



(19)

Europäisches Patentamt

European Patent Office

Office européen des brevets



(11)

EP 0 801 200 A2

(12)

EUROPEAN PATENT APPLICATION

(43) Date of publication:
15.10.1997 Bulletin 1997/42

(51) Int. Cl.⁶: **E05F 3/00**

(21) Application number: **97105586.8**

(22) Date of filing: **04.04.1997**

(84) Designated Contracting States:
DE ES FR GB SE

(30) Priority: **12.04.1996 IT TO960077 U**

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(54) A pneumatic braking device for controlling the opening of a door

(57) A device for controlling the opening of a door pivotally mounted on one side, in particular a door for the object containing compartment of a motor vehicle passenger's cabin, consists of a bellows (4) of elastomeric material provided with a valve (12) for controlling the inlet and outlet of air to and from its inside. The bellows has one end connected to the body (3) forming the object containing compartment (2), while the other end is connected to the end of the door (1) opposite to its other pivotally mounted end (7).

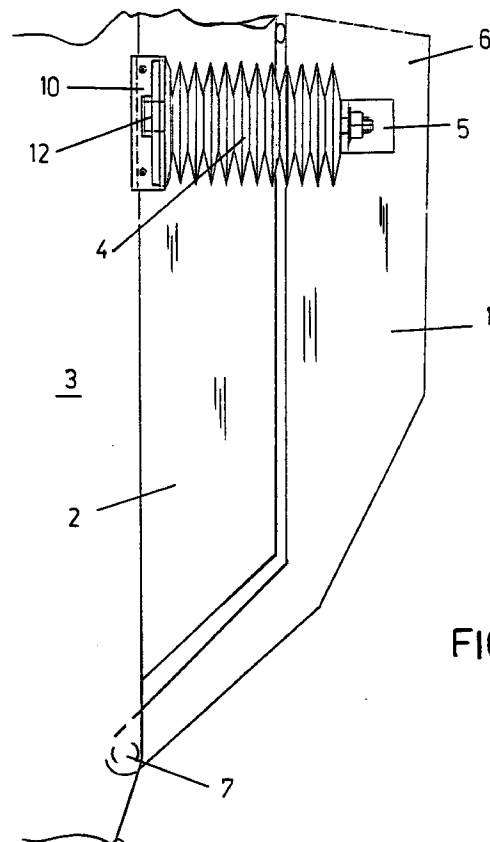


FIG.1

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Description

The present invention relates to a pneumatic device for controlling the opening of a door, in particular the door of an object containing compartment disposed on a motor-car dashboard.

A problem that is felt at present with the new arrangement of motor-cars dashboards lies in that the object containing compartment and its relevant door is located in positions where the door, when opened, falls towards the vehicle floor. This causes the door to open very quickly, rebounding on the end of stroke stopping means.

As apparent, the user regards this feature as a drawback, as the door might knock against his legs if he is sitting in front of it. Therefore, the user has to use his hands to let the door open gently.

Further, there are some doors of known kind which can themselves serve as containing drawers, whereby the sudden opening and rebound may cause the fall of the content of the drawer in the passenger's cabin.

It is an object of the present invention to provide a device capable of overcoming the above prior art drawbacks.

In accordance with one aspect of the invention as claimed, this object is accomplished by the provision of a device for controlling the opening of a door pivotally mounted on one side, in particular a door for the object containing compartment of a motor vehicle passenger's cabin, characterised in that it consists of a bellows of elastomeric material provided with a valve for controlling the inlet and outlet of air to and from its inside, said bellows having one end connected to the body forming the object containing compartment, the other end being connected to the end of the door opposite to its other pivotally mounted end.

In order that the present invention may be well understood there will now be described a preferred embodiment thereof, given by way of example, reference being made to the accompanying drawings, in which:

FIG. 1 is a schematic, partially cross-sectioned view of a door for an object containing compartment mounted on the dashboard of a motor-car, provided with the device of this invention, and

FIG. 2 is a view of the device of FIG. 1 showing a second operation position with the door open.

With reference to the drawings, numeral 1 designates a door for an object containing compartment 2, in particular a compartment 2 located on the dashboard 3 of a motor-car.

A bellows 4 of elastomeric material, preferably rubber, is fitted on the outside of the compartment 2 and connected through a bracket 5 to an end of the door 1 opposite to the end pivotally mounted at 7 to the body of

the dashboard 3.

The bellows 4 is further connected to the fixed portion of the dashboard by means of a bracket 10. The end 11 of bellows 4 connected to bracket 10 is provided with a valve 12 for adjusting the inlet and outlet of air to and from its inside. Valve 12 can be defined as a one-way valve, such that when the bellows extends following the opening of the door, air penetrates in it through a calibrated bore 15 so as to slow down its extension motion and the opening of the door 1. On the contrary, the closing motion of the door is not hindered by the bellows, as the valve is fitted with a curtain 16 adapted for opening completely to let the air contained in the bellows flow out freely.

The opening speed of the door 1 may therefore be adjusted at will according to the requirements of any particular arrangement of the motor-car dashboard, by varying the diameter of the bore 15 to determine the desired air flow.

In this manner there is provided a slowing-down device being reliable with time and of low constructional cost. The position of this device with respect to the movable part (the door) and the fixed part can obviously be chosen depending on the possibility of preventing the sight of it from the outside, without falling out of the scope of the present invention.

Claims

1. A device for controlling the opening of a door pivotally mounted on one side, in particular a door for the object containing compartment of a motor vehicle passenger's cabin, characterised in that it consists of a bellows (4) of elastomeric material provided with a valve (12) for controlling the inlet and outlet of air to and from its inside, said bellows having one end connected to the body (3) forming the object containing compartment (2), the other end being connected to the end of the door (1) opposite to its other pivotally mounted end (7).
2. A device as claimed in claim 1, characterised in that said valve (12) is located at the end (6) of the bellows (4) connected to the body forming the compartment (2).
3. A device as claimed in claim 1, characterised in that said valve (12) is provided with a calibrated bore (15) adapted to control only the air flow entering the bellows (4).
4. A device as claimed in claim 1, characterised in that said valve (12) is provided with a curtain (16) adapted for opening completely to let the air contained in the bellows flow out freely.
5. A device as claimed in claim 1, characterised in that said bellows (4) is connected to the body of the object containing compartment on the outside

thereof.

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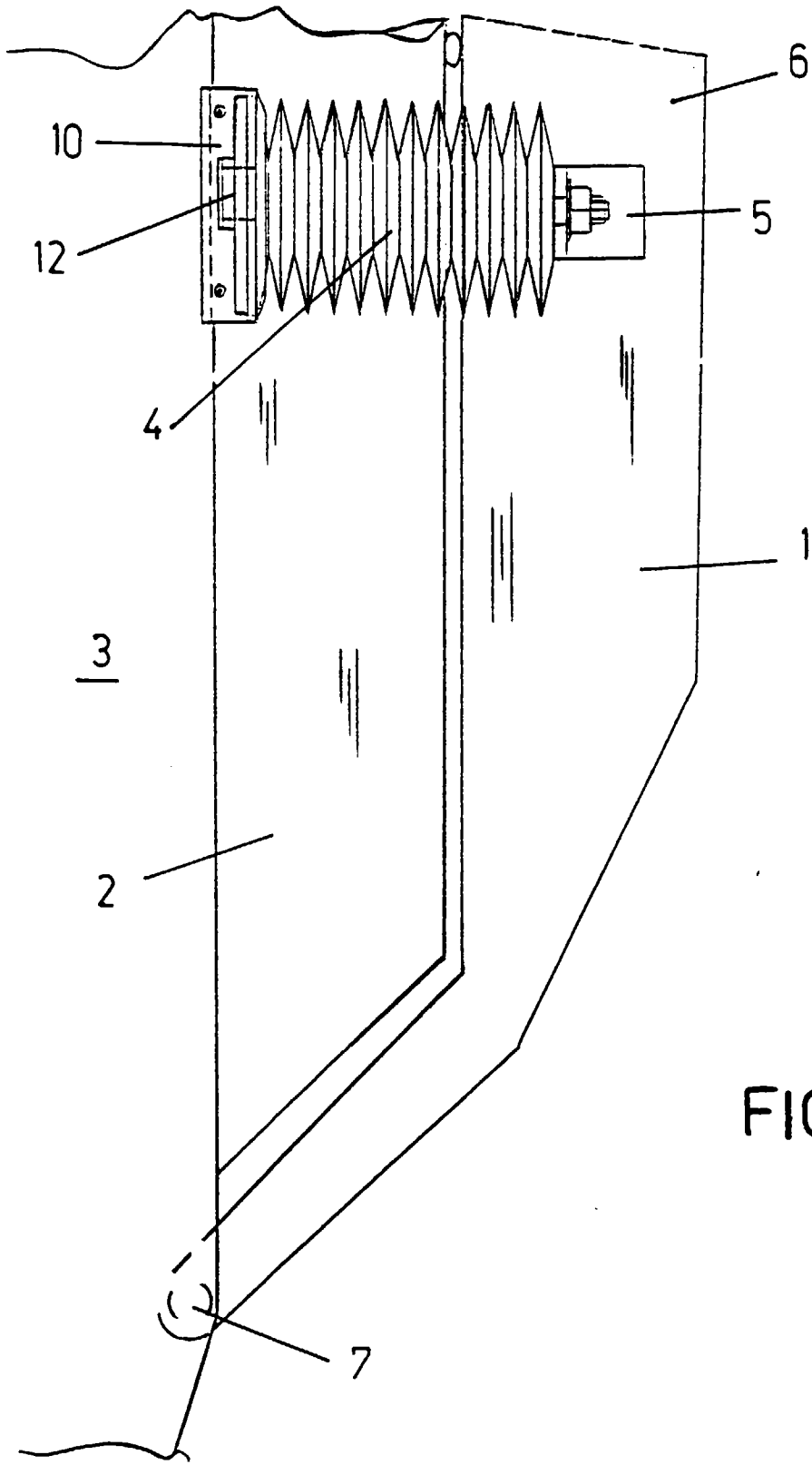


FIG. 2

