

# Shipping Live Poultry and the Live Poultry Car

Which shipped first, the chicken or the egg?

Kristin Dummler

## Welcome!

My name is Kristin Dummler. I model 1909 Central Vermont in New London, Connecticut and 1927 Norfolk & Western in West Virginia. I've been a modeler for many years and interested in the hobby since my father introduced me when I was a child.

I am a member of the NMRA, several historical societies for specific railroads, as well as the National Railway Historical Society and the Railway & Locomotive Historical Society.

By trade, I am a plant manager for a deep drawn metal stamping company. As such, I spend my day in a manufacturing environment, surrounded by metal, blue prints, measuring tools and hands on workmanship, all of which I get to use during my modeling.



# History of the Live Poultry Car

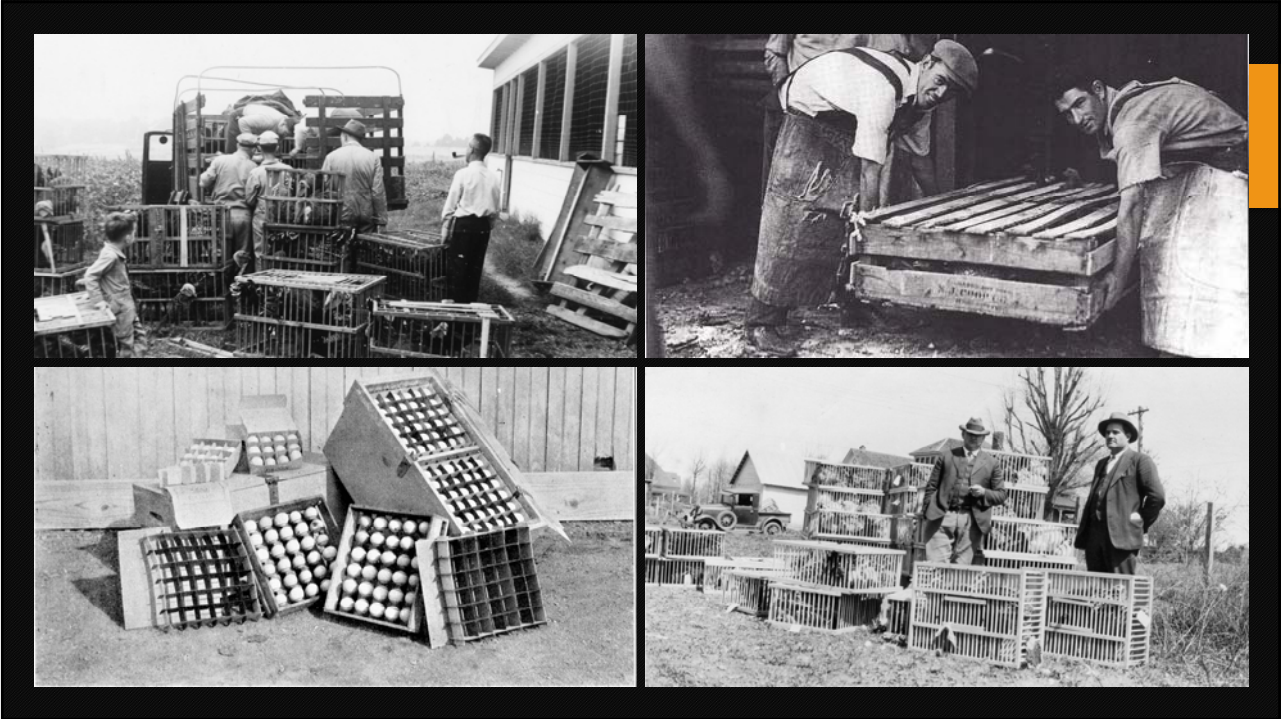
## Poultry Cars, The Early Years

In the mid to late 1800s, with the advent of ventilated box cars, block ice cooled refrigerator cars, and even early stock cars, dressed beef, pork, and produce were able to ship with relative ease to urban markets across the country.

Shipments of eggs, butter, and milk were also growing in demand.

Poultry shipping, however, was a problem. While inexpensive to raise poultry in non-urban areas thanks to cheap land, labor, and feed, shipping the birds, even as dressed poultry, was very unsuccessful.





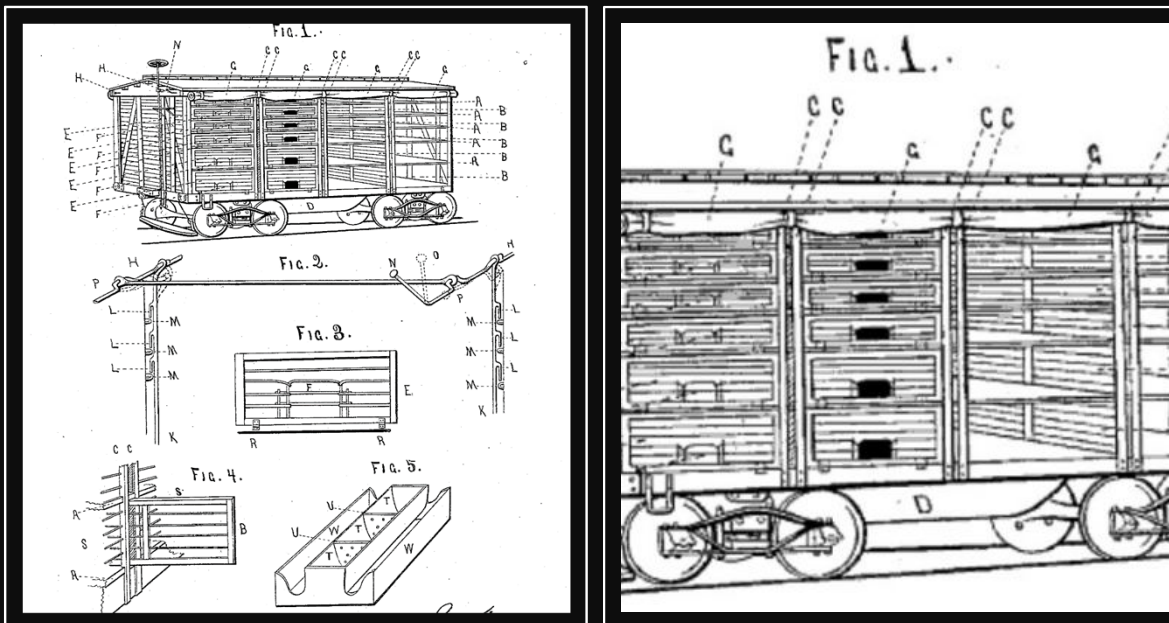


## Poultry Cars, The Early Years

Early live poultry shipments were made by crating the live birds in small wooden crates loaded on to box cars or stacked on flat cars. Most didn't survive the trip and those that did, illness and weight loss were serious problems that caused the poultry to get passed over at market.

Dressed poultry came in lots via early refrigerator cars, but the iced birds were often more unappealing than the live poultry shipments. Poultry placed nearest the ice bunkers might arrive in a fair state of preservation, but the meat at the center, and warmest part of the car, were often spoiled and unfit for consumption.

William Jenkins and James Streeator conceived the first design for a live poultry car in 1884 and quickly patented the concept - a single, open compartment stock car with wire mesh sides, broken into a multi-level series of individual coops, each fitted with feed and water troughs.



1884 Jenkins/Streeator Poultry Car Patent

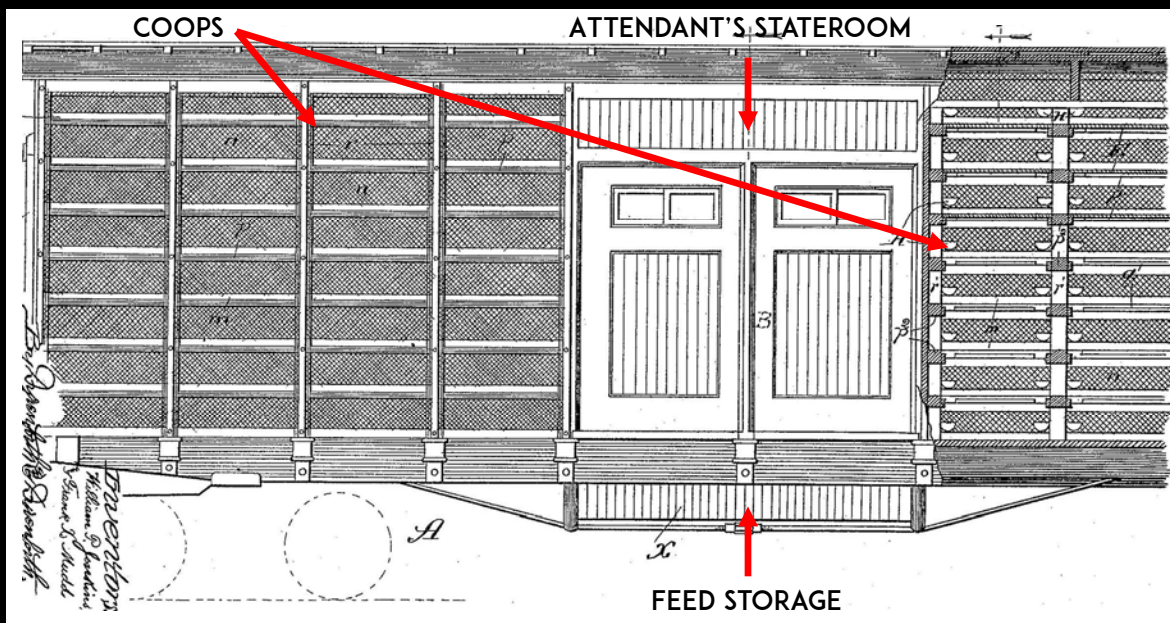


## The 1884 Jenkins/Streeter Poultry Car

While unique in its design, the concept for the first live poultry car still had problems:

- No care to ensure the birds lived to make it to market healthy and fat. Shrinkage was a big problem.
- Loading and unloading of the coops was done from the outside of the car with a risk for loss.
- The small size of the car limited the number of poultry that could be transported.

The car was quickly redesigned to address the design flaws with the original car. New patents for the changes were issued to Jenkins in 1885, 1888, and again in 1891.





## The Jenkins Live Poultry Car

In the revised plan, the car was broken up into three compartments: two poultry "coop" areas, feed storage, a watering system, and a small room for an attendant in the center of the car.

Coops were accessed through a center aisle, allowing for loading and unloading of the birds from inside the car.

Doors opened on to the aisle from the central "stateroom". The stateroom had a sink, stove, and bunkbed for the carman, allowing him to travel with the birds to ensure healthier and heavier birds arriving at market.

A rectangular water tank was built into the ceiling of the stateroom and feed was stored in a large box below the floor of the stateroom.

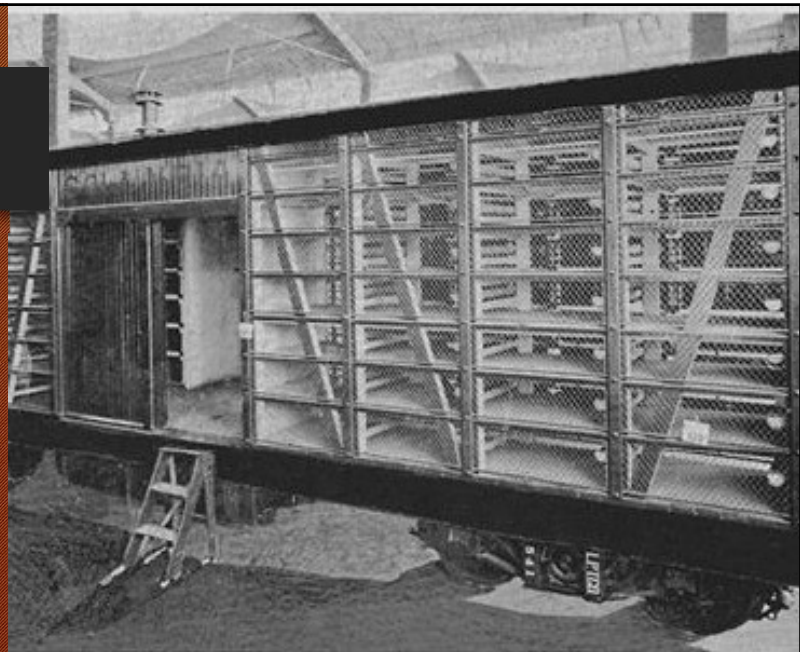
## The Jenkins Live Poultry Car

The first Jenkins car actually appeared in 1888. The eight-deck body contained 116 compartments with space for 3,500 to 4,500 birds depending on their size.

Within a year, cars with 128 coops were put in service. Capacity was boosted to 4,608 birds, or 36 chickens per cage.

An additional twelve coops could be stacked inside the attendant's stateroom boosting the car's capacity to 5,040 chickens, much to the chagrin of the carman.

The car was so revolutionary, it appeared at the Chicago World's Fair in 1893.



FOR TRANSPORTING LIVE POULTRY



## The Poultry Car Grows in Popularity

Jenkins created the Jenkins Live Poultry Car Company (L.P.T.C) in 1888 to correspond with the construction of his car design.

He quickly reorganized his business into the Live Poultry Transportation Company and by 1890, had 56 cars in operation - 6 through the Jenkins Live Poultry Car Company, and 50 through the Live Poultry Transportation Company. (1890 O.R.E.R.).

By 1903, The Live Poultry Transportation Company had 825 private cars in operation and very little in the way of competition.

Over a dozen additional patents for differing designs, improvements, and inventions, related to the transportation of live poultry, were issued through the early 1900s. Everyone, it seemed, wanted to ship chickens.

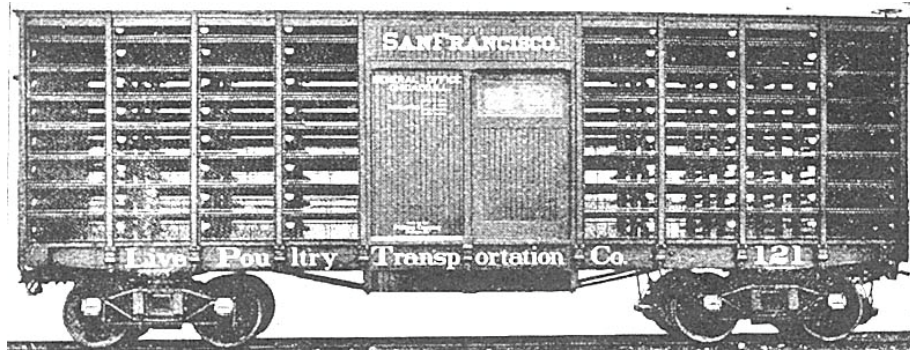
## The Poultry Car Grows in Popularity

Cars were given individual names. Some were named for places, some for fowl, and others named for individuals who had made an impact on the company. (i.e.: San Francisco, Magpie, and Mudd)

Almost every "fast-freight" headed for a large metropolitan area had poultry cars in the consist.

By 1910, Live Poultry had adopted a steel-underframe and other updated safety features. Wood frame cars were remodeled or retired.





L.P.T.C. 121 - SAN FRANCISCO

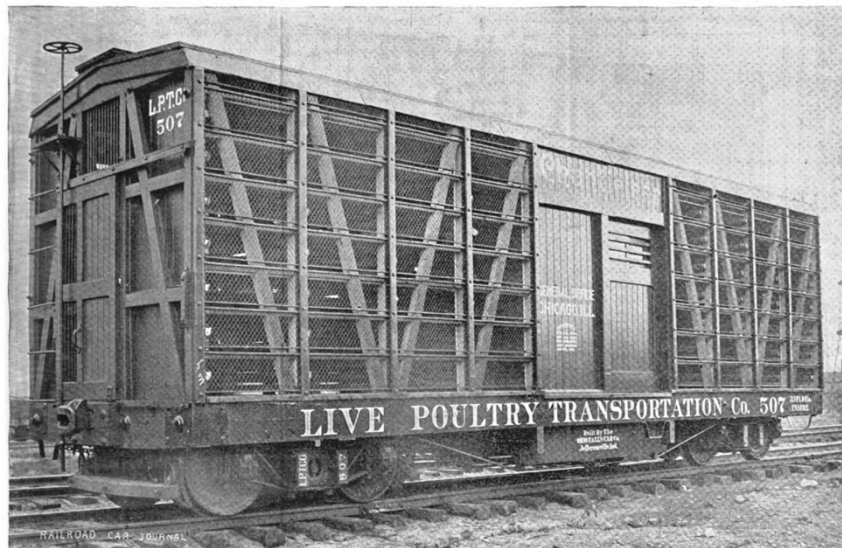


L.P.T.C. 257 - HAMBURG





L.P.T.C. 500 - MAGPIE

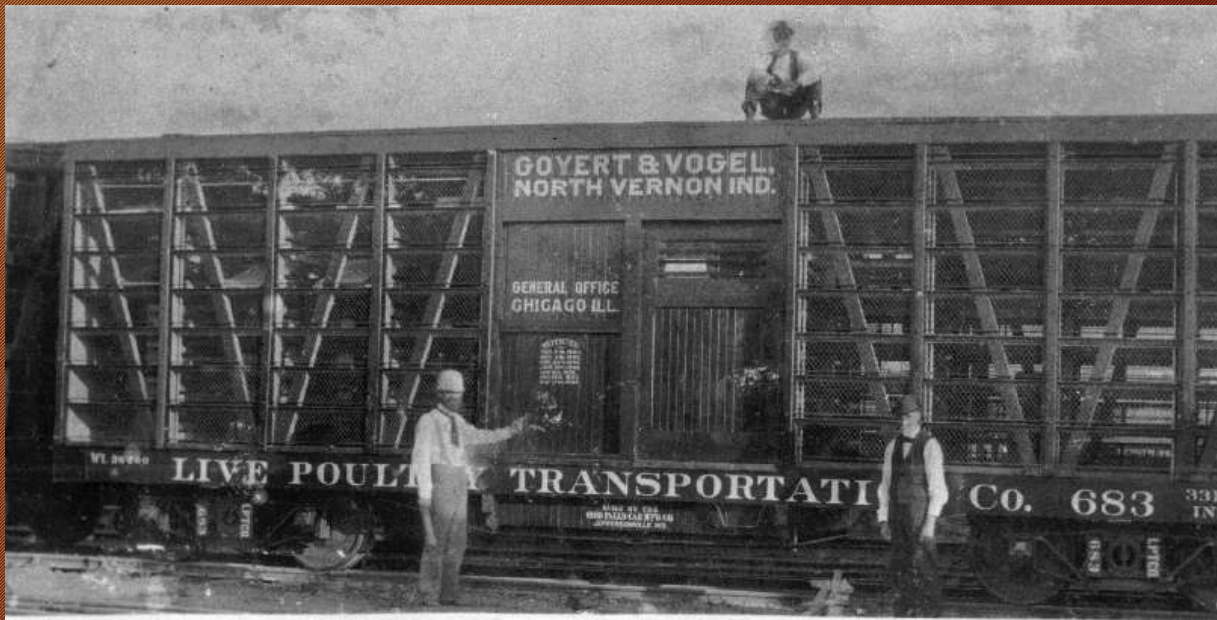


L.P.T.C. 507 - CHANDELEER



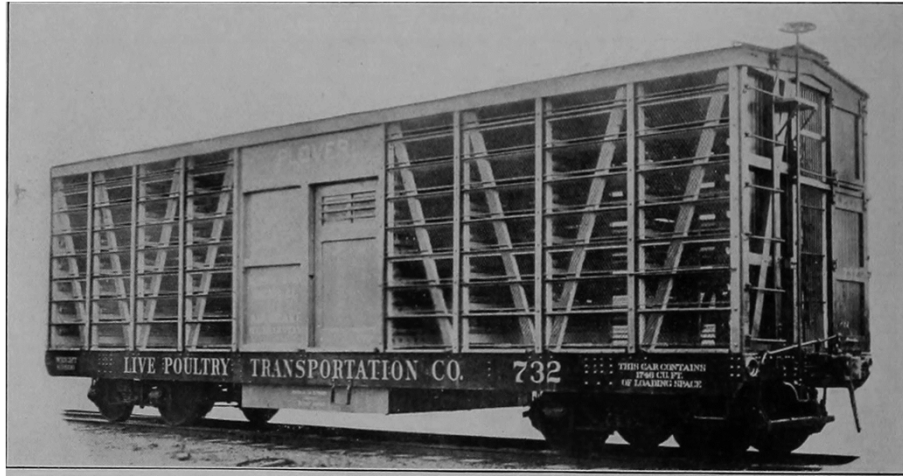


L.P.T.C. 677 - SPRINGFIELD



L.P.T.C. 683 - GOYERT & VOGEL



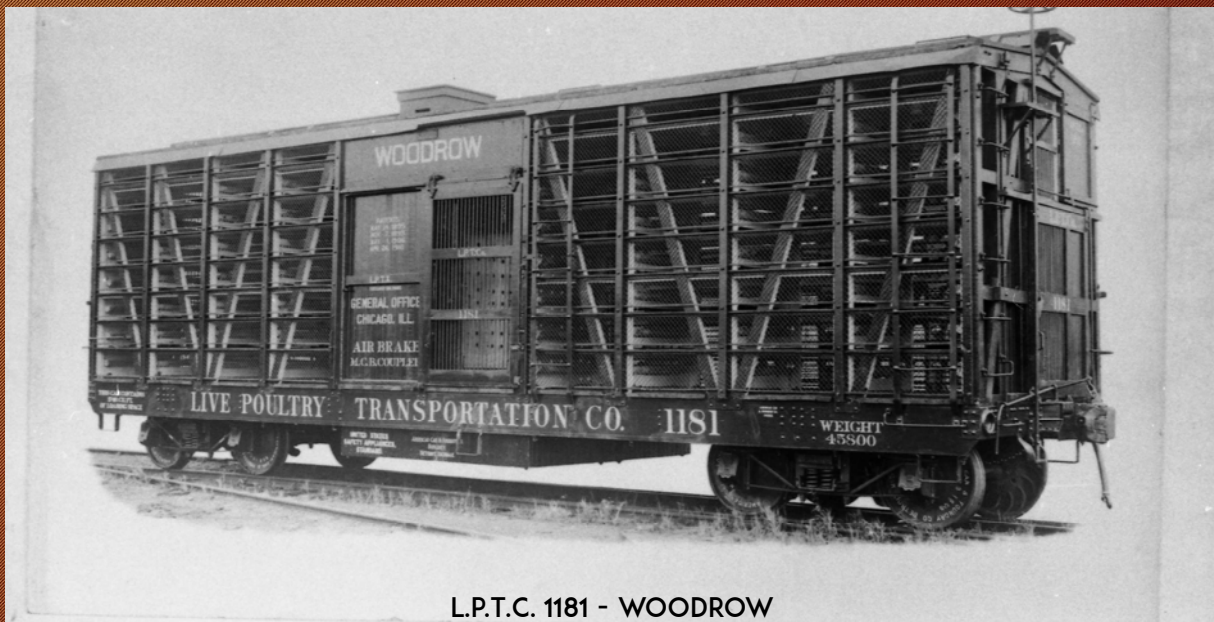


L.P.T.C. 732 - PLOVER



L.P.T.C. 922 - POLLY





L.P.T.C. 1181 - WOODROW

## Live Poultry Shipping Continues to Grow

In 1909, LEMAC Carrier Company tried to get in the game with 150 live poultry cars. (1910 O.R.E.R.). By 1917, they had quickly built a fleet of 400 cars. However, LEMAC was sued for patent infringement by the Live Poultry Transportation Company. Even with advertisements stating they had their own "new" patented design for cars, LEMAC vanishes from the records somewhere in the early 20s.

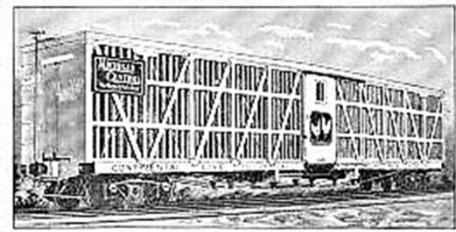
Some railroads were quick to purchase their own poultry cars. Starting in the late 1800s and into the early 1900s, O.R.E.R.s listed Poultry Cars for numerous roads such as Michigan Central, Lehigh Valley, Southern, Lackawanna, Norfolk & Western, and more.



## The Continental Live Poultry Car Company

In 1890, the Continental Live Poultry Car Company began operations. Continental hoped to gain favor in the market with a car that was longer and offered space for up to 7,000 birds. Even with the support of Michigan Central, Continental only survived a few short years.

These drawings of the Continental Live Poultry Car are the only known images to exist. (The Railway Review, June 19<sup>th</sup>, 1890)



CONTINENTAL LIVE POULTRY CAR-Fig. 11.

## The American Live Poultry Company

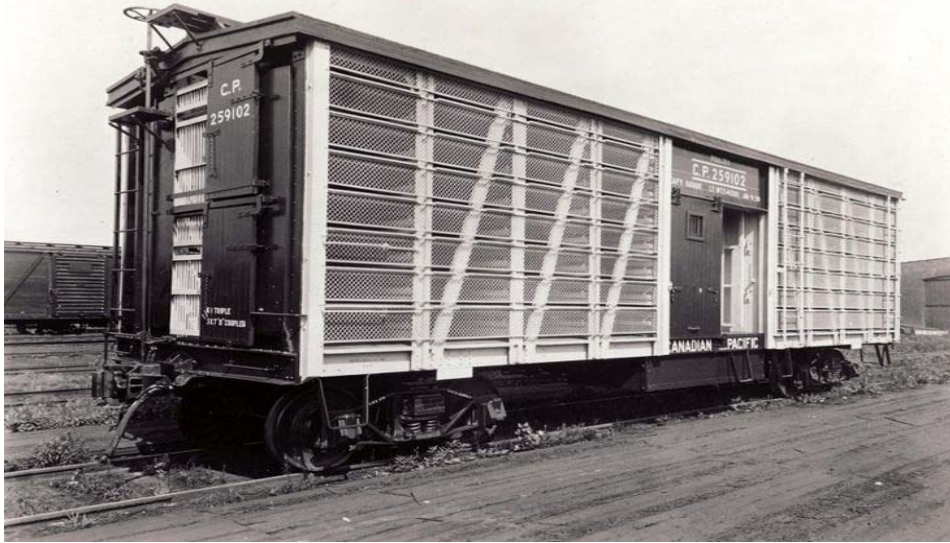
The American Live Poultry Company began operations in 1909 using the patent from Burgett - a very closed car with tight slats and louvers, thought to protect the birds from the harsh northern climates. The company and the car design failed to catch on, and dissolved by 1911.

The design was based on the Burgett patent - US913,690 - 1909





CANADIAN PACIFIC - C.P. 259102

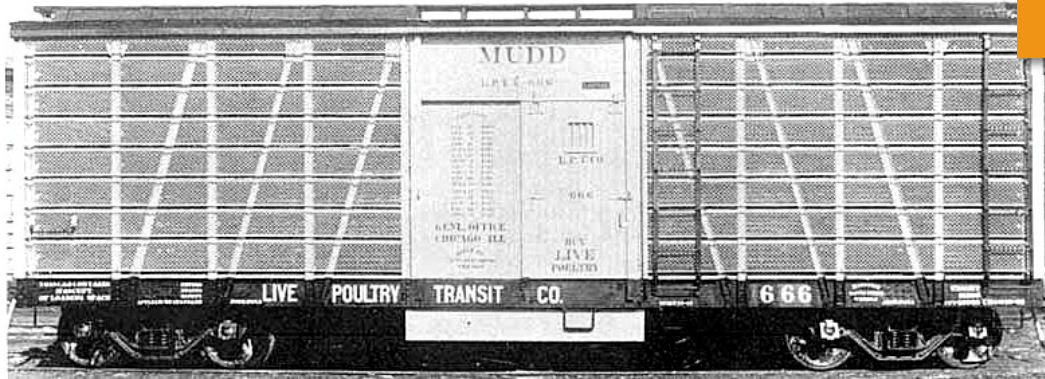


## Live Poultry Struggles with Demand

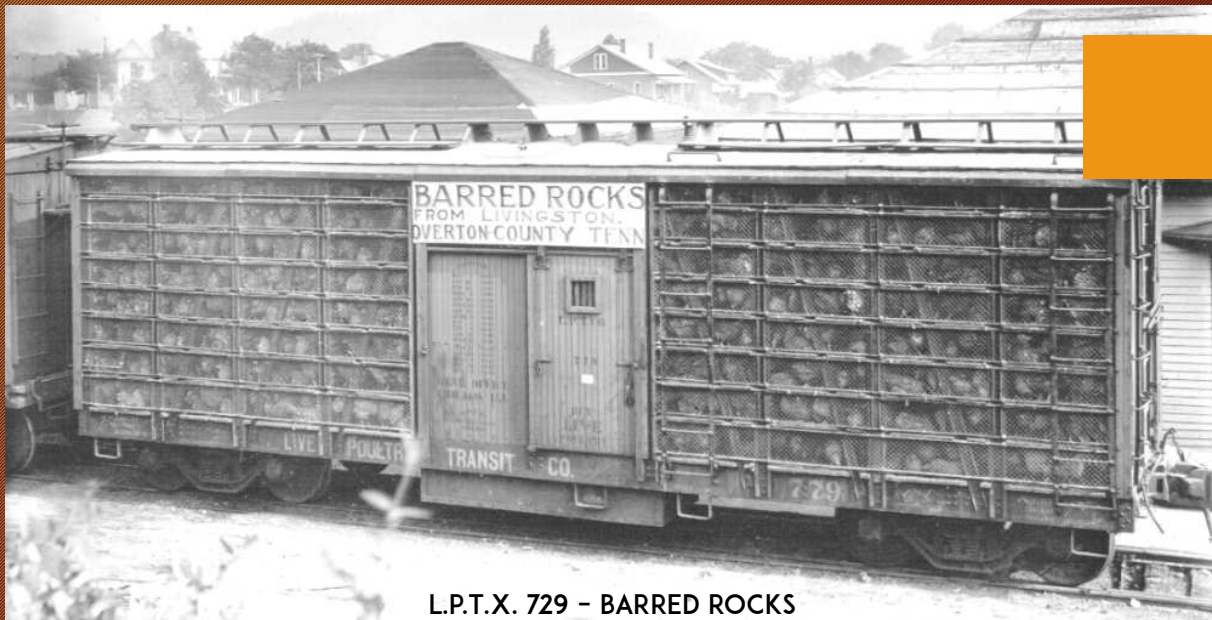
In 1914, Live Poultry Transportation Co. reorganized again, this time into the Live Poultry Transit Company, (L.P.T.X) and had over 1,000 cars in operation, with more on order from Terre Haute Car and Manufacturing Company. By 1921, that number swelled to 2,000 cars.

September of 1922, the National Poultry, Butter and Egg Bulletin was reporting severe shortages of live poultry cars. (National Poultry, Butter, and Egg Bulletin, November 1922, p. 30). This was a real concern. Live Poultry was already struggling to keep up with demand and the railroads, consumers, dealers, and markets were unhappy with performance. The Interstate Commerce Commission, the Department of Agriculture, the American Railway Association, and the American Farm Bureau Federation were all tapped to step in to help address the shortage.



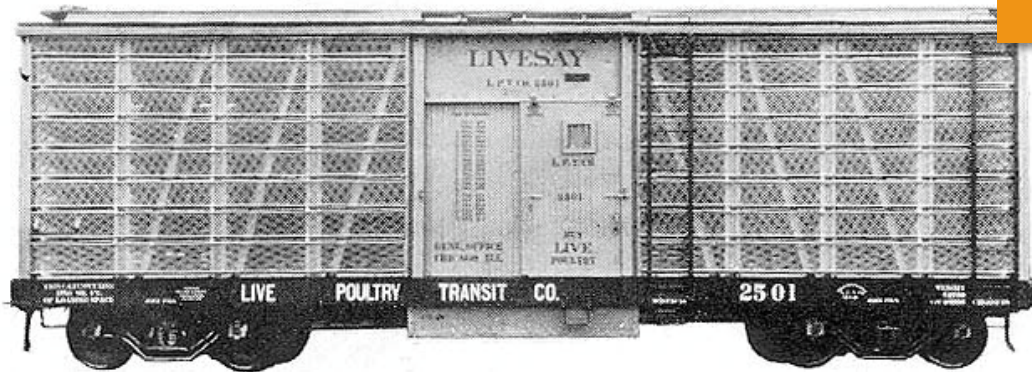


L.P.T.X. 666 - MUDD



L.P.T.X. 729 - BARRED ROCKS





L.P.T.X. 2501 - SPEEDY

## Live Poultry Finally Has Competition

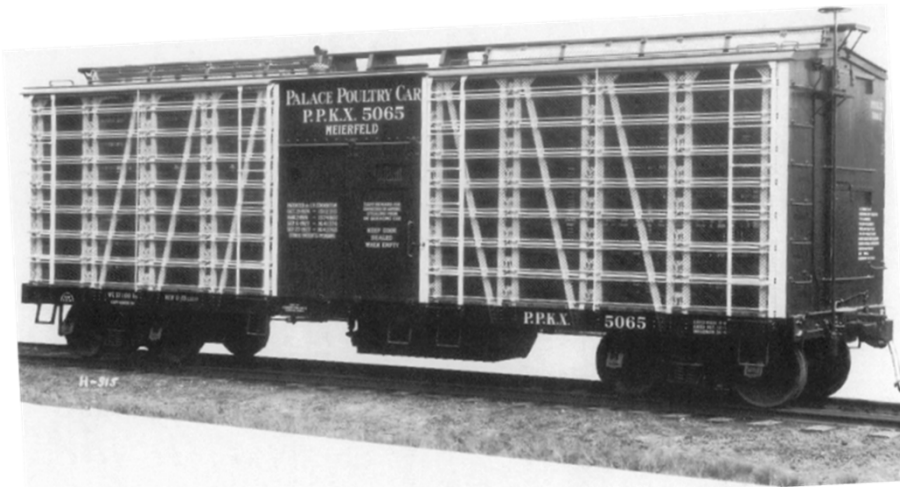
By the late 20s, there were 2,800 live poultry cars in operation on American railroads, the bulk of which were privately owned by the Live Poultry Transit Company.

In 1924 the Live Poultry Transit Company faced its first real competition with the launch of the Palace Poultry Car Company (P.P.K.X).

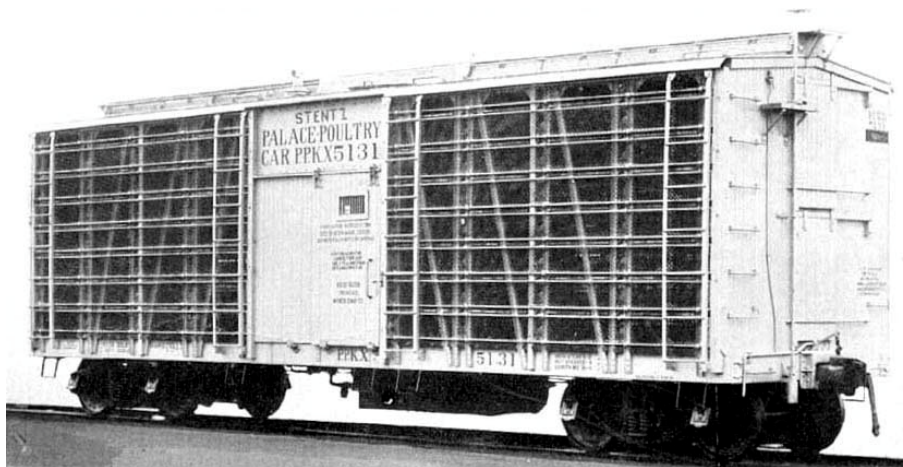
By June of 1925, Palace already had 251 cars in operation. That number quickly swelled to 400, and in 1926, the powerful North American Car Corporation took over operations.

North American had the power and resources to overwhelm the small Live Poultry Transit Company, and ultimately took control on January 1, 1930.



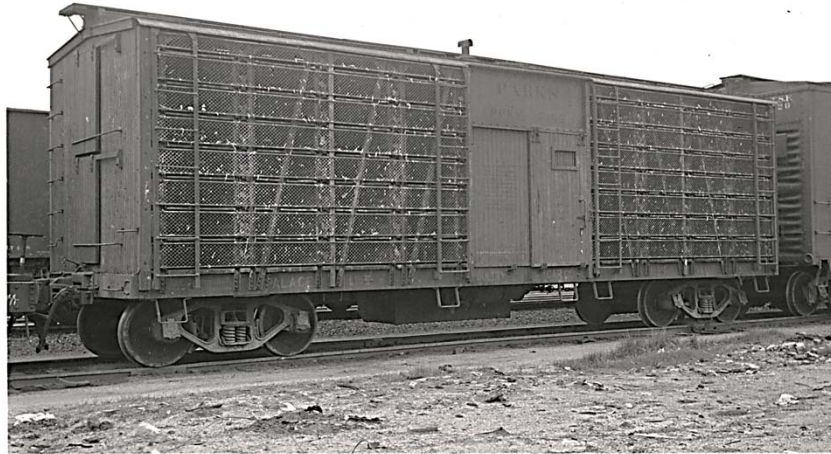


P.P.K.X. 5065 - MEIERFIELD



P.P.K.X. 5131 - STENTZ



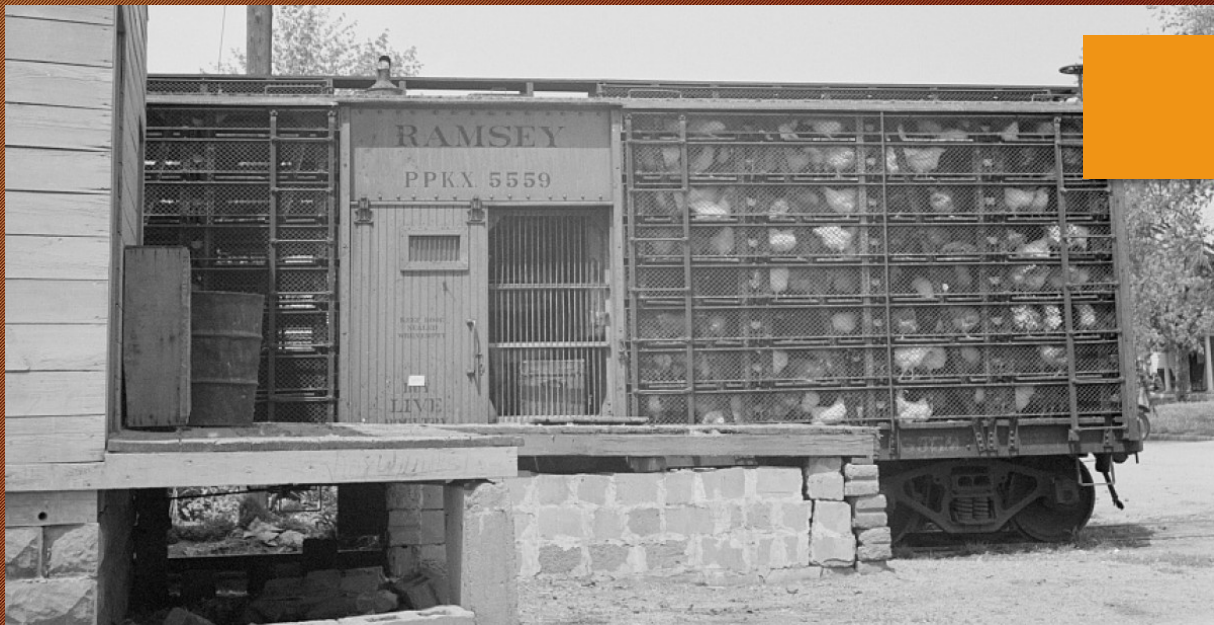


P.P.K.X. 5195 - PARKS



P.P.K.X. 5500 - KELLER





P.P.K.X. 5559 - RAMSEY

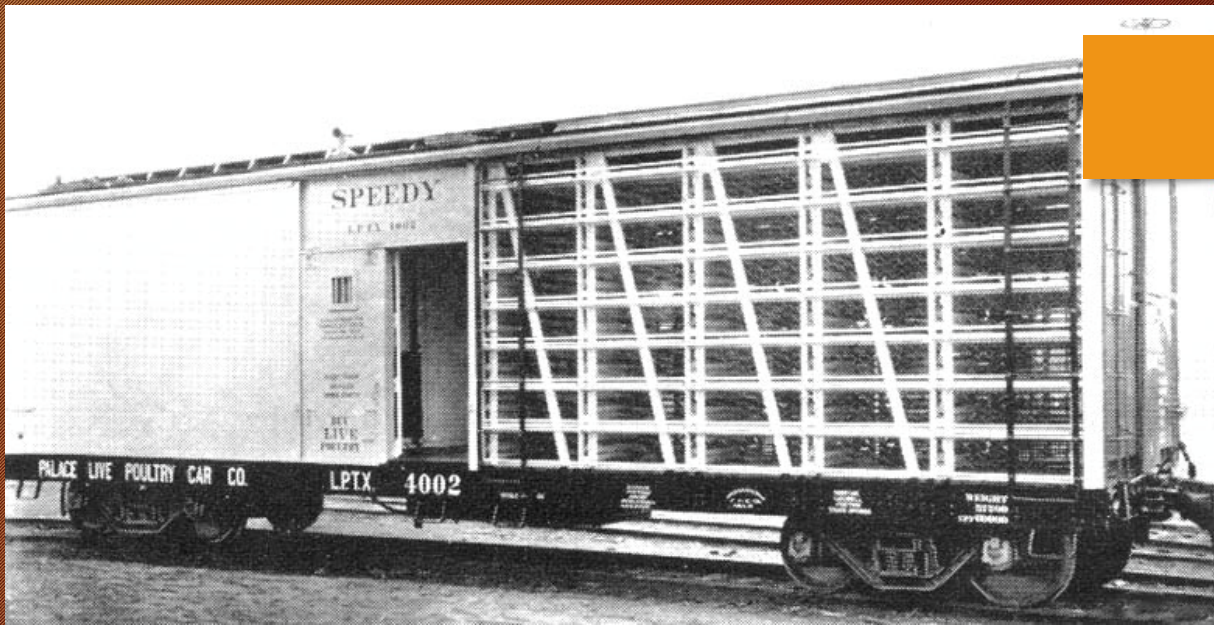
## Live Poultry Shipping Evolves

1928 saw over 50% of live poultry moved by rail. By 1940, that dropped to only 27% due to truck traffic and improvements made in the ability to ship dressed poultry by refrigerator car.

Even with the crash in 1929 and the farming industry in ruins, people still needed to eat. North American, and competitors Fruit Growers Express and Merchants's Despatch, show surprising prosperity in the 30s.

In response to the ever-increasing truck traffic, a dual refrigerator/poultry car was developed for less than car load poultry shipments. The live poultry end could carry 2,500 birds, while the refrigerator end offered up to 730 cubic feet of space for dressed poultry, eggs, butter, and other perishable goods.





L.P.T.X. 40002 'SPEEDY' COMBO REEFER/LIVE POULTRY CAR.  
NOTE: IT CARRIES THE PALACE NAME, BUT THE L.P.T.X. CAR NUMBER REMAINS.

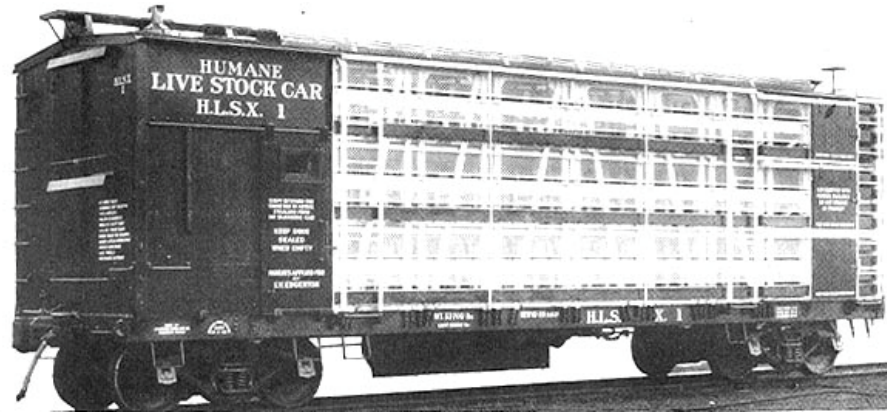
## Live Poultry Shipping Declines

1932 also saw the conversion of existing live poultry cars into dual purpose stock and poultry cars that allowed for railroads to make adjustments to the cars to meet their specific livestock needs. The cars were given the reporting marks H.L.S.X.

By 1940, North American, looking to cut back, retired 1,000 cars from its fleet as live poultry shipping continued to decline at a rapid rate.

The shift to dressed poultry becomes very evident in the tons of fowl shipped during the early 40s. Dressed poultry was being shipped at a 10:1 ratio over live poultry. The war helped increase live poultry shipments for a short time, however, the heyday of live poultry shipments was drawing to a close.





H.L.S.X. 1



H.L.S.X. 2



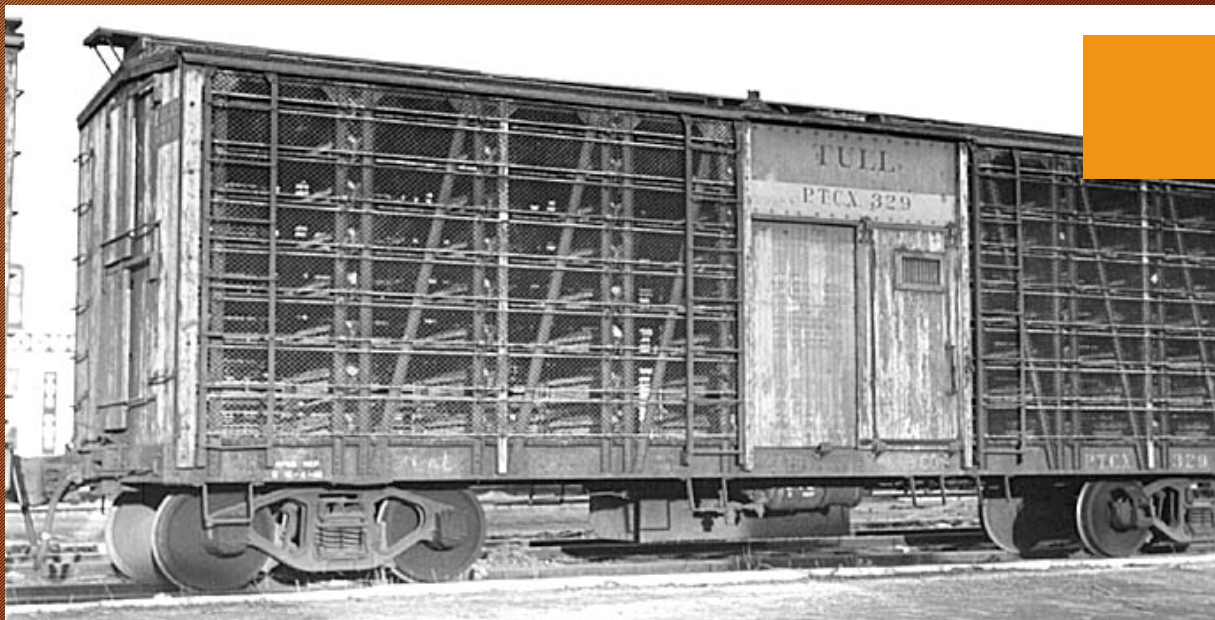
## The End of Live Poultry Shipping

In 1944, North American created the Poultry Transit Company to offload the failing live poultry transportation business. It transferred all but 124 cars to P.T.C.X. Those too were soon retired.

October of 1947, Poultry Transit Company was down to a mere 237 live poultry cars.

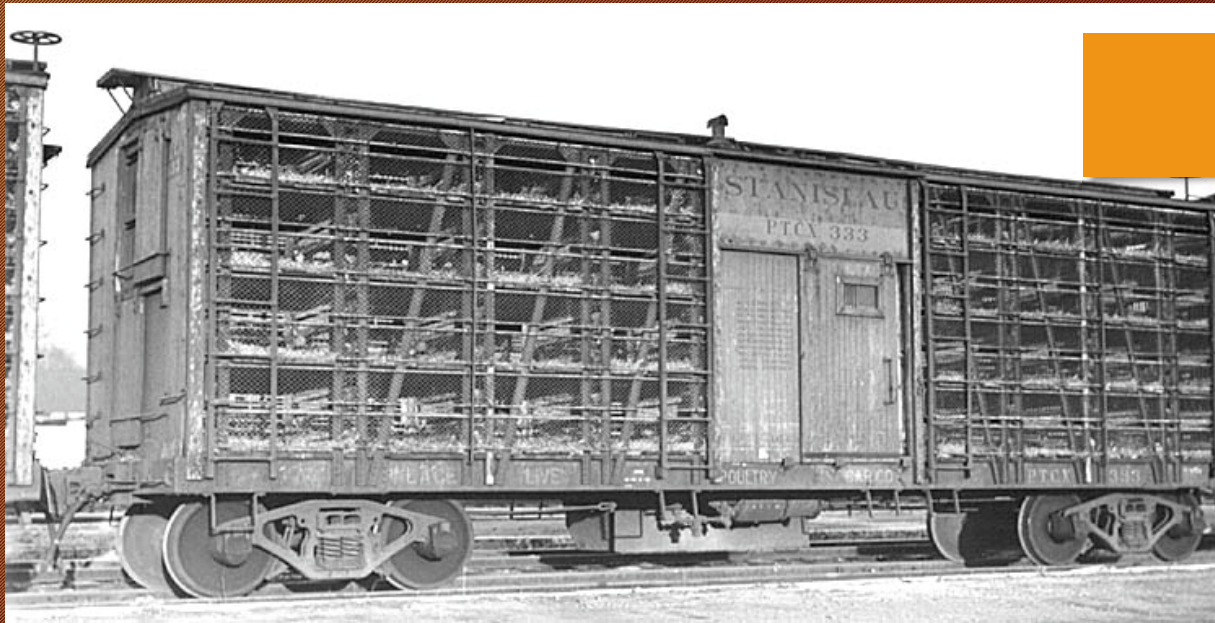
By 1950, only 15 cars remained active on the company's roster.

The actual end of live poultry shipments has two dates. A survey by the American Poultry Historical Society states that the actual end of live poultry shipping was 1956. However, the Association of American Railroads continued to list very small poultry shipments as late as 1961.



P.T.C.X. 329 - TULL



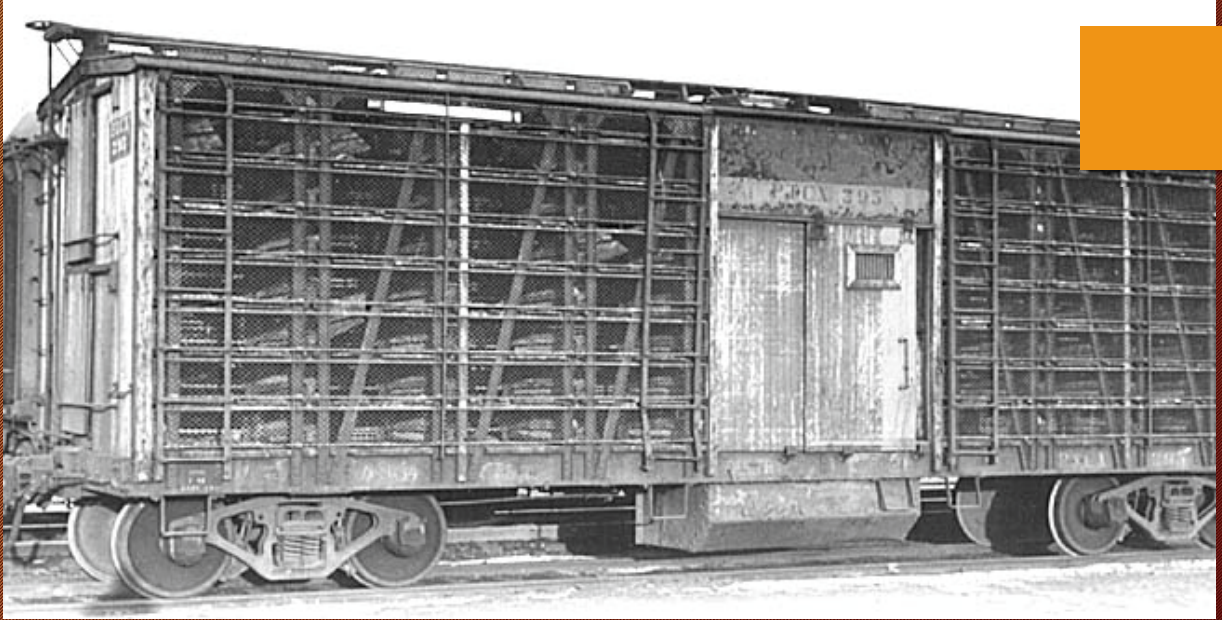


P.T.C.X. 333 - STANISLAU

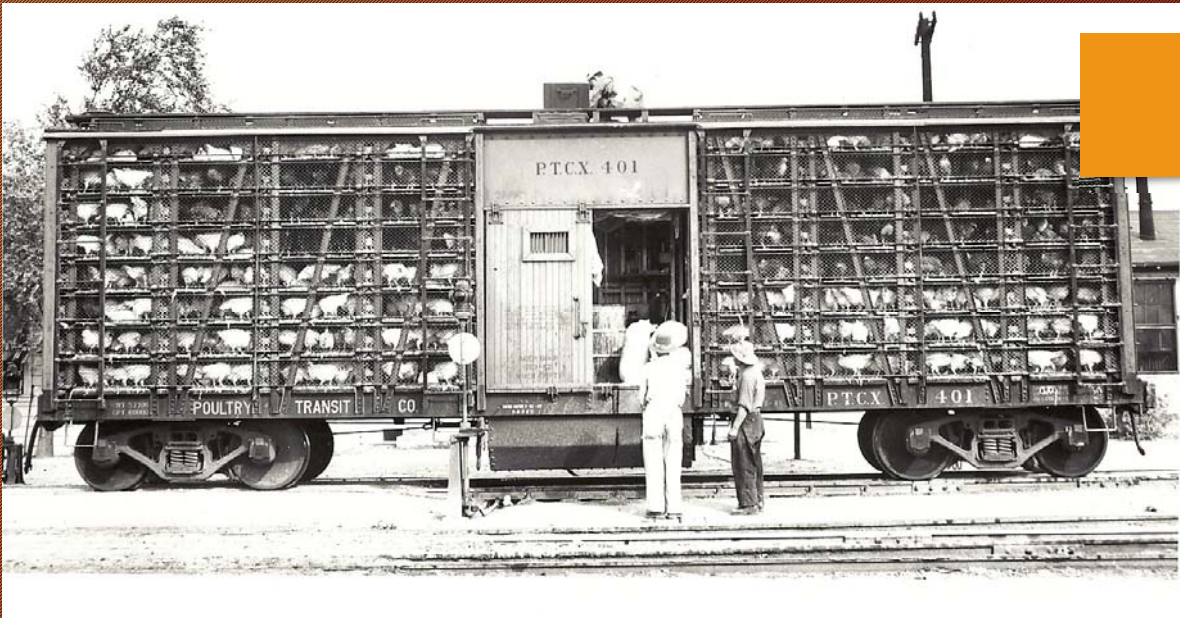


P.T.C.X. 366 - JAQUES





P.T.C.X. 395



P.T.C.X. 401



## The Last Known Live Poultry Car

Poultry Transit Company's car #423 was parked on a siding at the J.H. Brown Poultry Company in Illinois around 1950. It still carried its Palace Poultry Car designation and number 5568.

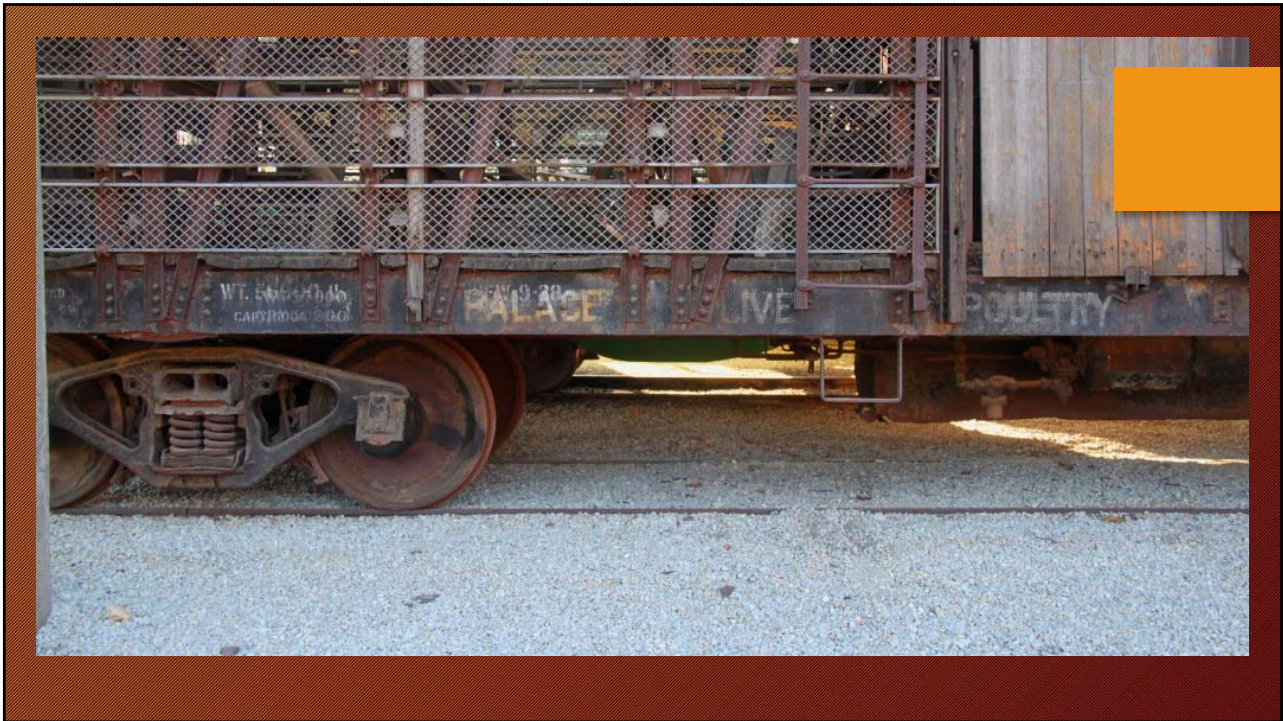
No longer able to run, the car was used simply as a hen house and chicken storage.

Sometime in 1957, the National Museum of Transportation spotted the car and tried to persuade the J.H. Brown company to part with its chicken coop. Even knowing the historical value, the company continued to decline the requests of the museum.

Persistence paid off. It took 28 years, until the demise of the J.H. Brown company, for the new owner to generously donate the car to the museum.



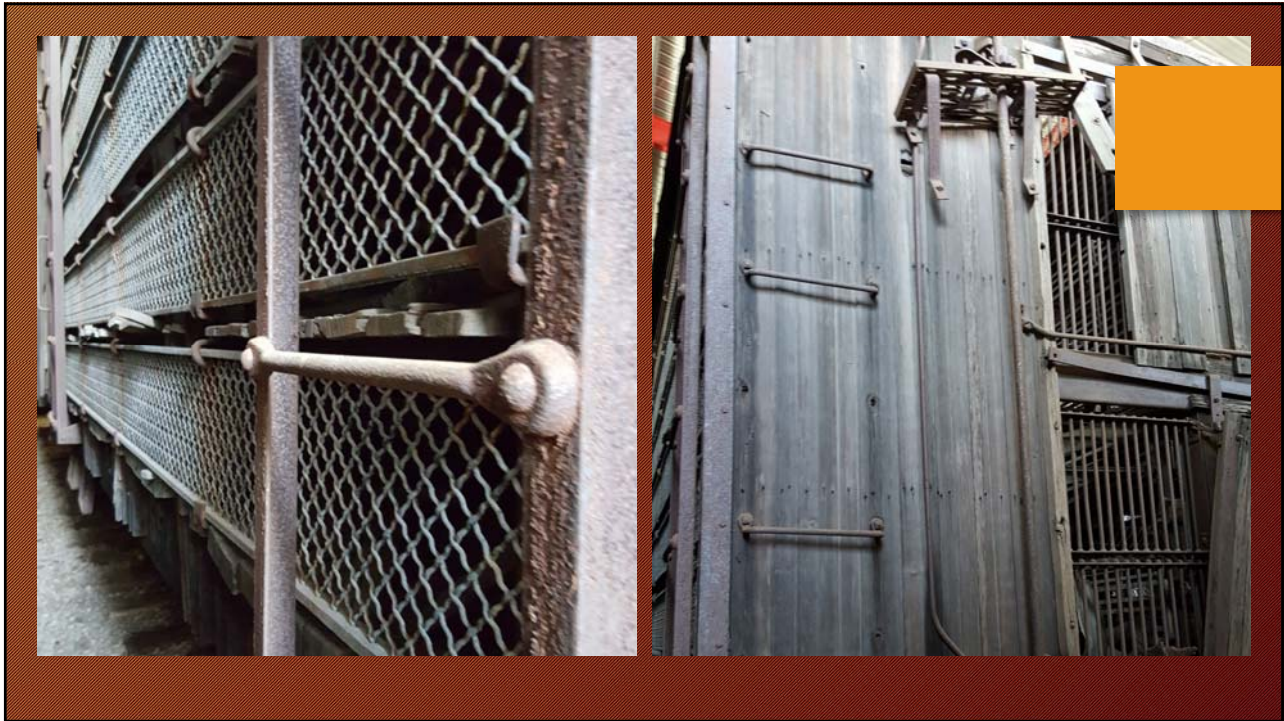












# Live Poultry Car Operation



## Live Poultry Cars, Operation Details

Duration of the trip depended on the distance and number of stops required for loading.

- A car from Texas to New England might be on the road for seven days, picking up poultry at numerous stops, while a loaded car, requiring no stops, could go from Chicago to New York in about 55 hours.
- The round trip was much slower. It took a day or two to unload and clean the cars and they went home on a slow freight; hence the entire trip might take two to three weeks.

shutterstock



The operation of poultry cars was more complex than a single arrangement between the shipper and the railroad. Several middlemen were involved in their operation.

- Involved was the assembler, a wholesale poultry buyer, or commission merchant, who purchased chickens from farmers and made arrangements with the railroads and LPT for the use of the cars.
- He assembled the chickens at stations and worked out a route for pick up as the car moved along the line.
- Farmers were advised when and where to make deliveries.
- The assembler paid the farmers directly and, as the shipper and owner, he assumed the risks that market prices would hold until the birds could be delivered.

The assembler would hire a carman to ride with the shipment and help load and fill the cages during the first few days of the trip.

During the entire trip, the carman would feed and water the birds and keeping the birds alive (and gaining weight) was the carman's primary duties. Dead birds had to be removed quickly to reduce the threat of disease.

After the car was unloaded and cleaned, the carman left the poultry car's stateroom and the car was returned empty.



Before permit is given for unloading, the poultry must be examined as to condition.

- 1922 Rules for Carmen
  - One carman per five cars from one owner on the same train.
  - Two men each in charge of 6 - 10 cars
  - Three men in charge of 11 or more cars
  - No women or children
  - Return passage reimbursement, if available, to be completed within 60 days. Most carman were not afforded the luxury of return fare. Western roads were more likely to reimburse or pay for a coach seat to points west of Chicago, however Eastern roads offered no such compensation.
  - When Live Poultry is shipped with no carman, the contract must be noted "No caretaker in charge."
- Caretakers' cars: Some roads put old passenger cars into service to act as caretaker's cars. Used to give carmen a break from the noise and the smell, they were often coupled to the end of the consist.



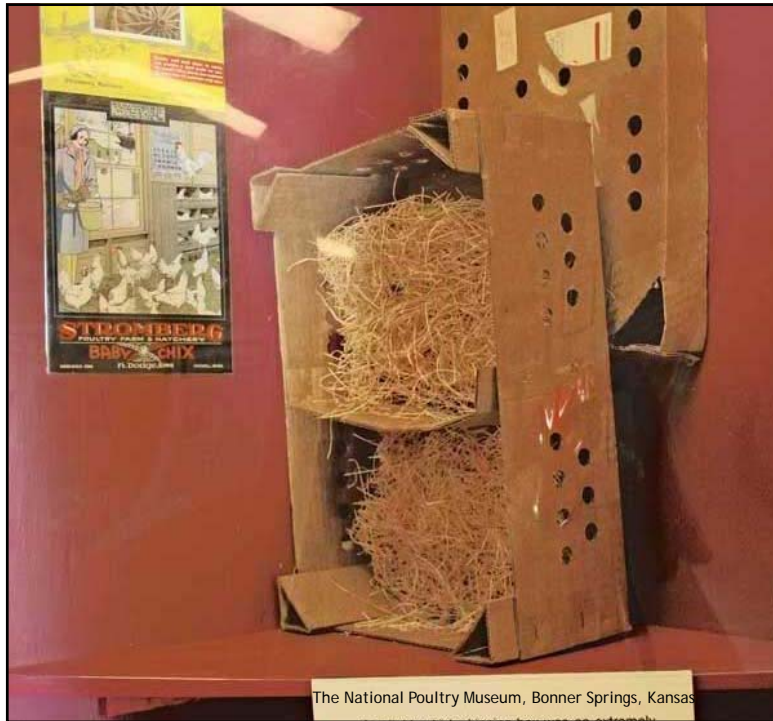


Eggs and chicks were shipped in box cars and RPOs until the late 30s when eggs could also be shipped with the live birds in the reefer/live poultry combo cars.

In the spring farmers received chicks in shipping boxes that held 25 to 100 chicks. Chicks were shipped the day they hatched as they could survive the first two days without food or water. The postmaster called the farmer when the chicks arrived.

Fresh eggs could be shipped to customers in specially designed tin or wood shipping boxes which would be shipped back after the eggs were delivered. (Note: Freshly laid eggs can be left out at room temperature for at least a month before you need to start thinking about moving them into refrigeration.)







# Modeling Live Poultry Cars

## Modeling Live Poultry Cars

If you are modeling a pre-depression era railroad that serves a large metropolitan area, the likelihood is one or more poultry cars would have gotten added to any fast freight shipments being made.

Because of the complex nature of poultry car operations, there are numerous opportunities to include these unique cars.

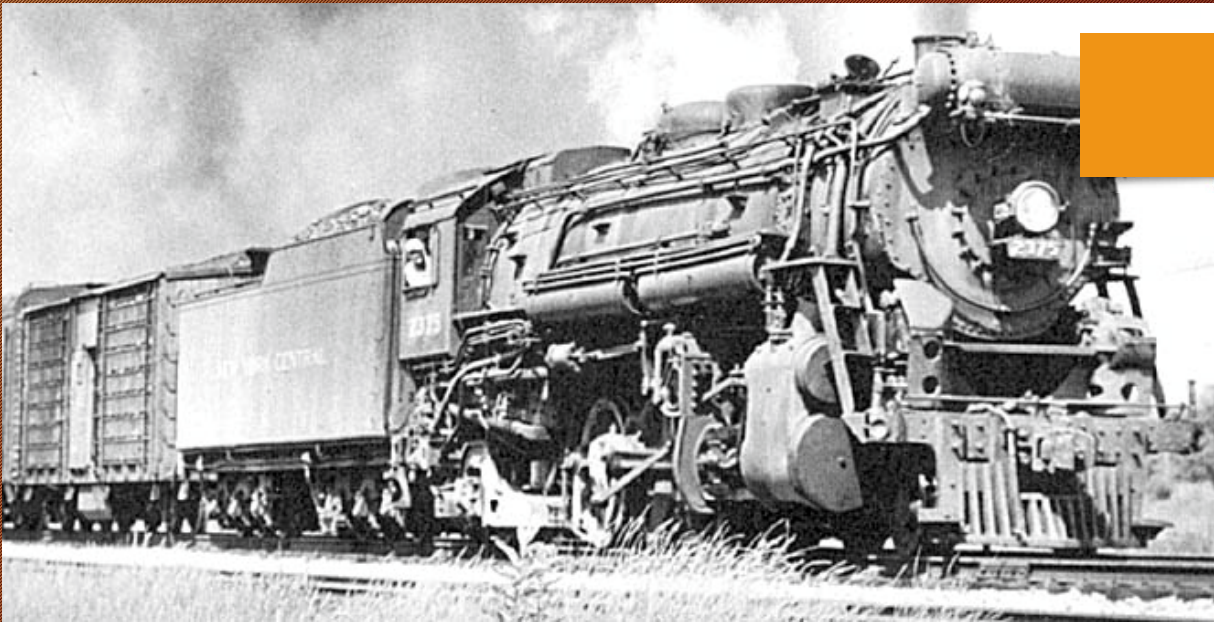
- Have a branch line that ran to an interchange with a major road? Even as late as the 50s? The possibility remains there might have been a poultry car that appeared on the line.
- Want to include an old-time passenger car on your post-depression era layout? A string of poultry cars and a caretakers' car could easily fill that role.

Look closely at old photographs of your railroad. Chances are you might just find some poultry cars.





POULTRY CAR ON C&NW FREIGHT



POULTRY CAR ON NYC FREIGHT



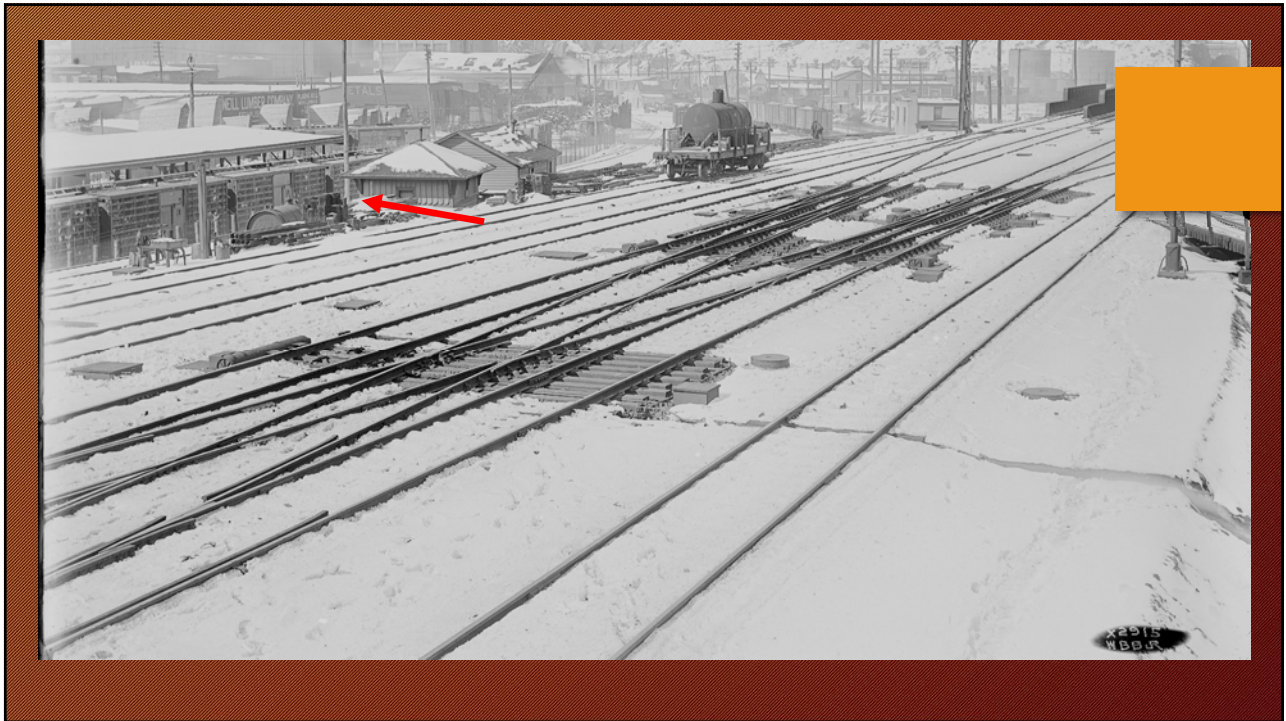


LINE OF POULTRY CARS ARRIVING IN NEW YORK

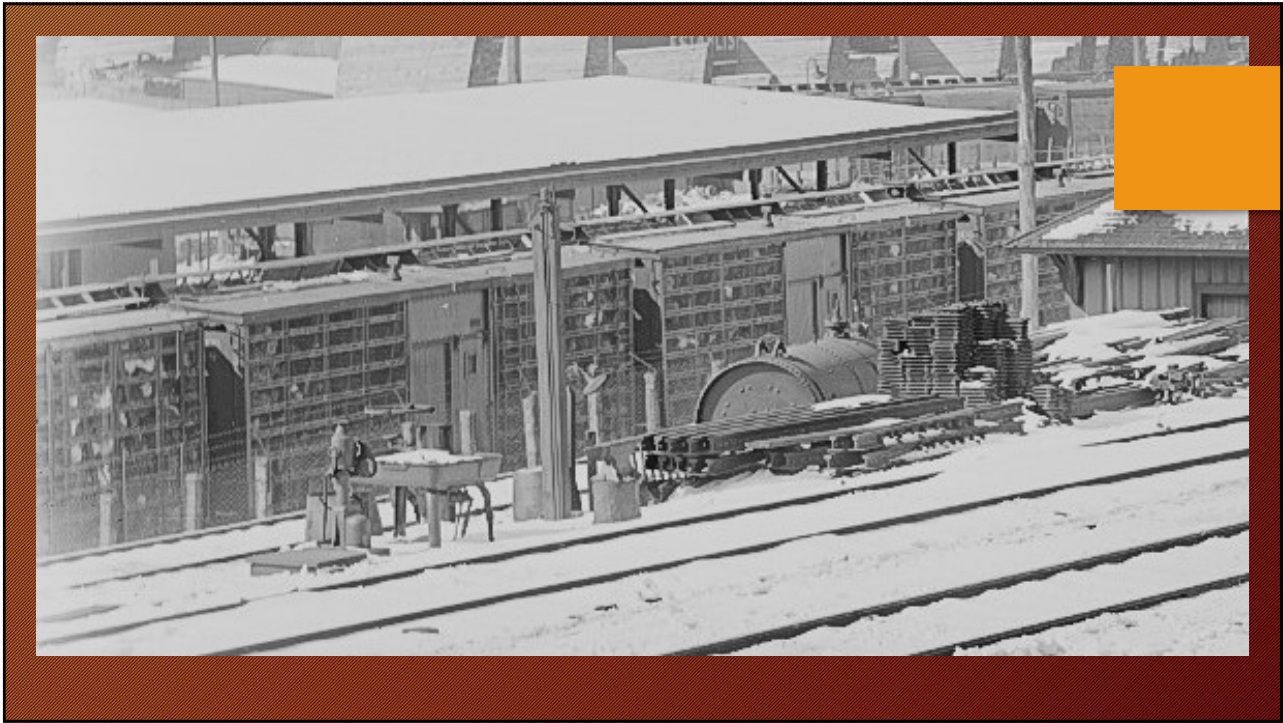
CHICKENS EVERYWHERE!







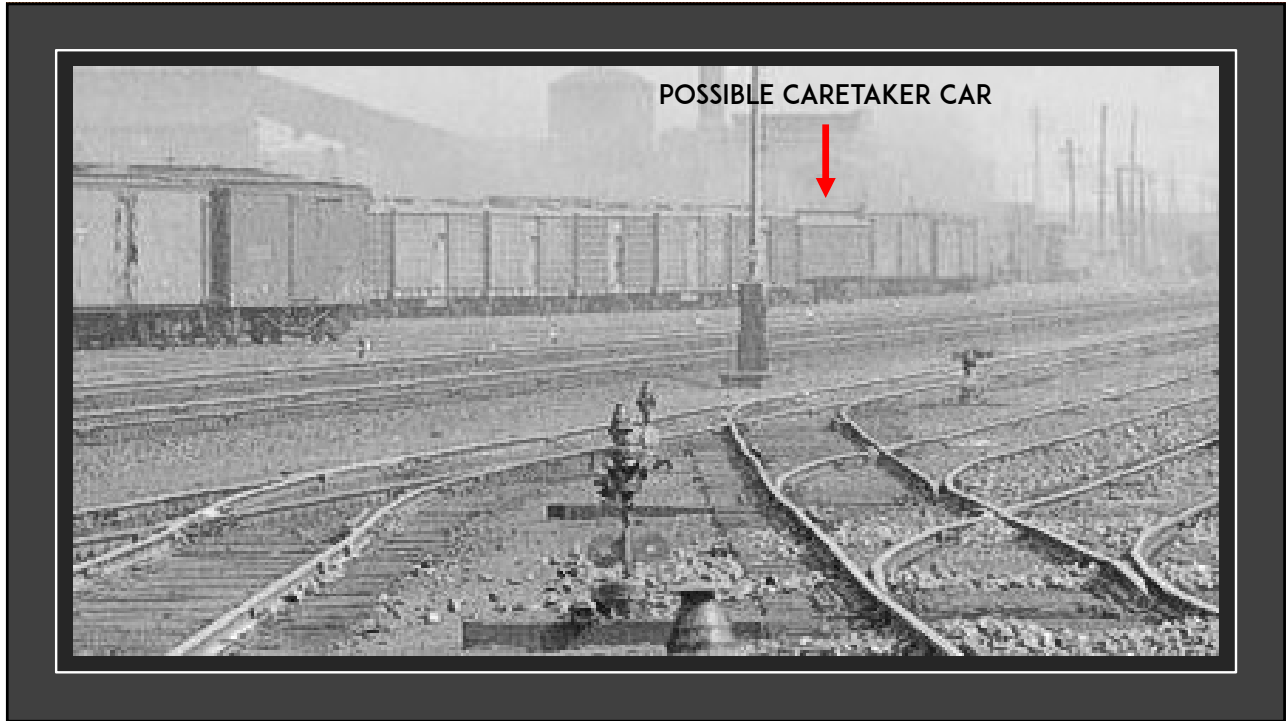
























## Modeling Live Poultry Cars, Commercially Available Kits

Live Poultry cars were unique. Several manufacturers have tried to produce a scale car for the modeler.

Ambroid and Northeast Scale Models produced the "Livesay" Poultry Car and the "Speedy" poultry and reefer car kits in wood. Both kits can be found on eBay, but neither is prototypical.

Main Line Models also produced a wood kit of the live poultry car, but like the other early wood kits, it suffers from a lack of detail. This kit is even less detailed than the Ambroid kit.

Articles published in Model Railroader from 1947 & 1961 including base drawings for the construction of a live poultry car. (MR, October 1947, p.804 & MR, July 1961, p.26)





AMBROID "LIVESAY"



AMBROID "SPEEDY" REEFER COMBO











## Modeling Live Poultry Cars, Commercially Available Cars

Overland released a brass model of the 1920-1950 era Palace Poultry Car. It is the closest to prototypical, however still has flaws.

Bachman/Tyco also released a tri-level stock car. It's modeled after the Humane Live Stock Cars of the 1930s converted from original live poultry cars.

Lionel also makes two poultry cars:

Lionel 26796 Poultry Dispatch Car: Features chicken silhouettes with interior illumination and realistic chicken sounds. It also features: a Molded plastic body, Stamped metal frame and Die cast metal trucks

Lionel 19801 Poultry Dispatch Car: The chickens in the windows light up from behind, Metal wheels and axles and Operating knuckle couplers.









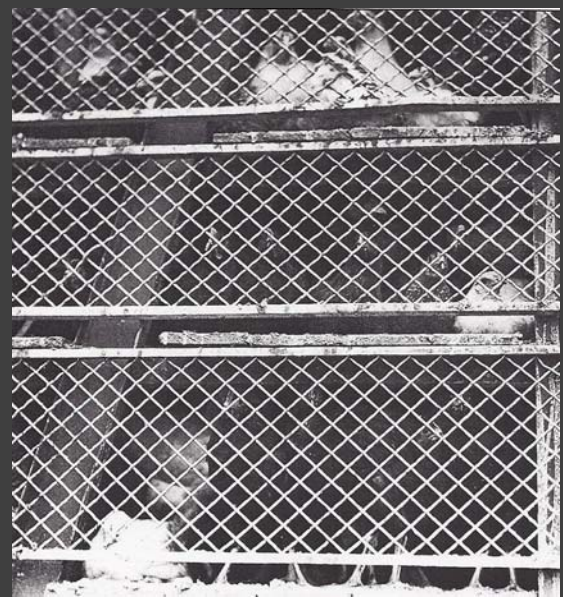
## Modeling Live Poultry Cars: The Details

While most models depict the "coop" area as open, the coop section was not only divided into coops that held the birds, there were coop "floors" made up of tongue and groove in between each of the levels. These were removable, for cleaning, and adjustable to accommodate larger poultry, such as turkey.

A narrow walkway in between both sides of the "coops" allowed the carman to move through the length of the car for feeding and watering access. The walkway was 24" - 30" wide, depending on the design.

The stateroom contained a bunk, a stove for heating, a sink for the carman, and provided access to the water tank. The inside doors that opened from the "stateroom" to the walkway, the car end doors that opened for ventilation, and the car side doors, all had additional "barred" doors that could improve air flow into to the car providing steady air flow when the cars were on the move.

Access to the feed storage, below the stateroom, was through a side door. The carman could only replenish his feed supply when the car was stopped, so it was customary to keep a feed barrel inside the stateroom that was periodically replenished. Some later design cars allowed for a hatch in the stateroom for more direct access.











## Modeling Live Poultry Cars: Roof Walk & Ventilation

Ventilation was key to the design of live poultry cars. Chickens are HOT and generate more heat when packed closely together. They are also prone to panic and smother others in their coops. While the open "mesh" sides of the car were part of the solution, even more air was key to keeping the poultry alive while traveling.

Most cars had center roof hatches which could be opened to work as additional ventilation. The roof hatch style employed a hinged roof walk-board that could be folded back exposing a car-length slot, 27 inches wide, to the sky. In very cold weather the end and top openings would be closed.

This system was probably cheaper than a clerestory, but it posed a special danger to brakemen who walked the length of the train. At night a luckless trainman could find himself suddenly propelled inside a car full of hysterical chickens. As car designs improved, the center roof hatches were covered with a full roof walk, supports, and screen over the hatch openings.



## Modeling Live Poultry Cars: Roof Walk & Ventilation

Roof walk supports were varied. Some were solid, such as the end supports, and the center supports near the water tank. However, the supports under the ventilation area were open, "bracket" type supports to allow for ventilation beneath the screens.



Top Photo: Note the open supports under the roof walk ventilation area and two doors to cover the vent.



Bottom Photo: Note the screen, and the four doors covering the ventilation area.





## Modeling Live Poultry Cars: Even More Details

Thin canvas or muslin curtains could be stretched over one side of the car, on the windward side, during especially inclement weather. The carman was tasked with handling the curtain.

Aside from the curtain and the roof walk hatch, all other ventilation could be adjusted from inside the car.

Real measurements from the last car relational to the screen and sides:

- A) The screen wire is a 1/8" diameter solid wire woven
- B) The pattern is in a 1 1/2" x 1 1/2" vertical diamond pattern
- C) The "C" channel frame holding the wire screen is a 1" tall, with 1/2" legs
- D) The length of the screens, (along the car) is 14'-6"
- E) The screens are 11" tall
- F) The gap between the screens is 3"

## Modeling Live Poultry Cars: Wire Screen

Few options have been available to model the screen sides on these cars. To achieve true to scale, the wire mesh needs to have openings 0.0172 x 0.0172 in a diamond pattern.

The old wood kits come with tulle or mesh fabric. While easy to use, it is not to scale, nor does it represent that the car is built with separate screen "panels" that run the length of the car sides. The tulle/mesh covers the sides of the car completely. It's also difficult to paint without closing the mesh "openings" and is prone to tearing and stretching.

Metal screen can be difficult to use and often does not come in scale, or the correct pattern. Cutting screen requires specific tools, such as mini tin snips, or specialized metal cutting sheers. These are not the same as metal nippers or small cutters most often used for cutting wire or other small metal components.





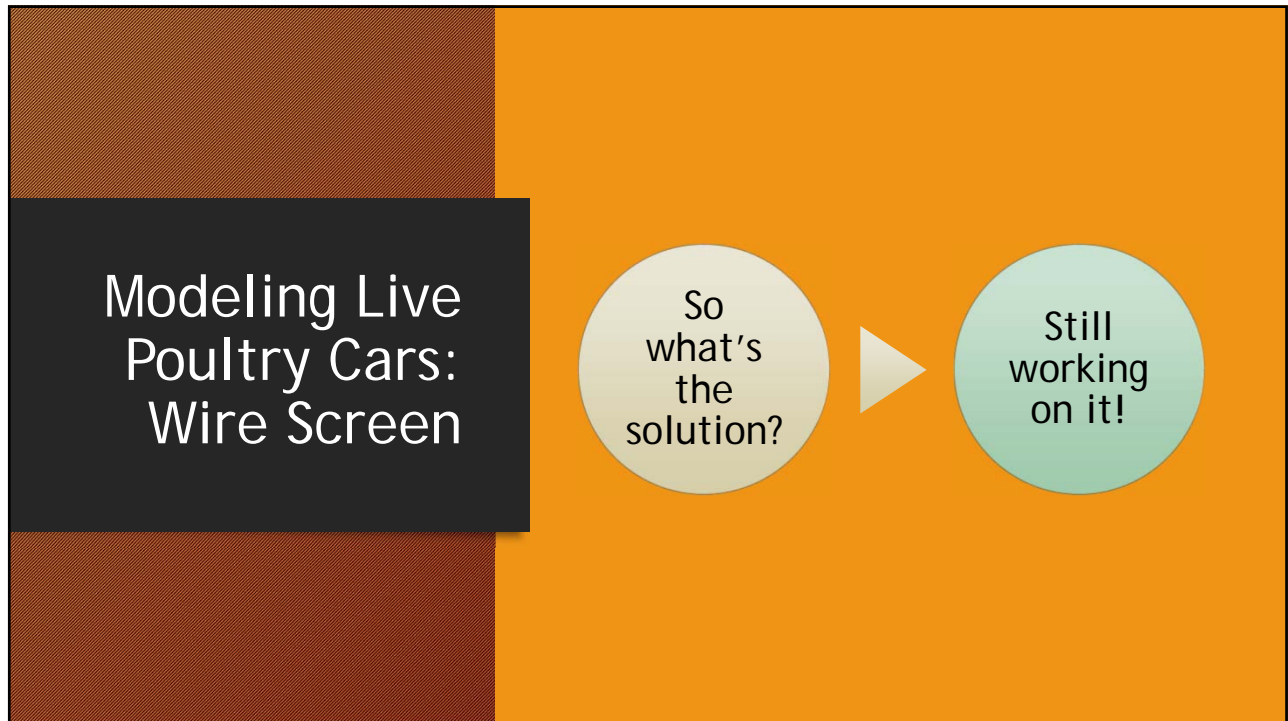
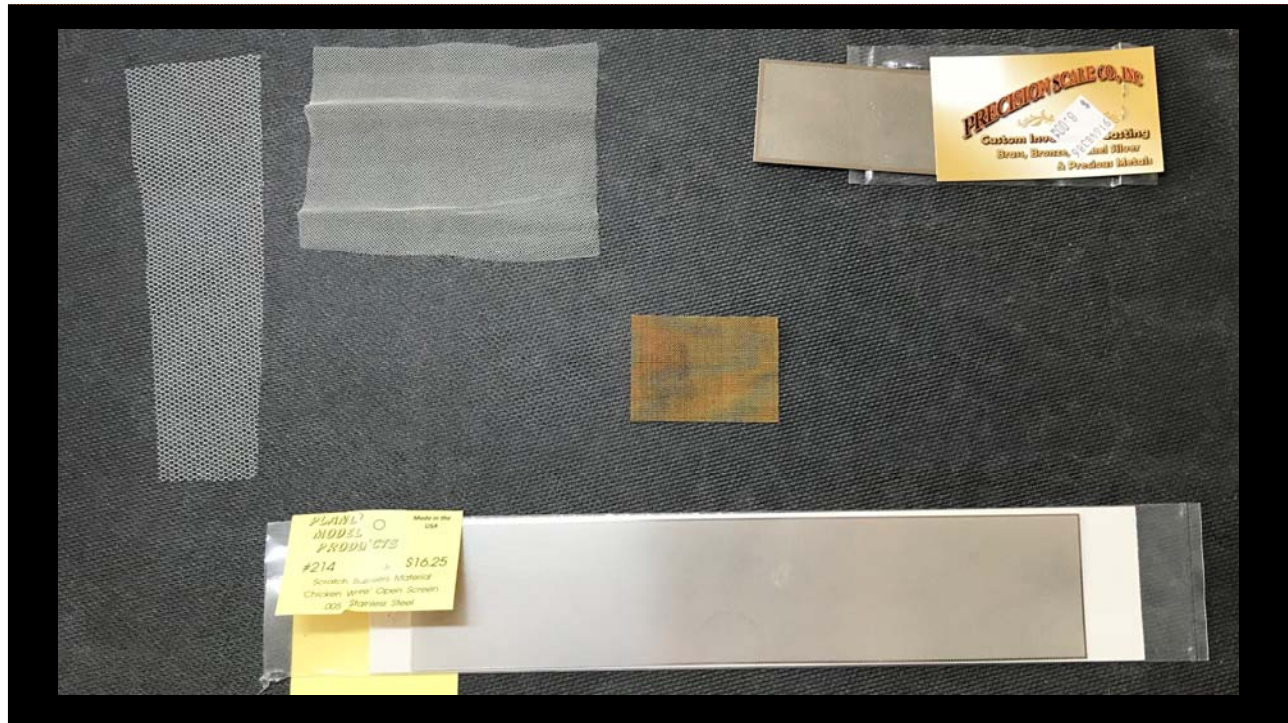
## Modeling Live Poultry Cars: Wire Screen

I've experimented with the screen that comes with the Mainline Model's car kit. Unfortunately, the brass screen has square openings, is thick and heavy, and is difficult to use.

Precision Scale Co.'s solderable silver screen #48386 is easier to work with and the openings in the mesh are diamond. The openings are closest to prototypical, measuring at .020, however, the product only comes in small 3.5" sheets.

Plano Model products also offers #214 Builders Material - "Chicken wire" Open Screen in Stainless Steel. This product has diamond openings that measure .020, very much like the Precision Scale product. One nice feature of the Plano material is that it comes in larger "sheets" giving a modeler more material to use.







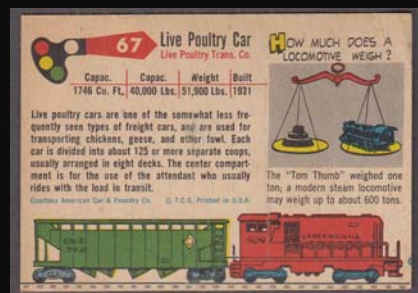
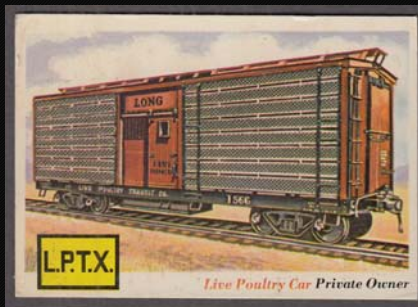
## Modeling Live Poultry Cars: Colors

There has been lots of discussion of the color of poultry cars, and yet, there is very little historical information available for the modeler.

Old kits indicate the car should be black for the undercarriage, white for the sides, and green for the roof and ends. Others specify the car colors as boxcar red and reefer yellow on the coop sides.

Because of the time period when these cars were in operation, there are no real color photos that exist.

The only examples of poultry cars in color are from an old issue of Railroad magazine and Tops® trading card.





## Modeling Live Poultry Cars: Colors

By zooming in on the door of the poultry car in St. Louis, you can almost see some yellow paint left over. However, it could simply be age, or a re-paint that had been done over time.

The only known mention of "color" in reference to live poultry cars, comes in "Home to Roost: The Story of Live Poultry Transit by Rail" by John White, Jr. where he mentions the yellow cars going down the line. To date, I have found no other historical document that specifies paint color.



## Modeling Live Poultry Cars: Colors

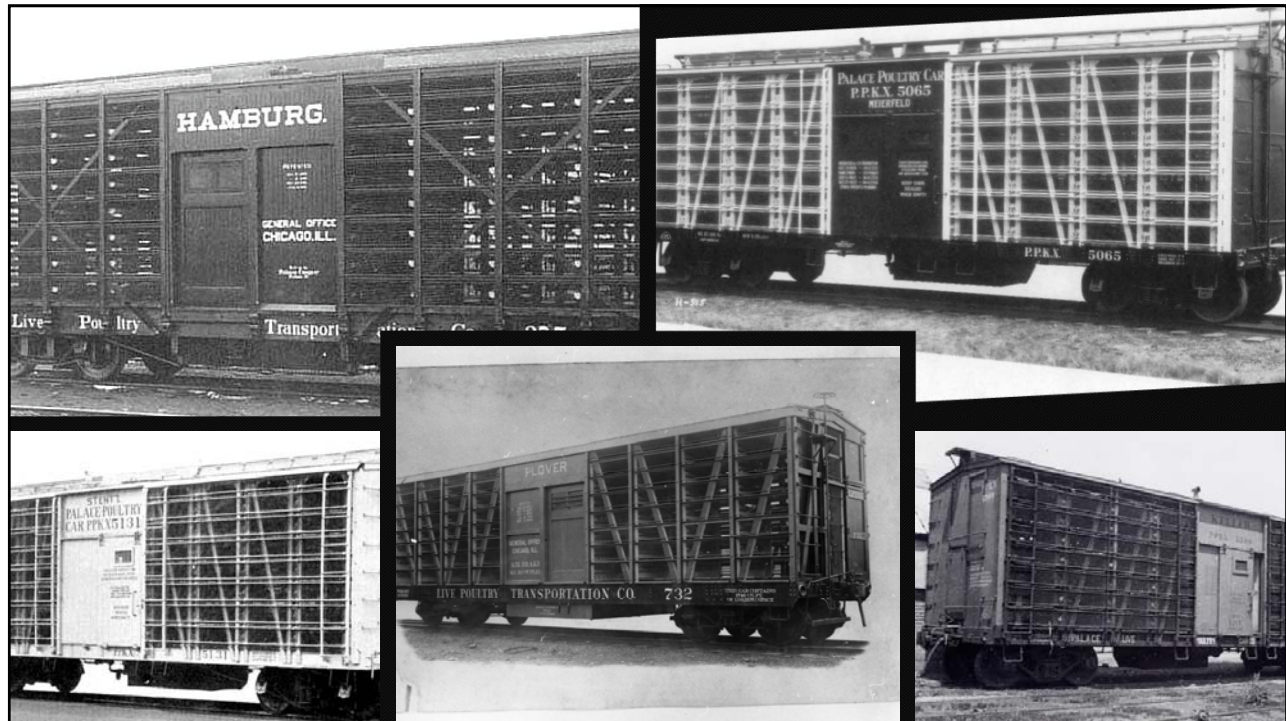
The best reference available is comparing photos from the time frame and making an educated guess as to color scheme.

Color schemes for the cars were visually varied.

Some cars were clearly more than a single color, doors and ends might be different, while others simply appear to have been one color, coops and all.

Modelers should use their best judgment for what works with their railroad and their color preference.





Live poultry cars were fussy and complex freight cars. However, there was nothing extraneous about the cars, and all their special features were necessary if their cargo was to reach market in good condition. They offer the modeler a unique challenge and an opportunity to model operations from a time when chickens rode the rails, feathers and all.





# Thank You

You can find the hand out for this presentation and additional information at <http://www.trainmodeler.com>

A very special thank you to Ray Breyer for the use of his amazing photo collection. And to all the countless others who have contributed to this presentation, I am grateful for your support and enthusiasm for this project.