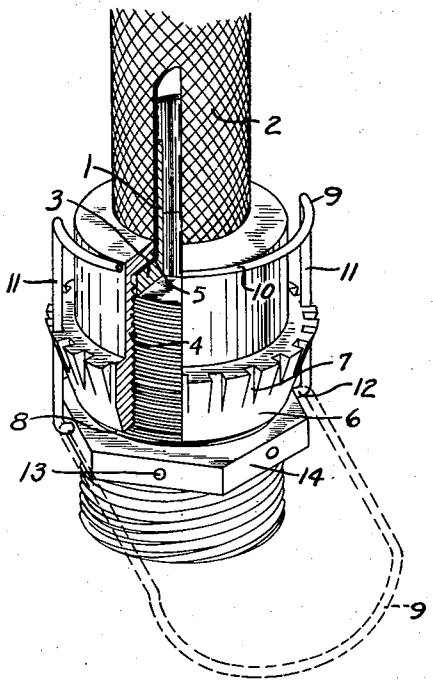
Aug. 25, 1936. J. J. ROSE 2,051,899

COLLAR LOCKING DEVICE

Filed May 7, 1934



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Patented Aug. 25, 1936 2,051,899

UNITED STATES PATENT OFFICE

2,051,899

COLLAR LOCKING DEVICE

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Application May 7, 1934, Serial No. 724,378

1 Claim. (Cl. 285—120)

(Granted under the act of March 3, 1883, as amended April 30, 1928; 370 O. G. 757)

The invention described herein may be manufactured and used by or for the Government for governmental purposes, without the payment to me of any royalty thereon.

It is a principal object of my invention to provide a simple and positive means for locking two members against movement relative to their common axis.

Further, my invention is so constructed and arranged that said locking means is readily secured to or detached from one of said movable members, prior to fixity of both of said members relative to their common axis.

Another object of my invention is to provide a means which can be conveniently locked or unlocked in a simple manner without special tools or the displacement or replacement of parts during the aforesaid operations.

My invention provides the added advantage of offering, in the unlocked position, free access to the ready adjustment of said two members relative to their common axis.

With the foregoing and other objects in view, which will appear as the description proceeds, the invention consists of certain new and novel improvements in locking devices, which will be hereinafter more fully illustrated and described in the accompanying drawing and more particularly pointed out in the appended claims.

Referring to the drawing, in which numerals of like character designate similar parts throughout the several claims:

Fig. 1 is a side view, in perspective, of my invention applied to an internal combustion engine spark plug.

In Fig. 1, a terminal 1 of a radio shielding 2 is provided at its open end with an outwardly turned flange 3. An internally threaded collar 4 is provided with an inwardly turned flange 5, adapted to operatively engage the flange 3, and with a conical outwardly turned flange 6 provided with longitudinally disposed grooves 7. Attachment of the shielding 2 is accomplished by screwing of the collar 4 down upon a thread provided upon the body portion of a spark-plug 8 until the bottom of the terminal 1 is securely pressed against the top of said body portion. Disengagement of the aforesaid members is prevented through employment of a locking device 9. The locking device 9 is in substance a bail composed of a bowed central portion 10 terminating in two parallel arms 11, disposed normal to the plane of the bow. The open ends of the arms 11 terminate in two inwardly turned and oppositely disposed trunions 12, adapted to pivot within retaining holes 13 provided in a hexagonal raised portion 14 of the spark-plug 8.

From the above description of Fig. 1, it is at once apparent that any conduit having an outwardly turned flange may be substituted for the radio shielding 2 and outwardly turned flange 3 without departing from the spirit of my invention. It is necessary only that the outside flange and wall diameters of the substitute conduit correspond to like diameters shown in Fig. 1.

The operation of my invention is as follows. Assuming previous attachment of the spark-plug and cable to an internal combustion engine; the assembled terminal 1, radio shielding 2 and collar 4 are slipped over the free end of the aforesaid cable and made fast to the body portion of the spark-plug 8 by screwing the collar 4 firmly in place. The locking device 9 is next raised from the phantom position shown in Fig. 1 and the parallel arms 11 "snapped" into the first grooves 7 coinciding therewith. It will be noted that the conical taper of the flange 6 materially assists upward travel of the parallel arms 11. The necessary "give" to accomplish the aformentioned "snapping action" is furnished by the bowed central portion of the locking device 9. The parallel arms 11 are also provided with sufficient initial "cant" at their lower extremities to assure that there will be no tendency of the trunnions 12 to free themselves from their retaining holes 13, even when the knee junctions of the parallel arms 11 and bowed central portion 10 are expanded outwardly to disengage the parallel arms 11 from the grooves 7, as shown in Fig. 1. The locking device 9 may be readily removed, in the event replacement is desired through outward disengagement of the trunnions 12 from their retaining holes 13.

I claim:

In combination with a conduit having a terminal provided with an outwardly turned flange, a threaded collar freely slidably mounted upon said conduit terminal having an outwardly turned flange provided with a plurality of oppositely and longitudinally disposed grooves, a body portion with threaded end adapted to receive and hold said threaded collar and attached conduit and having oppositely disposed holes perpendicular to the outer surface of said body portion, and a yoked one-piece bail having its open ends inwardly turned for pivotally engaging said body portion holes and its central portion disposed normal to its arms which are adapted to springingly engage and hold one pair of said longitudinal grooves.

JOHN J. ROSE.