Nov. 1, 1949 J. W. J. ACKERMANS 2,486,905

CONVERTIBLE TOP LATCHING MEANS

Filed Jan. 17, 1946 2 Sheets-Sheet 1

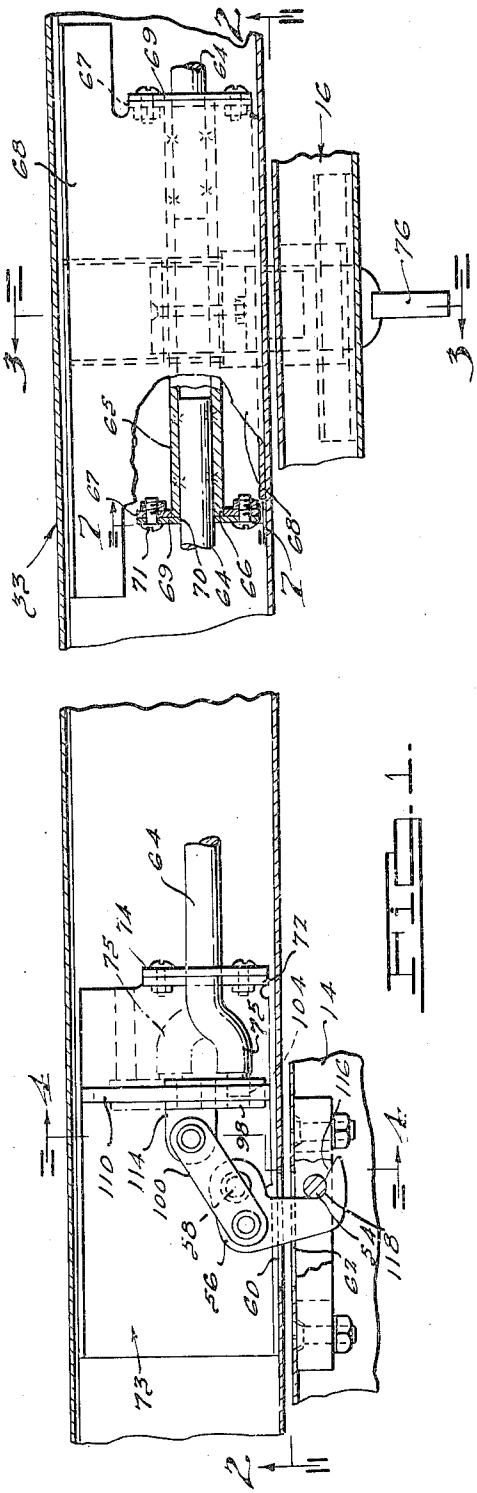


Fig. 1.

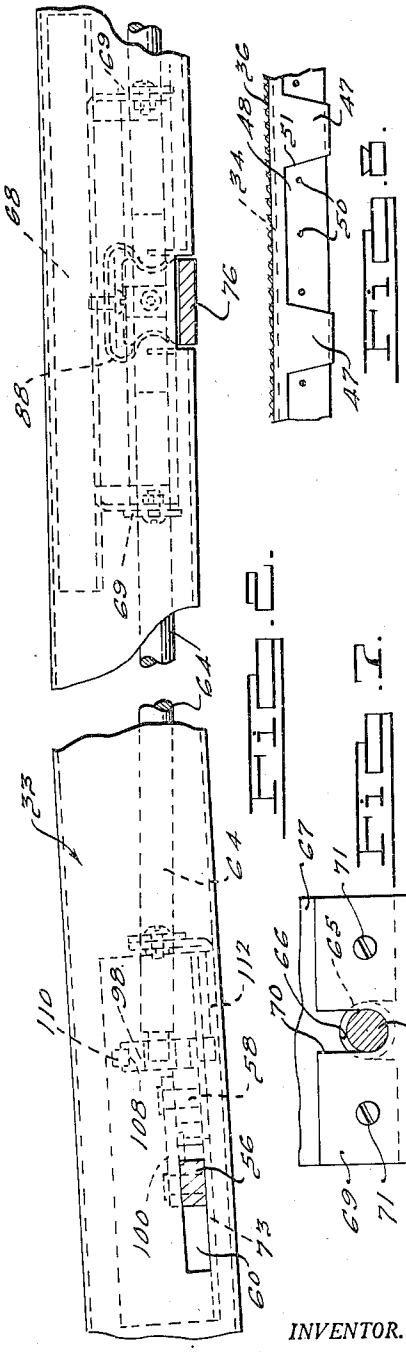


Fig. 2.

Fig. 3.

Fig. 4.

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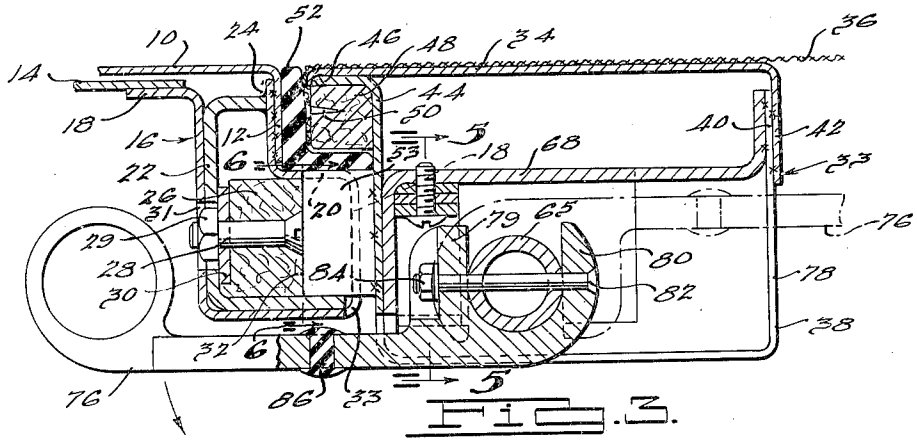


Fig. 3.

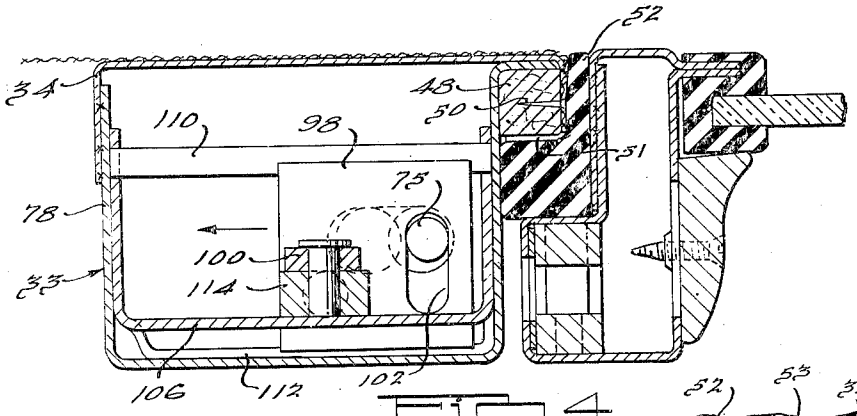


Fig. 4.

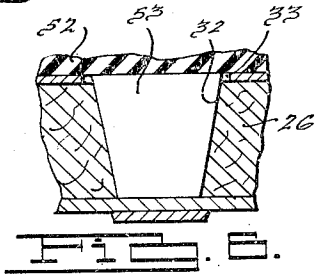


Fig. 6.

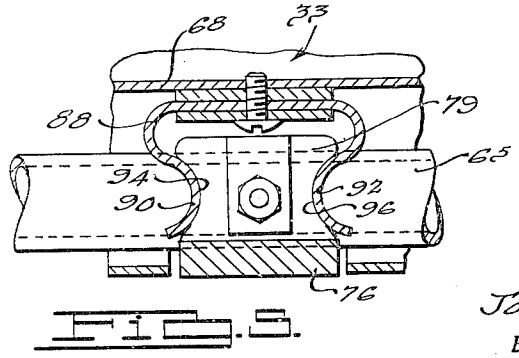


Fig. 5.

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2,486,905

CONVERTIBLE TOP LATCHING MEANS

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Application January 17, 1946, Serial No. 641,788

12 Claims. (Cl. 296—120)

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The invention relates broadly to foldable vehicle tops and more particularly to an improved means for latching the top in a closed position.

In conventional vehicles, foldable tops are supported in the closed position by body frame members which extend above and behind the windshield and are held attached thereto by suitable clamps. Since these clamps must be separately loosened or tightened each time the top is opened or closed, the operation of engaging or releasing the top is an arduous one. The difficulty is aggravated by the fact that a substantial number of the clamps are usually provided and many of them are located in difficultly accessible places; moreover, they are located at spaced intervals along the forward edge of the top and the person opening or closing the clamps must reach from one side of the car to the other in order to complete the operation.

An important object of the present invention is to provide means for latching the foldable top to the frame wherein all of the latch members may be released or engaged simultaneously.

Another object of the invention is to provide a device of the above mentioned character in which the latch means is operated by a single handle located within the vehicle and substantially medially of the top.

Still another object of the invention is to provide a device of the above mentioned character in which the operating handle is readily accessible to and easily operated by any person in the vehicle while being substantially flush with the lower surface of the foremost bow.

Yet another object of the invention is to provide a folding top construction which permits a vertical, flush-type seam or joint between the forward end of the top and the frame members.

Other objects and advantages of the invention will be apparent during the course of the following description.

In the drawings forming a part of this specification and wherein like numerals are employed to designate like parts throughout the same,

Figure 1 is a plan view showing a latching mechanism embodying the present invention;

Fig. 2 is a vertical sectional view taken on the line 2—2 of Fig. 1;

Fig. 3 is a transverse sectional view taken on the line 3—3 of Fig. 1;

Fig. 4 is a transverse sectional view taken on the line 4—4 of Fig. 1;

Fig. 5 is a fragmentary, longitudinal sectional view taken on the line 5—5 of Fig. 3;

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Fig. 6 is a cross-sectional view taken substantially along the line 6—6 of Fig. 3;

Fig. 7 is a cross-sectional view taken substantially along line 7—7 of Fig. 1; and,

Fig. 8 is a detail view showing how a tacking strip is mounted in Figs. 3 and 4.

Considered in certain of its broader aspects, the vehicle top construction embodying the present invention comprises a stationary frame or cowling at the front of the roof and a foldable top which is carried by a plurality of supports or bows, the foremost of which is U-shaped. These bows are pivoted on the body of the vehicle in the conventional manner and when the top is closed, the foremost bow is supported by the edge of the cowling.

I have provided a novel union between the foremost bow and the cowling which permits the bow to be easily moved from or against the cowling and provides a vertical flush-type weatherproof seam or joint therebetween. Attached to the edge of the cowling and extending transversely across the vehicle roof is a hollow rail which supports the bow when the top is closed. The bow carries a hollow or tubular support and the latter is provided with a forwardly projecting lip which fits in a recess at the upper rear edge of the rail. Disposed between the walls of the recess and the confronting surfaces of the lip is a sealing strip of rubber or the like. Manifestly, the sealing strip can be attached either to the walls of the recess or to the lip but I prefer that it be carried by the latter.

From the foregoing, it will be readily apparent that the recess defines a horizontal shoulder which extends under the lip to the inner face of the rail and also a vertical wall which extends to the top of the rail and sustains forward thrust of the bow. This construction permits easy engagement and disengagement of the foldable top with the cowling; and, at the same time, provides a weathertight joint therebetween.

I have also provided a novel latch mechanism for holding the foremost bow securely attached to the cowling in which all of the latches can be engaged or released simultaneously by means of a readily accessible handle located within the vehicle. Mounted within the support and projecting forwardly thereof through suitable openings are pivoted latches which enter aligning openings in the rail and releasably engage respective catches provided therein. The actuator mechanism for the latches includes a rockshaft which extends longitudinally in the support and between the latches. Attached to the rockshaft

is a manually operated handle which extends into the vehicle through a transverse slot in the support. Preferably, the operating handle is located at the front of the top and substantially medially in the vehicle where it is readily accessible. This handle can be swung through a predetermined arc and a spring clip securely but releasably engages therewith at each end of its travel to hold it stationary. At its ends the rockshaft is provided with laterally offset portions and each of these portions is coupled to a respective latch by a suitable linkage. These linkages are identical and each comprises a horizontal slide and a link pivoted at one end to the slide and at the other end to the latch. The slide has a vertical slot which loosely receives the end portions of the rockshaft. By reason of the slotted connection between the rockshaft and the plate, the construction adapts itself readily to the arched formation of the bow and variations in curvature thereof. This is an important feature of the invention since the curvature in the bow may vary considerably and even though it varies, the same latches may be employed since they will accommodate such variations. Thus, when the offset end portions swing about the axis of the shaft, they actuate the slides which in turn rock the latches about their pivots through the medium of the links. When the handle is swung forwardly the latches are engaged with the catches, and when the handle is swung rearwardly, the latches are released from the catches. The latches preferably exert a wedging action against the catch elements, in order to draw the bow and rail together and press the sealing strip solidly against the vertical wall of the recess. This insures a weathertight joint.

To close the top it is swung forwardly in the usual manner with the handle pulled back to hold the latches in a catch releasing position. As the foremost bow approaches the rail, the guide or dovetail engages to effect alignment of the parts longitudinally of the vehicle. To latch the top it is merely necessary to reverse the position of the operating handle which moves the latches simultaneously into interlocking engagement with the catch elements.

For a more detailed description of the invention, reference is had to the accompanying drawings wherein the numeral 10 designates a fragmentary portion of the cowling which covers the forward portion of the vehicle roof. Attached to a flange 12 at the rearward edge of the cowling 10 and to an under supporting plate 14 is a hollow or tubular rail 16. The latter is formed of sheet material and extends transversely across the vehicle roof. Immediately below the flange 12, the rail 16 is formed with a horizontal extension 20 which, together with the flange 12, defines a longitudinal rabbeted recess at the upper edge of the rail. The rail 16 is secured to a short metal channel 22 which is centrally located and this channel is welded to the rail as indicated at 24. Within the channel a fibrous block 26 is provided and this block is secured by a bolt 28 and nut 29 to a metal plate 30 which is welded to the front wall of the channel. Both front walls of the rail 16 and channel 22 have openings 31 to accommodate said bolt and nut so that the fibrous block may be easily secured in place.

As best shown by Fig. 6, the block 26 has a V-shaped notch or recess 32 which opens upwardly and the rail extension 20 is open in the region of the notch as indicated at 33. The notch

is adapted to receive a V-shaped metal element which presently will be described.

The foremost bow 33 is substantially tubular in form and the portion thereof which extends across the vehicle top comprises a support for the latching mechanism. The upper portion of the support comprises a metal strip 34 which extends transversely across the fabric top 36 and the lower portion thereof comprises a U-shaped metal strip 38. The rear wall 40 of the lower strip 38 is welded to a depending flange 42 on the upper strip 34 and the front wall 44 thereof is formed with a forwardly extending flange 46 which is flush with the forward edge of the upper strip and welded or otherwise secured thereto. At its forward end, the strip 34 is folded downwardly as indicated at 47 and retains a tacking strip 48 and the fabric 36 is tacked to the latter by tacks 50 which extend through notches or scallops 51 in strip 34.

The strip 48 forms a projecting lip along the upper edge of the bow which enters the recess in the rail 16 when the bow is swung to the closed position. Attached to the lip and closing the joint between it and the walls of the recess is a sealing strip 52 of rubber or the like. Preferably, the sealing strip 52 covers the entire front and bottom surfaces of the lip, as shown in Fig. 3, so that it seats on the extension 20 and against the flange 12 to hold the top flush with the cowling and prevent metal-to-metal contact between the bow and rail.

Below the rubber 52, the front wall 44 has a U-shaped element 53 welded thereto and this element is adapted to enter the opening 32 in extension 20 on rail 16 and seat in the notch 33 in block 26. It is evident that the element 53 and notch 33 co-operate to center the front end of the top laterally of the vehicle and to guide the top to its proper position. This is particularly important in connection with latching means to be described as it ensures proper location of the latches for engagement and disengagement.

In order to latch the foldable top to the cowling I provide a pair of spaced catch elements 54 in the lower portion of the rail 16 and a pair of pivoted latches 56 in the lower portion of the bow 33. While only one catch element 54 and one latch 56 is shown in the drawings, it will be understood that there are two of each and that they are disposed at opposite sides of the roof. Such latches 56 are mounted on vertical pivots 58 and project forwardly of the bow 33 through the openings 60. When the bow is against the rail 16, the latches are adapted to project through aligning openings 62 in the latter and engage catch elements 54.

Each of the latches 56 is actuated by a rockshaft 64 which extends longitudinally through the bow 33 and between the latches. At their inner ends, the rockshaft 64 projects into opposite ends of a tube 65 and are welded thereto. The tube 65 fits at its ends in downwardly open semicircular recesses 66 provided in downwardly projecting flanges 67 formed on a bracket plate 68 welded to strip 38. Such ends of the tube are held in the recesses 66 by plates 69 having U-shaped recesses or holes 70 receiving the shafts 64 and overlapping the ends of the tube so as to prevent endwise movement of the latter. Bolts 71 secure the plates 69 to flanges 67.

Towards its outer end, each of the shafts 64 is similarly supported in a recessed flange 72 projecting upwardly from a bracket plate 73 welded also to the strip 38. A plate 74 having a

U-shaped recess or hole receiving the shaft 64 is bolted to the flange and the two separable parts turnably support the shaft. It is evident that the shafts 64 and tube 65 may be easily assembled with plates 69 and 74 during assembly of the latter and bow. The portions 75 of the rockshaft which extends beyond bearing plates 72 are laterally offset, as shown in Fig. 1. As suggested, the offset portions 75 actuate latches 56 through the medium of suitable linkages when the rockshaft is oscillated.

Oscillation of rockshaft 64 is accomplished manually by means of a handle 76, which handle is attached to the tube 65 at substantially its middle and extends into the vehicle through a transverse slot 78 in the lower part 38 of bow 33. At its inner or attached end the handle 76 is provided with laterally extending fingers 79 and 80 which embrace the tube 65, and these fingers are attached to the tube rockshaft by a bolt 82 and nut 84. When the handle 76 is in the forward position, as shown by the full lines in Fig. 3, the offset end portions 75 are positioned forwardly in the bow 33 as shown in Fig. 1. On the other hand, when the handle 76 is in the rearward position shown by the dot and dash lines in Fig. 3, the offset end portions 75 extend rearwardly as shown by dot and dash lines in Fig. 1. In order to prevent metal-to-metal contact of handle 76 with the rail 16 and support 68, it is equipped with a suitable bumper 86 of rubber or the like.

The handle 76 is releasably held in the two positions shown in Fig. 3 by means of a spring clip 88 which is attached to the support 68 at the front of the tube 65. As best shown in Fig. 5 the clip 88 is provided with a pair of laterally spaced resilient arms 90 and 92 which snap into recesses 94 and 96 in the sides of fingers 79 and 80. When handle 76 extends forwardly, the finger 79 is engaged by clip 88, and when the handle extends rearwardly, the finger 80 is engaged thereby, as shown in Fig. 3.

The linkages for transmitting motion from rockshaft 64 to the latches 56 comprise slides 98 and links 100. The slides 98 are carried by supports 73 and are provided with vertically elongated slots 102 which receive journals 104 on the offset ends 75. The vertically elongated slots 102 in slides 98 accommodate the vertical movement of the offset end portions 75 of the rockshaft 64, and, as shown in Fig. 2, the slotted connections between the rockshaft and the slides permit the mechanism to readily adapt itself to the arched formation of the bow 33. As best shown in Fig. 4, the bottom portions 106 of bracket plate 73 are spaced from the bow 33 and the lower portions of the slides 98 extend through elongated slots therein. The upper edges of the slides 98 are provided with grooves 108 and these grooves receive guides 110 which are carried by supports 73. At one side of the slides 98, the plates 73 are depressed downwardly as at 112, and the depressed portions rest solidly on the bottom of the bow 33. One end of the links 100 are pivoted to brackets 114 on the slides 98 and the other ends thereof are pivotally attached to the latches 56 at one side of the pivot pins 58.

It will be readily apparent that when the offset end portions 75 are swung rearwardly, the slides 98 are retracted and the links 100 move the latches 56 away from catches 54. When the offset end portions are swung forwardly the slides 98 are advanced and links 100 move the latches 56 into

engagement with the catches 54. As the latches move into engagement, inclined surfaces 116 thereon exert a wedging action against the catches which press-holds the bow 33 solidly against the rail 16 and compresses the rubber sealing strip 52. Behind the inclined surfaces 116, the latch elements are provided with shallow sockets 118 which receive the catch elements and hold the latches securely but releasably associated therewith.

It is to be understood that when the latches are retracted, their front ends will move out of slots 62 and be fully retracted through slots 60 so that the top may be opened and closed without the latches interfering with such operations.

In the foregoing it has been mentioned that the rubber strip 52 seals the line between folding top and stationary part or bow at the rear end thereof. While this is an efficient means to prevent leakage, etc., it may be stated too that the bow may be slightly concave in cross-section or otherwise shaped to form a water collecting gutter extending crosswise of the vehicle so as to drain any water possibly leaking past the seal to points at opposite sides of the vehicle.

Although only one form of the invention has been illustrated and described in detail, it will be apparent to those skilled in the art that various modifications may be made without departing from the scope of the claims.

Having thus described the invention, I claim:

1. In combination with a foldable vehicle top of the type adapted to be supported at its forward end by body frame members, means for latching the top to the frame members comprising a pair of spaced vertical catch elements carried by said frame members; a bow carried by and movable with the forward edge of the top; a pair of latches pivoted on the bow and adapted to move in substantially horizontal planes into and out of engagement with respective catch elements and when engaged therewith to hold the top solidly attached to the frame members; and an actuator operable from within the vehicle for simultaneously moving the latches to either a catch engaging position or a catch releasing position, said actuator including a rockshaft extending transversely across the top and journaled in said bow, said rockshaft having crank end portions which swing about the axis of the shaft, a handle attached to the rockshaft and adapted to swing said end portions through a predetermined arc, and coupling assemblies including horizontally movable slides having vertically elongated slots which receive said crank ends, said assemblies tiltable about the crank ends and having a relatively great angular adjustment and adapted to transmit motion from said end portions to the latches whereby the latter are rocked about their pivots and relative to said catch elements.

2. In combination with a foldable vehicle top of the type adapted to be supported at its forward end by body frame members, means for latching the top to the frame members comprising a pair of spaced vertical catch elements carried by said frame members; a bow carried by and movable with the forward edge of the top; a pair of latches pivoted on the bow and adapted to move in substantially horizontal planes into and out of engagement with respective catch elements and when engaged therewith to hold the top solidly attached to the frame members; and an actuator operable from within the vehicle for simultaneously moving the latches to either a catch engaging position or a catch releasing posi-

tion, said actuator including a rockshaft extending transversely across the top and journaled to said bow, said rockshaft having crank end portions which swing about the axis of the shaft, a handle attached to the rockshaft and adapted to swing said end portions through a predetermined arc, transverse plate members having vertically elongated slots which receive said crank ends and permit relatively great angular adjustment in a vertical plane containing said rockshaft, means holding the plates against rotation but permitting sliding movement thereof in planes substantially transverse to the axis of said rockshaft, and pivoted links carried by the plates and attached to the latches at one side of their pivots.

3. In combination with a foldable vehicle top of the type adapted to be supported at its forward end by body frame members, means for latching the top to the frame members comprising a pair of spaced vertical catch elements carried by said frame members; a bow carried by and movable with the forward edge of the top; a pair of latches pivoted on the bow and movable about said pivots in substantially horizontal planes, said latches having catch engaging ends adapted to move back and forth relative to the longitudinal middle of the vehicle top into and out of engagement with respective catch elements and when engaged therewith to press-hold the top solidly attached to the frame members; and an actuator operable from within the vehicle for simultaneously moving the latches to either a catch engaging position or a catch releasing position, said actuator including a rockshaft extending transversely across the top and journaled to said bow, said rockshaft having crank end portions which swing about the axis of the shaft, a handle attached to the rockshaft and adapted to swing said end portions through a predetermined arc, plate members carried by said end portions and provided with vertically elongated slots through which said end portions extend and which permit relatively great angular adjustment of said plate members about said crank ends whereby to compensate for curvature in said vehicle top, guide means supporting said plate members for movement in a direction transverse to the axis of said rockshaft and normal to the major axes of said slots, and pivoted links carried by the plate members and attached to said latches at one side of their pivots, the various parts of said actuator so constructed and arranged that a full movement of said handle moves the catch engaging ends of said latches through an angle substantially less than said predetermined arc.

4. A foldable top construction for vehicles comprising a stationary hollow rail at the forward end of the vehicle, said rail extending transversely across the vehicle roof and provided with a recess; a foldable top mounted on the vehicle; a hollow bow carried by the top, a sealing strip between the bow and said rail adapted to close the joint therebetween; spaced catch elements in said rail; pivoted latches mounted in the bow and projecting forwardly through openings in the latter, said latches adapted to enter openings in the rail and engage the catch elements; an extension on said bow adapted to enter and fit snugly in said recess when the top is closed, said recess and said extension having correspondingly tapered side walls which wedge solidly together to hold the top in fixed association with the rail and are operative to position said latches

in proper relation to said catches and to prevent loosening and rattling of the latches due to lateral movement of the top relative to said rail when the vehicle is in motion; and an actuator operable from within the vehicle for simultaneously moving the latches to either a catch engaging position or a catch releasing position, said actuator including a rockshaft journaled in the bow and extending longitudinally therethrough between said latches, said rockshaft having laterally offset crank end portions, a handle attached to the rockshaft and extending into the vehicle through a transverse slot in the bow, said handle being manually operable and adapted to swing the end portions of the rockshaft through a predetermined arc, plate members provided with vertically elongated slots which receive and accommodate vertical movement of said crank end portions whereby said plate members are vertically stationary in the bow but slidably actuated horizontally by the rockshaft, and pivoted links carried by the plate members and attached to said latches at one side of their pivots whereby to rock the latches about their pivots and relative to the catch elements when the plate members are slidably actuated by the rockshaft.

5. A foldable top construction for vehicles comprising a stationary rail forming the roof's outer surface contour at the front of the vehicle, said rail provided at the rearward edge thereof with a rabbet which extends continuously across the top of the vehicle and said rabbet having an upwardly and rearwardly opening centrally located recess; a foldable top mounted on the vehicle, the forward end of said top shaped to interfit with said rabbet and adapted to be supported by said rail, said forward end having a fixed member positioned to enter the recess, said recess and said fixed member having correspondingly tapered side walls which wedge solidly together to assure identical positioning of said top each time it is closed and to prevent lateral movement of the top when the vehicle is in motion; a sealing strip between the end surface of the top and the vertical wall of the rabbet for closing the joint therebetween; and latch means for releasably attaching the roof to the rail and for pulling the former solidly against said sealing means.

6. A foldable top construction for vehicles comprising an arched stationary rail forming the roof's outer surface contour at the front of the vehicle, said rail provided at the rearward edge thereof with a rabbet which opens onto the top of the vehicle roof and having an upwardly and rearwardly opening recess located centrally of the rabbet; a foldable top mounted on the vehicle, the forward end of said top shaped to interfit with said rabbet and adapted to be supported by said rail, said end having a fixed member positioned to enter the recess, said recess and said fixed member having correspondingly tapered side walls which wedge solidly together when the top is closed; a sealing strip carried by the top and adapted to seat against the vertical wall of the rabbet and means for latching the top to the rail including spaced catch elements carried by the rail below said rabbet, pivoted latches carried by said top and adapted to move into and out of engagement with the catch elements and when engaged therewith to hold the sealing strip pressed solidly against the vertical wall of the rabbet, said latches automatically positioned for proper engagement with

said catch elements by said recess and said fixed member, and an actuator operable from within the vehicle and cooperatively associated with said latch members, said actuator adapted to move the latches simultaneously to either a catch engaging or a catch releasing position.

7. In a foldable top construction for vehicles, a stationary rail forming the roof's outer surface contour at the forward end of the vehicle, said rail provided with an upwardly and rearwardly opening rabbet which extends longitudinally thereof and transversely of the vehicle, said rail also provided at substantially its middle with an upwardly and rearwardly opening recess; a foldable top mounted on the vehicle; a bow at the forward end of the top; and means for supporting the bow on the rail including a forwardly extending flange on the bow adapted to fit into said rabbet when the top is closed, and a forward extension on the bow which enters the recess when the top is closed, said extension and said recess having correspondingly tapered side walls which wedge together and coact to guide the bow into alignment with the rail and to prevent relative lateral movement or play between the rail and the bow when the top is closed, the mentioned parts of said rail and said bow permitting at least limited linear movement of the bow longitudinally of the vehicle and relative to said rail without disengaging the bow from the rail.

8. A foldable top construction for vehicles comprising a stationary rail forming the roof's outer surface contour at the forward end of the vehicle, said rail provided with a rabbet which extends longitudinally thereof and transversely of the vehicle and an upwardly and rearwardly opening recess; a foldable top mounted on the vehicle; a bow at the forward end of the top, said bow shaped to fit into said rabbet and having a forward extension which enters the recess when the top is closed, said extension and said recess having correspondingly tapered vertical walls which coact to guide the top into position when the latter is closed and to prevent lateral movement of said top when the vehicle is in motion, the mentioned parts of said rail and said bow permitting at least limited linear movement of the bow longitudinally of the vehicle and relative of said rail; and means for latching the bow to the rail.

9. A foldable top construction for vehicles comprising a stationary rail forming the roof's outer surface contour at the forward end of the vehicle, said rail provided with a rabbet which extends longitudinally thereof and transversely of the vehicle and an upwardly and rearwardly opening recess; a foldable top mounted on the vehicle; a bow at the forward end of the top, said bow shaped to fit into said rabbet and having a forward extension which enters the recess when the top is closed, said extension and said recess having correspondingly tapered vertical walls which coact to guide the top into position when the latter is being closed and to prevent lateral movement of said top when the vehicle is in motion, the mentioned parts of said rail and said bow permitting at least limited linear movement of the bow longitudinally of the vehicle and relative to said rail; and interengageable catch and latch means carried by the rail and bow respectively operable when engaged with each other to press-hold the bow solidly forwardly against the rail and to restrain the bow against independent movement longitudinally of the vehicle.

10. A foldable top construction for vehicles comprising a stationary rail forming the roof's outer surface contour at the forward end of the vehicle, said rail provided with a rabbet which extends longitudinally thereof and transversely of the vehicle and an upwardly and rearwardly opening recess; a foldable top mounted on the vehicle; a hollow bow at the forward end of the top, said bow shaped to fit into said rabbet and having a forward extension which enters the recess when the top is closed, said extension and said recess having correspondingly tapered vertical walls which coact to guide the top into position when the latter is closed and to prevent lateral movement of said bow relative to the rail when the vehicle is in motion, the mentioned parts of said rail and said bow permitting at least limited movement of the bow longitudinally of the vehicle and relative to the rail when said bow is in engagement with and supported by said rail; sealing means for closing the joint between the bow and the rabbet; and means for latching the top to the rail including spaced catch elements carried by the rail, pivoted latches mounted on the bow, said latches projecting through openings in the bow and having cam surfaces which engage said catch elements to pull the bow forwardly against the rail and shallow sockets behind said cam surfaces which interlock with the catches to press-hold the bow against the rail, and actuator means for said latches.

11. A foldable top construction for vehicles comprising an arched stationary rail forming the roof's outer surface contour at the forward end of the vehicle, said rail provided with a rabbet which extends longitudinally thereof and transversely of the vehicle and an upwardly and rearwardly opening recess; a foldable top mounted on the vehicle; a hollow bow at the forward end of the top, said bow shaped to fit into said rabbet and having a forward extension which enters the recess when the top is closed, said extension and said recess having correspondingly tapered vertical walls which coact to guide the top into position when the latter is being closed and to prevent lateral movement of the top when the vehicle is in motion, the mentioned parts of said rail and said bow permitting at least limited linear movement of the bow longitudinally of the vehicle and relative to the rail when said bow is in engagement with and supported by said rail; sealing means for closing the joint between the bow and the rabbet; and means for latching the top to the rail including spaced catch elements carried by the rail below said rabbet, pivoted latches carried by the bow and engageable with said catch elements to pull the bow forwardly solidly against the rail whereby to compress said sealing strip, and an actuator means operable from within the vehicle operatively associated at opposite sides of the vehicle with said latches by curvature compensating means, said actuator means adapted to move the latches simultaneously to either a catch-engaging or a catch-releasing position.

12. In combination with a foldable vehicle top of the type adapted to be supported at its forward end in a rabbet by bow and frame members, which frame members form the roof's outer surface contour, means for latching the top in raised or closed position comprising spaced catch elements on said frame members; a bow at the forward edge of the top; latch means on the bow movable about substantially vertical pivots located adjacent the extremities of the bow and

provided with catch-engaging ends swingable in arcuate paths around said pivots into and out of engagement with said catch elements, said catch-engaging ends having cam surfaces arranged to bear against the catch elements as the latches move into engagement therewith and provided behind said cam surfaces with shallow sockets which interlock with said catch elements, said cam surfaces coactive with said catch elements to pull the bow forwardly against the vertical wall of said recess and said shallow sockets operative to press-hold the bow thereagainst; and an actuator co-operatively associated with the latch means, said actuator including a manually movable handle, and means for transmitting motion from the handle simultaneously to the latch means, the arrangement being such that in one

position of the handle the latch means are held engaged with the catch elements and in another position of the handle the latch means are held out of engagement with the catch elements.

JOHN W. J. ACKERMANS.

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