April 27, 1965 M. F. PAYNE 3,180,676

CONVERTIBLE VEHICLE BODY

Filed Nov. 13, 1961 2 Sheets-Sheet 1

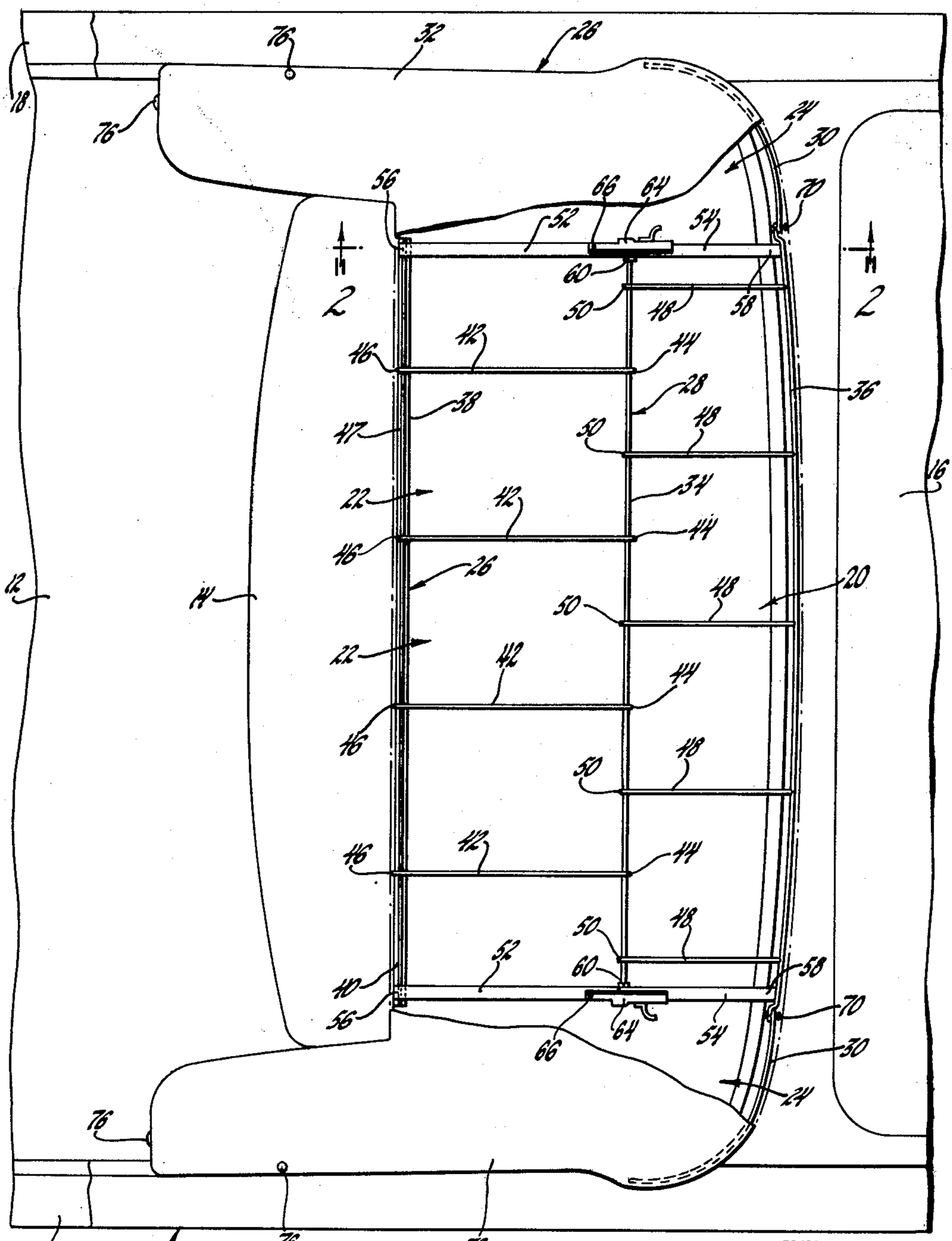

Fig. 1

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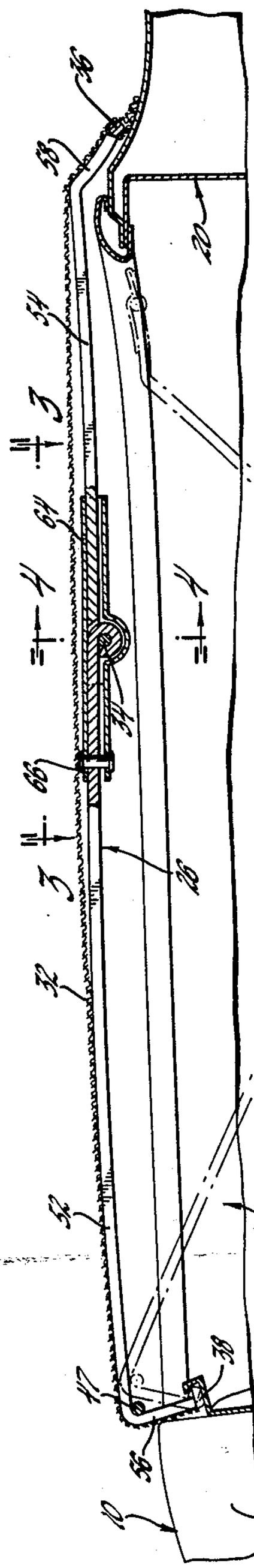

Fig. 2

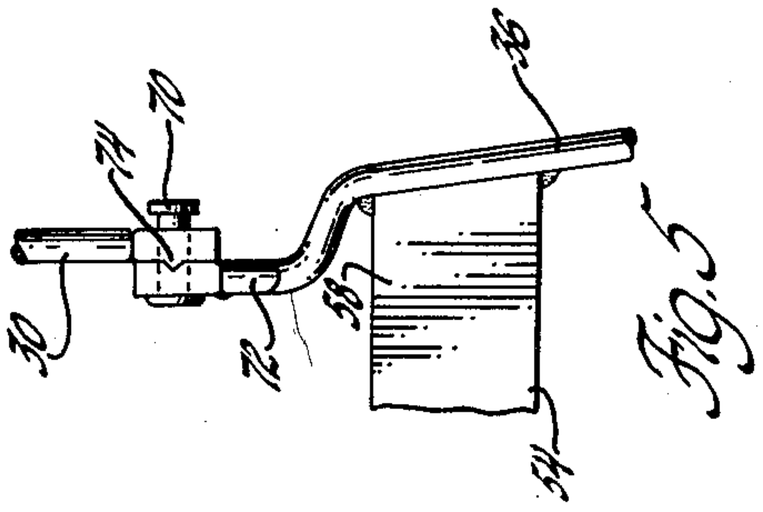

Fig. 5

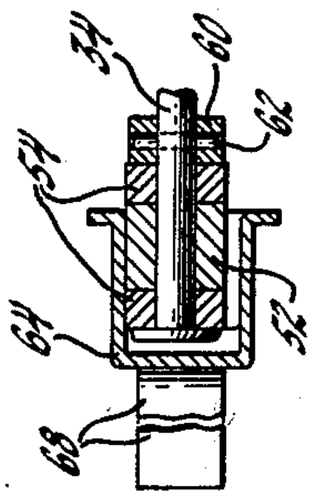

Fig. 4

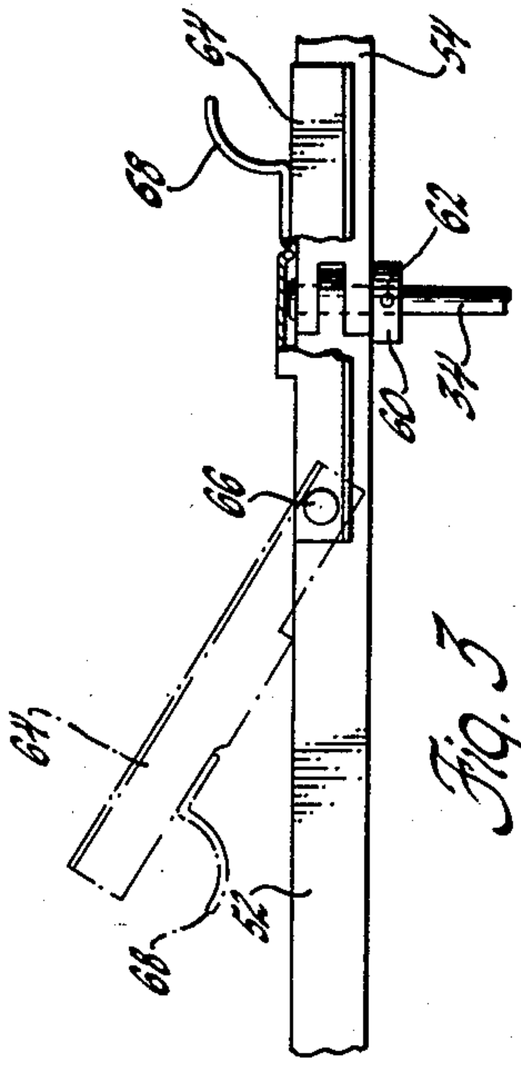

Fig. 3

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CONVERTIBLE VEHICLE BODY

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5 Claims. (Cl. 296—136)

This invention relates to convertible vehicle bodies and more particularly to top well closures for convertible vehicle bodies.

At the present time the usual convertible vehicle body includes a top well to receive the top frame in the lowered position thereof. The top well is usually covered by a fabric type boot which is secured to the body around the opening of the top well. Other types of top well covers which have been used are those of the generally rigid type wherein one or more rigid sections are removably secured in a suitable manner to the body around the top well opening.

The top well closure of this invention generally includes a main lightweight foldable frame which covers the main portion of the top well and is pivoted to the forward wall of the main portion of the top well so as to be swung forwardly and downwardly to a stored position when folded. The main frame includes a pair of foldable side frame members which are pivotally secured to the main frame so as to be foldable thereover prior to folding of the main frame. The main frame and side frame members support the top well cover which is foldable therewith.

One of the objects of this invention is to provide a top well closure which presents a smooth appearance when in place and which can be easily stored within the body when not in use. Another object of this invention is to provide a lightweight top well closure which includes a supporting frame structure foldable into a compact package easily stored within the body when not in use.

These and other objects of the invention will be readily apparent from the following specification and drawings wherein:

FIGURE 1 is a partially broken away top plan view of a portion of a convertible vehicle body embodying a top well closure according to this invention, with the closure being shown in its unfolded or closed position;

FIGURE 2 is an enlarged partially broken away view taken generally along the plane indicated by line 2—2 of FIGURE 1;

FIGURE 3 is an enlarged partially broken away view taken generally along the plane indicated by line 3—3 of FIGURE 2;

FIGURE 4 is an enlarged sectional view taken generally along the plane indicated by line 4—4 of FIGURE 2; and

FIGURE 5 is an enlarged view of a portion of FIGURE 1.

Referring now particularly to FIGURE 1 of the drawings, a convertible vehicle body 10 includes a rear seat having a seat cushion 12 and a seat back 14, a deck lid 16, doors 18, and a generally U-shaped top well 20 which receives the usual top frame (not shown) in the lowered position thereof and includes a main top well portion 22 and a pair of side well portions 24. The well 20 is closed by a well closure 26 according to this invention which generally includes a main lightweight frame 28, a pair of side frame members 30, and a fabric cover 32. Frame 28 includes an intermediatae supporting member or rod 34, a rear support member or rod 36, which is shaped generally to the contour of the rear wall of the main top well portion 22, and a forward support member or bar 38 received within a channel member 40 secured to the forward wall of the main top well portion 22. Members 34 and 38 are interconnected by a plurality

of wire members 42 having their rearward ends curled around the member 34 at 44, so as to hinge the member 34 to the members 42, and having their forward ends 46 bent laterally, secured to the member 38, and interconnected by member 47. Members 34 and 36 are likewise interconnected by a plurality of wire members 48 having their forward ends 50 curled around the member 34 so as to hinge the member 34 thereto, with the rearward offset ends of the members 48 being secured to the member 36. Members 34, 36 and 38 are further interconnected by members 52 and 54, members 52 being shaped the same as the members 42 and having their forward bent ends 56 secured to the member 38, and members 54 being shaped the same as the members 48 and having their rearward offset ends 58 secured to the member 36.

As best shown in FIGURES 2, 3 and 4 of the drawings, the curled forward end of each member 54 is formed into an apertured clevis and the curled rearward end of each member 52 is formed into an apertured tongue which is received within the clevis of the respective member 54 and is pivotally secured thereto by the member 34 passing through the aligned apertures in the members 52 and 54. The ends of the member 34 are headed over, as shown, and a collar 60 is pinned at 62 to the member 34 to the inner side of each member 54 to prevent lateral shifting movement of these members along the member 34.

Members 52 and 54 are held in a slighty downwardly bowed relationship in the normal or closed position of closure 26 by a manual type of latch which generally includes a channel shaped latch member 64 pivoted at 66 to each member 52 and adapted to receive both the adjacent ends of the members 52 and 54 therein as shown in FIGURES 3 and 4. A finger hold 68 attached to the member 66 allows it to be moved between its locked position, as shown in full lines in FIGURE 3, wherein rotational movement of the members 52 and 54 relative to each other is prevented, and an open position, as shown in dot-dash lines in FIGURE 3, wherein these members may pivot relative to each other.

The side frame members 30 are each of generally arcuate shape so as to follow the rear wall contour of the side well portions 24 of the top well. One end of each or the members 30 is pivoted by a headed pin 70 to the flattened offset end 72 of the member 36, as shown best in FIGURE 5. Each member 30 is further provided with a transverse generally V-shaped tongue 74 to each side of the aperture therethrough which are adapted to be received within complementary shaped grooves in the member 36 when the members 30 and 36 are located in aligned relationship. The fabric cover 32 is suitably secured to the members 36 and 38 and also to the members 30. The side wing portions of the cover 32 include at least two conventional snap buttons 76 which are adapted to be snapped over complementary fasteners secured to the body.

When the top well closure is in its normal or closed position as shown in FIGURES 1 and 2, the buttons 76 are in a snapped position to tension the side wing portions of the fabric cover 32 and in turn hold the tongues 74 of the members 30 in tight fitting engagement within the complementary grooves in the member 36.

The fabric cover 32 is tensioned between the members 36 and 38 when the closure 26 is in its normal or closed position so as to present a smooth appearance across the entire main portion of the top well, as can be seen in FIGURE 2. Also it will be remembered that the latch member 64 holds the members 52 and 54 in a slightly downwardly bowed position when the members are engaged therewithin. This causes the member 36 and in turn the members 30 to tightly grip the body adjacent the rear wall opening of the top well 20. The offset ends 58 of the members 54 and the similar offset ends of the mem-

bers 48 aid in this gripping of the members 36 and 30 to the body and, of course, also aid in tensioning the fabric cover 32.

When it is desired to move the closure 26 to a stored position, the buttons 76 are first released and the members 30 can thereupon be folded over the members 48 with the side wall portions of the fabric cover. Thereafter, the latch members 64 are moved to their unlatched or open position, as indicated by dot-dash lines of FIGURE 3. The operator then presses against the member 34 to initially fold the main frame 28, with this folding movement being thereafter continuous by grasping the member 36 and moving it forwardly of the body so that the entire closure is folded into a very compact package which can be stored against the forward wall of the top well compartment, so as to be out of the way of the top frame.

Thus, this invention provides a new and improved top well closure.

What is claimed is:

1. In a vehicle body having a top well opening including a main portion defined by forward and rearward edge portions and a pair of side portions defined by inner and outer edge portions merging respectively into said forward and rearward main edge portions, a top well closure comprising, in combination, a main foldable frame including a forward portion mounted on said body adjacent said forward edge portion and a rearward portion pivoted to said forward portion and engageable with said body adjacent said rear edge portion, a pair of side frame members pivotally mounted on said rearward frame portion and extending therefrom partially around said side edge portions, a flexible cover of a size to cover said opening, means securing said cover to said forward and rearward frame portions and to said side frame members, and means securing said cover to said body adjacent said inner and outer edge portions.

2. In a vehicle body having a top well opening including a main portion defined by forward and rearward edge portions and a pair of side portions defined by inner and outer edge portions merging respectively into said forward and rearward main edge portions, a top well closure comprising, in combination, a main frame including a forward portion swingably mounted on said body adjacent said forward edge portion and a rearward portion foldable relative to said forward portion between generally aligned and folded positions relative thereto, said rearward portion overlapping said rear edge portion and engageable with said body adjacent thereto in said aligned position, a pair of side frame members pivotally mounted on said rearward frame portion and extending partially around said side edge portions, a flexible cover of a size to cover said opening, means securing said cover to said forward and rearward frame portions and to said side frame members, and means securing said cover to said body adjacent said inner and outer side edge portions.

3. In a vehicle body having a top well including a main portion defined by forward and rearward walls and a pair of side portions defined by inner and outer walls merging respectively into said forward and rearward walls, a top well closure comprising, in combination, a main frame including a forward portion swingably mounted on said forward wall and a rearward portion pivotally secured to said

forward portion for folding movement relative thereto between a generally aligned position wherein said rearward portion overlaps said rear wall and engages said body adjacent thereto and a folded position wherein said forward and rearward portions are generally juxtaposed to said forward wall, a pair of side frame members pivotally mounted on said rear frame portion and extending therefrom adjacent said outer walls, a flexible cover of a size to cover said well, means securing said cover to said forward and rearward frame portions and to said side frame members, and means securing said cover to said body adjacent said inner and outer side edge portions.

4. In a vehicle body having a top well opening including a main portion having forward and rearward edge portions and a pair of side portions having inner and outer edge portions joined respectively to said forward and rearward edge portions, a top well closure comprising, in combination, a unitary frame assembly including a main frame mounted on said body adjacent said forward edge portions and engageable with said body adjacent said rearward edge portion and a pair of side frame members pivotally mounted on said main frame and movable in directions generally transversely thereof between a folded position overlying said main frame for compact storage and an unfolded position extending from said main frame and overlying said side portions, a flexible cover of a size to cover said opening, means securing said cover to said main frame and to said side frame members, and means securing said cover to said body adjacent said inner and outer edge portions.

5. In a vehicle body having a top well opening including a main portion having forward and rearward edge portions and a pair of side portions having inner and outer edge portions joined respectively to said forward and rearward edge portions, a top well closure comprising, a combination, a unitary frame assembly including a main frame having a forward portion mounted on said body adjacent said forward edge portion and a rearward portion engageable with said body adjacent said rearward edge portion, said frame assembly further including a pair of side frame members pivotally mounted on said rear frame portion and movable in directions generally transversely thereof between a folded position overlying said main frame for compact storage and an unfolded position extending from said rear frame portion and overlying said side portions, means biasing said rearward frame portion and said side frame members into engagement with said body, a flexible cover of a size to cover said opening, means securing said cover to said forward and rearward frame portions and to said side frame members, and means securing said cover to said body adjacent said inner and outer edge portions.

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PHILIP ARNOLD, *Primary Examiner.*

A. HARRY LEVY, *Examiner.*

UNITED STATES PATENT OFFICE

CERTIFICATE OF CORRECTION

Patent No. 3,180,676 April 27, 1965

Murel F. Payne

It is hereby certified that error appears in the above numbered patent requiring correction and that the said Letters Patent should read as corrected below.

Column 2, line 43, for "or the members" read -- of the members --; column 4, line 36, for "a combination," read -- in combination, --.

Signed and sealed this 14th day of September 1965.

(SEAL)
Attest:

ERNEST W. SWIDER
Attesting Officer

EDWARD J. BRENNER
Commissioner of Patents