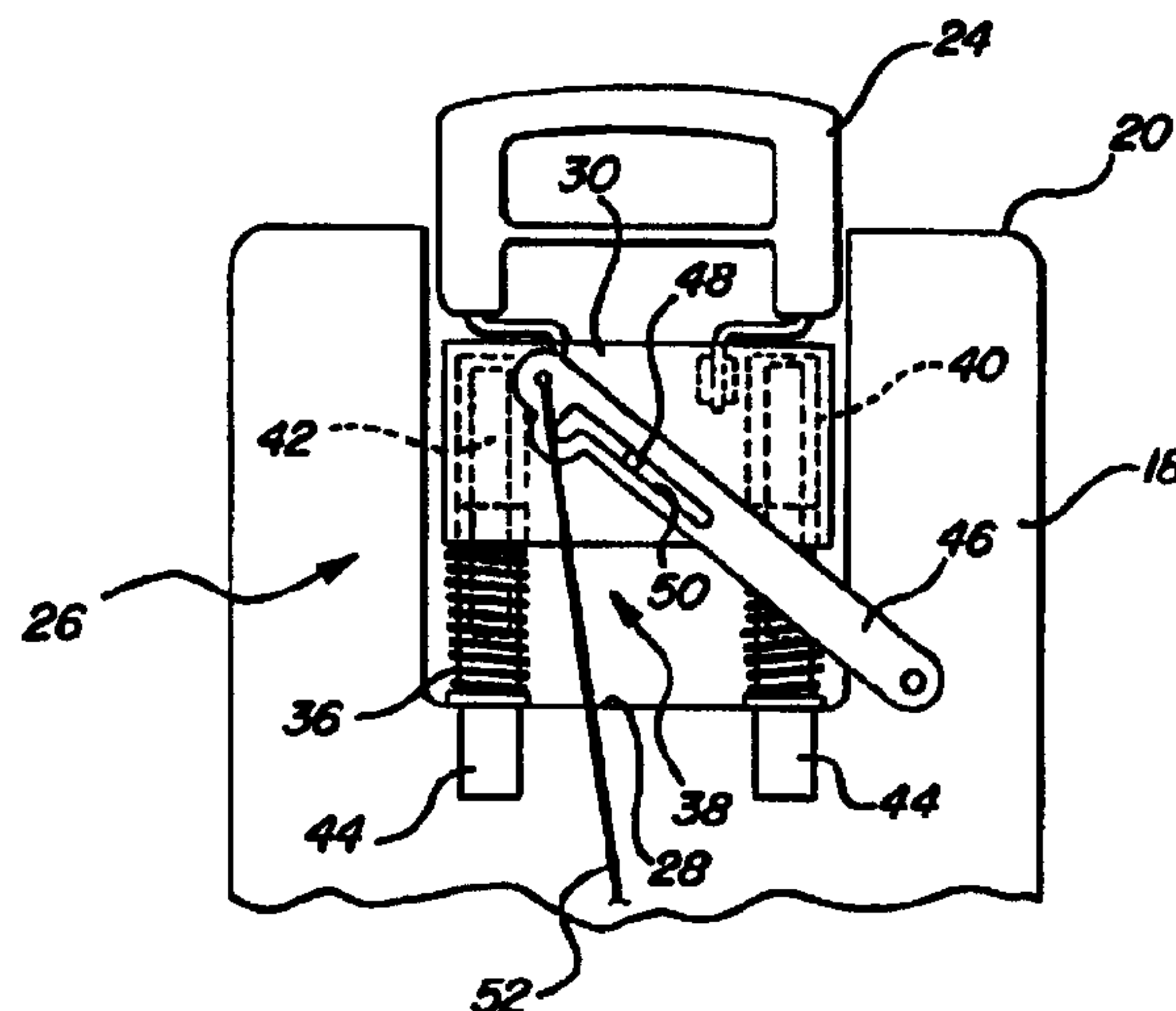




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(54) Titre : SYSTÈME DE SIÈGE D'AUTOMOBILE AVEC APPUI-TÊTE ESCAMOTABLE
(54) Title: AUTOMOTIVE SEAT ASSEMBLY HAVING A RETRACTABLE HEADREST



(57) **Abrégé/Abstract:**

An automotive seat including a seat cushion and a seat back (18). The seat back pivots relative to the seat cushion for movement between a seating position and a folded position. A headrest (24) is mounted to the seat back (18) and is moveable between a deployed position and a retracted position. The seat assembly is characterized by a control mechanism (26) mounted between the seat back and the headrest for automatically moving the headrest between the deployed and retracted positions in response to the pivotal movement of the seat back between the seating and folded positions. The subject invention is also characterized by a cavity (28) formed within the seat back for selectively housing the headrest. The control mechanism (26) moves the headrest between the deployed position with the headrest disposed completely outside the cavity and the retracted position with the headrest disposed within the cavity.



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(54) Title: AUTOMOTIVE SEAT ASSEMBLY HAVING A RETRACTABLE HEADREST (57) Abstract An automotive seat including a seat cushion and a seat back (18). The seat back pivots relative to the seat cushion for movement between a seating position and a folded position. A headrest (24) is mounted to the seat back (18) and is moveable between a deployed position and a retracted position. The seat assembly is characterized by a control mechanism (26) mounted between the seat back and the headrest for automatically moving the headrest between the deployed and retracted positions in response to the pivotal movement of the seat back between the seating and folded positions. The subject invention is also characterized by a cavity (28) formed within the seat back for selectively housing the headrest. The control mechanism (26) moves the headrest between the deployed position with the headrest disposed completely outside the cavity and the retracted position with the headrest disposed within the cavity.		

**AUTOMOTIVE SEAT ASSEMBLY HAVING
A RETRACTABLE HEADREST**

Technical Field

The subject invention relates to automotive seat assemblies which include
5 adjustable or retractable headrests.

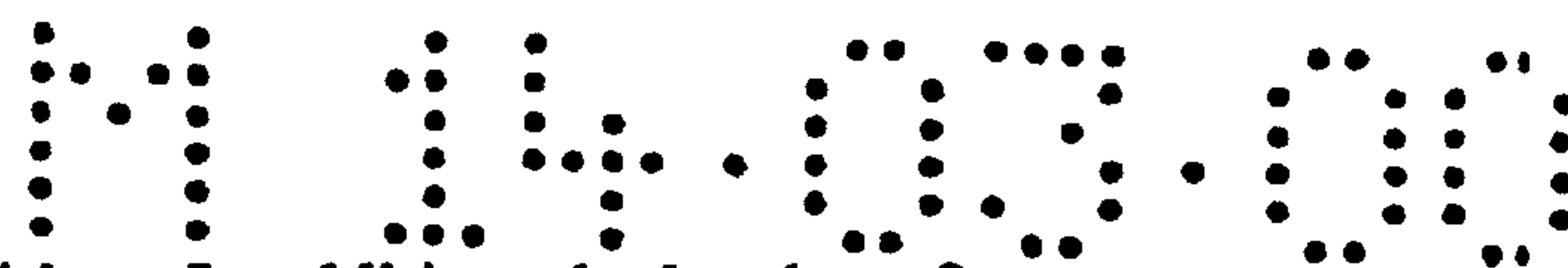
Background of the Invention

Front and rear seats in many passenger vehicles, such as automobiles, include
respective headrests which provide added comfort for a passenger. In addition to the
comfort feature, the headrests also provide a safety feature. Namely, the headrests provide
10 needed head support during rear end collisions which reduces the likelihood of whiplash
type injuries. Headrests are typically mounted to a top portion of a seat back as either an
integral part of the seat back or as a separate unit mounted to the seat back. The separable
headrests usually include some type of height adjustment mechanism. One of the
deficiencies which occurs when having a headrest is the possibility of obstructed views for
15 the driver and/or passengers. Another deficiency occurs when the seat is folded
downwardly to provide added storage space. Specifically, the headrest protruding from the
top portion of the seat back extends the length of the seat back; therefore, the amount of
available storage space is reduced.

The prior art has contemplated some solutions to these deficiencies. One relatively
20 simple solution is to remove the headrest from the seat back when views are obstructed
and/or the seat back is folded downwardly. This solution, however, creates another
problem of what to do with the loose headrest. Another solution relates to having the
headrest move to a position behind the seat back. An example of this type of headrest is
disclosed in United States Patent No. 4,935,680. Some difficulties encountered with these
25 designs are that the height adjustment means may be exposed and the headrest is still
occupying a portion of the needed cargo space.

French Patent No. 2 432 855 discloses another solution which conceals the headrest
into a portion of the seat back when the seat back is folded forward. The headrest has an
elongated frame which is pivotally connected to a bottom of the seat assembly. The
30 headrest frame abuts a top portion of a seat back frame and also extends upwardly beyond
the seat back frame. As the seat back is pivoted to the folded position, the seat back frame
pushes against the headrest frame to also pivot the headrest frame downward. The seat
back slides over the headrest such that the headrest is at least partially concealed within the
seat back. This proposed solution, however, creates a headrest which has no adjustment

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capabilities when the seat back is in the seating position. In addition, the headrest frame occupies a significant amount of space within the seat back. The headrest frame therefore reduces the available space for added components such as lumbar supports, heating elements and the like.

5 Yet another solution contemplated by the prior art is shown in German Patent No. 197 27 097. The German '097 patent discloses a seat assembly having a headrest which adjusts when the seat is moved forward or rearward and retracts when a seat back is pivoted downward to a folded position. A first cable is used to pull the headrest upward toward an extended position and a second cable is used to pull the headrest downward toward a
10 retracted position. A guide is also utilized which directs the headrest through the upward and downward movements. One deficiency of this design, is that the guide and cable arrangement extend into the seat back occupying a significant portion of the seat back. In addition, the double cable arrangement requires a number of directional pulleys and guides. Finally, the first cable is continuously tensioned when the seat back is in the seating
15 position and the headrest is in the extended position. This continuous strain on the cable reduces the effective operating life of the adjustment mechanism.

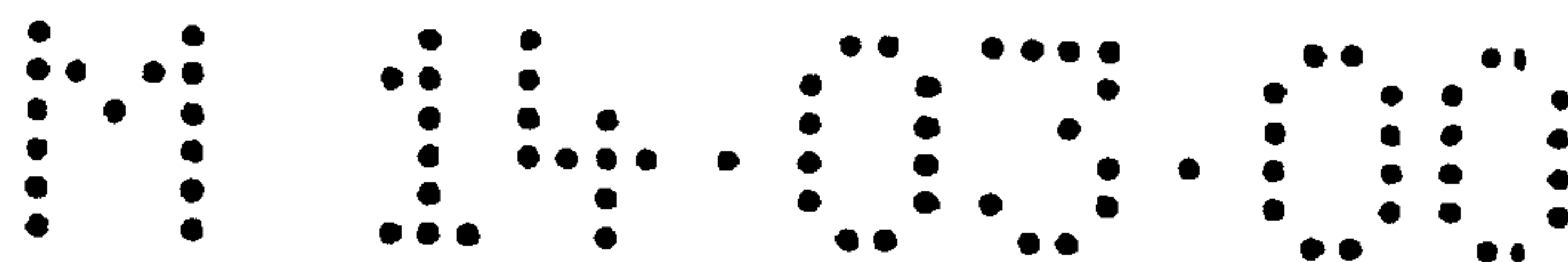
Hence, there is a need for a headrest design which can provide adequate support for a passenger and yet be automatically retracted to improve the viewing area and increase the available storage space, while overcoming the deficiencies outlined above. Primarily, the
20 adjustable headrest mechanism should be of a simple design which occupies only a small area of the seat back.

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Summary of Invention and Advantages

An automotive seat assembly comprising a seat cushion and a seat back, having top and bottom portions, pivotally mounted to the seat cushion for movement between a seating position and a folded position. A headrest is mounted to the top portion of the seat back and moveable between a deployed position and a retracted position. A control mechanism is supported by the seat back and is operatively connected to the headrest for automatically moving the headrest toward the retracted position in response to the pivotal movement of the seat back toward the folded position. The subject invention is characterized by the control mechanism further including a biasing device supported by the seat back and operatively coupled to the headrest for continuously biasing the headrest toward the deployed position.

Accordingly, the headrest of the subject invention can provide adequate support for a passenger and be retracted to improve the viewing area and increase the available storage space in a vehicle. The headrest is automatically retracted in response to the movement of the seat back. The headrest may be retracted into a cavity in the seat back or behind, beside, or in front of the seat back. The control mechanism is of a compact and relatively inexpensive design. As an added feature, the control mechanism does not have a cable which is stressed or tensioned when the headrest is in the fully extended position, thereby extending the operating life of the mechanism. Finally, the control mechanism also includes a stop for locking the headrest in the extended position until the seat back is folded forward.

Brief Description of the Drawings

Other advantages of the present invention will be readily appreciated as the same becomes better understood by reference to the following detailed description when considered in connection with the accompanying drawings wherein:

Figure 1 is a perspective view of front and rear seat assemblies incorporating a headrest in accordance with the subject invention;

Figure 2 is a schematic view of the headrest in a deployed position relative to a seat back;

Figure 3 is a schematic view of the headrest in a retracted position relative to the seat back;

Figure 4 is a partially cross-sectional side view of the seat back incorporating the headrest of the subject invention;

Figure 5 is a schematic side view of the seat assembly with the seat back in a seating position, partially folded position, and a fully folded position;

5 Figure 6 is a partially cross-sectional rear view of the seat back with the headrest in the deployed position;

Figure 7 is a partially cross-sectional rear view of the seat back with the headrest in a partially retracted position; and

10 Figure 8 is a partially cross-sectional rear view of the seat back with the headrest in the fully retracted position.

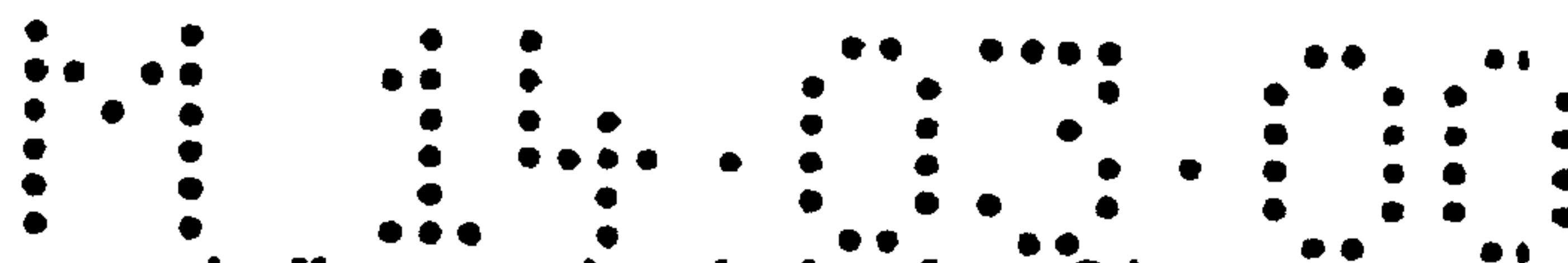
Detailed Description of the Preferred Embodiment

Referring to the Figures, wherein like numerals indicate like or corresponding parts throughout the several views, an automotive seat assembly is generally shown at 10 in Figure 1. The seat assembly 10 comprises a front row seat 12 and a rear row
15 seat 14. Both of the front 12 and rear 14 row seats include a seat cushion 16 and a seat back 18. Each of the seats 12, 14 are of a conventionally known construction which includes a seat frame, a flexible foam pad and a trim cover material. As also shown in Figure 5, the seat back 18 has top 20 and bottom 22 portions and is pivotally mounted to the seat cushion 16 for movement between a seating position and
20 a folded position. As appreciated by those skilled in the art, the seat back 18 is in a seating position when the seat back 18 is upright and substantially perpendicular to the seat cushion 16. The seat back 18 is in the folded position when the seat back 18 is pivoted forward toward the seat cushion 16 to at least partially overlay the seat cushion 16. In some applications the seat cushion 16 may pivot upwardly and
25 forwardly along with the seat back 18 to create what is known in the art as a tumbled seat. In other applications, the seat cushion 16 may pivot upwardly and forwardly independently of the seat back 18 such that the seat back 18 may fold downward abutting an underside of the seat cushion 16.

Referring also to Figures 2 and 3, a headrest 24 is mounted to the top portion 20 of the seat back 18 and is moveable between a deployed position and a retracted position. A control mechanism, generally shown at 26, is mounted between the seat back 18 and the headrest 24 for moving the headrest 24 between the deployed and retracted positions. Preferably, the seat assembly 10 includes a cavity 28 formed within the top portion 20 of the seat back 18 for selectively housing the headrest 24. The control mechanism 26 moves the headrest 24 between the deployed position with the headrest 24 substantially disposed outside of the cavity 28 and the retracted position with the headrest 24 substantially disposed within the cavity 28. Even more preferably, the headrest 24 is disposed completely outside of the cavity 28 when in the deployed position and disposed completely within the cavity 28 when in the retracted position. As appreciated, the headrest 24 may only be partially deployable and/or partially retractable without deviating from the overall scope of the subject invention. It is only necessary that some retraction take place in order to provide the desired retracting effect. As also appreciated, the control mechanism 26 may be of any suitable design or configuration without deviating from the general scope of the invention. As discussed below, the preferred design of retracting the headrest 24 is to link the headrest 24 with the pivotal movement of the seat back 18. The subject invention, however, is not limited to this particular linking design. The passenger may be able to retract the headrest 24 in any suitable manner irrespective of the position of the seat back 18.

Referring back to Figure 5, the control mechanism 26 preferably moves the headrest 24 automatically between the deployed and retracted positions in response to the pivotal movement of the seat back 18 between the seating and folded positions. Hence, the movement of the headrest 24 is linked to the pivotal movement of the seat back 18. This provides a user friendly design in that a passenger only has to pivot the seat back 18 forward in order to retract the headrest 24. As appreciated, the cavity 28 formed within the seat back 18 may be eliminated such that the headrest 24 moves or retracts to a position overlying the front, side or rear of the seat back 18.

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The subject invention is not necessarily limited to automatically retracting the headrest 24, in response to movement of the seat back 18, into the cavity 28. It should also be appreciated, the deployment and/or retraction positions of the headrest 24 do not necessarily have to occur at the maximum seating and/or folding positions of the seat back

5 18.

Referring also to Figures 4 and 6 through 8, the control mechanism 26 further includes a moveable mounting plate 30 with the headrest 24 fixedly secured to the mounting plate 30. Specifically, the headrest 24 includes a pair of headrest posts 32 which are mounted to the plate 30. The headrest 24 shown is designed with a passageway 34 and

10 may be covered by a trim cover material such as cloth, leather or vinyl. As appreciated, the headrest 24 may be of any suitable design or configuration. The control mechanism 26 also includes a biasing device 36 disposed within the cavity 28 between the mounting plate 30 and the seat back 18 for continuously biasing the headrest 24 between the retracted and deployed positions. The biasing device 36 may continuously bias the headrest 24 toward

15 the retracted or deployed positions depending upon the particular configuration of the control mechanism 26. The control mechanism 26 also includes an actuation device, generally shown at 38, mounted between the seat back 18 and the mounting plate 30 for selectively moving the mounting plate 30 and the headrest 24 toward the retracted position and into the cavity 28. As discussed above, the actuation device 38 may be a separate

20 manual or power device or may be interconnected with the movement of the seat back 18.

The preferred embodiment of the control mechanism 26 is now discussed in greater detail. At least one socket 40 is formed within the mounting plate 30 and at least one guide post 42 extends outwardly from the socket 40. Preferably, the post 42 is fixedly mounted to the mounting plate 30 at one end and extends outwardly to a distal second end. For

25 example, the post 42 may be welded, bolted, press fit or the like to the mounting plate 30.

The control mechanism 26 further includes at least one hollow support tube 44 mounted within the cavity 28 and extending upwardly toward the top portion 20 of the seat back 18. A collar (not numbered) securely mounts the support tube 44 to the frame of the seat back 18. Preferably, there are a pair of sockets 40, posts 42 and corresponding

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support tubes 44. The guide posts 42 are aligned with and slideably engage the support tubes 44 for supporting the headrest 24 and guiding the headrest 24 between the retracted and deployed positions relative to the cavity 28. Preferably, the guide posts 42 have a diameter smaller than an inner diameter of the sockets 40 such that the support tubes 44 may also extend into the sockets 40 when the headrest 24 is moved into the retracted position within the cavity 28 (Figures 7 and 8). The biasing device 36 is a coil spring 36 disposed around each of the support tubes 44 with a first end engaging the cavity 28 of the seat back 18 and a second end engaging the mounting plate 30 such that the mounting plate 30 and the headrest 24 are continuously biased toward the deployed position. The coil springs 36 encircle the tubes 44 in a helical manner as is known in the art. The biasing device 36 may be of any suitable design and may be positioned independent of the tubes 44.

The actuation device 38 further includes an actuation lever 46 pivotally mounted to the seat back 18. A limit pin 48 extends from the mounting plate 30 and slideably engages the lever 46 such that the lever 46 is movably mounted to the mounting plate 30. The lever 46 includes an integral L-shaped slot 50 with the limit pin 48 slideably disposed within the slot 50. The slot 50 is constructed to include an elongated portion and a recessed stop (not numbered). When the headrest 24 is in a deployed position, the limit pin 48 engages the recessed stop of the lever 46 which locks the headrest 24 in place. During the retracting and semi deployed movements of the headrest 24 the limit pin 48 slides within the elongated portion of the slot 50.

The actuation device 38 further includes a remote control cable 52 having a first end mounted to the lever 46 and a second end mounted to the bottom portion 22 of the seat back 18 such that pivotal movement of the seat back 18 toward the folded position tensions the cable 52 to move the lever 46 and the mounting plate 30 toward the retracted position against the biasing force of the biasing device 36. As discussed above, the second end of the cable 52 may be mounted to an alternative device, such as a handle (not shown), in order to provide a retracting feature for the headrest 24

without the pivoting of the seat back 18. The remote control cable 52 is of any suitable design such as a Bowden cable assembly having a surrounding conduit.

Preferably the cable 52 is mounted to the lever 46 at an opposite end from the pivot point and adjacent the recessed stop of the slot 50. The cable 52 may be
5 fastened to the lever 46, seat back 18 and/or alternative device by any suitable cable fastener. As discussed above, the second end of the cable 52 is mounted to the bottom portion 22 of the seat back 18 and more preferably to a cable retracting mechanism (not shown) mounted to the bottom portion 22 of the seat back 18. The cable retracting mechanism retains the second end of the cable 52 in a fixed position.
10 As the seat back 18 is pivoted forward toward the folded position the lever 46 moves downward due to the tensioning in the cable 52.

The preferred operation of the headrest 24 includes an automatic deployment and retraction based upon the position of the seat back 18 with the headrest 24 retracting into the cavity 28 formed within the seat back 18. When the headrest 24
15 is fully deployed (Figures 2,4,6) it is completely extended to the maximum limit allowed by the lever 46 and limit pin 48. As shown in Figure 5, the headrest 24 is in a fully deployed position when the seat back 18 is in a fully upright seating position. As the seat back 18 is pivoted forwardly toward a folded position, the cable 52 tensions which pulls the lever 46 downwardly. The initial downward movement
20 of the lever 46 disengages the limit pin 48 with the recessed stop of the slot 50. The limit pin 48 is subjected to a downwardly directed camming action by the elongated portion of the slot 50. The downward pulling force of the lever 46 overcomes the upward biasing force of the springs 36. This pulls the plate 30 downward which compresses the springs 36 and pulls the entire headrest 24 downward into the cavity
25 28. Specifically, the guide posts 42 telescopingly engage the tubes 44 as the headrest 24 moves into the cavity 28. The retracting action of the headrest 24 continues until the seat back 18 is completely folded. In this position (Figure 8) the springs 36 are completely compressed and the headrest 24 is completely retracted into the cavity 28. As appreciated, the dimensions of the cavity 28, size of the springs 36, length of the

cable 52, and total pivoting angle of the seat back 18 must all be appropriately coordinated to ensure a desired retraction of the headrest 24. As the seat back 18 is gradually pivoted rearward back to the seating position, the cable 52 gradually slackens which allows the springs 36 to automatically lift the headrest 24 out of the
5 cavity 28. This upward deployment movement continues until the limit pin 48 returns into the recessed stop of the slot 50 thereby locking the headrest 24 in the deployed position.

The invention has been described in an illustrative manner, and it is to be understood that the terminology which has been used is intended to be in the nature
10 of words of description rather than of limitation. Obviously, many modifications and variations of the present invention are possible in light of the above teachings. It is, therefore, to be understood that within the scope of the appended claims the invention may be practiced otherwise than as specifically described.

What is claimed is:

1. An automotive seat assembly (10) comprising;
 - a seat cushion (16),
 - a seat back (18), having top (20) and bottom (22) portions, pivotally mounted to said seat cushion (16) for movement between a seating position and a folded position,
 - a headrest (24) mounted to said top portion (20) of said seat back (18) and moveable between a deployed position and a retracted position,
 - a control mechanism (26) supported by said seat back (18) and operatively connected to said headrest (24) for automatically moving said headrest (24) toward said retracted position in response to said pivotal movement of said seat back (18) toward said folded position, said control mechanism (26) including a biasing device (36) supported by said seat back (18) and operatively coupled to said headrest (24) for continuously biasing said headrest (24) toward said deployed position,
 - wherein said seat back has a cavity (28) formed within said top portion (20) for selectively housing said headrest (24) such that said headrest (24) is substantially disposed outside of said cavity (28) when said headrest (24) is in said deployed position and said seat back (18) is in said seating position, and said headrest (24) is substantially disposed within said cavity (28) when said headrest (24) is in said retracted position and said seat back (18) is in said folded position.
2. An assembly as set forth in claim 1 wherein said control mechanism (26) further includes a moveable mounting plate (30) with said headrest (24) fixedly secured to said mounting plate (30).
3. An assembly as set forth in claim 2 wherein said biasing device (36) is operatively coupled between said mounting plate (30) and said seat back (18).
4. An assembly as set forth in claim 3 wherein said control mechanism (26) further includes an actuation device (38) operatively coupled between said bottom portion (22) of said seat back (18) and said mounting plate (30) for moving said mounting plate (30) and said headrest (24) toward said retracted position when said seat back (18) is pivoted toward said folded position.
5. An assembly as set forth in claim 4 wherein said mounting plate (30) defines at least one socket (40) and includes at least one guide post (42) extending outwardly from said at least one socket (40).

6. An assembly as set forth in claim 5 wherein said control mechanism (26) further includes at least one hollow support tube (44) disposed within said cavity (28) and extending upwardly toward said headrest (24).
7. An assembly as set forth in claim 6 wherein said guide post (42) slideably engages said support tube (44) for supporting said headrest (24) and guiding said headrest (24) between said retracted and deployed positions relative to said cavity (28).
8. An assembly as set forth in claim 7 wherein said guide post (42) has a diameter smaller than an inner diameter of said socket (40) such that said support tube (44) may also extend into said socket (40) when said headrest (24) is moved into said retracted position within said cavity (28).
9. An assembly as set forth in claim 8 wherein said biasing device (36) is a coil spring disposed around said support tube (44).
10. An assembly as set forth in claim 4 wherein said actuation device (38) further includes an actuation lever (46) pivotally mounted to said seat back (18).
11. An assembly as set forth in claim 10 wherein said actuation lever (46) is coupled to said headrest (24) and includes a stop for locking said headrest (24) in said deployed position.
12. An assembly as set forth in claim 11 further including a limit pin (48) extending from said mounting plate (30) and slideably engaging said lever (46) such that said lever (46) is movably mounted to said mounting plate (30).
13. An assembly as set forth in claim 12 wherein said actuation lever (46) includes an integral slot (50) extending from said stop with said limit pin (48) slideably disposed within said slot (50) and engaging said stop when said headrest (24) is in said deployed position.
14. An assembly as set forth in claim 13 wherein said actuation device (38) further includes a remote control cable (52) having a first end mounted to said lever (46) and a second end mounted to said bottom portion (22) of said seat back (18) such that said pivotal movement of said seat back (18) toward said folded position tensions said cable (52) to move said lever (46) and said mounting plate (30) toward said retracted position against said biasing force of said biasing device (36).
15. An assembly as set forth in claim 4 wherein said actuation device (38) is a remote control cable (52).
16. An automotive seat assembly comprising;

a seat cushion,

a seat back, having top and bottom portions, said bottom portion being pivotally mounted to said seat cushion for movement between a seating position and a folded position,

a mounting plate movably mounted to said top portion of said seat back,

a headrest mounted to said mounting plate and moveable between a deployed position and a retracted position,

said top portion of said seat back defining a cavity for selectively housing said headrest such that said headrest is substantially disposed outside of said cavity when said headrest is in said deployed position and said seat back is in said seating position, and said headrest is substantially disposed within said cavity when said headrest is in said retracted position and said seat back is in said folded position,

a biasing device disposed between said mounting plate and said seat back for continuously biasing said headrest toward said deployed position,

an actuation device mounted between said bottom portion of said seat back and said mounting plate, and said actuation device including an actuation lever pivotally mounted to said top portion of said seat back and coupled to said mounting plate for automatically moving said headrest toward said retracted position disposed within said cavity in response to said pivotal movement of said seat back toward said folded position.

17. An assembly as set forth in claim 16 further including at least one socket formed within said mounting plate and at least one guide post extending outwardly from said socket.

18. An assembly as set forth in claim 17 wherein said control mechanism further includes at least one hollow support tube mounted within said cavity and extending upwardly toward said top portion of said seat back.

19. An assembly as set forth in claim 18 wherein said guide post slideably engages said support tube for supporting said headrest and guiding said headrest between said retracted and deployed positions relative to said cavity.

20. An assembly as set forth in claim 19 wherein said guide post has a diameter smaller than an inner diameter of said socket such that said support tube may also extend into said socket when said headrest is moved into said retracted position within said cavity.

21. An assembly as set forth in claim 20 wherein said biasing device is a coil spring

disposed around said support tube with a first end engaging said cavity of said seat back and a second end engaging said mounting plate such that said mounting plate and said headrest are continuously biased toward said deployed position.

22. An assembly as set forth in claim 16 further including a limit pin extending from said mounting plate and slideably engaging said lever such that said lever is movably mounted to said mounting plate.

23. An assembly as set forth in claim 22 wherein said lever includes an integral slot with said limit pin slideably disposed within said slot.

24. An assembly as set forth in claim 23 wherein said actuation device further includes a remote control cable having a first end mounted to said lever and a second end mounted to said bottom portion of said seat back such that said pivotal movement of said seat back toward said folded position tensions said cable to move said lever and said mounting plate toward said retracted position against said biasing force of said biasing device.

25. An automotive seat assembly comprising;

a seat cushion,

a seat back having top and bottom portions,

a headrest mounted to said top portion of said seat back and moveable between a deployed position and a retracted position,

a control mechanism mounted between said seat back and said headrest for moving said headrest between said deployed and retracted positions,

said top portion of said seat back defining a cavity formed therein for selectively housing said headrest, said control mechanism moving said headrest between said deployed position with said headrest substantially disposed outside of said cavity and said retracted position with said headrest substantially disposed within said cavity, and

said control mechanism including at least one support tube and a biasing device each mounted within said cavity between said headrest and said seat back, said support tube guiding said headrest between said deployed and retracted positions and said biasing device continuously biasing said headrest toward said deployed position.

26. An assembly as set forth in claim 25 wherein said control mechanism further includes a moveable mounting plate with said headrest fixedly secured to said mounting plate.

27. An assembly as set forth in claim 25 wherein said control mechanism further

includes an actuation device mounted between said seat back and said mounting plate for selectively moving said mounting plate and said headrest toward said retracted position and into said cavity.

28. An assembly as set forth in claim 27 wherein said seat back is pivotally mounted to said seat cushion for movement between a seating position and a folded position wherein said control mechanism automatically moves said headrest between said deployed and retracted positions in response to said pivotal movement of said seat back between said seating and folded positions.

29. An assembly as set forth in claim 28 further including at least one socket formed within said mounting plate and at least one guide post extending outwardly from said socket.

30. An assembly as set forth in claim 29 wherein said guide post slideably engages said support tube for supporting said headrest and guiding said headrest between said retracted and deployed positions relative to said cavity.

31. An assembly as set forth in claim 30 wherein said biasing device is a coil spring disposed around said support tube with a first end engaging said cavity of said seat back and a second end engaging said mounting plate such that said mounting plate and said headrest are continuously biased toward said deployed position.

32. An assembly as set forth in claim 31 wherein said actuation device further includes an actuation lever pivotally mounted to said seat back.

33. An assembly as set forth in claim 32 further including a limit pin extending from said mounting plate and slideably engaging said lever such that said lever is movably mounted to said mounting plate.

34. An assembly as set forth in claim 33 wherein said lever includes an integral slot with said limit pin slideably disposed within said slot.

35. An assembly as set forth in claim 34 wherein said actuation device further includes a remote control cable having a first end mounted to said lever and a second end mounted to said bottom portion of said seat back such that said pivotal movement of said seat back toward said folded position tensions said cable to move said lever and said mounting plate toward said retracted position against said biasing force of said biasing device.

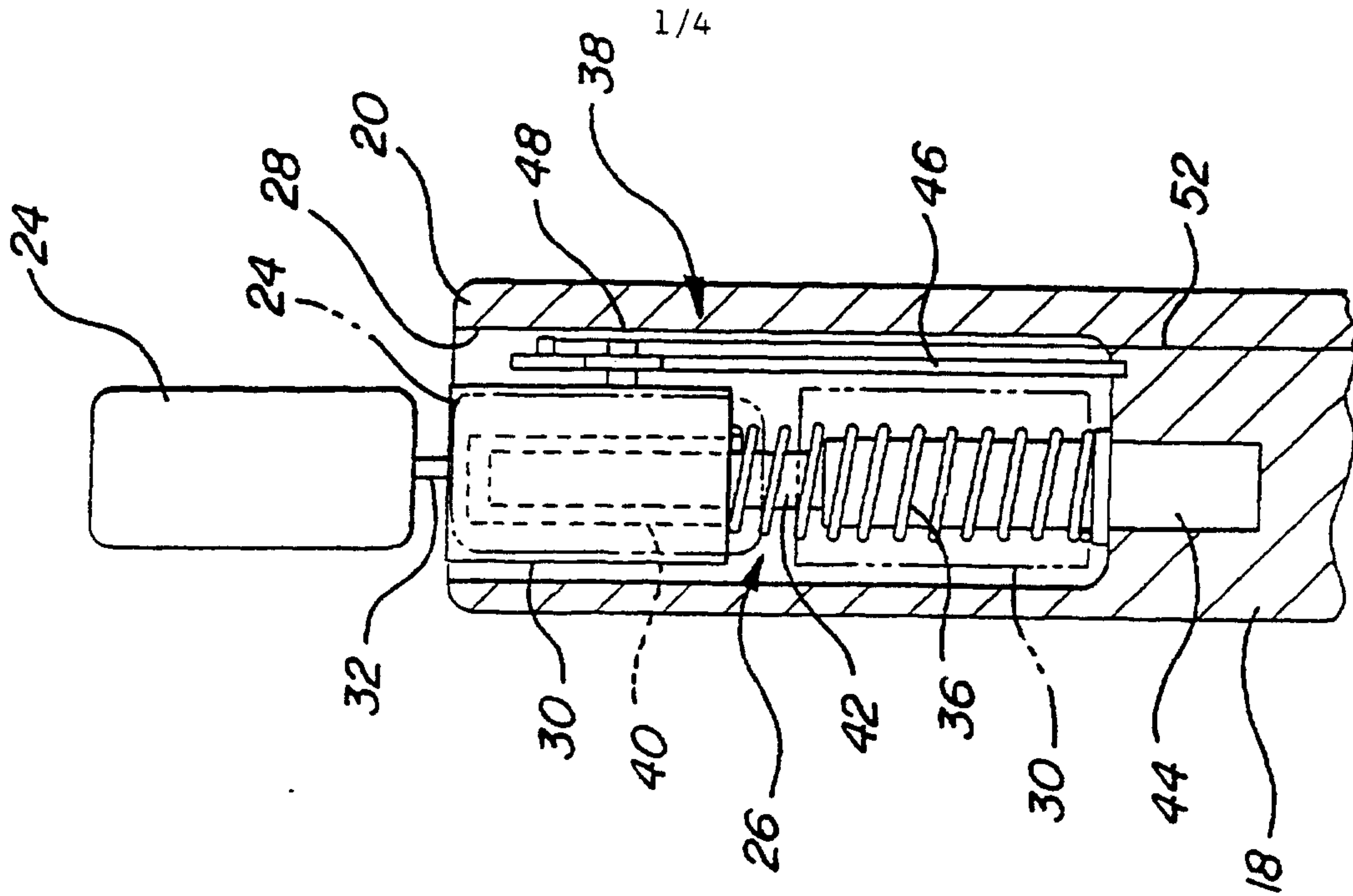


FIG-4

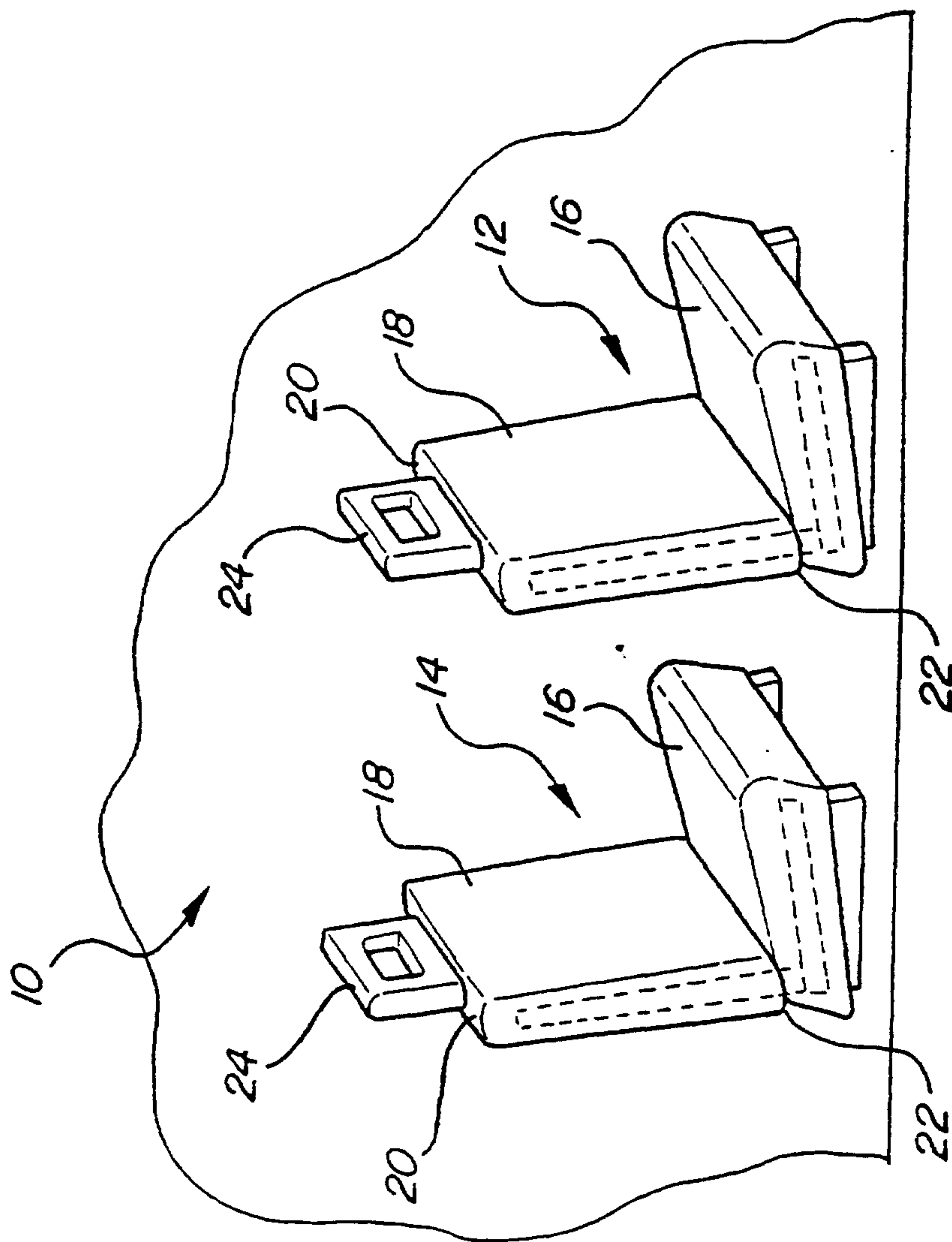


FIG-1

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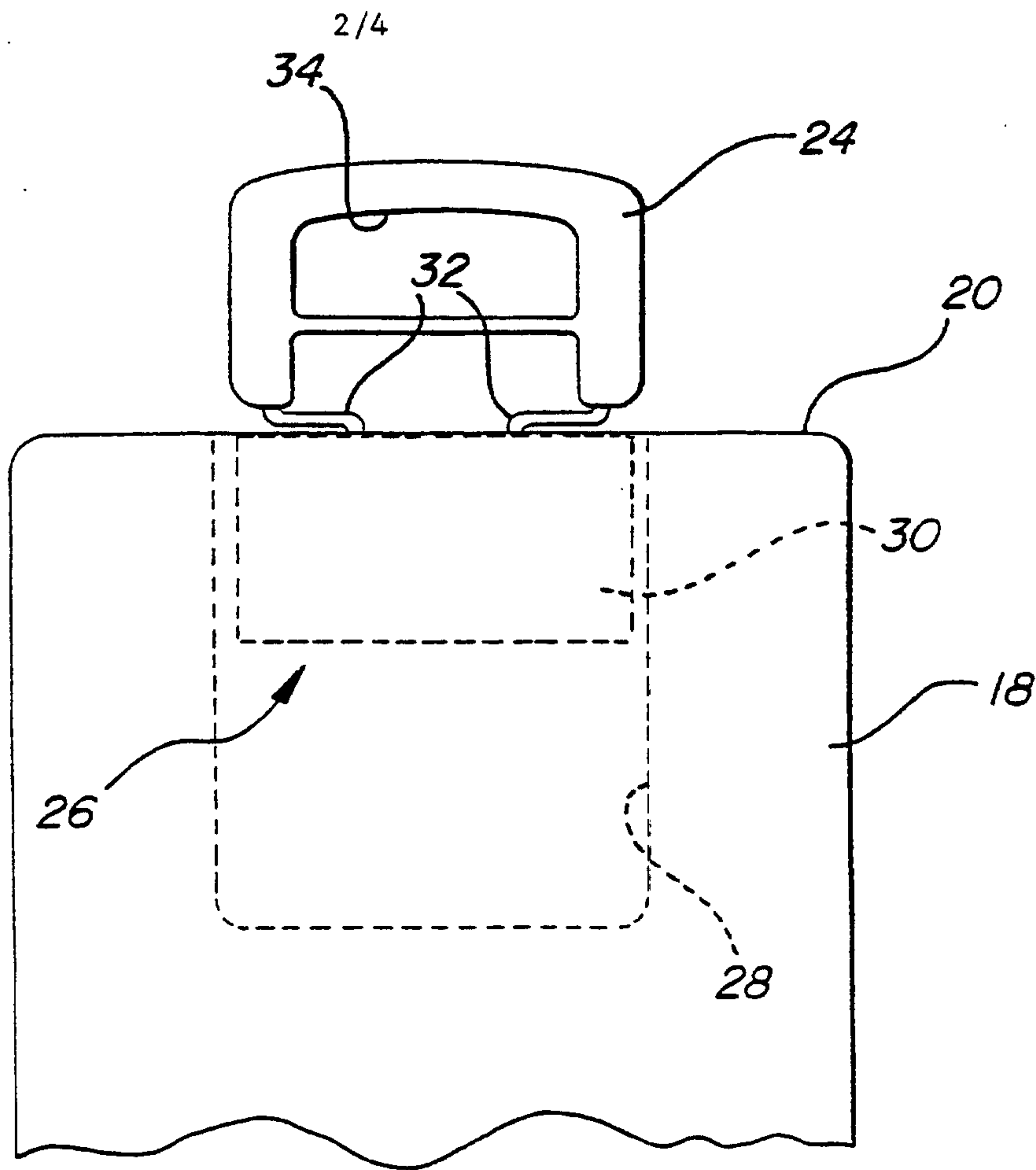
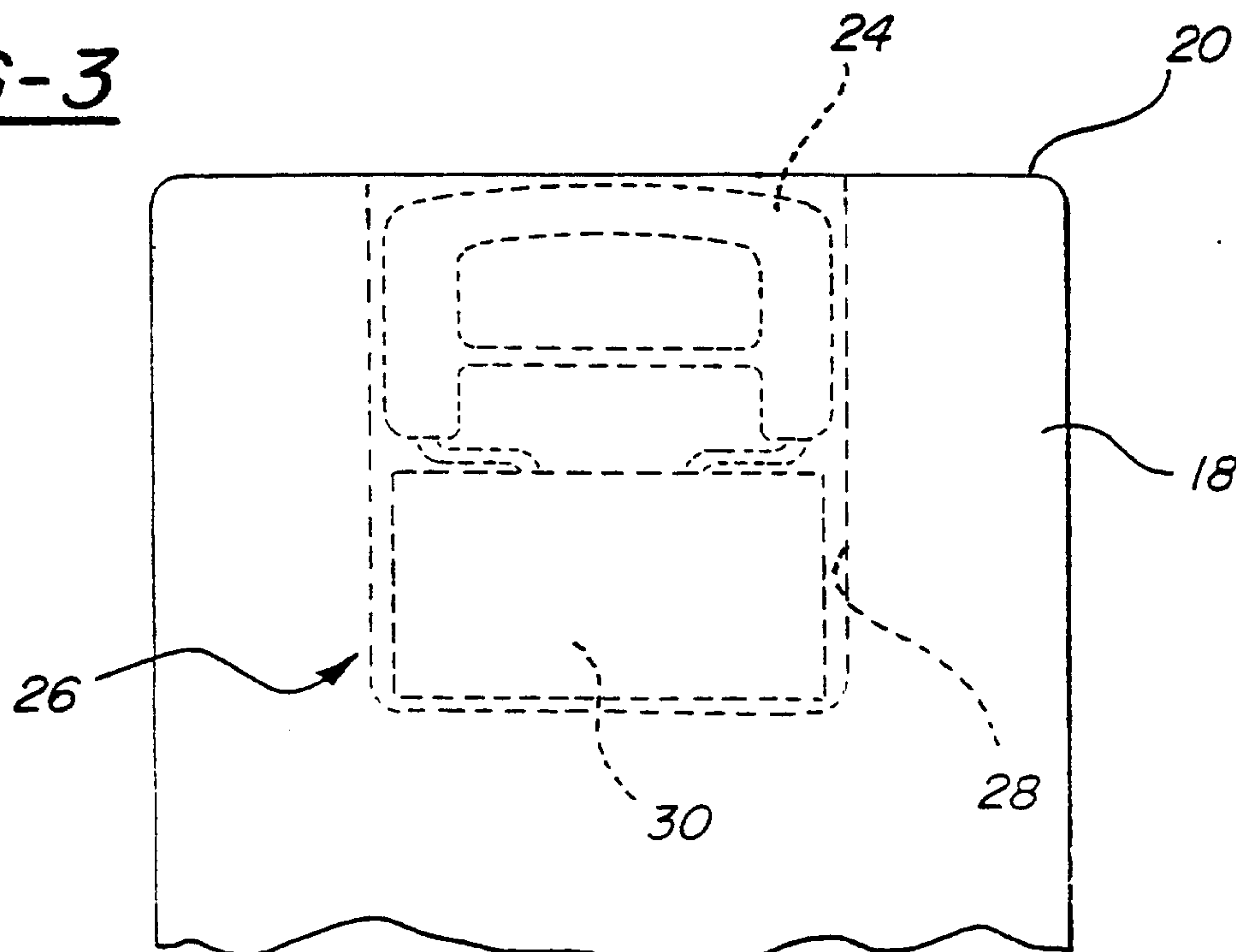
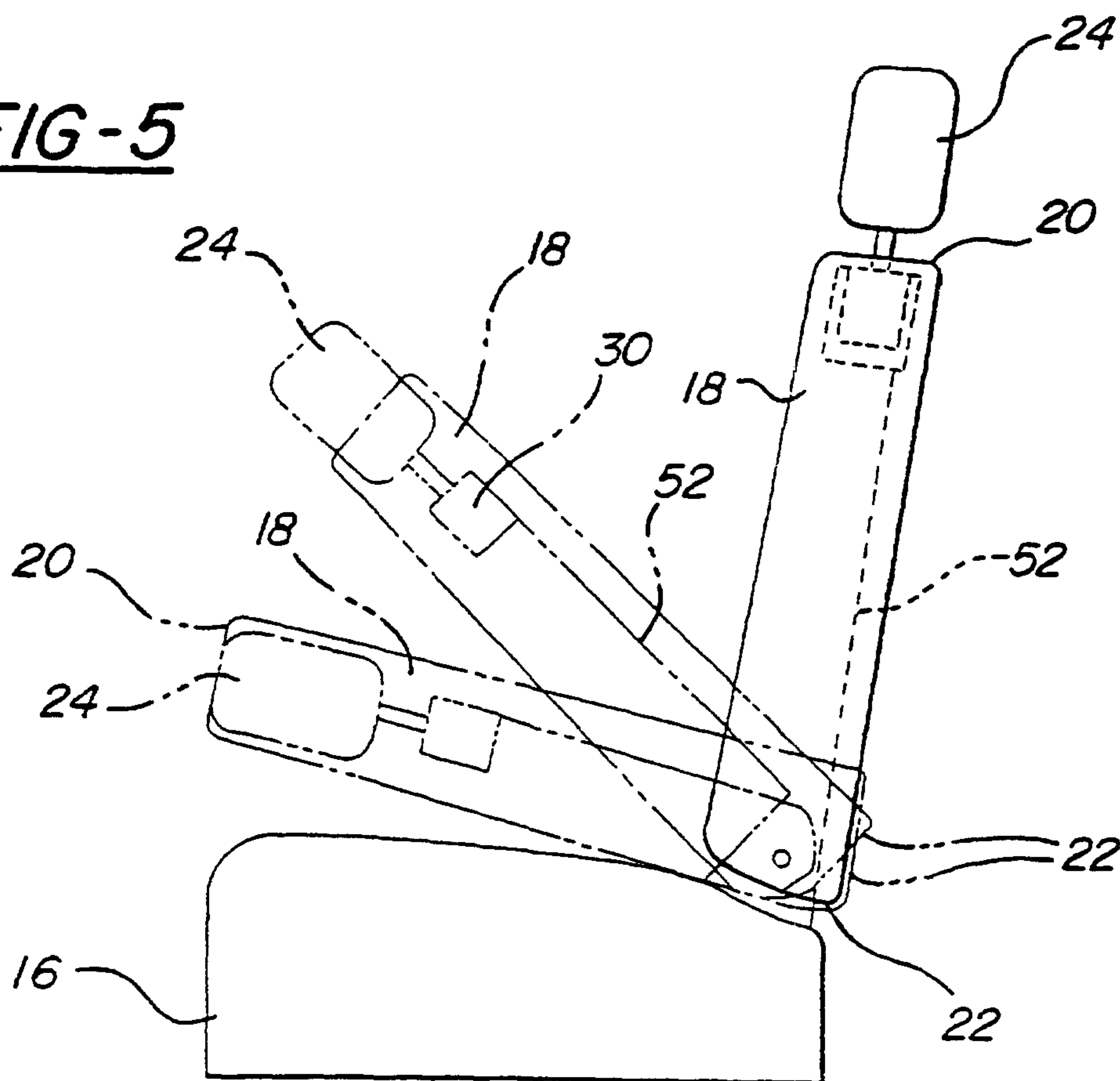
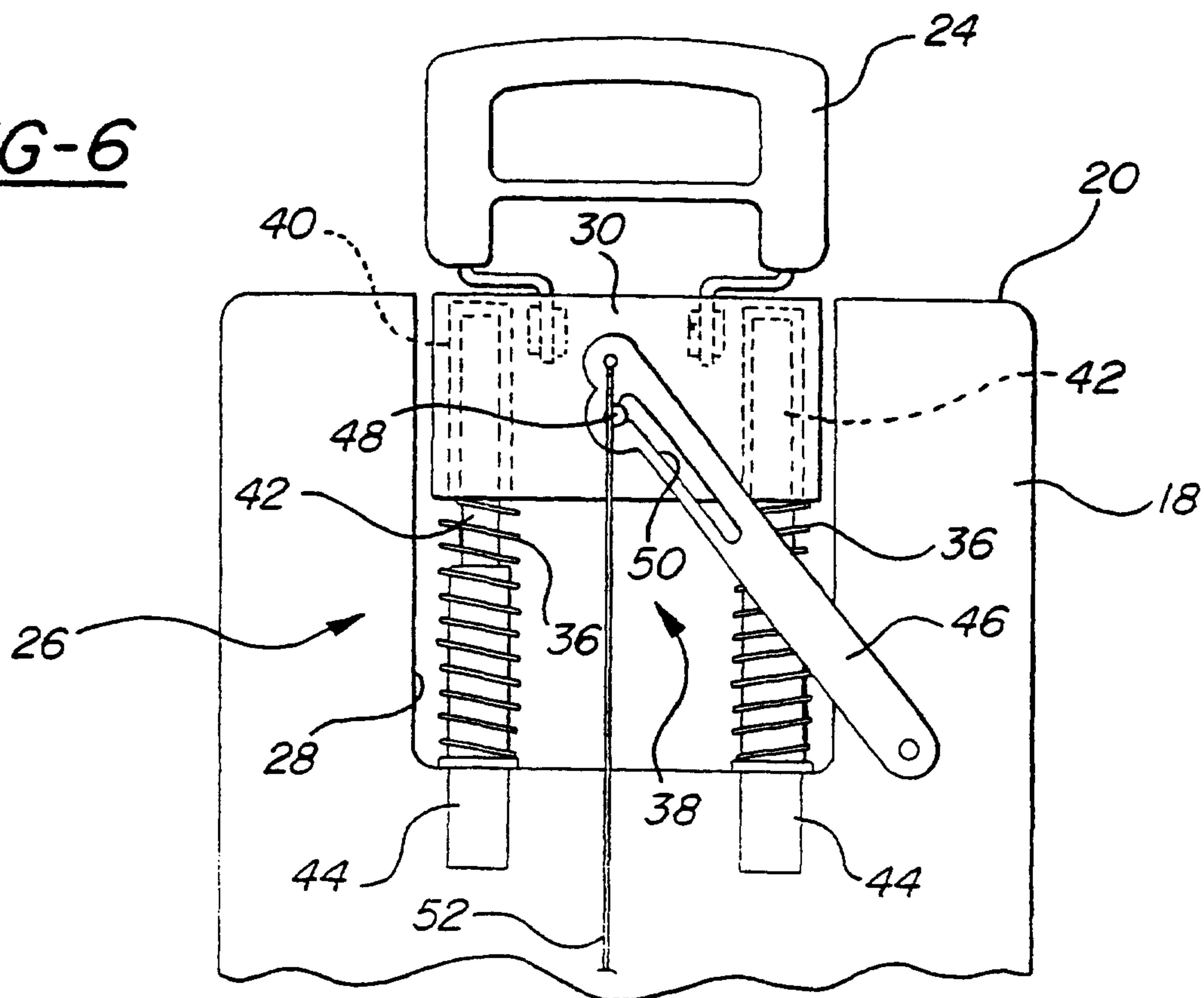
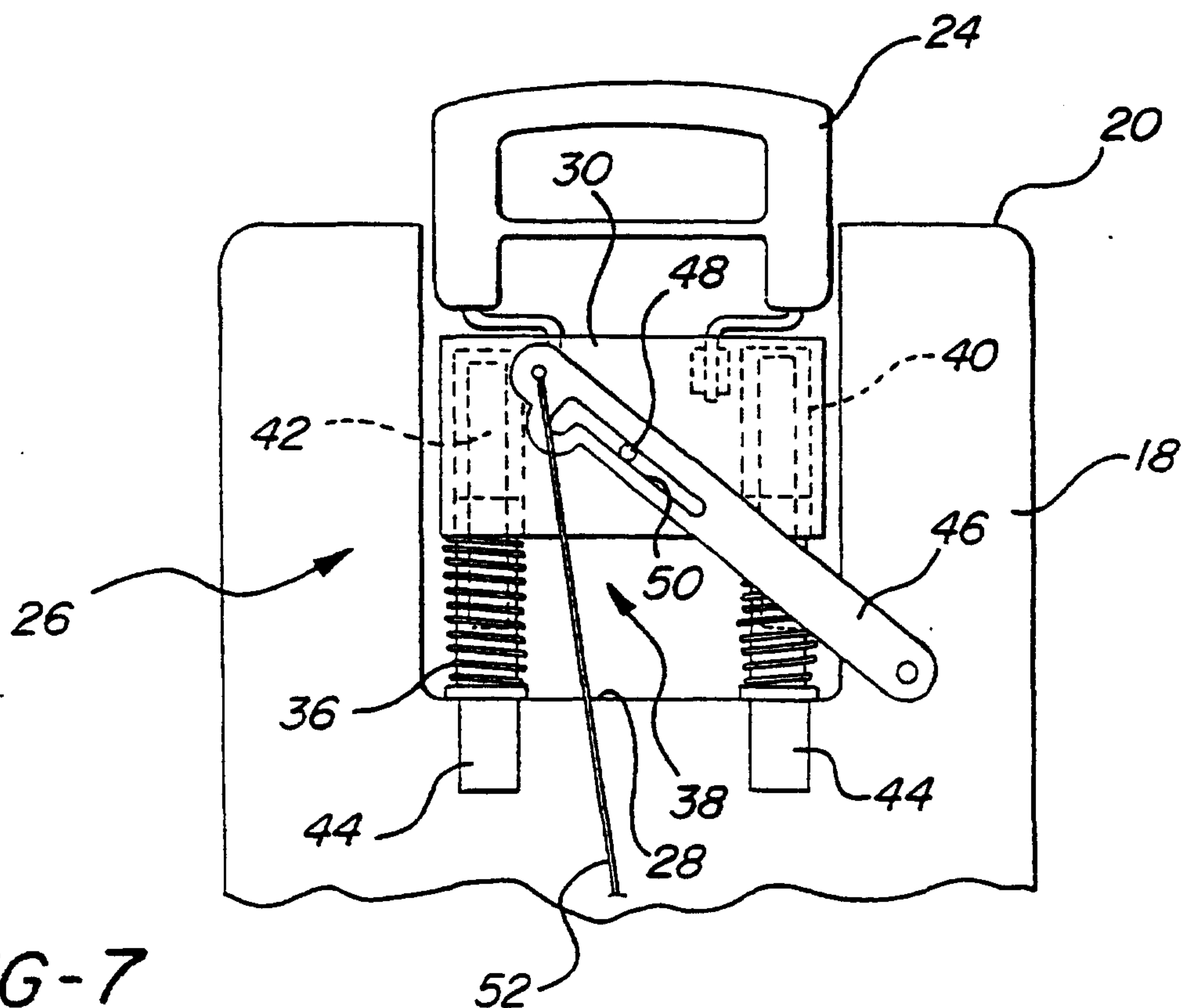
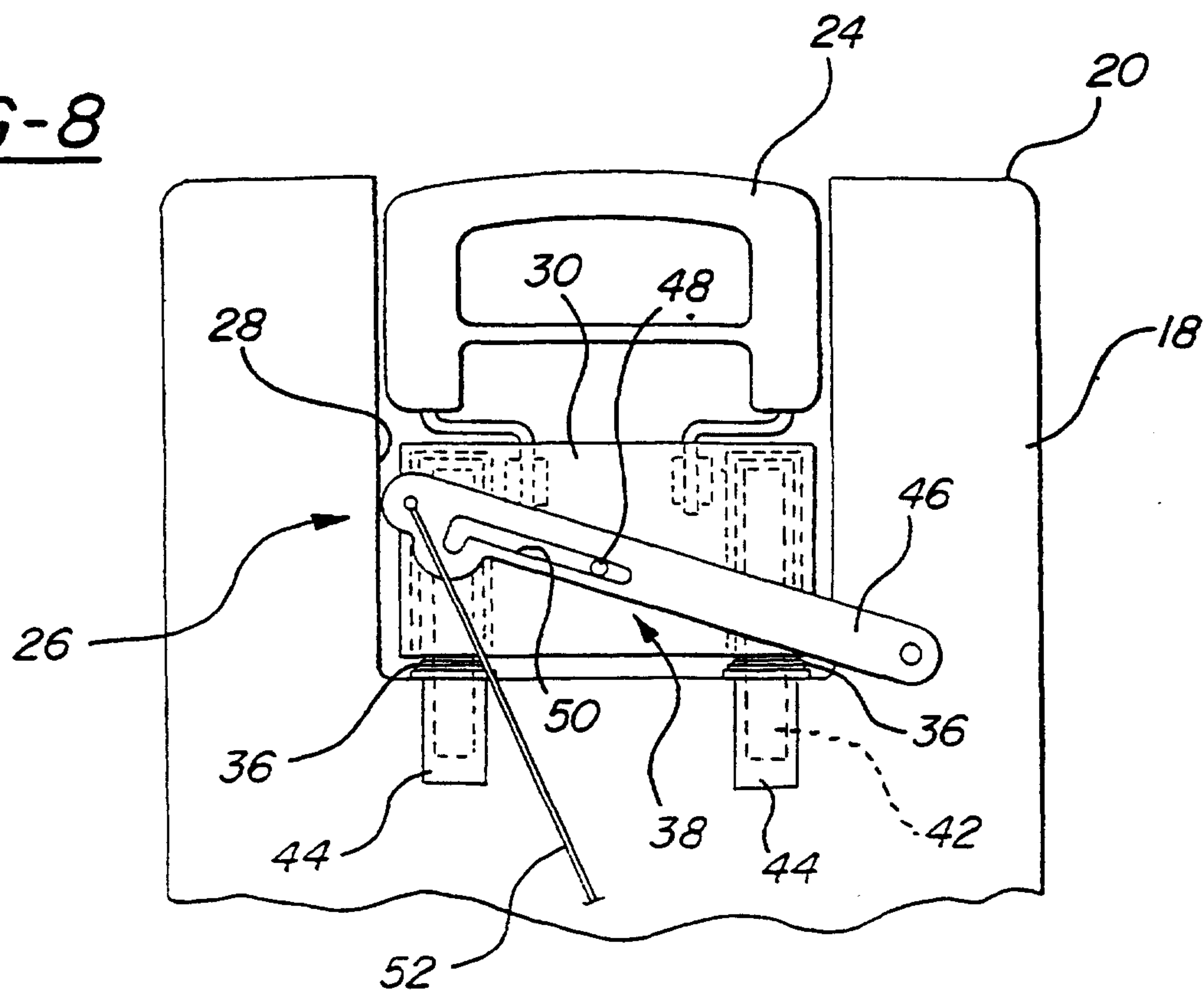
FIG-2FIG-3**SUBSTITUTE SHEET****AMENDED SHEET**

FIG-5FIG-6

SUBSTITUTE SHEET

AMENDED SHEET

FIG-7FIG-8**SUBSTITUTE SHEET**

AMENDED SHEET

