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EUROPEAN PATENT APPLICATION

21 Application number: 90101975.2

51 Int. Cl.⁵: A47H 13/16

22 Date of filing: 01.02.90

30 Priority: 08.02.89 IT 1934389

43 Date of publication of application:
 16.08.90 Bulletin 90/33

54 Designated Contracting States:
 AT BE CH DE DK ES FR GB GR IT LI LU NL SE

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54 Tape and process for gathering curtains.

57 The invention relates to a tape for gathering curtains which has at least one cord (2) made of elastic material which is alternately tied and left loose (3, 4), during the weaving of the band, with respect to the weft of the tape; the process for gathering curtains consists in associating, with a portion of a curtain, a tape which has at least one

elastic cord (2) alternately tied (3) and left loose (4) with respect to the weft of the tape, in applying a traction force on at least one end of the elastic cord until it becomes inelastic and in releasing the cord to simultaneously and automatically form the gathering of the tape and therefore of the curtain.

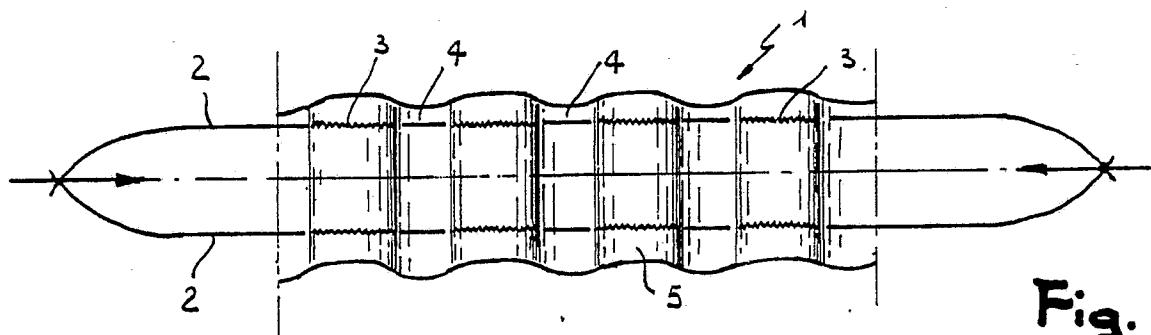


Fig. 3

TAPE AND PROCESS FOR GATHERING CURTAINS

The present invention relates to a tape and to a process for gathering curtains.

As is known, tapes currently used to gather curtains have one or more cords of inelastic materials, each of which is alternately tied and left loose, during the step of weaving the tapes with respect to the weft thereof.

The loose portions of the cords on the tape can be provided on one face or on the two faces thereof, according to the user's requirements.

The gathering of the curtain in one portion, for example the upper portion of the curtain, is then obtained by sewing or heat-welding the above described tape to the top of the curtain and, keeping the cords tensioned at their free ends, the tape is manually caused to slide along said cords until the required gathering is achieved with a preset number of folds according to the number of loose portions of the cord with respect to said tape.

The cords essentially perform a guiding function during the manual sliding of the tape thereon and subsequently retain the gathering formed on the tape and therefore on the part of the curtain to which said tape has been applied.

In view of the above description, it is easily understandable that the execution of the gathering of curtains performed with current tapes entails several disadvantages.

First of all, one of the main disadvantages derives from the fact that in order to perform an optimum gathering a person requires a hardly negligible amount of time and must furthermore have considerable experience in order to provide uniform gathering.

Secondly, the presence of a second person is required in order to gather curtains with a considerable extension; said second person must initially help to keep tensioned the sliding cords of the tape and therefore of the curtain, and secondarily allow the operator who performs the gathering to move along the curtain's entire length, especially if said curtain is considerably long.

These disadvantages obviously reflect in the final cost of the forming of the gathering on a curtain, which is essentially due, as described, to a considerable loss of time together with the fact of necessarily entailing the use of specialized labor.

In this situation, the technical aim of the present invention is to solve the above described disadvantages of the known art.

Within the scope of this technical aim, an important object of the present invention is to provide a tape and a process for gathering curtains which allow to perform said operation automatically, in extremely short times and in an extremely simple

manner.

Another important object of the present invention is to provide a tape and a process for the gathering of curtains which allow this operation to be performed even by unspecialized personnel and by a single person even for large-size curtains.

Not least object of the present invention is to provide a tape and a process for gathering curtains which allow the forming of said gathering in an optimum and uniform manner regardless of the ability of the person who performs it.

The above described technical aim and objects are substantially achieved by a tape for gathering curtains, characterized in that it comprises means for the automatic uniform gathering of the curtain.

The process for gathering curtains is characterized in that it consists in: associating with the upper portion of a curtain a tape which has at least one elastic cord which is alternately tied and left loose with respect to the weft of said tape, in applying a traction force on at least one end of said at least one elastic cord, in elastically elongating said cord until its inelasticity is reached and in releasing said cord for the simultaneous and automatic forming of the gathering of said curtain.

Further characteristics and the advantages of the invention will become apparent from the detailed description of a preferred but non-exclusive embodiment of a tape and a process for gathering curtains according to the invention, illustrated only by way of non-limitative example in the accompanying drawings, wherein:

figure 1 is a schematic plan view of a tape which comprises two elastic cords before it is applied to a curtain and before said curtain is gathered;

figure 2 is a schematic plan view of the tape illustrated in figure 1, the cords whereof are subjected to the application of a traction force to cause their elongation by virtue of their elasticity;

figure 3 is a schematic plan view of the beginning of the forming of the gathering when the traction force is no longer applied to the elastic cords; and

figure 4 is a schematic view of the achieved gathering of the tape and consequently of the curtain to which said tape is applied according to the invention.

With reference to the above described figures, the tape for gathering curtains, generally indicated by the reference numeral 1, comprises at least one cord, two cords 2 in the illustrated case; according to the user's requirements, said cords may be even more than two.

Said cords 2 are advantageously elastic and

are tied and left loose, as is shown in figure 1 respectively at the points indicated by 3 and 4, with respect to the weft of said tape 5.

More precisely, each elastic cord 2 comprises a core made of elastic material covered in a per se known manner, by plaiting or stranding, by threads of inelastic material adapted to cause friction with the tied portions 3 of the tape 1.

The elastic cords 2 are conveniently provided with a variable elastic elongation according to the width of the loose portions 4 and of the tied portions 3, so as to be able to vary the number and width of the folds which define the gathering in a preset manner.

Said cords 2 furthermore have an elastic elongation which must be inversely proportional to the ratio between the length of said tape when laid flat and the length of the tape once it has been finally gathered.

It should be finally noted that the loose portions 4 can naturally be provided on one face of the tape or on two, and that with such a tape it is also possible to provide so-called group gatherings, which could be done only in an extremely difficult manner with conventional tapes.

The process according to the invention, schematically shown in figures 1 to 4, is provided by means of the following succession of steps.

A tape, subject of the invention, having at least one elastic cord which is alternately tied and left loose with respect to the weft of said tape, is initially associated with a portion of a curtain.

The ends of the elastic cords are then gripped, applying thereon a traction force until the maximum extension of the cords, beyond which said cords become inelastic, is reached.

Finally, the forming of the gathering of said curtain is obtained automatically and simultaneously by releasing said cords; said gathering is furthermore perfectly uniform.

The invention achieves the proposed aim and objects as well as important and numerous advantages.

As already mentioned, it is in fact possible to automatically gather a curtain, forming the folds thereof simultaneously and uniformly, without using specialized labor and in an extremely short time.

The gathering can furthermore be easily performed by a single person without any assistance.

The invention thus conceived is susceptible to numerous modifications and variations, all of which are within the scope of the present inventive concept.

All the details may furthermore be replaced with technically equivalent elements.

The materials employed, the shapes and dimensions may be any according to the requirements.

Where technical features mentioned in any claim are followed by reference signs, those reference signs have been included for the sole purpose of increasing the intelligibility of the claims and accordingly such reference signs do not have any limiting effect on the scope of each element identified by way of example by such reference signs.

Claims

1. Tape for gathering curtains, characterized in that it comprises means (2) for the automatic uniform gathering of the curtain.

2. Tape according to claim 1, characterized in that said means for the automatic uniform gathering of the curtain comprise at least one elastic cord (2) which is alternately tied and left loose (3,4), during the weaving of said tape, with respect to the weft thereof.

3. Tape according to claim 2, characterized in that said cord (2) has an elastic elongation in relation to the width of said loose portions (4) and to the width of said tied portions (3).

4. Tape according to claim 3, characterized in that said elastic elongation is inversely proportional to the ratio between the length of said tape when laid flat and said tape when gathered.

5. Tape according to claim 2, characterized in that said elastic cord comprises a core made of elastic material covered by plaiting or stranding by threads of inelastic material adapted to cause friction with said tied portions of said tape.

6. Tape according to claim 2, characterized in that said loose portions (4) are on at least one face of said tape.

7. Process for gathering curtains, characterized in that it consists in: associating with a portion of a curtain a tape which has at least one elastic cord (2) alternately tied and left loose (3,4) with respect to the weft of said tape, in applying a traction force on at least one end of said at least one elastic cord, in elastically elongating said cord until its inelasticity is reached and in releasing said cord to simultaneously and automatically form the gathering of said curtain.

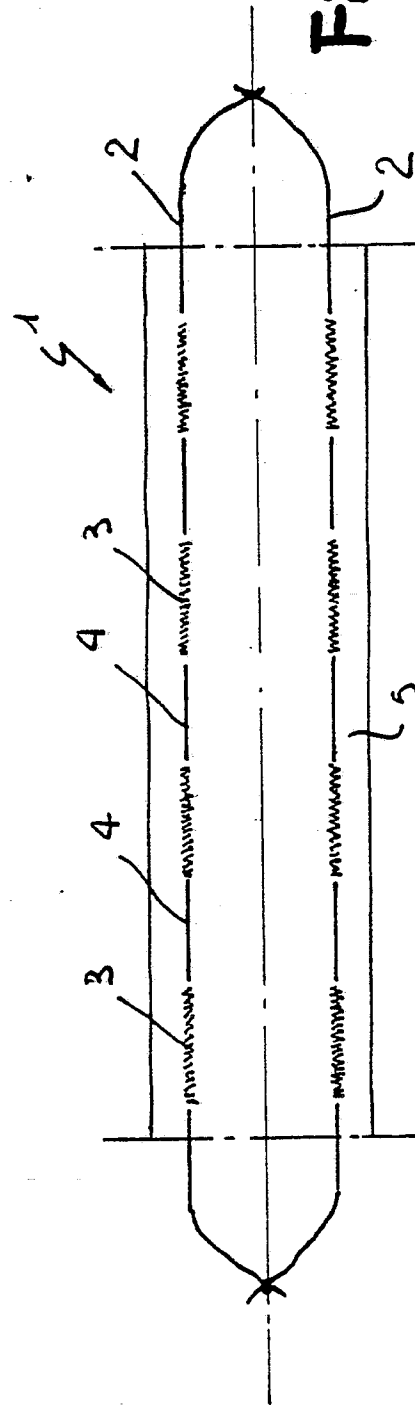


Fig. 1

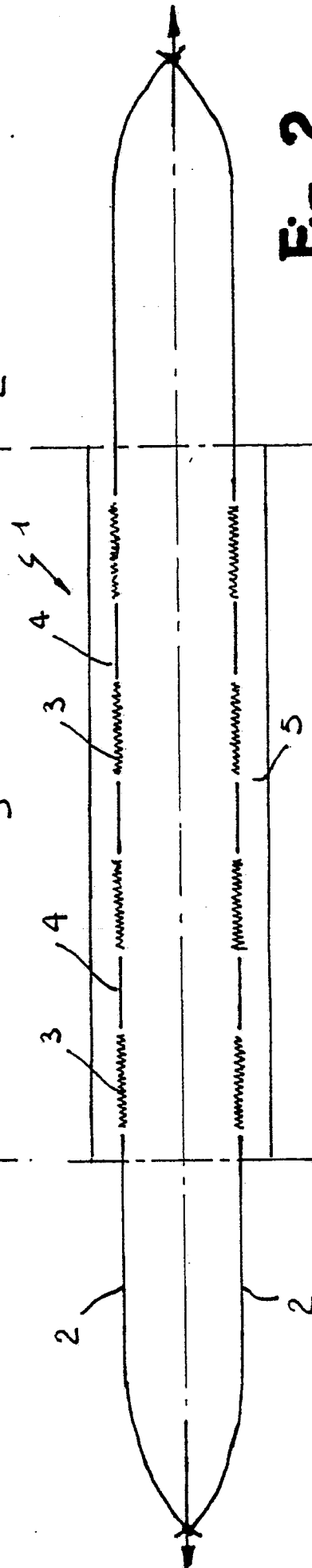
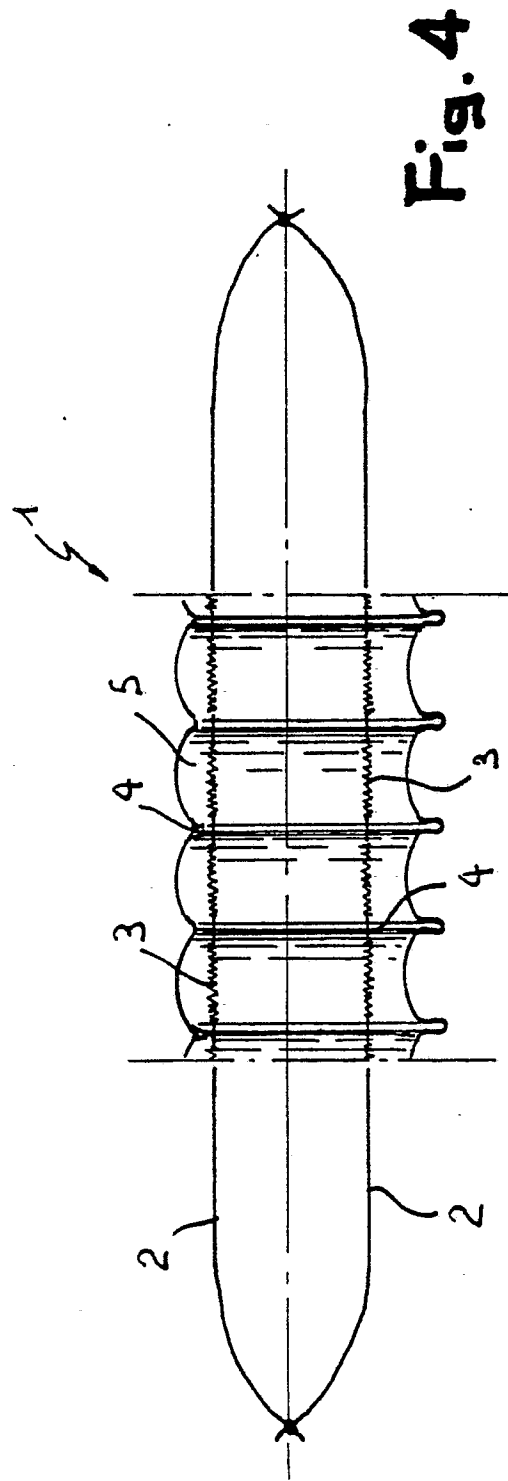
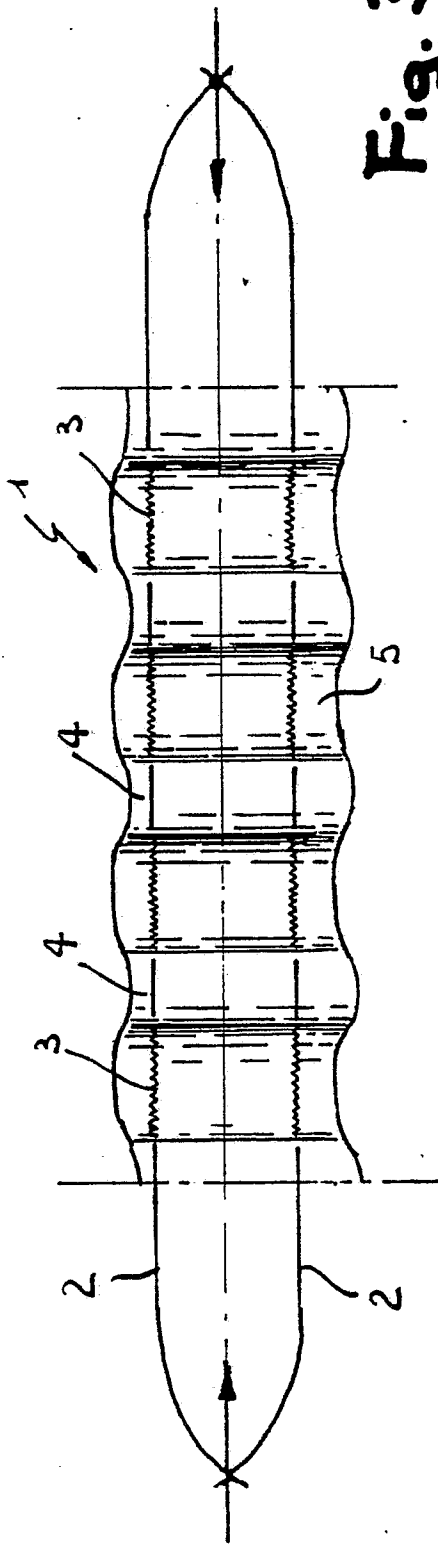


Fig. 2





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.5)
X	FR-A-2 461 476 (MANUTEX) * Page 2, line 19 - page 3, line 36; figures 1-5 *	1,2,3,4 ,7	A 47 H 13/16
Y		6	
A		5	
X	CH-A- 455 182 (GONON) * Column 2, line 16 - column 3, line 9; figures 1-6 *	1,2,3	
Y		6	
A	GB-A-2 200 379 (BRIGHTWAKE LTD) * Claim 1; figure 1 *	1,2	
			TECHNICAL FIELDS SEARCHED (Int. Cl.5)
			A 47 H
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 03-04-1990	Examiner LAUE F.M.
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			