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(54) Microphone connector

(57) A microphone connector comprising a connector member, a connector housing engaging with the connector member by means of a female thread and a male thread, a terminal carrier contained in the connector member and connected with a cable binder, which receives a cable therein so that the cable may be tightly bound with three or six divided elongate parts of an intermediate smaller diameter portion and a distal cone-shaped portion of the cable binder, with the cone-shaped portion compressed by a compressing ring of the connector housing after the connector housing is combined with the connector member.

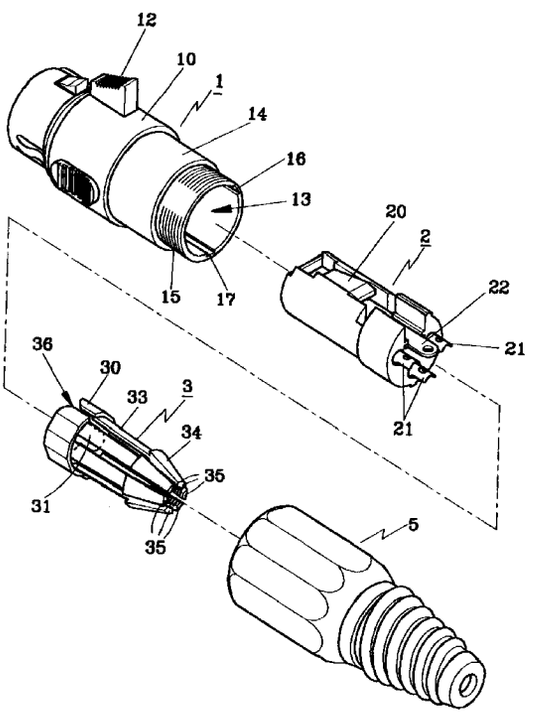

Fig 1

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Description

Background Of The Invention

This invention is a continued-in-part of U.S Patent No. 5,336,108, wherein a cable binder has pinching points for compressing and securing a cable. Although the pinching points can have excellent effect in securing a cable, they may also hurt an outer surface of a cable. This invention has been devised to improve this disadvantage.

Summary Of The Invention

This invention has an object to offer a microphone connector with features listed below.

1. It has a cable binder consisting of a proximal portion, an intermediate portion of a smaller diameter than the proximal portion, and a distal cone-shaped portion.

2. The intermediate portion and the distal portion of the cable binder are lengthwise and equally divided into three or six elongate parts to function as pressing posts.

3. The intermediate portion has its inner surface contacting with the outer surface of a cable deposited in the cable binder for pressing the cable tight.

4. The six elongate parts of the intermediate portion and the distal cone-shaped portion have small force against expansion so that a lengthwise slot provided in the whole length of the cable binder may be manually expanded to let a cable pushed into the cable binder.

Brief Description Of Drawings

Figure 1 is an exploded perspective view of a first embodiment of a microphone connector in the present invention.

Figure 2 is a cross-sectional view of the first embodiment of the microphone connector in the present invention.

Figure 3 is a rear view of a cable binder in the first embodiment of the microphone connector in the present invention.

Figure 4 is a cross-sectional view of line 4 - 4 in Fig. 3.

Figure 5 is an exploded perspective view of a second embodiment of the microphone connector in the present invention.

Detailed Description Of The Invention

A first embodiment of a female microphone connector in the present invention, as shown in Figs. 1 - 4, comprises a connector member 1, a terminal carrier 2, a cable binder 3 and a connector housing 5 as main components.

The connector member 1 is shaped cylindrical, having a proximal hand holding surface portion 10 with two opposite grips 11, 11 for a user to grip this connector, an intermediate smooth portion 14 and a distal male-threaded portion 15, an axially extending through hole 13 for depositing the terminal carrier 2 and the cable binder 3 therein, a push button 12 on the holding surface portion 10 and a front end 120 for assembling with the connector housing 5. The intermediate smooth portion 14 is rather long and the distal male-threaded portion 15 is rather short so that the threaded portion 15 can mesh with a female-thread of the connector housing 5 with little force. Two opposite axially extending grooves 16, 17 are provided in an inner surface of the hole 13 for the terminal carrier 2 and the cable binder 3 to fit unrotatably straight in the hole 13.

The terminal carrier 2 is fitted in the through hole 13 of the connector member 1, having a plate spring 20 fixed axially on its surface, two terminals 21, 21 to fit in terminal holes 24, 24, a negative terminal 22, and the end of each terminal is soldered with a wire of the cable 4.

The cable binder 3 shown in Figs. 3 and 4 has a proximal portion 30 with a groove 31, an intermediate portion 33 of a smaller diameter and longer than the proximal portion 30, and a distal cone-shaped portion 34. The proximal portion 30 is shaped as multi-gonal, preferably hexagonal or octagonal, with an inner circular surface with smooth glossiness. The groove 31 is for receiving the minus terminal 22 of the terminal carrier 2, and a reinforcing surface 32 is provided under the groove 31 to add strength to the proximal portion 30 for prevention of splitting. The intermediate portion 33 and the distal cone-shaped portion 34 are lengthwise and equally divided into six elongate parts 35 or three elongate carts 35' (see Fig 5) to function as pinching posts, and in addition a lengthwise slot 36, partly communicating with one of the slots dividing the six parts 35, provided in the whole length of the cable binder 3 so that the lengthwise slot 36 may be comparatively easy to be expanded for inserting a cable through the slot 36 into the interior of the cable binder 3 with less manual force, with the six elongate parts 35 having less force against expansion. And the intermediate portion 33 has its inner surface possible to tightly contact with the outer surface of a cable for acquiring tightness between the cable binder 3 and the cable 4. Therefore, after a cable 4 is deposited in the cable binder 3, the connector housing 5 is screwed with the connector member 1, by engaging a female-thread 50 with the male thread 15, permitting a compressing ring 51 of the connector housing 5 press the distal cone-shaped portion 34 of the cable binder 3 as shown in Fig. 3, with the cable 4 quite tightly bound therein and hardly pulled off as well.

Claims

1. A microphone connector comprising;

   a connector member shaped cylindrical, having at least a proximal hand holding portion, an intermediate smooth portion, a distal male-threaded portion to engage a female-threaded portion of a connector housing, and an axially extending through hole for depositing a terminal carrier or a plug and a cable pincher therein;
   a terminal carrier shaped cylindrical to fit in the through hole of said connector member, having a plate spring on an lengthwise surface, a number of terminal holes for terminals to pass through, said terminals having one end soldered with wires of a cable;
   a connector housing having a female-threaded portion to engage the male-threaded portion of the connector member and a compressing ring on an inner surface; and
   a cable binder having a proximal portion with a groove, an intermediate portion extending from the proximal portion, and a distal cone-shaped portion extending from the intermediate portion, and said intermediate portion and said distal cone-shaped portion being divided lengthwise into six equal elongate parts, said distal cone-shaped portion being compressed by the compressing ring of said connector housing after said connector housing screws with the connector member so that the three or six elongate parts may contact and press the outer surface of a cable deposited in said cable binder, and thus the cable can be bound tightly in said cable binder.

2. The microphone connector as claimed in Claim 1, wherein said proximal portion of said cable pincher is shaped as multi-gonal on its outer surface.

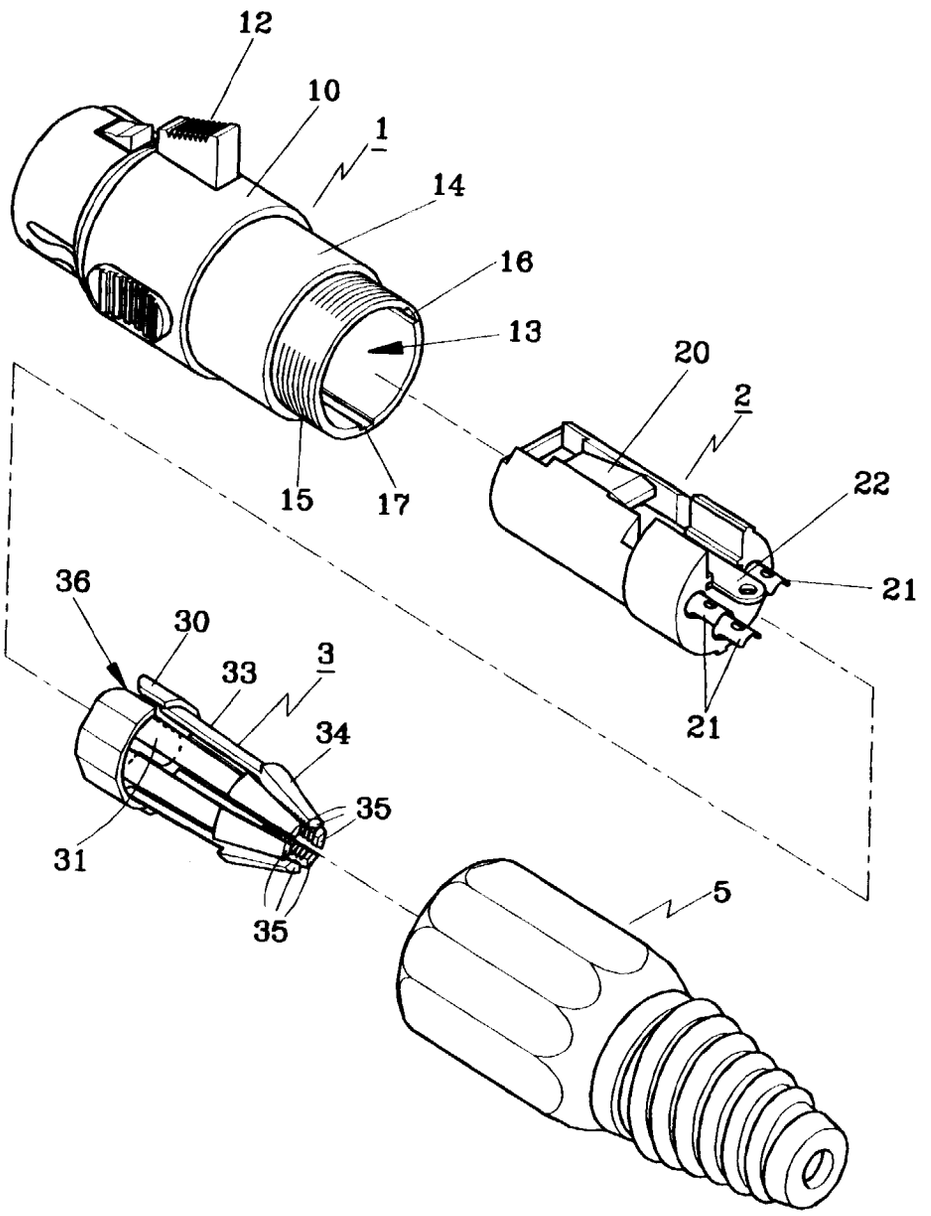

Fig 1

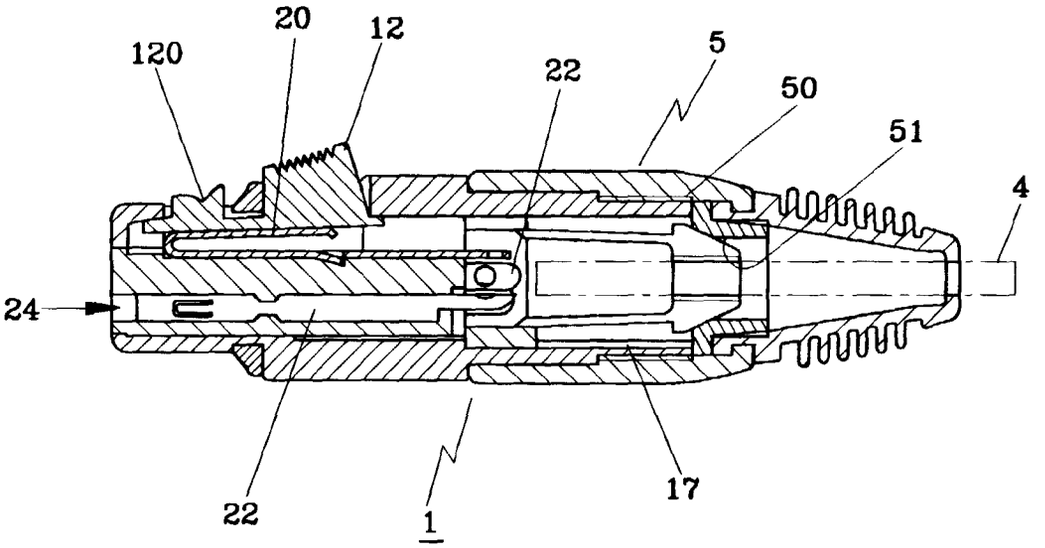

Fig 2

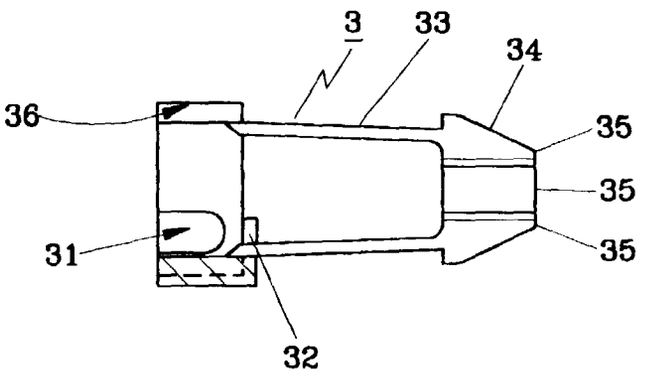

Fig 3

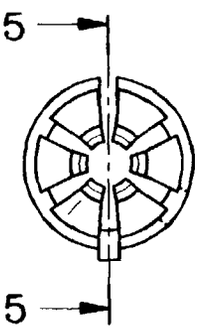

Fig 4

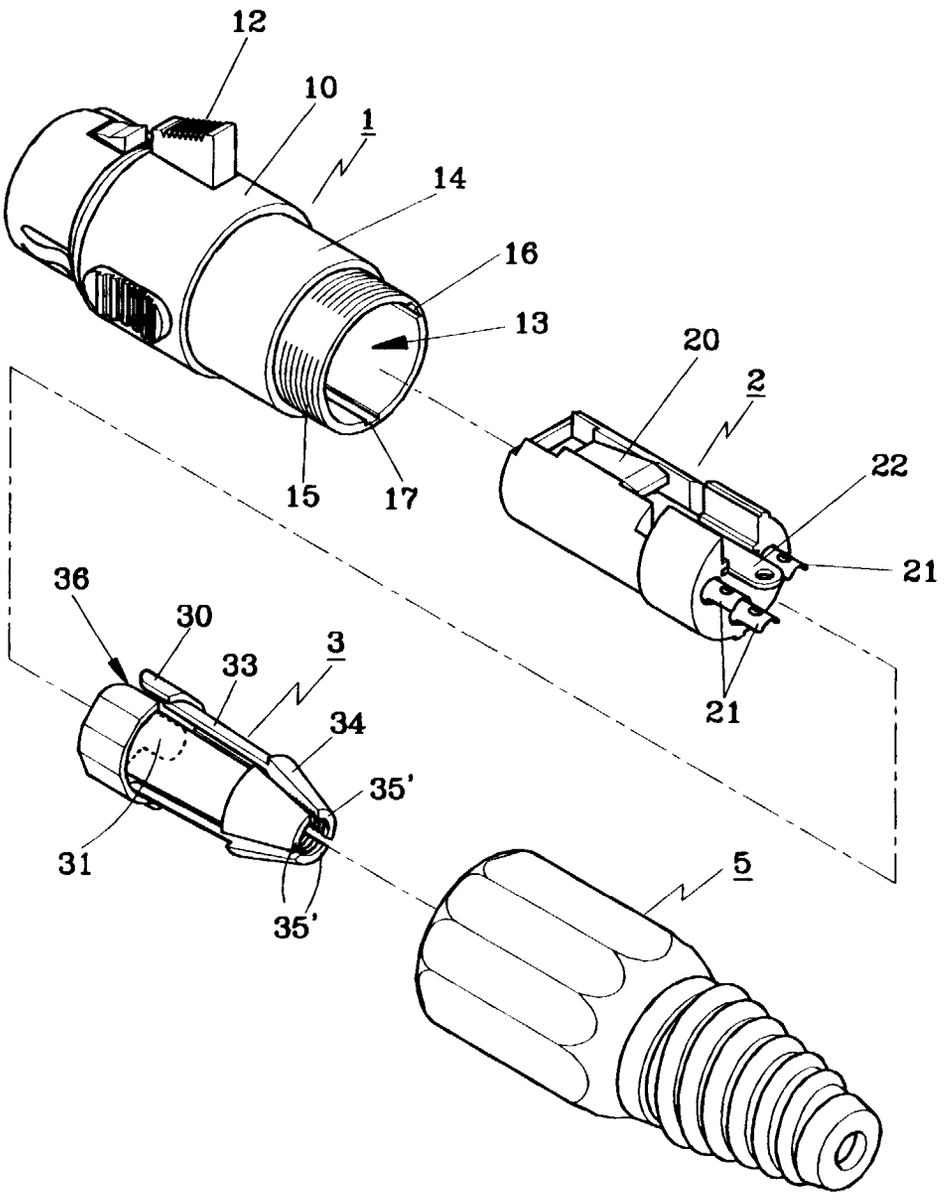

Fig 5

European Patent Office

EUROPEAN SEARCH REPORT

Application Number
EP 97 85 0090

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
X	DE 94 20 977 U (NEW TIDE ENTERPRISE CO) 23 February 1995 * claims 1,11 * -----	1,2	H01R13/59

TECHNICAL FIELDS SEARCHED (Int.Cl.6)
H01R

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
THE HAGUE	7 October 1997	Criqui, J-J

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
Y : particularly relevant if combined with another document of the same category
A : technological background
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T : theory or principle underlying the invention
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