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(52) UK CL (Edition O)
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B7J J101B

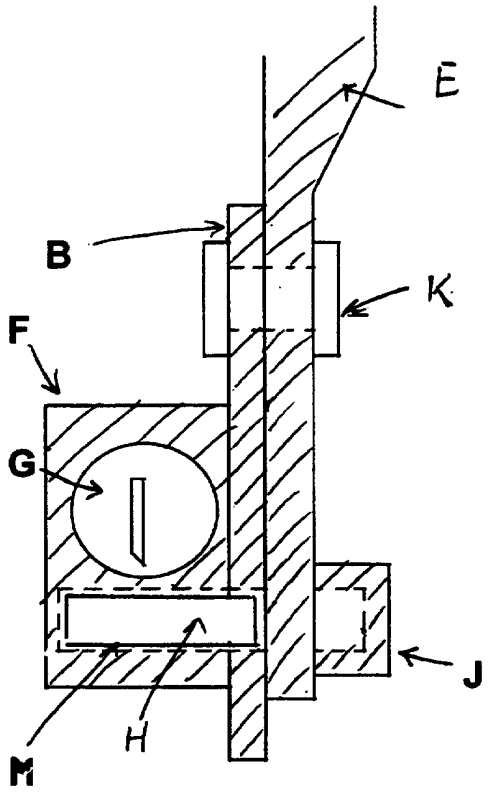
(56) Documents Cited
GB 2292127 A **GB 2245824 A** **GB 2132955 A**
GB 2102363 A **GB 2059757 A** **EP 0559054 A1**
EP 0414954 A1 **EP 0108581 A1**
WPI Abstract Acc No 92-081181/11 & DE4027953A

(58) Field of Search
UK CL (Edition O) **A4L LAAR LACF LBPB LBPC LBPE , B7J J101B**
INT CL^6 **B60R 25/00**
Online : WPI, CLAIMS

(54) Anti-theft motor vehicle seat

(57) The back of a vehicle driver's seat tips forward against the steering wheel and is locked in this position by way of a bolt H moving into recess J provided on the seat frame E which is pivoted to the seat mounting bracket B at K. The lock G may be manual or electric and is welded to the frame B.

Diagram 4



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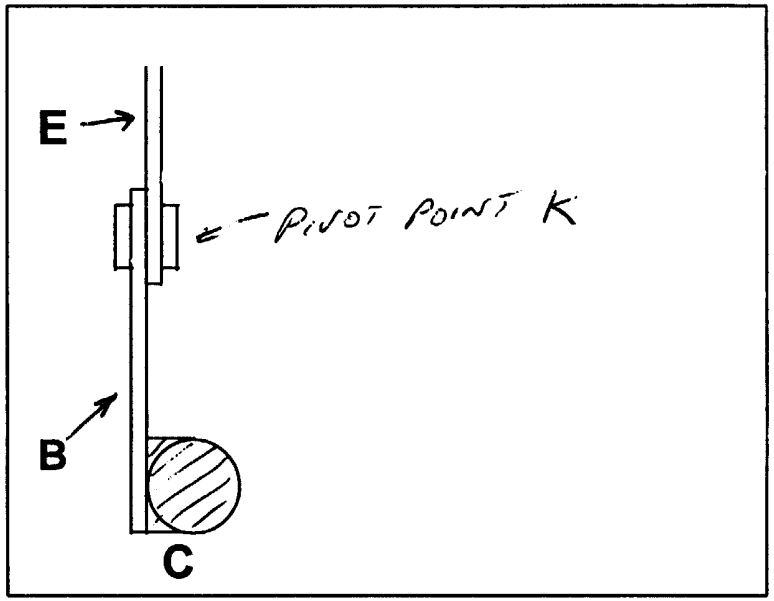
Diag 1.


E
Pivot Point K
B
C

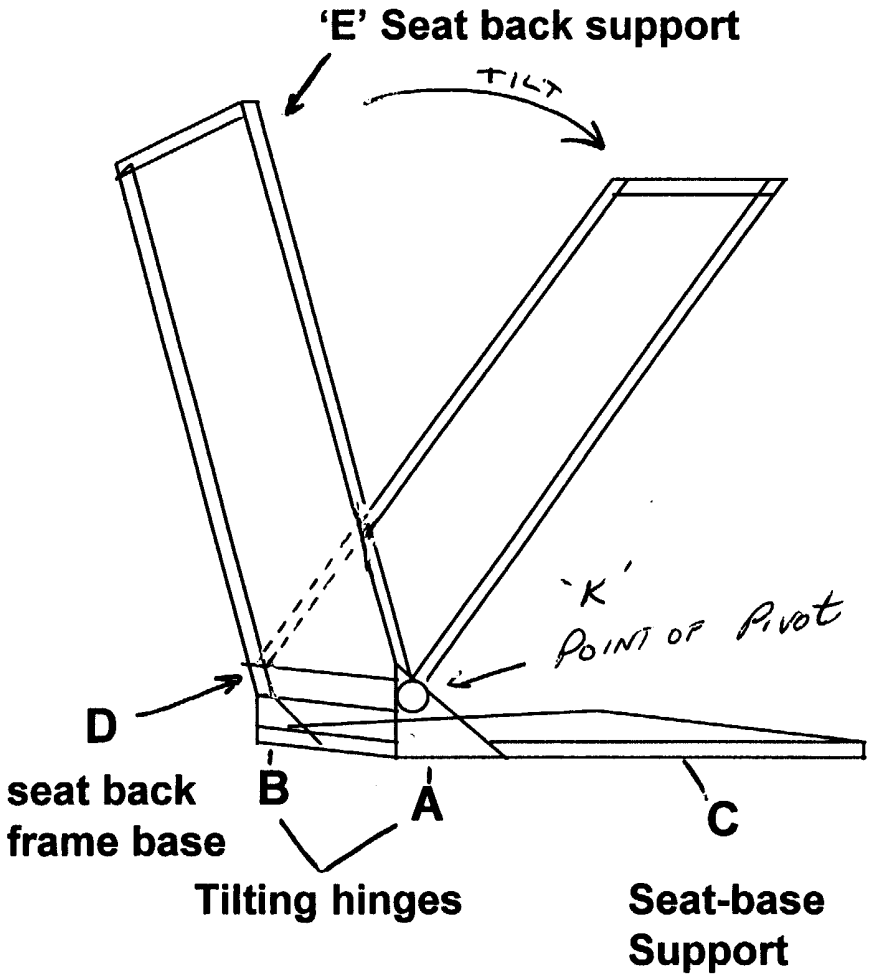

'E' Seat back support
TILT
'K'
Point of Pivot
D
seat back
frame base
B
A
C
Tilting hinges
Seat-base
Support

Diagram 2

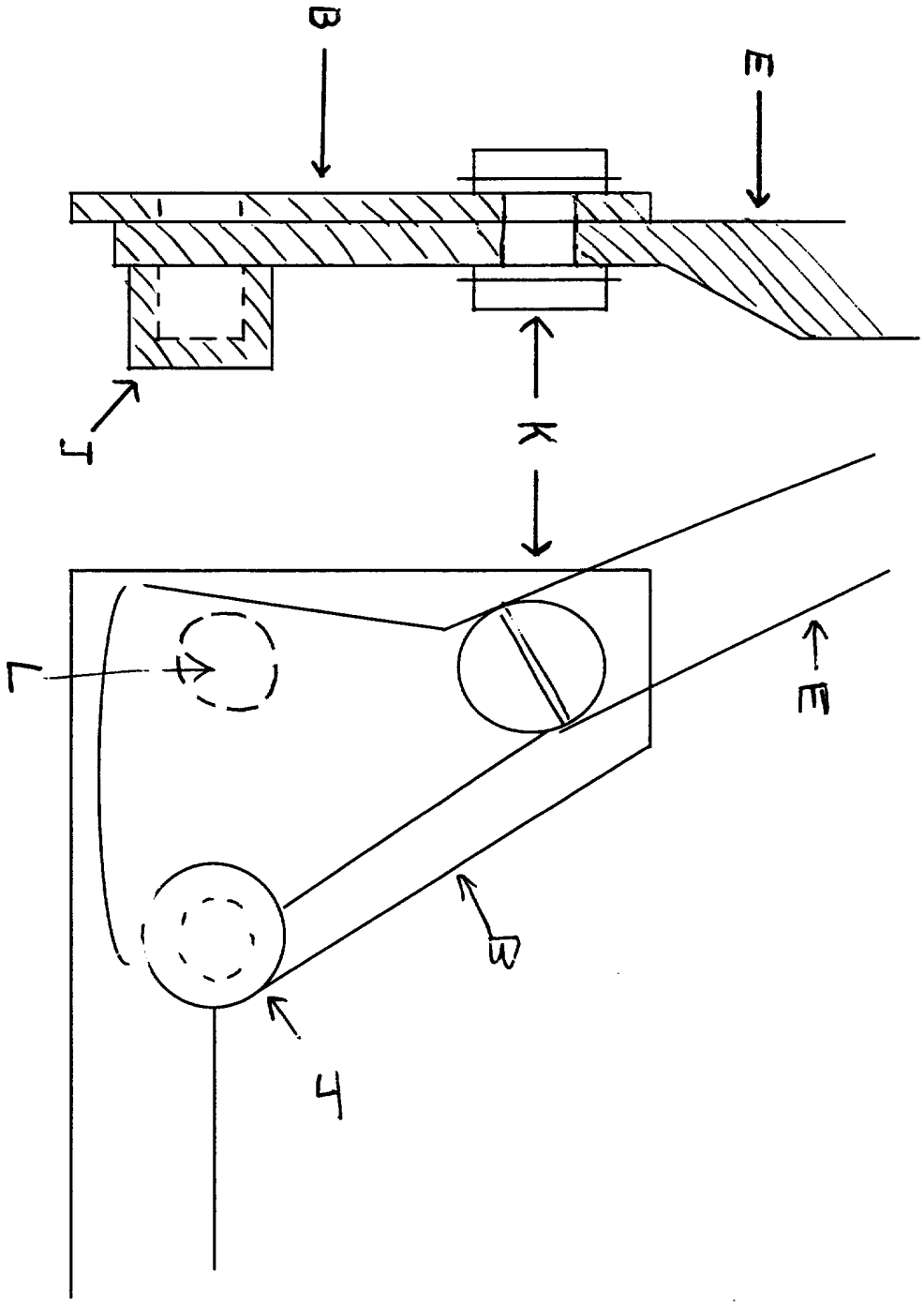
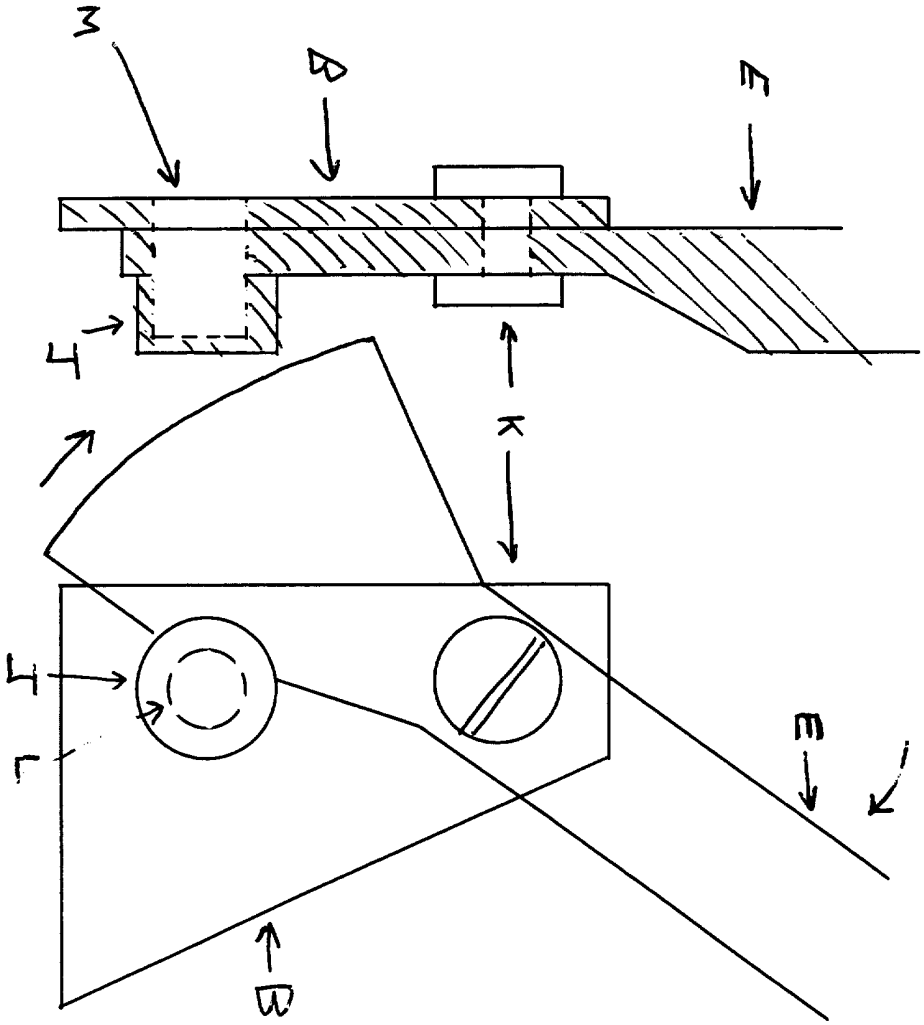
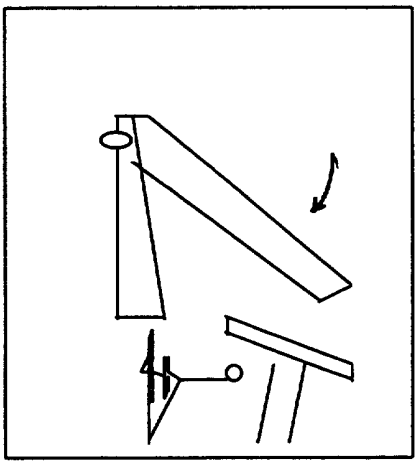


Diagram 3.





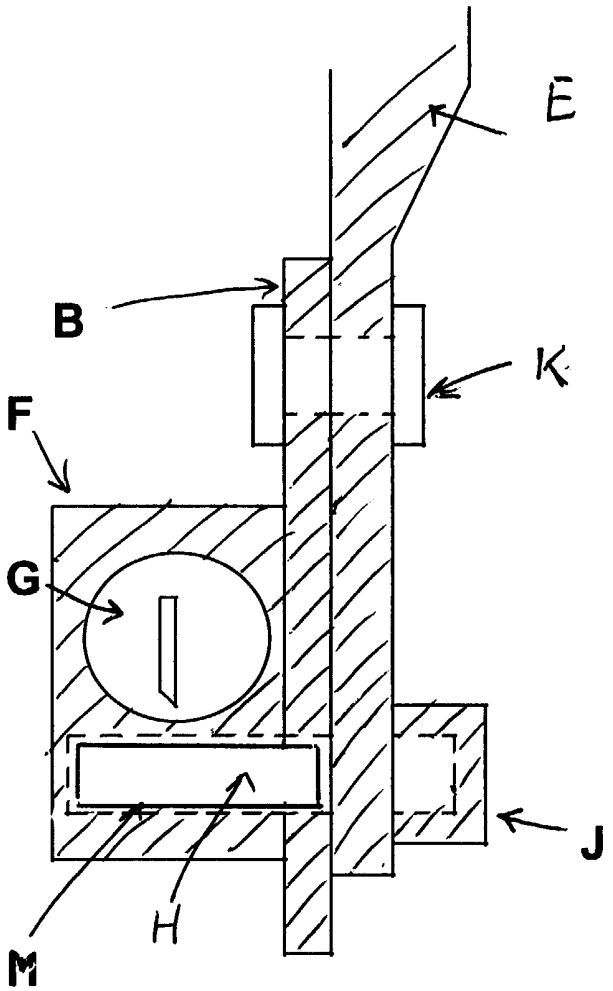


Diagram 4

Diagram 5

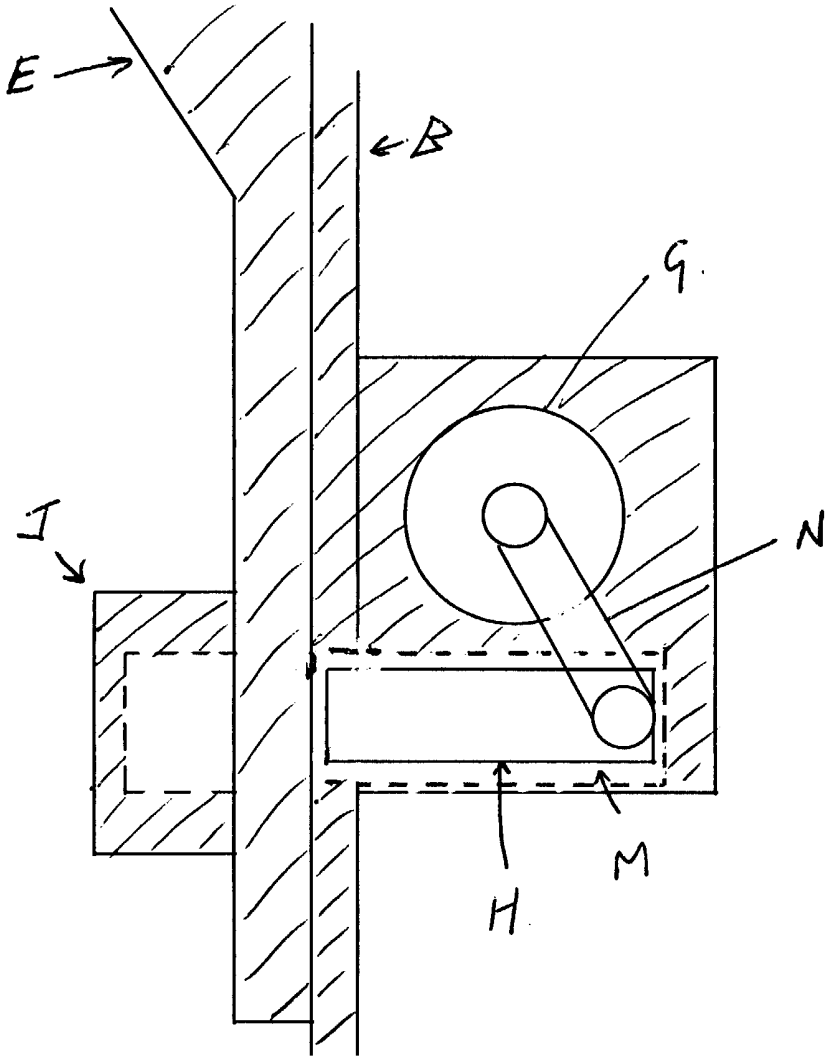


Diagram 6

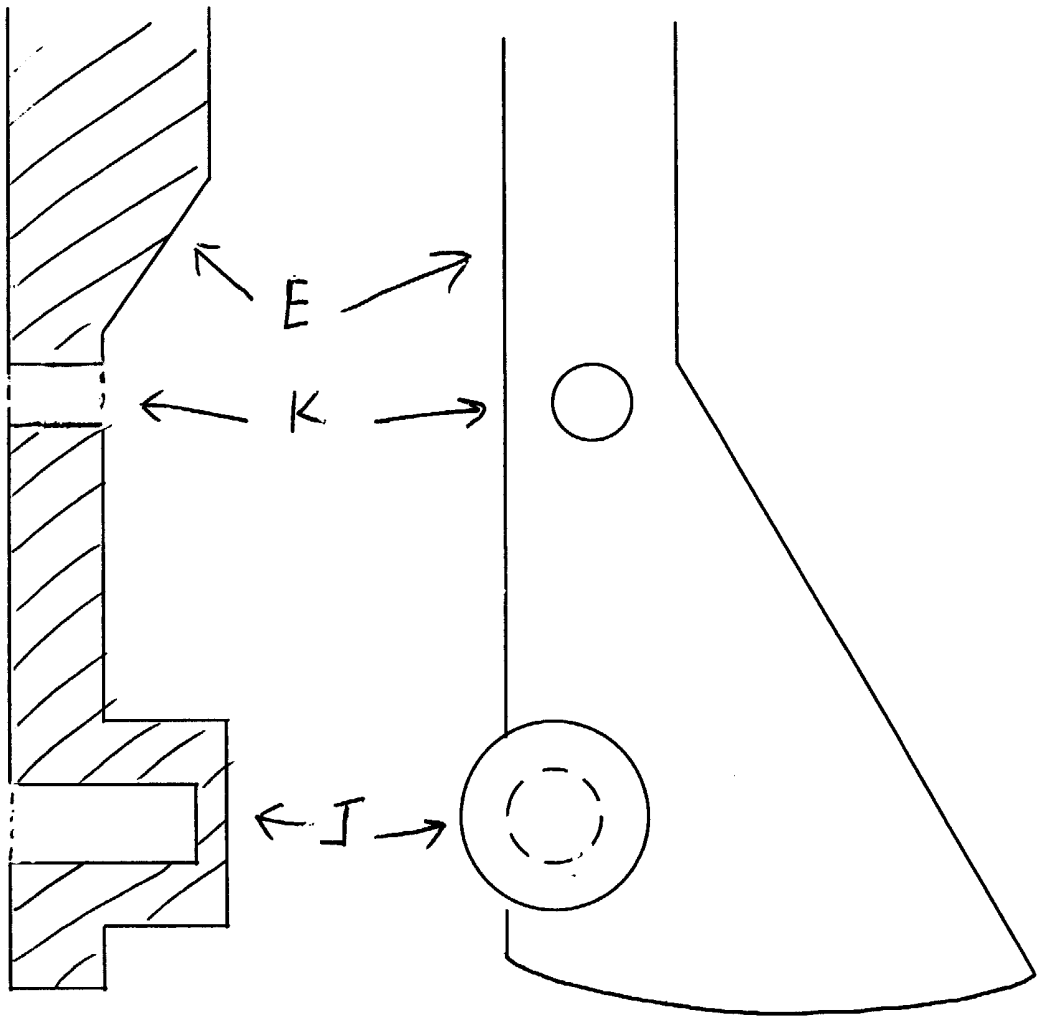


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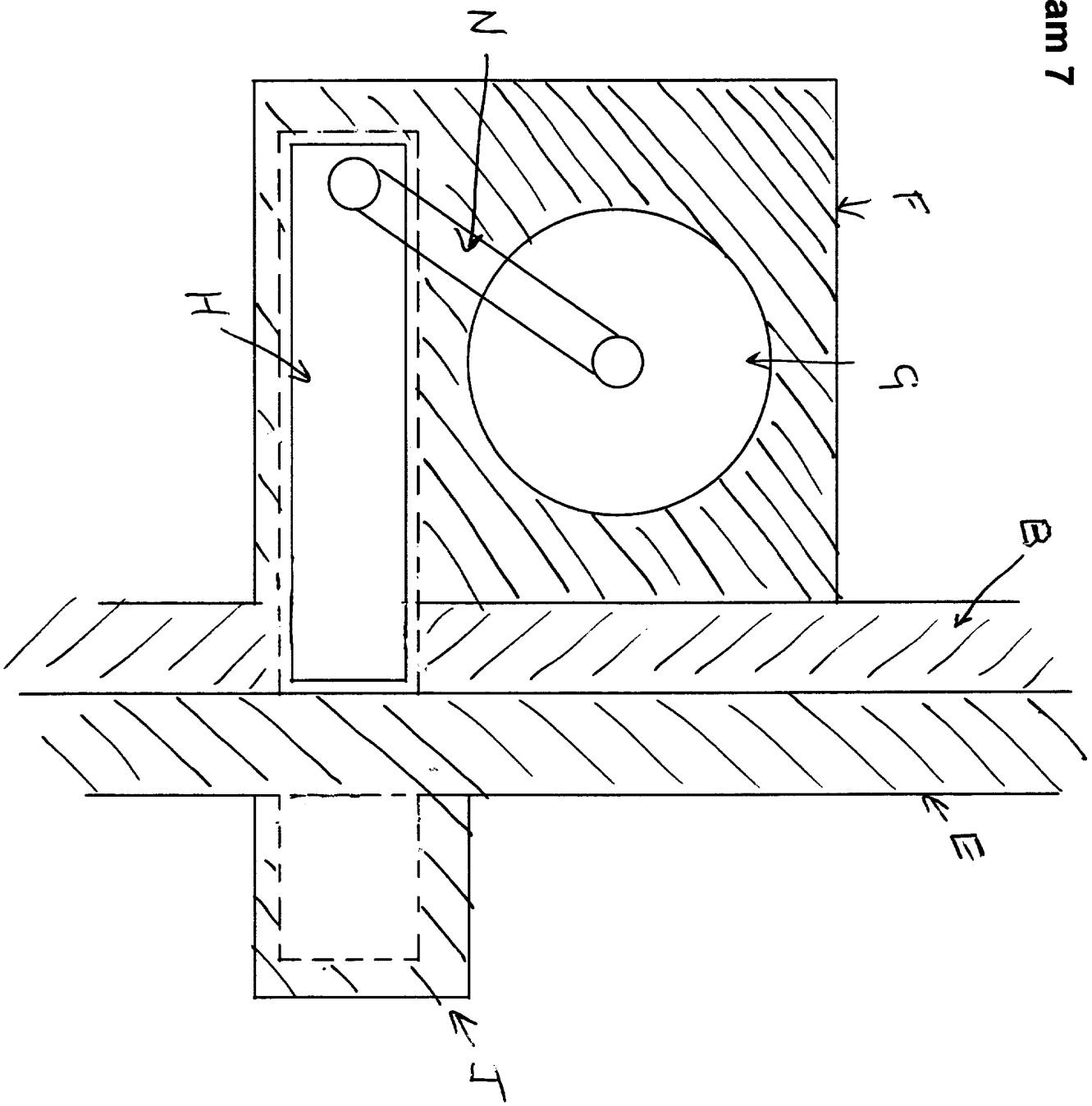
Diagram 7



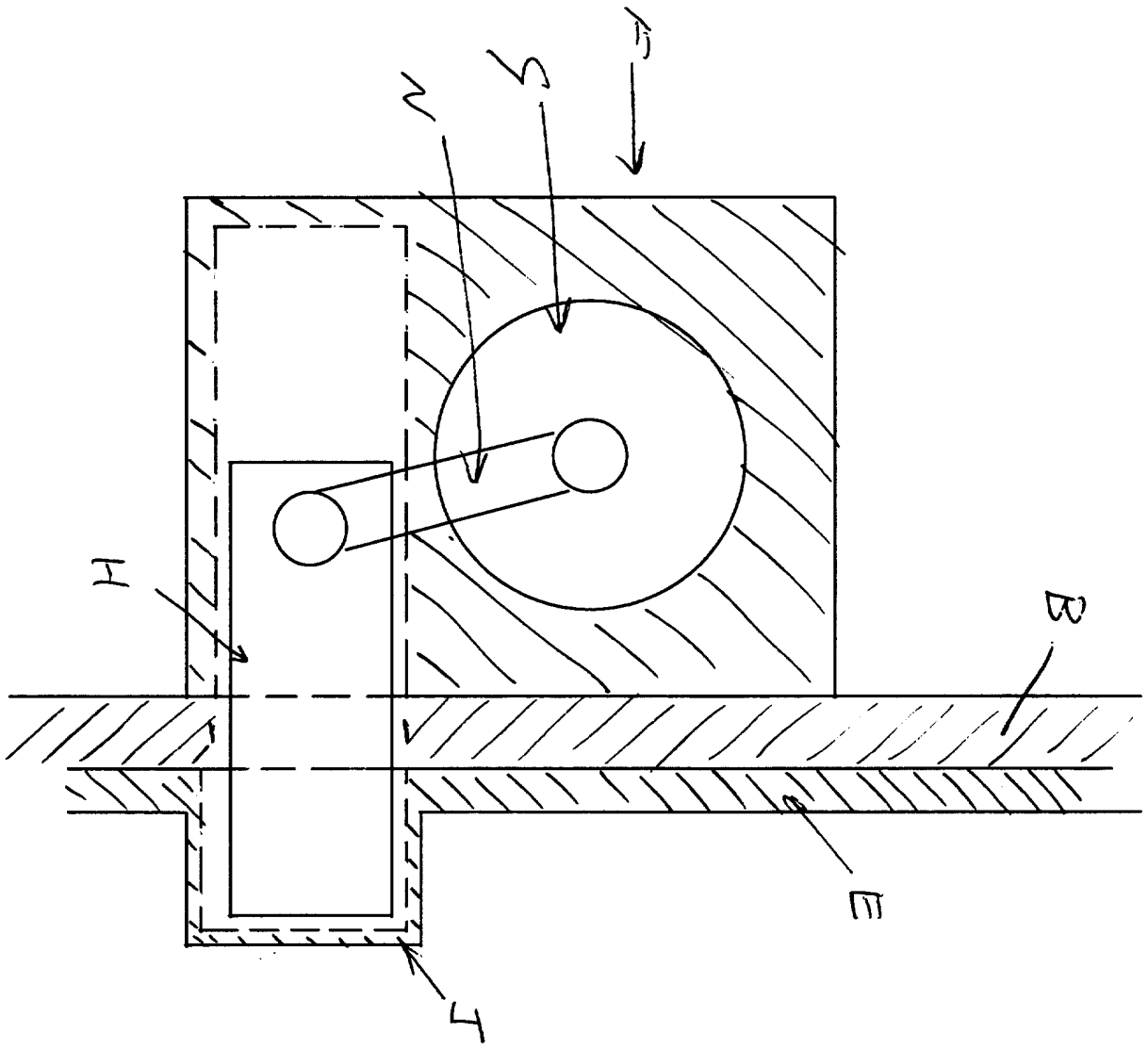


Diagram 8

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MOTOR VEHICLE ANTI-THEFT DEVICE

This invention relates to a motor-vehicle anti-theft device.

Road vehicles such as cars, trucks and vans all have driver's seats. They already incorporate designs enabling the seat-back to be adjusted for rake and in some cases, tipped forward completely (presently, these are mainly fitted to two door cars allowing access to the rear seats.) The movement almost universally being pivoted from simple hinge-arrangements , one of which incorporates the rake/ tip mechanism.

The currently used rake/ tip mechanisms generally operate from one hinge only and no example has the ability to lock.

This design enables the seat-back not only to be tipped forward using the current design's but innovates in that it locks the seat-back in the 'Tipped' forward position in a way that it prevents the vehicle being driven and from a point that it is not easily attacked. The design and the positioning enables current component parts to be used without modification, being required only to two current parts plus the application of the locking device - together Becoming functional.

This ability is explained best be referring to the submitted diagrams.

Diagram 1 displays the currently, and the most commonly used rake/ tip hinging systems, operating on hinge A or B; allowing the seat-back to be adjusted forward/ rearward, and in the case of 2 door cars, tip forward completely to allow access to the rear-seats. It is this type of seat on which the design is based. The 'two door' car seat being fitted to all vehicles as the 'tipping' function is a necessary capability.

Diagram 2 shows one 'vacant' hinge from the seat that has received initial modification. Instead of ending at it's pivot point, seat frame-support 'E' is extended below that point and is broadened; this broadened and extended arm forms an arc when the seat-back is tilted forward. Pivoting at 'K'. This extension incorporates a capped cup 'J', this is hollow and receives the bolt that is later explained. Also shown is the bracket 'B' which has been modified by the introduction of a hole 'L' through which the bolt will pass. Diagram 2 represents the seat when in the driving/ upright/ unlocked position, cup 'J' being moved aside from the hole 'L'.

Diagram 3 shows the bracket 'B' and seat frame 'E' set up in the tilted and locked position. The seat back has been tipped forward, pivoting at 'K' and causing the extension to arc thus moving the cup 'J' over the bracket-hole 'L' and, into a position where a bolt can pass through 'L' and into the hollow of cup 'J' - preventing 'E' from pivoting at 'K' and thus preventing the vehicle seat-back from returning to the upright position and from being occupiable. (See box-sketch).

Diagram 4 shows the lock mechanism that applies the bolt through hole 'L' and into cup 'J'. (The seat frame 'E' is in the upright / unlocked position, the hole 'L' being covered by the plate section of 'E' - see diagram 2). The lock mechanism is enclosed in a strong case 'F' which is welded to hinge-bracket 'B'. The lock barrel 'G' is connected to a shot bolt 'H' that sits in a channel 'M'; and into hole 'L'. The lock barrel may be manual or electric in operation.

Diagram 5 shows the rear of the device and placement with the rear of the case 'F' removed for viewing purposes, displaying the connection between the lock barrel 'G' and the shot bolt 'H'. (The seat being in the upright/ unlocked position, the passage of 'H' into securing cup 'J' being blocked by the main body of 'B'.

Diagram 6 shows modified seat-back support 'E' displaying pivot-hole 'K' and the bolt-securing cup 'J', into which the bolt 'H' will enter.

Diagram 7 shows the rear of the mechanism (with the rear cover removed). The seat being in the upright/ unlocked/ driving position with the lock 'G' unlocked, and the bolt 'H' withdrawn and it's path into 'J' blocked by the main body of 'E'.

Diagram 8 shows the situation when the seat-back has been tipped forward and locked into place. By tipping the seat forward the securing cup 'J' has been brought into line with the hole 'L' in bracket 'B', allowing the bolt 'H' to pass through hole 'L' and into securing cup 'J'. Thus preventing 'E' moving and subsequently locking the seat-back into the 'tipped' position.

Claims.

1. A motor-vehicle anti-theft device, being a motor-vehicle driver's seat, the back-support of which not only tips forward, but locks into that position; the framework/hinge construction being modified to accept an effective locking mechanism.

2. A motor-vehicle anti-theft device, the locking mechanism of which operates by electric or mechanical means.

The Patent Office

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Application No: GB 9612308.8 **Examiner:** R E Hardy
Claims searched: 1 **Date of search:** 23 September 1996

Patents Act 1977
Search Report under Section 17

Databases searched:

UK Patent Office collections, including GB, EP, WO & US patent specifications, in:

UK Cl (Ed.O): A4L (LAAR, LACF, LBPB, LBPC, LBPE); B7J (J101B)

Int Cl (Ed.6): B60R (25/00)

Other: Online : WPI, CLAIMS

Documents considered to be relevant:

Category	Identity of document and relevant passage		Relevant to claims
X	GB2292127 A	WATTS : Whole document	1
X	GB2245824 A	THOMPSON : Whole document	1,2
X	GB2132955 A	JORDAN : Whole document	1
X	GB2102363 A	HARTLEY : Whole document	1
X	GB2059757 A	KALMERE : Whole document	1,2
X	EP0559054 A1	LISSON : Whole document	1,2
X	EP0414954 A1	LIPOWEC : Note refs to locking seat against wheel	1,2
X	EP0108581 A1	MEIR : Whole document	1
X	WPI Abstract Acc No 92-081181/11 & DE4027953A (ROSENMEIER) : See Abstract and Figures 1,3		1

X	Document indicating lack of novelty or inventive step	A	Document indicating technological background and/or state of the art.
Y	Document indicating lack of inventive step if combined with one or more other documents of same category.	P	Document published on or after the declared priority date but before the filing date of this invention.
&	Member of the same patent family	E	Patent document published on or after, but with priority date earlier than, the filing date of this application.