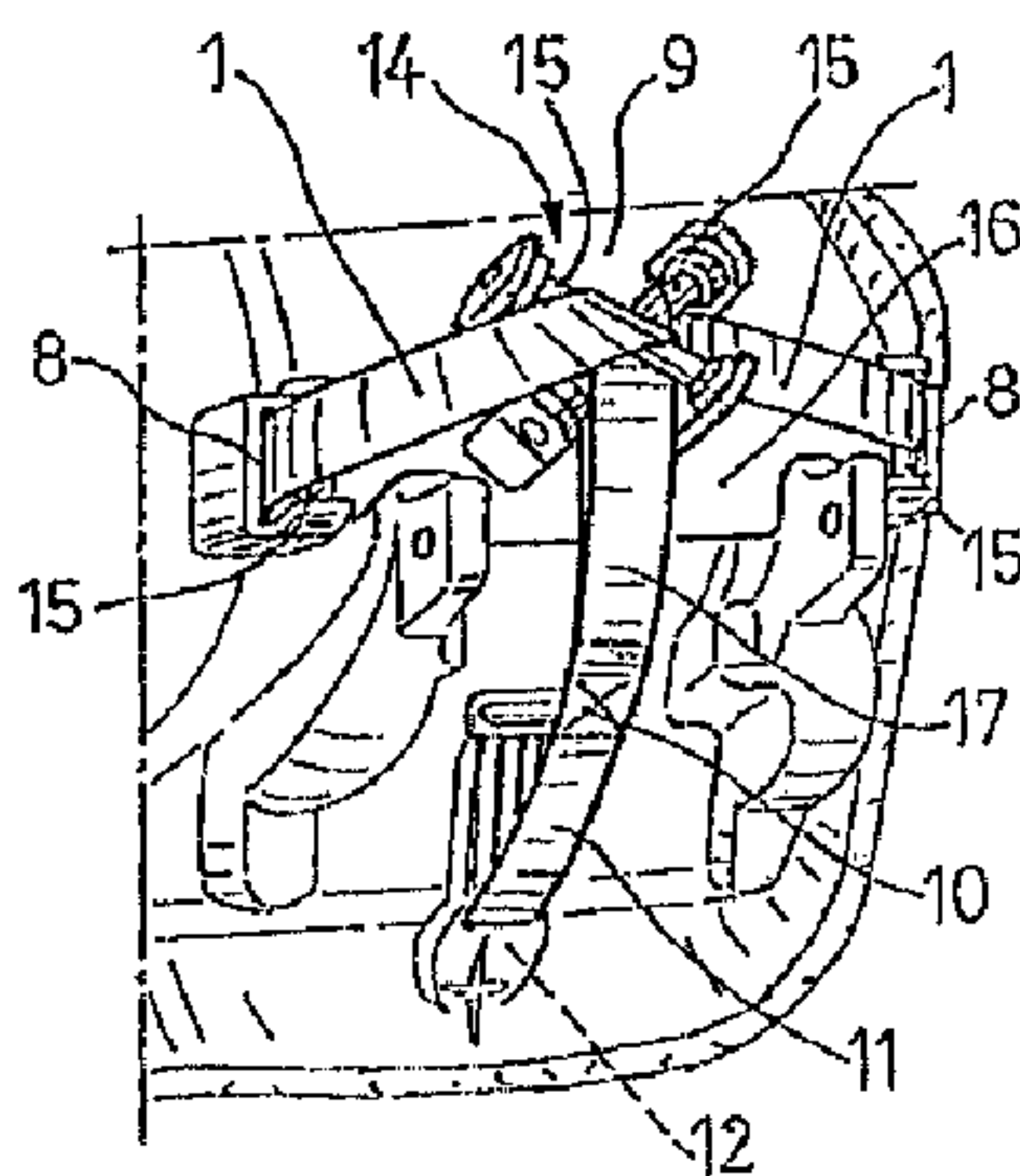
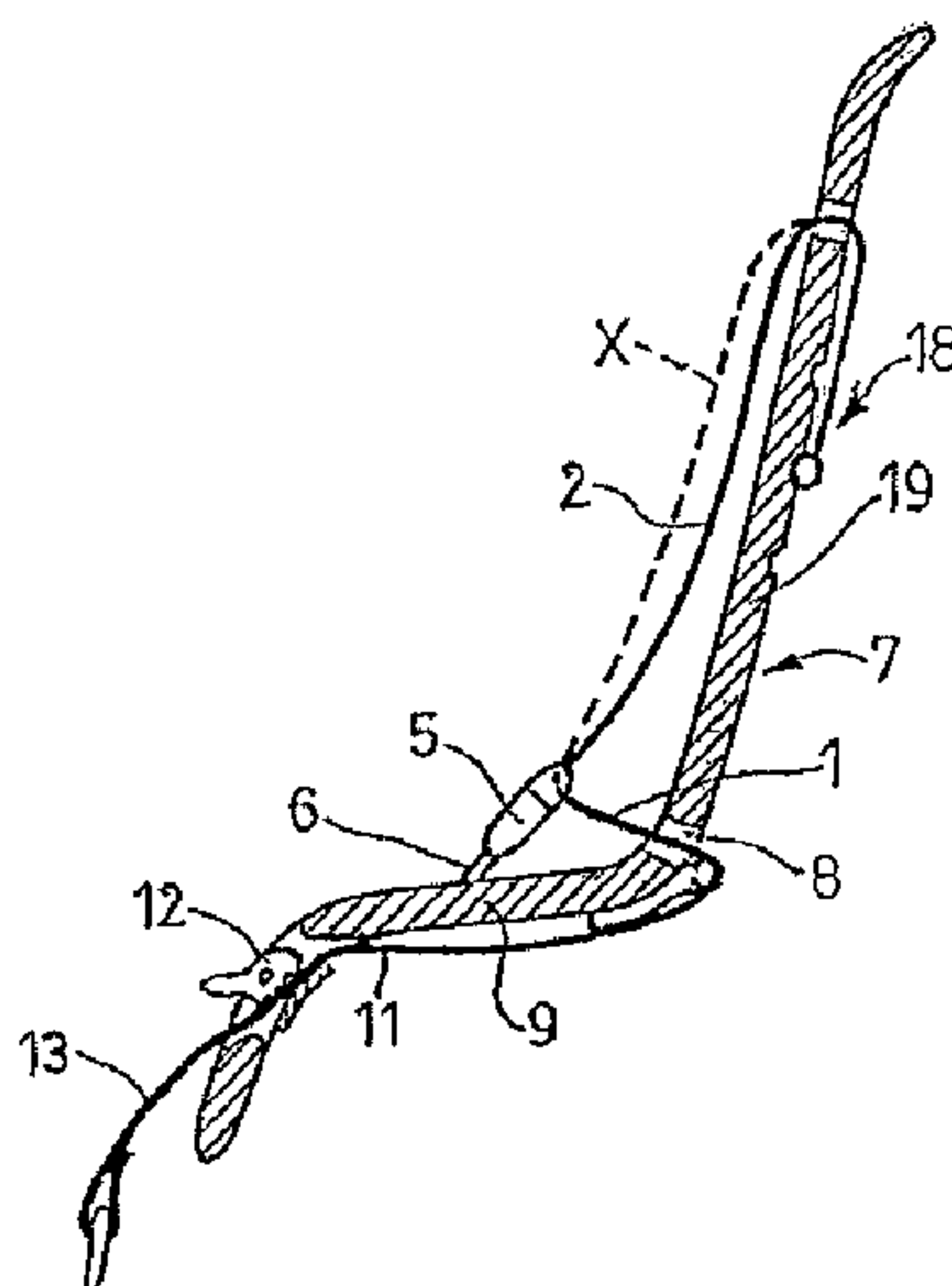




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 (54) Title: SAFETY DEVICE FOR CHILD SEATS FOR VEHICLES



(57) **Abrégé/Abstract:**

The invention relates to a safety device which is intended for a child seat for a vehicle. The inventive device consists of: a harness comprising (i) two adjustable straps (2) which are fastened to a crotch strap by means of a buckle (5), and (ii) means (12) for

(57) **Abrégé(suite)/Abstract(continued):**

tightening said straps (2). The invention is characterised in that the lower ends (1) of the straps (2) extend through (8) the seat (7) and are joined to one another (10) therebelow, such as to form a strap (11) which passes through the tightening device (12) and which projects out from the front of the seat portion (9) of the seat. In addition, the lower ends (1) of the straps (2) pass through an assembly (14) of guiding elements before being joined to one another. The straps (2) are adjusted using anchoring means (18) which are provided on the rear face of the backrest (19) of the seat.

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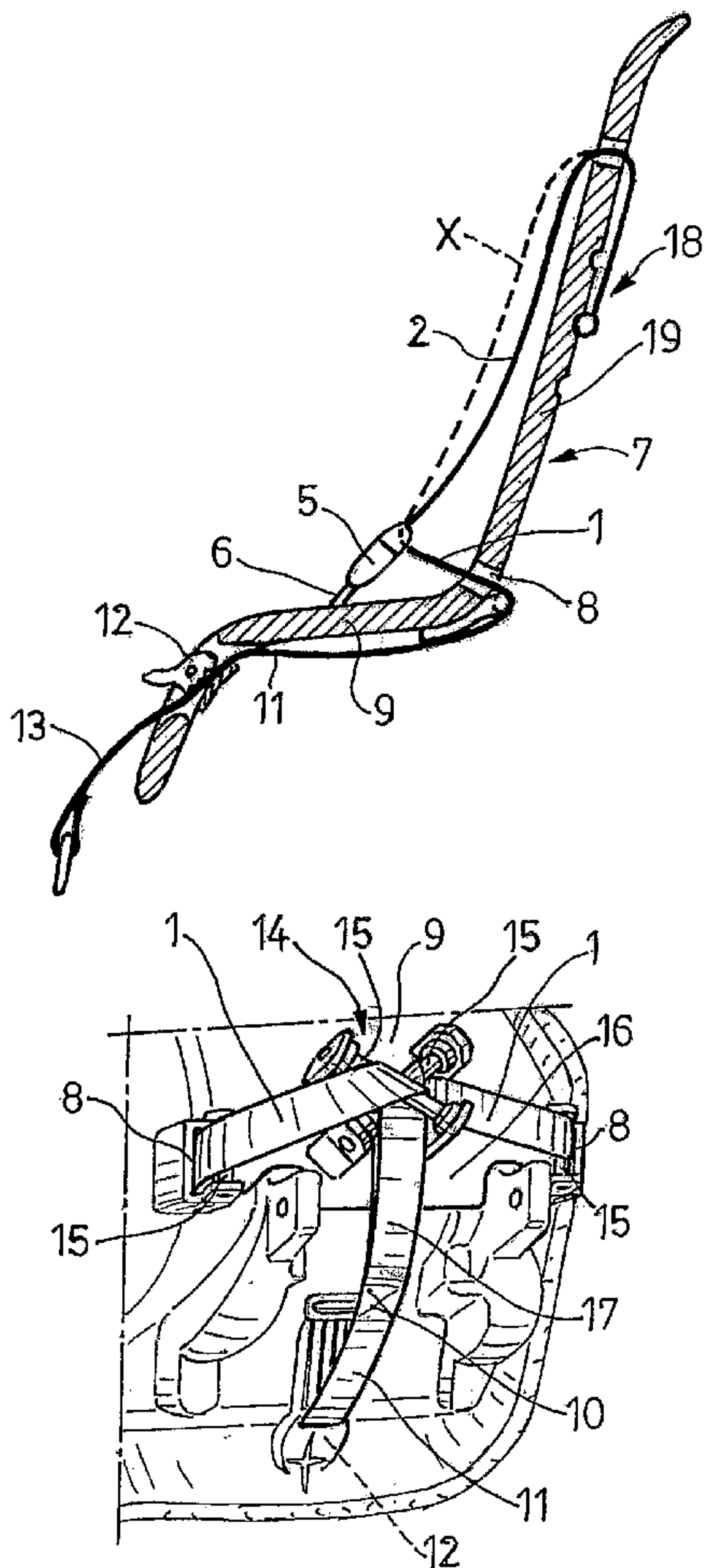
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(54) Title: SAFETY DEVICE FOR CHILD SEATS FOR VEHICLES

(54) Título: DISPOSITIVO DE SEGURIDAD PARA SILLAS INFANTILES APLICABLES A VEHICULOS.



(57) Abstract: The invention relates to a safety device which is intended for a child seat for a vehicle. The inventive device consists of: a harness comprising (i) two adjustable straps (2) which are fastened to a crotch strap by means of a buckle (5), and (ii) means (12) for tightening said straps (2). The invention is characterised in that the lower ends (1) of the straps (2) extend through (8) the seat (7) and are joined to one another (10) therebelow, such as to form a strap (11) which passes through the tightening device (12) and which projects out from the front of the seat portion (9) of the seat. In addition, the lower ends (1) of the straps (2) pass through an assembly (14) of guiding elements before being joined to one another. The straps (2) are adjusted using anchoring means (18) which are provided on the rear face of the backrest (19) of the seat.

(57) Resumen: Este dispositivo comprende un correaje formado por dos tirantes (2) regulables vinculados mediante hebilla (5) a una tira de entrepierna, y que presenta medios (12) para el tensado de dichos tirantes (2). Es característico el hecho de que los extremos inferiores (1) de los tirantes (2) atraviesen (8) la silla (7) y se unan entre si (10) debajo de ella formando una tira (11) que pasa por el dispositivo tensor (12) y sobresale por la parte delantera del asiento (9) de la silla, pasando los extremos inferiores (1) de los dos tirantes (2) por un conjunto (14) de elementos de guiado antes de unirse entre si. La regulación de los tirantes (2) se efectúa con medios de anclaje (18) previstos en la cara posterior del respaldo (19) de la silla.

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*Para códigos de dos letras y otras abreviaturas, véase la sección "Guidance Notes on Codes and Abbreviations" que aparece al principio de cada número regular de la Gaceta del PCT.*

**SAFETY DEVICE FOR CHILD SEATS FOR VEHICLES**

## BACKGROUND OF THE INVENTION

5 Different models of this kind of infant chairs are already known, said infant chairs in order to securely fasten the child to the seat comprising a strapping being formed by two adjustable straps being linked through a buckle to a crotch strip, said straps being joined to  
10 each other at the rear portion of the backrest and thereby forming a length passing through a tension device and extending beyond the front portion of the seat of the chair.

## SUMMARY OF THE INVENTION

15 It is the object of this invention to improve these safety devices by limiting the relative elasticity being displayed by the straps so that they are hence in a position to better hold back the child on the chair in case of a collision.

20 In order to achieve this limitation of the elasticity the total length of the straps has been reduced, it having been for such a purpose foreseen to carry out their tensioning at their lower ends being guidedly passed through the buckle and extending through  
25 the chair to be thereupon joined together underneath this latter and thus form the strip that passes through the tension device and extends beyond the front portion of the seat of the chair.

The lower ends of the straps are joined together by  
30 means of guiding elements being adapted to have them arranged in a mutually juxtaposed arrangement at a central length before their being joined together.

The adjustment of the straps is carried out with anchoring means being provided on the rear surface of the  
35 backrest of the chair.

These and other features will be best made apparent by the following detailed description whose understanding will be made easier by the accompanying sheet of drawings showing a practical embodiment being cited only by way of  
5 example not limiting the scope of the present invention.

#### DESCRIPTION OF THE DRAWINGS

In the drawings:

Figs. 1a and 1b diagrammatically depict in a sectional elevation a conventional safety device and the  
10 one being the object of the invention, respectively;

Fig. 2 frontally shows an infant chair being provided with the safety device in question; and

Fig. 3 illustrates in a perspective view a detail of the guiding means being adapted to bring the lower ends  
15 of the straps together.

#### DETAILED DESCRIPTION

According to Fig. 1a the conventional devices have their straps (T) joined together at the rear and thus form a band (C) extending at the rear portion of the  
20 chair and thereupon passing through a tension device (Te), and the end (E) of the band extends beyond the front portion of the seat of the chair (S). At their lower end the straps (T) are fitted to a buckle (H) and are fixedly fastened at lateral points (P) of the seat of  
25 the chair (S).

According to Figs. 1b, 2 and 3 the safety device being the object of the invention is characterised in that the lower ends (1) of the straps (2), after having passed through slits (4) of the buckle (5) to which the  
30 crotch strip (6) is attached, extend through the chair (7) through openings (8) being provided at the rear portion of the sides of the seat (9) of the chair and are joined together at (10) underneath this latter thereby forming a strip (11) that passes through the tension

device (12) and with its end (13) extends beyond the front portion of the seat (9) of the chair.

Before being joined together the lower ends (1) of the two straps (2) pass through an assembly (14) of  
5 guiding elements, these latter being made up by rollers (15) being supported on a plate (16) being fixedly attached to the bottom of the seat (9), said rollers being adapted to guide said opposite ends (1) at a common, central length (17) being attached to the strip  
10 (11).

The adjustment of the straps (2) is carried out with anchoring means (18) being provided on the rear surface of the backrest (19) of the chair.

Because of the shorter length of the straps (2)  
15 their extension (X) (Fig. 1b) being produced during a collision is reduced with respect to the extension (Y) (Fig. 1a) being produced in the straps (T) of the conventional safety devices, the child being thus held back in an improved manner.

20 The assembly (14) of the guiding means as well as the anchoring means (18) being provided at the rear ends of the straps for their adjustment can be carried out as per any other embodiments other than those having been depicted in these presents.

CLAIMS

1. A safety device for infant chairs being applicable to vehicles which comprises a strapping being formed by two adjustable straps (2) being linked through a buckle to a crotch strip (6) and has tensioning means (12) for the tensioning of said straps (2), characterised in that the lower ends (1) of the straps (2) extend at (8) through the chair (7) and are joined together at (10) underneath this latter thereby forming a strip (11) that passes through the tension device (12) and extends beyond the front portion of the seat (9) of the chair.

2. A safety device for infant chairs being applicable to vehicles, as per claim 1, characterised in that before being joined together the lower ends (1) of the two straps (2) pass through an assembly (14) of guiding elements.

3. A safety device for infant chairs being applicable to vehicles, as per claim 2, characterised in that the guiding elements (14) consist in rollers (15) being arranged in such a way as to bring the opposite ends (1) of the two straps together at a common, central length (17).

4. A safety device for infant chairs being applicable to vehicles, as per claim 1, characterised in that the adjustment of the straps (2) is carried out with anchoring means (18) being provided on the rear surface of the backrest (19) of the chair.

