AROUND THE LOOP

A Publication of the Museum of Transportation Trolley Volunteers

Volume 2 – Number 8 – September 2017

MUSEUM EVENTS FOR SEPTEMBER 2017

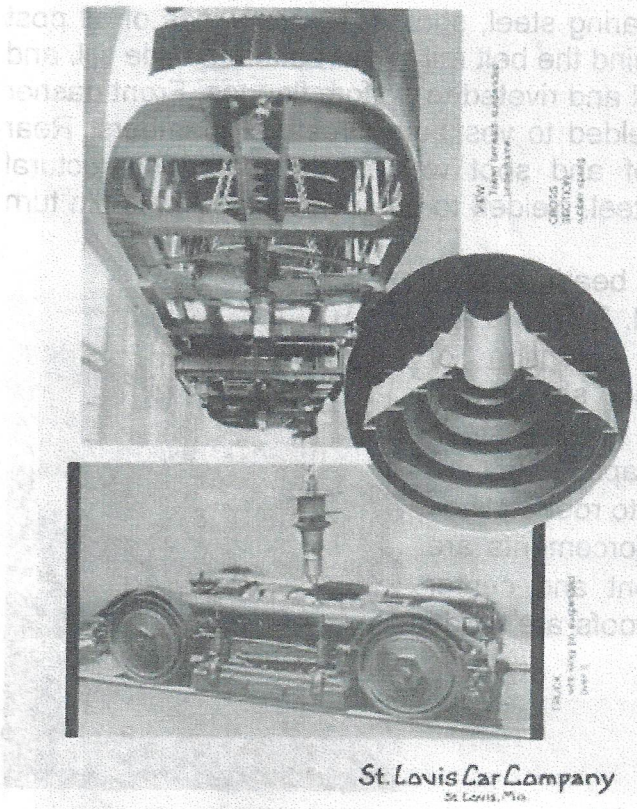
- September 10th – *All Chevy Show – 11 AM – 3:30 PM – Large attendance draw.*
- September 23rd – *Our Animal Names Pet Project Car Show – 9:00 AM – 2:00 PM.*
- September 23rd – *Museum Day Live! (Smithsonian) – All day.*
- September 24th - *Oldsmobile Fun Show – 11 AM – 3:30 PM.*

Now A Reality the PCC Car

(Continued from last month.)

In the light-weight welded underframe, note the unique spider type bolster with the huge center bearing protruding. With this P.C.C. construction, conventional side bearings are unnecessary, and the bolster arms emanate directly from the massive center casting over a much greater area of the car under framing than has been the case in previous car designs. This construction not only provides strength and durability, but incorporates other useful purposes.

The bolster arms form walls for the ducts for supplying clean air to the motors. This fresh air is drawn through louvres into the duct just below the side sills, while jacking pads are attached to the bottom of the combination bolster and air duct. It should be noted that the car reservoirs and electrical apparatus are neatly and conveniently located centrally without huge masses of cable, conduit and piping extending all over the underpart of the car.



The P. C. C. type truck illustration shows one of the large bolster center bearings or pins about to be lowered into the deep well arrangement built into the truck to receive it. This unusual center pin arrangement, which makes full use of the floating truck bolster, is one of the many innovations which make for smooth riding.

The use of rubber springs, shock absorbers, and rubber cushion wheels, with the consequent absence of a direct metal path from rail to car body, are other features improving the quality of the ride.

The trucks are propelled by specially built electric motors functioning through hybrid gears floating in oil.

Note the magnetic track brake suspended between the wheels.

The insert shows a cross section of one of the buildup rubber truck springs. The springs are of rubber and steel, so arranged that the metal holds the rubber in place and transmits forces to it. The rubber serves as the resilient member.

Body Details

The P. C. C. Car is 46 feet in length over all, 8 feet 4 inches total outside width, and the height to top of roof is 10 feet ¼ inch.

The superstructure of this car is built up of formed shapes electrically welded into an integral unit. Side posts are winged channel section pressings, extending from side sill to top of letter panel. At the bottom the post is flared and welded to side sill, window sill, and at the top of upper ledge of letter panel. Side post covers are electrically welded to side posts between belt rail and letter panel.

Body corner posts, except one at front doorway, are of built-up box section, using two winged channel section posts. Corner post covers are electrically welded to outside wings of posts between belt rail and letter panel. Door posts are of built-up box section, using one winged channel section post and a pressed channel section post. Posts at the center of the car on blind side are duplicates of the center door posts on the door side of the car. Door post covers are electrically welded to outside wings of posts between belt rail and letter panel.

Front vestibule comer posts are of formed sections welded to the underframe at bottom, window sills at middle, and vestibule roof at top. Reinforcing curved angle pressings are welded to these posts at top and bottom of windshield openings. Front vestibule center post extends from destination sign header to anti-telescoping plate. Rear vestibule corner plate is of built-up box section. The front post of box section is curved behind the letter panel so as to form a structural member for carrying rear vestibule roof purlins. Rear vestibule comer pier cover extends between belt rail and letter panel.

Side sheets are made of copper bearing steel, spot-welded to wings of all post members. The side sheets extend from behind the belt rail to the bottom of side sill, and are spot welded to the top flange of side sill and riveted to bottom flanges. Front dasher sheet is formed to contour of and spot welded to vestibule structural members. Rear vestibule dasher is formed to contour of and spot welded to vestibule structural members. Side skirts are copper bearing steel, welded to pressed shapes which in turn are bolted to bottom edge of side sill.

Belt rail is made of 3/32-inch copper bearing steel pressed into shape forming the window sill. Belt rails are carried completely around car, with exception of doorways, and are electrically welded to side sheets and posts. Letter panels are made of copper bearing steel, including roof cove and formed to shape, and are electrically welded to top of side posts and to roof carlines between body corner posts. Formed reinforcements are added to inside of letter panel over front and center doorways. Front and rear vestibule hood roofs are made of deep drawn O. H. S. formed to shape.

Front View of P. C. C. Car, showing Windshield Type Vestibule Windows, Destination Signs, Etc.

Roof carlines are of winged channel shape of No. 16 gauge Copper Bearings O. H. S. electrically welded to upper ledge of panels. The rub rail extending along side of car over vestibule corner post, except at doorways, is of extruded aluminum alloy bolted in place. Front and rear vestibule roof framing is Copper Bearing O. H. S., and is electrically welded so as to form a rigid structure for support of vestibules. Trolley base supports are built between three carlines.

The roof between body corner posts is made of three-ply 5/16 inch poplar plywood bolted through wings of carlines, and anti-squeak material is laid between wings of carlines and roofing veneer. Roof covering is of No. 8 cotton duck, laid in white lead, tightly stretched, and is held in place with aluminum mouldings bolted to roof cover. Top ceiling is made of 3/16 inch Masonite, fastened to carlines with shake-proof screws.

Flooring is level from end to end of car and is of 15/16-inch tongued and grooved 3/4-inch face long leaf yellow pine bolted to flanges of cross sills, end sills, floor supports and bolster top covers. Strips of Johns-Manville No. 50 waterproof asbestos felt, 5 inches wide are placed on top of cross sills under flooring as an anti-squeak. Floor covering is Armstrong's Automat-Linoleum cemented in place, and all unprotected edges are covered with suitable mouldinq.

Wainscot sheet below window sills are of 1/8-inch Masonite, extending between top edge of side sill and inside bottom of window sills. Curtain moulding is made of extruded aluminum, and extends completely around car except for doorways and across front vestibule. Advertising card racks are made of No. 28 gauge steel for 11-inch advertising cards. Side lower deck ceiling is formed of No. 18 gauge steel, and is arranged for louver or lens lighting.

Side sash are of single raise type, arranged to raise 15-5/8 inches and are equipped with two lift type locks, and glazed with double strength glazed "A" glass. Two front vestibule sash are hinged at the top, arranged to swing out and equipped with mechanical arrangements for opening and closing, and are glazed with 1/4-inch safety plate glass. Rubber weather stripping is provided around the outside of sash to provide weather tight fit when sash are closed.

Front vestibule sash to the left of operator includes a stationary frame and a movable frame glazed with 1/4-inch safety plate glass, the front frame being hinged vertically and is provided with a mechanical arrangement for opening and closing. Rear vestibule side sash is stationary on is glazed with double strength grade "A" glass. Rear vestibule rear sash is glazed with ¼-inch safety plate glass. Both rear sash are stationary.

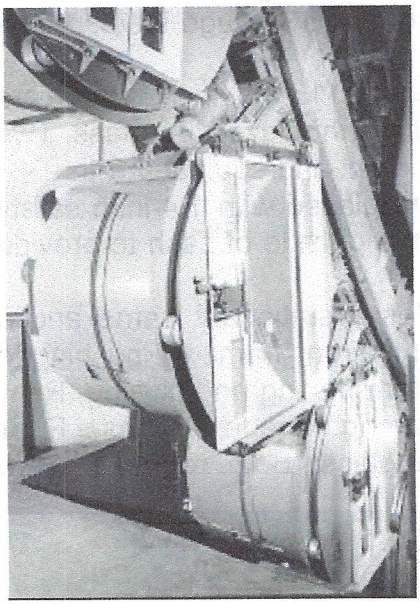
DID YOU KNOW....

The St. Louis Car Company's plant covered approximately 60 acres of ground, over one-third of which is floor space for the various manufacturing departments, and the remaining space is storage, yard tracks, lumber kilns and yards, transfer table and trolley system.

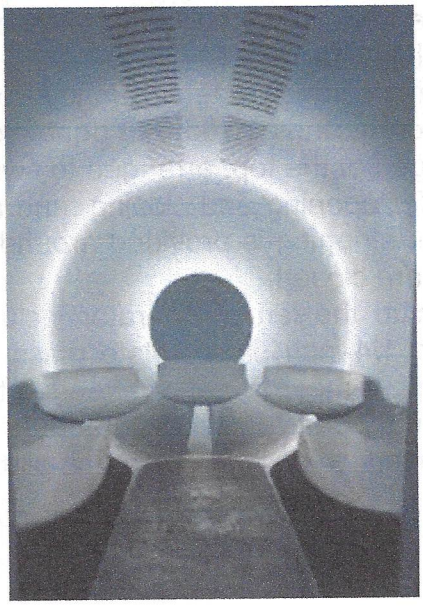
(Continued next month)

The following was submitted by MTTV Member Steve Siegerist. Thank you Steve for your submission.

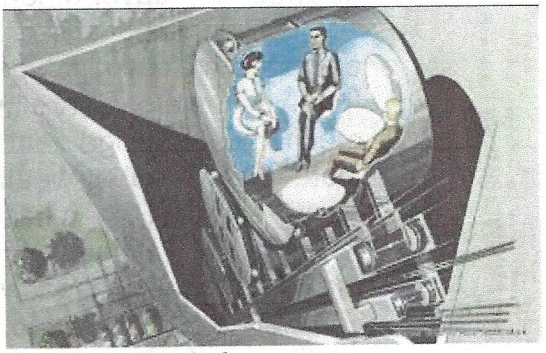
We all know that the St. Louis Car Company went out of business in the 1970's. It had a reputation as the "Quality Shops" which had an effect on their business when the purchasers were for profit corporations. Once the governments took over the operation of public transit, price became the primary consideration, and the car company got priced out of the market by their cheaper competitors. The products of the car company soldiered on long after the car company's demise and you could still ride some into this century on certain transit operations. I think they are all gone now, except for one, that celebrated 50 years of operation on July 24, 1967. The first day of operation of the trams in the St. Louis Gateway Arch was July 24, 1967. The system was designed by Planet Corporation of Lansing, Michigan (where are they now?), but the tram cars were built right here on Hall Street by the St. Louis Car Company. Of course, car company President Edwin B. Meissner, Jr, was one of the first riders to go to the top, along with all the incumbent city and state leaders, from both sides of the river. You can still ride a product of St. Louis Car Company someplace other than a museum.



Exterior



Interior



Interior occupied