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The invention relates to a cinch (RCA) plug with clamping means, comprising a plug body and a cover sleeve which can be screwed on in the axial direction and which surrounds the plug body, wherein at its contact side the plug body has a contact pin and an outer ring contact which surrounds the contact pin and which is conical on its outside and which is divided by axially extending slits and which can be radially compressed by means of the cover sleeve upon axial movement of the cover sleeve.

A cinch (RCA) plug of this kind is disclosed in WO-A-86 03 895, for example. The radially oriented clamping forces produced by the clamping means of this kind of cinch (RCA) plug provide a particularly firm and tight hold of the outer ring contact to the outer ring contact of the associated bush.

One drawback of the known cinch (RCA) plug with clamping means is that when the clamping force is produced a high degree of friction occurs against rotational movement of the cover sleeve between the outside of the outer ring contact and the cover sleeve. As a result of this friction grooves or other blemishes are formed on the outside of the outer ring contact which may cause the gold plating of the contact to come off. Friction also hinders rotational movement of the outer sleeve and thus has an adverse effect on the tightening and loosening operations.

The aim of the invention is therefore to further develop the cinch (RCA) plug with clamping means of the kind mentioned in the introduction in such a way that grooves or comparable blemishes on the outside of the clamping ring contact are avoided and in such a way that the tightening and loosening operations are simplified.

In solving this problem the invention uses the cinch (RCA) plug of the kind mentioned in the introduction as the basis and proposes that the cover sleeve be provided at the contact side with a ring element which is mounted rotatably to the sleeve body of the cover sleeve and that it bears with its inside against the conical outside of the outer ring contact.

By virtue of the ring element which is mounted to rotate about the screw axis of the cover sleeve the friction which hinders the screwing operation in the

peripheral extent is significantly reduced so that the tightening and loosening processes are correspondingly facilitated. During tightening, since the stationary outer ring contact and the ring element are no longer displaced relative to each other in the peripheral extent, grooves and other blemishes are avoided as far as possible on the outer ring contact.

An expedient further embodiment of the invention provides for a tubular portion to adjoin the ring element, the tubular portion projecting beyond the mounting location into the cover sleeve and being provided approximately as far as the mounting location with one or more axially extending slits. By virtue of this tubular portion the ring element is guided with precision on the cover sleeve. The axially extending slits on the tubular portions permit easy and simple assembly of the ring element in the associated receiving opening in the cover sleeve.

Expediently, the cover sleeve and the ring element are provided on the outside with an insulating covering, in particular an insulating electrolytic oxidation layer. By virtue of this insulation undesirable side effects are avoided which can occur, particularly with cinch (RCA) plugs which are arranged close together.

There will now follow a more detailed description of an embodiment of the invention with the aid of the drawings, wherein:

Figure 1 is a side view, partly in longitudinal section, of a cinch (RCA) plug of the kind according to the invention with connected cable;

Figure 2 is a section along the line II-II in Figure 1.

The cinch (RCA) plug shown in the drawings has a plug body 1 onto which a cover sleeve 2 can be screwed. The cover sleeve 2 is composed of a sleeve body 3 and a ring element 4 which is rotatably connected to the sleeve body 3 at a mounting location 5. A tubular portion 6 is joined to the ring element 4, which tubular portion projects beyond the mounting location into the sleeve body 3.

Up to about the mounting location 5 the tubular portion 6 is provided with one or more axially extending slits 7 (shown in Figure 2). These slits 7 serve to make it possible for the tubular portion 6 of the ring element 4 to be easily inserted into the sleeve body 3 for the purpose of assembly. The tubular portions 6 impart secure and stable guidance to the ring element 4 in the sleeve body 3 during the tightening and loosening operations.

On the contact side the plug body 1 is provided with a central contact pin 8 and with an outer ring contact 9 which encloses this circularly. The whole of the outside of the plug body 1 is covered over the whole of its length by the cover sleeve 2. The sleeve body 3 of the cover sleeve 2 is provided, on the cable connection side, with a metal inner thread 10 which is screwed onto a corresponding metal outer thread 11 of the plug body 1. The metal outer thread 11 communicates via a bridge 12 in electrically conductive manner with the terminal 13 for a screened conductor 14 of a coaxial cable 15. The coaxial cable 15 is firmly held in the plug body 1 by a clamping screw 16 which is shown by broken lines in the drawings. A further terminal 17 of the coaxial cable 15 is electrically connected to the contact pin 8.

The outer ring contact 9 has one or more axially extending longitudinal slits 18, so that the portions of the outer ring contact 9 formed thereby are resiliently sprung and can be pushed radially inwards. The outer side 19 of the outer ring contact 9 is conical and tapers towards the front on the contact side. The front end of the ring element 4 tapers inwardly in such a way that the outside of it rests against the conical outer side 19 of the outer ring contact 9. As can be seen in Figure 1, the portions of the outer ring contact 9 formed by the longitudinal slits 18 are pushed radially inwards due to the conicity of the outer side 19 if the sleeve body 3 is pushed axially relative to the plug body 1 in the direction of the cable terminal side. When this happens, the ring element 4 is likewise drawn axially onto the outside 19 of the outer ring contact 9, without itself being twisted. The metal cover sleeve 2 which consists of the sleeve body 3 and the ring element 4 is composed of a metal contact between the outer ring contact 9 and the terminal 17 of the screened conductor 14 of the attached coaxial cable 15, and screens the entire interior of the plug from effects.

To plug the cinch (RCA) plug onto a corresponding bush, not shown in the drawings, the outer ring contact 9 is first of all pushed over the corresponding companion piece of the terminal box, wherein the contact pin 8 simultaneously produces the electrical contact provided. Then, by twisting the sleeve body 3, the outer ring contact 4 is radially compressed by the non-rotating ring element 4 so that the outer ring contact 9 is firmly clamped to the corresponding companion piece of the terminal sleeve.

With the embodiment shown in the drawings, the cover sleeve 2 which is composed of the sleeve body 3 and the ring element 4 can be coated on the outside with an insulating layer, an insulating electrolytic oxidation layer, for example. This insulation prevents electrical contact between the cover sleeves 2 of cinch (RCA) plugs according to the invention which are placed close together.



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CLAIMS

1. A cinch (RCA) plug with clamping means, comprising a plug body (1) and a cover sleeve (2) which can be screwed on in the axial direction and which surrounds the plug body (1), wherein at its contact side the plug body (1) has a contact pin (8) and an outer ring contact (9) which surrounds the contact pin (8) and which is conical on its outside (19) and which is divided by axially extending slits (18) and which can be radially compressed by means of the cover sleeve (2) upon axial movement of the cover sleeve, characterised in that the cover sleeve (2) is provided at the contact side with a ring element (4) which is mounted at a mounting location (5) rotatably on the sleeve body (3) of the cover sleeve (2) and bears with its inside against the conical outside (19) of the outer ring contact (9).

2. A cinch (RCA) plug according to claim 1 characterised in that adjoining the ring element (4) is a tubular portion (6) which projects beyond the mounting location (5) into the cover sleeve (2) and which is provided approximately as far as the mounting location (5) with one or more axially extending slits (7).

3. A cinch (RCA) plug according to claim 1 or claim 2 characterised in that the cover sleeve (2) and the ring element (4) are externally provided with an insulating covering, in particular an insulating electrolytic oxidation layer.