



Europäisches Patentamt  
European Patent Office  
Office européen des brevets



(11) **EP 1 205 138 A1**

(12) **EUROPEAN PATENT APPLICATION**

(43) Date of publication:  
**15.05.2002 Bulletin 2002/20**

(51) Int Cl.7: **A47H 5/14**, A47H 3/04,  
E06B 9/324

(21) Application number: **01830609.2**

(22) Date of filing: **26.09.2001**

(84) Designated Contracting States:  
**AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU  
MC NL PT SE TR**  
Designated Extension States:  
**AL LT LV MK RO SI**

(72) Inventor: **Zanusso, Pietro**  
**10149 Torino (IT)**

(74) Representative: **Notaro, Giancarlo et al**  
**c/o Buzzi, Notaro & Antonielli d'Oulx**  
**Via Maria Vittoria 18**  
**10123 Torino (IT)**

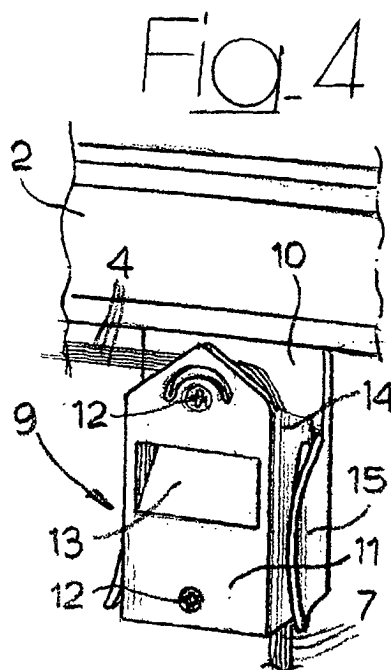
(30) Priority: **14.11.2000 IT TO000200**

(71) Applicant: **MOTTURA S.p.A.**  
**I-10090 San Giusto Canavese (Torino) (IT)**

(54) **Gather-up curtain device**

(57) In a gather-up curtain device, the cords (4) for operating the curtain are sent back through a common returning support (6) having a shell or casing (9) which defines a passage for the cords. The casing has at least one side wall made up of two tabs or flaps (14, 15) which

partially overlap one another and which define, between them, a passage that enables insertion of the cords inside the casing or extraction of the cords therefrom, without the need to slide out the cords as far as their ends through the casing in order to remove them.



EP 1 205 138 A1

## Description

**[0001]** The present invention relates to a curtain device, which can be gathered up vertically, of the type comprising:

- a horizontal top supporting sectional strip or rail provided with means for its fixing to a wall; and
- a curtain having its top border connected to the supporting sectional strip or rail and its bottom border supported by the bottom ends of a plurality of cords guided through loops associated to the curtain;

said cords being sent back through respective guiding supports associated to the supporting sectional strip or rail in positions set apart from one another, and also around a further common returning support, which is set at one end of the sectional strip or rail, in such a way that each cord presents a vertical branch that extends as far as the bottom border of the curtain, a horizontal branch parallel to the supporting sectional strip or rail, between the respective returning support and the aforesaid further common returning support, and a final vertical actuating branch, which hangs free downwards from said common returning support;

said common cord-returning support comprising a casing containing a device for withholding the cords in position when the curtain is partially or totally raised, said device including a clamping member mounted in a floating way inside said casing, between two walls facing one another that converge upwards, said clamping member being designed to wedge between said converging walls as a result of the drawing action by friction that the cords exert on it, when the actuating stretches of the cords are released with the curtain at least partially raised, in such a way that the cords are squeezed and blocked between said clamping member and one of said facing walls converging upwards of the casing.

**[0002]** Gather-up curtain devices of the type specified above are already known and used. The devices so far produced present, however, the drawback that they require relatively laborious and difficult operations to remove the cloth of the curtain whenever it is necessary to wash it, and subsequently to place it back again. The aforesaid operation involves in fact the need to remove the cords from the cloth of the curtain in order to slide their ends out of the guiding passage defined by the common returning support, from which the vertical actuating stretches of the cords hang.

**[0003]** With the purpose of overcoming the aforesaid drawback, the subject of the present invention is a device of the type specified above, characterized in that the aforesaid casing has two side walls which define, together with said converging walls, a passage for guiding the terminal actuating branches of the cords, and in that at least one of said side walls is defined by two separate tabs or flaps, parallel to one another and at least partially overlapping one another, which leave a pas-

sage free between them which can be used for inserting the cords inside said casing and for taking them out.

**[0004]** Thanks to the above characteristic, the cloth of the curtain can be removed with all the cords associated thereto simply by taking the cords out of the aforesaid common returning support of the cords. The other returning supports distributed along the supporting sectional strip or rail consist, according to the prior art, of hook devices, out of which the cords can be slid without any need to remove the cords themselves from the cloth of the curtain.

**[0005]** According to a further characteristic, each of the two side walls of the casing comprises an internal tab or flap and an external tab or flap, which is separate from the internal tab or flap and partially overlaps it, to define a passage for introduction and extraction of the cords. In a preferred example, the external tab has a width decreasing from its bottom end to its top end to facilitate introduction of the cords. In addition, the aforesaid external tab is slightly curved outwards, to define a lead-in mouth that facilitates introduction of the cords.

**[0006]** Again in the case of the preferred example, the aforesaid casing has a vertical plane rear wall and a vertical plane front wall including a portion that is inclined in the direction of the rear wall upwards and defines, with the latter, the aforesaid two converging walls. The internal tabs of the two side walls of the casing are connected to the front wall, whilst the two external tabs are connected to the rear wall.

**[0007]** Preferably, the internal tabs of the side walls are integral with the front wall, whilst the external tabs are integral with the rear wall.

**[0008]** Finally, said clamping member consists of a serrated or toothed roller having ends guided in corresponding slits made in the two internal tabs. The said slits extend parallel to the aforesaid inclined wall.

**[0009]** Further characteristics and advantages of the invention will emerge from the ensuing description with reference to the attached drawings, which are provided purely by way of non-limiting example and in which:

- Figure 1 is a partial front view of a gather-up curtain according to the invention;
- Figure 2 is a view, at an enlarged scale, of a detail of Figure 1;
- Figure 3 is a sectional view according to the line III-III of Figure 2; and
- Figure 4 is a perspective view of the detail of Figures 2 and 3.

**[0010]** In Figure 1, the reference number 1 designates, as a whole, a curtain device which can be gathered up vertically, comprising a horizontal top supporting sectional strip or rail 2, of itself of a known type, provided with means for its fixing to a wall. The reference number 3 designates, as a whole, the cloth of the curtain, having a top border connected, for example by means of Velcro (registered trade mark) coupling, to the

sectional strip or rail 2, and a bottom border supported by a plurality of cords 4. Each of the cords 4 has one of its ends connected to the bottom border of the curtain and is guided through loops associated to the curtain. The vertical branch for supporting the curtain of each cord 4 is sent back at the top in a corresponding support 5, which is hook-shaped and is secured to the sectional strip or rail 2. The returning supports 5 are distributed along the sectional strip or rail 2 and are the same in number as the cords 4 supporting the curtain. Finally, mounted at one end of the sectional strip or rail 2 is a further common returning support 6 inside which all the cords 4 are sent back, in such a way that each cord 4 has the vertical branch for supporting the curtain, a horizontal branch parallel to the sectional strip or rail 2, which extends between the respective returning support 5 and the common returning support 6, and an end actuating branch 7 which hangs free downwards from the common returning support 6. As has already been said, all the cords 4 are sent back through the common returning support 6, the end branches 7 of the various cords being then associated, at their top ends, to a single actuating ribbon or rope 8.

**[0011]** As may be seen in Figures 2, 3 and 4, the common returning support 6 comprises a casing, designated as a whole by the reference number 9. The casing 9 has a rear vertical plane wall 10 secured to the sectional strip or rail 2 in any known way, for example by means of a device for coupling with a slit of the sectional strip or rail 2, and a vertical plane front wall 11 which is parallel to and set at a distance from the rear wall 10. The front wall 11 is secured to the rear wall 10 by means of two screws 12. The front wall 11 has a plane portion 13 which is inclined upwards in the direction of the rear wall 10, in such a way that the walls 10, 13 constitute two walls converging upwards and defining a wedge-shaped passage converging upwards (Figure 3).

**[0012]** The passage comprised between the two walls 10, 13 is closed laterally by two side walls, each of which comprises a plane internal tab or flap 14 and a plane external tab or flap 15, which are separate from one another and partially overlap one another in such a way as to define, between them, a passage that can be exploited for inserting the bundle of the various lengths 7 of cords 4 inside the casing 9. As may be seen in Figure 4, each external tab 15 has a width decreasing from its bottom end towards its top end, in such a way as to facilitate introduction and extraction of the cords. For the same reason, the external tab 15 is slightly curved outwards, in such a way as to define a lead-in mouth for introduction of the cords.

**[0013]** Mounted between the converging walls 10, 13 facing one another, is a serrated or toothed roller 16 having the function of a clamping member for the vertical branches 7 of the cords 4. The roller 16 has, at its ends, pins that are guided in corresponding slits 17 made in the two internal side tabs 14 and directed parallel to the inclined wall 13. According to a technique in itself

known, the roller 16 is used for clamping the cords in position when the actuating branches 7 are released with the curtain in a condition at least partially raised. In said condition, in fact, the vertical stretches 7 of the cords 4 tend to move upwards (see Figure 3), but in this way they draw upwards by friction the roller 16, which consequently tends to wedge between the two converging walls 10, 13, squeezing and blocking the branches 7 of the cords between the roller itself and the rear wall 10. Should it be necessary to operate the curtain again, it will be sufficient to pull the branches 7 downwards so as to release the roller 16 from its clamping condition and cause it to drop by gravity into the position in which its ends engage the bottom ends of the guide slits 17.

**[0014]** The main characteristic that distinguishes the invention from the prior solutions lies in providing a common returning support 6 for the actuating cords of the curtain, which has a passage (defined by the two overlapping tabs 14, 15) that enables the cords to be introduced into the casing 9 of said common returning support 6 or to be taken out without any need to take the cords down completely from the curtain in order to cause them to slide as far as their ends inside the casing 9 in order to slide them out. The operation for taking down the cloth of the curtain, as well as the operation for putting it up again after it has been washed, are thus considerably simplified with respect to what could be achieved with the devices according to the prior art. The user can take down the curtain in order to wash it in an extremely easy and fast way, and can then put it back up in an equally easy and fast way.

**[0015]** Of course, the invention extends to other models which achieve the same level of utility exploiting the same innovative idea.

## Claims

1. A curtain device, which can be gathered up vertically, comprising:
  - a horizontal top supporting sectional strip or rail (2) provided with means for its fixing to a wall; and
  - a curtain (3) having its top border connected to the supporting sectional strip or rail (2) and its bottom border supported by the bottom ends of a plurality of cords (4) guided through loops associated to the curtain (3);

said cords (4) being sent back through respective guiding supports (5) associated to the supporting sectional strip or rail (2) in positions set apart from one another, and also around a further common returning support (6), which is set at one end of the sectional strip or rail (2), in such a way that each cord presents a vertical branch that extends as far as the bottom border of the curtain, a hori-

zontal branch parallel to the supporting sectional strip or rail, between the respective returning support (5) and the aforesaid further common returning support (6), and a final vertical actuating branch (7), which hangs free downwards from said common returning support (6);

said common cord-returning support (6) comprising a casing (9) containing a device (13, 10, 16) for withholding the cords in position when the curtain (3) is partially or totally raised, said device including a clamping member (16) mounted in a floating way inside said casing (9), between two walls (10, 13) facing one another that converge upwards, said clamping member (16) being designed to wedge between said converging walls (10, 13) as a result of the drawing action by friction that the cords exert on it, when the actuating stretches of the cords (7) are released with the curtain at least partially raised, in such a way that the cords (7) are squeezed and blocked between said clamping member (16) and one of said facing walls of the casing (9),

**characterized in that** said casing (9) has two side walls which define, together with said converging walls, a passage for guiding the terminal actuating branches (7) of the cords (4), and **in that** at least one of said side walls is defined by two separate tabs or flaps (14, 15), parallel to one another and at least partially overlapping one another, which leave a passage free between them which can be used for inserting the cords inside said casing (9) and for taking them out.

2. The gather-up curtain device according to Claim 1, **characterized in that** each side wall comprises an internal tab or flap (14) and an external tab or flap (15), which is separate from the internal tab or flap (14) and partially overlaps it, to define a passage for introduction and extraction of the cords (7).

3. The gather-up curtain device according to Claim 2, **characterized in that** said external tab or flap (15) has a width decreasing from its bottom end to its top end to facilitate introduction of the cords.

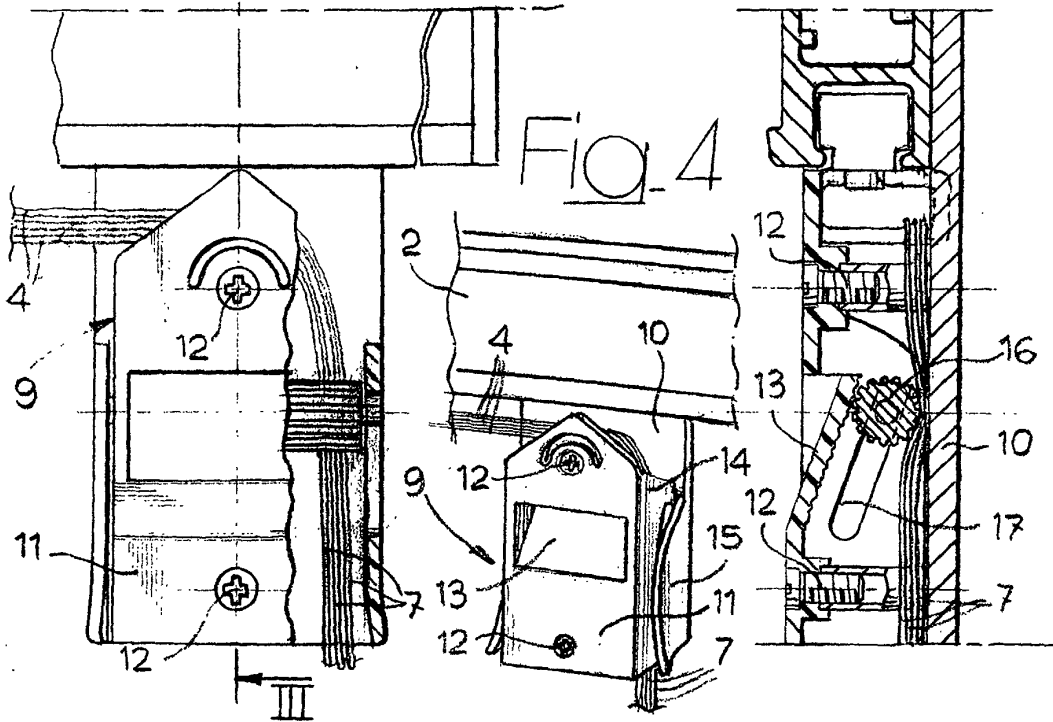
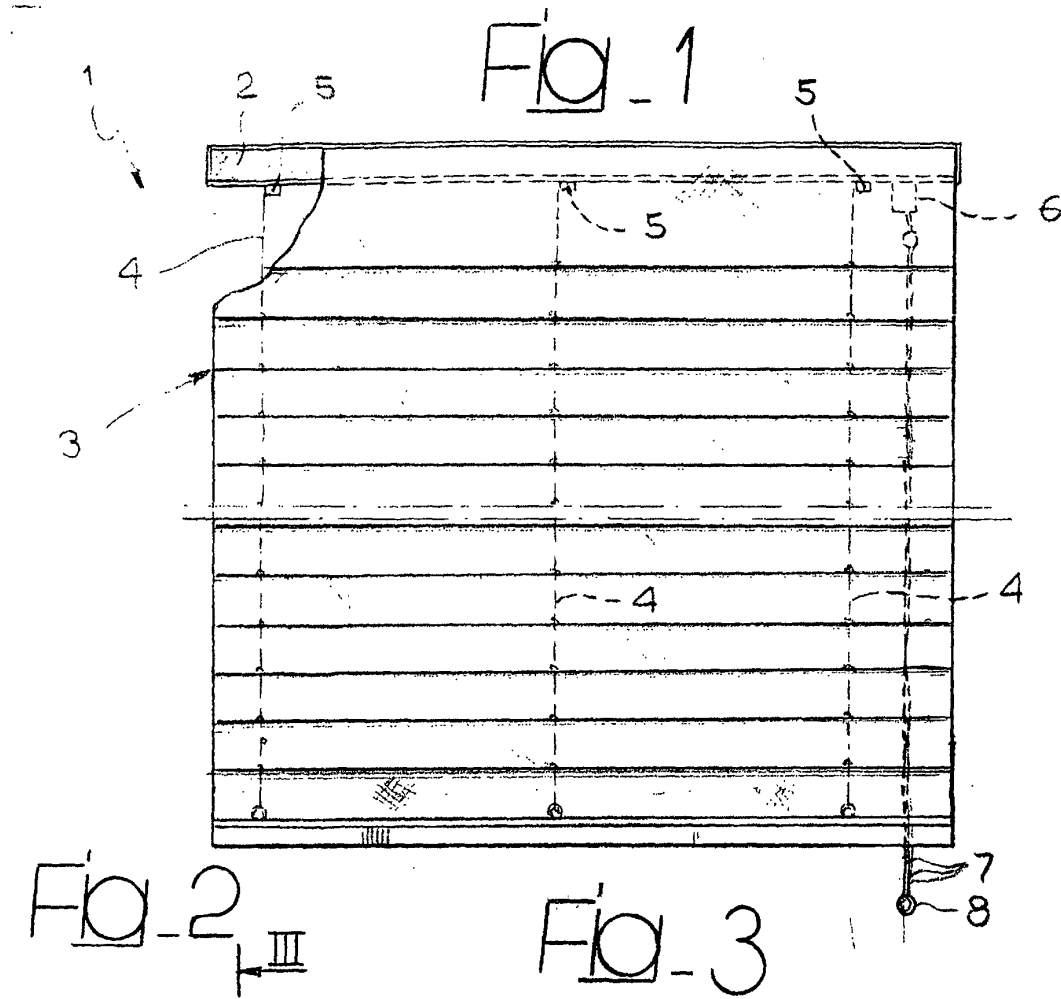
4. The gather-up curtain device according to Claim 3, **characterized in that** said external tab (15) is slightly curved outwards, to define a lead-in mouth that facilitates introduction of the cords.

5. The gather-up curtain device according to Claim 2, **characterized in that** said casing (9) has a vertical plane rear wall (10) and a vertical plane front wall (11) including a portion (13) that is inclined in the direction of the rear wall (10) upwards and defines, with the latter, the aforesaid two converging walls, and **in that** the internal tabs (14) of the two side walls of the casing (9) are connected to the front

wall (11), whilst the two external tabs (15) are connected to the rear wall (10).

6. The gather-up curtain device according to Claim 5, **characterized in that** the internal tabs (14) of the two side walls of the casing are integral with the front wall (11), whilst the two external tabs (15) are integral with the rear wall (10).

7. The gather-up curtain device according to Claim 5, **characterized in that** said clamping member (16) is a serrated or toothed roller having ends guided in corresponding slits (17) made in the two internal tabs (14) and directed parallel to said inclined wall (13).





European Patent  
Office

# EUROPEAN SEARCH REPORT

Application Number  
EP 01 83 0609

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.7)
A	US 4 928 743 A (WOJTYSIK PAMELA) 29 May 1990 (1990-05-29) * the whole document *	1	A47H5/14 A47H3/04 E06B9/324
A	US 2 223 403 A (BURNS FRED J) 3 December 1940 (1940-12-03) * the whole document *	1	
A	US 4 245 688 A (VECCHIARELLI FRANCIS) 20 January 1981 (1981-01-20) * the whole document *	1	
			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
			A47H E06B
The present search report has been drawn up for all claims			
Place of search		Date of completion of the search	Examiner
THE HAGUE		8 January 2002	Vrugt, S
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 O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

EPO FORM 1503 03 82 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT  
ON EUROPEAN PATENT APPLICATION NO.**

EP 01 83 0609

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on  
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

08-01-2002

Patent document cited in search report		Publication date	Patent family member(s)		Publication date
US 4928743	A	29-05-1990	NONE		
US 2223403	A	03-12-1940	NONE		
US 4245688	A	20-01-1981	CA	1141285 A1	15-02-1983
			CA	1121260 A1	06-04-1982
			DE	3005934 A1	11-12-1980
			GB	2066337 A , B	08-07-1981
			IT	1130693 B	18-06-1986
			JP	56500698 T	21-05-1981
			WO	8002715 A1	11-12-1980

EPO FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82