides a pivotal connection with the brake housing **21**.

Disposed within the brake housing **21** is a brake shoe **26** of a material such as cast iron or the like. The brake shoe **26** is loosely received within the brake housing **21**, so that the tape **16** may be readily payed out under normal circumstances. When, however, it is desired to apply a pressure to the tape **16** as it leaves the reel assemblies, an operating handle **27** is provided, the latter being pivoted by means of a pin **28** between a pair of opposed ears **29** on the brake housing **21**. The operating handle **27** at one end is formed with an eccentric **31** which is received through a slot **32** formed in the brake housing **21**. It will be seen from Figure 5 that downward pressure exerted on the operating handle **27** is effective to cause the eccentric **31** to cam the brake shoe **26** into tight engagement with the tape **16** as the latter passes to the brake housing **21**. It is a simple matter to release the brake, merely by lifting the operating handle **27** upward, thereby removing the braking pressure of the shoe **26** against the tape **16**.

For convenience in storing the tape reel, the reel may be provided with a pair of folding arms **33** and **34** which are connected by a hinge connection **36** and extend between the brake housing **21** and the upper channel member **12**. When the reel assembly is not in use, it is a simple matter to fold the arms **33** and **34** inwardly as illustrated in Figure 5, and fold the brake housing **21** substantially flush against the surface of the tape reel housing.

One manner of employing the fish tape reel assembly of the present invention is illustrated in Figure 7 of the drawings. In that drawing, there is illustrated an outlet box **38** in which is received a conduit **39**. In this form of invention, the outlet end of the brake housing **21** is provided with a threaded connector **41** which secures the outlet end of the brake housing **21** with a telescoping tube **42**. The latter has a threaded connector **43** which is received in threaded engagement with the end of the conduit **39**. With this type of an arrangement, the operator is assured that the tape **16** will be received properly within the conduit **39**, and it is merely necessary for

the operator to hold the outer channel member **12** in one hand while rotating the inner channel member **11** in the other hand to effect continuous reeling in of the tape from the conduit **39**.

While the drawings illustrate a preferred embodiment of the invention, it will be evident that various modifications can be made to the specific structure shown without departing from the scope of the present invention.

I claim as my invention:

1. A fish tape reel comprising first and second overlapping annular channel members cooperating to define an enclosure having a peripherally disposed outlet, a fish tape coiled in said enclosure and withdrawable through said outlet, each of said channel members having a U-shaped cross-section, said first channel member being wide enough to fit over the outside of said second channel member and being received thereon in inverted position to form a closure for said second channel member to define said enclosure for receiving said fish tape, a first ball bearing race on the inner surface of said first channel member and a second ball bearing race on the outer surface of said second channel member in opposed relationship to said first ball bearing race, and a plurality of ball bearings received between said races to facilitate relative rotation of said first and second channel members with respect to each other.

2. A fish tape reel comprising first and second overlapping annular channel members cooperating to define an enclosure having a peripherally disposed outlet, a fish tape coiled in said enclosure and withdrawable through said outlet, each of said channel members having a U-shaped cross-section, said first channel member being wide enough to fit over the outside of said second channel member and being received thereon in inverted position to form a closure for said second channel member to define said enclosure for receiving said fish tape, a first ball bearing race on the inner surface of said first channel member and a second ball bearing race on the outer surface of said second channel member in opposed relationship to said first ball bearing race, a plurality of ball bearings received between said races to facilitate relative rotation of said first and second channel members with respect to each other, a brake housing secured to one of said channel members and having an opening arranged to receive a fish tape payed out through said outlet, and hand operated brake means on said brake housing arranged to apply a holding pressure against said tape as it passes through said brake housing.

3. A fish tape reel comprising first and second annular overlapping channel members cooperating to define an enclosure having a peripherally disposed outlet, a fish tape coiled in said enclosure and withdrawable through said outlet, each of said members having a U-shaped cross-section, said first channel member being wide enough to fit over the outside of said second channel member and being received thereon in inverted position to form a closure for said second channel member to define said enclosure for receiving said fish tape, a first ball bearing race on the inner surface of said first channel member and a second ball bearing race on the outer surface of said second channel member in opposed relationship to said first ball bearing race, a plurality of ball bearings received between said races to facilitate relative rotation of said first and second channel members with respect to each other, a brake housing pivotally secured to said first channel member and having an opening arranged to receive said fish tape payed out through said outlet, a collapsible locking hinge means supporting said housing in an extended operating position and enabling the housing to be moved to a storage position wherein it lies in close proximity to said first channel member, and hand operated brake means on said brake housing arranged to apply a holding pressure against said tape as it passes through said brake housing.

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