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2,585,602

CYLINDRICAL CONTAINER AND CLOSURE CAP THEREFOR

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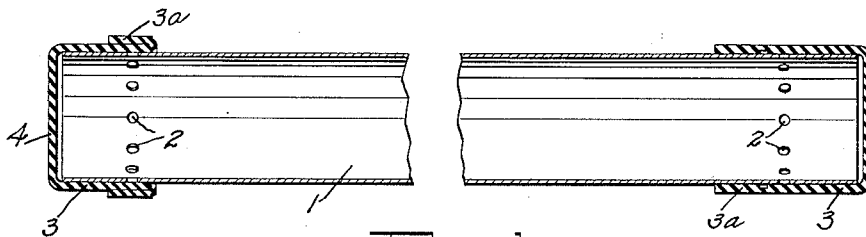


FIG. 1

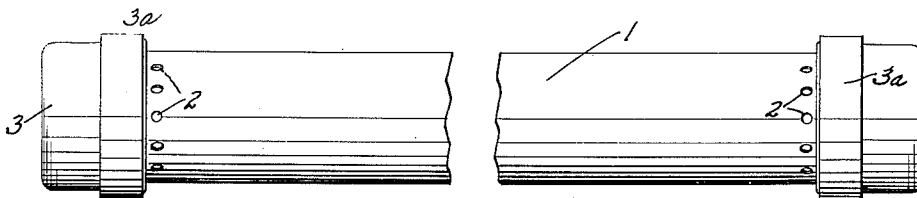


FIG. 2

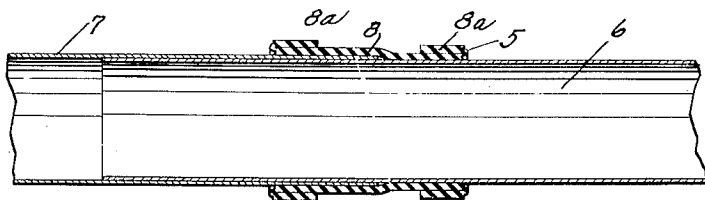


FIG. 3

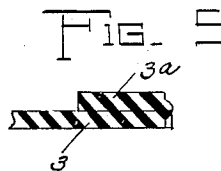


FIG. 5

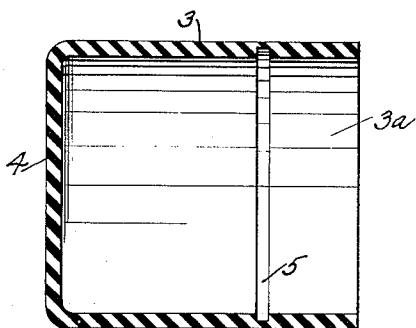


FIG. 4

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CYLINDRICAL CONTAINER AND CLOSURE
CAP THEREFOR

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3 Claims. (Cl. 220-42)

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My present invention embodies certain novel improvements in fishing rod cases, or the like.

Fishing rod cases are quite commonly in use today for receiving fishing rods when in collapsed or broken down condition, primarily for carrying purposes, and for maintaining the rod in packed condition so as to be unaffected by moisture changes in the air, as well as sealed from the effect of water should the case with the enclosed rod happen to be dropped into the water on fishing expeditions.

A primary objective of my invention has been to devise certain novel means for sealing the enclosure body of the rod case at the end thereof, the sealing means involving essentially a new form of sealing cap or end member.

Now sometimes rods, after being used for fishing, are in damp condition and it is highly desirable that they be permitted to dry out if they are placed in the rod case for facilitating the transportation or carrying thereof. With this in mind I have so designed my sealing means for the rod case that the same may be adjusted temporarily upon the case in such a manner that certain ventilating openings in the case may be permitted to act so that air ventilating and drying currents may pass through the body of the rod case and effectuate the desired object of drying out the rod placed therein.

Certain rod cases are made of telescopic form, as well known. In such forms they usually comprise two cylindrical members, adjacent ends of which are telescopically fitted together and therefore adjustable so that rods of different sizes when in collapsed condition may be placed in the case and the latter will fit the rod to the extent of the end sealing means engaging the ends of the rod sections, when the rod is broken down, to prevent undue movement of the rod sections within the case during carrying. With the foregoing in mind, my invention involves an additional improvement means residing in the provision of special sealing means for the sections of the rod case adjacent to the point of telescoping fitting together thereof, said sealing means involving the principle of sealing which is employed in conjunction with the end sealing members provided for the rod case.

A full understanding of the special improvements which are comprised in my present invention will be had upon reference to the following detail description, in conjunction with the accompanying drawings, and in the latter:

Figure 1 is a longitudinal sectional view of a rod case equipped with the sealing closure of my invention at the ends thereof, one of the sealing closures being shown in its final adjusted sealing position and the other being shown in its preliminary position prior to effecting its sealing action.

Figure 2 is a view in side elevation of my rod case of the type disclosed in Figure 1, illustrating the end closures so disposed and tightly affixed to the ends of the case as to expose certain ventilating openings provided near the ends of such casing, the position of the end closures under the conditions of Figure 2 illustration permitting of access of air to the interior of the case for drying out the rod sections disposed in the latter.

Figure 3 is a view somewhat similar to Figure 1, illustrating, however, a telescopic or sectional type of rod case and showing the application of the sealing means of my invention to the telescopic portions of the latter.

Figure 4 is an enlarged cross sectional view taken through one of the end closures of my invention, the same shown in the condition thereof when it is applied to the end of a rod case preliminary to sealing application to the latter.

Figure 5 is an enlarged fragmentary sectional view bringing out more clearly the hinging fold portion of the sealing closure when the said portion has been folded to compress the body portion of the closure by the resilient or elastic action of the hinged end portion of said closure.

Now describing the various features of my invention with reference to the illustration thereof shown in the annexed drawing, it is noted that a fishing rod case embodying the present invention, in one form, will comprise the cylindrical or tubular body 1. This body is usually made from ordinary aluminum tubing, or any suitable material may be employed, such as plastic, or other kinds of metal, this matter being immaterial to the invention.

Near the end portions of the tubular body of the case there are provided a series of openings 2, one series for each end, these openings being located at intervals circumferentially of the case end as seen well in Figures 1 and 2.

For closing the ends of the case body 1 I employ a resilient closure structure preferably made of rubber of like resilient material and designated generally at 3. The closure 3 is of cap-like form comprising a generally cylindrical body structure enclosed at one end as seen at 4 and open at its other end. Now the body structure 3 of the closure is formed on its inner cylindrical wall and somewhat adjacent to the open end thereof, with a cut out section 5 providing an internal annular groove. The reason for forming the groove 5 is to weaken the cylindrical body of the closure 3 at the point where the groove is located, so as to facilitate the folding of the open end portion of the closure outwardly and over the body of the closure in the manner illustrated in Figures 1 and 2. Thus, virtually, I provide for the body 3, an end folding section 3a which, by simple grasping of the case body 1 in the fingers of the two hands, and using the two thumbs of the two

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hands engaging the free edge of the section 3a may be folded or rolled back upon the body portion of the closure 3. This action will, of course, cause an effective compression of the body portion of the closure 3 which is surrounded by the hinge folded end part 3a, the compression resulting because the part 3a is necessarily placed under increased tension when it is folded over the part 3, as compared with its normal non-tension or static condition when in the position of Figure 4.

It is contemplated also that the closure 3 of my invention shall be formed of a size so that it loosely fits over its associated end of the case 1 because it is desirable that the closure 3 be quickly and readily slid in its place on the case preliminary to effecting its sealing action. Likewise, the free sliding movement of the closure 3 on the case is desirable when the closure is unsealed, so to speak, in order to enable the closure to be quickly and easily displaced from the position thereof fitting about the case end.

With the foregoing structure of my sealing closure in mind, it is evident that the closure may be readily slid onto the end of the case 1 where it is to be used when the closure is in the condition illustrated in Figure 1 at the right hand end of the case. When in such position, the end section 3a of the closure will be turned back or folded back onto the body of the closure in the manner in which it is shown at the left hand end of Figure 3, and in this way the sealing action of the closure is established in relation to the body of the case 1. The sections of the fishing rod will ordinarily be carried in the case 1 with the closures 3 adjusted on the case body so that the end members 4 of the closures 3 may abut the extremities of the rod sections and act with cushioning effect relative thereto to avoid damage to the sections in the carrying of the same from one place to another.

If the fishing rod or rods are placed in the case 1 in damp or wet condition it will be apparent that it is a very simple matter to mount the closure members 3 upon the case 1 in the manner shown in Figure 2 so that the openings 2 remain exposed and enable current of air with self-ventilating and drying effect to pass through the body of the case 1 from end to end. In the above use the end section 3a tightly holds the closure 3 from displacement from the case 1.

I now refer to Figure 3 of the drawings in which the case illustrated is of the telescopic type including the inner cylindrical or tubular section 6 and the outer over-fitting tubular section 7. Obviously, it is desirable for such a case 6 to be equipped at its ends with the closures 3 of the type which I have previously described, and it is further necessary and desirable to seal the case at the point of the inner extremity of the section 7 where it overlies the section 6. With this in mind I have devised a sealing device which consists of the tubular sleeve-like body 8, the ends of which are equipped with the hinged or fold-over section 8a similar to the section 3a of the closure 3 as previously described and made in the same manner by forming internal grooves in the end portions of the body 8.

It is obvious that by folding back upon the body 8 the end sections or portions of the sleeve structure of said body, said end sections 8a will compress the portions of the member 8 therebeneath to cause effective sealing action of the latter in relation to both of the telescopic sections 6 and 7 of the case.

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It will be understood, of course, that my present invention contemplates the employment of the sealing closures 3 alone in connection with single section fishing rod cases, or they may be used in telescopic section fishing rod cases, and may be used in such cases whether the latter employ the openings 2 formed in the section or sections thereof, or not. Moreover, the sealing device 8 is of substantially the same tubular body construction as the closure 3, omitting merely the end member 4 by reason of the nature of the use of said device 8. The advantages of my improved fishing rod case and closure means and sealing means associated therewith are believed to be obvious from the foregoing.

While the preferred use of my invention is for application in connection with fishing rods, it is obvious that tubular cases or containers such as employed for carrying tools, marine charts, or maps on vessels, supplies for outboard or inboard motors for boats, or any equipment parts, desirably sealed, may embody the sealing means herein described, to excellent advantage. I therefore do not wish to be limited to any particular use of my invention in view of the foregoing.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent of the United States, is:

1. An end closure for open end tubular containers comprising a resilient tubular body closed at one end and open at its opposite end, said body formed with a circumferential groove spaced from the open end to weaken the connection of the open end portion with the body the open end portion from the grooved portion being folded back on the body to a position around and lying flat in non-rolling contact with the body for applying sealing pressure to the latter externally thereof.

2. A closure as claimed in claim 1, combined with an open ended tubular case, on the open end of which the closure is fitted, and sealed by said pressure.

3. A container comprising the combination of a cylindrical casing having an open end and a uniform cylindrical surface adjacent said open end and a closure cap for said end comprised of an elastic material, said cap having an elongated cylindrical skirt portion of substantially uniform section having an inner diameter substantially equal to the diameter of said uniform cylindrical surface, said skirt being longitudinally and reversely foldable in a single tight layer on itself, and said cap having a smooth sliding fit over said end of said casing when said skirt portion is in nonfolded condition, but being resiliently bound to said casing when said skirt is folded.

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