

Scratchbuilding a Class Fk Flat Car



The Class Fk flat car is apparently the last all wood flat car design adopted by the Pennsylvania. The design dates to 1898 and it appears to be the last all wooden flat design used. Just to keep things in perspective here's a list of car designs from about the same period:

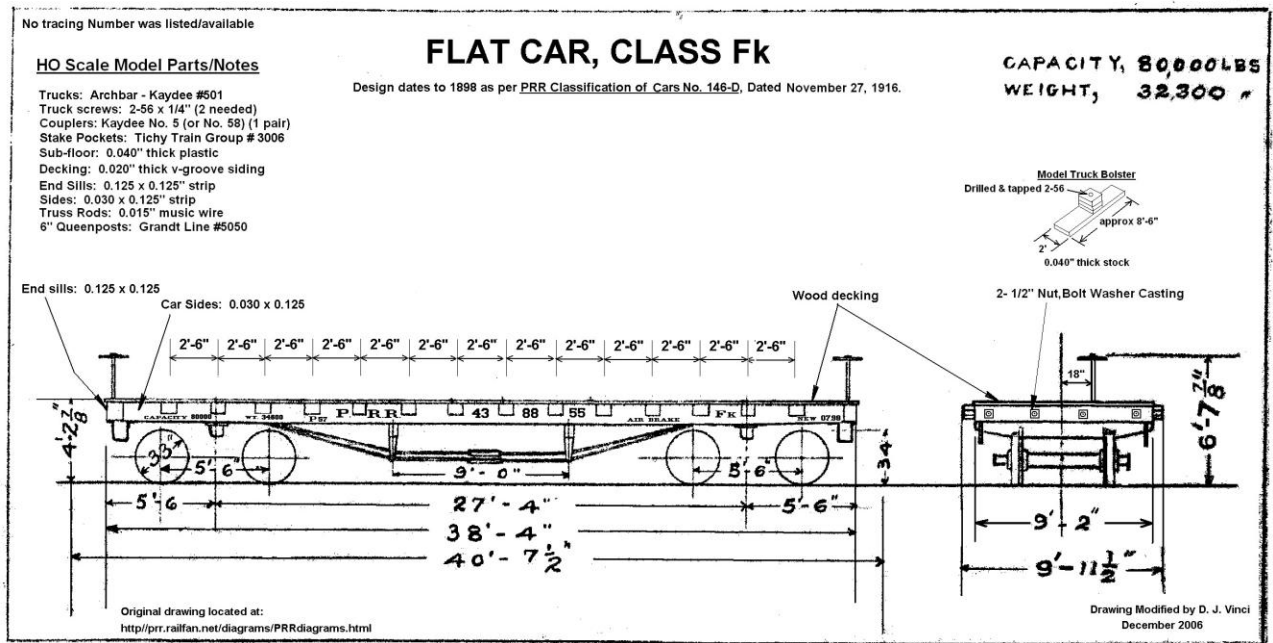
Car Type	Class	Year Adopted	Car Type	Class	Year Adopted
Box	Xh	1898	Flat	FL	1901
Box	XL	1901	Flat	Fm	1901
Auto Box	Xlc	1906	Well flat	Fn	1901
Box	X23	1912	Flat	F22	1912
Box	X25	1914	Well Flat	F25	1915
Refrigerator	R7	1912	Hopper	Gg	1895
Gondola	Ge	1888	Hopper	Gn	1898
Gondola	Gk	1898	Hopper	GL	1898
Gondola	Gi	1898	Hopper	Gla	1904
Gon side dump	Uc	1901	Hopper	H21a	1911
Gondola	Gs	1902	Cabin	NC	1893
Gondola	Gra	1906	Cabin	ND	1903
Gondola	G22	1915	Cabin	N5	1914
Gondola	Gr	1902	Cabin	N6a	1914
Flat	Fk	1898	Cabin	N6b	1914
Data from: PRR Classification of Cars No. 146-D, November 27, 1916					

According to the Railway Equipment Register of October 1919, there were only about 151 Fk flats left in service and by 1925 they were all gone. This is why I find the first 20 years of the 20th century so interesting with the transition from wooden to steel cars. The Class FL flats were the first steel underframe flat cars and they lasted into the 1940s, I think. The Fm flat that most

folks are familiar with lasted at least into the 1970s in MOW service. Not a bad longevity performance for a 1901 design, is it?

Anyway this is about scratchbuilding the class Fk flat car. This may be the last all wooden flat car with truss rods but truss rods were also applied to class FL to increase the capacity. Maybe I'll get around to making up a pair of the FL flats one of these days.

This car is really basic and fairly easy to build so it makes a good first effort at scratchbuilding a freight car. I took a copy of the tracing for the Fk flat and modified it a bit:



The drawing has the parts list and the supplies needed. The car is a piece of 0.040" thick sheet styrene cut a scale 9'-2" wide and 38'-4" long with the side sills (0.030 x 0.125" strip) and end sills (0.125 x 0.125" strip) glued along the perimeter. I made up the truck bolsters from some 0.040" sheet cut into a scale 2' wide strip that would just fit between the side sills. There are then 3, 2' x 2' squares of the 0.040" thick plastic stacked in the center. This is drilled and

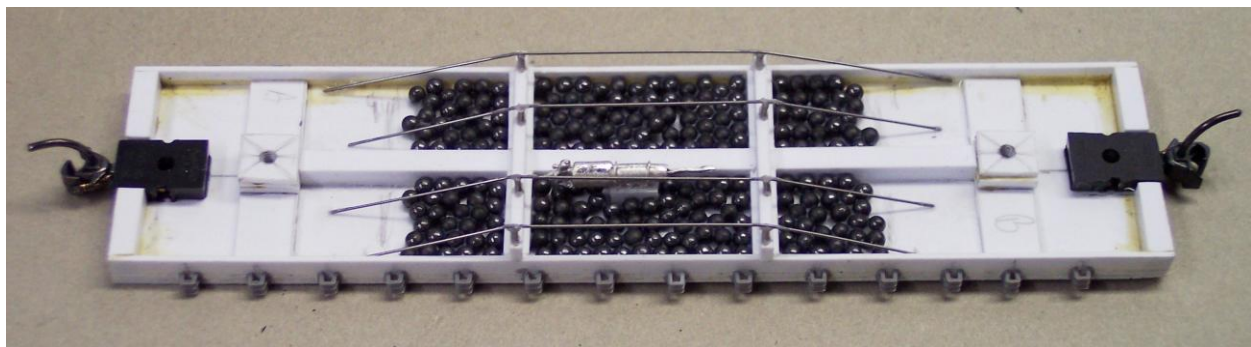


Figure 3

tapped for a 2-56 screw and then the assembly is glued to the underside. I then glued a strip of 0.125 x 0.125 with a strip of 0.040 x 0.060" strip on top to serve as the base for the queen posts. Once these were glued in, I added some 0.125 x 0.125 down the center of the car and between the truck bolsters to serve as a stiffener. Figure 3 shows the underside of the model. Were I to build this car again, I would add an additional layer of 0.040" plastic between the truck bolsters and the car floor and between the coupler boxes and the car floor. This would raise the body just a bit higher, which I think would be a little more correct.

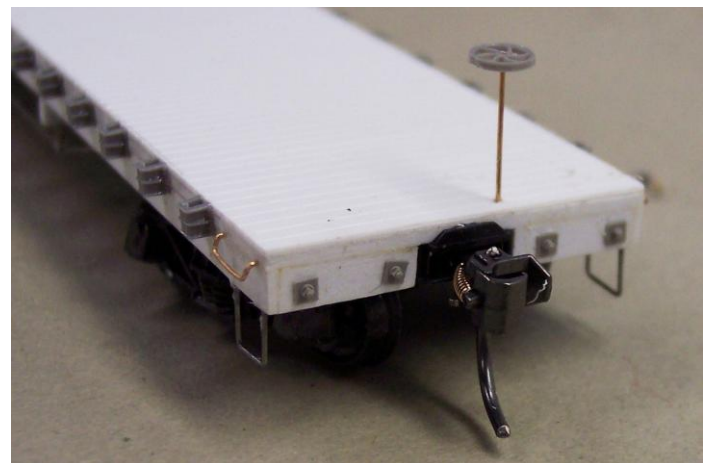
I used 6" queen posts and 0.015 music wire for the truss rods. I used ACC to cement the wire parts to the model. The KC brake cylinder was a white metal casting I had in my parts box and this was placed on a styrene pad and glued in place. You could, if you choose install the complete brake hardware and both Cal Scale and Tichy make nice sets. I don't usually go to the trouble since it can't be seen.

For couplers, I used my standard Kaydee No.5 but No. 58 would look nice too. Flat cars are usually very difficult to weight, which is why I simplified the underside of the car, to allow as much room as possible for lead shot. Even so, with metal trucks, the car only weighs 2 oz.

The decking of the car can be made from v-groove sheet plastic, scribed wood siding, or individual scale wood boards. I used the v-groove plastic, as that's what I had on hand. I cut the plastic to just slightly larger than the car floor and then cemented it in place with liquid cement. Then it was just a matter of sanding the edges until they were even.

Since the stake pockets are so noticeable on this car, I used some Tichy Train Group part No. 3006 castings. After some trial and error I found that the stake pockets are on 2'-6" centers. If you place one at each truck center and measure from there you'll see it will come out right on the money. Mark each location with a pencil and your scale rule and then glue on the plastic castings.

The end sills need 4 nut, bolt and washer castings to simulate the ends of the truss rods. I used some 2- 1/2 " nut with a 6" square washer castings that I had in the parts box. I made up the stirrup steps with the 0.015" music wire and ACC'd them in place in holes I had pre-drilled. I added a drop style grab iron at each corner of the car as this was pretty common practice, but I don't know if they were there before the standard safety practices were instituted in the teens. I added a brake wheel and staff at each end and then added a pair of archbar trucks using 1/4" 2-56 brass screws. That completes the construction phase.



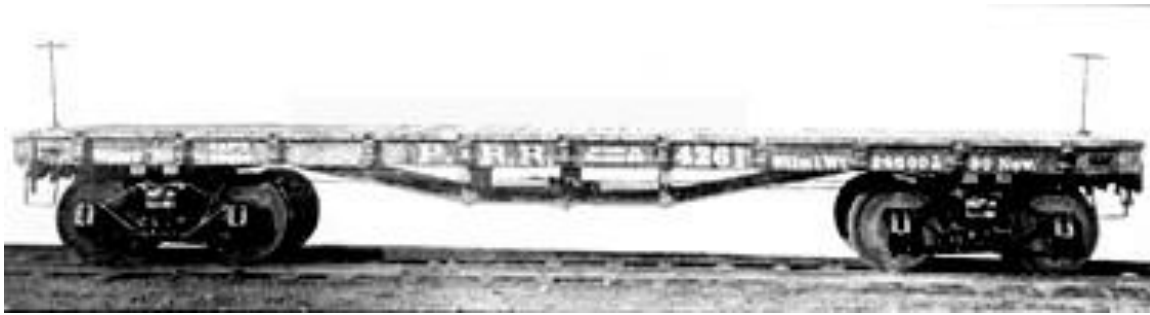


Figure 5 – Class Fb

Figure 5 is a photo of a Class Fb flat that I used to give me the general layout for the lettering as I have yet to locate an as-built photo of a class Fk but if I have a drawing, I don't let that stop me from building a model. The lettering for this period is the No-keystone P.R.R. so the photo of the Fb should be right for the Fk.

I brush painted the car PRR freight car red with my mixture of Poly S Special red oxide and a little reefer orange added. I wanted the deck to be weathered wood, so I gave it a base coat of Grey and then streaked on some Rail Brown. While the Rail Brown was still wet, I added a bit of Mud and Dirt. I painted the truck side frames Rail Brown also.

I used some left over Westerfield XL decal sets to create the lettering. The class lettering came from a Walthers White Railroad Roman alphabet set I've had forever. Once the decals were applied, I used some Solvaset to get them to set. Once all was dry, I gave the car a mist of Dullcoat to seal the lettering.

All that was left was to dry brush the car with a bit of grey to allow the detail to pop out and it was time to do a test run.



Figure 6

Here is the Fk flat with a Bowser N5 I backdated to the 1920s and a Lake Shore and Michigan Southern wooden gondola I scratchbuilt. The Gons in the background are a G22 and a G25 that were also scratchbuilt. Scratchbuilding is fun and is frequently not awfully difficult. It's also

very satisfying and sometimes is the only way to get a particular model. Give it a try and join the fun!