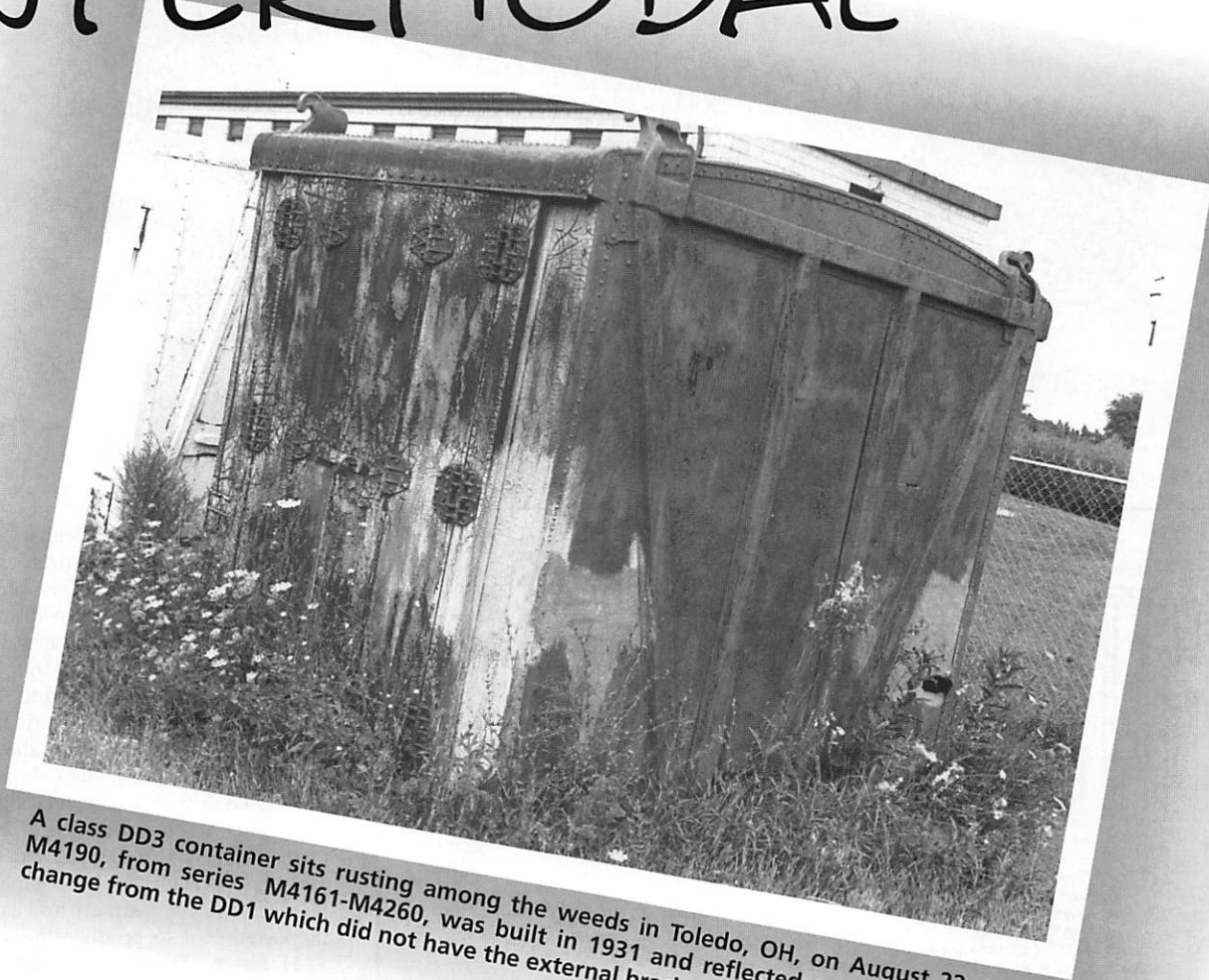


EARLY INTERMODAL



A class DD3 container sits rusting among the weeds in Toledo, OH, on August 22, 1981. M4190, from series M4161-M4260, was built in 1931 and reflected a significant design change from the DD1 which did not have the external bracing.
Richard J. Burg collection

PART 4B: CONTAINERIZATION

BY LARRY E. SMITH, MMR

MODEL PHOTOS COURTESY OF RAILWORKS

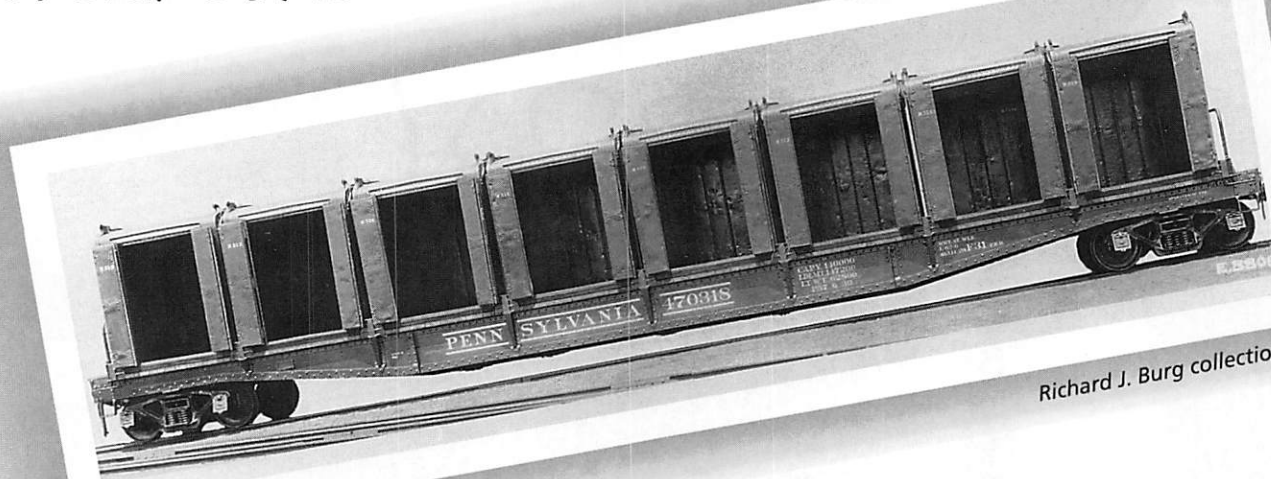
EVEN WITH WRANGLING GOING ON before the ICC, the PRR was in a remarkable position with its container service. Beginning at the start of 1931, the railroad had 1,010 merchandise containers, of three different designs, in service. The SD-1 (single-door container) was a 9' x 7' container with a height of 8' 8¹¹/₁₆" with a single door, 42" wide by 6' 9" tall. They had a 12,000-lb. capacity. The DDs (double-

door) and DD1s were very similar, 9' x 7' and 8' 2" tall. The DD1s had two four-panel folding doors on each end while the DDs had six panel doors. Both containers had a 12,000-lb. capacity. Because of the quantity of containers they owned, the Pennsy began to apply numbers to them. At first they applied numbers along with the prefix "C," but this didn't last long as the railroad was developing other types of containers.

Starting with the DD1s, the prefix was changed to "M" to designate merchandise containers.

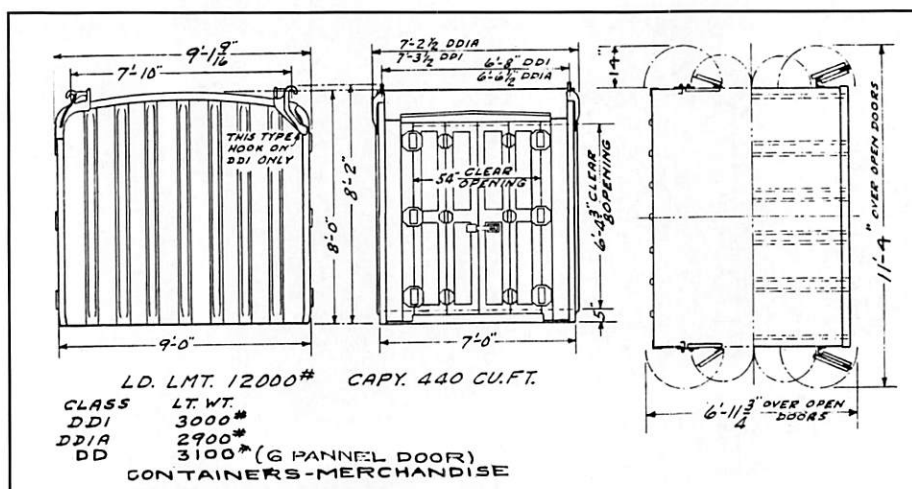
While the NYC's container service was floundering, the Pennsy's was expanding rapidly. The main facility, in Harrisburg, was expanded from a capacity of 75 to 150 container cars. Containers could be handled at a rate of 1,200-1,500 per day if necessary, however, the usual rate was closer to 800 per

EARLY INTERMODAL



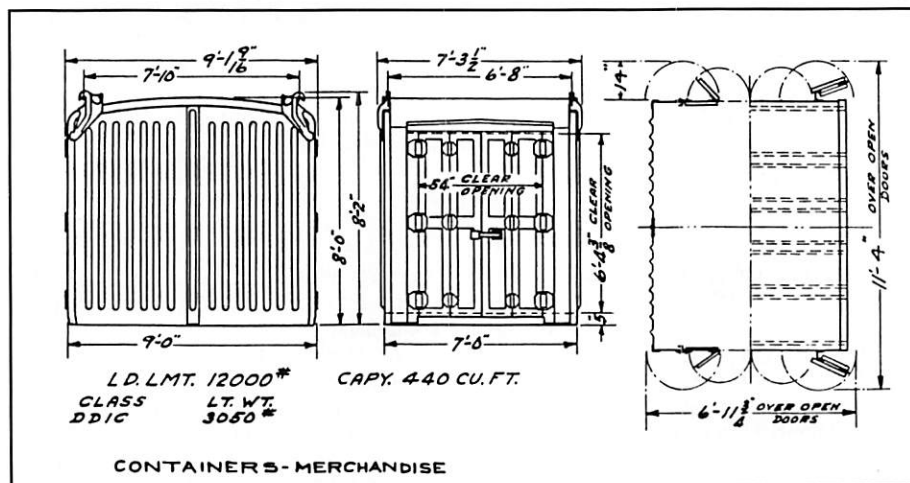
Richard J. Burg collection

PRR F-31 flatcar with load of containers.



PRR tracing of the DD, DD1 and DD1A containers.

From the collection of Richard J. Burg



PRR tracing of a DD1C container.

From the collection of Richard J. Burg

day. In 1931 alone, the Pennsy added container facilities in over a dozen cities. Additionally, in May 1931, they ordered 3,250 more containers to add to the fleet. The majority of these were the new DD1A and were numbered M1011-M4160. The major difference between these and the DD1s was the replacement of the lifting rings with cast lift hooks. The remainder of the order was filled with a new class, DD3.

The DD3 was a radical design change, employing bracing reminiscent of the ends of the X-23 boxcar. The new design saved 400 lbs. of dead weight, compared to the DD1s. This was offset, however by the increased cost to produce them, \$381 vs. \$241 for the DD1. Altogether there were probably 100 DD3 containers built, and they were numbered M4161-M4260. The DD3 was followed by two one-of-a-kind prototypes, the DD4 and DD4A. The DD4 had redesigned door hinges while the DD4A had six-panel sliding doors.

There were only two other types of merchandise containers used on the Pennsy. The DD64A was a small 4' x 4' x 4' container built just after World War II for use within merchandise cars. The design designation told you the container had a capacity of 64 cu. ft. and had double doors. It was constructed of plywood, coated with aluminum and mounted on casters for easy movement. They were numbered with the letter "P" to designate package service. The last container design was the DD1C. This was a 1931 rebuild of the DD1 using corrugated sides in place of the original 1/16" steel sheet, reinforced by pressed steel ribs.

The use of merchandise containers began to take a downturn because of business con-

ditions in the mid 1930s. This downturn allowed the Pennsy to change their usage of containers, removing them from service and designating them as LCL containers, the problem that started the whole container idea in the first place. Taking the SD1 containers from service because of their small doors and lack of cast lifting hooks, and placing them on flatcars to be spotted at stations as small compartment boxcars for LCL service. This would free up a boxcar for more profitable usage. The containers stayed with the same car at all times, but occasionally were transferred between cars when maintenance was required, placing the car out of service. This wasn't much different than the freight forwarding services, except the railroad took out the middleman. The transfer of containers to trucks never proved popular despite efforts by the railroad to design trailers for them. They even went so far as to set up a contracted trucking service, but that didn't work either. The Pennsy stayed in the LCL container business until the early '50s when it was ended in favor of merchandise boxcars.

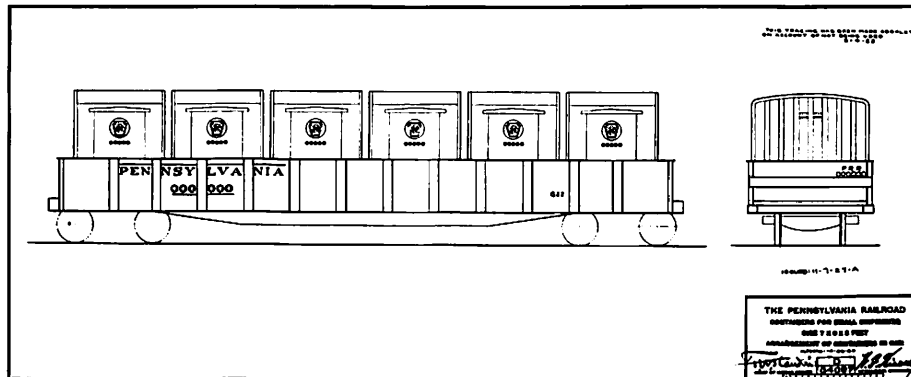
After the 1932 changes to the rate structure, the NYC continued to struggle with the merchandise containers, eventually abandoning them before World War II. They did, however, stay with the use of commodity containers, but there were still problems...not with the rates, but with the design. They wouldn't fit in cars with the merchandise containers. Another factor affecting the use of merchandise containers was the introduction of forklifts. These new pieces of equipment meant that no longer did shipments have to be in a container, but could simply be strapped to a pallet, greatly reducing the cost of shipment.

TRUCK BODY CONTAINERS

Beginning in 1931, the PRR began developing a new type of container called a "Dismountable Truck Body." It was designed concurrently with the Keystone Container, and used the same rolling stock. Experimental operation began in April 1931 from Baltimore to points on the Delmarva Peninsula. Since this wasn't across state lines, the ICC didn't have to approve the rates. While never developed to its fullest, the system was a forerunner of today's intermodal system, encompassing travel by rail, water and truck.

The Pennsy developed two prototypes, one a refinement of the other. The first, class TD, was a box 7' x 7' x 19", weighing 4,000 lbs. It had three doors, one on each side (6' x 4') and one in the end measuring 6' x 6'. The side doors slid into a recess in the wall. The end door was in three sections, the bottom folding down to form a tailgate. Lift rings were on the top. The experiments were so successful that the PRR filed rates jointly with the B&O, CNJ, DL&W and RF&P with the ICC.

The second prototype was the TD1, built in 1932. The dimensions were almost identical to the TD, but the container was built of



PRR arrangement drawing issued November 1927, but made obsolete in May 1928 "on account of not being used." From the collection of Richard J. Burg

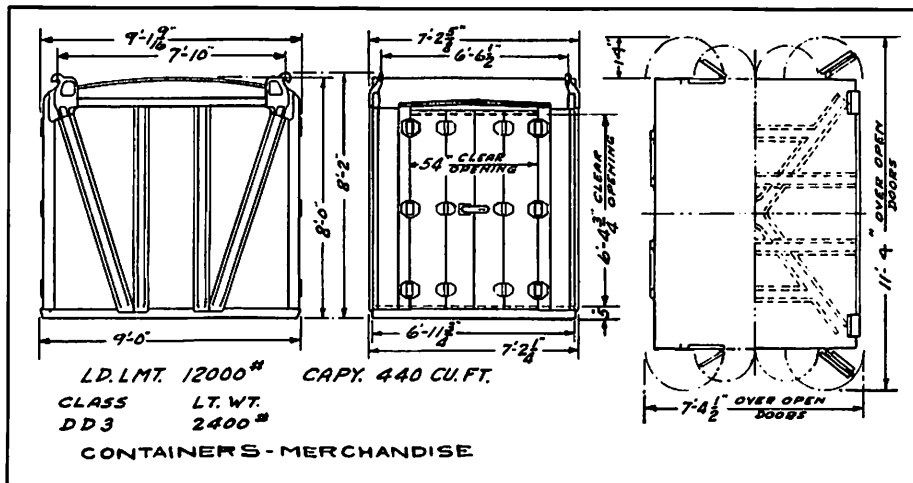
aluminum instead of steel, reducing the weight of the container by 1,500 lbs. Diagonal bracing was added to give the lift rings additional support. Both classes were numbered with the prefix TR but very little is known about the size of the fleet.

A private company, D. W. Durkin, operating out of New York, Philadelphia and Baltimore also had truck body containers based loosely on the PRR's TD1 design, but with several modifications. Their containers had

hinged doors on the side and some had removable roofs. Photographs suggest that the PRR sold their truck body containers to Durkin when they decided to leave the business.

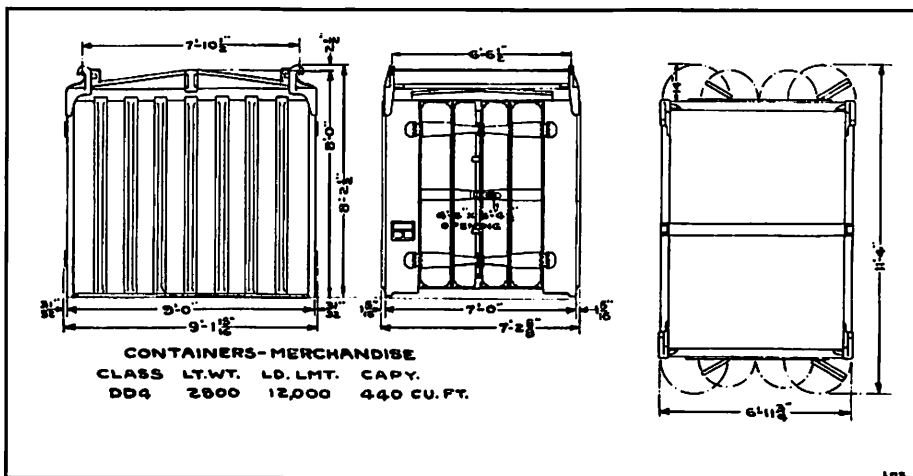
ROLLING STOCK

The two railroads took different approaches to the types of rolling stock they used in container service. The NYC favored gondolas, eventually using their class G-23



PRR tracing for a DD3 container like the one seen in the lead photo.

From the collection of Richard J. Burg



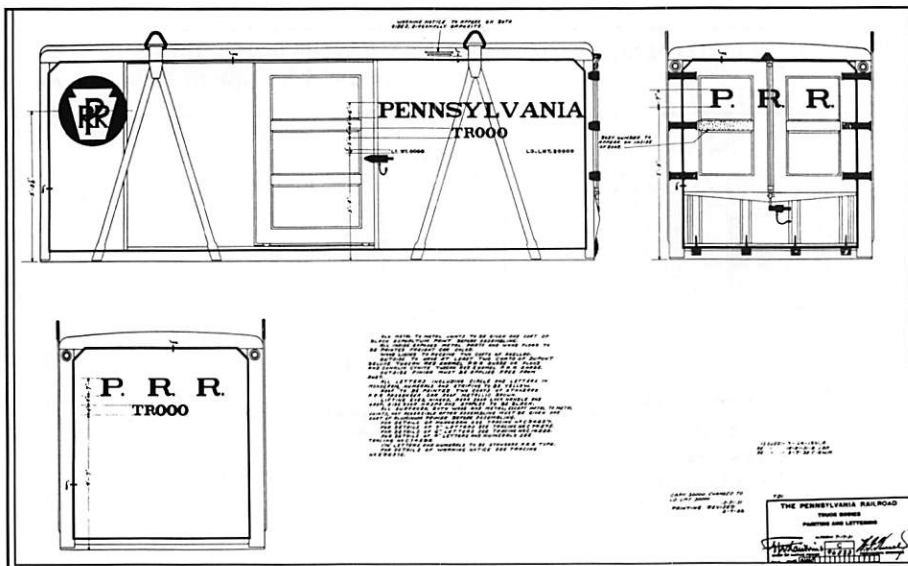
PRR tracing of a DD4 container.

From the collection of Richard J. Burg

EARLY INTERMODAL



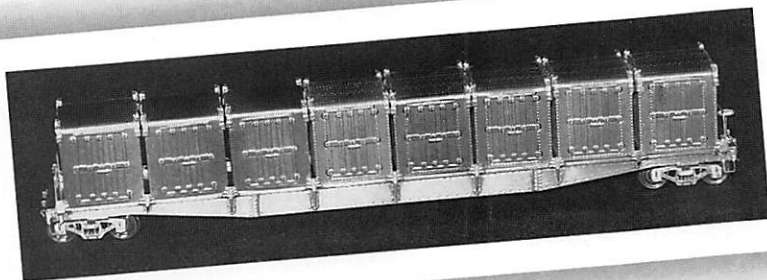
In this 1932 photograph we see one of the Pennsy's White tractors with a 4,000 lb. steel class TD "Dismountable Truck Body" on a flatbed trailer. The photo must have been taken in early 1932 as the "TR" prefix has not yet been added to the number. The TD1 (see illustration below) was similar in design but had diagonal bracing for the lift rings and was made of aluminum; it weighed only 2,500 lbs. American Truck Historical Society collection



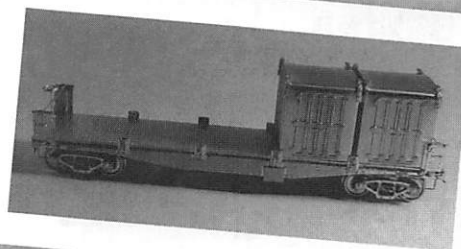
PRR Painting and Lettering diagram for a TD1 truck body; issued July 1931, last revision March 1932.
From the collection of Richard J. Burg

for the majority of service, although they could use any gon that met the specifications of the LCL Corp. The specifications were 47' long by 9' 3/2" wide. Some of the gons were equipped with drop sides to facilitate easier loading and unloading. One of the reasons the NYC favored gons was because of what they felt was added security. With the containers loaded in the gons, it was almost impossible for anyone to get the doors open and steal anything.

The Pennsy at first considered using their G-22 gondola for container service, but instead opted for the use of flatcars. Instead of building an entire fleet of flatcars specifically for container service, they modified existing flats from class FM. They did this by adding cast retaining blocks to the car sides. Later modifications added four wooden tack boards to the car sides and the ends. A third modification was made with the addition of raised steel structures on each end. The structure consisted of two steel walls connected by a steel rod across the end of the car. The purpose of these structures was to guide the containers into place. Initially, 25 FM flats were converted to container service. In addition to these



Railworks PRR F-31 flatcar with DD1 containers.



Railworks FM flatcar with DD1 containers.

cars, 25 of the new F-31 flats were converted to container service. These cars were 60' long and could carry eight containers. While these cars were successful, the Pennsy never added any more of them to the fleet. By 1939, their number had decreased to ten, seven by 1948 and none by 1950. At its peak in 1936, the Pennsy had 870 FM flatcars in container service. This steadily declined until the fleet numbered in the low 600s, where it stayed until around 1950, after which they declined rapidly until only 16 remained in service in 1953. These too were removed from service that year in favor of merchandise boxcars.

Both the Pennsy and the NYC developed other types of containers for the carrying of bulk commodities that haven't been discussed in this article. Both companies, along with the Lehigh Valley and the Delaware & Hudson carried everything from bricks to steel in specially designed containers. The Pennsy alone had 13 different designs numbering 7,768 containers. These containers were carried in a variety of gons, but predominantly in the G-22b.

MODELING EARLY CONTAINERS

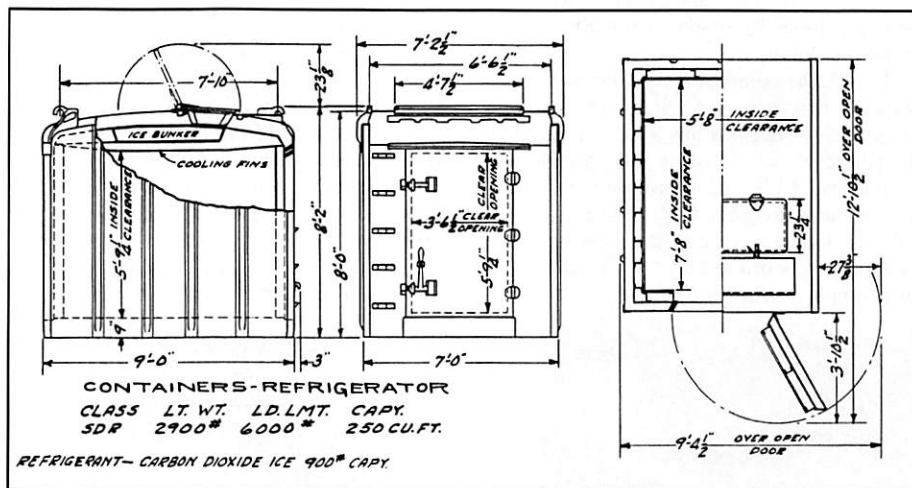
Sadly to say there are no models currently on the market that allow the modeler to represent the early merchandise container business. Westerfield does produce the G-22b and the containers (HB1) they carried. The containers are available separately, but they were only carried in the G-22b. Some may have been carried in the G-27a or the G-36E, but models of those cars aren't available. In the past, Railworks has offered the

FM and F-31, both with merchandise containers, in brass. Wabash Valley has also offered a car, although the type and designation isn't known at this time. Red Ball also produced a car that closely resembles an early NYC design. Ambroid, and then Northeastern, produced a model of the first NYC cars, and if you look around you can still find them. I have updated the one I have by adding Grandt Line lift rings to the containers, nut and bolt castings, and king posts underneath the car. I have also replaced the heavy wire with monofilament. It does improve the looks of the car. Athearn offers

cement containers and frozen-food containers to be carried in their 50' gon. This is a very accurate representation for the car lettered for the NYC.

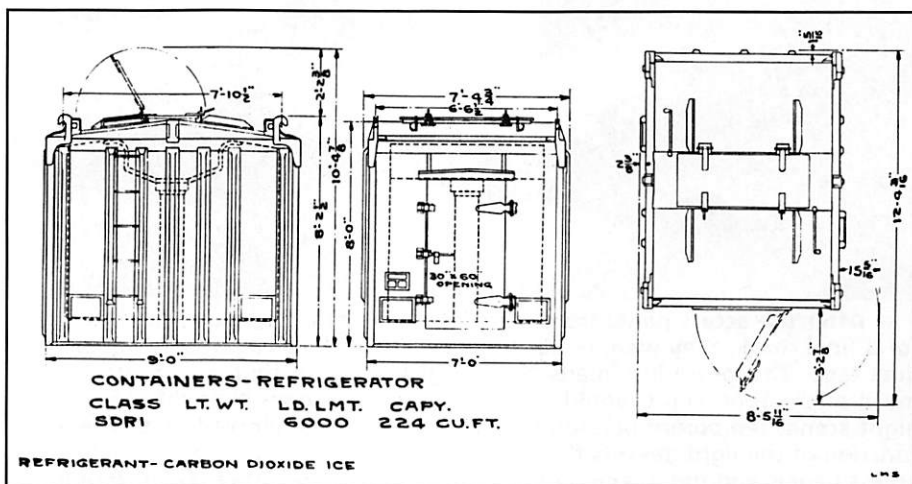
REFERENCES

- White, John, *American Railroad Freight Car*, Smithsonian
- Nehrich, John, "LCL Containers," *Mainline Modeler*, April & May 1989
- Burg, Richard, "Pennsylvania Containers," *The Keystone*, Spring 1985
- DeBoer, David, *Piggyback and Containers*, Golden West Books, 1992



PRR tracing of an SDR refrigerated container.

From the collection of Richard J. Burg



PRR tracing of an SDR1 refrigerated container.

From the collection of Richard J. Burg



Railworks DD1.