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8
9 THE UNITED STATES DISTRICT COURT
10 FOR THE NORTHERN DISTRICT OF CALIFORNIA

11 JOHN HANNA, an individual,

12 Plaintiff,

13 v.

14
15 FINANCIAL ANALYSTS CONSULTANTS,
INC., d/b/a.COIL N' WRAP, an Arizona
16 corporation, KEN WILTON, an individual, and
JUDY WILTON, an individual,

17 Defendants.
18

Case No. **C08 02476**

**COMPLAINT FOR PATENT
INFRINGEMENT AND DEMAND FOR
JURY TRIAL**

19 Plaintiff John Hanna ("Hanna"), for its Complaint for patent infringement against Defendants
20 Financial Analysts Consultants, Inc. d/b/a Coil n' Wrap, Ken Wilton, and Judy Wilton, (collectively,
21 "Defendants"), allege as follows:

22 **THE PARTIES**

23 1. Plaintiff Hanna is an individual residing in the county of Santa Clara in the State of
24 California.

25 2. On information and belief, Defendant Financial Analysts Consultants, Inc. is an
26 Arizona corporation and is doing business under the trade name "Coil n' Wrap" as registered with
27 the Arizona Secretary of State. Financial Analysts Consultants, Inc. d/b/a Coil n' Wrap
28 (collectively, "Coil n' Wrap") has its principal place of business at 24060 North 195th Avenue,

Filed
MAY 14 2008
RICHARD W. WIEKING
CLERK, U.S. DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA
SAN JOSE

ADR

E-FILING

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1 Surprise, Arizona, 85387. Coil n' Wrap is in the business of selling recreational vehicle ("RV")
2 products and boating accessories.

3 3. On information and belief, Defendant Ken Wilton is an individual with unknown
4 residence, living and traveling across the United States in his RV. Defendant Ken Wilton is
5 currently listed with the Arizona Corporation Commission as President and CEO of Financial
6 Analysts Consultants, Inc. which is doing business under the trade name "Coil n' Wrap" as
7 registered with the Arizona Secretary of State.

8 4. On information and belief, Defendant Judy Wilton is an individual with unknown
9 residence, living and traveling across the United States in her RV. Defendant Judy Wilton is
10 currently listed with the Arizona Corporation Commission as Secretary of Financial Analysts
11 Consultants, Inc. which is doing business under the trade name "Coil n' Wrap" as registered with the
12 Arizona Secretary of State.

13 JURISDICTION

14 5. This is a civil action for patent infringement arising under the patent laws of the
15 United States, Title 35 of the United States Code. Thus, the Court has subject matter jurisdiction
16 over this action pursuant to 28 U.S.C. §§ 1331 and 1338.

17 6. The Court has personal jurisdiction over Defendants because Defendants have
18 established certain minimum contacts with California such that the exercise of personal jurisdiction
19 over Defendants would not offend traditional notions of fair play and substantial justice. Defendants
20 have and continue to conduct business in the State of California and within the Northern District of
21 California. Defendants have and continue to sell its infringing products in the Northern District of
22 California.

23 VENUE

24 7. Venue is proper in this Court pursuant to 28 U.S.C. § 1391(b) because a substantial
25 part of the events or omissions giving rise to the claim occurred, or a substantial part of property that
26 is the subject of the action is situated, in the Northern District of California.

27 8. Further, venue is proper in this Court pursuant to 28 U.S.C. § 1391(c) because Coil n'
28 Wrap is subject to personal jurisdiction in this Court.

INTRADISTRICT ASSIGNMENT

9. This is an Intellectual Property Action subject to district-wide assignment under Local Rule 3-2(c).

FACTUAL BACKGROUND

10. On or about 2003, Hanna was in the business of supplying RV products, including awning pull straps. Hanna's awning pull straps are used and applied to window and patio awning assemblies mounted on RVs. Hanna's awning pull straps include, without limitation, the Main/Patio Awning Pull Strap, the Window Awning Pull Strap, the Carefree Omega Awning Pull Strap, and Awning Hangers (collectively, "Hanna's Awning Pull Straps").

11. On June 3, 2003, Hanna applied for a patent with the United States Patent and Trademark Office (the "USPTO") for the invention directed to Hanna's Awning Pull Straps. On May 16, 2006, the USPTO duly and legally issued United States Patent No. 7,044,189 B1 (the "'189 patent") entitled "ADJUSTABLE WINDOW AWNING ASSEMBLAGE." Hanna is the inventor and owner of all right, title, and interest of the '189 patent. A true and correct copy of the '189 patent is attached hereto as Exhibit 1.

12. Hanna's Awning Pull Straps embody the '189 patent.

13. On information and belief, on or about 2003, Hanna entered into a two-year exclusive distributorship agreement with Coil n' Wrap for the sale of Hanna's Awning Pull Straps.

14. On information and belief, at the time Coil n' Wrap entered into the exclusive distributorship agreement, Defendants were aware that Hanna had a pending application with the USPTO directed to Hanna's Awning Pull Straps.

15. On information and belief, Coil n' Wrap sold Hanna's Awning Pull Straps from about 2003 to about 2005, and during that relevant period, Coil n' Wrap's distribution and sale of Hanna's Awning Pull Straps were a commercial success.

16. On information and belief, Hanna's exclusive distributorship agreement with Coil n' Wrap terminated on or about 2005. Thereafter, Hanna began selling Hanna's Awning Pull Straps independently and was commercially successful.

17. On information and belief, on or about 2005, after termination of the exclusive distributorship agreement, Coil n' Wrap began manufacturing and selling Coil n' Wrap branded awning pull straps including, without limitation, the Main/Patio Awning Pull Strap, the RV Window Awning Pull Strap, the Over-the-Door & Omega Slide-Out Awning Pull Strap, and Awning Hangers (collectively, the "Coil n' Wrap Awning Pull Straps").

18. On information and belief, the Coil n' Wrap Awning Pull Straps infringe upon the '189 patent.

19. On information and belief, Coil n' Wrap has sold and continues to sell the Coil n' Wrap Awning Pull Straps.

20. On information and belief, Coil n' Wrap has worked and is working in concert with Ken Wilton and Judy Wilton to infringe upon the '189 patent.

21. On information and belief, Coil n' Wrap has sold and continues to sell the Coil n' Wrap Awning Pull Straps to wholesale distributors, dealers, and end-users.

22. On information and belief, Coil n' Wrap has sold and continues to sell the Coil n' Wrap Awning Pull Straps at trade shows, including, without limitation, the Northern California Good Sam Club Samboree held in Lodi, California, on May 1 through May 4, 2008.

23. On information and belief, Coil n' Wrap has sold and continues to sell the Coil n' Wrap Awning Pull Straps through its website.

24. On information and belief, the Coil n' Wrap Awning Pull Straps have been and continue to be a commercial success.

25. On or about January 2008, Hanna learned of Coil n' Wrap's infringing activity.

26. On February 25, 2008, Hanna's agent sent, by certified mail, a letter to Coil n' Wrap, addressed to Ken Wilton, asserting his rights under the '189 patent. Hanna demanded that Coil n' Wrap, its agents, distributors, retailers, and those aiding Coil n' Wrap to immediately cease and desist from making, using, selling, offering for sale, or otherwise distributing the Coil n' Wrap Awning Pull Straps which infringe upon the '189 patent.

1 27. On information and belief, despite having received Hanna's cease and desist letter,
2 Coil n' Wrap continues to manufacture and sell the Coil n' Wrap Awning Pull Straps to end-users
3 and wholesale distributors, willfully and deliberately infringing upon the '189 patent.

4 28. On information and belief, Ken and Judy Wilton are the exclusive shareholders of
5 Coil n' Wrap, and that there exists, and at all relevant times mentioned herein there existed, a unity
6 of interest in ownership between the Ken Wilton, Judy Wilton, and Coil n' Wrap, such that any
7 individuality and separateness between Ken and Judy Wilton and Coil n' Wrap never existed and
8 does not exist.

9 29. On information and belief, Coil n' Wrap is, and at all times mentioned herein was, a
10 mere shell instrumentality and conduit through which Ken and Judy Wilton carried out their
11 business, exercising complete control and dominance over Coil n' Wrap to such extent that any
12 individuality or separateness of Ken and Judy Wilton from Coil n' Wrap has never existed or ceased
13 to exist.

14 30. On information and belief, Coil n' Wrap is, and at all times mentioned herein was, the
15 alter ego of Ken and Judy Wilton in that Ken and Judy Wilton have used the assets of Coil n' Wrap
16 for their personal uses.

17 31. On information and belief, the business activities of Coil n' Wrap were carried out
18 without the proper holding of directors' or shareholders' meetings, and that Ken and Judy Wilton
19 entered into personal transactions without proper approval.

20 32. As a result thereof, Ken and Judy Wilton should be held liable for all damages
21 incurred by Hanna as a result of actions of Coil n' Wrap.

22
23 **CAUSE OF ACTION FOR PATENT INFRINGEMENT**

24 33. Hanna realleges and incorporates by reference paragraphs 1 through 32 of this
25 Complaint as though fully set forth herein.

26 34. Hanna is the inventor and owner of all right, title, and interest of the '189 patent
27 which was duly and legally issued by the USPTO on May 16, 2006.
28

35. On information and belief, Defendants have infringed and continue to infringe, directly, jointly, contributorily, and/or indirectly by inducement, literally and/or under the doctrine of equivalents, one or more of the claims of the '189 patent. Defendants' infringements include, among other things, making, using, offering for sale, and/or selling the Coil n' Wrap Awning Pull Straps to end-users and wholesale distributors. Defendants are thus liable for infringement of the '189 patent pursuant to 35 U.S.C. § 271.

36. On information and belief, Defendants have willfully and deliberately infringed the '189 patent in disregard of Hanna's rights.

37. Hanna has suffered monetary damages as a result of Defendants' infringing activity. Defendants are thus liable to Hanna in an amount adequate to compensate him for infringement, but in no event less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284. Hanna has suffered and will continue to suffer such monetary damages in the future unless Defendants' infringing activities are permanently enjoined by this Court.

38. Further, as a result of Defendants' willful and deliberate infringement of the '189 patent, Hanna is entitled to treble damages under 35 U.S.C. § 284.

39. Unless a permanent injunction is issued enjoining Defendants and their agents, servants, employees, attorneys, representatives, affiliates, and all other acting on their behalf from infringing the '189 patent, Hanna will be greatly and irreparably harmed.

40. This case presents exceptional circumstances within the meaning of 35 U.S.C. § 285 and Hanna is thus entitled to an award of its reasonable attorneys' fees.

DEMAND FOR JURY TRIAL

41. Pursuant to Rule 38 of the Federal Rules of Civil Procedure, Hanna hereby demands a jury trial as to all issues in this lawsuit.

PRAYER FOR RELIEF

WHEREFORE, Hanna prays for relief against Defendants as follows:

A. A judgment in favor of Hanna that Defendants infringed directly, jointly, contributorily, and/or indirectly by inducement, literally and/or under the doctrine of equivalents, one or more of the claims of the '189 patent;

1 B. A judgment in favor of Hanna that Defendants infringement was willful;

2 C. A judgment and order requiring Defendants to pay Hanna its damages, costs,
3 expenses, and prejudgment and post-judgment interest for Defendant's infringement of the '189
4 patent as provided under 35 U.S.C. § 284;

5 D. A judgment and order requiring Defendants to pay treble damages in view of
6 Defendants willful infringement of the '189 patent as provided under 35 U.S.C. § 284;

7 E. A Permanent injunction, enjoining Defendants and their officers, directors, agents,
8 servants, affiliates, employees, divisions, branches, subsidiaries, parents, and all other acting in
9 concert or privity with any of them from such infringement of the '189 patent;

10 F. A judgment and order finding that this is an exceptional case within the meaning of
11 35 U.S.C. § 285 and awarding to Hanna his reasonable attorneys' fees; and

12 G. Any and all other relief as the Court deems just and reasonable.
13

14 Dated: May 14, 2008

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15
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EXHIBIT 1



US007044189B1

(12) **United States Patent**
Hanna

(10) **Patent No.:** **US 7,044,189 B1**

(45) **Date of Patent:** **May 16, 2006**

(54) **ADJUSTABLE WINDOW AWNING
ASSEMBLAGE**

(76) Inventor: **John E. Hanna**, 21 Dorchester Dr.,
Northridge, CA (US) 91324

(*) Notice: Subject to any disclaimer, the term of this
patent is extended or adjusted under 35
U.S.C. 154(b) by 0 days.

(21) Appl. No.: **10/454,451**

(22) Filed: **Jun. 3, 2003**

Related U.S. Application Data

(60) Provisional application No. 60/385,596, filed on Jun.
3, 2002.

(51) **Int. Cl.**
E04F 10/06 (2006.01)

(52) **U.S. Cl.** **160/66; 160/67; 160/265**

(58) **Field of Classification Search** **160/66;**
160/67; 133, 383, 391, 392, 265, 264, 46;
135/89, 117, 89.117; 211/87.01

See application file for complete search history.

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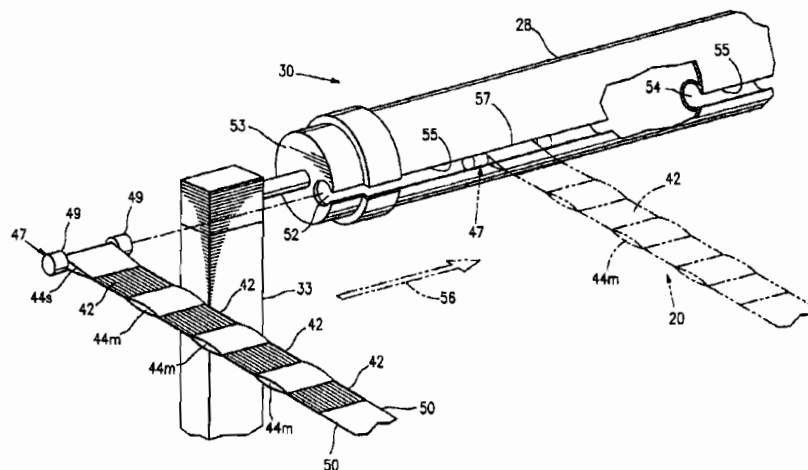
Primary Examiner—Bruce A. Lev

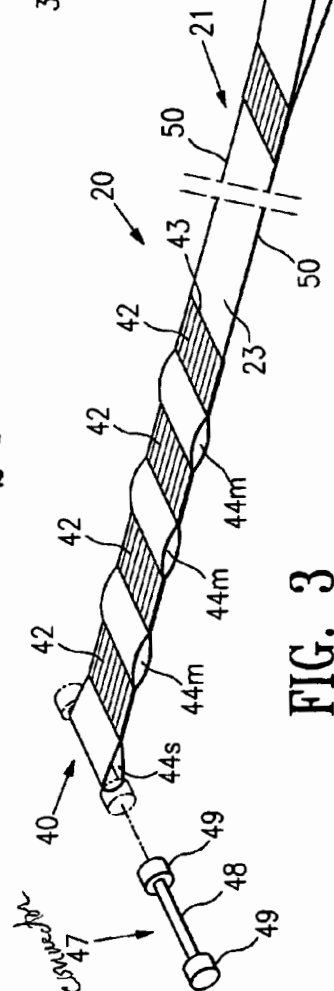
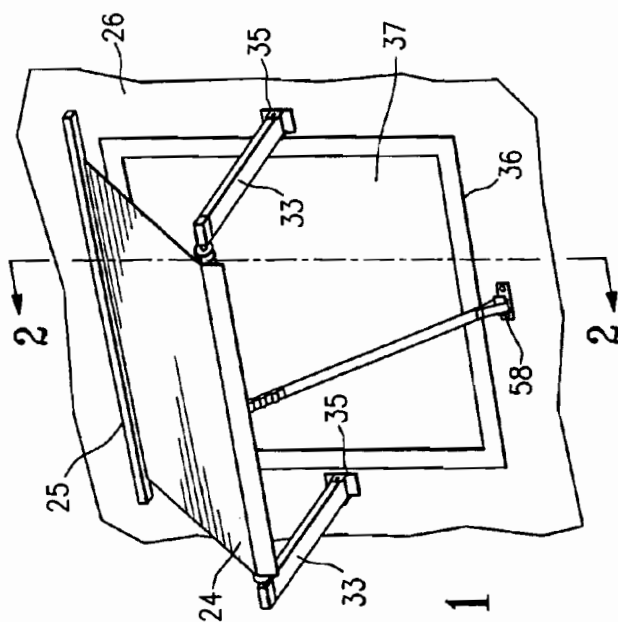
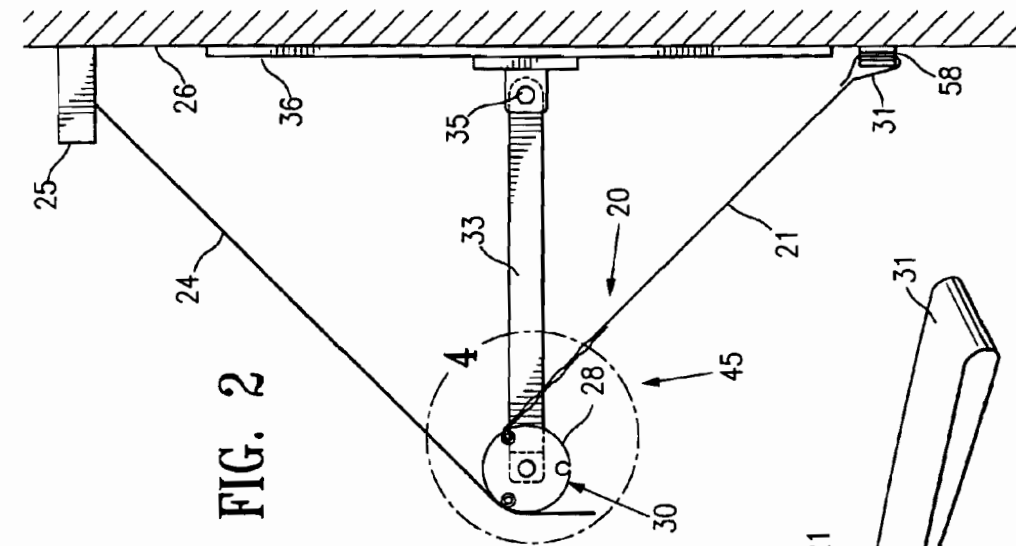
(74) *Attorney, Agent, or Firm*—Frank L. Zugelter

(57) **ABSTRACT**

An improved pull-strap assembly (20) made from webbing material (21) that forms a strap (23) the material (21) looped back on itself at its first or one end to form along the strap's length two layers of mated material (42) along which multiple openable pockets (42s, 44m) are formed and spaced from one another, the other or second end of strap (23) being looped backed on itself to form a pull loop (31). An openable pocket (44) is produced at the strap's first end and the multiple openable pockets (44m) are spaced therefrom along the length of strap (23). A connector (47) having a stem (48) and an enlarged head (49) at each end of stem (48) mounts in any one of the pockets (44s, 44m), with its enlarged head (49) of connector (47) abutting the edges of strap (23). In assemblage of pull-strap assembly (20) to a roller-tube assembly (30), connector (47) in a particular one of pockets (44s, 44m) is fed through a hole in a slot-and-hole arrangement (55, 52), FIGS. 5, 9, and as in FIG. 11 at (62, 61). so that pull-assembly (20) is operatively connected to roller-tube assembly (30). Assembly (20) is shifted or slid to a desired position along slot (55) in roller-tube (28) of assembly (30). The number of pockets (44m) provides adjustability for the length of extension of pull-strap (23) in unraveling an awning (24) from roller-tube (30), while pull-loop (31) is attached to a hook (58) on a panel in such adjusted extant.

5 Claims, 9 Drawing Sheets





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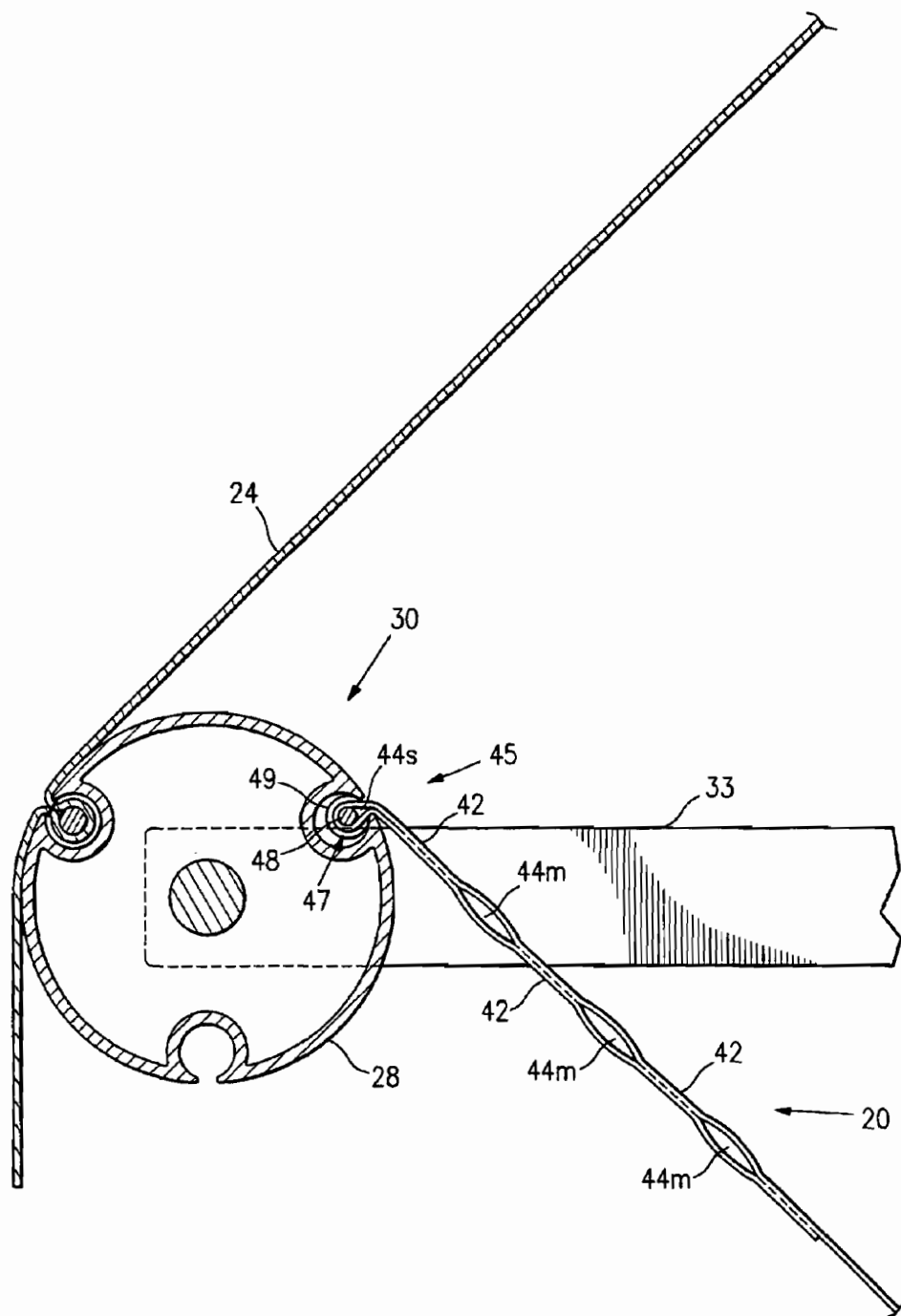


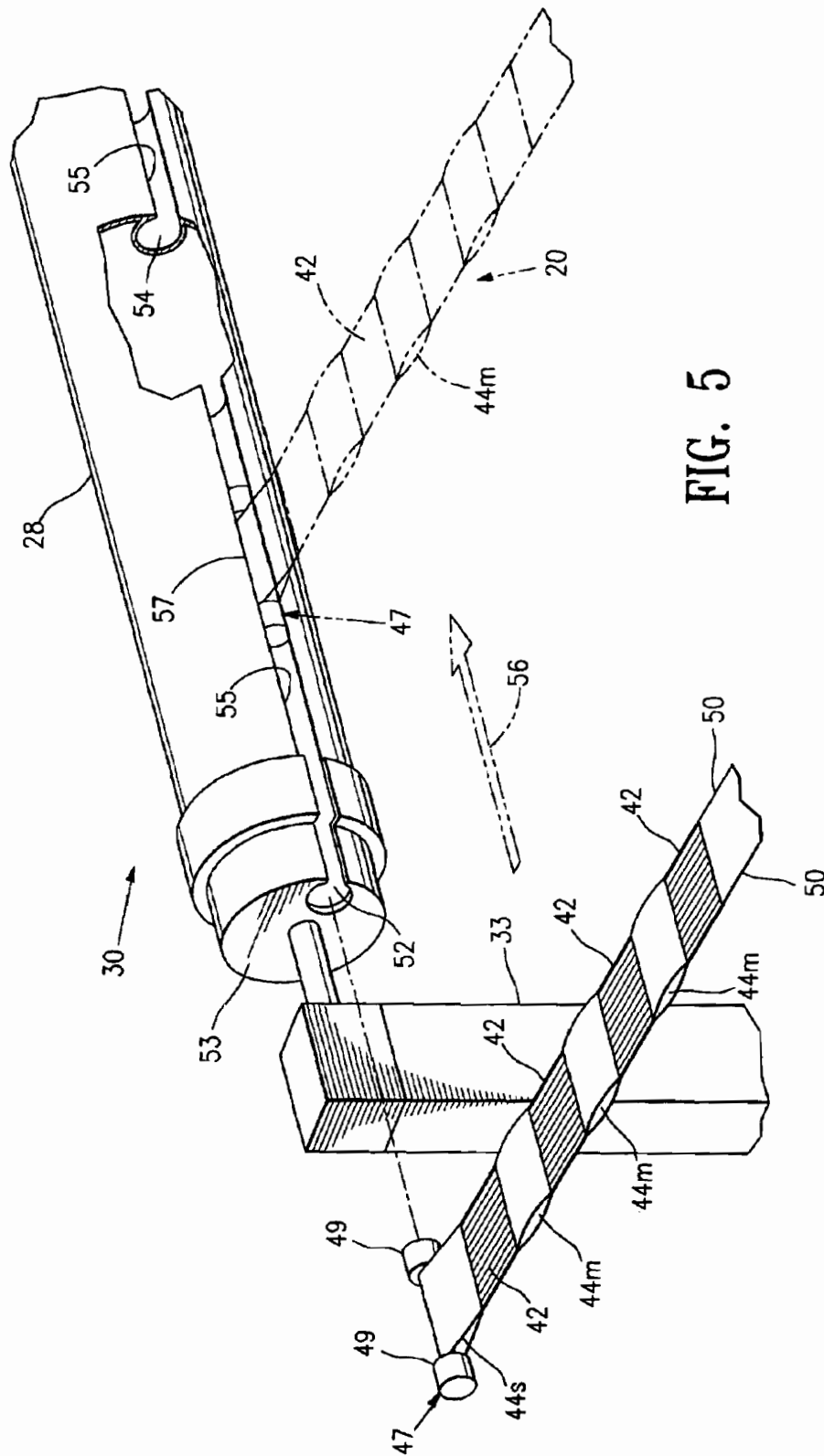
FIG. 4

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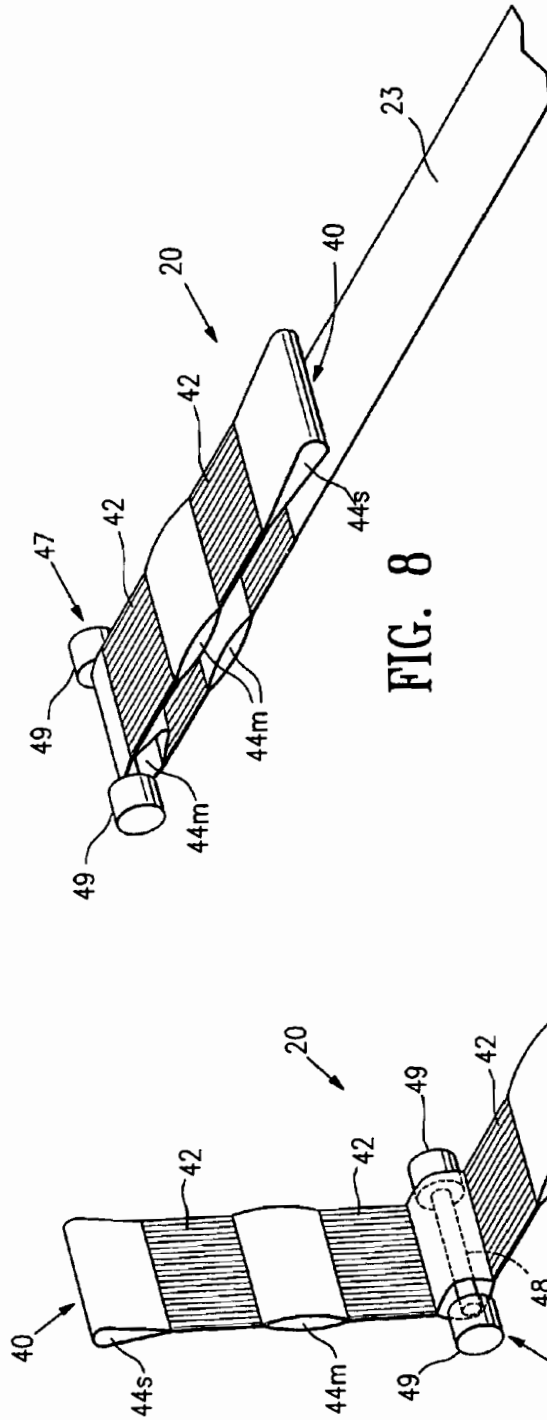


FIG. 8

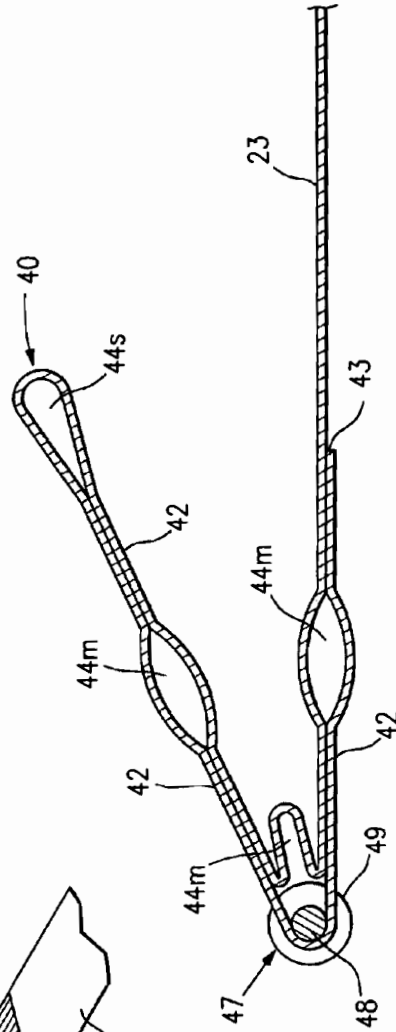


FIG. 7

FIG. 6



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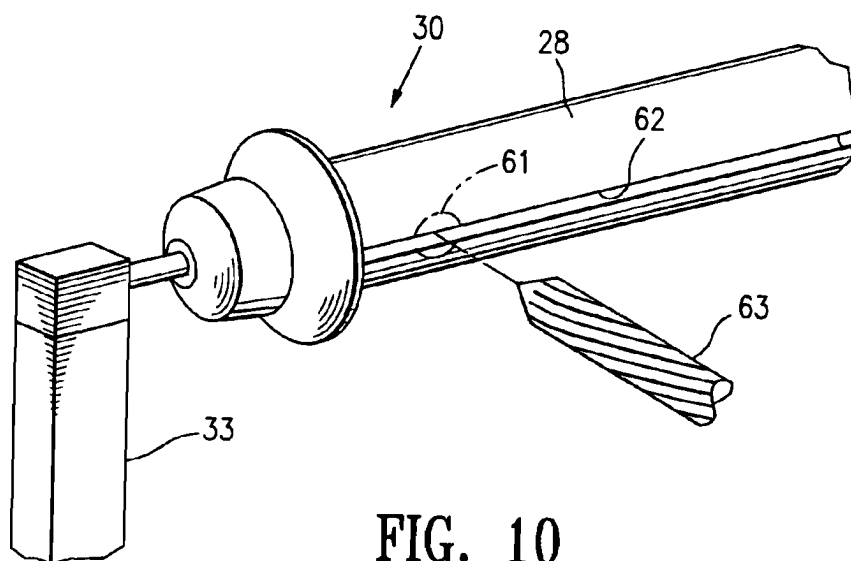


FIG. 10

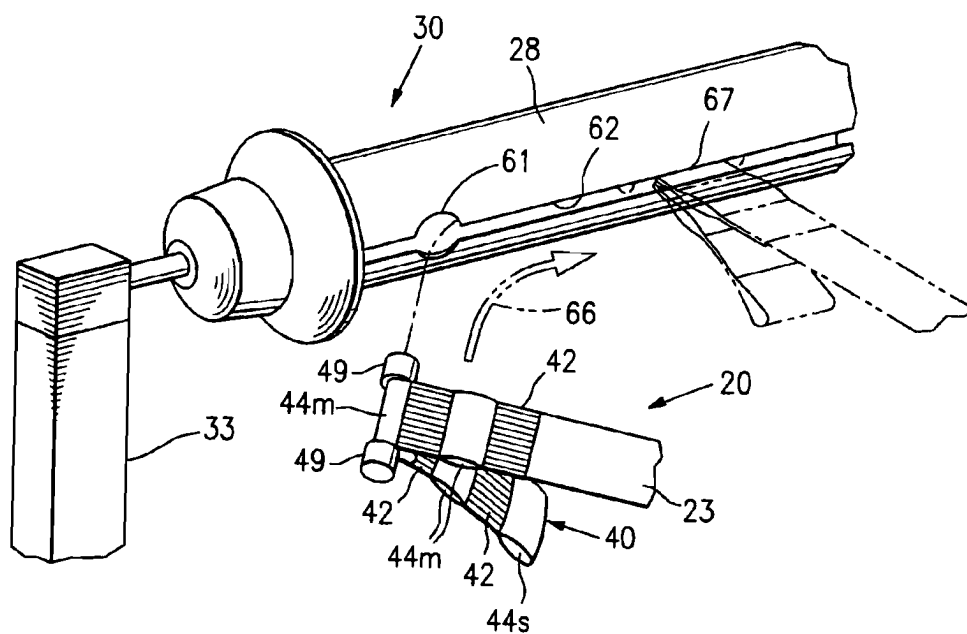


FIG. 11

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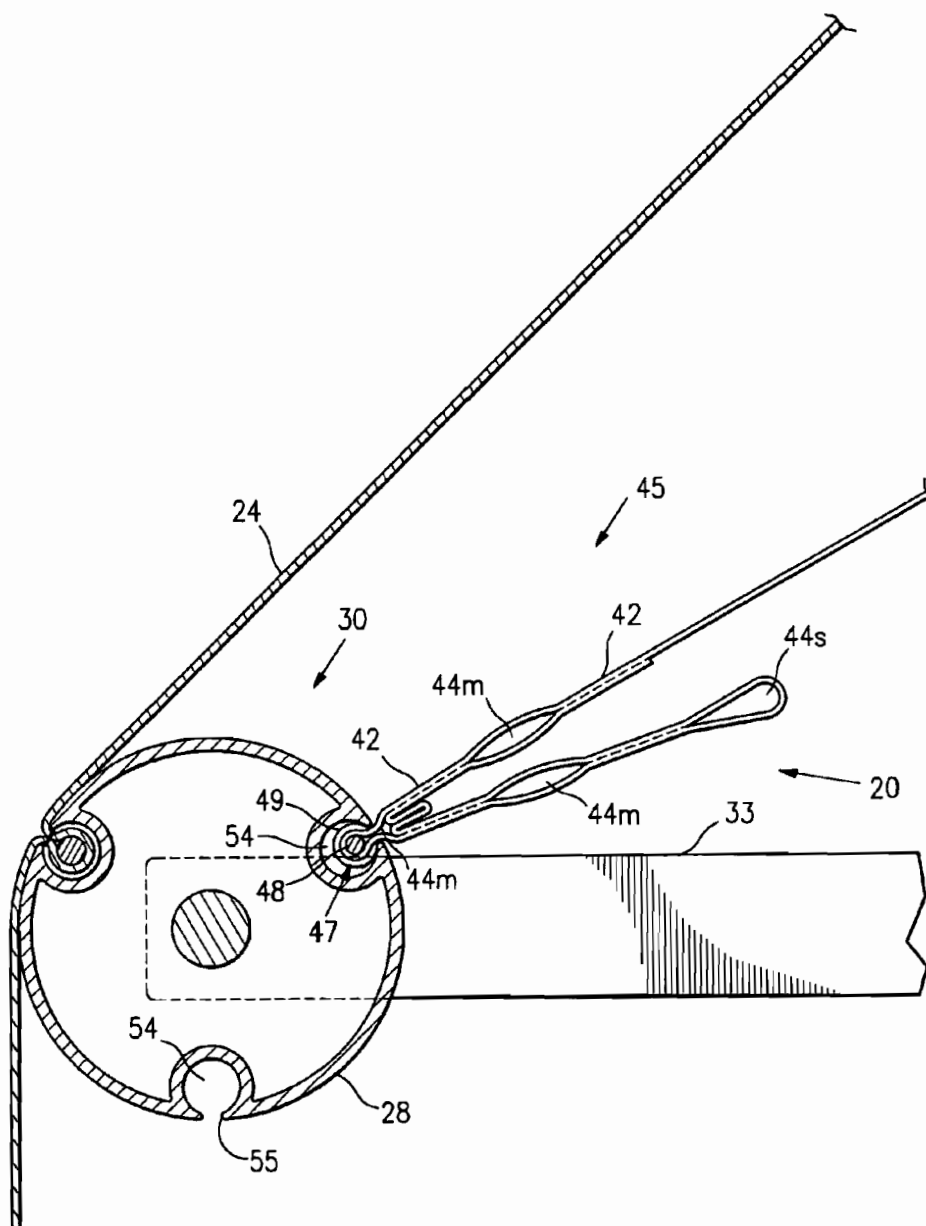
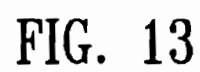


FIG. 12



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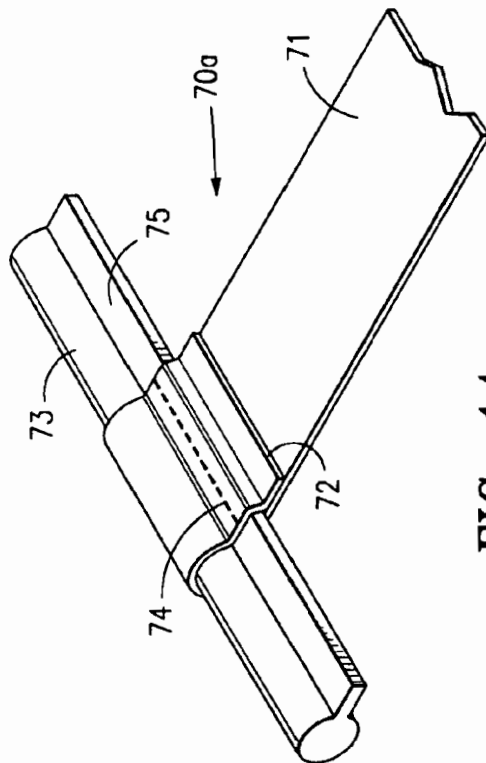


FIG. 14
PRIOR ART

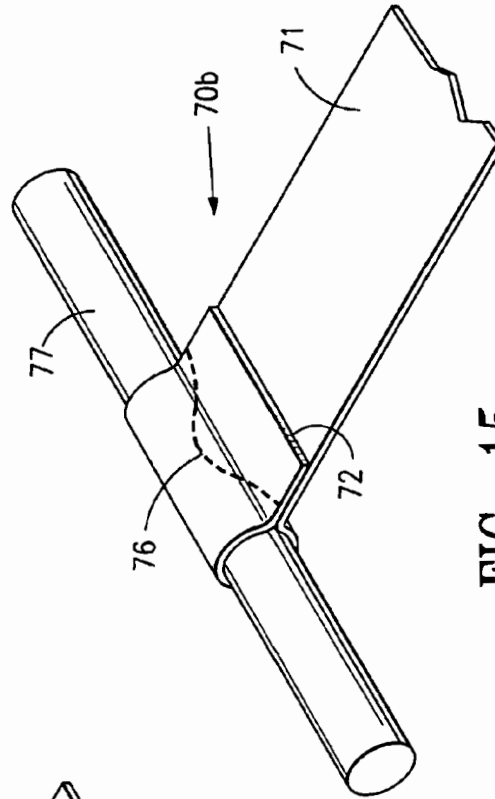


FIG. 15
PRIOR ART

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**ADJUSTABLE WINDOW AWNING
ASSEMBLAGE**

This invention is related to the disclosure of the Provisional Application, Improved Adjustable Window Awning Pull-strap Assembly, ACN 60/385,596, filed Jun. 3, 2002.

TECHNICAL FIELD

This invention is directed to a pull-strap assembly for an awning's roller-tube assembly and to its combination with the awning's roller-tube assembly as an assemblage.

BACKGROUND TO THE INVENTION

Pull-straps are used and applied to window and patio awning assemblies mounted on RV and other motor vehicles. To date, these straps have been found to deteriorate, to become discolored, or even to break. The deterioration is usually caused by exposure to ultraviolet rays of the sun and to nature's wind and other elements. Deteriorated straps, if still useable, require sewing to maintain their operational function with an awning's roller-tube assembly. With today's commercial assemblages, do-it-yourself-owners or operators of RV's or like vehicles re-sew their RV's pull-straps because of such deterioration, or because of prices, or buy and install fresh ones. A longer-life pull-strap assembly is also looked forward to in an advance of the applicable art. There is a need to remove these disadvantages to a mobile vehicle operator, as this invention does.

An advantage in this invention is the elimination of the need to remove or disassemble an end cap on some awning roller assemblies so that another pull strap can be installed in the pull-strap slot of the awning's roller-tube. In other awning roller-tube assemblies a hole is formed directly across the roller tube's slot to install the invention's pull-strap assembly to the awning's roller-tube assembly.

Another advantage in this invention is to provide for an accurate length for the pull-strap in its assemblage, between its roller-tube assembly and a fixed hooking member on a side wall panel, by the inclusion of a multiple number of pockets into one of which a connector is inserted and installed in a slot of the roller-tube assembly whereby the length of the pull-strap is adjustable to achieve such accuracy.

SUMMARY OF THE INVENTION

The subject matter of the invention is directed to a novel pull-strap assembly and in its installation to and with an awning's roller-tube assembly to produce an assemblage that is mountable upon a window panel of a motor vehicle, such as an RV vehicle, on which this kind of assemblage is already mounted, required, or desired. The pull-strap assembly includes a number of spaced pockets along the length of the assembly's strap resulting from the secured mating of portions of the strap after one of its ends has been looped back upon itself to produce two layers of the strap one abutting the other and in which a multiple number of mating portions in the two layers in turn are secured to each other. The other end of the strap is formed into a (finger) pull-loop by overlapping the end upon the strap itself and securing its two generated layers of strap together. The strap itself is made from a material in the form of a strip that is thin and strong, and long-lasting. The multiple number of pockets provides the adjustability of length for the pull-strap assembly to meet the accuracy desired in an open mode for the

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roller's awning. A connector, in the form of a rigid stem having enlarged heads on its opposing ends and which abut the edges of the strap, is disposed within an end pocket or one of the multiple spaced pockets, their heads, after installation of the pull-strap assembly to an awning's hollow roller-tube, seating against the body formation forming the roller-tube's slot. The heads are of a larger size than that of the slot. With the connector installed in one of the multiple pockets any remaining pocket of the strap in the direction of the strap opposite to its pull-loop end is bent back upon itself prior to introducing and installing the connector and strap to the slot. In effecting such installation, the connector in its pocket is fed through a hole in the awning's roller-tube and which hole communicates with the slot in the awning's roller-tube, so that the pull-strap assembly in its introducing step can be operatively connected to the awning's roller-tube. The pull-strap assembly is then slid along the slot to a desired position in the slot whereby its (finger) pull-loop is attachable to a hook securely mounted below a window to the panel of the motor vehicle upon opening-up of the awning. The number of pockets provide for adjusting the length of the pull-strap of its assembly to accurately meet the panel hook, the variation in the distance between the pull-strap and such hook being a disadvantage in present day assemblages. Each pocket's opening is of an expandable nature, found in the material of the strap itself, to introduce a head of the connector so that it can project out of the other edge of the pocket. In the assembling of the pull-strap to the roller-tube of the awning, the one of the multiple number of pockets' opening is pinched against the stem of the connector due to the folds in the bent-backed condition of the pocket upon itself at the location of the connector, which in turn frictionally assists in retaining the connector of the pull-strap assembly in its seat behind its slot. The slot is formed by a cavity in the roller-tube and through which slot the pull-strap itself exits from the awning's roller-tube.

An object of this invention is to provide a novel pull-strap assembly for a roller-tube of an awning.

Another object of the invention is to provide a novel and improved assemblage of an awning roller assembly and a pull-strap assembly for it.

Yet another object of the invention is to provide adjustability in the length of the pull-strap assembly, thus providing for its accurate length to a vehicle's panel hook to which it is fastened.

A further object of the invention is to eliminate the appearance of markings and attendant noise accompanying it on a motor vehicle's panel by the fluttering of the pull-loop of the strap assembly against the vehicle's panel.

A still further object of the invention is to provide ease of installation of the pull-strap assembly to its awning's roller-tube assembly.

Yet another object of the invention is to eliminate disassembly of a part of an awning's roller-tube assembly to install the pull-strap assembly.

Still another object of the invention is to produce a pull-strap assembly having a longer life span than prior art pull-straps, and which is less affected by ultra-violet rays of the sun or inclement weather elements such as rain, ice, wind, and the like.

Again another object of this invention is to reduce costs in the installation of a pull-strap assembly.

These and other objects and advantages of the invention will become more apparent by a full and complete reading of the following description, its appended claims, and the accompanying drawing comprising nine (9) sheets of fifteen (15) FIGURES.

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BRIEF DESCRIPTION OF THE DRAWING

FIG. 1 is a perspective view expressing the operativeness of the assemblage of the assemblies of this invention.

FIG. 2 is a view taken on line 2—2 of FIG. 1.

FIG. 3 is a perspective view of a pull-strap assembly of this invention, with its connector shown removed while shown in phantom in the strap's one end openable pocket when installed in the pull-strap assembly.

FIG. 4 is an enlarged diagrammatic elevational view within circle 4 of FIG. 2, of the assembling of the pull-strap assembly to its awning's roller-tube assembly, the strap's one end openable pocket being assembled to the roller-tube assembly in this view.

FIG. 5 is a perspective diagrammatic view, partially broken away, of an initial step of connecting the strap's one end openable pocket of the pull-strap assembly to its awning's roller-tube assembly that has its slot communicating with a hole in an end cap of the roller-tube assembly.

FIGS. 6, 7, and 8 are perspective diagrammatic views, respectively, of inserting a connector of the pull-strap assembly into one of its multiple number of openable pockets other than the strap's end openable pocket, FIG. 6, after which the remaining ones of the number of pockets in the direction of the strap's end openable pocket are laid upon or over the strap proper as illustrated in FIG. 8, FIG. 7 illustrating in a cross-sectional manner formation of the folds of the connector's pocket in preparation of installing the connector and its pull-strap assembly to a roller-tube assembly.

FIG. 9 is a perspective diagrammatic view like that of FIG. 5, however, a connector inserted in one of the multiple number of pockets other than the strap's end openable pocket is being installed in the roller-tube's assembly.

FIGS. 10 and 11 are perspective diagrammatic views of preparation of a roller-tube assembly that has no end-cap slot through which a connector can be installed, FIG. 10, FIG. 11 illustrating the manner by which the connector is installed in the slot of the roller-tube assembly.

FIG. 12 is a diagrammatic cross-sectional view of the manner by which a connector mounted in one of a number of multiple openable pockets of the pull-strap assembly is installed to a roller-tube assembly.

FIG. 13 is a diagrammatic cross-sectional view of the installed connector mounted in one of a number of multiple openable pockets after the strap of the pull-strap assembly has been connected to a hook member on the side wall panel of a vehicle.

FIGS. 14 and 15 are Prior Art illustrations of old-style connectors that are found in today's marketplace for motor vehicle roller-tube and pull-strap assemblages.

BEST MODE FOR CARRYING OUT THE INVENTION

Turning now to the drawing wherein reference characters refer to like numerals hereinafter, FIG. 3 illustrates a pull-strap assembly 20 formed of a thin webbing material 21 forming a strap 23 of pull-strap assembly 20. Strap 23 approximates, for example, one inch in width and of a length suitable for wrapping about and along with an awning 24, FIGS. 1, 2, having its one end customarily secured to its awning rail 25, FIG. 1, suitably secured to a side wall panel 26 of a motor home or the like, such as a recreational vehicle [RV] while the strap's body rolls around a roller-tube 28 in its assembly 30 so that in the awning's closed mode, a pull-loop 31, FIG. 3, customarily formed at the one end of strap 23, remains exposed beyond the rolled-up condition

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for awning 24 in its closed mode about roller-tube 28. Its closed mode is provided in an abutting relationship to the vehicle's side wall panel 26 by means of a pair of arms 33 (customarily) spring-biased towards panel 26. The awning's roller-tube 28 rotates in a customary manner as the latter moves back and forth between the closed and open modes for awning 24. Arms 33 are pivotally mounted as at 35, FIGS. 1, 2, to panel 26 along the opposite vertical sides of a window frame 36 its window 37 being shaded by awning 24 in its open mode. In the formation of pull-strap assembly 20, FIG. 3, at its end 40 opposite its pull-loop 31, strap 23 is looped back over and upon itself a substantial way along its length, to provide two (2) contiguous layers of material 21. A multiple number of spaced mated areas 42 are permanently fixed together along a length of strap 23 between the assembly's end 40 and a terminal end 43, FIG. 3, of strap 23. In turn, the spaced mated areas 42 form a multiple number of spaced openable pockets, a one openable pocket 44s at end 40 resulting from the looping back of strap 23 on itself and a multiple number of openable pockets 44m past pocket 44s along the length of strap 23 extending in the direction towards the terminal end 43 of strap 23. The multiple number of pockets 44m provides adjustability in the length of pull-strap assembly 20 in an operational mode for an assemblage 45 of the invention.

A connector 47 is formed from a rigid member for disposal or insertion within either the end openable pocket 44s or within any one of the multiple number of pockets 44m. Connector 47 includes a stem 48 at each end of which a head 49 of a larger dimension than stem 48 is secured or formed thereon but not of a diameter larger than that of each openable pocket 44s, 44m in the latter's most expanded states in order to install its two (2) heads 49 adjacent to and exterior of the strap's longitudinal edges 50. A single connector 47 is inserted within a single pocket 44s or within one of the multiple pockets 44m, for operational mode of use, by expanding from a flattened or slimmed-down condition for strap 23 an expanded opening of pocket 44s or an expanded opening of one of the multiple number of pockets 44m, and by which a head 49 at one end of stem 48 is inserted into one of such pockets to pass through it so as to position itself in its final disposition along and exterior of its corresponding and other edge 50 of strap 23. FIG. 5 illustrates connector 47 in end pocket 44s and FIGS. 6, 7, and 8 illustrate connector 47 in one of the multiple pockets 44m of its assembly 20. It is clear from FIGS. 5, 6, 7, and 8 the manner in which connector 47 is inserted into either pocket 44s or a pocket 44m, namely, by a manual insertion of a head 49 through an expanded opening of pocket 44s or one of pockets 44m, and that stem 48 sets within the width of strap 23 and the heads 49 seat adjacent to their corresponding edges 50 of strap 23.

Attaching pull-strap assembly 20 to an awning roller-tube assembly 30 is illustrated by FIGS. 5, 9, and 11. In the FIG. 5 and FIG. 9 assemblings, a hole-and-slot arrangement 52 is included in an end cap 53 of one conventional awning's roller-tube assembly 30. The roller-tube 28 itself is formed from a conventional hollow circular aluminum extrusion, FIGS. 12, 13 that includes cavities 54 along which slots 55 in cavities 54. FIGS. 12, 13, extend the length of its roller-tube 28. A connector 47, inserted and properly seated within its end pocket 44s, FIG. 5, or in one of the multiple number of pockets 44m, illustrated in FIG. 9, is installed through the hole of arrangement 52 and then slid along its slot 55 in roller-tube 28 in a direction shown by arrow 56, FIGS. 5, 9, to a position along slot 55 of an awning's

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roller-tube 28, illustrated in phantom as at 57, FIG. 5, determined by the adjusted length that is used of strap 28 by reason of the particular pocket, either pocket 44s or one of the pockets 44m, selected relative to the fixed location of a hook member 58, FIGS. 1, 2, secured to the vehicle's side wall panel 26 below window frame 36.

In the FIG. 11 assembling, a hole 61 is either already drilled across a slot 62 in the roller-tube 28 of another conventional awning's roller-tube assembly 30, or is easily formed in roller-tube 28 by operation of a (hand) drill 63, FIG. 10. Hole 61 provides for the introduction of a connector 47, already inserted and seated in one of the multiple number of pockets 44m, or seated in the single pocket 44s illustrated in FIG. 5, of a pull-strap assembly 20, into slot 62, FIG. 12, in roller-tube 28 in a direction shown by arrow 66, to a position shown in phantom at 67 in the awning's roller-tube 28 along its length, again determined by the adjusted length that is used of strap 28 by reason of the particular pocket, either pocket 44s or one of the pockets 44m, selected relative to the fixed location of a hook member 58, FIGS. 1, 2, secured to the vehicle's side wall panel 26 below window frame 36.

FIGS. 14 and 15 illustrate prior art attaching devices 70a and 70b, respectively, by which a pull-strap 71 is connected to an awning's roller-tube. One end 72 of a customary fabric strap 71, FIG. 14, is wrapped around a rubber bar 73 and then sewn across the width of strap 71 by a stitch 74 to a lip 75 on bar 73, or as illustrated in FIG. 15, wherein a sewn stitch 76 across the width of strap 71 is woven along a line through its rubber bar 77 as well as through the width of strap 71 itself. In either instance, past use of these devices has shown that they are not long-lasting, deteriorate over time under nature's elements, and disassemble themselves by reason of the stitches 74, 76 wearing out causing strap 71 and its deteriorating rubber bars 73, 77 to dis-associate from one another, in which case strap 71 exits from a roller-tube's slot. Further, only one length of strap 71 is available between its assembly to a roller tube and a hook on a vehicle's side wall panel, requiring the need to seek a particular lengthened strap assembly required for the particular awning and vehicle to which it is to be applied. In this invention, with the availability of a multiple number of pockets 44m in but one pull-strap assembly 20, the assembly 20 is useful to numbers of kinds of motor vehicles and awnings. In addition, the rigidity of connector 47 and choice of strong and thin webbing material 21 provide a less deteriorating condition for pull-strap assembly 20.

In operation of the subject matter of the invention, upon pull-loop 31 being attached to hook member 58, the tautness of strap 23 in the open mode for awning 24 provides for a slimness of pockets 44s, 44m, and particularly with respect to the pocket in which connector 47 that seats behind slot 55. The pocket is not in its expandable state and the size of slot 55 is such that the pinching of the pocket about stem 48 of connector 47 at slot 55 frictionally assists maintaining connector 47 in its stationary position within slot 55.

It should be apparent that the purpose of the multiple number of pockets 44m in the invention is to provide a ready adjustment of the length of a pull-strap assembly that can be utilized with a variety of awning apparatus that include rolled-up awnings, to provide an accurate reaching to a hook member of a side wall panel in the open mode for the awning.

In further carrying out the best mode for the invention the webbing material 21 is formed from thin Nylon™ stock, approximating one (1") in width, its mated secured-together areas 42 approximating 1/2-inch in length. Connector 47 is

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machined from stainless steel stock, with its stem 48 approximating 0.096 inch in diameter and its heads 49 of a diameter approximating 0.220 inch. Brass, aluminum and other suitable materials also may be utilized for connector 47 as well as other suitable fabrics which are strong and thin being suitable in place of Nylon™ for the webbing material 21. The technique of permanently fixing together the two layers of material 21 to form the spaced mated areas 42 is carried out by machinery manufactured by Branson Ultrasonics Corporation, San Dimas Calif. 91773 which an ultra-sonic welding of mated areas 42 takes place.

Various modifications and changes may be made without departing from the scope of the appended claims. The application of the invention is not limited to merely RV window panels, but also applicable to side panels where, for example, a shady location only is desired. Connector 47 can be formed by threaded heads thereon or as presently done its stem being machined from a rod of a head's diameter.

INDUSTRIAL APPLICABILITY

The invention is most useful in the mobile home and RV industries for installation of pull-strap assemblies to awning assemblies, however, its utility is useful on hollow tubes and walls in other arts as well.

I claim:

1. The combination of a roller-tube in an assembly having a slot formed in the body formation of the roller-tube and a pull-strap assembly connected to said roller-tube through said slot and by which an element within said roller-tube is opened-up through said slot by operation of said pull-strap assembly,

said pull-strap assembly comprising

a pull-strap of a length formed of a thin composite of two layers of strong and thin material,

said length extending from a looped-back end of the strong and thin material forming the pull-strap to a terminal end for the pull-strap, said layers including longitudinal edges formed along said length of said pull-strap,

said two layers permanently mated to each other along the length of said pull-strap,

a plurality of spaced pockets formed in said permanently mated two layers along the length of said pull-strap and openable to said longitudinal edges, and

connecting means removably mountable in any one of said plurality of spaced pockets installed to said slot of said roller-tube,

said connecting means comprising

a pair of heads each of said heads seatable on the body formation behind the slot in said roller-tube, and

a stem of a size less than the sizes of said heads,

said pair of heads securely mounted to said stem,

said stem and pair of heads removably mountable throughout said any one of said plurality of open pockets and which is installed within said slot,

each of said pair of heads on said stem extending exteriorly of and along its corresponding one of said longitudinal edges to seat on the body formation of the slot in said roller-tube.

2. In the combination of claim 1,

said stem and said pair of heads are of a rigid nature.

3. In a pull-strap assembly for operation with another assembly having a body formation with a slot therein,

said pull-strap assembly including a pull strap having longitudinal edges along a length of strong and thin material forming the pull-strap of said assembly,

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a plurality of spaced pockets formed in said length of said pull-strap and openable to both said longitudinal edges, said pull-strap assembly including connecting means having a stem and a pair of heads one on each end of said stem,

said stem disposable throughout any one of said openable pockets of said pull-strap, said heads projecting from said stem exteriorly of said longitudinal edges of said pull-strap,

the improvement in said connecting means comprising each of said heads being of a larger dimension in directions other than the direction of said stem, said stem of a size less than the dimensions of said heads,

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whereby said heads are adapted to seat upon the body formation behind the slot upon installing said pull-strap assembly to the other assembly.

4. The pull-strap assembly of claim 3 wherein said stem and said pair of heads is integrally formed and is of a rigid nature.

5. The improvement of claim 3 wherein each of said heads on each end of said stem is mounted adjacent to and not extending distantly from their corresponding longitudinal edges of said pull strap.

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