



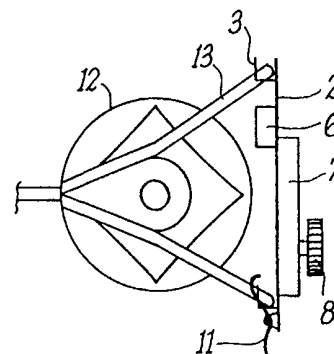
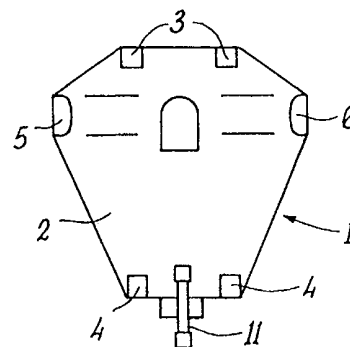
INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

| | | |
|--|--|--|
| (51) International Patent Classification ⁶ : B65H 75/38 | A1 | (11) International Publication Number: WO 99/05056 (43) International Publication Date: 4 February 1999 (04.02.99) |
| (21) International Application Number: PCT/IT98/00199 (22) International Filing Date: 16 July 1998 (16.07.98) (30) Priority Data: RM97U000151 23 July 1997 (23.07.97) IT (71)(72) Applicant and Inventor: FILIPPINI, Renato [IT/IT]; Viale del Sole, 20, I-00040 Anzio (IT). (74) Agents: BANCHETTI, Marina et al.; Ing. Barzanó & Zanardo Roma S.p.A., Via Piemonte, 26, I-00187 Roma (IT). | (81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG). Published <i>With international search report.</i> <i>Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i> | |

(54) Title: WINDING ROLL SUPPORT, PARTICULARLY FOR TUBE, WIRE, CABLE WINDING ROLL

(57) Abstract

The invention relates to a winding roll support (1; 1'), particularly for tube, wire, cable winding roll (12), said winding rolls (12) providing a structure (13, 14) for the resting on a surface, the support (1, 1') for winding rolls being comprised of a base structure (2; 15', 16') providing upper (3; 3') and lower (4, 4') coupling elements, respectively, of said roll resting structure (13), lateral coupling elements (5, 6; 5', 6'), for said roll resting structure (14), and a rear seat (7; 7') for the coupling with a support element (9, 10) for the winding roll support (1; 1').



FOR THE PURPOSES OF INFORMATION ONLY

Codes used to identify States party to the PCT on the front pages of pamphlets publishing international applications under the PCT.

| | | | | | | | |
|----|--------------------------|----|--|----|--|----|--------------------------|
| AL | Albania | ES | Spain | LS | Lesotho | SI | Slovenia |
| AM | Armenia | FI | Finland | LT | Lithuania | SK | Slovakia |
| AT | Austria | FR | France | LU | Luxembourg | SN | Senegal |
| AU | Australia | GA | Gabon | LV | Latvia | SZ | Swaziland |
| AZ | Azerbaijan | GB | United Kingdom | MC | Monaco | TD | Chad |
| BA | Bosnia and Herzegovina | GE | Georgia | MD | Republic of Moldova | TG | Togo |
| BB | Barbados | GH | Ghana | MG | Madagascar | TJ | Tajikistan |
| BE | Belgium | GN | Guinea | MK | The former Yugoslav Republic of Macedonia | TM | Turkmenistan |
| BF | Burkina Faso | GR | Greece | | | TR | Turkey |
| BG | Bulgaria | HU | Hungary | ML | Mali | TT | Trinidad and Tobago |
| BJ | Benin | IE | Ireland | MN | Mongolia | UA | Ukraine |
| BR | Brazil | IL | Israel | MR | Mauritania | UG | Uganda |
| BY | Belarus | IS | Iceland | MW | Malawi | US | United States of America |
| CA | Canada | IT | Italy | MX | Mexico | UZ | Uzbekistan |
| CF | Central African Republic | JP | Japan | NE | Niger | VN | Viet Nam |
| CG | Congo | KE | Kenya | NL | Netherlands | YU | Yugoslavia |
| CH | Switzerland | KG | Kyrgyzstan | NO | Norway | ZW | Zimbabwe |
| CI | Côte d'Ivoire | KP | Democratic People's Republic of Korea | NZ | New Zealand | | |
| CM | Cameroon | | | PL | Poland | | |
| CN | China | KR | Republic of Korea | PT | Portugal | | |
| CU | Cuba | KZ | Kazakstan | RO | Romania | | |
| CZ | Czech Republic | LC | Saint Lucia | RU | Russian Federation | | |
| DE | Germany | LI | Liechtenstein | SD | Sudan | | |
| DK | Denmark | LK | Sri Lanka | SE | Sweden | | |
| EE | Estonia | LR | Liberia | SG | Singapore | | |

WINDING ROLL SUPPORT, PARTICULARLY FOR TUBE, WIRE, CABLE WINDING ROLL

5 The present invention relates to a winding roll support,
particularly for tube, wire, cable winding roll.

It is well known that presently many elements for winding tubes exist, particularly for watering tubes, made up of a support structure, provided with differently shaped legs to rest the same on the ground, of a roll about which a tube is wound and unwound, and of a winch or like to
10 operate the roll.

Obviously, in case of a watering tube, it provides a water feeding, provided on the roll, in such a way to be connected to one end of the tube, following the same during its rotation, independently from the winding and unwinding action.

15 Other structures of this kind exist, serving for winding wires and cables, such as electric cables, telephone cable extensions, etc., substantially realised as described in the above.

Each one of the structures described in the above is laid on the ground, without any restraint with the resting surface.

20 Particularly, but not exclusively, in many occasions, when a certain distance from the roll has been reached, it occurs that the roll overturns, notwithstanding the resting structure is suitably realised, dragged by the user acting on the tube or on the cable, for example trying to unwind it without going back to the same roll, so that the cable jams or
25 damages the roll and the relevant structure sometimes in an irreparable way.

Further, in many cases when the roll is used within little environments, such as flat terraces, it is not possible to rest the roll, leaving it in position, without the need of storing it each time.

30 In this situation, the Applicant has thought and realised a solution able to obviate to all the above mentioned drawbacks.

Main object of the present invention is that of providing an universal support for tube, cable, wire winding rolls.

35 Still an object of the present invention is that of providing a support allowing to place the winding roll rest on the ground or fixed to the wall.

Another object of the present invention is that of realising a support allowing to place and remove the winding roll in an extremely

simple, safe and fast way, i.e. without the risk the it disengages during the use.

Another object of the present invention is that of providing a support which can be oriented, following the unwinding of the tube.

5 It is therefore specific object of the present invention a winding roll support, particularly for tube, wire, cable winding roll, said winding rolls providing a structure for the resting on a surface, the support for winding rolls being comprised of a base structure providing upper and lower coupling elements, respectively, of said roll resting structure, lateral
10 coupling elements, for said roll resting structure, and a rear seat for the coupling with a support element for the winding roll support.

According to the invention, said support provides a hooking system for locking said resting structure.

15 Preferably, according to the invention, said base structure is comprised of a shaped plate.

Still according to the invention, said base structure can be comprised of a first vertical plate, bearing said upper and lower coupling element, and said rear seat, and a second horizontal plate, coupled with said first plate, and bearing said lateral coupling elements.

20 Furthermore, according to the invention, said base structure can be comprised of section bar structure.

Preferably, according to the invention, said upper and lower coupling and said lateral coupling elements can be comprised of folded wings, in such a way to create seats for the elements comprising said roll
25 resting structure.

Particularly, said upper and lower coupling elements can be comprised of two folded side-by side spaced wings.

30 Always according to the invention, said seat for coupling with said support element can be provided with coupling fixing means, particularly a tightenable knob.

The support according to the invention can be made up of metal, sheet, plastics, etc.

35 The present invention will be now described, for illustrative but not limitative purposes, according to its preferred embodiments, with particular reference to the figures of the enclosed drawings, wherein:

figure 1 is a front view of a first support according to the invention;

figure 2 is a lateral view of the support of figure 1;

figure 3 shows the support of figure 1 with a first kind of roll applied;

5 figure 4 shows the support of figure 1 with a second kind of support applied;

figure 5 is a front view of a second support according to the invention;

figure 6 shows an element to apply on the ground the support according to the invention; and

10 figure 7 shows an element for the application on the wall of the support according to the invention.

In the following, it will be made reference to a support realised for a watering tube winding roll, but it is evident that this cannot be considered as limitative, since the same kind of structure can be used for
15 a different kind of winding rolls.

Furthermore, it must be once more put into evidence that the materials for the realisation of the support are not important, and they therefore do not constitute a limitation of the scope of the present invention.

20 Coming now to examine figures 1 and 3, it is shown a first support 1 according to the invention, providing a plate 2 with upper 3 and lower 4 wings, as well as lateral wings, respectively 5 and 6, that will be described in greater detail in the following.

Support 1 further provides a rear seat 7, having a fixing knob 8,
25 for the coupling of the ground support element 9 (figure 6) or with the wall support element 10 (figure 7)

Furthermore, on the lower portion of the plate 2, a tube bearing roll 12 fixing hook 11 is provided.

30 Wings 3 and 4 are folded upwardly, in such a way to realise a roll 12 resting structure 13, see figure 4, while wings 5 and 6 are also folded inward, in such a way to create a structure to contain the resting structure 14 of the roll 12 shown in figure 3.

Support 1 according to the invention is realised in such a way to be conformable to any kind of roll 12, with the relevant resting structure.

35 Obviously, support according to the invention must not necessarily provide a plate 2 like the one shown in figures 1 and 2, but

the same function could be for example performed by a structure made up of section bars or like.

5 An alternative to the plate 2 is shown in figure 5, wherein a support 1' is shown, providing the same kind of wings 3', 4', 5', and 6', of fixing hook 11', and the seat 7' for the coupling of the support element 9 or 10.

10 However, in this case, instead of the single plate 2, a first vertical plate 15', providing wings 3' and 4', the hook 11' and the seat 7', and a second horizontal plate 16', coupled to the first one by welding, riveting or any other equivalent system, upon which wings 5' and 6' are realised, are provided.

In this way, a lightening of the support, without reducing its sturdiness, is obtained.

15 As already mentioned, material of the support according to the invention is not restraining. It can be realised by metal, plastics, sheet, or any other suitable material.

Ground support elements 9 and wall support elements 10 are shown in figures 6 and 7.

20 Said elements 9 and 10 are realised in such a way to be fixed respectively to the ground or to the wall, and to have a section suitable to be coupled with said seat 7 or 7' provided on the support 1 or 1'.

Knob 8 or 8' is useful to fix support 1 on the support element, in order to avoid that during the unwinding or winding of the tube from the roll 12, the support 1 or 1' - roll 12 assembly swings.

25 The present invention has been described for illustrative but not limitative purposes, according to its preferred embodiments, but it is to be understood that modifications and/or changes can be introduced by those skilled in the art without departing from the relevant scope as defined in the enclosed claims.

CLAIMS

1. Winding roll support, particularly for tube, wire, cable winding roll, said winding rolls providing a structure for the resting on a surface, the support for winding rolls being characterised in that it is comprised of a base structure providing upper and lower coupling elements, respectively, of said roll resting structure, lateral coupling elements, for said roll resting structure, and a rear seat for the coupling with a support element for the winding roll support.

2. Support structure according to claim 1, characterised in that, said support provides a hooking system for locking said resting structure.

3. Support structure according to claim 1 or 2, characterised in that said base structure is comprised of a shaped plate.

4. Support structure according to claim 1 or 2, characterised in that said base structure is comprised of a first vertical plate, bearing said upper and lower coupling element, and said rear seat, and a second horizontal plate, coupled with said first plate, and bearing said lateral coupling elements.

5. Support structure according to claim 1 or 2, characterised in that said base structure is comprised of section bar structure.

6. Support structure according to one of the preceding claims, characterised in that said upper and lower coupling and said lateral coupling elements is comprised of folded wings, in such a way to create seats for the elements comprising said roll resting structure.

7. Support structure according to one of the preceding claims, characterised in that said upper and lower coupling elements is comprised of two folded side-by side spaced wings.

8. Support structure according to one of the preceding claims, characterised in that said seat for coupling with said support element is provided with coupling fixing means, particularly a tightenable knob.

9. Support structure according to one of the preceding claims, characterised in that it is made up of metal, sheet, plastics, etc.

10. Winding roll support, particularly for tube, wire, cable winding roll, according to each one of the preceding claims, substantially as illustrated and described.

1/1

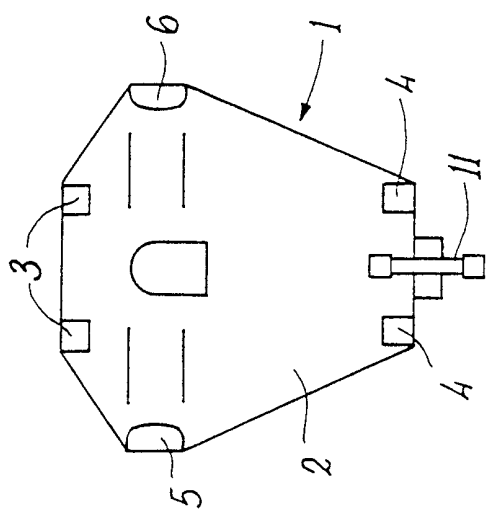


FIG. 1

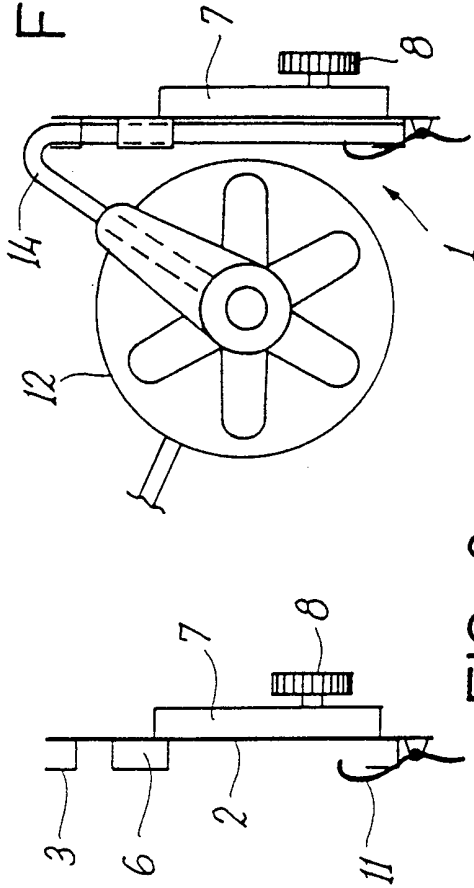


FIG. 2

FIG. 3

FIG. 6

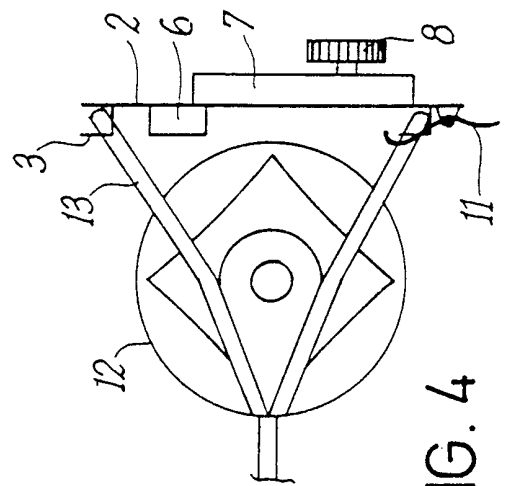


FIG. 4

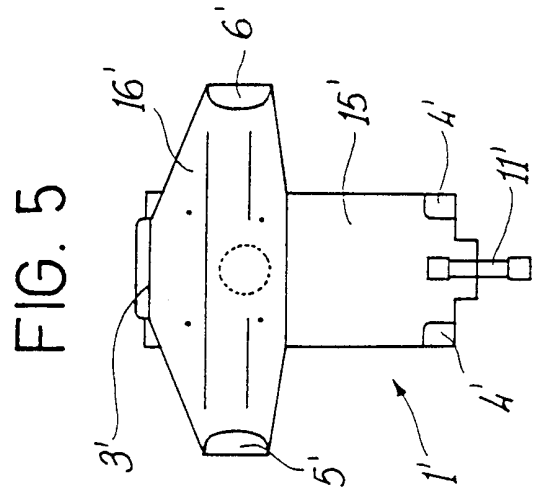


FIG. 5

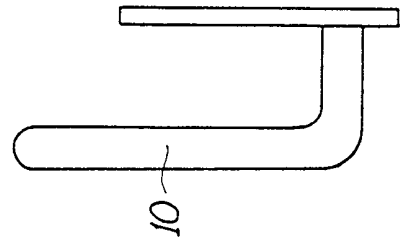


FIG. 7

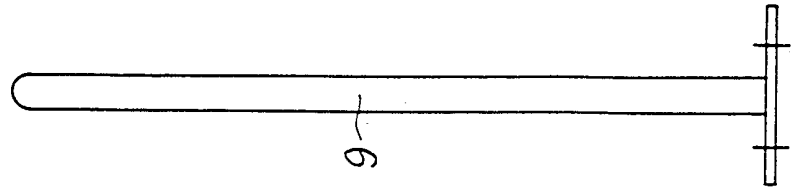


FIG. 6

INTERNATIONAL SEARCH REPORT

International Application No

PCT/IT 98/00199

A. CLASSIFICATION OF SUBJECT MATTER
IPC 6 B65H75/38

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 6 B65H D06F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|------------|--|-----------------------|
| X | WO 89 02181 A (TURBOREEL LIMITED) 9 March 1989 see claims; figures 1-6 --- | 1,3,6,9, 10 |
| A | US 2 583 151 A (R.L. MOONSHOWER) 22 January 1952 see the whole document --- | 1 |
| A | US 3 433 247 A (A.G.P. HASELDEN) 18 March 1969 see the whole document --- | 1,2 |
| A | US 2 602 605 A (C.S. SHILLING) 8 July 1952 see figures --- | 1,2 |
| A | FR 51 028 E (C.M. VUILLERME) 3 June 1941 --- | |
| | -/-- | |



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"S" document member of the same patent family

Date of the actual completion of the international search

16 November 1998

Date of mailing of the international search report

26/11/1998

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

D'Hulster, E

INTERNATIONAL SEARCH REPORT

Internal Application No

PCT/IT 98/00199

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

| Category | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|----------|--|-----------------------|
| A | FR 1 285 919 A (WOLF-GERÄTE GMBH) 18 July 1962 ---- | |
| A | US 3 880 378 A (W.G. BALLENGER) 29 April 1975 ---- | |
| A | AU 629 033 B (E.R.G. AGENCIES PTY. LTD.) 24 September 1992 ----- | |

INTERNATIONAL SEARCH REPORT

Information on patent family members

Internati: Application No

PCT/IT 98/00199

| Patent document cited in search report | | Publication date | Patent family member(s) | Publication date |
|---|---|---------------------|-----------------------------|--------------------------|
| WO 8902181 | A | 09-03-1989 | AU 2303288 A | 31-03-1989 |
| US 2583151 | A | 22-01-1952 | NONE | |
| US 3433247 | A | 18-03-1969 | AU 209566 A DE 1536067 A | 24-08-1967 22-01-1970 |
| US 2602605 | A | 08-07-1952 | NONE | |
| FR 51028 | E | 03-06-1941 | NONE | |
| FR 1285919 | A | 18-07-1962 | NONE | |
| US 3880378 | A | 29-04-1975 | US 3698656 A | 17-10-1972 |
| AU 629033 | B | 24-09-1992 | AU 6227090 A | 14-03-1991 |