COLLAPSIBLE PASSENGER-CARRYING CAR FOR AEROPLANE SWINGS.


To all whom it may concern:

Be it known that I, HARRY G. TRAVER, a citizen of the United States, and a resident of Beaver Falls, in the county of Beaver and State of Pennsylvania, have invented certain new and useful Improvements in Collapsible Passenger-Carrying Cars for Aeroplane Swings, of which the following is a specification.

This invention relates to an amusement device, commonly termed as “aeroplane swings” and to the collapsible structure in which all of the parts are arranged and constructed to be releasably connected and disconnected, whereby the same may be quickly erected and knocked down and the parts arranged in a collapsed and compact structure to be readily packed and transported.

The present application is a division of my copending application Serial Number 356,881, and it is the object of the invention to provide a knock down passenger carrying car for use in aeroplane swings whereby the same may be collapsed into a compact structure to take up the minimum amount of space in transportation, and to provide a structure to conform in outline to the body of fuselage of a hydroplane.

Another object of the invention relates to an imitation motor or engine to be utilized in connection with amusement devices of this character, including a revoluble propeller with means operable by the revolving of the propeller to make a noise and imitation of the exhaust of the internal combustion engine.

Other objects and advantages will hereinafter appear.

In the drawings accompanying and forming a part of this specification, Figure 1 is a perspective view of my improved collapsible passenger carrying cars for aeroplane swings.

Figure 2 is a perspective view of the body of the car looking at the bottom and one side thereof.

Figure 3 is a side elevation of the car, partly in section, to show the manner of mounting plane supporting struts thereon.

Figure 4 is a perspective view of the body frame.

Figure 5 is a cross sectional view to show the manner of supporting the side frames of the body in parallel spaced relation and for supporting the seats and seat-backs and also showing the manner of suspending the cars.

Figures 6 and 7 are perspective views of ends removably connected to the car body.

Figure 8 is a perspective view of the car body frame showing the same in collapsed condition.

Figure 9 is a perspective view of a rudder adapted to be removably connected to the rear end of the car body.

Figure 10 is a perspective disassembled view of the means to mount the rudder.

Figure 11 is a perspective disassembled view of the means to releasably connect the ends to the car body.

Figure 12 is a front elevation of an imitation motor and showing the manner of mounting the same.

Figure 13 is a view of a portion of the framework to show the manner of connecting the ends to the car body; and

Figure 14 is a cross sectional view to show the manner of mounting the plane supporting struts upon the car body.

Similar characters of reference designate like parts throughout the different views of the drawing.

In carrying out the invention the frame work for the car body comprises a pair of side frames, one frame being constructed of 85 parallel angle iron rails 15, 16 rigidly connected in parallel and spaced relation by transverse bars 17, and the other side frame constructed of a pair of angle iron rails 18 and 19 connected at opposite ends in spaced relation by bars 20, secured to and projecting up from the angle iron 18 are members 21, 22 arranged to form seat ends and arm rests. The open spaces between the frame members are closed by sheet metal as shown.

The side frames are connected to adapt the same to be supported in rigid parallel spaced relation as shown in Figure 4, or to be collapsed as shown in Figure 8, by transverse bars 23, 24 and 25, the bars 24 and 25 being pivotally connected at opposite ends to the bars 17 and 22, and the bars 23 pivotally connected at one end to a bar 26 fixed to the bars 17 extending parallel with the frame angle iron rails 15, 16, and at the opposite ends to the members 21 of the other side frame. The bars 23, 24 serve as seat supports, and back rests 28 are hung from the bars 25 by cleats 3, with the ends engaging the angle bars 17, 22. At opposite...
ends the side frames are pivotally connected to opposite ends of transverse angle irons 29, the ends of the lower irons 29 extending beyond the seat frames and have perforations therein, as shown at 30, for a purpose hereinafter described. The side frames are maintained in rigid parallel relation by diagonally extending bars 31 bolted at opposite ends to the members of the side frames.

The frame is provided with a flooring consisting of matched boards 33 fastened to connecting members 34 to form an integral member which is adapted to be removably mounted in the frame of the car body, and removably supported therein by the opposite ends of the boards engaging upon the angle portion of the lower angle iron rails 16, 19 of the side frames, as shown in Figures 2 and 14.

To make the car body conform to the shape of the body or fuselage of a hydroplane there is removably connected to the forward end of the body frame an end portion 35 arranged to simulate and conform to the bow of the body of a hydroplane, said end portion being constructed of an angle iron frame covered with sheet metal as shown in Figure 6. To releasably connect said end portion 35 to the body frame brackets 36 (Figure 11) are fastened to the upper angle iron of the frame to extend therefrom with the extending ends bent to S-shape as shown and adapted to engage in openings in the top rail 15 of the side frame and an angle portion 37 of the end member 20 at the forward end of the other side frame by tilting the end portion 35 to an angle relative to the end of the body frame and engage the underside of the angle rail 15 and portion 37 of said member 20 when adjusted to extend in line with the body frame with the lower rear edge engaging the angle portion of the forward transverse bar 29, as clearly shown in Figure 13 at 38.

An end portion 39 (Figure 7) shaped to simulate and conform to the stern or rear end of the fuselage of a hydroplane is removably connected to the end of the body frame, said end member also consisting of a framework built up of angle iron covered with sheet metal. To releasably connect said end portion to the body frame it is also provided with brackets 40 similar to the brackets 36 to engage in openings in said frames by tilting said end portion at an angle relative to the body frame and the lower forward edge is adapted to engage and be supported by the angle portion of the rear transverse bar 29.

A member 41 (Figure 9) to simulate a rudder is releasably connected to the rear of the stern 39 by bars 42 fixed thereto having hooked projecting ends to engage U shape brackets 43 (Figure 10) secured to the stern portion 99, the bars being of rectangular shape in cross section and the hooked portion thereof and the bracket 43 arranged whereby as the hooked ends engage the brackets the rudder will be held against sidewise movement.

Superoised planes 44 are mounted upon and in superposéd relation to the car body, said planes consisting of open frames 45 of suitable material, such as piping, and sheet material such as fabric stretched between the frames. To stretch the material between the frames it is arranged with a cable or wire 46 in a hem frame 47 extending around the edge of the material and secured to the pipe framing by lacing, as shown at 48. The planes are releasably retained in superposed spaced relation by struts 49 pivotally secured at opposite ends to space the frames by bolts passing through the struts and threaded into the plane frames and retained in such position by truss wires or rods 50.

To support the planes in superposed relation to the car body the central struts 51 are extended, as shown at 51, and are adapted to engage in sockets 52 arranged in the angle rail 15 of the side frame and sockets 53 secured to the members 21 of the seat ends, plug 54 engaging and secured in the ends of the struts by transverse pins 55 engaging in openings in the bottom angle rails 16 and 19 of the side frames with the ends of the struts engaging and being supported by said rails.

The cars are supported or suspended from a rotatable or revolving structure by cables (not shown) connected to yoke members 56 having the ends hooked to engage in the openings 50 of the extended ends of the transverse frame members 29.

An imitation motor or engine of the radially extending cylinder type (designated in a general way by E) is mounted upon the car supporting yokes 56 at the forward ends and centrally of the planes as shown in Figures 1 and 12. This engine composes a hexagonal frame 57 having sheet metal cylindrical members 58 fixed to the car supporting yokes by straps 59. A propeller 60 is rotatably supported axially of the cylinder supporting frame 57, said propeller being adapted to be revolved by the action of the air striking against the propeller blades as the car is moved through the air in the operation of the swing. As the propeller is revolved a toothed or ratchet wheel 61 rotates therewith, and as said wheel is rotated yielding means in the form of a spring dent 62 fixed to the cylinder frame 57 is caused to ride over the teeth of the wheel making a clicking noise representative of or imitation of the noise of the exhaust of an internal combustion engine.

To knock down the car the engine is removed with the car supporting yoke, when the planes are released from the car body.
by moving the extended ends of the central struts from the sockets in the car frame. One end of the truss wires or rods 30 when the planes may be moved on the pivotal connection of the struts 49 and the planes folded together. The rudder and ends 35 and 39 are then released by raising the same in angular relation to the car body and lifting the hooks 36, 40 out of the openings in the frames. The truss bars 31 are then unbolted when the seat-backs are moved up to right angles from the position shown in Figure 4, when the car body frame may be collapsed or folded to the position shown in Figure 8. One end of the seat-back supporting bars 25 is off-set as shown at 63 (Figure 5) to clear the top bar of the side supporting frame when the frame is collapsed or folded as shown in Figure 8, and to compensate for this offset of the bars the opposite end of the bars have a pin and slot connection with the opposite side frame as shown at 65, Figures 4, 5 and 8.

Having thus described my invention I claim:

1. A collapsible passenger carrying car for aeroplane swings comprising side frames, seat carrying members pivotally connected at opposite ends to said frames, and releasable means to secure the side members in parallel spaced relation with the seat carrying members extending transversely between the side members.

2. A collapsible passenger carrying car for aeroplane swings comprising a pair of side frames, seat and seat-back carrying bars pivotally connected at the ends to said frames whereby the said frames may be adjusted to extend in parallel relation with the bars extending transversely between the same and collapsed to lie contiguous to each other.

3. A collapsible passenger carrying car for aeroplane swings comprising a pair of side frames, seat and seat-back carrying bars pivotally connected at the ends to said frames whereby the said frames may be adjusted to extend in parallel relation with the bars extending transversely between the same and collapsed to lie contiguous to each other, and diagonally extending truss members at opposite ends of said frames to maintain the frames in parallel spaced relation with the seat bars extending transversely between the frames.

4. A collapsible passenger carrying car for aeroplane swings comprising a pair of side frames, seat and seat-back carrying bars pivotally connected at their ends to said frames whereby the frames may be adjusted to extend in parallel relation with the bars extending transversely between the same, flooring extending transversely between the frames and supported thereby, and bars extending transversely of and pivotally connected to the frame with the ends projecting beyond the frames and having perforations in said extended ends for the engagement of car suspending means.

5. A collapsible passenger carrying car for aeroplane swings comprising side supporting frames adapted to extend in parallel and spaced relation; diagonal truss bars at the ends of said frames to secure said frames in parallel and spaced relation; transverse bars pivotally connected at the ends to the side supporting frames and arranged to carry seats and back supports; transverse extending floor members carried by the side supporting frames; means connected to said frames for the engagement of means to suspend the car; and removable ends releasably secured to the side supporting frames.

6. In a collapsible passenger carrying car for aeroplane swings, side supporting frames, transverse seat and seat-back supporting bars pivotally connected at opposite ends to the side frames, diagonal truss bars at opposite ends to maintain the side frames in parallel and spaced relation, flooring extending transversely between the side frames, end sections releasably connected to the side frames; and a rudder member releasably secured to the rear end section, substantially as and for the purpose specified.

7. In a collapsible passenger carrying car for aeroplane swings, side supporting frames having transverse seat and seat-back supporting bars pivotally connected thereto at the ends and releasable truss bars to maintain the side supporting frames in parallel and spaced relation, planes supported in superposed relation, and means to support the superposed planes from the car frame in superposed relation thereto.

8. In a collapsible passenger carrying car for aeroplane swings, side supporting frames having transverse seat and seat-back supporting bars pivotally connected thereto at the ends and releasable truss members to maintain the side frames in parallel and spaced relation, and planes supported by the framework of the car in superposed relation to the car.

9. In a collapsible passenger carrying car for aeroplane swings, side supporting frames having transverse seat and seat-back supporting bars pivotally connected thereto at the ends and releasable truss members to maintain the side frames in parallel and spaced relation, planes supported in superposed relation to the car, and an imitation motor rotatably carrying a propeller removably carried by the car.

10. In aeroplane swings, the combination with a passenger carrying car, including planes in superposed relation thereto; of a propeller carrying means simulating an
engine carried by the car supporting means for the purpose specified.

11. In passenger cars for aeroplane swings, a body portion carrying seats, and ends removably connected to said body simulating the bow and stern of a hydroplane for the purpose specified.

12. In passenger cars for aeroplane swings, an elongated body portion carrying seats, means simulating the bow of a hydroplane adapted to be removably connected to the forward end of the body, and means to simulate the stern with a rudder adapted to be removably connected to the rear end of the body for the purpose specified.

13. In passenger cars for aeroplane swings, an elongated rectangular body portion, seats arranged therein, a member to simulate the bow of a hydroplane removably connected to the forward end of the body, and a member to simulate the stern of a hydroplane removably connected to the rear end of the body, and a member to simulate a rudder removably and pivotally connected to said rear member for the purpose specified.

14. In cars for aeroplane swings, the combination of a body portion, front and rear end portions adapted to be removably connected to the body, and a plane removably supported by the body in superposed relation thereto.

15. In cars for aeroplane swings, the combination of a seat carrying body, a pair of planes, and means to releasably support the planes in superposed relation and arranged to removably mount the planes upon the car body.

16. In cars for aeroplane swings, the combination of a collapsible seat carrying body, a pair of planes, and struts and truss wires to releasably support the planes in superposed relation, certain of the struts being arranged to removably mount the planes in superposed relation upon the car.

17. In a collapsible passenger carrying car for aeroplane swings, side supporting frames, transverse bars connected at opposite ends to the side frames adapted to maintain the frames in parallel relation and permit said frames to be adjusted to lie contiguous to each other.

18. In a collapsible passenger carrying car for aeroplane swings, side supporting frames one of said frames consisting of rails supported in rigid parallel and spaced relation, and the other of said frames consisting of a pair of parallel rails supported in rigid and spaced relation with said end supports and arm rests projecting up from said rails, and transverse bars connected at opposite ends and the side frames adapted to maintain the frames in rigid parallel relation and permit said frames to be adjusted to lie contiguous to each other.

19. In a collapsible passenger carrying car for aeroplane swings, side supporting frames, transverse bars connected to the frames at opposite ends to maintain the frames in rigid parallel spaced relation and permit said frames to be adjusted to lie contiguous to each other, and superposed planes supported by the side frames in superposed relation thereto.

20. In a knock down passenger carrying car for aeroplane swings, the combination of a collapsible body portion, superposed planes removably carried by the body in superposed relation thereto, and car suspending yokes releasably connected to the body.

21. In a knock down passenger carrying car for aeroplane swings, the combination of the collapsible body portion, superposed planes removably carried by the body in superposed relation thereto, and car suspending yokes releasably connected to the body, and a propeller carrying imitation engine carried by the car suspending yokes.

22. Cars for aeroplane swings, comprising a body portion, planes, and means releasably connected to the planes to maintain said planes in superposed relation and adapted to permit said planes to be collapsed to lie adjacent to each other.

23. Cars for aeroplane swings, a body portion, planes superposed to the body, struts pivotally connected to the planes, and truss members connected to the planes to co-operate with the struts to maintain the planes in superposed relation and adapted to be released to permit the planes to be adjusted to lie contiguous to each other for the purpose specified.

Signed at Beaver Falls, in the county of Beaver and State of Pennsylvania, this fifteenth day of September, 1920.

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