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(71) Applicant : **HAMSTRA-WEESP B.V.**
Postbus 11
NL-1380 AA Weesp (NL)

(72) Inventor : **Schaap, Henk**
La Rivierestraat 16
NL-1222 ER Hilversum (NL)

(74) Representative : **de Vries, Johannes Hendrik Fokke**
Octrooibureau Los en Stigter B.V. P.O. Box 20052
NL-1000 HB Amsterdam (NL)

(54) Rollable gauze screen.

(57) Roller gauze screen (1) comprises a gauze (1), a roller mechanism for the gauze, a pull-beam (3) connected to the free end of the gauze (1), guides (4) for guiding the pull-beam (3) and the side edges of the gauze (1). The guides (4) at the ends opposite to the roller mechanism and the pull-beam are provided with cooperating locking means (5) for locking the pull-beam (3) guided in the pulled-out position of the gauze.

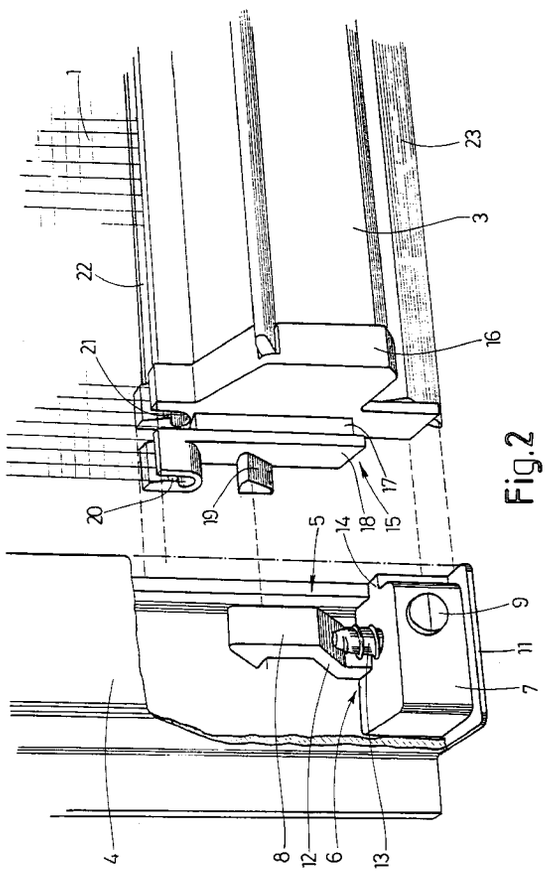

Fig.2

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The invention relates to a roller gauze screen, comprising a gauze, a roller mechanism for the gauze, a pull-beam connected to the free end of the gauze, guides for guiding the pull-beam and the side edges of the gauze, and means for locking the pull-beam in the pulled-out position of the gauze.

Roller gauze screens of this type for closing off a door or window opening are known in different embodiments. The roller mechanism of the roller gauze screen generally comprises a spring so that the pulled-out gauze screen is tensioned and the gauze will always tend to roll up again. Because the pull-beam is held in the pulled-out position, the gauze will always be tensioned tightly and free of folds along the door or window opening. The usual means for locking the pull-beam have several disadvantages such as, for example, the cumbersome locking in the pulled-out position or spontaneously detaching of the pull-beam. The latter can, for example, easily happen at a relatively high spring force when a magnet closing means is used. The known locking means further have the disadvantage that a separate mounting step is necessary at the location of the door or window opening. The locking means are clearly visible and can be experienced as disturbing. Moreover, the locking means may form an obstruction at the door or window opening. If, for example, a roller gauze screen is mounted at both sides of a door opening, the locking means may prevent the joining of the pull-beams.

The invention aims to provide a roller gauze screen of the above-mentioned type, wherein especially the disadvantages caused by the locking means are obviated in a simple but nevertheless effective manner.

To this end the roller gauze screen according to the invention is characterized in that the guides at the ends opposite to the roller mechanism and the pull-beam are provided with cooperating locking means.

In this manner no separate actions are necessary for correctly mounting the locking means, because after mounting the guides the locking means are always in the correct position. Moreover, the locking means are fully hidden from view so that on the one hand the roller has a neat outer appearance and on the other hand the locking means do not form any obstructions at the door or window opening any more.

According to a favourable embodiment of the roller gauze screen of the invention, a resilient hook is mounted in said end of each guide, said resilient hook cooperating with a cam mounted on the end of the pull-beam guided in said guide.

Preferably the resilient hook is part of a first locking part of plastic material comprising a base fitting in said end of the guide, supporting the resilient hook and comprising at least one wedge-shaped mounting cam cooperating with a corresponding opening in the guide. Thereby the roller gauze screen of the invention can be manufactured in a very simple manner.

According to the invention it is to be preferred that the resilience of the resilient hook is adjustable.

According to a favourable embodiment of the invention each of the cams of the pull-beam is part of a second locking part of plastic material comprising a mounting sleeve fitting on the end of the pull-beam, a body part guided in a slot of the guide and a carrier for the cam, lying within the guide. Thereby the cams can be easily mounted on the ends of the pull-beam while moreover an accurate guiding of the pull-beam in the guides is guaranteed.

Preferably the carrier is provided with U-shaped body for receiving the end edge of the gauze, so that the possibility of the gauze meeting any resistance in the guides is prevented effectively.

The invention will be further explained by reference to the drawings in which an embodiment of the roller gauze screen of the invention is schematically shown.

Fig. 1 is a view of an embodiment of the roller gauze screen of the invention in the pulled-out position of the gauze.

Fig. 2 is a partially exploded view of a detail of the roller gauze screen of Fig. 1 at a larger scale.

Figs. 3 and 4 show the locking means of the roller gauze screen of Fig. 1 in two different positions.

Referring to Fig. 1, there is shown a roller gauze screen in the pulled-out position wherein the gauze 1 covers a door opening. Of course, the roller gauze screen can also be used for a window.

The roller gauze screen comprises a roller mechanism for the gauze 1, said roller mechanism being accommodated in a housing 2. The free end of the gauze 1 is connected to a pull-beam 3, the ends of which are guided in guides 4 just as the side edges of the gauze 1.

As shown in Fig. 2, each guide consists of a profile tube with a slot 5, wherein the guides 4 are mounted at both sides of the door opening in such a manner that the slots 5 of the guides 4 are facing each other.

A first locking part 6 is mounted in the end of the guides 4 opposite of the housing 2, which locking part comprises a base 7 carrying a resilient hook 8 and fittingly received in the end of the guide 4. The base 7 further comprises at opposite sides a wedge-shaped mounting cam 9 cooperating with a corresponding opening 10 in the guide 4. This makes mounting the first locking part 6 in the guide 4 very simple. In the mounted position of the locking part 6 a flange edge 11 engages the end of the guide 4.

The resilient hook 8 includes a hook portion 12 extending obliquely with respect to the longitudinal direction of the guide 4 and an adjusting screw 13 is mounted in the base 7, the end of which engages the oblique hook portion 12. The resilience of the hook 8 can be adjusted with the aid of the adjusting screw 13. As the adjusting screw 13 is accessible from the outside, the adjustment of the resilience may take

place after mounting the locking part 6.

As shown in Fig. 2, the base 7 further has a projecting edge 14 fittingly received in the slot 5 of the guide 4.

A second locking part 15 is mounted on each end of the pull-beam 3. This locking part 15 comprises a mounting sleeve 16 attached to the end of the pull-beam. An elongated body part 17 joins the mounting sleeve 16 and is received in the slot 5 of the guide 4 in the mounted position of the roller gauze screen. The carrier 18 for a cam 19 is provided on the body part 17.

As shown in Figs. 3 and 4, this cam 19 cooperates with the resilient hook 8 for locking (to lock) the pull-beam 3 in the pulled-out position of the gauze 1. The resilience of the hook 8 is adjusted in such a manner that on the one hand it is possible to bring the pull-beam 3 into the locking position, whereas on the other hand a spontaneous loosening is excluded with certainty.

The locking means described have the advantage that the entire assembly can take place in the factory. For fitting a window or door opening with the roller gauze screen it is only necessary to mount the housing 1 and the guides 4. The locking means further do not form any obstruction at the window or door opening. The locking means are fully hidden from view so that the roller gauze screen has a neat outer appearance. Moreover, it is impossible to damage the locking means.

As indicated in Fig. 2, the carrier 18 is further provided with a U-shaped body 20 in which the end edge of the gauze 1 is received. The mounting sleeve 16 has a corresponding U-shaped receiving space 21 for the gauze, wherein both U-shaped spaces are aligned with the web part 17 of the second locking part 15. Thereby an accurate guiding of the gauze in the slot 5 of the guides 4 is guaranteed, excluding any damage of the gauze 1.

The U-shaped receiving space 21 of the mounting sleeve 16 joins a corresponding fastening slot 22 in the pull-beam 3. Fastening the end edge of the gauze 1 is easily possible by means of a string provided in said end edge, which string fits tightly in the U-shaped body 20, the U-shaped receiving space 21 and the fastening slot 22.

It is noted that the pull-beam 3 at its free end is provided with a rubber sealing strip 23 in order to achieve that the door or window opening are well sealed.

The invention is not restricted to the embodiment described above which can be varied in a number of ways within the scope of the claims.

Claims

1. Roller gauze screen, comprising a gauze, a roller mechanism for the gauze, a pull-beam connected to the free end of the gauze, guides for guiding the pull-beam and the side edges of the gauze, and means for locking the pull-beam in the pulled-out position of the gauze, **characterized** in that the guides at the ends opposite to the roller mechanism and the pull-beam are provided with cooperating locking means.

2. Roller gauze screen according to claim 1, **characterized** in that a resilient hook is mounted in said end of each guide, said resilient hook cooperating with a cam mounted on the end of the pull-beam guided in said guide.

3. Roller gauze screen according to claim 2, **characterized** in that the resilient hook is part of a first locking part of plastic material comprising a base fitting in said end of the guide, supporting the resilient hook and comprising at least one wedge-shaped mounting cam cooperating with a corresponding opening in the guide.

4. Roller gauze screen according to any one of the preceding claims, **characterized** in that the resilience of the resilient hook is adjustable.

5. Roller gauze screen according to claims 3 and 4, **characterized** in that the resilient hook includes a hook portion extending obliquely with respect to the longitudinal direction of the guide and in that an adjusting screw is mounted in the base engaging the oblique hook portion for adjusting the resilience of the hook.

6. Roller gauze screen according to any one of the preceding claims, **characterized** in that each of the cams of the pull-beam is part of a second locking part of plastic material comprising a mounting sleeve fitting on the end of the pull-beam, a body part guided in a slot of the guide and a carrier for the cam, lying within the guide.

7. Roller gauze screen according to claim 6, **characterized** in that cam carrier has a greater width than the slot of the guide.

8. Roller gauze screen according to claims 6 or 7, **characterized** in that the carrier is provided with U-shaped body for receiving the end edge of the gauze.

9. Roller gauze screen according to claim 8, **characterized** in that the mounting sleeve of the second locking part has a U-shaped receiving space corresponding with the U-shaped body for receiving the end edge of the gauze and joining a corresponding mounting slot for the end edge of the gauze in the pull-beam.

10. Roller gauze screen according to claim 9, **characterized** in that the U-shaped body and the U-shaped receiving space are aligned with the body part of the second locking part.

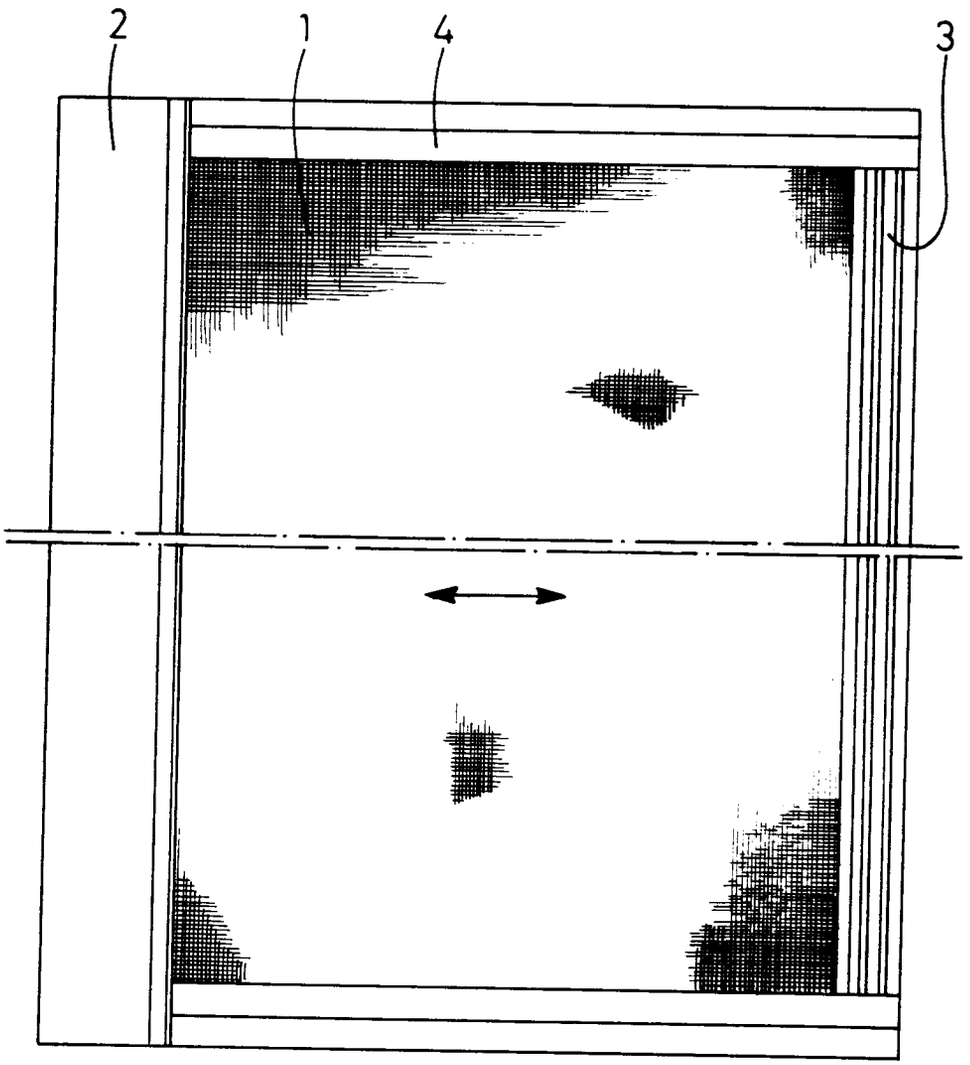

Fig.1

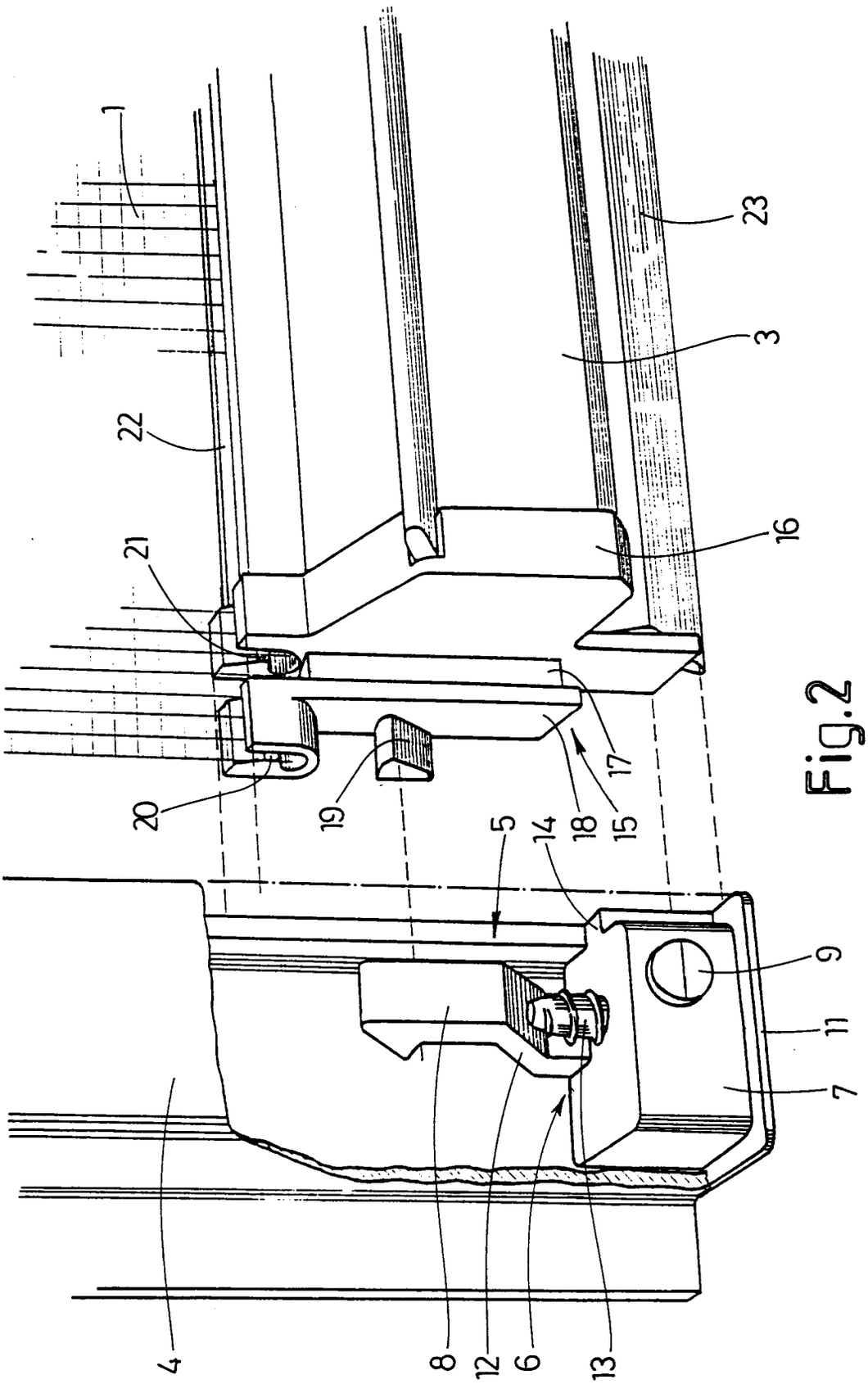

Fig.2

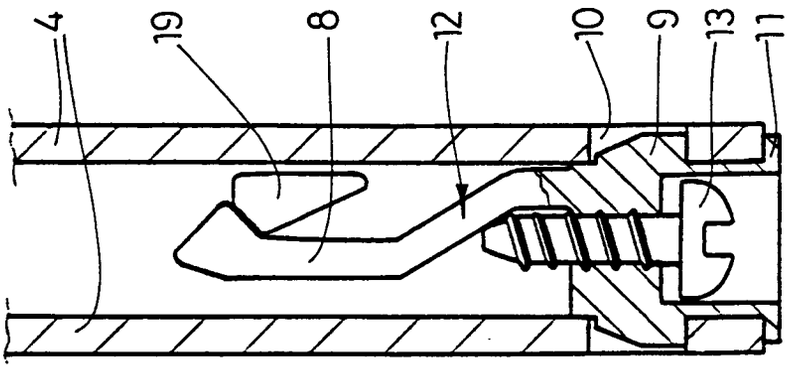

Fig.4

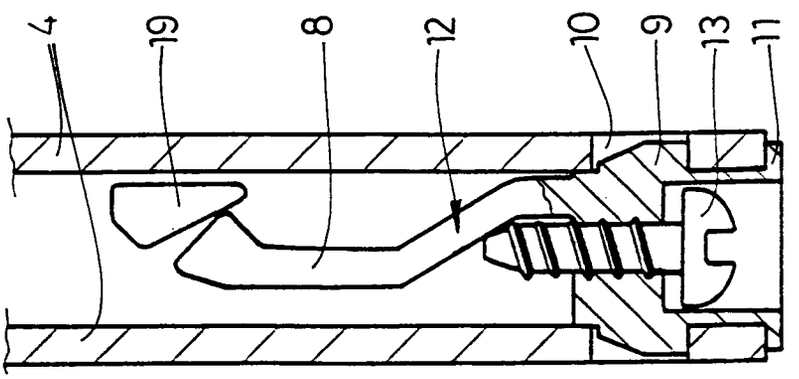

Fig.3

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EUROPEAN SEARCH REPORT

Application Number
EP 93 20 2163

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	GB-A-998 409 (HUNTER DOUGLAS INTERNATIONAL LTD) * page 3, line 66 - page 4, line 34; figures *	1	E06B9/40 E06B9/54
A		2-10	
A	EP-A-0 305 081 (HUNTER DOUGLAS INDUSTRIES B.V.) * column 4, line 15 - column 5, line 36; figures *	1-10	
A	DE-C-37 21 921 (HAYASHIGUCHI) * the whole document *	1-10	

TECHNICAL FIELDS SEARCHED (Int.Cl.5)

E06B

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
THE HAGUE	26 October 1993	KUKIDIS, S

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
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