



West Michigan Woodworkers Guild

February 2022

President's Message

By Les Derusha

Greetings from Texas, where it is much warmer than Michigan right now. Can't say I am jealous of all that snow and cold, but I digress. COVID is STILL kicking around the country, but I'm hoping you are all still moving easily. I'm assuming you're somewhat like me in looking forward to the threat retreating in the very near future.

So what is happening guild wise? Although there has been very little happening in person lately, our Facebook page is booming (and no, that isn't another 'Boomer' joke, just an accidental pun, but I'm not complaining). We are regularly getting upwards of 6000-8000 views a month, and from all over the world. I realize that not everyone likes Facebook (or is it META now? I don't know, take your pick), but it remains a great way to get some of your photos out there, share a project you are working on, or just a place to stop in an comment. So if you haven't posted lately, or at all, give it a thought, we would like to hear from you.

As far as in person meetings go, I'm guessing here, but the Guild is still 2 or more months from a face to face meeting. The Board will be investigating all our options in the month of February. We would be very interested in your opinion of what we should consider. Email me at Les@svideo.org.

In the meantime we have scheduled a "Let's Talk Shop" Zoom session on Tuesday February 8th at 7:00PM EST. I would like you to think about your shop organization and things about it that you really appreciate and are willing to share with the rest of us. Until then, stay safe.

- Les



Save the date :
Tuesday, February 8,
2022 at 7:00 pm

"Let's talk shop"
ZOOM get together.

There is no agenda or
presentation, just people
who want to talk shop.

Join Zoom Meeting

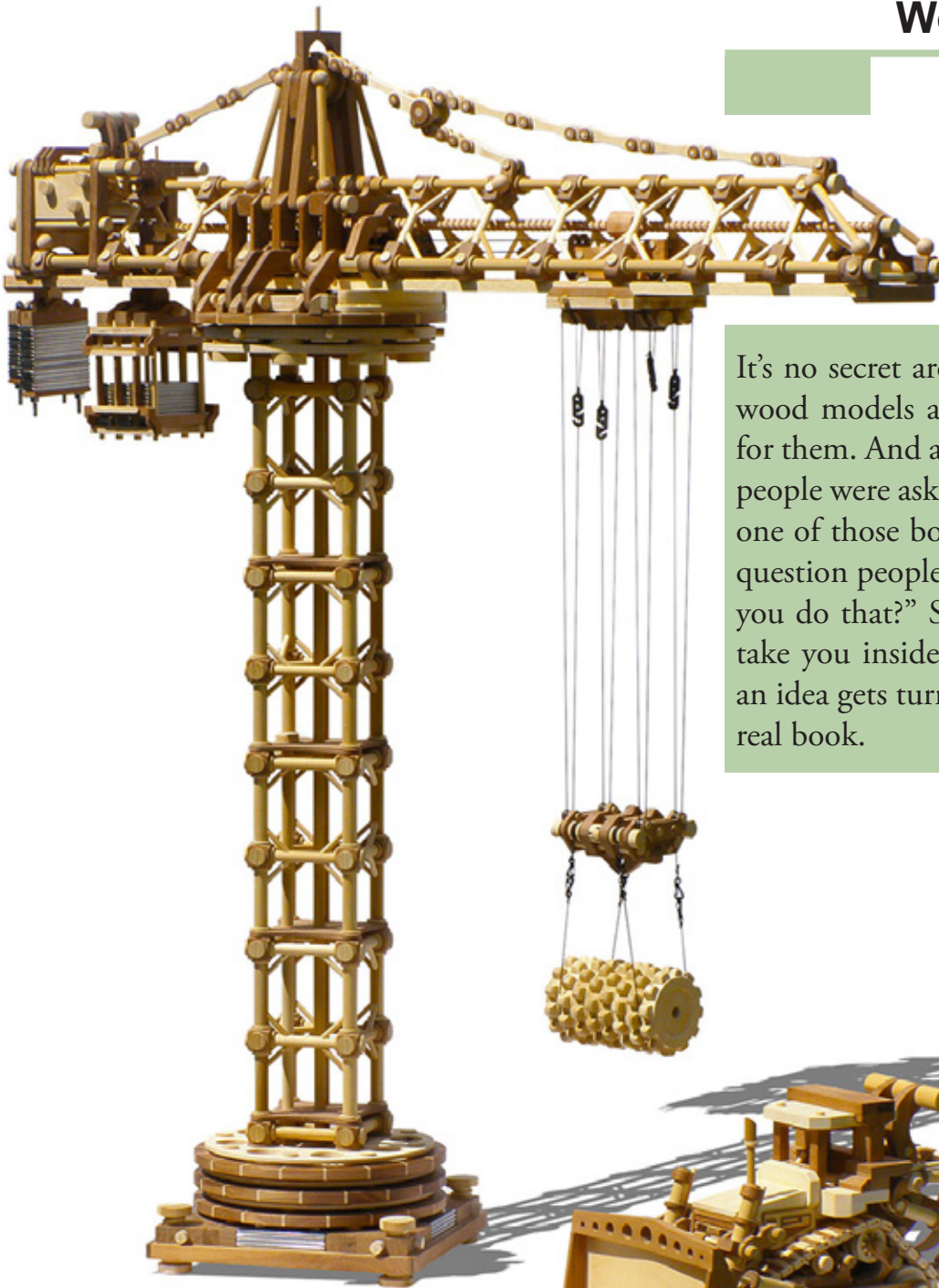
<https://us02web.zoom.us/j/82893028960?pwd=NkRzb-GZsUUkva2dnbWRDeCsxbm-VQUt09>

Meeting ID: 828 9302 8960

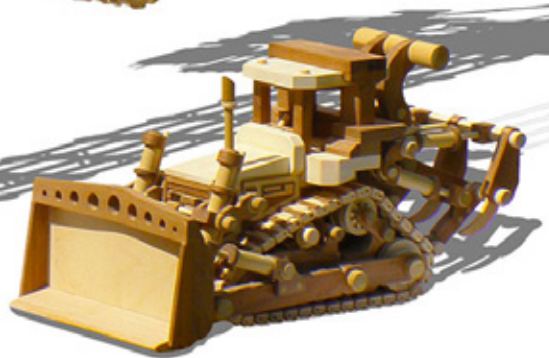
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Wood model design

By Steven DeVries

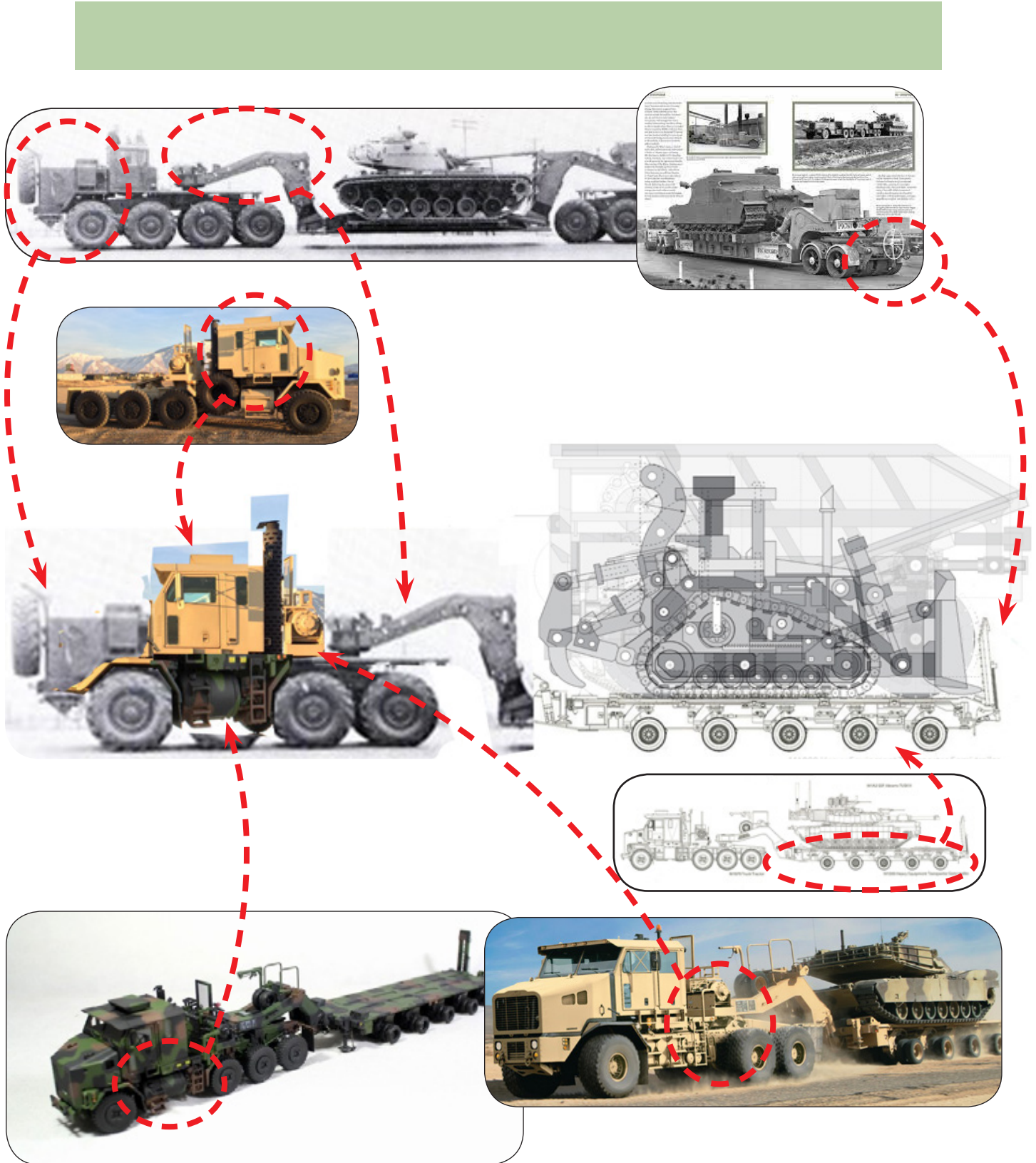


It's no secret around the guild that I build wood models and write instruction books for them. And although the question I wish people were asking was "Hey, how can I get one of those books?" (Amazon), the actual question people ask most often is "How do you do that?" So today I thought I would take you inside the design process of how an idea gets turned into a real model, and a real book.



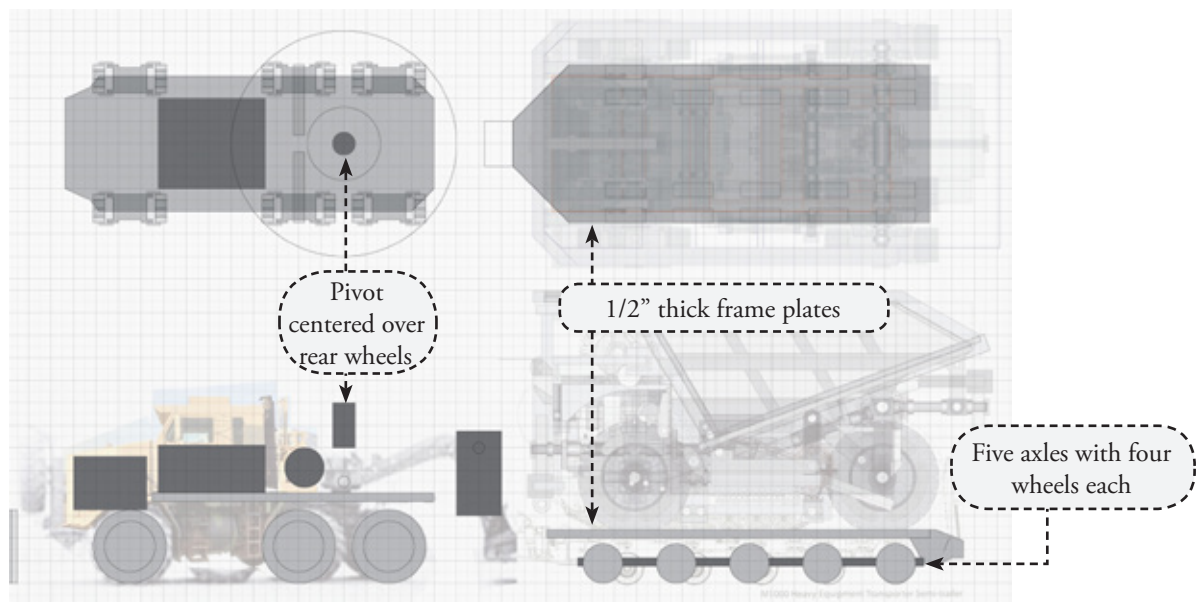
Step 1 : Ideas

I begin by downloading equipment images of what I want to build. I then use Photoshop to smash them into a rough scale composite, taking bits and pieces of images, then scale, stretch, warp, twist, and clip my way to a rough idea. I make this composite at the actual scale of the model I want to build. In this case, I want to build a hauler that will carry either my BIG Dozer or my BIG Truck models. Since I know the exact size of those already built models, I can size other things accordingly.



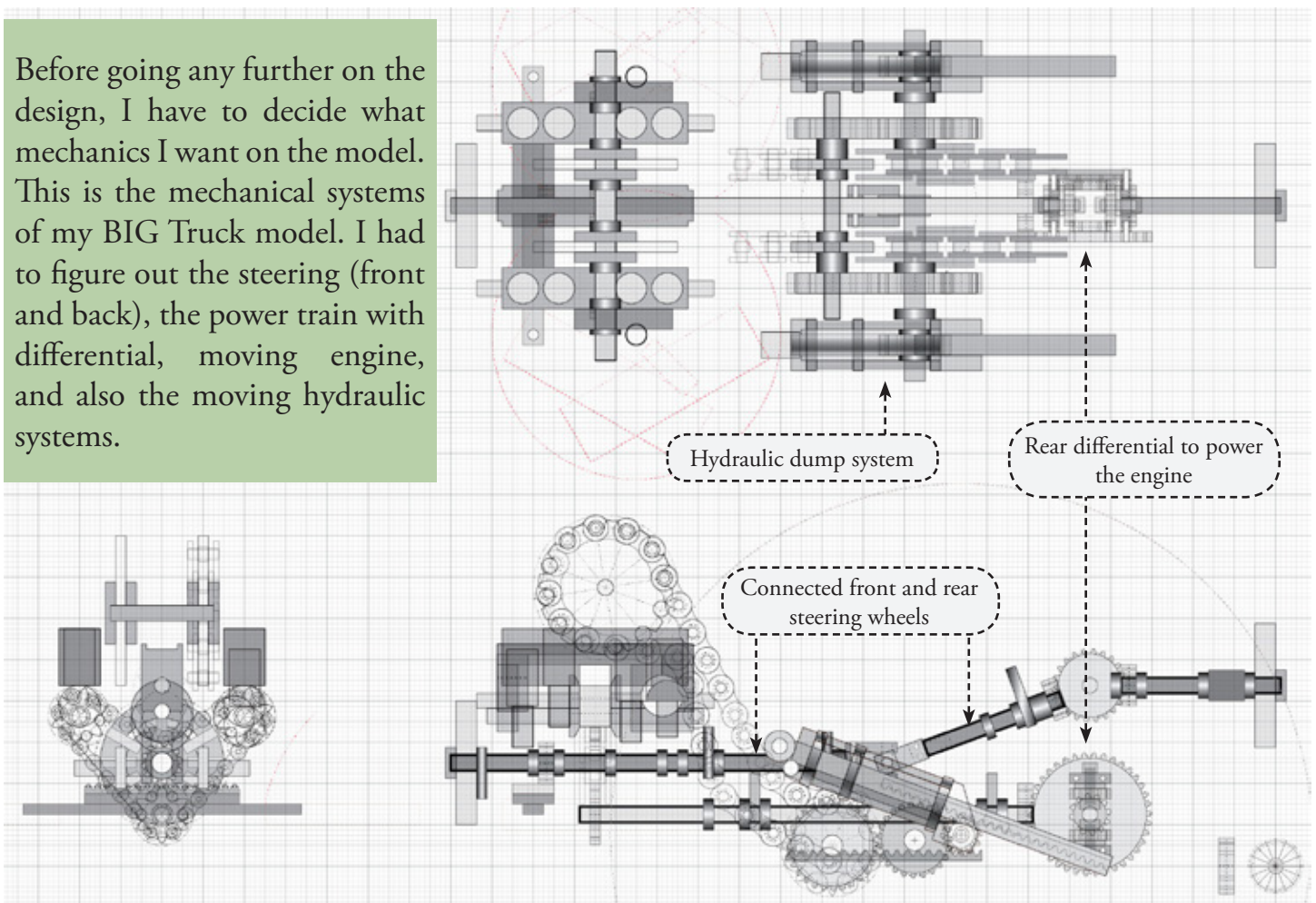
Step 2 : Blocking

Once I have a rough idea what I want, I take the image into Adobe Illustrator and begin to sketch over the drawing with basic shapes. At this stage I want to see how things look at scale, how the spacing of elements work over a grid, whether pivot points are reasonable, if my wheel sizes are workable, etc...

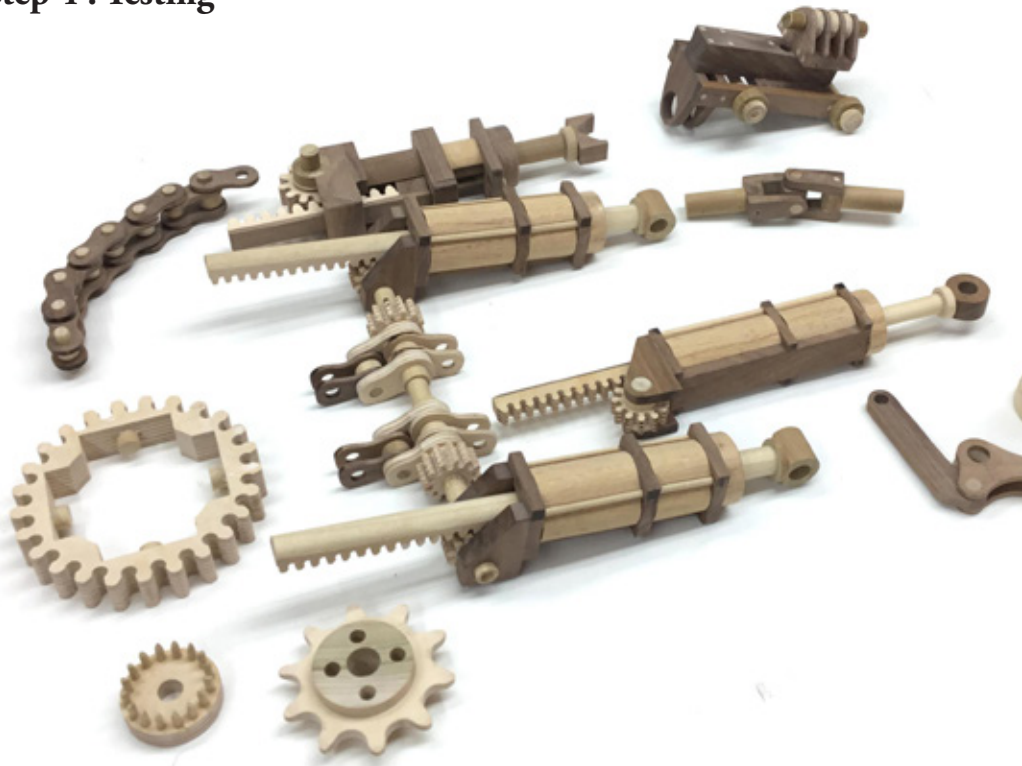


Step 3 : Mechanical systems

Before going any further on the design, I have to decide what mechanics I want on the model. This is the mechanical systems of my BIG Truck model. I had to figure out the steering (front and back), the power train with differential, moving engine, and also the moving hydraulic systems.



Step 4 : Testing



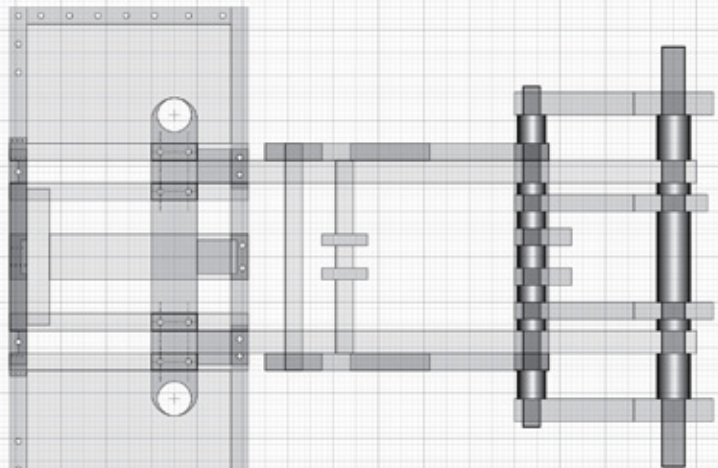
Whenever I design something that I haven't built before, like a geared hydraulic, or a wooden chain, or a sprocket, universal joint, etc., I always build a prototype to check if it is possible, and if it is, how hard is it?

I have rejected designs simply for the reason that I thought it would be too hard for other people to build.

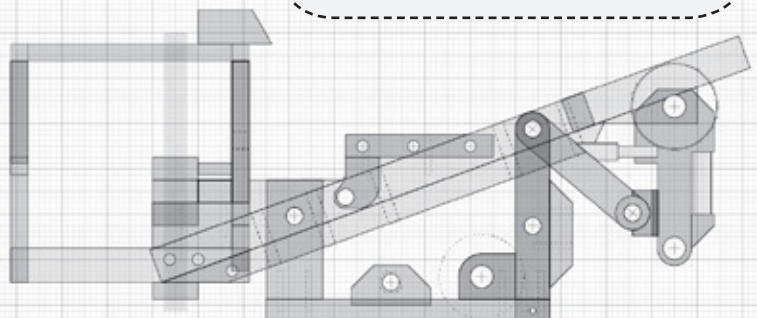
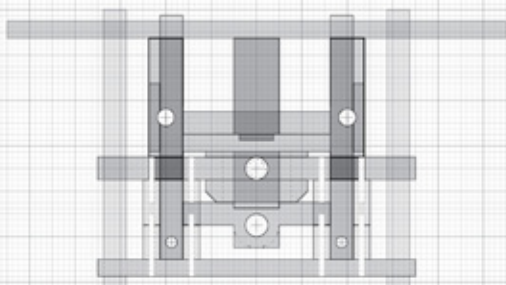
Step 5 : Frame

Once the mechanics work, I design a frame that will hold all the parts in the places that they need to be.

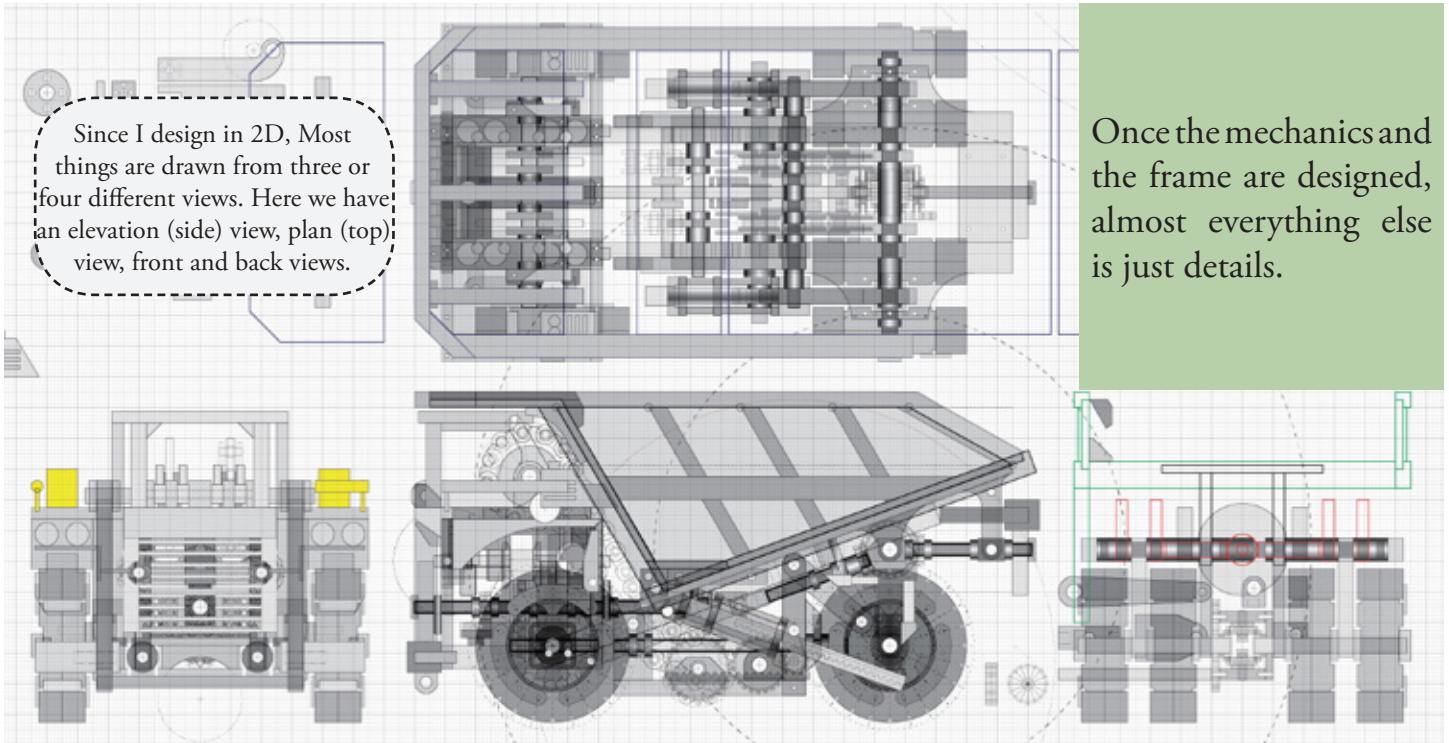
This is the frame for the BIG Truck model. When you strip away all the mechanics, the wheels, and the decorations, there isn't much left. But what is there, is very precisely designed and thought out.



The critical component in the frame design was setting the angle of the main structural beams. I have several pages in the book dedicated to building a template and showing people how to get this angle perfect.



Step 6 : Details



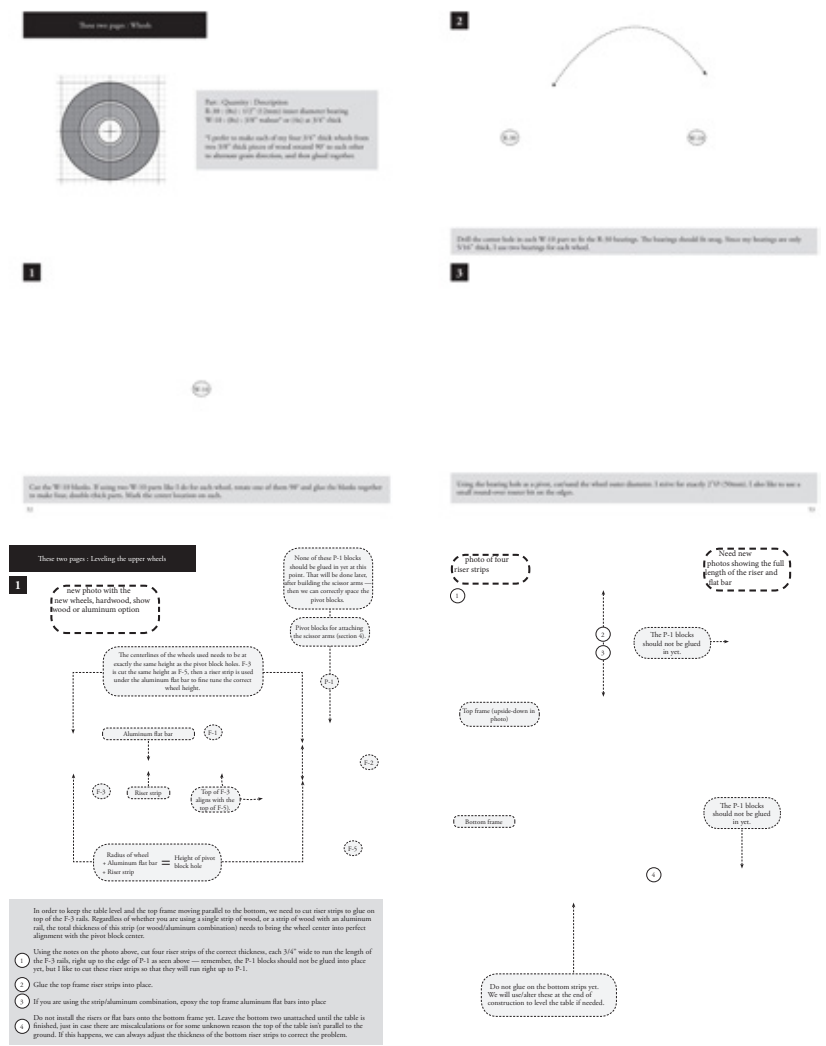
Step 7 : Book mock-ups

Before I begin primary construction, I will mock-up the entire book, start to finish. I visualize each system and how I will break down the construction into step-by-step instructions. Placeholders are put in for every image that I think I will need and drawings are referenced in.

It is very important at this phase to try to present information in a logical sequence that will make sense to another person.

It is also important not to assume everyone will know what to do if you give them a drawing. I insist on showing things broken down into smaller steps.

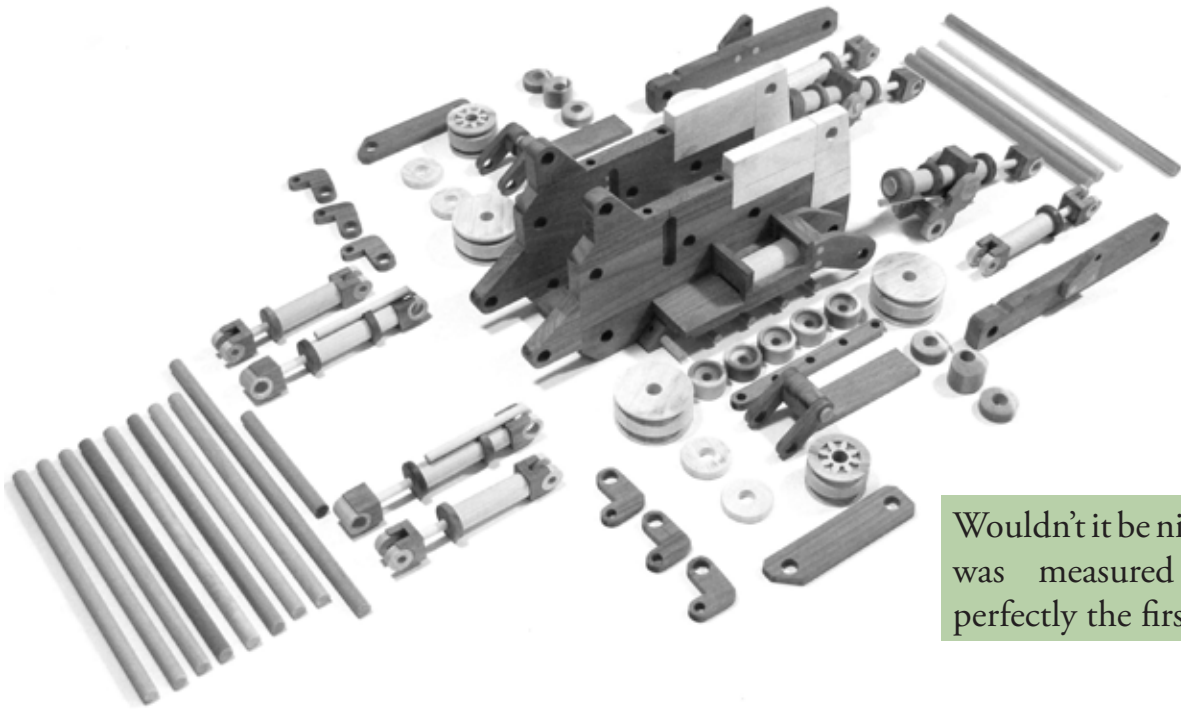
- 1-Cut the blank and mark these locations.
- 2-Drill these holes to this size.
- 3-Cut these bevels and curves to shape the part.
- 4-Glue this part here.



Step 8 : Begin construction

This step is quite complex because I am not simply building. I am building, photographing, setting and resetting order of operations, redesigning things that don't work quite right, all while trying to establish a logical sequence.

The most agonizing thing during this phase is using glue. I don't glue anything until I absolutely have to. I don't always know when I will have to remove a part to get a different part on, or when I will have to redesign something. Glue is a point of no return and it can be terrifying.



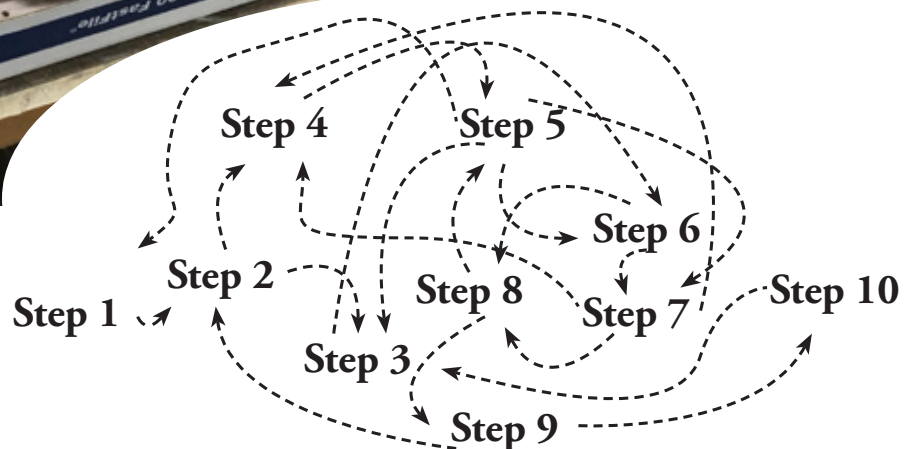
- ↓ Step 1
- ↓ Step 2
- ↓ Step 3
- ↓ Step 4
- ↓ Step 5
- ↓ Step 6
- ↓ Step 7
- ↓ Step 8
- ↓ Step 9
- Step 10

Wouldn't it be nice if everything was measured and worked perfectly the first time?

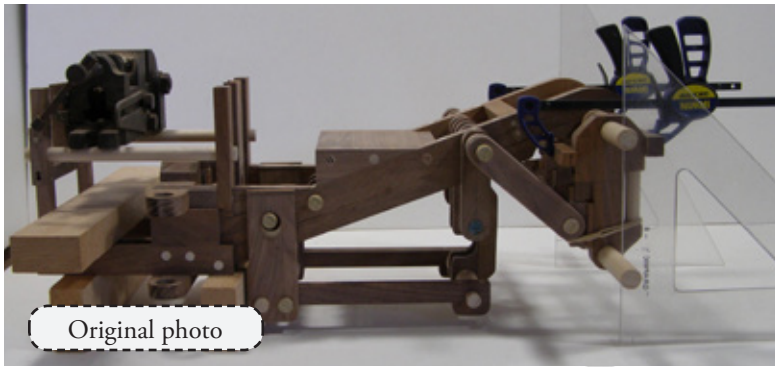
Um, yeah. That never happens. The picture above is a fantasy. Below is what the construction process really looks like.



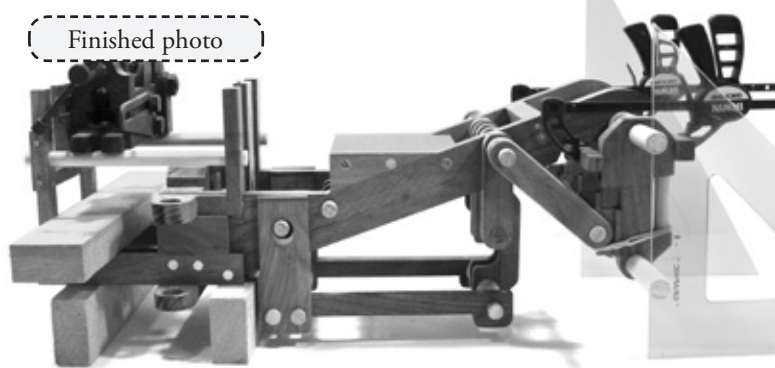
I make it look easy in the book and when I bring in a model, but I have boxes and boxes of rejected parts, screw ups, wrong measurements, and misaligned holes.



Step 9 : Photograph everything



Original photo



Finished photo

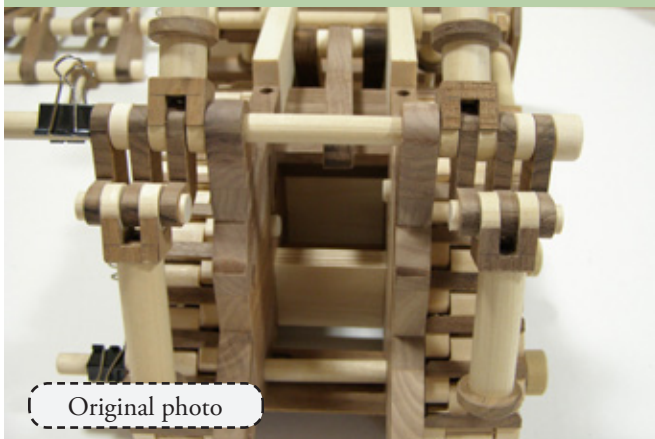
This step happens during the construction process. Every part blank, every hole drilled, every assembly step, every unique method, and everything else gets photographed. This is why the book mock-up is so important. Unless I know the model inside and out, I will miss photographing steps.

(And yes, I have rebuilt parts specifically to photograph them because I missed something)

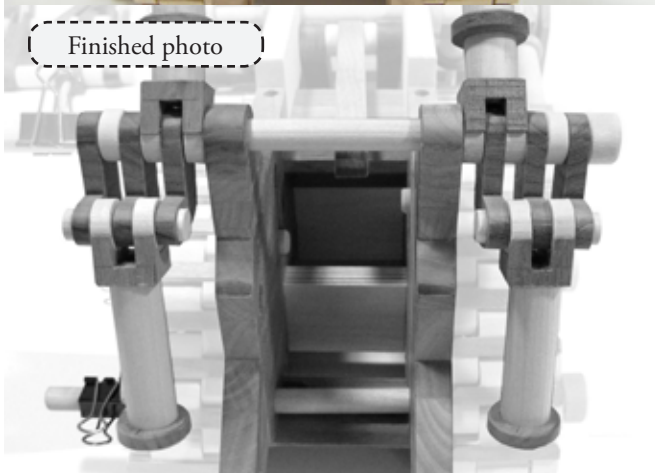
Every photo that makes it into the book gets taken into Photoshop for editing.

- Conversion to gray-scale
- Perspective correction
- Highlighting specific parts
- Masking out backgrounds
- Lighting adjustments

On average, for every photo that makes it into a book, there are ten that don't. The tower crane book has over 800 photos. Do the math.



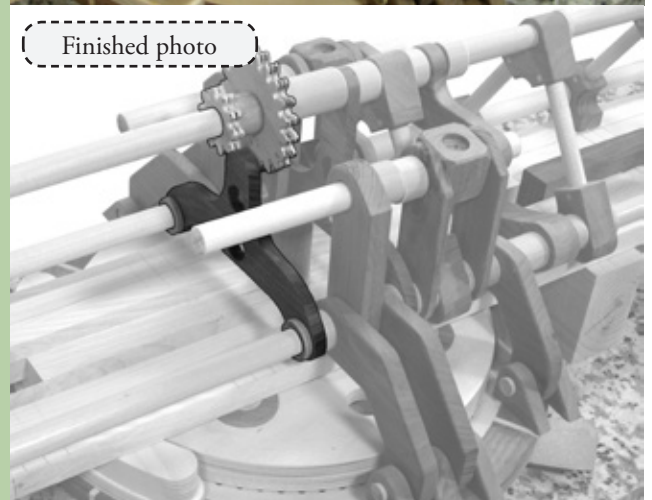
Original photo



Finished photo



Original photo

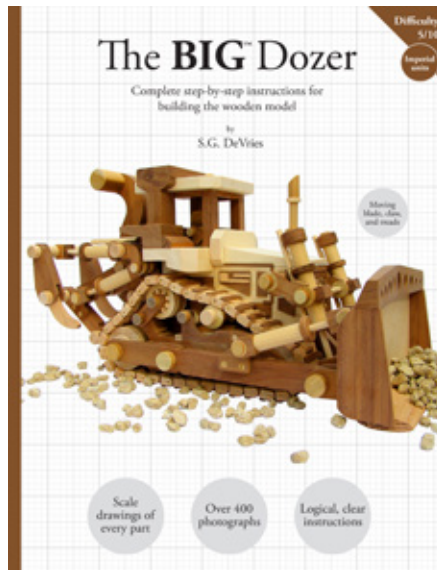


Finished photo

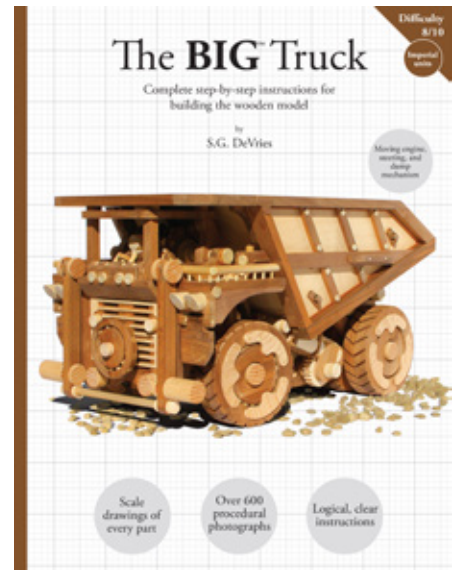
Step 10 : Finish the book

This sounds like the last step, but in reality, I write the book as I build the model. I try to keep both processes on the same timing track. It often happens that when laying out the book with the photos, I will realize I have missed a view, a step, or really need another photo of something.

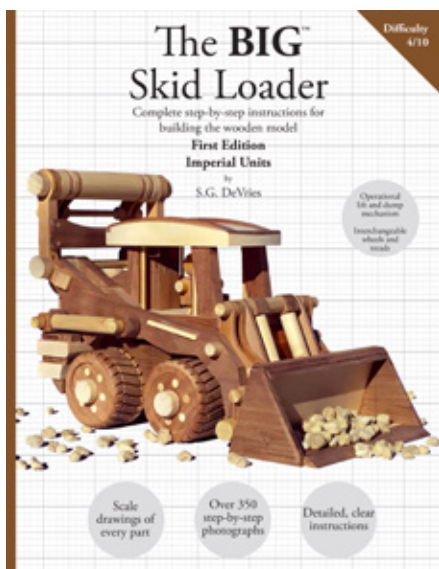
There are usually massive differences between a mock-up and a final book. The order of operation often gets adjusted and sometimes whole sections added or combined.



The BIG Dozer
170 pages
400+ photographs
800+ hours



The BIG Truck
301 pages
600+ photographs
1200+ hours



The BIG Skid Loader
149 pages
350+ photographs
800+ hours - Imperial and Metric editions added to the time



The BIG Steam Roller
99 pages
200+ photographs
300+ hours



The BIG Tower Crane
426 pages
800+ photographs
2000+ hours

There is also a lot of things as part of a final edit such as page number reference checking, part number reference checking, image test prints and edits, etc...

Well, there it is : a highly simplified step through a book production. Most of these books took about a year from start to finish, although big books like the Tower Crane took closer to 18 months.

The Guild's
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Watch West Michigan Woodworkers
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FREE Guild Membership!

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To join the WM Woodworkers Guild for FREE until July 1, 2022 and to receive our monthly Newsletters and to post to our Facebook Page, all you have to do is send us the following information:

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How Woodworkers Keep in Touch.

There are three ways Woodworkers can keep in touch with one another during this time of pandemic meeting restrictions:

One: Join the West Michigan Woodworkers Guild (Join Free until 12-31-21)

Two: Receive our Monthly Newsletter (FREE from September through June, annually)
(Send us your contact information, Name, e-mail address, mailing address and phone number to: information@westmichiganwoodworkers.org)

Three: View and post questions, projects, items for sale or desired or general woodworking information to our Facebook Page regularly.
www.facebook.com/groups/wmiwwguild



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