

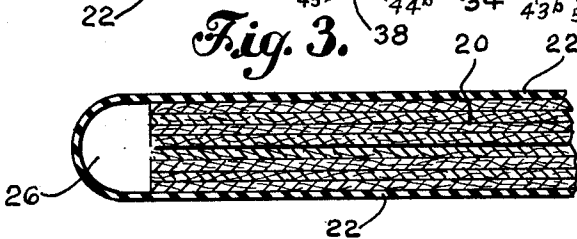
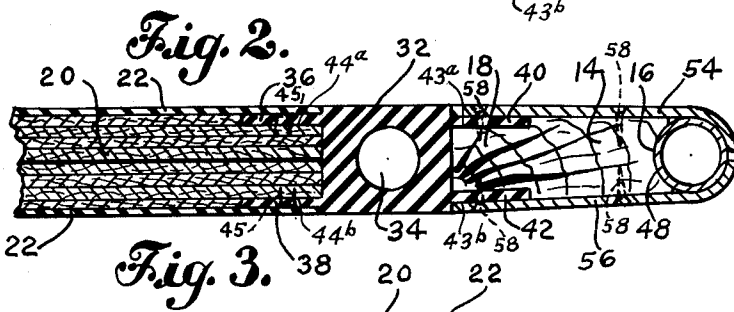
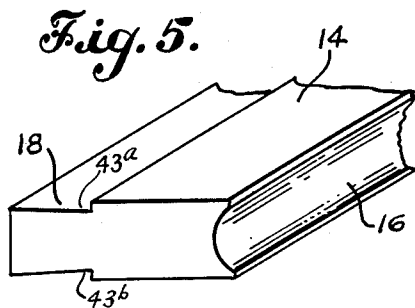
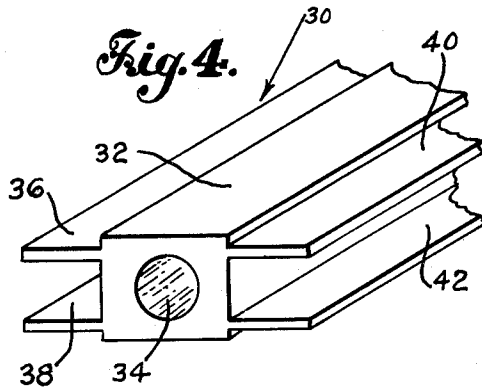
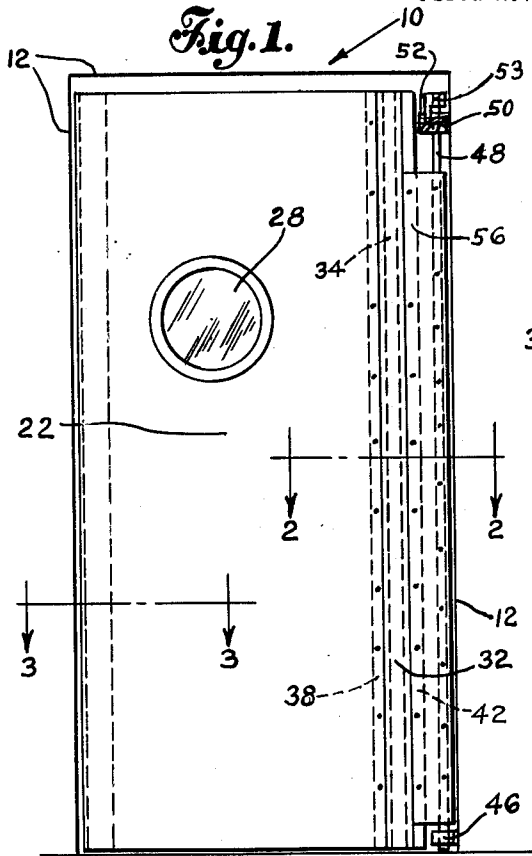
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3,146,826

YIELDABLE DOOR

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3,146,826

**YIELDABLE DOOR**

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This invention relates to a door so constructed that a portion of the body will yield upon impact with a moving object such as a truck.

One object of my invention is to form a swinging door in parts, including a resilient connector forming part of the door body that provides elbow action in two directions, thus enabling this part of said door body to first yield and absorb the shock from impact with a moving truck or the like.

Another object is to so position said resilient connector that it will be most effective in absorbing the aforesaid shock and thereby protect the mechanism upon which the door swings as well as the whole door body.

A further object is to provide such a resilient connector with attaching pieces extending inwardly and outwardly which can easily be connected to adjoining parts of the door body and serve its function as shock absorber.

A still further object is to provide such door that is simple and economical in construction the main portions of which may be made of wood or other relatively economical material, while a relatively small portion is made of said resilient connector.

The foregoing and other objects which will appear as the nature of the invention is better understood, may be accomplished by a construction, combination and arrangement of parts such as is disclosed by the drawing. The nature of the invention is such as to render it susceptible to various changes and modifications, and, therefore, I am not to be limited to the construction disclosed by the drawing nor to the particular parts described in the specification; but am entitled to all such changes therefrom as fall within the scope of my claims.

In the drawing:

FIG. 1 is a front elevational view showing my yieldable door in position of use.

FIG. 2 is an enlarged, sectional view taken on the line 2—2 of FIG. 1.

FIG. 3 is an enlarged, sectional view taken on the line 3—3 of FIG. 1.

FIG. 4 is a fragmentary, perspective view showing a resilient connector forming part of the door body.

FIG. 5 is a fragmentary, perspective view showing an inner section of the door body.

As illustrated, my door 10 may serve as a single door or as one side of a double door. It is attached to a door frame or jamb 12. An inner section at portion 14 of the door body, may be made of wood. It has a pivot mounting portion or groove 16 therein, at the inner end, while at the opposite end is an attaching portion 18.

An outer section or portion 20 of the door body is formed of wood laminations or any suitable material that is normally non-resilient. It has an outer cover sheet of rubber or other resilient material 22 cemented thereto that extends from one side of said body portion 20 to the outer end, being spaced outwardly, as at 26 from the latter, and then continuing along the opposite side of said body portion 20. I provide a window 28 set in the latter. Said outer door portion 20 is preferably at least three times the width of said inner portion 14.

A resilient connector 30 has a central or intermediate portion 32 that is solid, except that, as shown, it has a central opening 34 extending through it from top to bottom. From said center portion 32 two attaching

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pieces 36 and 38 extend outwardly and are spaced apart, and two attaching pieces 40 and 42 extend inwardly and are spaced apart. The latter pieces 40 and 42 are connected to said attaching portion 18 as by cement or otherwise, and as later described, fit into recesses made therein as at 43a and 43b respectively. The other two attaching pieces 36 and 38 are similarly connected to said main body portion 20, fitting into recesses 44a and 44b respectively therein and they are also held by staples 45 or the like that extend through said attaching pieces 36 and 38 and into said main body portion 20.

All of said attaching pieces commence at points spaced interiorly or inset from exposed or face surfaces of said central portion 32 thereby providing said recesses. Said central portion 32 and said four attaching pieces are preferably integral, and may be formed as a single rubber extrusion.

Adjacent the inner and lower part of my door is a pivot bearing 46 which is usually attached to said door jamb 12 in any well known way. A pivot member 48 shown as a length of metal pipe movably extends into said bearing 46 and said groove 16. A cam 50 near the top of my door is customarily fixed to said door frame. It has a cam follower 52 that rides on said cam 50 and that is fixed to said pipe 48 by a screw 53. Metal covering members 54 and 56 are at opposite sides of said door mount 14, being attached as by screws 58 that extend from said members 54 and 56 through said attaching pieces 40 and 42 and into said attaching portion 14. Said members 54 and 56 abut the edges of said connector center portion 32.

When my door is struck, as by a moving truck, in order to open it, said connector 30 is the first to yield and become distorted. It is capable of yielding in two directions. The movement is somewhat similar to the movement of a person's elbow. One part of said central portion 32 at one side of said opening 34 stretches while another part at the opposite side is compressed. Said opening 34 should be of sufficient size to permit ample movement. The result is that the shock from the initial impact of a moving truck against my door is absorbed to a considerable extent by said connector 30 before the door starts to open. Thus this resilient portion of the door will bend somewhat before the opening movement of the whole door commences with the result that the most violent part of the initial shock is absorbed by the resilient connector.

What I claim is:

1. A door comprising two body portions spaced apart and an integral, resilient connector between and connected to said portions, and forming part of the body thereof, said connector embodying a central portion having an intermediate opening extending longitudinally therethrough and otherwise being solid, and four attaching pieces extending from said central portion two of which are spaced laterally apart and are attached to one of said body portions, and two of which are spaced laterally apart and are attached to the other of said body portions, two of said attaching pieces being integral with an inset from the face surfaces of said connector central portion and extending towards one of the edges of said door, and a cover member extending from, overlying and attached to said latter two attaching pieces and covering said inset pieces.

2. A door comprising an inner end body portion and an outer end body portion spaced apart, and a resilient connector between and connected to said portions and forming part of the body thereof, said connector embodying a central portion having an intermediate opening extending longitudinally and four attaching pieces extending from said central portion the first two of which are

spaced laterally apart and are attached to said inner end body portion, and the second two of which are spaced laterally apart and are attached to said outer end body portion, said latter two attaching pieces being integral with and inset from the face surfaces of said connector central portion and extending towards one of the edges of said door, and a cover member extending from, overlying and attached to said latter two attaching pieces and covering said inset pieces, said cover extending beyond said outer end body portion and forming the outer end of said door.

3. A door comprising an inner body portion and an outer body portion both of non-resilient material and spaced apart, and a resilient connector between and connected to said portions and forming part of the body thereof, said connector embodying a central portion having an intermediate opening extending longitudinally and four attaching pieces extending from said central portion the first two of which are spaced laterally apart and are attached to said inner body portion, and the second two of which are spaced laterally apart and are attached to said outer body portion, said second two attaching pieces commencing at points spaced interiorly

from the face surfaces of said connector central portion, a resilient cover member extending from and attached to one of the first two of said attaching pieces and to the outer end of said outer body portion and thence to and attached to the second of the first two of said attaching pieces, a cover member extending from and attached to one of the second two of said attaching pieces and extending to the inner end of said inner body portion and another cover member extending from and attached to the second of the second two of said attaching pieces.

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