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PATENT REQUEST: STANDARD PATENT/PATENT OF ADDITION

We, being the persons identified below as the Applicant, request the grant of a patent to the person identified below as the Nominated Person, for an invention described in the accompanying standard complete specification.

Full application details follow.

[71] Applicant: INTERNATIONAL COMPUTERS LIMITED

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[70] Nominated Person: INTERNATIONAL COMPUTERS LIMITED

Address: 1 HIGH STREET, PUTNEY, LONDON SW15 1SW, ENGLAND

[54] Invention Title: CABLE GUIDE

[72] Name(s) of actual inventor(s): JOHN GRAHAM GARNETT, ROY MOON and TREVOR JOHN JONES

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BASIC CONVENTION APPLICATION(S) DETAILS

[31] Application Number	[33] Country	Country Code	[32] Date of Application
9404154.8	UNITED KINGDOM	GB	4 MARCH 1994

Basic Applicant(s): INTERNATIONAL COMPUTERS LIMITED

Drawing number recommended to accompany the abstract .....

By our Patent Attorneys,
WATERMARK PATENT & TRADEMARK ATTORNEYS

.....

Richard C. T. Smoorenburg
Registered Patent Attorney

DATED this 2nd day of March 1995.

M065784 020395

P/00/008b 12/11/91
Section 29 (1)
Regulation 3.1 (2)

AUSTRALIA 693842

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NOTICE OF ENTITLEMENT

We, **INTERNATIONAL COMPUTERS LIMITED** of, 1 High Street, Putney, London SW15 1SW, England being the applicant in respect of Application No. 13611/95 state the following:-

The Persons nominated for the grant of the patent have entitlement from the actual inventors by assignment

The persons nominated for the grant of the patent have entitlement from the applicants of the basic application listed on the patent request form by assignment.

INTERNATIONAL COMPUTERS LIMITED
By our Patent Attorneys,
WATERMARK PATENT & TRADEMARK ATTORNEYS

..... 21 May 97.
L. J. Dyson (Date)
Registered Patent Attorney

AU9513611

(12) PATENT ABRIDGMENT (11) Document No. AU-B-13611/95
(19) AUSTRALIAN PATENT OFFICE (10) Acceptance No. 693842

(54) Title
CABLE GUIDE

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(51)[6] **G02B 006/44** **G02B 006/04**

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(56) Prior Art Documents
WO 86/01349
EP 474609
GB 2206455

(57) Claim

1. A cable guide comprising a plurality of similar units, each of said units comprising a centre portion and a flange portion, said units being stacked together to define a plurality of channels, each channel being defined by the respective flange portions of an adjacent pair of said units and by the centre portion of one of said adjacent pair of said units, each channel being adapted to hold a plurality of cables, and each said centre portion defining a minimum radius of curvature for the cables in a respective one of said channels.

P/00/011 28/5/91
Regulation 3.2(2)

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ORIGINAL
COMPLETE SPECIFICATION
STANDARD PATENT

Application Number:

Lodged:

Invention Title: CABLE GUIDE

The following statement is a full description of this invention, including the best method of performing it known to us :-

C1276

CABLE GUIDE

Background to the Invention

This invention relates to a guide for cables and is particularly, although not exclusively, concerned with a guide for positioning and providing direction control for a bundle of fibre optic cables.

It is known, for example in communications or computer equipment, to interconnect units by means of a bundle of cables, such as fibre optic cables. These cables may become tangled and may therefore require untangling before a fault in the cable can be identified and repaired.

The object of this invention is to provide an inexpensive and effective means for positioning a bundle of cables in a way which overcomes the problems described above.

Summary of the Invention

According to the invention, a cable guide comprises a plurality of similar units, each of said units comprising a centre portion and a flange portion, said units being stacked together to define a plurality of channels, each channel being defined by the respective flange portions of an adjacent pair of said units and by the centre portion of one of said adjacent pair of said units, each channel being adapted to hold a plurality of cables, and each said centre portion defining a minimum radius of curvature for the cables in a respective one of said channels.

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Brief Description of the Drawings

Figure 1 is a view of an assembled guide embodying the invention.

Figure 2 shows a unit used to form the assembled guide.

Description of an Embodiment of the Invention

A fibre optic guide in accordance with the invention will now be described by way of example with reference to the accompanying drawings.

Referring to Figures 1 and 2 the guide consists of a plurality of plastic units 1 each of which is shaped as a quadrant of a circle, and which can be stacked together to form a required number of guide channels. Each unit consists of a centre portion 2, and a flange portion 3 which provides a wall of sufficient height to support the required number of fibre optic cables stacked one on top of the other. The guide channels should not be too deep because increased depth causes weakness and requires thicker walls. The units are bolted together by means of bolts passing through holes in each unit.

The outside radius of the centre portion 2 defines the minimum radius of curvature for cables in each of the guide channels, and is chosen to be equal to or greater than the minimum permitted bend radius of the cables.

The flange portion 3 has a plurality of radial ribs 4 which distort the soft outer sheath of the fibre optic cable and which also force the stacked cables against alternate sides of the walls of the flange causing them to snake. This ensures that the cables are gripped tightly in the guide channels and thereby provides longitudinal stress relief.

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The longitudinal stress relief is a function of the bend radius of the cables. The outer cables are not gripped as well as the inner cables. For this reason extra radial ribs 5 are provided at radially outward positions to grip the outer cables in each channel. The outer cables may still over time ease out of the guide channels and therefore a restraint 6 is provided at the open ends of the slots to keep the cables in place.

In a modification, the restraint 6 may be extended so that it covers the channels over the whole circumference of the quadrant, and may be adapted so that it is attached at one end only.

In another form of the invention, the cable guide may consist of a series of concentric arc shaped walls attached to a base plate to produce a series of guide channels each of which is capable of holding a plurality of cables. In this implementation the degree of curvature defined by the centre provides sufficient resistance to longitudinal stress, as long as the guide channel width ensures the fibre optic cables fit tightly within the guide channels.

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THE CLAIMS DEFINING THE INVENTION ARE AS FOLLOWS:

1. A cable guide comprising a plurality of similar units, each of said units comprising a centre portion and a flange portion, said units being stacked together to define a plurality of channels, each channel being defined by the respective flange portions of an adjacent pair of said units and by the centre portion of one of said adjacent pair of said units, each channel being adapted to hold a plurality of cables, and each said centre portion defining a minimum radius of curvature for the cables in a respective one of said channels.

2. A cable guide according to Claim 1 wherein each of said units is generally shaped in the form of a quadrant of a circle.

3. A cable guide according to either preceding claim wherein each channel has means for gripping a cable along a portion of the length of said cable, thereby providing longitudinal stress relief.

4. A cable guide according to Claim 3 wherein said means for gripping a cable consists of a plurality of radially extending ribs within each said channel.

5. A cable guide according to Claim 4 further including additional ribs at radially outward positions within each said channel.

6. A cable guide according to any preceding claim further including restraining means for holding said cables in place in said channels.

7. A cable guide substantially as hereinbefore described with reference to the accompanying drawings.

DATED this 19th day of May, 1997.

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ABSTRACT

A cable guide for a bundle of optic fibre cables, consists of a number of stackable plastic quadrants, clamped together to form a number of channels. The quadrants have radial ribs to grip the cables and to provide stress relief. The cables are held in the channels by a restraint.

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1/2

Fig. 1

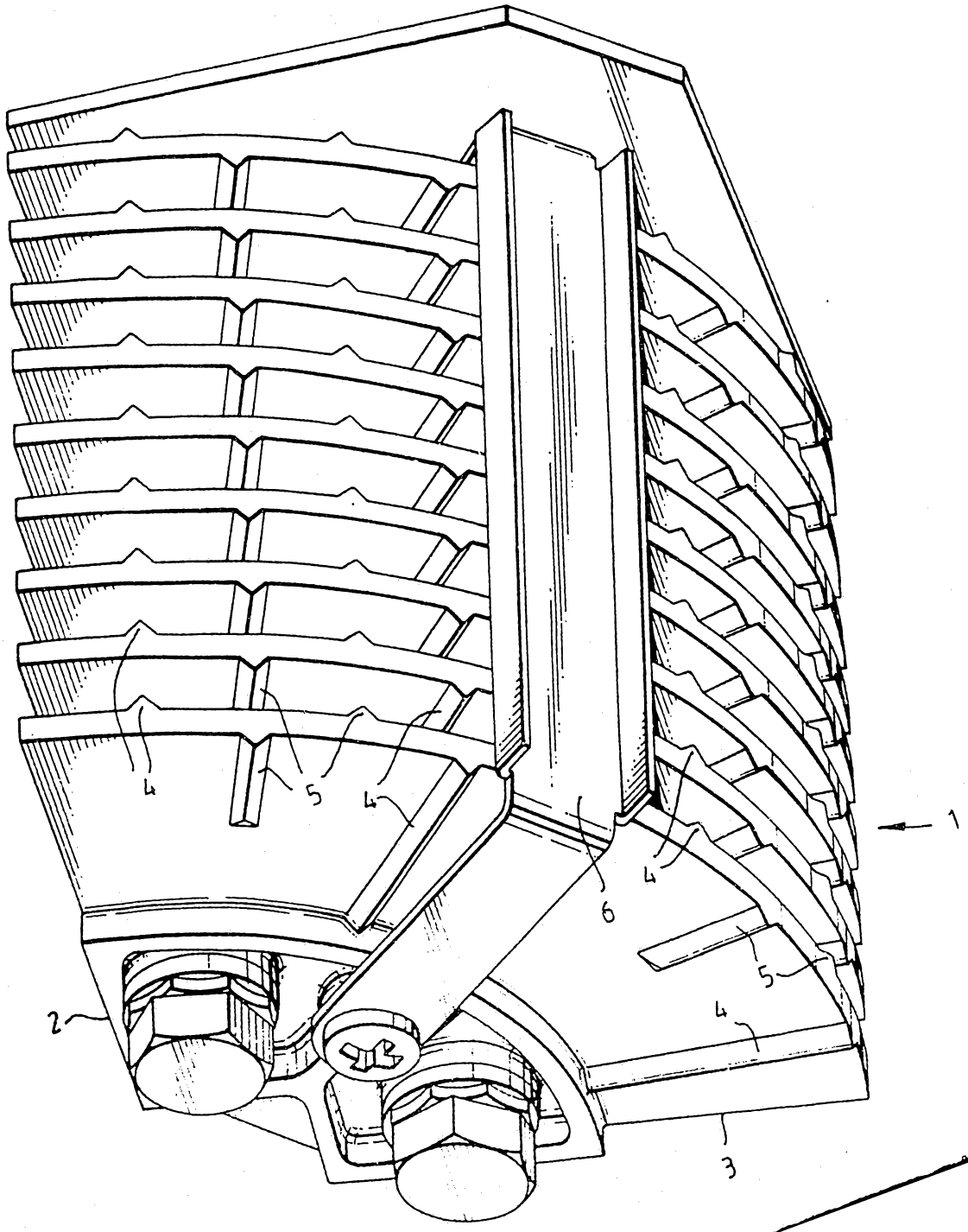

Fig. 2

