

Joat's Hopper

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Topic:

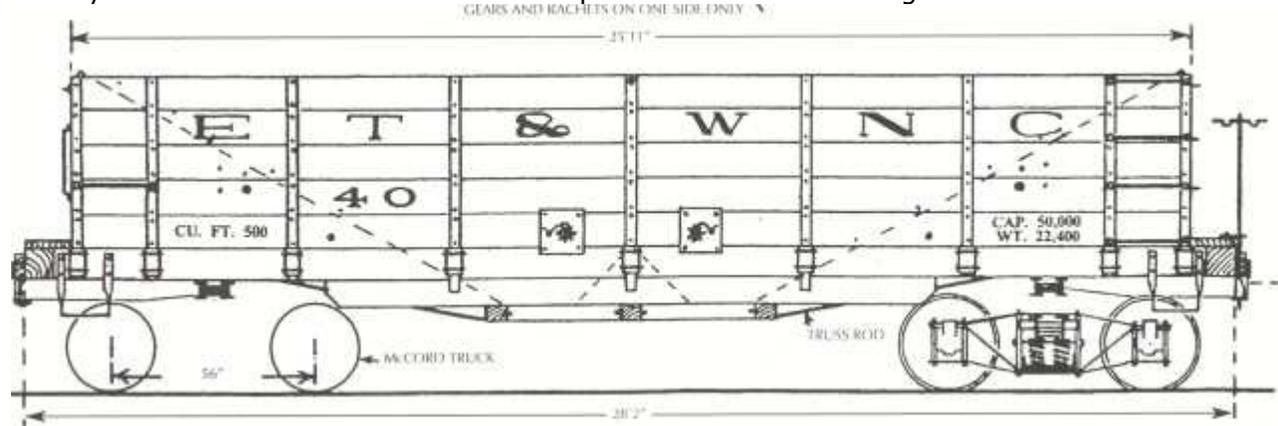
Topic author: TheJoat

Subject: Joat's Hopper

Posted on: 31 Oct 2004 08:17:03

Message:

Well, I finally figured out what to build for the challenge. I'm going to build a hopper that will be loosely based on the ET&WNC #40 - from plans out of the NG&SL gazette.



I'm not going to try for the McCord trucks and I may make some other mods as well, but this looks to be a good starting point. The trucks on this have a 56" wheelbase - anyone have any ideas?

Replies:

Reply author: Bubba

Replied on: 31 Oct 2004 11:04:39

Message:

Bruce, for something close to a 56" wheelbase you might try Hartford's 4'6" (54") reefer trucks. They look like a basic archbar design.

<http://www.hartfordpr.com/product.asp?nav=5&id=T008>

That's going to be a nice looking car. I can't quite read the length. Is that 28' over the end sills?

Reply author: TheJoat

Replied on: 31 Oct 2004 16:26:24

Message:

Bubba,
Yep - it's 28'2" over the end sills.

Those trucks from Hartford look like they would work!

The more I look at this, the more I get concerned! 🤔 It doesn't look like there are queenposts - anyone have any idea?

Reply author: Timmy
Replied on: 31 Oct 2004 16:59:48
Message:

Bruce- Some cars didn't have queen posts, just little metal pads with a notch in them to hold the rod in position. See Ozark Miniatures part number 0014, Trussrod pad, 10 per pack, \$1.15

Reply author: Dougald
Replied on: 31 Oct 2004 18:03:49
Message:

Bruce

Matt or some other student of the Tweetsie may have researched this ... or you may try a post on the 1:20.3 board on Yahoo ... but Tim is correct in that the drawing does not actually show queenposts of the traditional kind. It is quite possible that that trussrods were tightened over grooved blocks. But it is also possible that the drawing are in error ...

Regards ... Doug

Reply author: East Broad Top
Replied on: 05 Nov 2004 11:26:52
Message:

The drawing is correct. The three little "squares" just above the truss rod are the beams that run across the bottom of the car, providing the same fulcrum points as the more pronounced queenposts do on other cars. Photos I have show these three boards actually covered by a board running longitudinally along the side of the car, capping it like the side of a ladder. Another photo seems to indicate that the hopper doors were attached to the three lateral boards. (and would explain why there were three of them; two would have been more than sufficient for support beams.)

Also of interest on these hoppers is the use of steel bolsters on the car itself. These look to be two "I" beams side by side, and were common on some flat cars as well. Not all the wood hoppers had these beams. A photo of hopper #1 shows a more traditional looking bolster.

Hope that helps.

Later,

K

Reply author: TheJoat
Replied on: 05 Nov 2004 14:18:33
Message:

I heard from John Waite over on the Tweetsie board:

quote:

The Stemwinder which is in the mail and should arrive on everyone's doorstep this week has about thirty photos of hoppers including several with details, including the inside end.

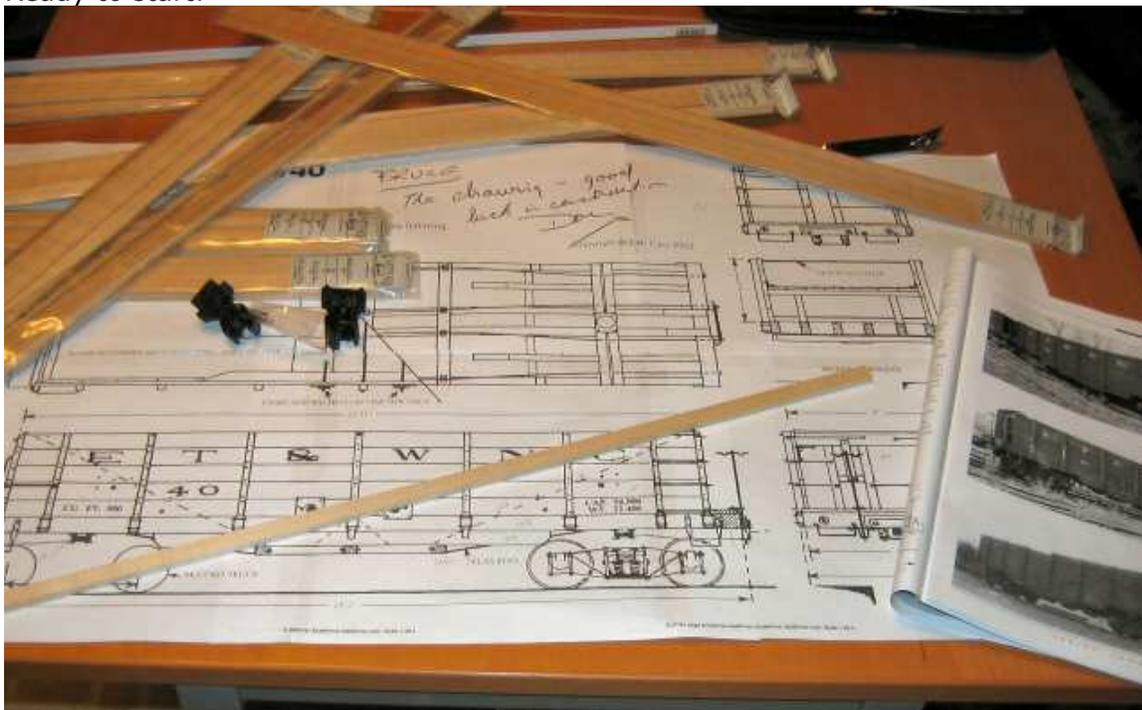
I signed up awhile back - so I'm looking forward to this issue!

Apparently a lot of the earlier cars were rebuilt using the steel I-beams to replace the wood bolsters. I like the look and it should make it a bit more interesting to build.

So far it looks pretty straightforward. I'll have to come up with something to represent the gears on the sides for the doors. Rest assured, the doors will not be working!

Reply author: TheJoat
Replied on: 19 Nov 2004 16:13:32
Message:

Ready to start!



Rather than cut the wood myself, I ordered it from Kappler lumber. Actually, they do a MUCH better job than I can do myself - and they let me specify the dimensions in scale inches. Very handy. Of course after I sat down with my order, I realized I shorted myself, so I did have to cut some of my own. I'll probably discover more mistakes later!

I also received the Stemwinder - which has loads of pictures of the ET&WNC hoppers. Quite timely.

I've blown up the NG&SL Gazette plans to 1:20 scale to use as my "plan".

I've order some reefer trucks from Hartford. They are about the closest I can get to the McCord trucks. I also ordered some of the hardware for the brakes.

Does anyone have a diagram of how the brake hardware was hooked up on a hopper? I'm not going to do it all, but I'd like something that looks reasonable.

Reply author: canfield

Replied on: 20 Nov 2004 03:26:31

Message:

Bruce

That looks like mine did about a month ago. It's just like building a house, one stick at a time. The more sticks the sturdier it gets. The wood has been fine for a diversion but, it's back to the smell of styrene for me. It will be fun watching your progress.

Paul

Reply author: TheJoat

Replied on: 20 Nov 2004 14:13:30

Message:

Well...got the frame done - complete with glue spots! 😬 Oh well, you won't see them after it's painted. 🙄



Paul I did use some styrene - for the I-beams. I enjoy the wood, since it doesn't melt when I drill it!

I also completed one of the sides.



I probably should have used some smaller castings, but I really like these I got from Phil Dippel.

Reply author: Timmy
Replied on: 20 Nov 2004 16:06:01
Message:

That's looking good Bruce, you have made a fine start. I also use those turned brass nut/bolts from Phil Dippel, and like them a lot!

Reply author: flatracker
Replied on: 21 Nov 2004 05:42:52
Message:

It looks like a great project Bruce, and I will follow along as you build the hopper. 🤔🤔

Are you building an E.T.& W.N.C. style R/R, or just interested in this hopper in general? Reason I asked, was I think lumbering and passenger service in that part of the country will be what I'm interested in.

Also I'm not familiar with Phil Dipple and his products. Mind giving out the info. on how to get his products? Thanks.

Reply author: TheJoat
Replied on: 21 Nov 2004 07:00:58
Message:

Bob,
I like that - an ET&WNC "style" railroad! Exactly. I'm somewhat inspired by them, but I'm not trying to model it exactly, or even close. I like Eastern narrow gauge.

Doug and I are also building a set of passenger cars loosely based on the Azalea. You can see more of it here http://www.mylargescale.com/forum/topic.asp?TOPIC_ID=24260

Phil Dippel and his kits and parts can be found at <http://www.philsnarrowgauge.com/>. I just received a 40 foot reefer kit and will be working on that next. The quality is outstanding!

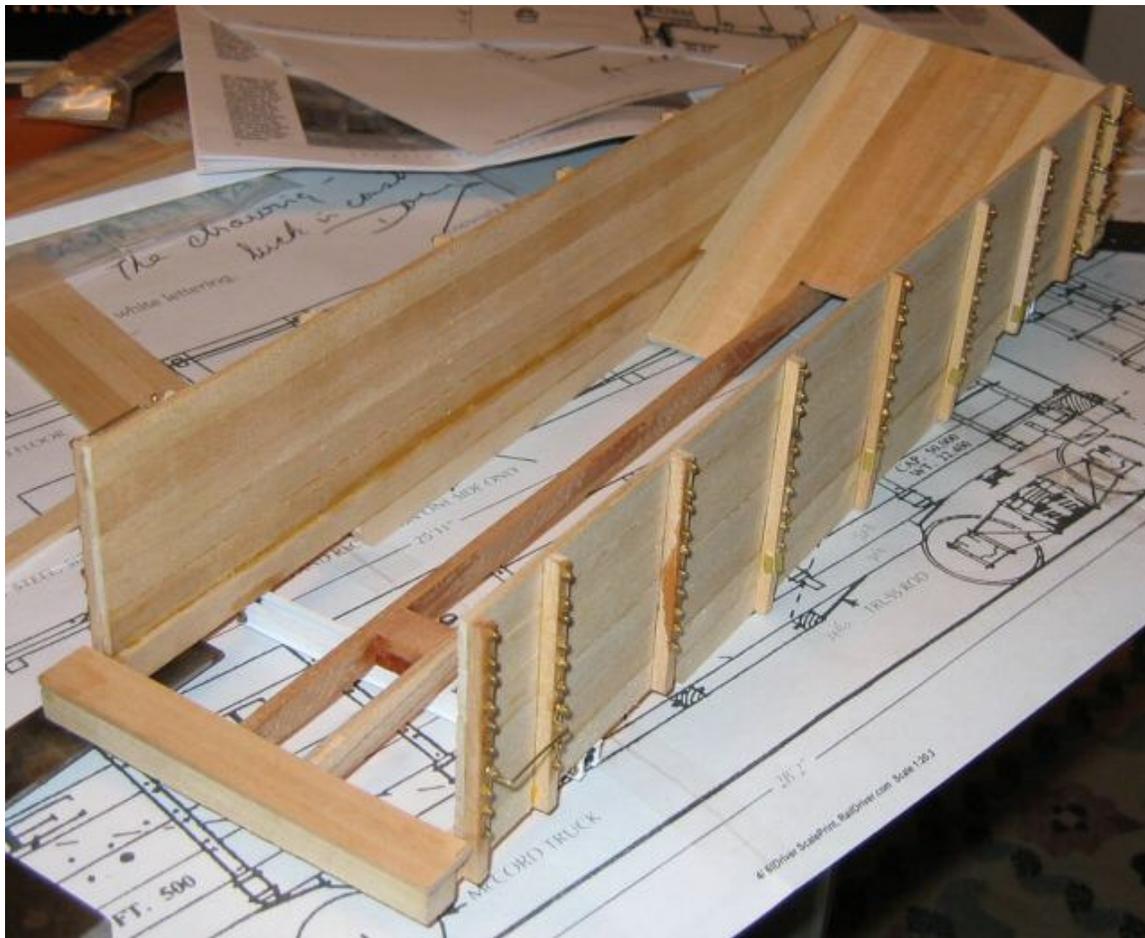
Reply author: flatracker
Replied on: 22 Nov 2004 05:27:21
Message:

Thank's for the info. Bruce. 😊

The Azalea car seats look neat, but it seems like you have really gotten into something rather large (number of cars you all are going to build). That should keep you busy for a long time! 🙌🙌 I'll have to keep tabs on your project. Good Luck!!

Reply author: TheJoat
Replied on: 28 Nov 2004 06:59:05
Message:

Well, progress is slow...



I've attached the sides, added some grab irons, and made one of the floor pieces. Actually, it's my second one as the first one ended up too narrow. Good thing I had some extra wood!

Reply author: TheJoat

Replied on: 29 Nov 2004 19:20:59

Message:

Well, while waiting for other parts to dry, I decided to go ahead and assemble my trucks. Some drilling and tapping and forming. I was going crazy trying to make identical brake hangars until I remembered reading Doug's tip on cutting off the ends of fishhooks - voila - perfect brake hangars.

👉 So, a trip to the hardware store for some nice brass screws and some nylon washers. A bit of paint...and it's starting to look pretty decent. 😊



I'm still waiting for my order of stake holders. I started to make some and just wasn't making decent progress. I just decided to go ahead and use what's available. They'll be a little big as they are sized for 3 1/2" stakes and mine are 3". You probably won't really notice!

Reply author: docwatsonva

Replied on: 30 Nov 2004 06:01:30

Message:

Hey Bruce, the progress on your hopper car is looking great. The finish on the trucks is very realistic. Good job.

Reply author: TheJoat

Replied on: 03 Dec 2004 19:36:41

Message:

I got my stake pockets from Ozark and added them.

Then I started thinking about how I was going to build the inside.

I glued some scale 2x8's together on their edges to form a wooden base for the slanted floor and then covered it with a brass sheet. My original intention was to use "Blacken-It" for coloring, but I really don't like the way it turned out. So, I'll be spraying it the car color - black. Or some shade thereof.

I cut four pieces of brass to represent the doors and glued these in place. I don't need a working model. 😊

Now that I have the slanted floor in place, I'll add a couple of framing pieces on each underside and also put in some vertical posts on the ends. I still have to bend some extra long grab irons.

I've been using Phil Dippels brass ones, which are perfect for the regular size grabirons.

I have some plastic "L" shapes to dress up the inside and will put those in place with some tiny pins to look like bolts.

Eventually, I figure out exactly how I want to do the brake gear. Paul has given me an idea of how to build the gears for the sides. I still need to get some more brass to cover the door mechanisms - there's a large inverted "V" that covers each pair of doors.



Reply author: 10wheeler

Replied on: 03 Dec 2004 19:51:33

Message:

Bruce,

The hoppers are my favorite ET car.

The inverted V in the center of the car drawing isn't quite that large. It covers the hinge end of the center doors with a little overhang. What is shown would cover the center doors.

The truss rods are not round from end to end. There is a flat steel bar bolted to the side sills and the round part of the truss rods has a clevis jaw pinned to the flat bar. The clevis is shown in the Stemwinder center pic. on page 8 and the bottom of page 6. The same through bolts that hold the steel bar also hold the extra board under the side sill beam. The heads of the bolts can be seen in the center pic. on page 8 and page 5. They can be seen in the rotten wood section of the car on top of page 7. There are no turnbuckles. The adjustments were with the end nuts. The round part of the truss rods angles out to the steel straps on the outside and inward to the two straps in the middle frame rails. The E. H. Cass drawing in one of the 1996 Outdoor Railroader Mag. (Month and page anyone?) shows the angle in the truss rods. The Julian Cavalier article in the Nov./Dec. 1984 Gazette shows the center beams of the underframe wrong. Yours are correct. It also shows a 3" x 9" as a slope sheet brace. The pics. show a 4 x 4 or a 5 x 5 under there.

The pic. on the middle right of page 10 shows the best photo of of the mounting of the brake gear. The top of the main brake lever is mounted on a pivot on the vert. member between the two long vert. members shown on the pic. on top of page 6. The second bolt down on the steel strap shown is where the pivot is mounted. The brake wheel staff chain goes back to the bottom of the lever. The rod to operate the truck brakes on the other end of the car is in the center of the underframe with the airline. An exact diagram of the brake rigging is not known to exist. There would have to be some extra levers to transmit the motion to the trucks.

I use K&S 1/2 x .015 brass angle #9611 to make the windlass chain rod covers.

I have been using the Bachmann gondola to kitbash a close version of the hoppers. The sides are really close. I have a ton of plans and photos I could copy and send you if you would like. Let me know by email.

Larry S.
peerless@zoomnet.net

Reply author: canfield
Replied on: 03 Dec 2004 21:29:46
Message:

Bruce

Your hopper is looking great. I can't wait to see the end result. Keep up the good work and send more pictures.

Paul

Reply author: Dougald
Replied on: 04 Dec 2004 06:22:47
Message:

Bruce

Great looking car coming along ... I really like the appearance of the wooden sides.

As you have discovered, gons could be a bit complex in terms of having a stiff body frame and still able to drop the load through the bottom. And the drawings are not really definitive on how all that looks 😊 Am enjoying your usual craftsmanlike effort on this car.

Regards ... Doug

Reply author: TheJoat
Replied on: 05 Dec 2004 20:03:26
Message:

Well, a bit more progress - after a few steps backward. I got a lot more information from Larry. He clarified the pictures a great deal.

So, I ripped off the bottom, because I really hadn't understood how the truss rods worked. These are probably not historically accurate either, but there exactly the way the Jackson and Burke does it! I really cheated by running a solid piece from the door back to the truss rods. They're supposed to be attached with a clevis, but this looks OK to me.



I had also worried about the gears on the sides, but decided to just use a commercial casting. It works for me. 🤖 Once painted, half of this will disappear!

And I got the interior more or less completed.



The picture to the right provided a lot of insight. The drawings I have don't show much of the detail. I was going to go fancy with the chain, but decided that you really can't see how it's attached to the doors, so this simplified construction. Glue works!

Now, it's on to the ends. And the paint shop.

Reply author: Timmy
Replied on: 05 Dec 2004 21:01:18
Message:

Bruce-

You've made a lot of progress on the hopper! It's looking great! I didn't understand much about the truss rods, but they look nice. I'm surprised that they go UNDER those 3 beams, instead of OVER!

Reply author: TheJoat
Replied on: 06 Dec 2004 06:46:56
Message:

Tim,
Actually, they don't - or shouldn't. I was just looking for an expedient way to attach things.

Most of my viewing of this will be from above.

Reply author: TheJoat

Replied on: 06 Dec 2004 19:42:21

Message:

Well, lots of mistakes on this one. 😞 But, I think it will look good overall.

This has been one of the hardest models to build. I did a lot of things in the wrong order. If I were to start over, I'd try to drill more of the holes ahead of time. It's a lot easier to use the drill press before parts are assembled. It's sort of tough trying to figure the angle of the floor, so I wish I'd done some more accurate drawings. I built some of the framing after the floor was glued in - and it was difficult fitting the pieces. I also wish I'd come up with a better design for the truss rods and door openings.

While I was able to use Phil Dippel's grab irons for most, I had to bend some of the long ones on the end. There must be a good way to get them closer to each other.

Well, those are lessons learned for the next time. 😊

In the meantime, I think I'm ready for the paint shop -where a lot of the mistakes get covered up! 🙄





Reply author: docwatsonva
Replied on: 07 Dec 2004 05:48:03
Message:

Bruce,

No matter what problems you've encountered, you have an excellent model. Sometimes attempting something that is out of the ordinary, provides one with a greater learning experience that can be an enormous benefit in future projects.

Reply author: Dougald
Replied on: 07 Dec 2004 05:48:40
Message:

Bruce

Mistakes or not ... the model came out well ... a nice looking car. I am sure the finished model will fit very nicely into your train.

We have all learned the lesson of laying out the plans and cutting drilling etc in advance. But the lesson usually only lasts till we begin the next model! From building boats I learned the importance of accurately lofting ... something I have tried mostly unsuccessfully to incorporate into my model building.

BTW ... Ric Golding has a very interesting display of hoppers above the trackage in his basement. He shows 3 hoppers - similarly appearing cars - in 1:24, 1:22.5 and 1:20.3. The difference in size is atggering.

Regards ... Doug

Reply author: East Broad Top
Replied on: 07 Dec 2004 10:11:12
Message:

Very cool! That turned out great!. Perhaps after I get my Ruby conversion finished, I should finish those two hopper I'm working on... (I know, I've still got the long-promised passenger car masterclass, too.)

Later,

K

Reply author: Timmy
Replied on: 07 Dec 2004 10:50:18
Message:

Bruce, it really does look good! Sorry about my nit-pickiness on the truss rods! Considering you started with just one drawing, and not a very descriptive one at that, you've done a great job!

Reply author: TheJoat
Replied on: 07 Dec 2004 11:35:20
Message:

quote:

Originally posted by Timmy

Bruce, it really does look good! Sorry about my nit-pickiness on the truss rods! Considering you started with just one drawing, and not a very descriptive one at that, you've done a great job!

Timmy,

That was hardly nit-picking. It's a valid comment! And I really have a few drawings and a lot of pictures. Part of my problem is just not thinking through the entire process. It's quite a bit different than building a boxcar or flatcar and I should have planned it out more. I'm still not all that happy with my truss rod solution, but it works.

Reply author: llynrice
Replied on: 07 Dec 2004 18:16:59
Message:

Hi Bruce,

Don't beat yourself up over small mistakes. The vast majority of us would never see them. It's a really handsome model and will, doubtless, look even better when you paint it.

Llyn

Reply author: 10wheeler
Replied on: 07 Dec 2004 19:17:43

Message:

Bruce,

The hopper is looking good. What color will it be?

I used a similar method for my hopper truss rods. I didn't have any clevises so I drilled a hole in the flat straps and bent the end of the round rods like those. I may try a set of Ozark clevises on the next one.

Larry S.

Reply author: TheJoat

Replied on: 08 Dec 2004 07:43:08

Message:

Thanks guys. I'm not really second guessing myself - I do like it. I'm just making some comments for anyone building one - and maybe for me if I build another one!

I'll be painting this black - or some shade thereof. Actually I was thinking of grimy black with a bit of gray in there - I don't want it too dark.

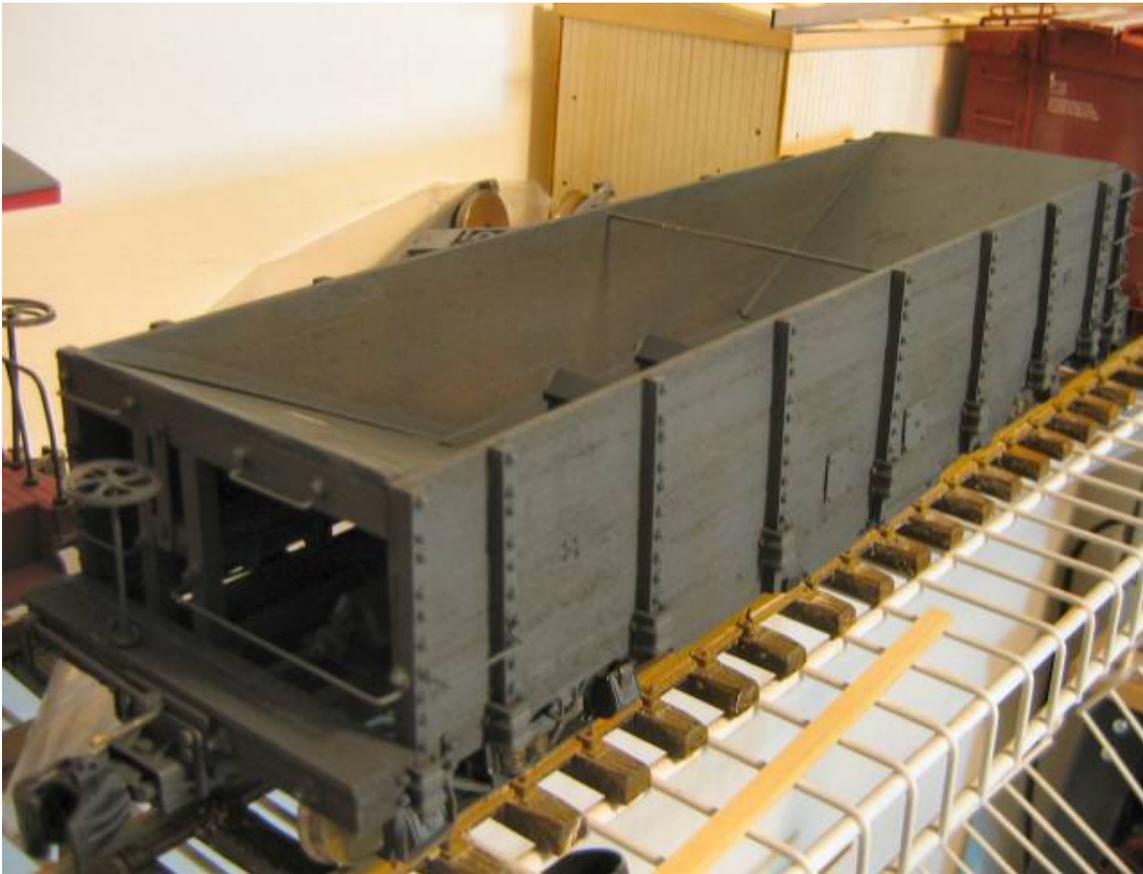
Reply author: TheJoat

Replied on: 08 Dec 2004 17:22:11

Message:

And I like it even better with the paint on it!





I still have some work to do. I need to add the air lines and hoses - oops! And, I want to put some chain on the lift bars. I ended up leaving off a few of the grab irons, but it's really hard to tell!

Then, the decals and some light weathering. Not much.

Reply author: flatracker

Replied on: 08 Dec 2004 17:39:19

Message:

That looks "muy grande" Bruce! 😊😊😊😊

A couple of those with some flats, a box car or two, and a caboose, will be a super consist! 😊😊

You've done a nice job and I look forward to trying one or two myself. I love the older wooden cars, which seem to have a lot of character to them. Guess it's my age, along with some good memories. Thanks for the details and pictures!

Reply author: TheJoat

Replied on: 12 Dec 2004 12:24:09

Message:

Well, I finally got the decals on, put chains on the lift bars and added the air hoses.

A bit of weathering and some dirt inside, and I think I'm done.



I may have to build some more of these - it's hard to just have one!



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