Title (en)

Device for feeding cable ends to a cable harness assembly apparatus

Title (de)

Einrichtung zur linearen Zubringung von Kabelenden zu Konfektioniereinheiten

Title (fr)

Dispositif de transport d'extrémités de câble pour une unité de confection de câbles

Publication

EP 1073163 A1 20010131 (DE)

Application

EP 00115707 A 20000721

Priority

- EP 00115707 A 20000721
- EP 99810672 A 19990726

Abstract (en)

The cable finishing machine has cables of different sizes and colors (2) fed along a linear track (7) that has height adjustment. The cable ends are received by a unit that forms a loop and the feed length is measured by an encoder (10). A gripper system (13) moves the cable along a transfer track to stages (5) for cutting, stripping insulation and crimping of a fitting.

Abstract (de)

Diese Konfektionieranlage (1) für Kabel (2) besteht aus einer Kabeleinheit (3), einem Kabelzubringer (4) und aus Konfektioniereinheiten (5). Das vorauseilende Kabelende wird von einem Schlaufenleger (8) gefasst und horizontal um 180 Grad gedreht. Gleichzeitig wird das Kabel (2) mittels eines Kabelvorschubes (9) vorgeschoben und mittels der Richtstrecke (7) gerichtet. Ein Encoder (10) misst die Länge des vorgeschobenen Kabels (2), wobei sich beim Vorschieben des Kabels (2) eine Kabelschlaufe (2.1) bildet. Zur Übernahme, Zubringung und Abgabe von Kabelenden besteht der Kabelzubringer (4) aus einer entlang einer Transferführung (11) verschiebbaren ersten Transfereinheit (12) mit einer ersten Greifereinheit (13) und aus einer entlang der Transferführung (11) verschiebbaren zweiten Transfereinheit (14) mit einer zweiten Greifereinheit (15). Eine Steuereinrichtung (20) steuert und überwacht die Konfektionieranlage (1), wobei die Bewegungen insbesondere der Transfereinrichtungen (12,14) und der Greifereinheiten (13,15) frei programmierbar sind. <IMAGE>

IPC 1-7 (main, further and additional classification)

H01R 43/052

IPC 8 full level (invention and additional information)

H01R 43/052 (2006.01)

CPC (invention and additional information)

H01R 43/052 (2013.01)

Citation (search report)

- [A] EP 0302804 A1 19890208 - RICARD CLAUDE
- [A] US 4858311 A 19890822 - KOCH MAX [CH]
- [A] CH 673858 A5 19900412 - MEGOMAT AG
- [A] EP 0876885 A1 19981111 - KOMAX HOLDING AG [CH]

Cited by

CH700897A1; CN106299960A; CN102969642A; CN103354317A; CN104882766A; EP3024099A1; EP3312956A1; EP2565992A1; EP2421102A1; EP3272469A1; US10014644B2

Designated contracting state (EPC)

CH DE FR GB IT LI

EPO simple patent family

EP 1073163 A1 20010131; EP 1073163 B1 20030514

INPADOC legal status

2017-10-31 [PGFP CH] POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE
- Ref Country Code : CH
- Payment date : 20170719
- Year of fee payment : 18

2017-10-31 [PGFP IT] POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE
- Ref Country Code : IT
- Payment date : 20170728
- Year of fee payment : 18

2017-10-31 [PGFP DE] POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE
- Ref Country Code : DE
- Payment date : 20170724
- Year of fee payment : 18

2015-05-29 [PG25 FR] LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO
- Ref Country Code : FR
- Free text : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES
- Effective date : 20140731

2015-04-24 [REG FR ST] NOTIFICATION OF LAPSE

- Effective date : 20150331

2013-11-29 [PGFP FR] POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE
- Ref Country Code : FR
- Payment date : 20130722
- Year of fee payment : 14

2010-05-31 [PG25 GB] LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO
- Ref Country Code : GB
- Free text : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES
- Effective date : 20090721

2010-03-24 [GBPC] GB: EUROPEAN PATENT CEASED THROUGH NON-PAYMENT OF RENEWAL FEE
- Effective date : 20090721

2008-12-31 [PGFP GB] POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE
- Ref Country Code : GB
- Payment date : 20080722
- Year of fee payment : 9

2004-05-06 [26N] NO OPPOSITION FILED
- Effective date : 20040217

2003-12-05 [ET] FR: TRANSLATION FILED

2003-08-20 [GBT] GB: TRANSLATION OF EP PATENT FILED (GB SECTION 77(6)(A)/1977)
- Effective date : 20030725

2003-06-30 [REG CH NV] NEW AGENT
- Representative's name : INVENTIO AG

2003-06-18 [REF] CORRESPONDS TO:
- Document : DE 50002147 P 20030618

2003-05-15 [REG CH EP] ENTRY IN THE NATIONAL PHASE

2003-05-14 [AK] DESIGNATED CONTRACTING STATES:
- Designated State(s) : CH DE FR GB IT LI

2003-05-14 [REG GB FG4D] EUROPEAN PATENT GRANTED
- Free text : NOT ENGLISH

2001-10-17 [AKX] PAYMENT OF DESIGNATION FEES
- Free text : CH DE FR GB IT LI

2001-08-16 [17P] REQUEST FOR EXAMINATION FILED
- Effective date : 20010618

2001-01-31 [AK] DESIGNATED CONTRACTING STATES:
- Kind Code of Ref Document : A1
- Designated State(s) : CH DE FR GB IT LI

2001-01-31 [AX] REQUEST FOR EXTENSION OF THE EUROPEAN PATENT TO:
- Free text : AL;LT;LV;MK;RO;SI