Oct. 11, 1938. J. M. SHIMER 2,133,049

THREAD PROTECTOR

Filed April 9, 1937

Fig. 1.

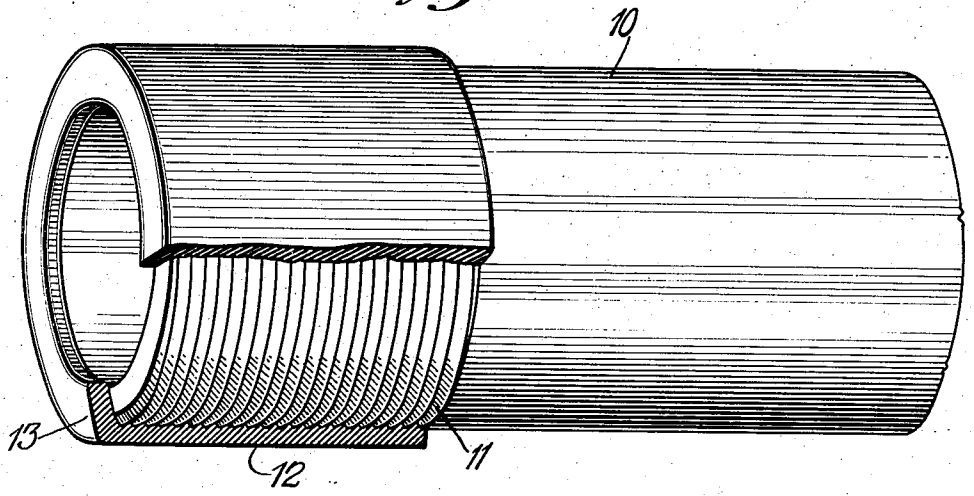


Fig. 2.

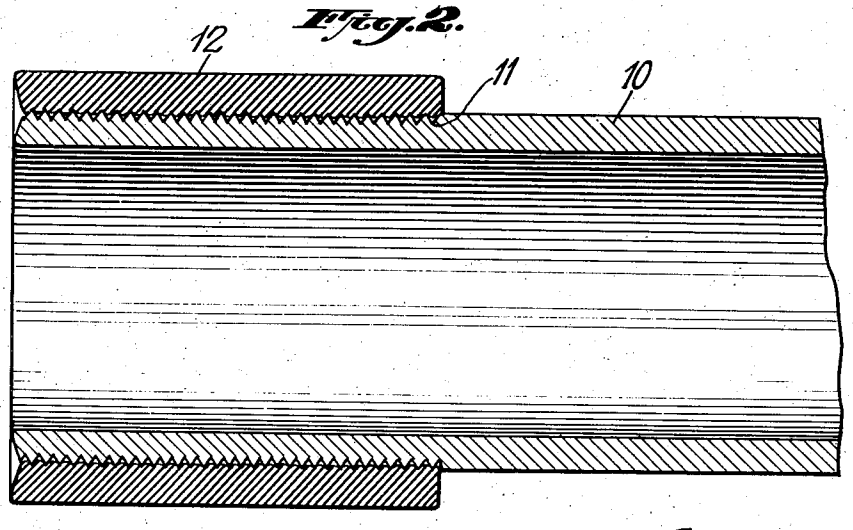


Fig. 3.

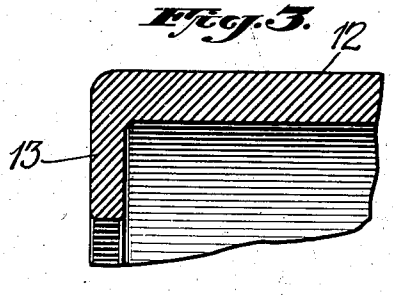
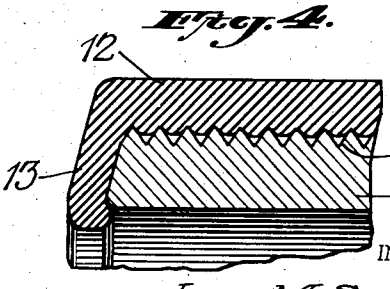


Fig. 4.



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THREAD PROTECTOR

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Application April 9, 1937, Serial No. 135,992

1 Claim. (Cl. 138—96)

My invention relates to an article which may be placed on the threaded portions of externally threaded articles such, for example, as the thread ends of pipe or sucker rods, or of connecting fittings, in order to prevent the injury of the threads during handling or shipping.

In order to prevent injury to the screwthreads of articles of the above type, they have generally been protected with a coating of lacquer or grease and then an internally threaded collar has been screwed tightly on so as to cover all of the screwthreads. This adds quite considerably to the cost of handling and shipping the articles, not only due to the cost of the metal and the manufacture of the thread protectors and to the added weight in shipping, but also because the threading of the protectors onto the threaded articles requires considerable labor. In some cases where the articles are small, such as various types of pipe fittings for oil production, the articles have been separately packed, thus requiring individual packages instead of the internally screwthreaded metal protectors.

In my present invention I provide a relatively cheap, light-weight thread protector which can be very easily and quickly inserted on the threaded portion of an article to be protected, and which effectively guards the threads against injury.

The thread protector of my invention comprises a covering in the shape of a collar of resilient, stretchable material, such as a softly vulcanized rubber, which can be expanded and slipped over the threaded end of the article and which, because of its resiliency, is tenaciously retained thereon. Preferably, the internal diameter of the protector is somewhat less than the external diameter of the screwthread so that when it is in place, it tends to grip the threaded portion of the article. One end of the protector may have an internally turned flange to fit against the end of the article, such as the end of a pipe, thus covering and protecting the end and buffering it against contact with the threaded portions of other pipes or articles.

The article to be protected by the rubber cap or protector may be covered with a rust preventing coating, such as grease or lacquer, preferably lacquer. However, the tendency of the rubber protector to grip the article tends to seal it against the entrance of moisture and thus to add greatly to the protecting action of the lacquer, or even to render the lacquer unnecessary.

The various features of the invention are illustrated by way of example in the accompanying drawing, in which—

Fig. 1 is a perspective view of the end of a tubular article, such as a pipe, protected by the thread protector of my invention, a portion of the latter being broken away to show its relation to the screwthreads.

Fig. 2 is a longitudinal section through a pipe protector of my invention.

Fig. 3 is a longitudinal section of an end portion of a modified form of embodiment of the thread protector of my invention.

Fig. 4 is a similar view of the thread protector mounted on a threaded article such as a pipe.

In the drawing the invention is illustrated as applied to a pipe 10 having screwthreads 11 at one end. A collar shaped protector 12 of soft vulcanized rubber is expanded and slipped over the threaded portion of the pipe 10 and may extend to a certain extent over the unthreaded portion. As shown in Fig. 2, the protector 12 may be merely a straight cylindrical length of rubber of the proper diameter. However, it preferably has an inturned flange 13, as shown in Figs. 3 and 4, to abut the end of the pipe 10 and thus protect the latter. This has the advantage that should the end of one pipe be swung or knocked against the threaded portion of another, the two rubber surfaces will come into contact and there will be less tendency for cutting, and a greater buffering action.

Consequently, the walls of the protector may be made thinner without endangering the protective action, and an economy in the weight of the protectors may be obtained. Also, the flange tends to seal the end of the pipe and to ensure that the protector will be placed in proper position, as it would be a natural reaction for any one applying the protector to push it into place until stopped by the flange.

Not only is the protector for use on long articles, such as lengths of pipe, tubing or rods, but it may also be used to protect the externally threaded ends or portions of short articles such as reducing nipples and other articles. When thus protected these fittings may be shipped and handled in bulk instead of being individually packaged as has heretofore been customary.

Although the protector tends to grip the threads, as indicated in Fig. 4, it may be easily placed in position on the articles. This is due to the fact that the rubber, being resilient and stretchable may be expanded to, or slightly greater than, the diameter of the pipe, then slipped over the end of the pipe and released,

whereupon it will grip the threaded end portion tightly.

Through my invention, therefore, I have provided a protector that can be easily placed in position, and that is light in weight and inexpensive.

What I claim is—

A protector for an externally threaded article comprising a sleeve consisting of elastic material of less diameter than the threaded portion of the article and adapted to be applied thereto by stretching of the sleeve over the threaded portion of the article, said sleeve being retained in position solely by its inherent resiliency.

JOHN M. SHIMER.