

592624

SPRUSON & FERGUSON

COMMONWEALTH OF AUSTRALIA

PATENTS ACT 1952

CONVENTION APPLICATION FOR A STANDARD PATENT

We, DRABERT SÖHNE GmbH & CO., of Wilhelmstrasse 11 - 17, D-4950 Minden, Federal Republic of Germany hereby apply for the grant of a standard patent for an invention entitled:

"SEAT FURNITURE"

which is described in the accompanying complete specification.

DETAILS OF BASIC APPLICATION

Number of Basic Application:-
P 36 08 718.1

Name of Convention Country in which Basic Application was filed:-
FEDERAL REPUBLIC OF GERMANY

Date of Basic application:-
15 MARCH 1986

Our address for service is:-

C/- Spruson & Ferguson
Patent Attorneys
Level 33 St Martins Tower
31 Market Street
Sydney New South Wales Australia

DATED this ELEVENTH day of MARCH 1987

DRABERT SÖHNE GmbH & CO

By:

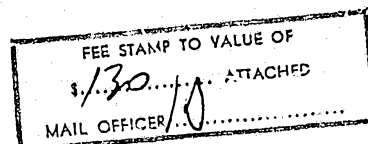
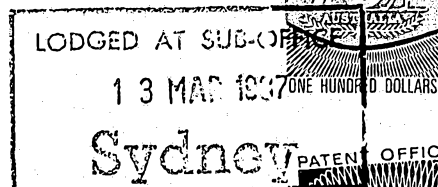
M. J. Anderson
Registered Patent Attorney.

TO: THE COMMISSIONER OF PATENTS
AUSTRALIA

SBR/na/159W

APPLICATION ACCEPTED AND AMENDMENTS

ALLOWED 2-11-89



DECLARATION IN SUPPORT OF A
CONVENTION APPLICATION FOR A PATENTIn support of the Convention Application made for a
patent for an invention entitled:

Title of Invention

"SEAT FURNITURE"

Full name(s) and
address(es) of
Declarant(s)

I/We ~~XX~~ Rainer Nobbe
of Schubertstr. 21
4950 Minden
Federal Republic of Germany

do solemnly and sincerely declare as follows:--

Full name(s) of
Applicant(s)1. ~~I am/We are the applicant(s) for the patent~~

(or, in the case of an application by a body corporate)

1. I am/We are authorised by
DRABERT SÖHNE GmbH & CO.

the applicant(s) for the patent to make this declaration on
its/their behalf.

2. The basic application(s) as defined by Section 141 of the
Act was/were made

Basic Country(ies)

in Federal Republic of Germany

Priority Date(s)

on 15 March, 1986

Basic Applicant(s)

by Drabert Söhne Minden (Westf.)

Full name(s) and
address(es) of
inventor(s)

3. ~~I am/We are the actual inventor(s) of the invention referred
to in the basic application(s)~~

(or where a person other than the inventor is the applicant)

3. HANS-JOACHIM EDEL and KARL-HEINZ PRIETSCH

of Schlossweg 13, D-4950 Minden and
Nussbaumweg 3, D-4953 Petershagen
both in Federal Republic of Germany

(respectively)

is/are the actual inventor(s) of the invention and the facts upon
which the applicant(s) is/are entitled to make the application are
as follows:

Set out how Applicant(s)
derive title from actual
inventor(s) e.g. The
Applicant(s) is/are the
assignee(s) of the
invention from the
inventor(s)

The said applicant is the assignee of the actual
inventors and made the basic application in its
former name of Drabert Söhne Minden (Westf.),
the name of the Company now having been changed.

4. The basic application(s) referred to in paragraph 2 of this
Declaration was/were the first application(s) made in a Convention
country in respect of the invention(s) the subject of the application.

Declared at Minden this 25. day of March 1987

25. 3. 1987

(Rainer Nobbe)

Signature of Declarant(s)

(12) PATENT ABRIDGMENT (11) Document No. AU-B-69999/87
(19) AUSTRALIAN PATENT OFFICE (10) Acceptance No. 592624

(54) Title
SEAT FURNITURE

International Patent Classification(s)
(51)⁴ **A47C 001/023 A47C 001/024**

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HANS-JOACHIM EDEL; KARL-HEINZ PRIETSCH

(74) Attorney or Agent
SPRUSON & FERGUSON

(56) Prior Art Documents
US 3602537
GB 637068

(57) Claim

1. A chair comprising a seat and a backrest which are adapted to be jointly adjusted and are connected in articulated fashion, comprising a seat column, a forwardly and upwardly inclined seat carrier mounted on said column, and a backrest carrier supporting the backrest;

said backrest carrier being pivotally mounted on the seat carrier forward of the seat column, said seat being pivotally mounted at its front edge to the seat carrier, and wherein the backrest carrier comprises a first lever arm which is pivotally connected at a position spaced from said backrest carrier to the seat, and a second lever arm which is pivotally connected at a position thereof spaced from said backrest carrier to a biasing means.

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FORM 10

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COMMONWEALTH OF AUSTRALIA

PATENTS ACT 1952

COMPLETE SPECIFICATION

(ORIGINAL)

FOR OFFICE USE:

Class

Int. Class 69999/87

Complete Specification Lodged:

Accepted:

Published:

Priority:

Related Art:

This document contains the
amendments made under
Section 49 and is correct for
printing.

Name of Applicant: DRABERT SÖHNE GmbH & CO.

Address of Applicant: Wilhelmstrasse 11 - 17, D-4950 Minden,
Federal Republic of Germany

Actual Inventor(s): HANS-JOACHIM EDEL and KARL-HEINZ PRIETSCH

Address for Service: Spruson & Ferguson, Patent Attorneys,
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Street, Sydney,
New South Wales, 2000, Australia

Complete Specification for the invention entitled:

"SEAT FURNITURE"

The following statement is a full description of this invention,
including the best method of performing it known to us

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Seat Furniture

The invention relates to a seat furniture, with a seat carrier having an inclined frontseat-carrier region, on which a seat is articulated pivotally and so as to be longitudinally displaceable and a backrest carrier with a backrest is articulated.

Seat furniture of his type is known from European Patent Specification 85,670. A disadvantage of this known solution is, among other things, that when the backrest is pivoted the seat taken with it rises at its front edge. The result of this is that the known chair construction does not have the same comfort in all its inclined positions. Because the front seat region rises unavoidably in the state of the art, it presses against the underside of the thigh and consequently impairs the circulation.

Starting from this state of the art, the object on which the invention is based is to provide for a seat furniture of the known type a chair mechanism which, without detriment to aesthetic considerations, guarantees that when the backrest is tilted back the seat can be taken with it without its front edge rising.

In one broad form the present invention provides a chair comprising a seat and a backrest which are adapted to be jointly adjusted and are connected in articulated fashion, comprising a seat column, a forwardly and upwardly inclined seat carrier mounted on said column, and a backrest carrier supporting the backrest;

said backrest carrier being pivotably mounted on the seat carrier forward of the seat column, said seat being pivotally mounted at its front edge to the seat carrier, and wherein the backrest carrier comprises a first lever arm which is pivotally connected at a position spaced from said backrest carrier to the seat, and a second lever arm which is pivotally connected at a position thereof spaced from said backrest carrier to a biasing means.

The preferred exemplary embodiment of the invention is described in detail below with reference to the drawing.

In the drawing:

Figure 1 shows a diagrammatic side view of the upper part of the chair, with the range of movement indicated,



Figure 2 shows, in section, a side view of the critical mechanism,
Figure 3 shows a partially sectional plan view of the front seat
mounting.

On the seat carrier 1 which is fastened in the usual way to a chair
column (S) there are, at the front end, extension members 3 which project
towards the front edge of the seat and which terminate in pins 4 connected
firmly to the extension members 3.

The seat 5, comprising the seat frame or seat plate 5a, is formed
with a cylindrical hollow chamber at its front edge 5b, at least at the
lateral outer ends, so that pegs 6 can be received by the chamber from both
sides of the seat 5. The pegs 6 are mounted in the cylindrical hollow
chamber at 5a so as to be rotatable about the horizontal axis 7. The pegs
6 are provided with transverse bores 6a which slidably receive the pins 4 of
the seat carrier 1. The seat frame 5a is therefore pivotable about the
axis 7, and is also slidably displaceable in the direction of the
longitudinal axis 8 of the seat.

In front of the junction between the chair column S and the seat
carrier 1 there are, on both sides of the seat carrier, bearings 1a which
form part of the seat-carrier shell. The backrest carrier 9, to which the
backrest 10 is fastened is arranged pivotably mounted on the seat carrier
of the bearings 1a. First lever arms 12, which project upwards towards the
seats frame 5, and lever arms 13 which project downwards towards the seat
carrier 1 are connected firmly to the backrest carrier 9. The first and
second lever arms are provided in duplicate, but are only shown singly in
Figure 3.

The first lever arm 12 are mounted pivotably at their ends in bearing
blocks 5c of the seat frame 5a. Tension springs 14 arranged inside the
hollow seat carrier 1 are suspended from the ends of the second lever arms
13.

The prestress of the tension springs can be varied via a pull yoke
15a by means of a handwheel 15 mounted at the rear end of the seat carrier
1.

A pneumatic spring 16 is also articulated on the second lever arm and
is mounted at its other end in the seat carrier 1a the bearing point 16a.



The interaction between the pneumatic spring and the adjustable tension spring produces a damped synchronous movement of the seat backrest mechanism which can be positioned or moved in any position by continuous adjustment and which can be matched to the weight of the chair user by means of the handwheel 15.

A connecting line V between the pivot axis I and the pivot axis R of the backrest 10 forms an angle of 30° with the vertical when the seat furniture is in the so-called 0 position (initial position). Such an arrangement has proved particularly advantageous.

The chair column S has a tilt of 20° relative to the vertical and joins the seat carrier 1 at a distance z (measured horizontally from the rear edge of the seat 5). The distance z amounts to approximately $1/3$ of the total seat depth.

Figure 2 of the drawing represents the position of the seat furniture inclined to the rear by means of dot-and-dash lines. In this position, the seat 5 is shifted to the rear by an amount 'x' and lowered at the front edge by an amount 'y' by means of the pins 4 being slidably received in the bores 6a of the pegs 6. At the same time the inclination of these has changed by the angle α .



The claims defining the invention are as follows:

1. A chair comprising a seat and a backrest which are adapted to be jointly adjusted and are connected in articulated fashion, comprising a seat column, a forwardly and upwardly inclined seat carrier mounted on said column, and a backrest carrier supporting the backrest;

said backrest carrier being pivotally mounted on the seat carrier forward of the seat column, said seat being pivotally mounted at its front edge to the seat carrier, and wherein the backrest carrier comprises a first lever arm which is pivotally connected at a position spaced from said backrest carrier to the seat, and a second lever arm which is pivotally connected at a position thereof spaced from said backrest carrier to a biasing means.

2. A chair according to claim 1, wherein a tautenable tension spring on the one hand and a pneumatic spring on the other hand engage on the second lever arm.

3. A chair according to claim 1 or 2, wherein the seat has cylindrical receiving region for at least one cylindrical peg having a transverse bore, in which a pin fixed to the seat carrier is mounted so as to be longitudinally displaceable.

4. A chair according to any one of claims 1 to 3, wherein the pivot axis of the backrest carrier is located in front of the junction point between the chair column and the seat carrier.

5. A chair according to any one of claims 1 to 4, wherein the junction between the tilted chair column and the seat carrier is at a horizontally measured distance from the rear edge of the seat which amounts to approximately 1/3 of the seat depth.

6. A chair according to any one of claims 1 to 5, characterized in that the inclined seat-carrier region is fastened to a likewise inclined central chair column.

7. A chair as hereinbefore described with reference to and as shown in the accompanying drawings.

DATED this EIGHTEENTH day of SEPTEMBER 1989

Drabert Sohne GmbH & Co



KLN / 1568b

Patent Attorneys for the Applicant
SPRUSON & FERGUSON

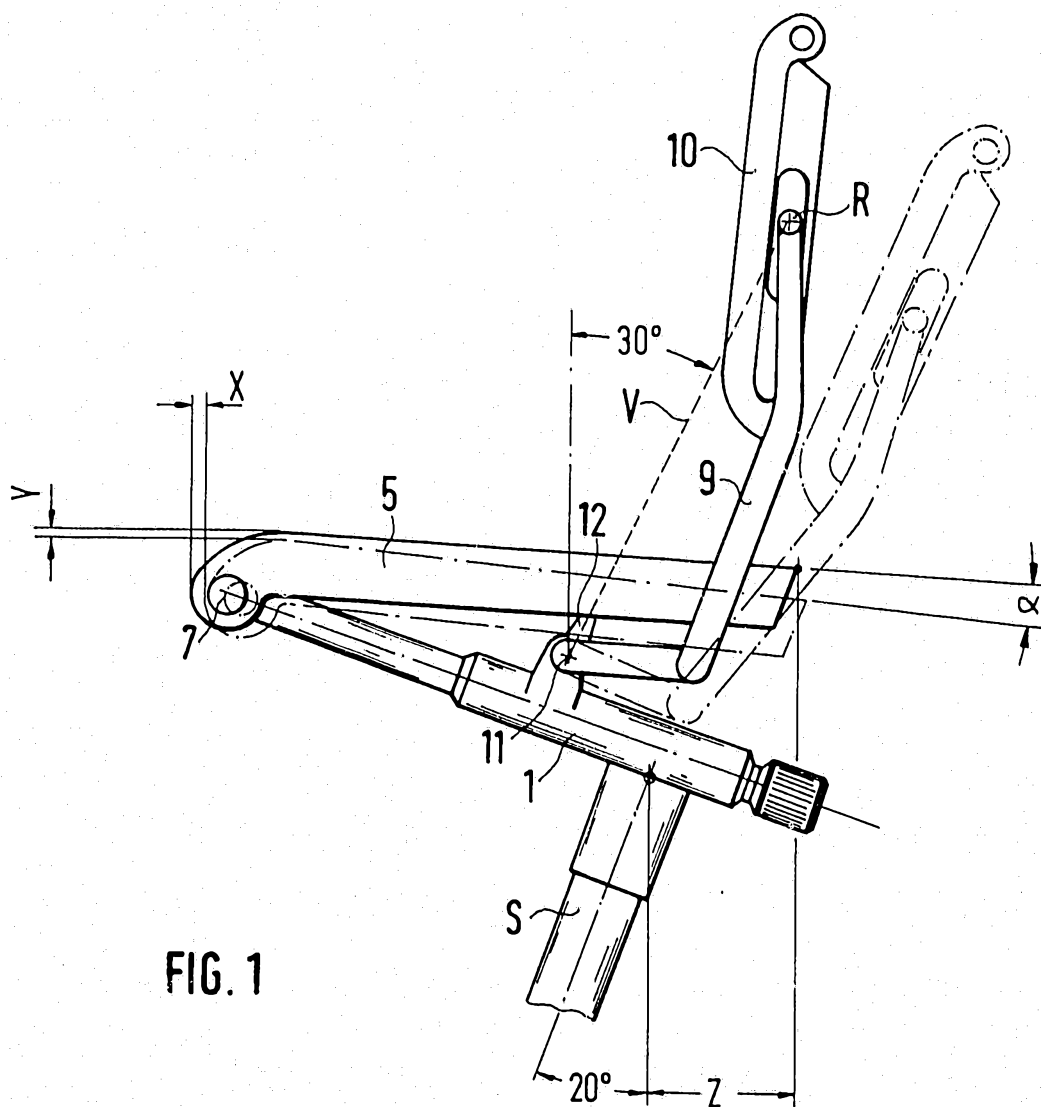


FIG. 1

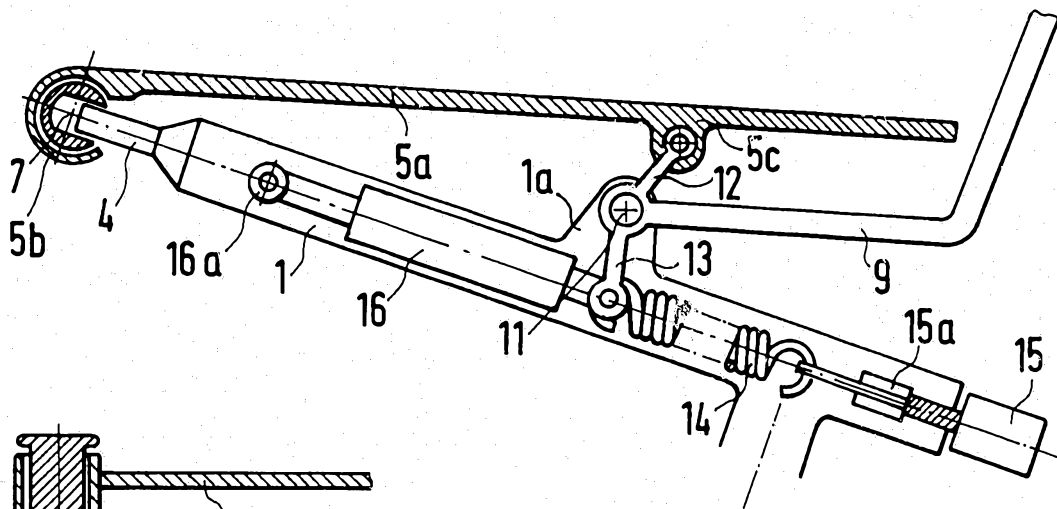


FIG. 2

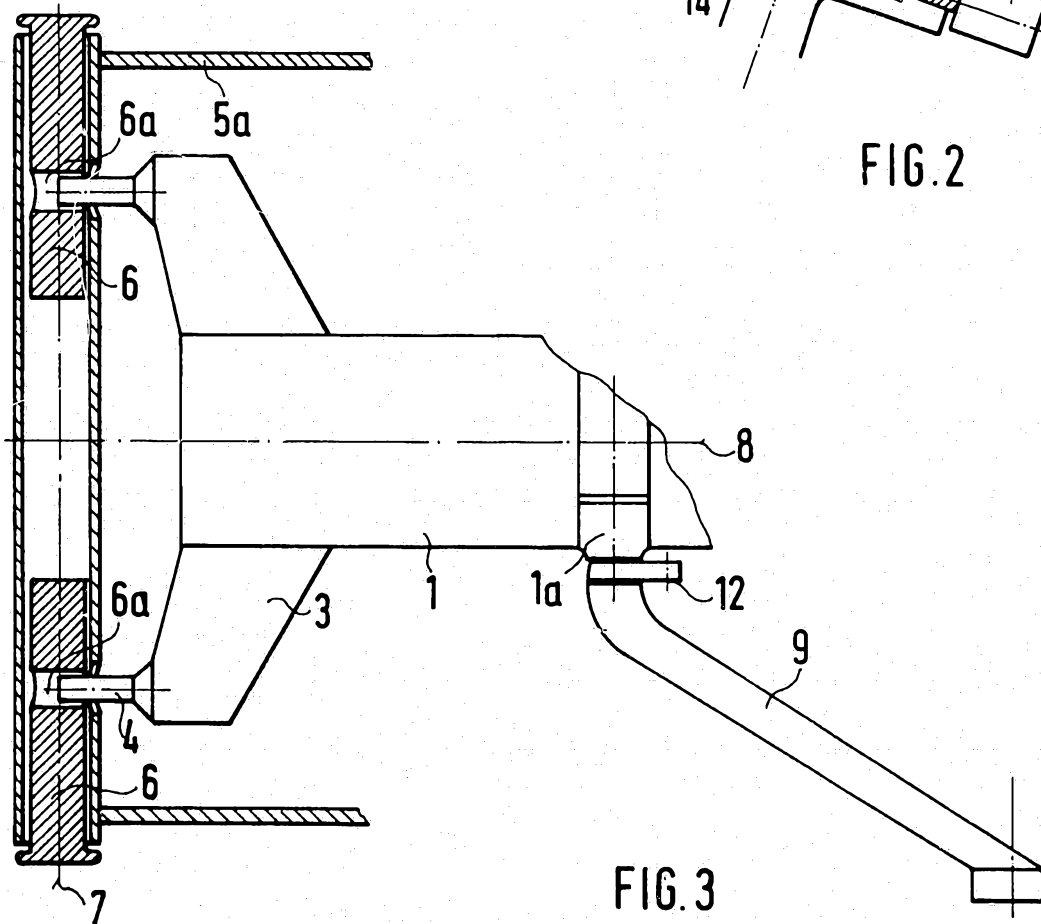


FIG. 3