

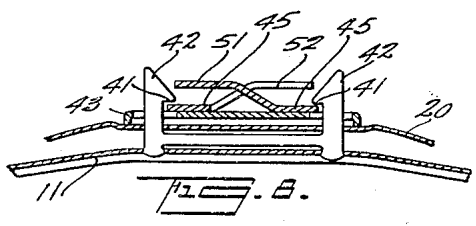
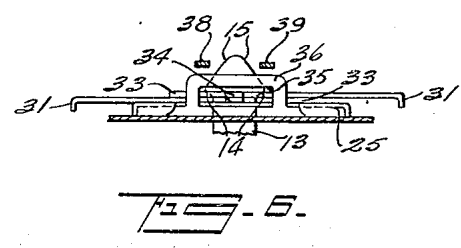
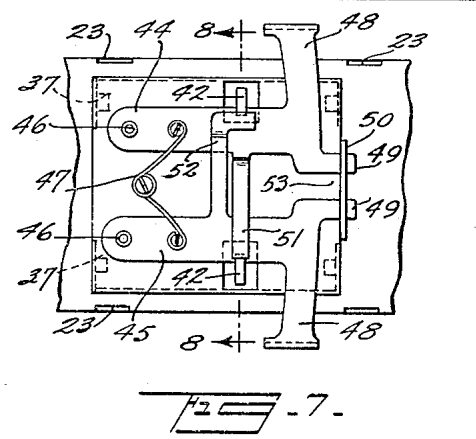
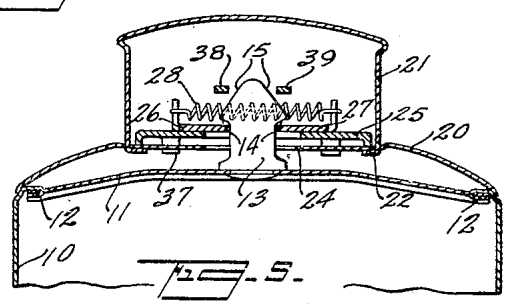
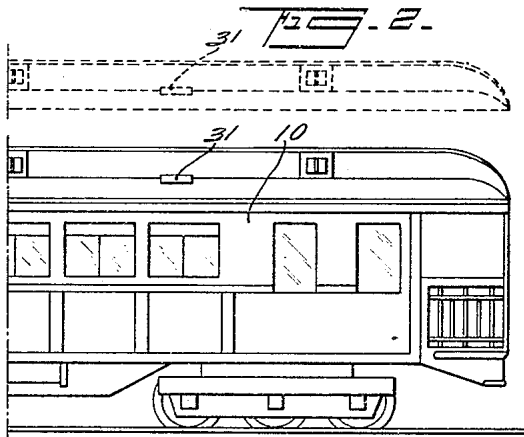
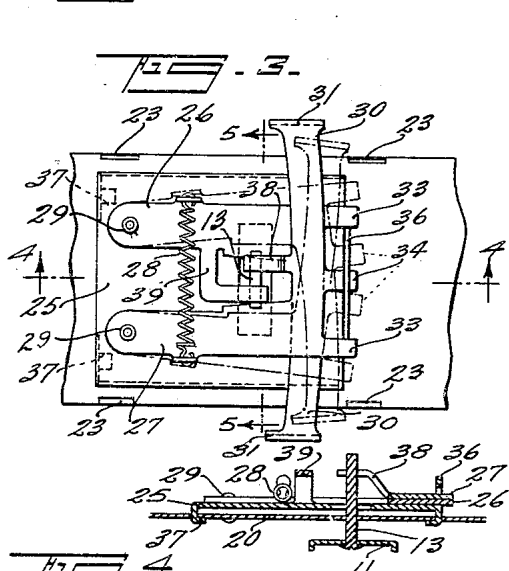
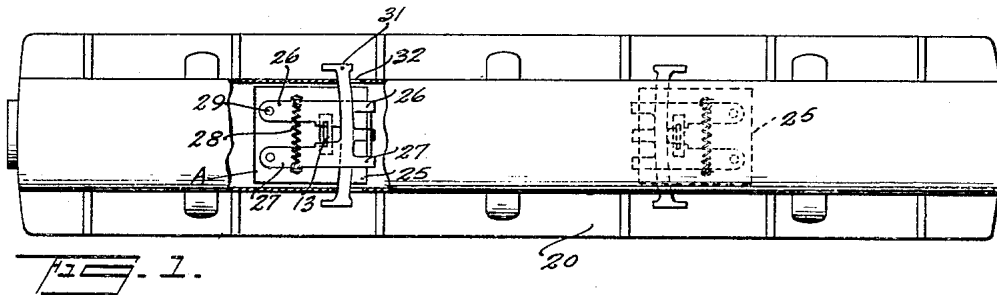
Oct. 27, 1931.

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1,829,505

REMOVABLE ROOF FOR TOY CARS

Filed Feb. 3, 1931



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REMOVABLE ROOF FOR TOY CARS

Application filed February 3, 1931. Serial No. 513,096.

The present invention relates to removable roofs for toy cars and is more particularly directed toward removable roofs for toy cars in which finger grips are provided adjacent to the roof of the toy car for operating an enclosed mechanism whereby the roof may be released from abutment members carried by the car body and lifted off the car body.

The invention also contemplates securing means for detachably fastening the toy car roof to the car body, this securing means being in the form of spring controlled catch members adapted to engage notched abutments carried by the car body. These catch members are capable of being grasped or squeezed so as to release them from the abutments and permit removal of the roof to permit access to the interior of the car.

A further object of the invention is to so arrange the parts that the catch members are moved out of their normal condition against the spring tension by stationary cam means acting on them when the roof is being placed on the car body. If desired, the cam means and catch members may be arranged so that they interengage, after the separation of the catch members from the abutments, to effect a positive lifting action on the car roof to overcome any sticking of the parts.

Other and further objects will appear as the description proceeds.

The accompanying drawings show, for purpose of illustration, two of the many possible embodiments in which the present invention may take form, it being understood that the drawings are illustrative of the invention which may be embodied in various forms.

In these drawings:

Figure 1 is a top plan view of a toy car with a portion of the roof broken away to show the roof securing means;

Figure 2 is a side elevational view of a portion of the removable roof and toy car;

Figure 3 is an enlarged plan view of the roof securing means, the dot and dash lines indicating the catch members in releasing position;

Figure 4 is a longitudinal view on the line 4—4 of Figure 3;

Figure 5 is a transverse sectional view on the line 5—5 of Figures 1, 3 and 4;

Figure 6 is an elevational view in the direction of the arrow 6 in Figure 3;

Figure 7 is a top plan view of modified form of construction;

Figure 8 is a sectional view on the line 8—8 of Figure 7.

A toy car body of usual construction is indicated at 10. It is provided with a number of cross braces 11, equally spaced from the center of the car. These cross braces may consist of channel shaped pieces of sheet metal, as indicated in Figures 4 and 5, and may be secured to the car body by bent prongs as indicated at 12, these prongs being integral with the side stampings of the car body. In the form shown in Figures 1 to 6 inclusive these cross braces carry centrally disposed upwardly extending abutments 13 of arrowhead shape. They have opposed notches 14 and are tapered above the notches to provide cam surface 15.

The roof-forming stamping is indicated at 20. This stamping, together with a deck-forming stamping 21, is designed to cover the car body and give it the appearance of a standard railway car. The deck-forming stamping 21 secured to the roof stamping 20 by prongs 22 passing through holes 23 in the roof-forming stamping and bent up in the usual manner. The roof forming stamping 20 is apertured as indicated at 24 to permit the abutments 13 to pass upwardly as indicated. The space inside the deck forming stamping 21 and above the roof forming stamping 20 is utilized to house the roof securing devices which are cooperative with the abutment members 13.

The roof securing means carried by the roof forming members take the form of pre-assembled units as indicated at A. They are identical and are mounted symmetrically with respect to the center of the car. Each unit includes a sub-base or plate 25 which pivotally carries two catch members 26 and 27 connected together by a spring 28 and mounted as indicated at 29. The front or lower catch member 27 has an upper or rear extension 30 provided with a finger piece 31 adapt-

ed to pass out through a notch 32 in the side wall of the deck-forming stamping. This catch member 27 has two spaced lugs or stop members 33 and 34. The other catch member 26 is shaped similar to the catch member 27 and is provided with corresponding extensions and stop members indicated by the same reference characters. The projections 34 extend through an opening 35 in a member 26 bent upwardly from the sub-base or plate 25. The spring 28 tends to hold the projection 33 against the outside of this upwardly bent member 36 while the two lugs 34 projecting through the opening 35 act to hold the catch members close to the plate 25.

The catch members 26 and 27 spring 28 and sub-base or plate 25 are in the form of pre-assembled units and may be secured to the roof forming stamping 20 by upwardly bent projections or lugs as indicated at 37.

When the car roof is in position on the car body as indicated in the drawings the catch members 26 and 27 are held in the notches 14—14 by the spring 28 thereby securely holding the roof on the car body. To release the roof it is merely necessary to grasp the pairs of projections or finger pieces 31, pinch them together and then lift the roof off the car body.

To facilitate removal of the roof from the car body the catch members 26 and 27 may be provided with extensions 38 and 39 as indicated. These extensions are normally spaced away from the cam surfaces 15—15 but are designed so that, when the catch members are pressed to separate them far enough to clear the notches, they then come against the cam surfaces and act to lift the car roof away from the car body. This overcomes any tendency for the parts to stick on account of the close fitting of the stamped roof and body.

When one desires to replace the roof it is merely necessary to put it on top of the car body so that the abutment members 13 pass up through holes 24 in the roof. The small end of these abutment members will pass between the catch members 26 and 27 and the cam surfaces 15 will act to spread these members as pressure is applied to press the roof down in to place. Owing to the symmetrical arrangement it makes no difference whether the roof is reversed end for end as it will fit in either position.

In the modification shown in Figures 7 and 8 the abutment member 40 has two opposed notches 41—41 similar in purpose to the notches 14—14, except that they face one another and are adapted to receive the catch members between them. The abutment member 40 also has cam surfaces 42—42 similar to cam surfaces 15—15.

The subplate 43, similar to the subplate 25, carries two catch members 44—45 similar in purpose to the catch members 26 and 27.

They are pivoted as indicated at 46 and are biased outwardly by a compression spring indicated at 47. They have finger pieces 48 similar to the finger pieces 31 and lugs 49 passing through an apertured upwardly extending member 50 similar to the lugs 34 and apertured member 36. The catch members 44 and 45 are provided with extensions 51 and 52 normally spaced from the cam members 42 as indicated.

When the finger grips 48 are pressed toward one another they become released from the notches and the lifter extensions 51 and 52 engage the cam surfaces 42 to assist in raising the roof off the car body. The catch members are spaced as indicated at 53 so as to limit their inward movement.

It will, of course, be understood that the roof lifting extensions 38—39 or 51—52 may be omitted if desired.

It is obvious that the invention may be embodied in many forms and constructions within the scope of the claims, and I wish it to be understood that the particular forms shown are but two of the many forms. Various modifications and changes being possible, I do not otherwise limit myself in any way with respect thereto.

What is claimed is:

1. In a toy car, a car body, a cross brace carried at the top thereof, a car-roof forming stamping for covering the car body, a longitudinally extending, deck-forming stamping secured to the roof stamping to simulate the appearance of a standard railway car, the cross brace carrying an upwardly extending anchorage device passing through the roof stamping and entering the space within the deck-forming stamping, and roof securing means carried by the roof forming stamping and housed within the deck-forming stamping, the securing means including spring actuated members normally interengageable with the anchorage device to prevent removal of the roof.

2. In a toy car, a car body, a cross brace carried at the top thereof, a car-roof forming stamping for covering the car body, a longitudinally extending, deck-forming stamping secured to the roof stamping to simulate the appearance of a standard railway car, the cross brace carrying an upwardly extending notched anchorage device passing through the roof stamping and entering the space within the deck-forming stamping, and roof securing means carried by the roof forming stamping and housed within the deck-forming stamping, the securing means including spring actuated members normally entering the notches in the anchorage device to prevent removal of the roof.

3. In a toy car, a car body, a cross brace carried at the top thereof, a car-roof forming stamping for covering the car body, a longitudinally extending, deck-forming stamping

secured to the roof stamping to simulate the appearance of a standard railway car, the cross brace carrying an upwardly extending notched anchorage device passing through
 5 the roof stamping and entering the space within the deck-forming stamping, and roof securing means carried by the roof forming stamping and housed within the deck-forming stamping, the securing means including
 10 spring actuated members normally entering the notches in the anchorage device to prevent removal of the roof, the anchorage also carrying cam means above the notches for moving the spring actuated members against the
 15 spring pressure when the roof is being placed on the car body so that the members are forced into the notches.

4. In a toy car, a car body, a cross brace carried at the top thereof, a car-roof forming stamping for covering the car body, a longitudinally extending, deck-forming stamping secured to the roof stamping to simulate the appearance of a standard railway car, the cross brace carrying an upwardly extending
 25 anchorage device passing through the roof stamping and entering the space within the deck-forming stamping, roof securing means carried by the roof forming stamping and housed within the deck-forming stamping,
 30 the securing means including spring actuated members normally interengageable with the anchorage device to prevent removal of the roof and manually operable releasing means for the securing means extending laterally
 35 through the deck-forming stamping.

5. In a toy car, a car body, cross braces carried at the top thereof, a car-roof forming stamping for covering the car body, a longitudinally extending, deck-forming
 40 stamping secured to the roof stamping to simulate the appearance of a standard railway car, the cross braces each carrying an upwardly extending anchorage device passing through the roof stamping and entering
 45 the space within the deck-forming stamping, and roof securing means carried by the roof forming stamping and housed within the deck-forming stamping, the securing means including pairs of spring actuated members
 50 each normally interengageable with an anchorage device to prevent removal of the roof, the anchorages and securing means being arranged symmetrical so that the roof is reversible end for end.

6. In a toy car, a car body carrying upwardly extending notched anchorages provided with cams above the notches, and a car roof carrying manually releasable spring closing catch members engageable with the
 60 notches to hold the roof on the car body, the cams being adapted to move the catch members against spring pressure when the roof is being placed onto the car body.

7. In a toy car, the combination with a toy car body and toy car roof, of securing means

for detachably securing the car roof to the car body, comprising a rigid upwardly extending anchorage carried by the car body, spring actuated members carried by the car roof and engageable with the anchorage, the
 70 configuration of the parts being such as to hold the roof in place, and externally accessible releasing devices for moving the spring actuated members to release them from the anchorage.
 75

8. In a toy car, the combination with a toy car body and toy car roof, of securing means for detachably securing the car roof to the car body, comprising two rigid upwardly extending anchorages carried by the car
 80 body, two pairs of spring actuated members carried by the car roof and engageable with the anchorages, the configuration of the parts being such as to hold the roof in place, and externally accessible releasing devices for
 85 moving the spring actuated members to release them from the anchorages, the parts being symmetrically arranged so that the roof is reversible end for end.

9. In a toy car, the combination with a toy car body and toy car roof, of securing means for detachably securing the car roof to the car body, comprising a rigid upwardly extending anchorage carried by the car body,
 90 the anchorage having opposed notches spring actuated members supported from the car roof and entering the notches when the roof is in place, and finger pieces for releasing the members from the notches.
 95

10. In a toy car, the combination with a toy car body and toy car roof, of securing means for detachably securing the car roof to the car body, comprising a rigid upwardly extending anchorage carried by the car body,
 100 the anchorage having opposed notches and cams above the notches, spring actuated members supported from the car roof and entering the notches when the roof is in place, and finger pieces for releasing the members
 105 from the notches, the cams acting to move the members against the spring pressure when the roof is being secured in position.
 110

11. A toy car having a car body, cross braces carried by the car body and anchorage members carried thereby and extending
 115 upwardly, the members having opposed notches intermediate the length thereof and opposed cam surfaces above the notches.

12. In a toy car, a car roof stamping, a deck forming stamping, the roof stamping supporting two pivoted catch members, a spring biasing the catch members toward a predetermined position, laterally extending
 120 finger pieces accessible outside the deck stamping and above the roof stamping for moving the catch members toward another position, a car body and an anchorage carried by the car body and against which the spring urges the catch members, the catch
 125
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members being released when the finger pieces are actuated.

13. In a toy car, a car roof stamping, a deck forming stamping, the roof stamping supporting two pivoted catch members, a spring biasing the catch members toward a predetermined position, laterally extending finger pieces accessible outside the deck stamping and above the roof stamping for moving the catch members toward another position, a car body and an anchorage carried by the car body and against which the spring urges the catch members, the catch members being released when the finger pieces are actuated, the anchorage having opposed notches to receive the catch members when the roof is in place and opposed cams to actuate the catch members against the spring pressure when the roof is being placed on the car body.

14. A securing device for toy car roofs comprising a plate adapted to be secured to a toy car roof, two catch members pivoted to the plate, a spring interconnecting them to urge them to one direction, lateral extensions from the catch members adapted to be gripped between the thumb and finger to move the catch members in the other direction and stops for limiting the movement in either direction.

15. A securing device for toy car roofs comprising a plate adapted to be secured to a toy car roof, two catch members pivoted to the plate, a spring interconnecting them to urge them in one direction, lateral extensions from the catch members adapted to be gripped between the thumb and finger to move the catch members in the other direction, stops for limiting the movement in either direction, and a guide for the free ends of the catch members to hold them close to the plate.

16. In a toy car, a car body, a cross brace carried at the top thereof, a car-roof forming stamping for covering the car body, a longitudinally extending, deck-forming stamping secured to the roof stamping to simulate the appearance of a standard railway car, the cross brace carrying an upwardly extending notched anchorage device passing through the roof stamping and entering the space within the deck-forming stamping, roof securing means carried by the roof forming stamping and housed within the deck-forming stamping, the securing means including spring actuated members normally entering the notches in the anchorage device to prevent removal of the roof, and cam means effective after the catch members have been moved out of the notches for lifting the car roof away from the car body.

17. In a toy car, a car body carrying upwardly extending notched anchorages provided with cams above the notches, and a car roof carrying manually releasable spring closing catch members engageable with the notches to hold the roof on the car body, the

cams being adapted to move the catch members against spring pressure when the roof is being placed onto the car body, the catch members carrying cam engageable elements effective after the members have been moved out of the notches to lift the car roof off the car body.

18. A toy car having a car body, cross braces carried by the car body and anchorage members carried thereby and extending upwardly, the members having opposed notches intermediate the length thereof and opposed cam surfaces above the notches, and a car roof having spring actuated catch members normally entering the notches to hold the roof on the car body, the catch members being manually movable to release them from the notches and being then engageable with the cams to lift the roof away from the car body.

Signed at New York, in the county of New York, and State of New York, this 29 day of January, 1931.

MARIO CARUSO.