

FLIMZIE

***The Newsletter of the Rock River Valley Division
Midwest Region, National Model Railroad Association***



February Volume 55, Number 6

The Rock River Valley Division, RRVD, is a local division of the Midwest Region of the National Model Railroad Association, NMRA. The RRVD serves NMRA members in areas of Green and Rock Counties of Wisconsin, and Boone, Jo Davies, Lee, Ogle, Stephenson, Whiteside, Carol, DeKalb and Winnebago counties in Illinois. The RRVD holds monthly meets typically the first Sunday afternoon of each month, September through May, in Rockford at the at **The Lutheran Church of the Good Shepherd, 1829 North Rockton Avenue, Rockford, IL**. They consist of various clinics on model railroading, model contests, drawings for door prizes for NMRA members. The meets start at 1:00 PM, and the doors open at 12:30 PM.

Mark your Calendar

2022 MadCity Model Railroad Show and Sale

The **MadCity Model Railroad Show and Sale** will take place **Saturday February 19 – 20, 2022**. It will be held at the Alliant Energy Center, Exhibition Hall, Madison, WI. You can receive updated show information on the website, <https://www.nmra-scwd.org/events.html>

Rock River Valley Train Show

The RRVD will hold the Rock River Valley Train Show **March 26 & 27, 2022**. The show will be held at **Harlem High School**, 9229 N Alpine Rd, Machesney Park, IL. The times are 10:am-5pm on the Saturday the 26th and 10:00am-3:00pm Sunday the 27th. For more detailed information see our website, <https://www.rrvd-nmra.com>.

Indy Junction 2022 Three Regions Convention

The Three Regions Convention **INDY JUNCTION 2022** will take place **May 18-22, 2022**. The show will be held at the Marriott East hotel complex in Indianapolis, Indiana. You can receive updated convention information on the webpage <https://www.indyjunction2022.org/> or the Facebook page <https://www.facebook.com/indyjunction2022>

Gateway 2022

NMRA National Convention and National Show

The **Gateway 2022** MNRA National Convention and National Show will take place Sunday, **August 7, 2022 thru Saturday, August 13, 2022**. The Convention will be held at Marriott Grand, St Louis 800 Washington Ave, St Louis, MO Saint Louis, MO. The train show will be at the Collinsville, IL Gateway Convention Center. The website is https://www.eventsquid.com/event.cfm?preview&event_id=13724

Layout tours for March

Tom Weltzer will have his HO scale Chicago-Memphis-New Orleans Railroad open which follows the Amtrak Line from Chicago to New Orleans with freight yard operations in Chicago and Memphis. If you bring your own Digitrax throttle, Tom says you can operate.

Bruce Giersch will have his O scale 3 rail railroad open with its wealth of scenic detail.

In March, the clinic will be by Bob Simmons from Dodge City, KS discussing "Fitting Structures into a Layout".

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Office Vacancies

Tom Maladecki has resigned from the position of Director of the RRVD. Ken Peterson has been appointed to fill his position until the RRVD April elections. At that time a permanent Director will be elected. Contact Gary Loiselle, hofreight@gmail.com, to let him know you would like to run for that position. We need someone to take over the Social Media position. Also, a new position, Technology/Outreach Chairman is needed. Contact Marty Hendrickx, RRVD Superintendent to offer your time and service for these positions.

Flimzie Deadlines

The Flimzie will now be published once per month on the first of the month. It will be placed on the RRVD website for anyone that wants to read it.

The content for the Flimzie comes from you, our readers. Please submit your articles, pictures and editorial comments to the Editor, Ken Peterson, poplarken53@gmail.com, no later than 10 days before the 1st of the month, i.e., Jan 21, 2022, for a February 1st publication.

Message From the Superintendent

By Marty Hendrickx

Hello all, it is hard to believe the holidays are over and it is the end of January. Hopefully Santa was good to you, and you got the car, loco

or kit you have been wanting. The weather has been cold, so it is good model railroading weather and hopefully you have had time to work on you layout, kit or weathering project. I've had a chance to attend several operating sessions and it was great to get together with fellow railroaders and operate on some layouts.

We had a great dinner at Lino's on the second of January with a decent turnout. I had hoped we would have a better turnout but it was fun to meet with our fellow NMRA members socially. Many of the members brought their wives so it was nice to get to know them socially and not to just say Hi as we visited for a layout tour/operating session.

Speaking of getting together, I want to remind everyone they are invited to the two weekly breakfast get togethers. One group meets every on Monday at Sophia's in Roscoe at 9:15. The other get together meets at 8:00 AM and is at Alpine View on the first, third and fourth Thursday of the month and Sunrise North on the second and fourth Thursday. Wives are invited.

So, attendance at our monthly meets has been down. I realize it is winter and the holidays, but we really need to have more folks show up. Once again all are invited, if you are a first-time attendee there is no cover charge. After the first meet we do charge a \$5.00 cover charge for all non-members. We do have monthly clinics, contest, and layout tours, so there is always something interesting and new to be learned.

We are only two months away from our Rock River Valley Train Show. We are optimistic we will have a good vendor and model railroader turnout. I cannot emphasize how nice of a facility the Harlem High School is. It is larger with better amenities than we have had in the past. We will need for our membership to help with the setup, running and teardown for this event. If you are unable to attend one of our meets in February or March, I would ask you to contact Ken Mosny (registrar@rrvd-nmra.com) Doug Loy (delsclho@yahoo.com) or myself (superintendent@rrvd-nmra.com) to let us know what assistance you can provide. This event is our only fund-raising event of the year, and we are dependent on this to pay for all of the other activities during the year.

Several of us plan to attend the Mad City Train Show in Madison on the 19th of February. We are planning on carpooling to cut down on the cost of gas and parking. Tickets are \$11.00 so if you are interested in attending and would like to carpool, let me know so we plan our carpool.

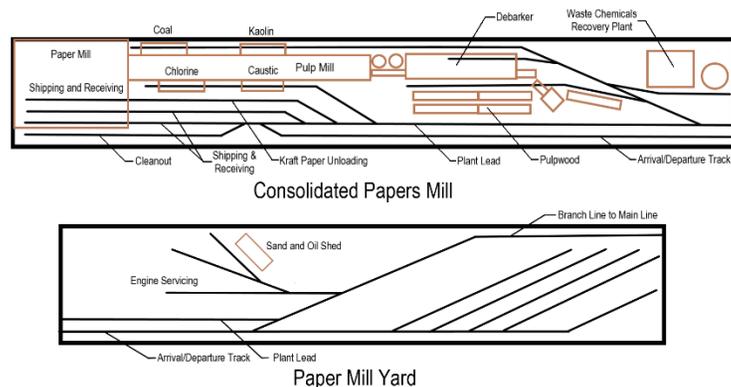
I look forward to seeing everyone soon.

The Layout Design Column

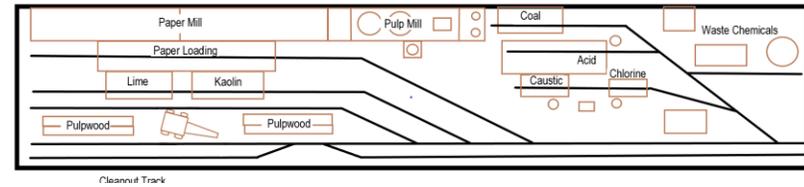
By Ken Peterson

In the December Flimzie, I described simple design concepts that can be used to reduce layout design mistakes and make the design process fun. I described how I applied those concepts in designing and building a portable layout to take to the **Rock River Valley Train Show March 26th & 27th**. That layout featured a large, single industry, a paper mill. I used an Internet map application, pictures from the Internet, and historical documents for information to create the design.

This month I want to discuss changes that I decided to make to that design. This is the original design.

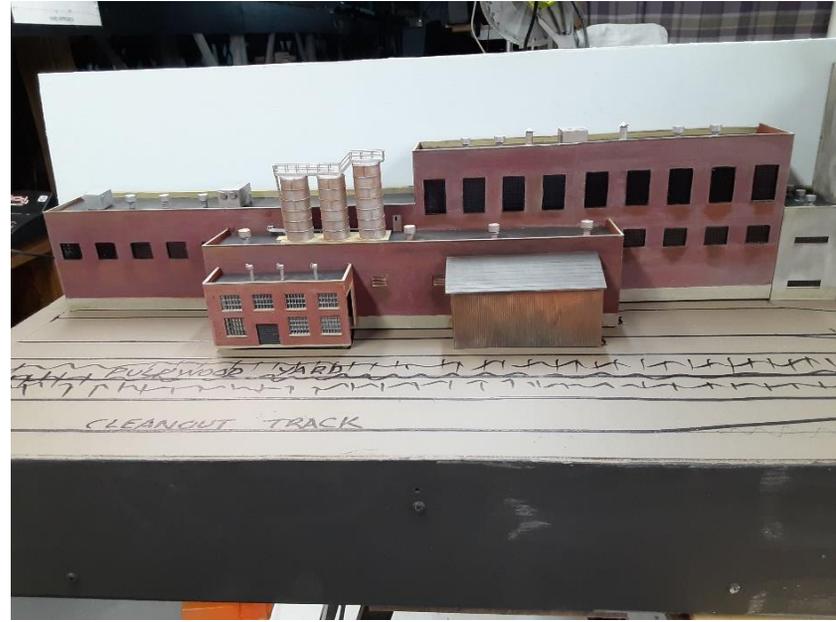


This is the new design of the paper mill module.

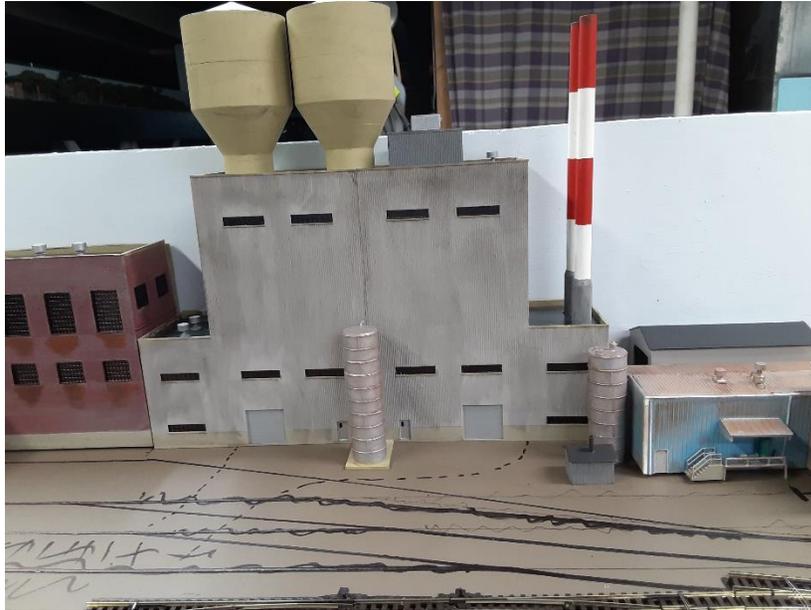


Rather than scratch building the paper mill and pulp mill, I decided to buy the Walthers paper mill kit and “bash” it to fit. When I tried to work out ways to kit bash it to fit the original design, I could not make it work without having to buy another kit. The kit was too much money for me to buy another one. So, I laid out all the paper mill wall pieces that came with the kit and rearranged them until I came up with a workable structure. I did the same thing with the kraft mill. To maximize the size of the structures I had to make them as flats against the backdrop. The paper mill, paper loading annex and pulp mill all came from the Walthers kit. The lime unloading shed was built from pieces in the scrap box. The kaolin, coal and chlorine unloading sheds were scratch built from my scrap box I have learned from many years of model railroading, never throw out scraps, especially when building in N-scale. It didn’t take much material to build these small sheds. There are two sheet metal structures with loading docks that contain tools and parts for equipment maintenance. They supply a need for the occasional box car delivery. The debarking and acid loading structure was kit-bashed from a Pikestuff kit. The pulpwood piles came from hours of chopping very fine River Birch tree twigs (gathered from under trees in the neighborhood) into 8-foot-long N-scale pulp logs and gluing them all together. It is mind-numbing work, but the results make it worth it. The following pictures show the in-progress construction of the structures and layout.

The first picture below is a view of the mill yard. There is a yard office temporarily placed near the engine servicing tracks. There will be another structure adjacent to one of the engine servicing tracks to house lubricants, air hoses, coupler parts, etc.



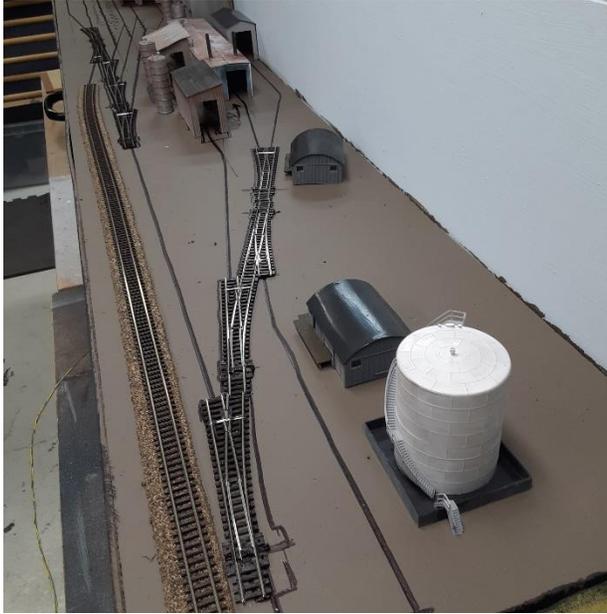
The second picture shows the paper mill kit bash with the paper loading annex on front. The lime unloading structure is in front on the left and the kaolin unloading structure is on the right.



The third picture shows the pulp mill kit bash. The structure on the far right in the back is the coal unloading shed.



The fourth picture is the debarking (blue) building. Acid unloading takes place inside the right end of the building. The caustic unloading is in the shed on the left in front. The chlorine unloading is in the shed on the right.



This picture shows waste chemical recovery track. Turpentine is a by-product of the waste recovery process. A tank car of turpentine will ship out once a week.

Now that most of the structures are complete, I will mark their locations. The hills and trees will be drawn on the backdrop. Next comes the painting of the backdrop.

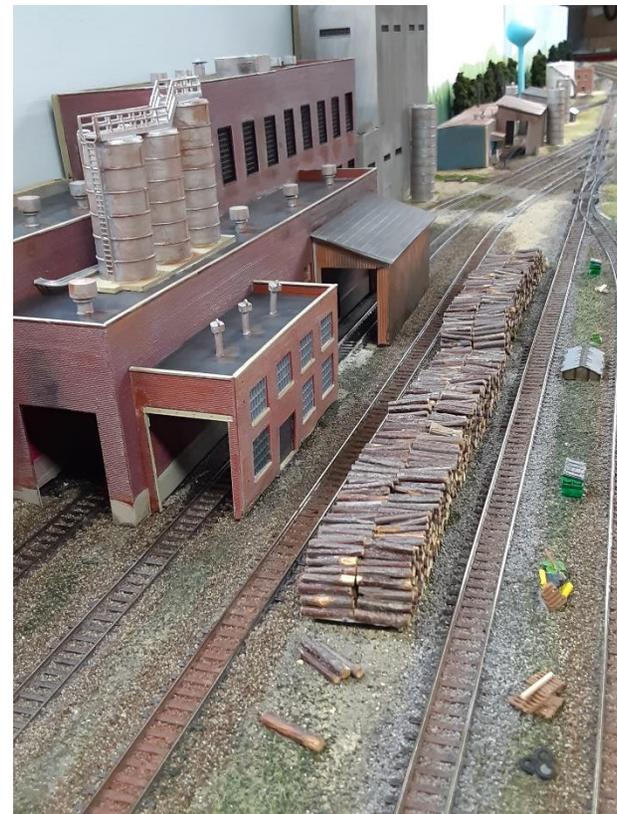
Installing the roadbed follows the backdrop painting. I will cut and glue a cork foundation for each structure in place. Premixed patching compound is used to create the ground on top of the foam base. Drainage ditches and minor undulations are also added to eliminate the dead flatness. Then all the cork is painted to match the color on the ballast. The ground is painted my chosen dirt brown.

The track is installed and wired. After running trains for a few hours to assure there are no problems, I will paint and weather the track.

Since this is a portable layout, all the structures must be firmly glued in place.

Here are some more pictures showing the progress I have made.





Next month I will describe the operating system I developed for this layout. All my layouts are built to operate, not run around in circles. Based on information I found, this paper mill received deliveries and made shipments five days per week. Each day the mill received different commodities. For example, they received empty boxcars on Monday and Thursday. So, each daily train consist will be completely different. To switch out the cars for a shift will take about two hours. I have enough cars I can make a different set of cars for the next five days. This layout is fun to operate. You definitely won't get dizzy watching a train go round in circles. If you want to see the layout in person, come to the Rock River Valley Train Show March 26th and 27th. I will have it set up and operating.

Guide for Lettering with Decal Alphabet Sets

By Ken Mosny

Sets of decals preprinted with arranged lettering for a specific herald or even a whole car are relatively easy to use. All that is required is usually to get single decal in the correct position and level. A little poking and prodding with a needle or the tip of a hobby blade and eyeballing the final position will usually do the trick because the letters are already prearranged.

When making up a line of lettering from an alphabet set it is more difficult to keep the letters straight and level. Lettering the letterboard of a passenger car is not too difficult because the letterboard provides a built-in guide. The challenge is when you letter the side of car such as a boxcar or, in this case, a circus car with no guides. Eyeballing straight and level will not cut it for most of us, and you can't mark guidelines on the side of the car. The trick is to provide a removable guide.

This circus car required three lines of text almost the entire length of the car. To provide a lettering guide I taped a straight thin wire where I wanted the bottom of the line to be. Music wire, 0.20" or 0.15" diameter taped in place with Tamyra tape worked well for me. The music wire is very straight and tempered so it won't bend easily, but any fine straight wire will do. I have never had Tamyra tape lift paint and it held when it got wet so that is why I used it instead of masking tape. Blue painters' tape for sensitive surfaces would probably work, too, so use what you are comfortable with. I was able to slide the edge of each letter under the wire and line the letters up quite easily. Usually, I rough placed a word at a time and then slid the letters around to get the spacing right. The decal can be slipped under the wire easily. Using the wire as a guide I was able to easily make the three lines of lettering straight and level the length of the car.

To hide decal film on the model, I spray Pledge Floor Care Multi Surface Finish as a gloss coat first, apply the decal, let it dry and then set the decal with Walther's Solvaset. The Solvaset seems to dissolve the film into the Pledge making it invisible after a Dullcote

final finish. A complete description of this process was in the Fall 2017 Flimzie.



The following information was taken from several Model Railroader forum posts. They were posted by ATLANTIC CENTRAL (Sheldon) with comments by others. This post gathers information from the NMRA, several forums, consolidates it, and explains how the various bits of information relate to each other. I have edited the comments to keep this as brief as possible.

Ken Peterson

Freight Car Trucks and Wheels Standards

From Sheldon:

I have gathered some engineering information to explain how model trucks work, why some roll better than others, why equalization matters, and hopefully dispel a few myths.

Myth #1 - The car rides on the points of the axles.

Myth #2 - Our cars do not weigh enough to make sprung trucks "equalize".

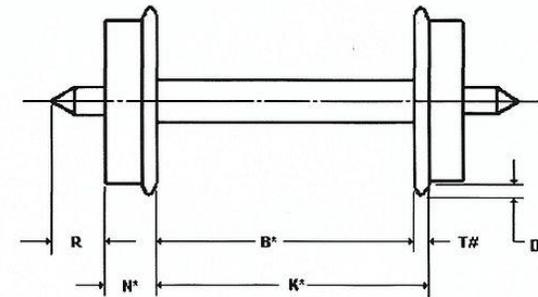
Myth #3 - Rigid trucks track just as well as equalized trucks.

First, some basic engineering standards for model trucks and their components, from the NMRA:

NMRA RECOMMENDED PRACTICES	
WHEELSETS	
Issue Date	AUG. 1963
	RP 24.2

NMRA RECOMMENDED PRACTICES RP-24.2 Wheelsets

Compiled By: S. R. Guinter
Drawing by: H. H. Krien



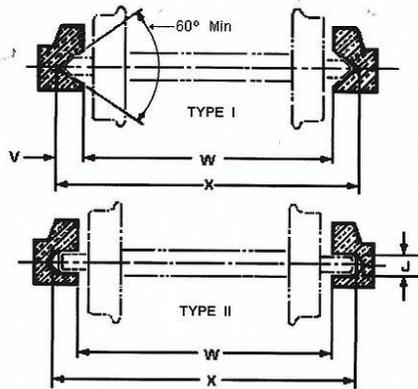
*For these dimensions see current NMRA STANDARD S-4.
#This dimension is not a STANDARD---see RP-25.

NOTES:

1. Rail contacting surfaces of wheel should be round, concentric and perpendicular to their axles within 1% of "K". Check Gage distance---see NMRA STANDARD S-4, measured as TIR (total indicator runoff), while remaining within the limits of NMRA STANDARD S-4.
2. Diameters of the two wheels in a wheelset should be equal within 1/2 % of "K".
3. Axle overhangs "R" on each end should be equal within 1% of "K".
4. Rail contacting surfaces should be smooth, true and free from irregularities.

NMRA RECOMMENDED PRACTICES	
JOURNALS	
RP 24.1	Revised: July 1982

NMRA RECOMMENDED PRACTICES
RP-24.1 Journals



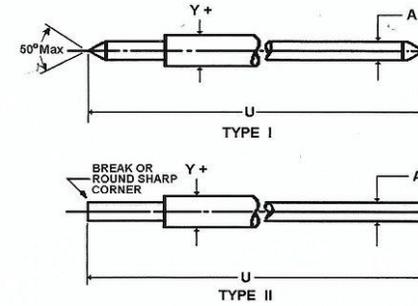
Scale	J Journal Bore Diameter min	V Journal Bore Depth min	X Journal Bore Span min	W Journal Face Spacing min
O				
S	.067	.123	1.314	1.068
On3				
OO				
HO	.067	.105	1.038	.828
TT				
HOn3				
N		.050	.569	.469

NOTES:

- Journal Bore Depths "V" in a sideframe should be equal within 1% of "K", the Check Gage distance of the wheelset.
- Journal Bore Span "X" should restrict axle end play in excess of 2% of "K" except for the "inside" axles of three or more axle trucks.

NMRA RECOMMENDED PRACTICES	
AXLES	
RP 24.3	Revised: July 1982

NMRA RECOMMENDED PRACTICES
RP-24.3 Axles



Scale	A Axle Diameter max	Y+ Shoulder min	U Axle Length max
O			
S (see Note 5)	.063	3/32	1.310
On3			
OO			
HO	.063	3/32	1.035
TT			
HOn3			
N	3/64	3/64	.562

+ When used.

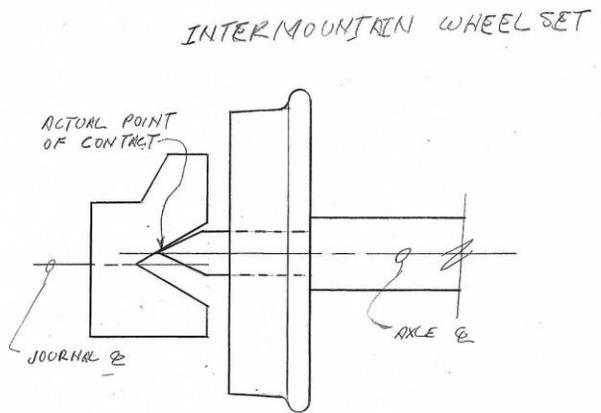
NOTES:

- Shouldered axles may be used to insure proper wheel assembly. Enlarged center section may be contoured similar to the prototype.
- Dimension "U" for the Type I axle is taken at the theoretical point of the cone. A blunted point will measure shorter.
- Surface finish of bearing surface marked dimension "A" and coned surfaces should be smooth, true and free from irregularities.
- Cone point should be concentric with dimension "A" within 1/2% of "K" measured as TIR.
- For S scale: Axle insulating bushings are optional and if used may extend beyond the outer face of the wheel. The maximum allowable distance over the outer faces of bushings shall be 1.064 inches.

Interestingly, the axles on Intermountain wheelsets are nearly identical to the design shown above. The key feature being the small axle diameter outside the wheel, resulting in a smaller axle cone.

Myth #1 - The car rides on the points of the axles.

Well, no. Actually the cone of the truck journal contacts the cone of the axle tip, but not on the "end" or point of the axle, but rather like this:



Notice from the NMRA specs that the journal cone is 60 degrees minimum, while the axle is 50 degrees maximum and the max axle length is less than the minimum journal span, creating a minimum standard for side-to-side play. Interestingly there is no maximum spec for side-to-side play.

It is assumed that as long as the axle stays in the truck, gravity will center the axle.

This leaves a 5-degree difference on the weight bearing top side to minimize the contact patch of the axle onto the journal.

Varying amounts of side play are allowable, but the axle points are not all the way into the points of journal cones, so the load is not on the axle tip, but on the side of the axle tip near the point.

Myth #2 - Our cars do not weigh enough to make sprung trucks "equalize".

Well, here is the thing, your freight car does not need to compress the springs in sprung trucks, in fact there is no expectation that the springs will provide that sort of "suspension".

We don't need that. But what we need is equal loading of the car weight onto all the wheels, typically 8 of them on a freight car.

For that to happen the only thing that the truck needs are independent flexing of the side frames at the truck bolster. The springs allow this, and very little weight is required to cause this flexing.

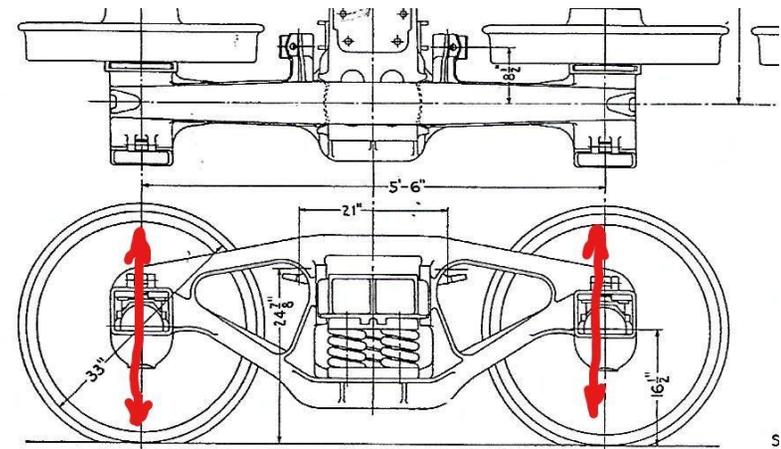


Fig. 2742—Self-Aligning Spring-Plankless Double-Truss Truck for 50-Ton Center Plate Height.

Each side frame needs to move as the red arrows indicate, one end up as the other end moves down, the springs need only compress

the smallest amount while still holding the top of the bolster in contact with the side frame - which is unlike the prototype.

Myth #3 - Rigid trucks track just as well as equalized trucks.

Rigid trucks track "OK" for most people's needs, no question.

BUT equalized trucks track better. They will navigate grade transitions better, work better on super elevation with less chance of string lining, and result in smooth running and less slack action because the "dynamic friction load" will not change as much as track conditions change.

All this is small numbers wise until your trains get longer, 30 cars, 50 cars, 100 cars.

Much of the time, with rigid trucks, the actual weight of your freight car is only on 6 wheels. No different than a chair on an uneven surface.

Equalized trucks also travel through turnouts better because no wheels are ever "floating". Those wheels that might be floating on a rigid truck can more easily ride up on frogs and points.

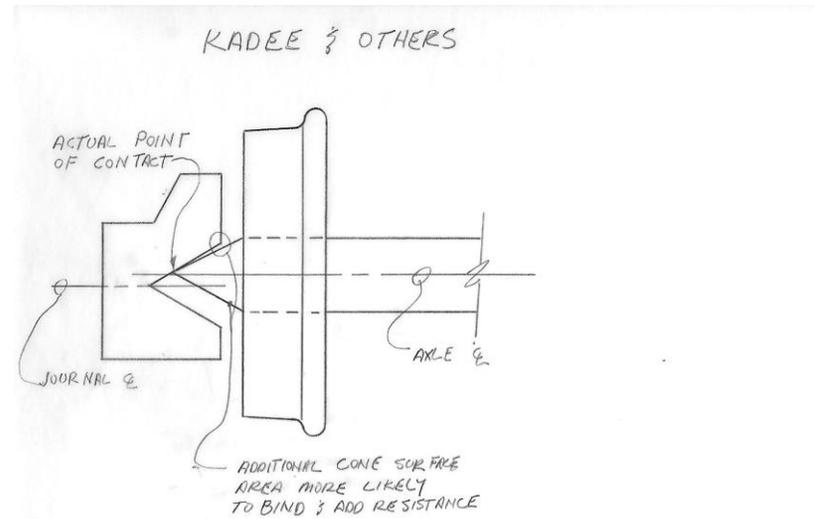
Why do the Intermountain wheelsets work so well?

Why do the Kadee sprung trucks roll OK, but not great?

Why does the Intermountain wheelset fix this? The side frames of a sprung or equalized truck must move relative to the axles. This slight movement changes the relationship of the axle to the journal. Some would say this is justification for the rigid truck and "settling" for the 6-wheel effect.

Kadee, and other manufacturers use a large cone axle rather than the small cone in the NMRA Recommended Practices.

They look like this:



As the side frame moves, the larger cone has more surface area that can come in contact with the journal cone, with more friction and more opportunity for binding.

Admittedly this is less of a concern with rigid trucks, but tests show, and owners report, that small axle wheelsets like Intermountain work better even in rigid trucks.

Here is a photo of the Intermountain axle end (right) vs the Kadee axle end (left):



I started in this hobby at a time when better equipment came with sprung trucks, and names like Kadee, Central Valley, Lindberg, Walthers and Silver Streak were synonymous with quality sprung trucks. That was 54 years ago.

Today, and for the last two decades, I have been refitting Kadee sprung trucks with Intermountain wheelsets to achieve the freest rolling equalized truck possible.

The goal was derailment free operation of trains in the 40 to 70 car range.

Another side benefit, the weight of metal trucks adds weight where it works the best, down low at the track. Often making it unnecessary to add additional weight to cars that are slightly below NMRA recommended practice.

Does the smaller bearing surface of the Intermountain axles cause any more wear to the bearing surface of the trucks?

No, because under "ideal" conditions the contact patch is the same size with both types of axles. And the weight vs hardness is not really a wear issue of much concern.

It is only as the side frame moves during equalization that the larger axle is more likely to have more contact, and thereby more friction, and more possibility for binding.

If, as in my case using Intermountain wheels in Kadee trucks, you have metal to metal, some form of lubrication is desirable.

I use a small drop of light oil. It soaks into the porous cast metal of the side frame journal and acts like an Oilite bearing, not needing relubrication for many years, and causing no issues commonly believed about lubricating trucks.

If either the axle or journal are slippery plastic, wear concerns are even smaller.

When I was in *Scale Rails of Southwest Florida*, we had a demonstration track showing why sprung trucks (HGC did not exist yet) were required on all cars that ran on the club layout.

It was just a piece of flex track with a couple of staples over one rail of the track. Rigid trucks would always derail, but a string of freight cars with sprung trucks would glide right through the obstacles.

The fact is that when a sprung (equalized) truck has one wheel lifted, the other three stay on the rail. When a rigid truck has one wheel lifted, another wheel is also lifted, and there is a derailment.

I want to draw attention to the intentional 'blunting' of the tips of these axles. This defines the 'bearing' area on the axle slightly differently: it is now where the curved radius of the blunted tip intersects the 50-degree cone machined or formed in the axle end.

In my opinion, it follows that this very small region is the 'only' part of the axle that needs to be carefully trued and polished. But there is another implication of this radius: it maintains a good contact area on both ends when the two side frames equalize.

Naturally, there is a small deformation between the near-point contact of the relatively hard axle and the softer side frame material the latter will, ideally elastically, deform slightly to give the required bearing area. I suspect you would need very good instrumentation to measure this.

A Delrin side frame will distort 'more' than a brass one, but the inherent low surface activity of acetal will ensure low friction of the 'deformed' area even without lubrication.

Something I have not read about is the bearing arrangement used for those trucks with rotating simulated roller-bearing endcaps. Those usually involve a small 'wire' extension on the axle end that penetrates the side frame. Now if you remember your Hot Wheels cars, those use a Delrin tube bearing with line contact to a thin wire axle... and roll very well. The question is whether the rotating-bearing trucks 'bear' on those pins, or on a contact with the axle taper inboard of the pin end.

How important is axle length?

I found that the Intermountain wheelsets did very well in downhill rolling resistance if the IM axle length was not much longer (it was often shorter) than the original. So that became my default. I used the Proto in cases where I wanted the ribbed back wheelsets for older cars.

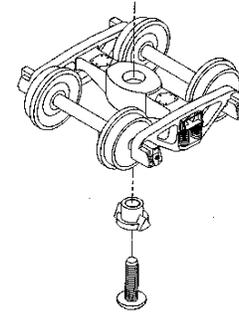
Your explanation firms up my guess that shorter axle lengths than original are usually not an issue because the axle point does not need to ride in the very end of the cone. Of course, too long an axle length, exerting horizontal force into the cone ends would not be desired, as that would be creating a binding force.

Sprung suspension does not work quite the way most people think. First, there is a difference between spring rate and spring length. The weight bearing capacity of a spring depends on both variables. Weight bearing capacity is irrelevant to the value of sprung trucks under model railroad cars. It is the compliance that matters.

Even the lightest model railroad car will compress the springs of a sprung truck to some degree. But that is not the function of a sprung truck anyway. There is no need for springing a truck to carry a load on a model railroad.

It's the spring rate that matters, and that can be very high relative to the load and still work fine. What matters is the compliance: some versus none.

The proof is the design of Kadee HGC trucks (High Gravity Compound weighs nearly the same as Metal Trucks but with more detail and a 2-piece split bolster design for more efficient truck equalization, reduced axle friction for greater rolling performance).



They have no springs but a limited amount of compliance that results from the split bolster design with two halves centered on the mounting boss. The central bushing insert fixes the truck relative to the car within very tiny variance but the truck itself floats around that bush providing the same flexing as two separately sprung side frames would but without the complication of actual springs. Kadee designed exactly the right amount of relative movement between the truck mounting point which is firmly fixed and the rotation of the truck around the center bushing which is loose. Both ends of the Kadee HGC equipped car have exactly the same movement compliance, unlike standard rigid trucks. It is because our rolling stock is so light, even at NMRA recommended weights, that actual springs are not required.

The Kadee HGC truck is screwed down tight to the car, but the compliance is engineered into the design of the actual truck. This contrasts to actual sprung Kadee trucks which cannot be screwed down tight but are mounted in the same way as rigid unsprung trucks: one reasonably snug and the other less so.

Sprung trucks can be installed tighter to the mounting boss than unsprung trucks because they have compliance.

As for "point wear" resulting from the axle point angle being more acute than the angle of the "journal" well, the loads are very, very low. The wear point is actually a ring, and the very nature of a model railroad layout means the axle points are continually sliding up and down the faces of those cones due to lateral compliance. If you ran

these cars on perfectly straight, level, and horizontal track for miles and miles (real miles, not just scale miles) at high speeds maybe, just maybe the cones might wear a bit. In normal running there's no chance of any wear ring developing. Interestingly, the smaller axle end on Intermountain wheelsets makes lubrication more effective because there is less axle surface area to generate drag from any lubricant.

Bear in mind that when James May ran standard Hornby OO equipment across North Devon for miles and miles in his Toy Story episode, his rolling stock and motive power did not suffer a single bearing failure. Mostly straight running too. At 1/87 any curve in a real mile is virtually straight.

Are there any studies or opinions as to the use of lubricants on the axel tips as to rolling qualities or incompatibilities of materials? These lubricants would include everything from the Kadee "Grease-Em" to the line of Labelle products and anything else (i.e., powdered graphite or Teflon type product) being marketed. I model On30 using the stock Bachmann trucks and have never lubed or adjusted any of their trucks as they seem to roll just fine. Any opinions on the "truck tuner"? Or "truck tuner" and a lubricant?

Truck tuning often makes good sense. Note that it works by smoothing the 60-degree cone in the side frame. Even though the 'active' bearing area might be only from about 5 degrees before and behind 'top center' and only a few thousandths long, it's easiest to cut and smooth the whole cone at one time.

The lubricated area on these is small and any hydrodynamic bearing wedge likely slight at most. I think the use of lube depends on the side frame and axle materials and only the smallest amount. Dust will preferentially get up in there over time if you overlubricate, and it can be surprising how little constitutes 'over' doing it.

As pointed out above, the truck tuner is useful to insure a smooth bearing surface in the journal.

I use Labelle 108; I prefer it over graphite or Teflon powder.

One other note about the above comments, yes, no matter how sharp it feels to you, the axle tip is rounded off, to the benefit of the actual contact point.

When should one consider switching his cars to sprung/equalized trucks? When it pays to change to sprung/equalized trucks are when you are operating long heavy trains, particularly through complex trackage. As the total train weight increases, the side load on wheels and flanges increases on curves for the cars at the front/middle of the train.

With equalized trucks these additional forces are much more evenly distributed to each wheelset.

Remember what was said above about the Scale Rails club? Sprung trucks required they pull long trains.

But, given a choice for a replacement or on a scratch-built car, I would pick Kadee or some other high quality sprung truck even if my other rolling stock was not so equipped.

Here are a couple of comments from Sheldon about code 88 vs. 110 wheels:

Before I get started, please understand, my thoughts on code 88 wheels are my OPINION, based on some simple facts. I am not suggesting code 88 wheels don't work, but they don't work well enough for me, on the track and turnouts I use.

What is a code 88 wheel? It is a semi scale wheel with an overall width of 0.088", compared to the original NMRA standard wheel of 0.110". A true scale wheel would only be 0.064" wide in HO scale.

Just like our wheels are not exactly scale, our track is not exactly to scale either. It allows for more play, larger flangeways, etc., when compared to the prototype.

Code 88 wheels are simply the narrowest wheel that is expected to negotiate NMRA standard HO track without derailment. This does however cause issues with wheels possibly dropping into, or

"bumping over", turnout frogs much more so than the wider code 110 wheel.

When you replace the code 110 wheels in a model truck with code 88 wheels, you move the outer face of the wheel farther from the back of the side frame. This is not prototypical, the wheel face on the prototype is close to the back of the side frame.

So, code 88 wheels offer a finer, more scale appearance to the wheel, at the expense of the overall visual proportions of the truck which was designed for a reasonable prototype proportion with code 110 wheels, despite being slightly wider than prototype trucks.

I am unaware of any trucks on the market that use code 88 wheels and bring the side frames into a more scale width. A tooling expense no one seems willing to do at this point.

You are in fact improving one out of scale appearance without fixing the related out of scale distance between the side frames, and thereby drawing more attention to that fact.

In rigid or sprung trucks, code 88 wheels will "clunk" through many of the commercial turnouts on the market. The narrow tread width will allow the wheel to drop in the gap between the frog point and the wing rail. Commercial turnouts with the frog point rounded creates a longer gap and the wheel is even more likely to drop in the gap. Some turnout manufacturers will fill in the frog so the wheel flanges ride on the fill instead of dropping down in the gap.

I use primarily Atlas Code 83 Custom Line turnouts. The operation of code 88 wheels through that product is at best "clunky".

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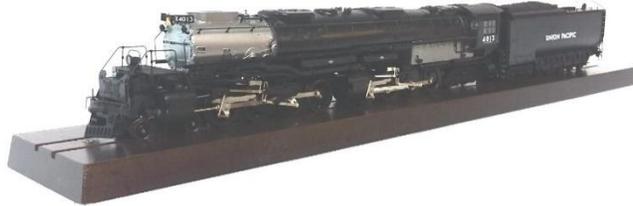
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For Sale



You, too, can own an HO scale model of the iconic Union Pacific class 4000 4-8-8-4 "Big Boy" so named when a worker at the Alco factory chalked those enduring words across the smokebox front. Arguably the most powerful steam locomotive type in the world, they were originally built with one purpose in mind - to roam the Wasatch range with ease. This gently used Trix model of UP 4013 in its magnificent wooden presentation case is equipped with DCC and sound. It is ready to roam your HO railroad, too.

The sale of this locomotive is the result of the generosity of Steve Faivre and all proceeds of the sale go to the Rock River Valley Division. Contact Ken Mosny, uiop999@comcast.net or 815-566-0595.

\$550.00

(offers considered)

For Sale



Offered is a Lionel catalog number 6-18203 Canadian Pacific SD-40-2 diesel locomotive with dual motors, Magne-Traction, AC drive, lights, and horn. I believe it was first cataloged in 1989 and appears on the cover of that catalog. It appears to be in as new cosmetic condition, intact with instructions and original box. It has just been serviced with new lubricants and look only in test run condition.

All proceeds of the sale go to the Rock River Valley Division-NMRA. Contact Ken Mosny, uiop999@comcast.net or 815-566-0595

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(offers considered)