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(54) **SOFA WITH RECLINING BACKREST**

(57) Sofa with reclining backrest comprising a structure formed by a rear structure (4) and a seat structure (5), in addition to the reclining backrest (2) itself and a seat (3), which comprises a headrest (1) attached to the backrest (2), and a mechanism formed by bases (8), which attach to the rear structure (4), from which two extensions (9) protrude, a backrest structure (11) formed by first bars (12) located in the side ends of the backrest (2) and attached by means of extension bars (13) which

give the backrest (2) the rigidity required, a headrest structure (14) which gives the headrest (1) rigidity, where the ends of the first bars (12) end in two articulations (10) by means of which the first ends attach to the corresponding extensions (9) of the base (8) and the second ends attach to the headrest structure (14), so that the backrest (2) can be folded with respect to the rear structure (4) and the headrest (1) can be folded with respect to the backrest (2).

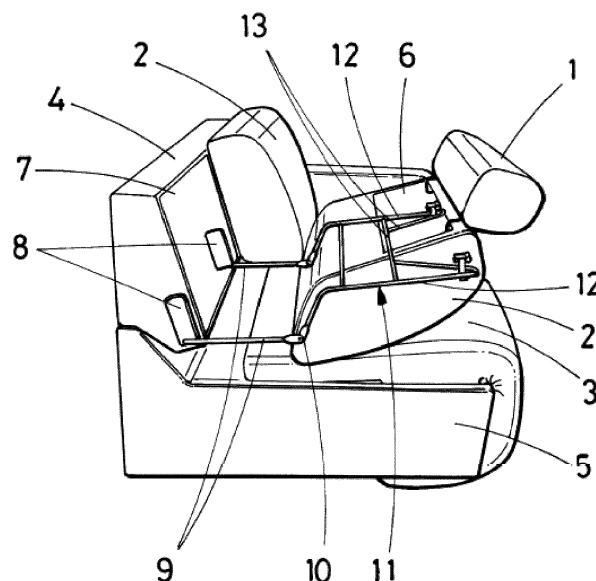


FIG.7

Description

Object of the invention

[0001] This invention refers to an armchair or sofa that incorporates a reclining backrest where a headrest is located with a mechanism that enables it to be retractable, so that it can be folded down to be hidden behind the backrest of the armchair without it being possible to be detected or deployed to be used as a complement to the backrest to support the head. It finds a special application in the field of the armchair manufacturing industry.

State of the art

[0002] The lounge furniture industry has evolved greatly since its beginnings when the robustness of sofas and armchairs prevailed. This has progressively given way to designs that try to solve the shortage of space in homes. A subsequent step has consisted of implementing elements which, although they may not be entirely acceptable aesthetically, have been deemed to provide great comfort to the user. One of these elements is the one outlined in this descriptive report. It is based on the fact that sofas and armchairs normally have a backrest that does not cover the head, but only the back, so that rest in this type of furniture is intended for the user to remain seated only on it.

[0003] Document US3275374 describes an upholstered piece of furniture comprising a headrest that can be fixed in an operative position above the backrest or moved below a positive guide from above the backrest to a cavity therein. This document applies preferably to seats whose backrests comprise a rear section and a front section which receives or represents the backrest cushion itself. In this case, the cavity intended to receive the headrest in its inoperative position is conveniently formed by a recess in -at least- one of the contact surfaces of the front and rear sections of the backrest of the chair. In one embodiment of document US3275374, the headrest is secured to -at least- one support that articulates in the rear section of the backrest of the chair in a similar way to a hinge. However, the headrest can be fastened to a support that slides with sliding pins or studs on guide rails located inside the backrest. In another suitable form of construction, the headrest is connected to the backrest by means of a guide link of the parallelogram type.

[0004] However, this invention as described in the attached claims solves a problem that is not yet solved in the prior art by presenting a sofa that incorporates a reclining headrest hidden in the backrest so that, in order to be used, one just needs to fold down the backrest, deploy the headrest and return the backrest to its position of use, thus combining traditional aesthetics with the comfort sought.

Explanation of the invention

[0005] In order to achieve the objectives and avoid the disadvantages mentioned above, this invention describes a sofa with a reclining backrest comprising a structure formed by a back structure and a seat structure, in addition to the reclining backrest itself and a seat.

[0006] Although the sofa can be divided into several modules and incorporate several backrests and seats, for greater simplicity in the wording, the sofa will be deemed to consist of a single backrest and seat, as an armchair, although it can incorporate several backrests and seats without this signifying a variation in the object of the invention.

[0007] The sofa additionally comprises a headrest attached to the backrest, and a mechanism responsible for providing the capacity for movement to both the headrest and the backrest. The mechanism, which is preferably metallic, is formed by bases, by means of which they are attached to the rear structure of the sofa, from which two extensions protrude, as well as a backrest structure and a headrest structure.

[0008] The backrest structure is formed by first bars located at the side ends of the backrest and attached by means of extension bars intended to provide the required rigidity to the backrest.

[0009] The headrest structure, for its part, is responsible for providing rigidity to the headrest.

[0010] With this configuration of the mechanism, the ends of the first bars incorporate two articulations by means of which the first ends are attached to the corresponding extensions of the base and second ends are attached to the headrest structure, so that the backrest can be folded with respect to the rear structure of the sofa and the headrest can be folded with respect to the backrest. In this way, a user can fold down the backrest of the sofa to bring it close to the front area and, from this position, fold down the headrest to remove it and return the backrest to its position of use with the headrest already removed. The user may thus manipulate the headrest in a very ergonomic and natural way, without the need to bend towards the backrest area or having to adopt uncomfortable positions on very deep sofas that can cause discomfort or even back pain.

[0011] The sofa with reclining backrest of the invention can also incorporate a first recess located in the backrest and a second recess located in the rear structure. The recesses are intended to accommodate the headrest when it is in the folded position.

Brief description of the drawings

[0012] To complete the description of the invention and in order to help with a better understanding of its characteristics, in accordance with an example of a preferred embodiment of the same, a set of drawings is attached, in which the following figures are shown for illustrative and nonlimiting purposes:

- Figure 1 represents a perspective view of the sofa of the invention with two backrests and two seats, the headrests being folded.
- Figure 2 represents a perspective view of figure 1 with a headrest deployed.
- Figure 3 represents a side view of the sofa represented in figure 1 where the folded headrest can be seen.
- Figure 4 represents a side view of the sofa with the backrest in the first step of being folded down.
- Figure 5 represents a side view of the sofa with the backrest in the second step of being folded down, where the headrest has begun to be removed from the backrest.
- Figure 6 represents a side view of the sofa where the headrest has been completely deployed with respect to the backrest and the backrest has been brought to its initial position.
- Figure 7 represents a perspective view of the sofa with one of the backrests folded down, showing the structure of the folding mechanism and the recesses for locating the headrest.
- Figure 8 represents a perspective view of the folding mechanism when the sofa is in its resting position.
- Figure 9 represents a perspective view of the folding mechanism when the sofa is in its folding position with the headrest not deployed.
- Figure 10 represents a perspective view of the folding mechanism when the sofa is in its resting position with the headrest deployed.

[0013] A list of the references employed in the figures is provided below:

1. Headrest.
2. Backrest.
3. Seat.
4. Rear structure.
5. Seat structure.
6. First recess.
7. Second recess.
8. Base.
9. Extensions.
10. Articulation.
11. Backrest structure.
12. First bars.
13. Extension bars.
14. Headrest structure.

Description of a preferred embodiment of the invention

[0014] This invention refers to a sofa with a structure formed by means of a rear structure (4) and a seat structure (5), which support, respectively, at least one backrest (2) and the corresponding seats (3). The sofa has the peculiarity that it also incorporates a retractable headrest (1) hidden in each of the backrests (2), that can be

deployed so that the user can rest his/her head.

[0015] In this way, the sofa can go from the situation represented in figure 1, with the headrest (1) folded and housed in recesses (6, 7), remaining hidden from view, to the situation represented in figure 2, with the headrest (1) deployed ready for a user to rest his/her head when he/she sits down.

[0016] In the resting position, the backrest (2) rests on the rear structure (4) of the sofa. In order to be able to deploy the headrest (1), the backrest (2) of the sofa can be folded at the area where it joins the seat (3).

[0017] The process of deploying the headrest (1) is represented in figures 3 to 6.

[0018] Figure 3 represents a side view of the sofa with the headrest (1) incorporated in folding form.

[0019] It can be seen how, in order to make the most of space and to avoid unnecessary increases in the dimensions of the sofa, the backrest (2) incorporates recesses (6, 7) where part of the headrest (1) is housed. These recesses (6, 7) are more clearly represented in figure 7.

[0020] Figure 4 shows the first step in the folding of the backrest (2), leaving the headrest (1) accessible to be deployed.

[0021] In figure 5, the backrest (2) is completely folded, and the headrest (1) has already been deployed, tending to occupy its final position with respect to the backrest (2). It can be seen how the folding to extract the headrest (1) of the backrest (2) can be performed from a position where a user does not have to adopt uncomfortable positions that can cause back problems, especially in very deep sofas, but is done standing in front of the sofa in a natural position.

[0022] Figure 6 represents the sofa in the position of use with the headrest (1) already fully deployed, according to figure 2, where the backrest (2) has been folded back to its initial position of use.

[0023] Figure 7 shows the backrest (2) folded back with the headrest (1) deployed, where the folding mechanism can be seen, as well as a first recess (6) located in the backrest (2) and a second recess (7) located in the rear structure (4) of the sofa.

[0024] Figures 8 to 10 show the deployment sequence of the mechanism of the invention. The mechanism is preferably symmetrical and comprises bases (8) intended to be attached to the rear end of the sofa on the rear structure (4). Extensions (9), which extend into the seat structure (5) protrude from the bases (8).

[0025] The headrest (1) incorporates a headrest structure (14), which gives it rigidity, and the elements required for the transmission of movement with respect to the backrest (2). The backrest (2), for its part, also incorporates a backrest structure (11) formed by first bars (12) located at the side ends of the backrest (2) and attached by means of extension bars (13) that gives the backrest (2) the required rigidity.

[0026] The ends of the first bars (12) end in articulations (10) by means of which some of the ends are at-

tached to the corresponding extensions (9) of the base (8) and the other ends are attached to the headrest structure (14). In this way, the articulations (10) enable the headrest (1) to be folded with respect to the backrest (2) and the backrest (2) to be folded with respect to the sofa. 5

[0027] Finally, it should be noted that this invention should not be seen to be limited to the embodiment described herein. Other configurations can be realised by those skilled in the art in light of this description. Accordingly, the scope of the invention is defined by the following 10 claims.

Claims

1. Sofa with reclining backrest comprising a structure formed by a rear structure (4) and a seat structure (5), in addition to the reclining backrest (2) itself and a seat (3), the sofa being **characterised in that** it comprises: 15
 - a headrest (1) attached to the backrest (2), and a mechanism comprising bases (8), which are attached to the rear structure (4), from which two extensions (9) protrude, a backrest structure 25 (11) formed by first bars (12) located in the side ends of the backrest (2) and attached by means of extension bars (13) that give the backrest (2) the rigidity required, a headrest structure (14) that gives the headrest (1) rigidity, wherein: 30
 - the ends of the first bars (12) end in two articulations (10) by means of which the first ends are attached to the corresponding extensions (9) of the base (8) and second ends attach to the headrest structure (14), so that the backrest (2) can 35 be folded with respect to the rear structure (4) and the headrest (1) can be folded with respect to the backrest (2).
2. Sofa with reclining backrest, according to claim 1, 40 characterised because it comprises:
 - a first recess (6) located in the backrest (2), a second recess (7) located in the rear structure 45 (4),
 - the recesses (6, 7) being intended to house the headrest (1) when it is in the folded position.
3. Sofa with reclining backrest, according to claim 1, 50 characterised because the elements that the mechanism is made of are metallic.

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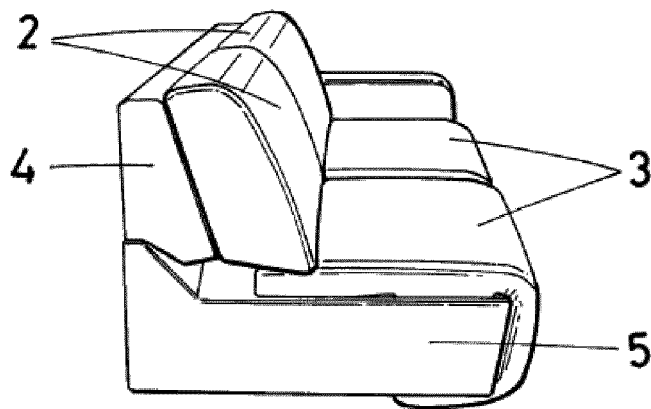


FIG.1

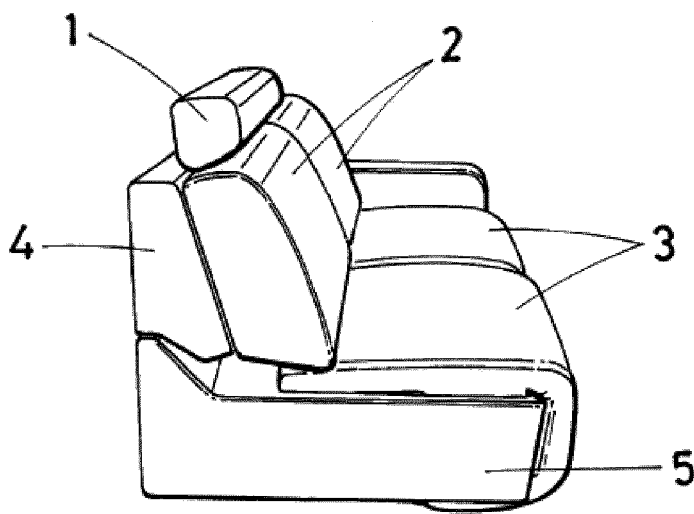


FIG.2

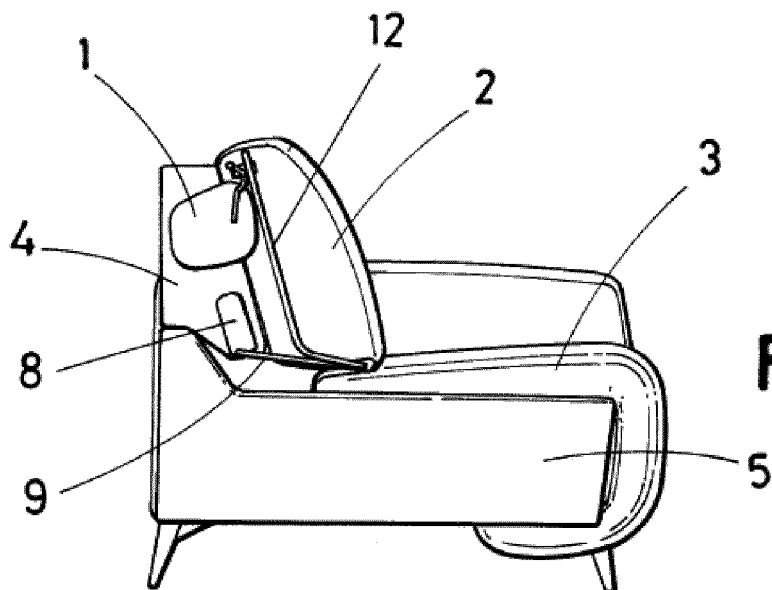


FIG.3

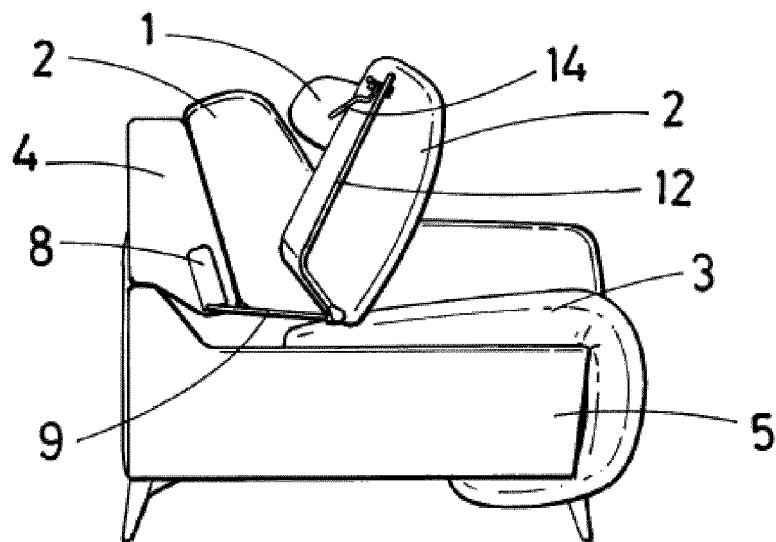


FIG. 4

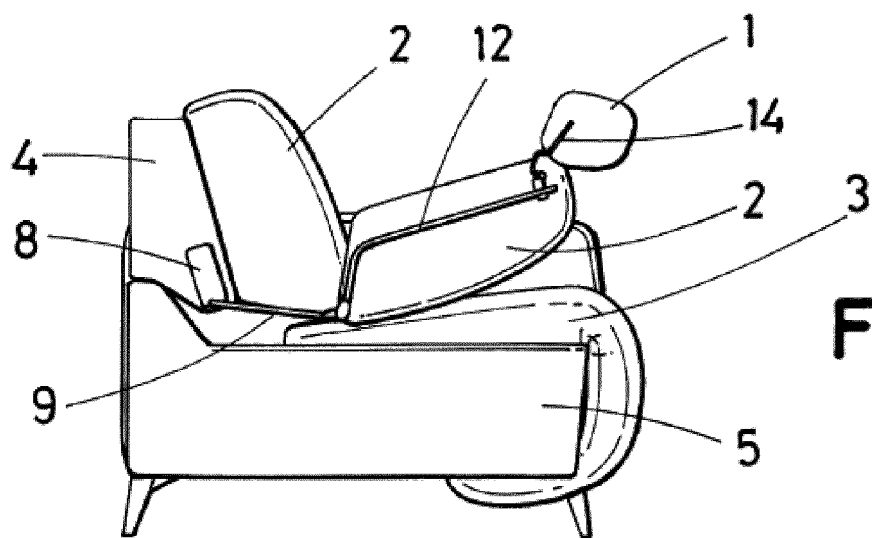


FIG. 5

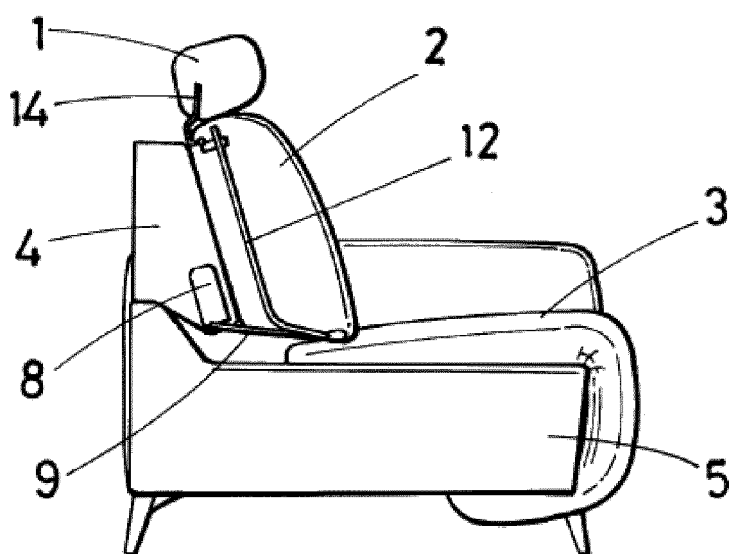


FIG. 6

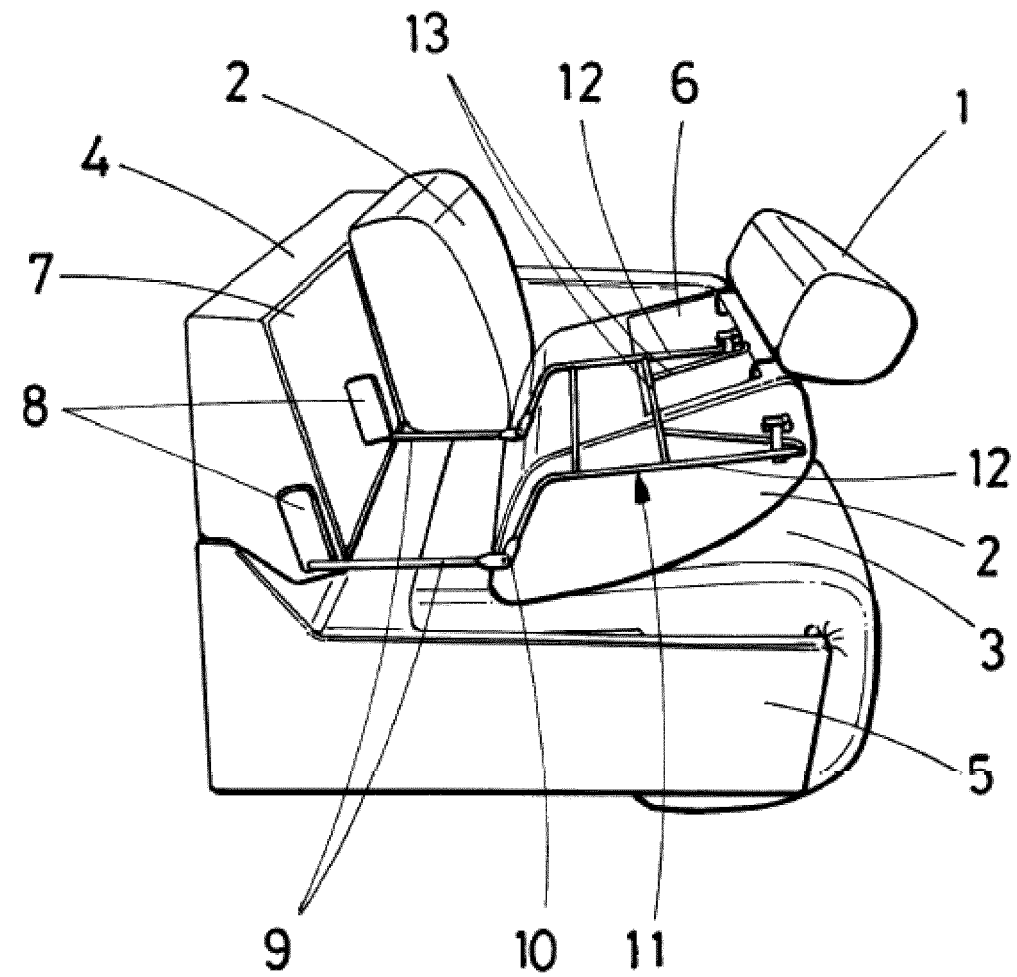


FIG.7

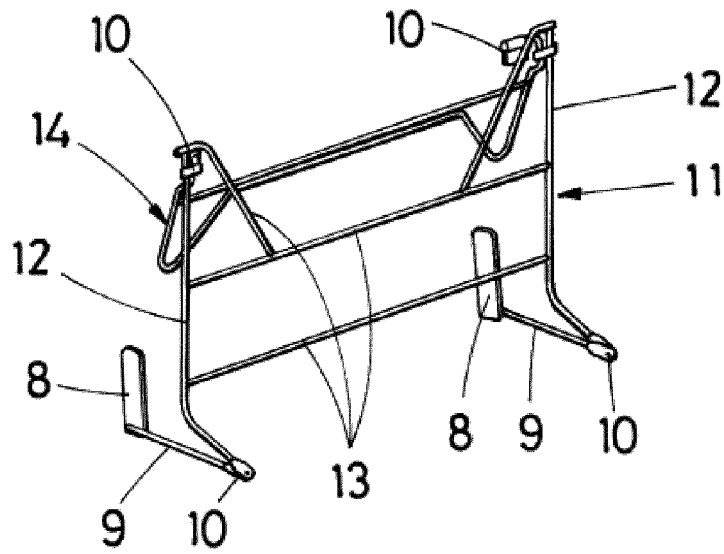


FIG. 8

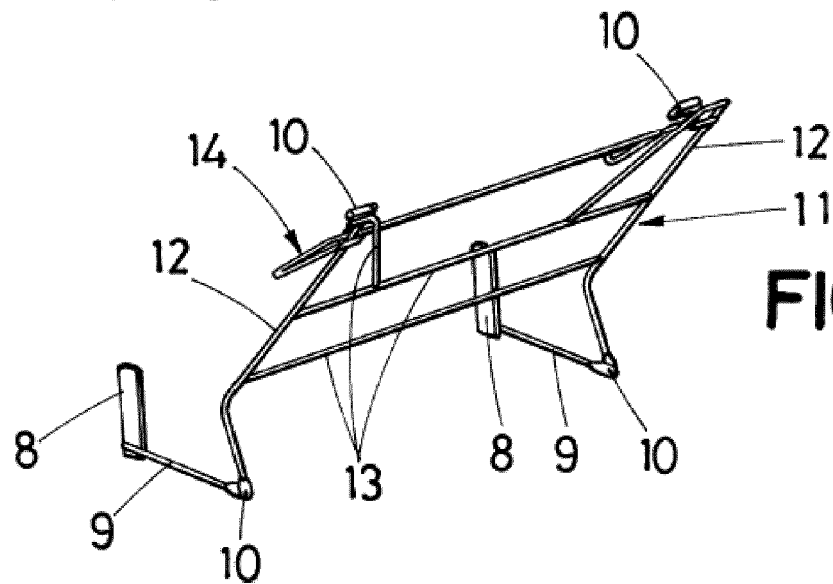


FIG. 9

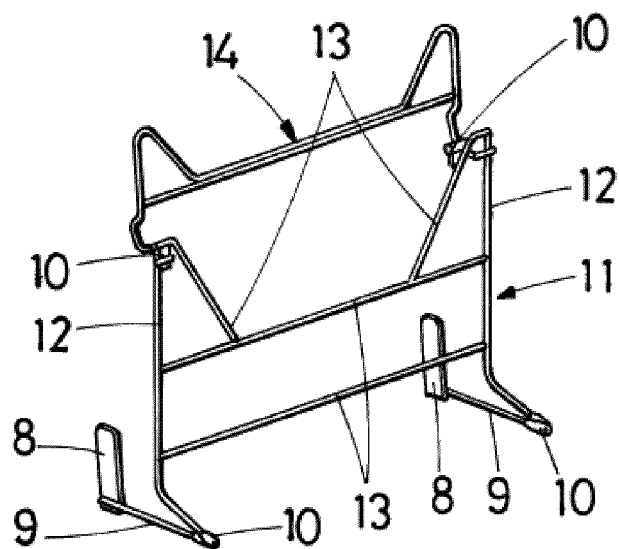


FIG. 10



EUROPEAN SEARCH REPORT

Application Number

EP 21 38 2967

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EPO FORM 1503 03.82 (P04C01)

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			TECHNICAL FIELDS SEARCHED (IPC)
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The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 20 April 2022	Examiner Lehe, Jörn
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	

**ANNEX TO THE EUROPEAN SEARCH REPORT
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EP 21 38 2967

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REFERENCES CITED IN THE DESCRIPTION

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