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(54) Title: ARRANGEMENT IN CONNECTION WITH A CURTAIN ROD

(57) Abstract: The invention concerns an arrangement (1) in connection with a curtain rod (6) which is attachable to a ceiling or to a wall and which possesses graspable holders slidable along the sliding rod (7) of a curtain rod and supportable by the same, which holders have means for curtain holding. According to the invention, the curtain rod (6) has a ledge-shaped holder base (11) extending along the length extension of the curtain rod, through which holder base fixing screws are received for bolting said holder base (11) of the curtain rod tightly against a ceiling (2) or against a wall (3). From the holder base (11), a ledge-shaped neck (13) extends which supports said sliding rod (7) wherein there is an obtuse angle (a) between said holder base (11) and neck (13), in the formed space between wall/ceiling where the curtain rod is arranged to be fastened to a said ceiling or to a said wall. At the top, the holders have flanges at least one flange of which is shape-adapted to the cross-sectional shape of the sliding rod and possible to spring apart from the other flange.



Arrangement in connection with a curtain rod

The present invention concerns an arrangement in connection with a curtain rod which is attachable to a ceiling or to a wall and which possesses graspable holders slidable along the sliding rod of a curtain rod and supportable by the same, which holders have means for curtain holding.

Curtains give, as is known, a nice and cosy impression of premises. However, there are risks when such are to be suspended on premises where people reside who then risks hurting themselves and other by the use of existing curtain rods and the like.

There are solutions to this problem.

By US 8,533,910 B2, a curtain rod having curtain hooks is known which come loose upon the load of a certain maximum weight, about 23 kg. However, a separate fastener or clip (400, 500) is arranged to carry the curtain rod or track (300) which is bendable. In that connection, said fastener could work as holder for a snare or something else that the person in question could try to hurt himself with. Then it is not enough that the proper holders (100) for curtain hooks (200) and the curtain yields at a certain load of the holders (100).

GB 2385511 A comprises a hollow (3) curtain rod (1) having a holder (2) the flanges (12, 6) of which yield at too high a load. However, there is a risk that the person in question can insert a pen or another elongate object in the hollow (3) of the curtain rod to form a fastener for, e.g., a snare. Particularly if several holders are packed together to form a common fastener.

Problems similar to the above are present in further curtain rods known by GB 715150 A, US 6 098 246 A, DE 3915461 A1, DE 3933907 A1, and DE 3707133 A1.

Thus, the main object of the present invention is to solve, among others, the problems mentioned above in connection with a curtain rod which comprises holders for a curtain so that a suicide-resistant, i.e., anti-ligature curtain suspension is obtained but which consists of simple parts both to manufacture and to use.

Said object is achieved by means of an arrangement according to the present invention, which essentially is characterized in that the curtain rod has a ledge-shaped holder base extending along the length extension of the curtain rod, through which holder base fixing screws are received for bolting said holder base of the curtain rod tightly against a ceiling or against a wall, that from the holder base, a ledge-shaped neck extends which supports said sliding rod wherein there is an obtuse angle between said holder base and neck, in the formed space between wall/ceiling where the curtain rod is arranged to be fastened to a said ceiling or to a said wall, and that the holders at the top have flanges at least one flange of which is shape-adapted to the cross-sectional shape of the sliding rod and possible to spring apart from the other flange.

The invention is described in the following in the form of a couple of preferred embodiment examples, reference being made to the accompanying drawings, in which

Figs. 1-4 schematically show a first embodiment example of an arrangement in connection with a

curtain rod having end fastening part and holders,
wherein,

Fig. 1 shows a section view of a curtain
rod, which is attached to the ceiling,

5 Fig. 2 shows a suitable end fastening part
for a said curtain rod as seen in perspective,

Fig. 3 shows a perspective view of the
curtain rod having a holder carried thereby,

Fig. 4 shows an edge view of a holder, and

10 Figs. 5-8 show a second embodiment example
of an arrangement in connection with a curtain rod having
end fastening part and holders, wherein

Fig. 5 shows a perspective view of a
curtain rod, which is attached to a wall,

15 Fig. 6 shows a suitable end fastening part
for a said curtain rod and as seen in perspective,

Fig. 7 shows a side view of a curtain rod,
end fastening part, and a holder,

20 Fig. 8 shows a section view of the curtain
rod and the holder,

Fig. 9 shows pictures of a variant of a
holder having a fastening hook,

25 Fig. 10 shows a perspective view obliquely
from below of a said curtain rod, which is attached to the
ceiling having a holder thereon,

Fig. 11 shows an example of curved curtain
rods having much curvature and little curvature,
respectively,

30 Fig. 12 shows a front view of a complete
curtain suspension, and

Fig. 13 shows an end part of a curtain rod
having a holder and an end fastening part.

An arrangement 1 according to the present invention which is suitable to be fastened to a ceiling 2 or to a wall 3 in the room 4 in which it is desired to hang the curtain 5 by means of an attachable curtain rod 6, which in turn has holders 8 slidable along the sliding rod 7 of a curtain rod and supportable by the same, which holders have means 9 for curtain fastening, is arranged to function reliably without risk of persons hurting themselves. More precisely, the curtain rod 6 has a ledge-shaped holder base 11 extending along the length extension 10 of the curtain rod. By pre-formed holes 12 therein, fixing screws, not shown, are received to allow bolting said holder base 11 of the curtain rod tightly against a ceiling 2 or against a wall 3 in the room 4, etc., in which it is desired to hang the curtain 5.

From said holder base 11, a ledge-shaped neck 13 extends, which is arranged to support said sliding rod 7. In that connection, there is an obtuse angle α, β between said holder base 11 and the neck 13. The main reason for arranging the angle α, β to be obtuse is to prevent or at least make it more difficult for persons to be able to attach, e.g., a snare between wall/ceiling 3, 2 and a said neck 13 of the curtain rod 6, where the curtain rod 6 is arranged to be fastened to a said ceiling 2 or to a said wall 3, e.g., by inserting a pen or another solid item in the space 31, 32 therein or in the space 33 that is formed between a wall 3 and said neck 13 of the curtain rod 6, and attach the end of the snare around the pen.

Said holders 8 have at the top 14 at least two flanges 15, 16 at least one flange 15 of which is shape-adapted to the cross-sectional shape of the sliding rod and possible to spring apart from the other, opposite flange 16.

The holder base 11 and neck 13 of a curtain rod are formed of a common, elongate profile ledge of appropriate plastic or metal material, suitably aluminium. Said profile ledges may be cuttable into
5 desired length before mounting of the same and they may be straight, curved, as is shown in Fig. 11, or they are easily bent using a little direct action.

In order to conceal the ends of the curtain rod 6, if it has not been tailor-made exactly to
10 the distance between wall to wall, said profile ledge may be receivable with the respective ends in a respective end fastening part 17, which in turn is arranged tightly attachable against a ceiling or a wall. In that connection, said end fastening parts 17 are closed in one
15 end 17A but have a congruent recess 18 which is arranged in the opposite end 17B and mates with said profile ledge and which is matched before hanging a said curtain rod 6 and the end fastening parts 17 on a ceiling or on a wall. The end fastening parts 17 are there to prevent a snare
20 from being attached in the space between rod end and ceiling/wall or between the rod ends.

With the purpose of preventing insertion and attachment of, e.g., one end of a snare between the wall 3 and the end fastening part 17, said one end 17A of
25 the end fastening part 17 is arranged sloping 30 or curved in the direction from the connection portion 17C thereof to a ceiling 2 or a wall 3. It is also important there that no space is obtained that allows attachment a rope, etc., so that persons are prevented from getting hurt.

30 Suitably, said sliding rod 7 has a curved side 19 along the end 7A thereof turned in the direction from the holder base 11 and a straight side 20 on the opposite side. Between each a side A, B of a said curved

side 19 and a straight side 20, a straight surface 21 or a curved surface extends, which links together the two sides 19, 20 with each other.

Said holders 8 are preferably formed of y-shaped clips having an opening 22 and means, e.g., Velcro® fastening means 9 or another suitable fastening means for securing a curtain by appropriate means, e.g., Velcro® fastening means, in a respective diametrically opposite end 8A, 8B. The material of the holders 8 is preferably
5 acetal plastic (POM), polyamide (PA), etc., or resilient metal.
10

In case of a sliding rod 7 having a curved at least one side 19, a fitting holder 8 has at least one curved one flange 15. Simultaneously, the holders 8 have a
15 counter-positioned straight flange 16. Said curved and straight, respectively, flanges 15, 16 abut along and cooperate with, respectively, the curved and straight, respectively, sides 19, 20 of the sliding rod 7. As is shown in the drawings, a superpositioned opening 22
20 reaching into the internal space 25 of the holders is laterally displaced as seen to the opposite end 8B of the holders 8.

For a reliable fastening of the curtain rod 6, without possibility of loosening the same without
25 special tools, through fastening holes 12, 26 are arranged for screws, e.g., one-way screws, to extend through holder base 11 and mounting flanges 27 of end fastening parts.

In order to prevent a plurality of holders 8 from being interengaged close to each other with the
30 sides of the holders 8 abutting tightly together, so that it would be possible to increase the bearing capacity should someone try to arrange some kind of snare or another hang means in a plurality of holders 8, the

holders 8 have a thickening 28, for instance in the form of a boss-like projecting bulge, stud, etc., on one or both opposed sides 29 of the holder.

Furthermore, at least one flange 15, the curved one, of the holders is arranged to spring apart from the counter-positioned paired flange 16, the straight one, upon load by a certain predetermined force acting on the respective holder and/or groups of holders in brought-together positions, so that they spring apart and open and come loose from the sliding rod 7 in question long before a person's weight is reached, e.g. at 15 kg or less.

As curtain holding means, in addition to the above-mentioned Velcro® fastening elements, these may be holes 35 for supporting fork curtain holders or sewing thread or other fastening means present therein or receivable on the holders 8.

It is also possible, as is shown in the drawings in Fig. 9, to arrange the holders 8 with hooks 36 in the lower ends thereof for supporting the curtain 5 by inserting the hooks 36 into, e.g., holes 37 along the upper edge side of the curtain or by utilizing folding strips, etc.

The function and nature of the invention should have been clearly understood from the above-mentioned and also with knowledge of what is shown in the drawings but the invention is naturally not limited to the embodiments described above and shown in the accompanying drawings. Modifications are feasible, particularly as for the nature of the different parts, or by using an equivalent technique, without departing from the protection area of the invention, such as it is defined in the claims.

C l a i m s

1. Arrangement (1) in connection with a
5 curtain rod (6) which is attachable to a ceiling (2) or to
a wall (3) and which possesses graspable holders (8)
slidable along the sliding rod (7) of a curtain rod and
supportable by the same, which holders have means for
curtain holding, **characterized in** that the curtain rod (6)
10 has a ledge-shaped holder base (11) extending along the
length extension (10) of the curtain rod (6), through
which holder base fixing screws are received for bolting
said holder base (11) of the curtain rod tightly against a
ceiling (2) or against a wall (3), that from the holder
15 base (11), a ledge-shaped neck (13) extends which supports
said sliding rod (7) wherein there is an obtuse angle
(α, β) between said holder base (11) and neck (13), in the
formed space (31, 32) between wall/ceiling (3, 2) where
the curtain rod (6) is arranged to be fastened to a said
20 ceiling (2) or to a said wall (3), and that the holders
(8) at the top (14) have flanges (15, 16) at least one
flange (15) of which is shape-adapted to the cross-
sectional shape of the sliding rod and possible to spring
apart from the other flange (16).

25

2. Arrangement according to claim 1,
characterized in that the holder base (11) and neck (13)
of the curtain rod are formed of a common, elongate
profile ledge of plastic or metal material.

30

3. Arrangement according to claim 2,
characterized in that said profile ledge is receivable
with the respective ends in a respective end fastening

part (17), which in turn is arranged tightly attachable against ceiling (2) or wall (3).

4. Arrangement according to claim 3,
5 **characterized in** that said end fastening parts (17) are closed in one end (17A) with a sloping or curved side surface (30) but have, in the opposite end (17B), a congruent recess (18) mating with said profile ledge.

10 5. Arrangement according to any one of the above claims, **characterized in** that the sliding rod (7) has a curved side (19) along the end thereof turned in the direction from the holder base (11).

15 6. Arrangement according to claim 5, **characterized in** that the sliding rod (7) has a straight side (20) along the end thereof facing the holder base (11).

20 7. Arrangement according to claim 6, **characterized in** that, between the curved and the straight side (19 and 20, respectively), a straight surface (21) or a curved surface extends.

25 8. Arrangement according to any one of the above claims, **characterized in** that the holders (8) are formed of y-shaped clips having an opening (22) and means for curtain holding situated in a respective diametrically opposite end (8A, 8B).

30

9. Arrangement according to claim 8, **characterized in** that the holders (8) have at least one curved one flange (15).

10. Arrangement according to claim 9,
characterized in that the holders (8) have a straight
flange (16).

5

11. Arrangement according to any one of claims
9-10, **characterized in** that an opening (22) into the
holders (8) is laterally displaced as seen in relation to
the opposite end (8B) of the holders (8).

10

12. Arrangement according to any one of claims
1-4, **characterized in** that through fastening holes (12,
26) for screws extend through holder base (11) and
mounting flanges (27) of occurring end fastening parts.

15

13. Arrangement according to any one of the
above claims, **characterized in** that the holders (8) have
at least one thickening (28) which is arranged to prevent
close abutment of the holders (8) against each other in a
row.

20

14. Arrangement according to any one of the
above claims, **characterized in** that at least one flange
(15) of the holders is arranged to spring apart upon a
certain, determined force acting on the respective holder
(8).

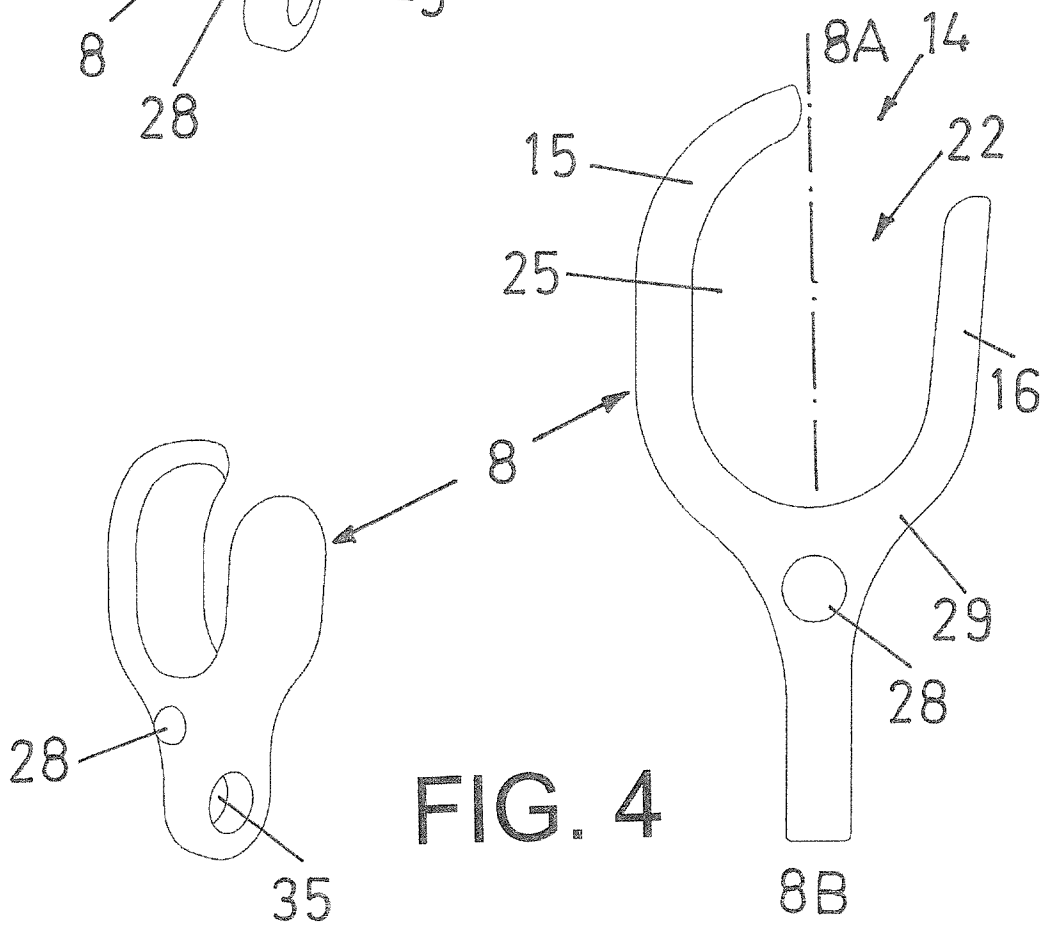
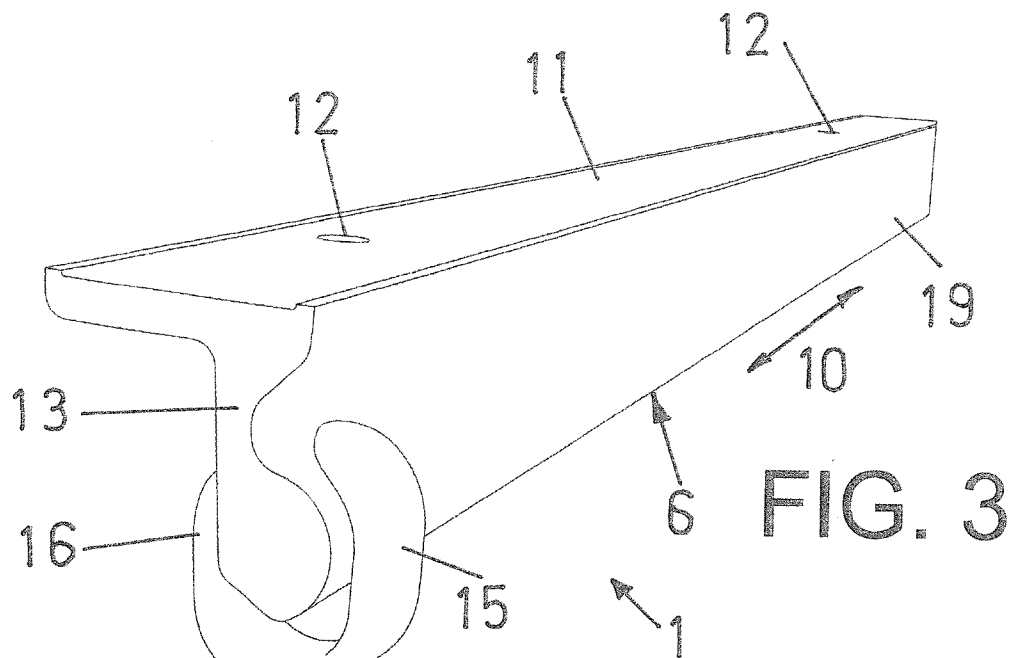
25

15. Arrangement according to any one of the
above claims, **characterized in** that curtain holding means
are formed of Velcro® fastening elements (9), holes (35),
or of other means such as hooks (36) for supporting fork
curtain holders or folding strips, sewing thread, or other

30

fastening means receivable therein or to be received in mating openings (37) in the curtain (5).

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FIG. 5

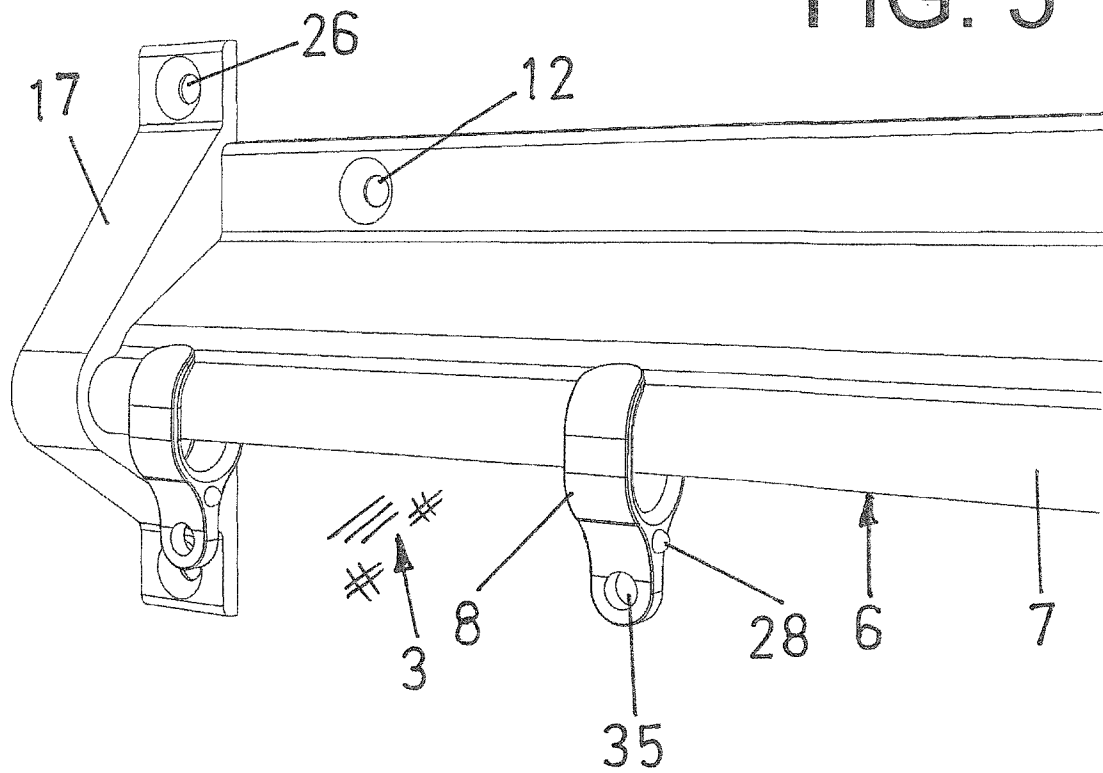


FIG. 6

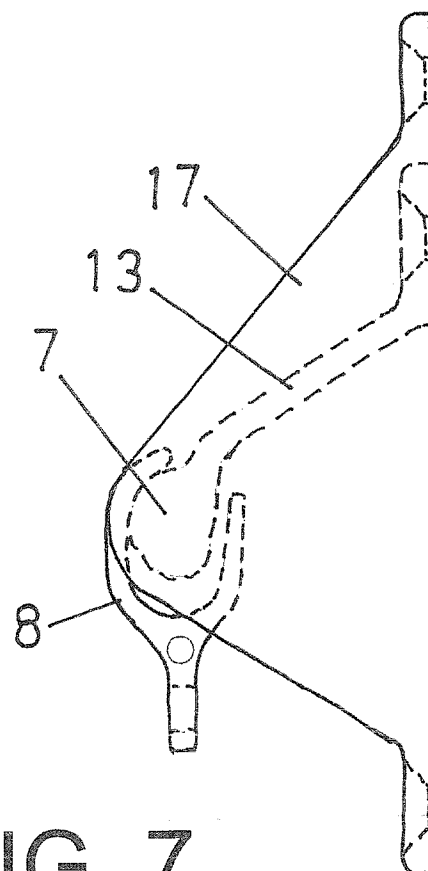
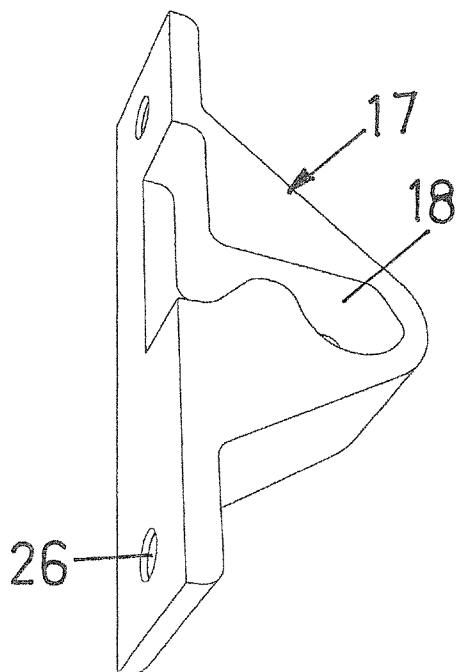


FIG. 7

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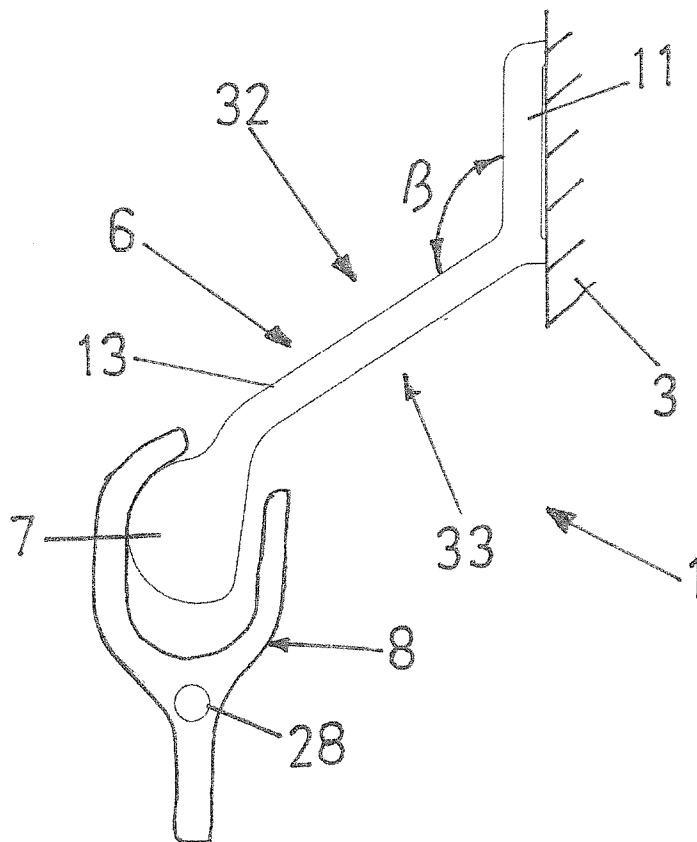


FIG. 8

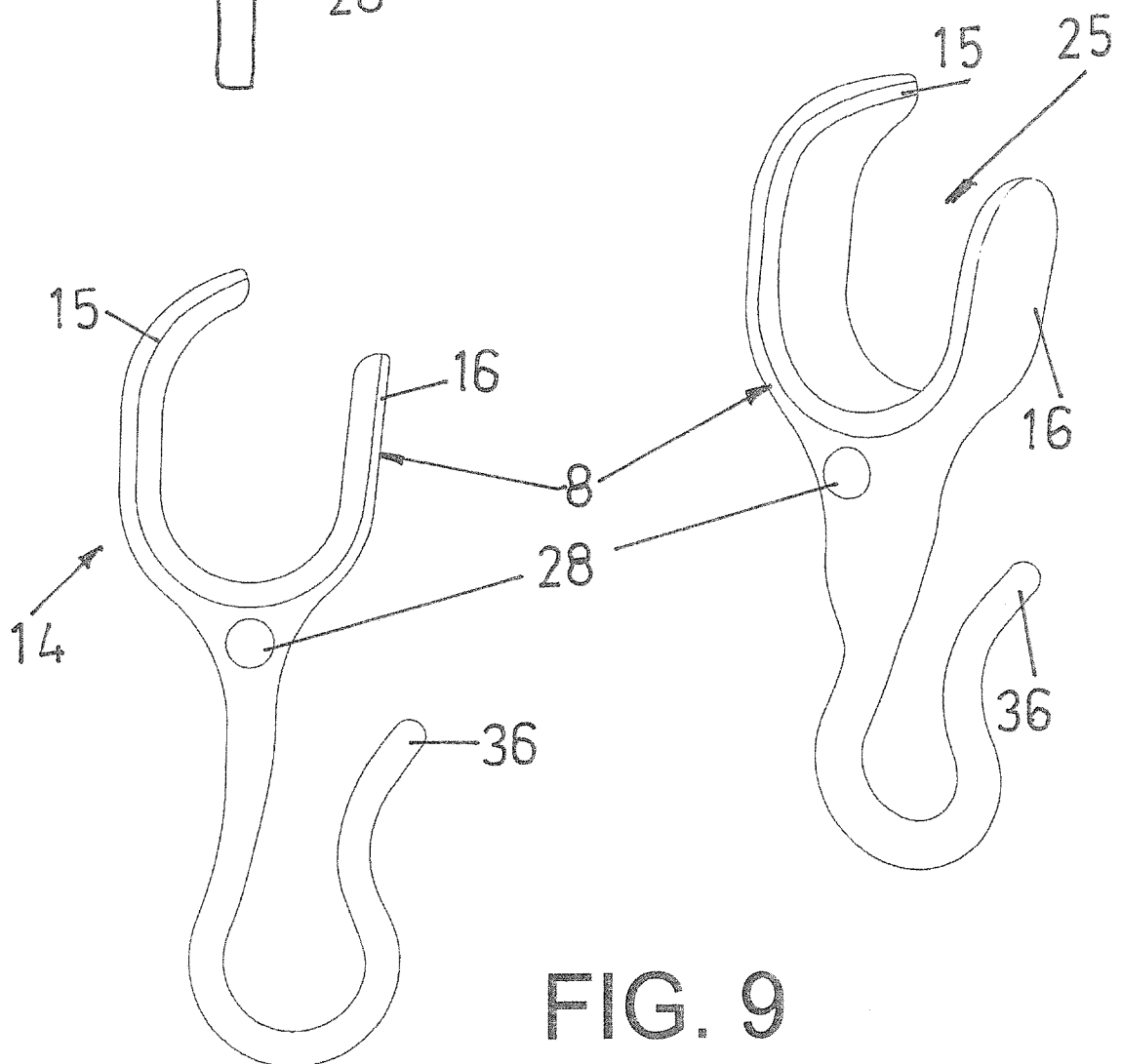
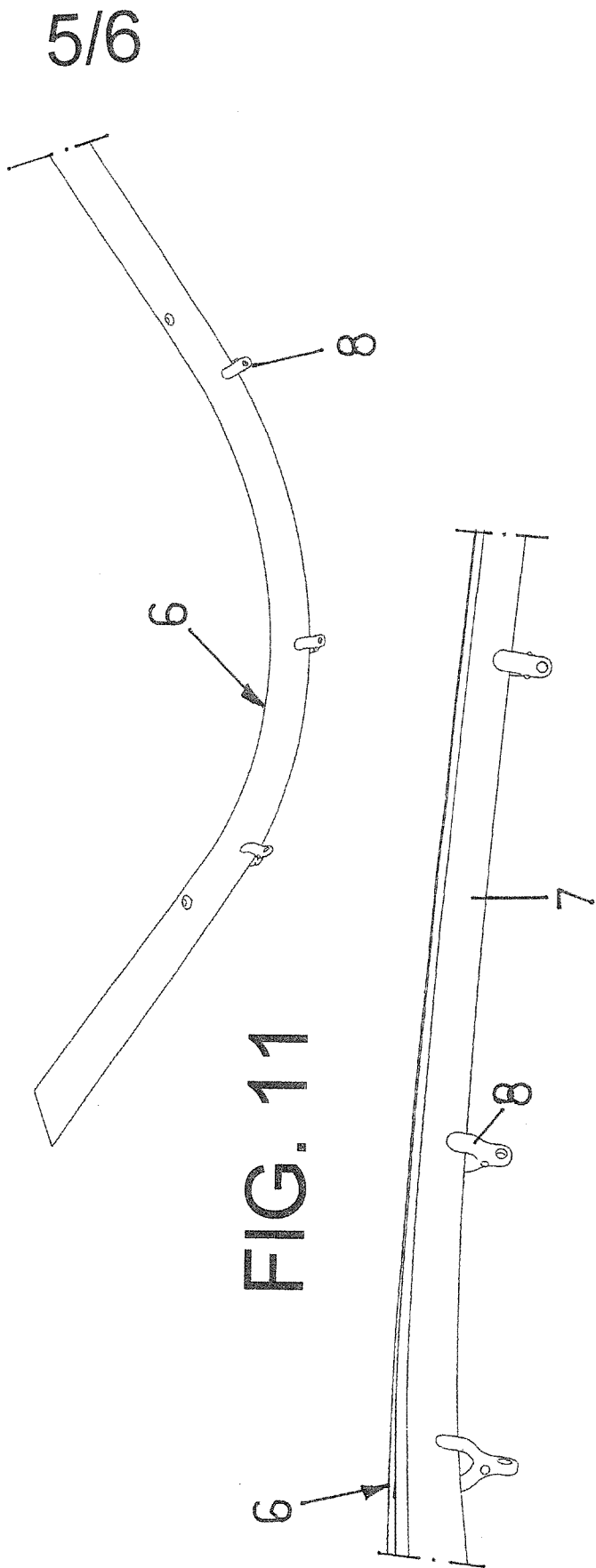
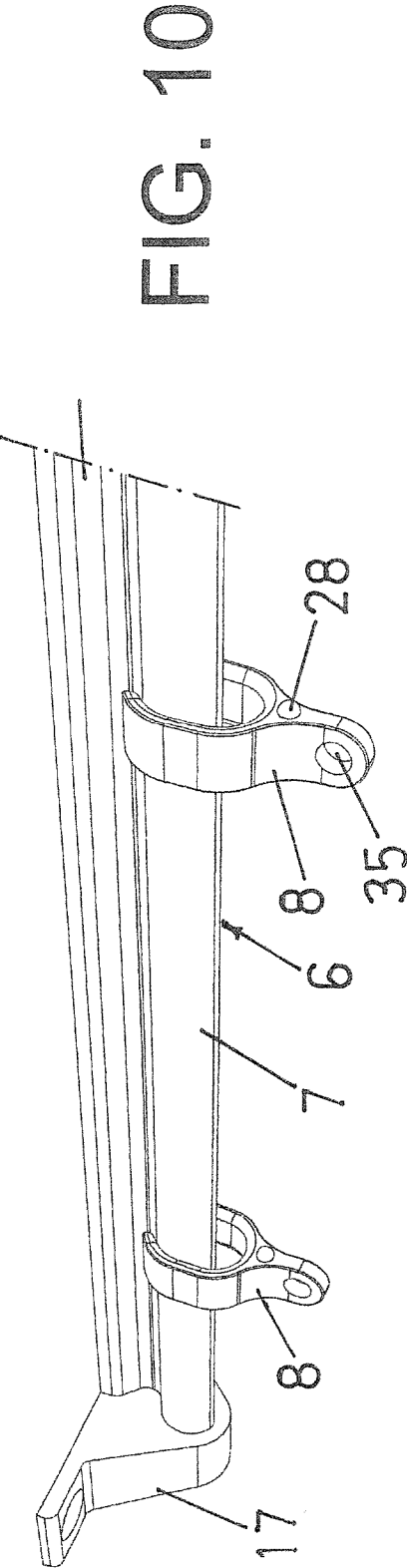


FIG. 9



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FIG. 12

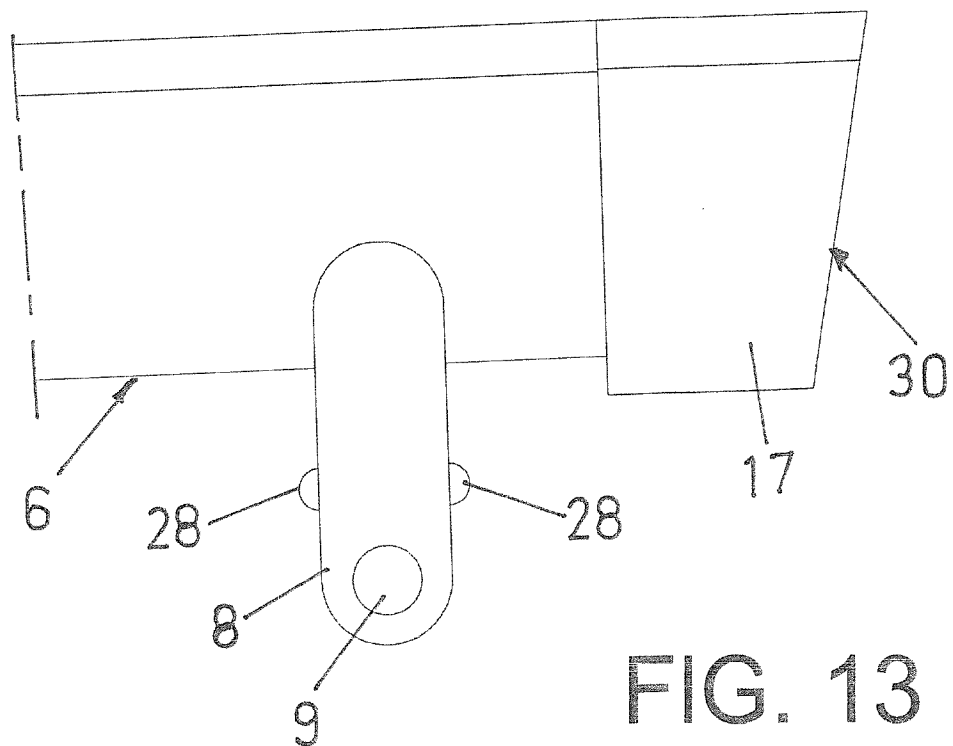
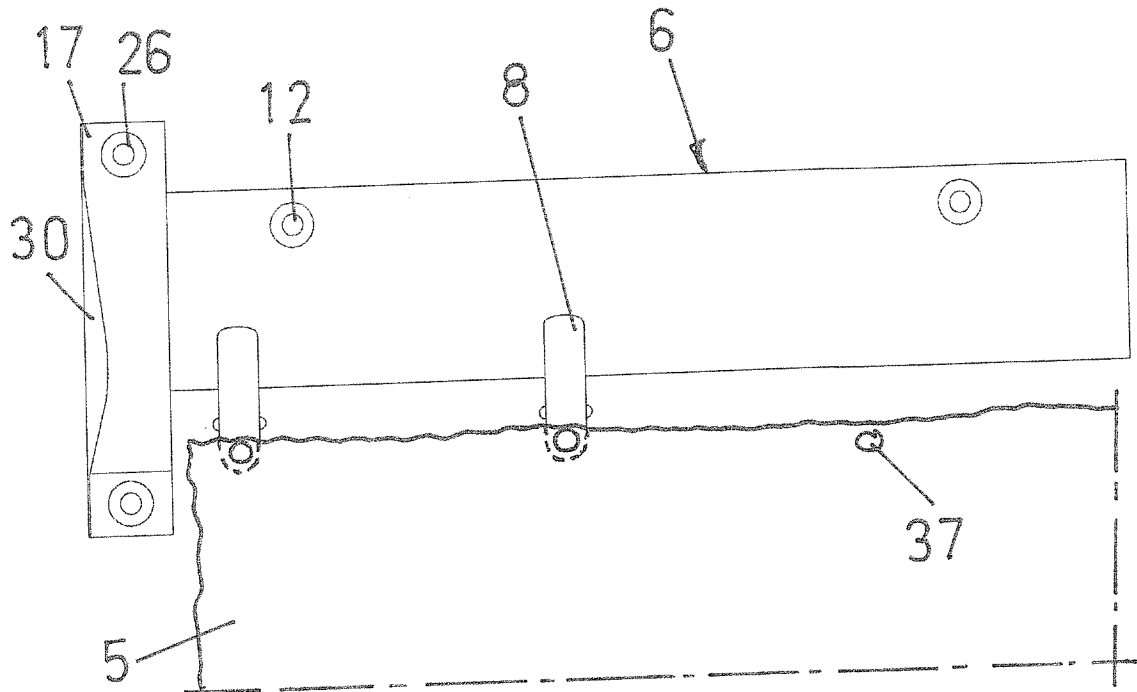


FIG. 13

INTERNATIONAL SEARCH REPORT

 International application No.
 PCT/SE2017/050397

A. CLASSIFICATION OF SUBJECT MATTER

IPC: see extra sheet

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: A47H, E06B

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

SE, DK, FI, NO classes as above

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

EPO-Internal, PAJ, WPI data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	DE 1911449 A1 (BUECHLER AG), 6 November 1969 (1969-11-06); page 2, line 6 - line 9; page 3, line 9 - line 25; figure 3; claim 3 --	1-15
A	US 5950255 A1 (THOMPSON GREG), 14 September 1999 (1999-09-14); abstract; column 1, line 4 - line 57; figures 5-7 --	1-15
A	US 20070277944 A1 (WU HANS), 6 December 2007 (2007-12-06); figure 2; Detaljer 1,3,4 --	1-15
A	US 20110061819 A1 (ELINSON LEONARD), 17 March 2011 (2011-03-17); abstract; figure 1; Detaljer 20,44,50 --	1-15



Further documents are listed in the continuation of Box C.



See patent family 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 application or patent but published on or after the international filing date

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“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

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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

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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

“&”

document member of the same patent family

Date of the actual completion of the international search

31-05-2017

Date of mailing of the international search report

31-05-2017

Name and mailing address of the ISA/SE

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/SE2017/050397

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5050750 A1 (MASON ROLAND V), 24 September 1991 (1991-09-24); abstract; figures 1,8; Detalj 20 --	1-15
A	US 20040126181 A1 (TER BRAAK BART), 1 July 2004 (2004-07-01); abstract; paragraphs [0001], [0028] -- -----	1-15

Continuation of: second sheet

International Patent Classification (IPC)

A47H 1/04 (2006.01)

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INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/SE2017/050397

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