WOOD DESIGNS

Howard Brady

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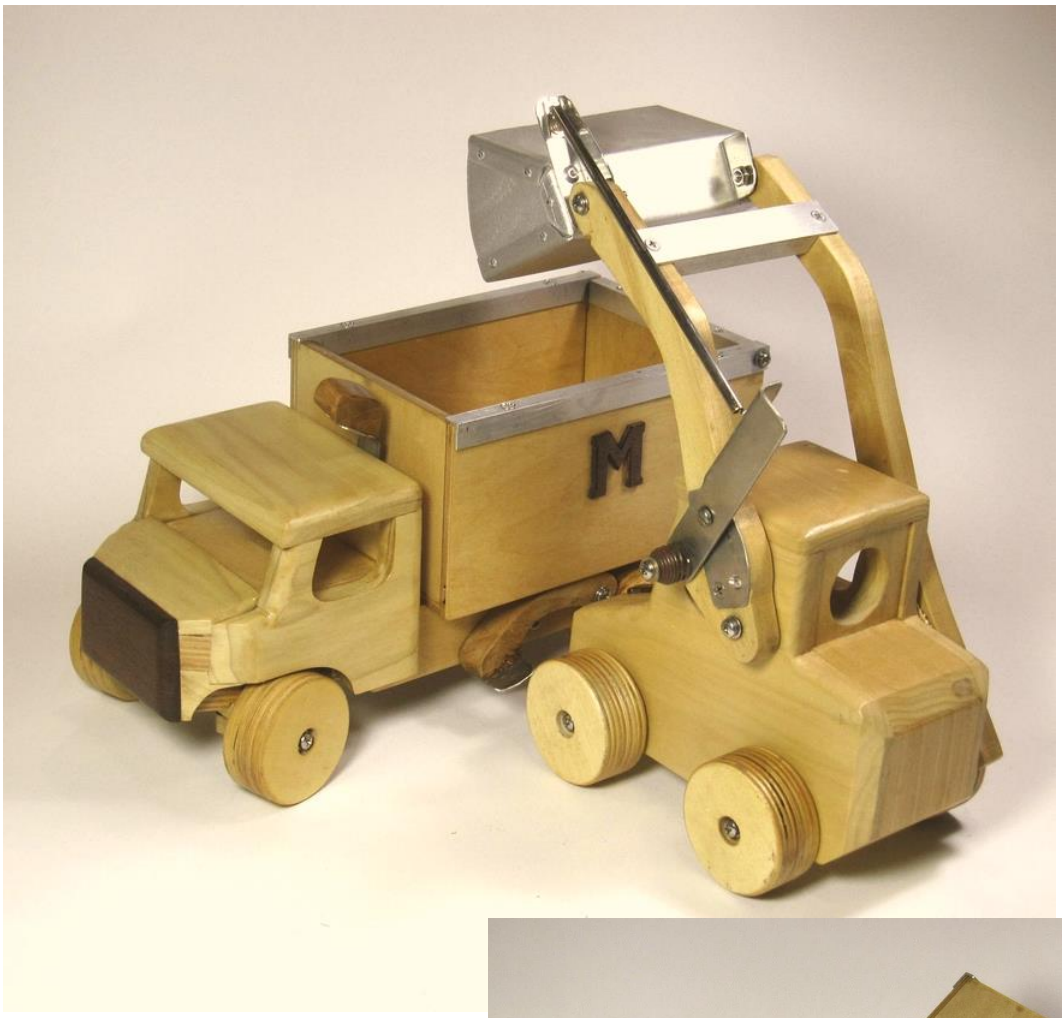
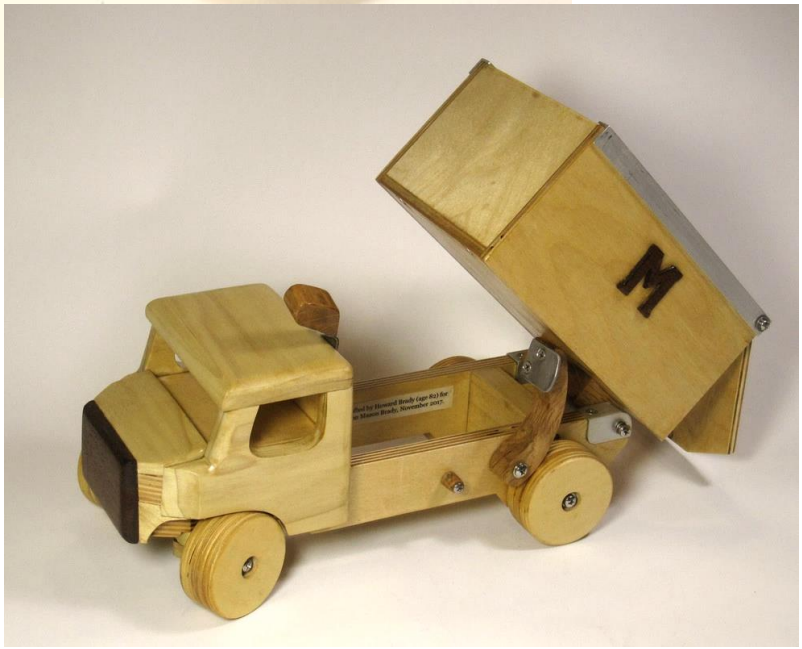
Note:

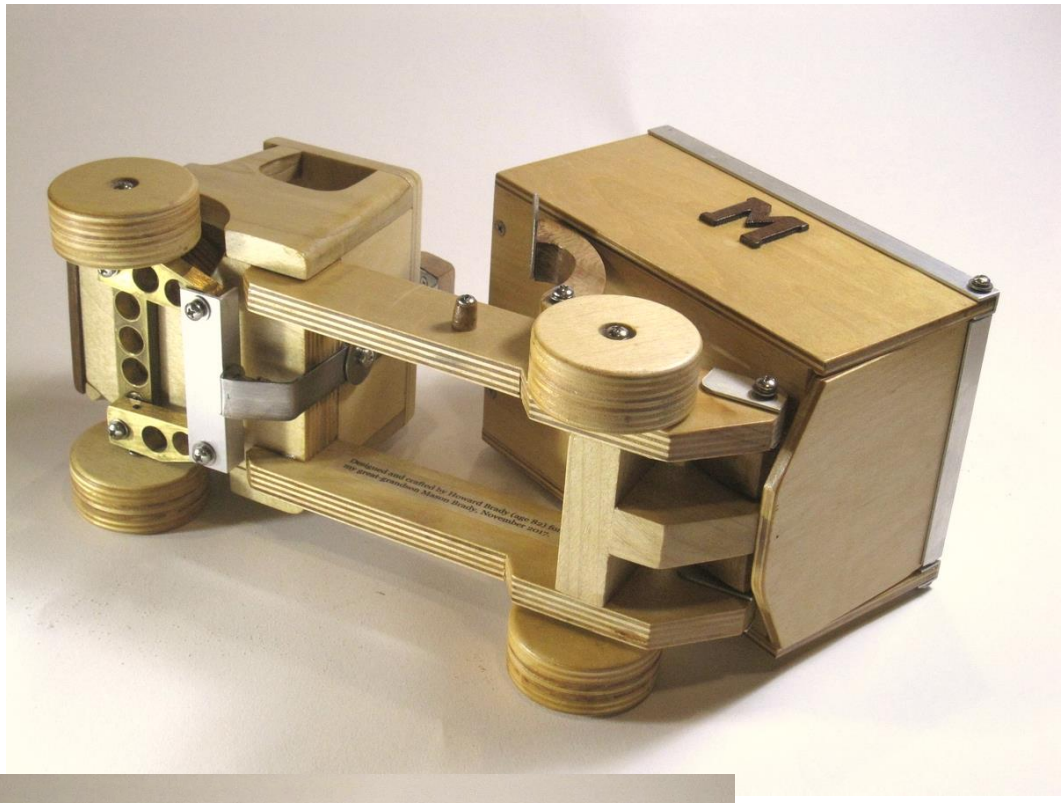
With a few minor exceptions, every item shown in this album was an original, one-of-a-kind design. The design process from concept through crafting to the finished item is a source of incredible satisfaction to me, and a process that extends well beyond woodworking into music composition, and (with my brother) creation of innovative educational materials. A few years before I retired, Dave Campbell, a senior engineer and friend at Skydata where I worked, remarked that as a writer of technical communications documents for satellite communications equipment, I was an "information designer." Those were kind works, and, I hope, accurate. This octogenarian loves designing.

Toys for my great-grandson, Mason:

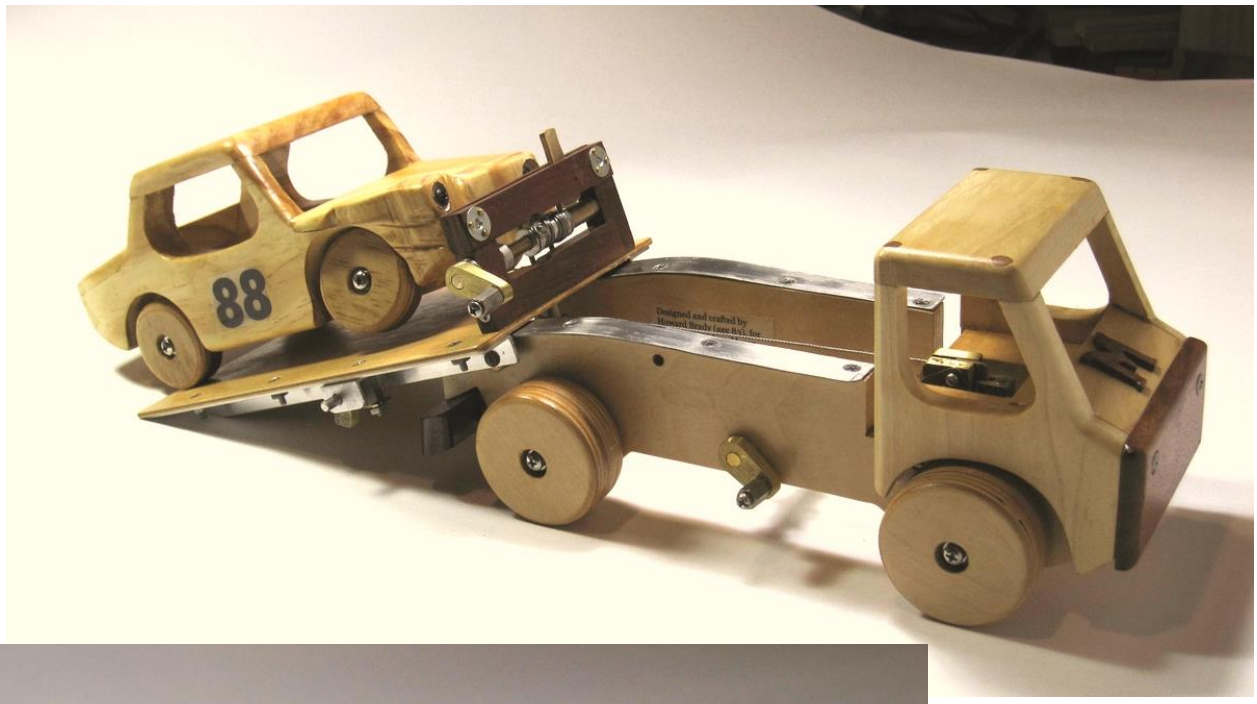


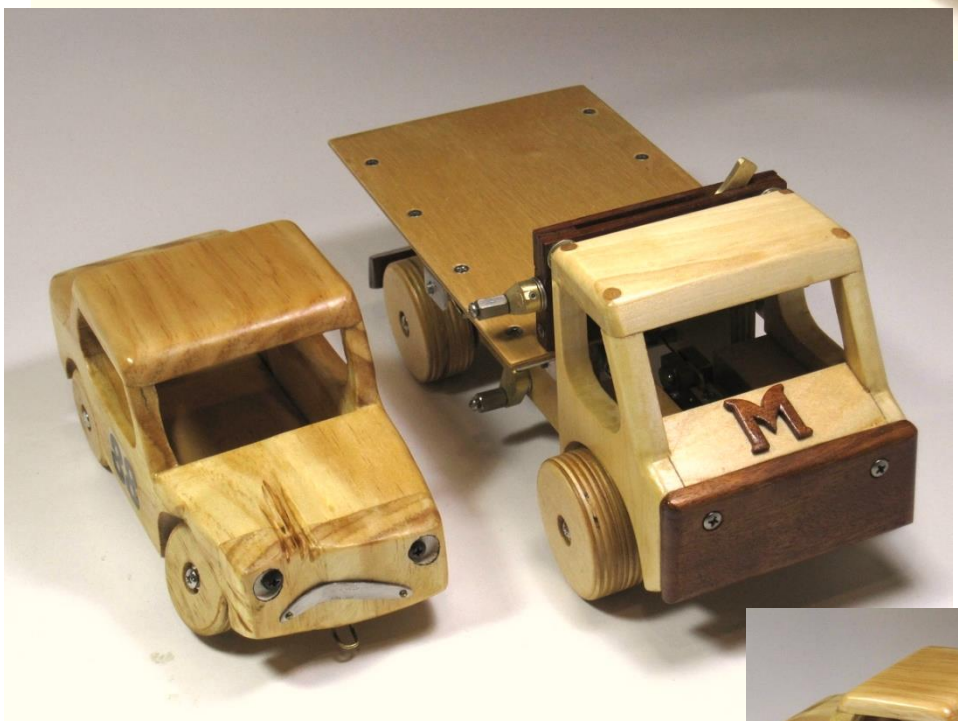


The front-end loader and dump truck were my first major toy designs, built November 2017. Most solid wood is poplar, plywood parts are Baltic birch, dark wood is Indian rosewood, from a local tree destroyed in one of the 2004 hurricanes. Metal parts were aluminum (truck bed edge rails, front end loader bucket and crosspiece), brass (truck steering components) and stainless steel (all fasteners, operating levers). Lever and knob above truck cab controls steering.



Built March 2018: Toy box for Mason's third birthday, May 6th:



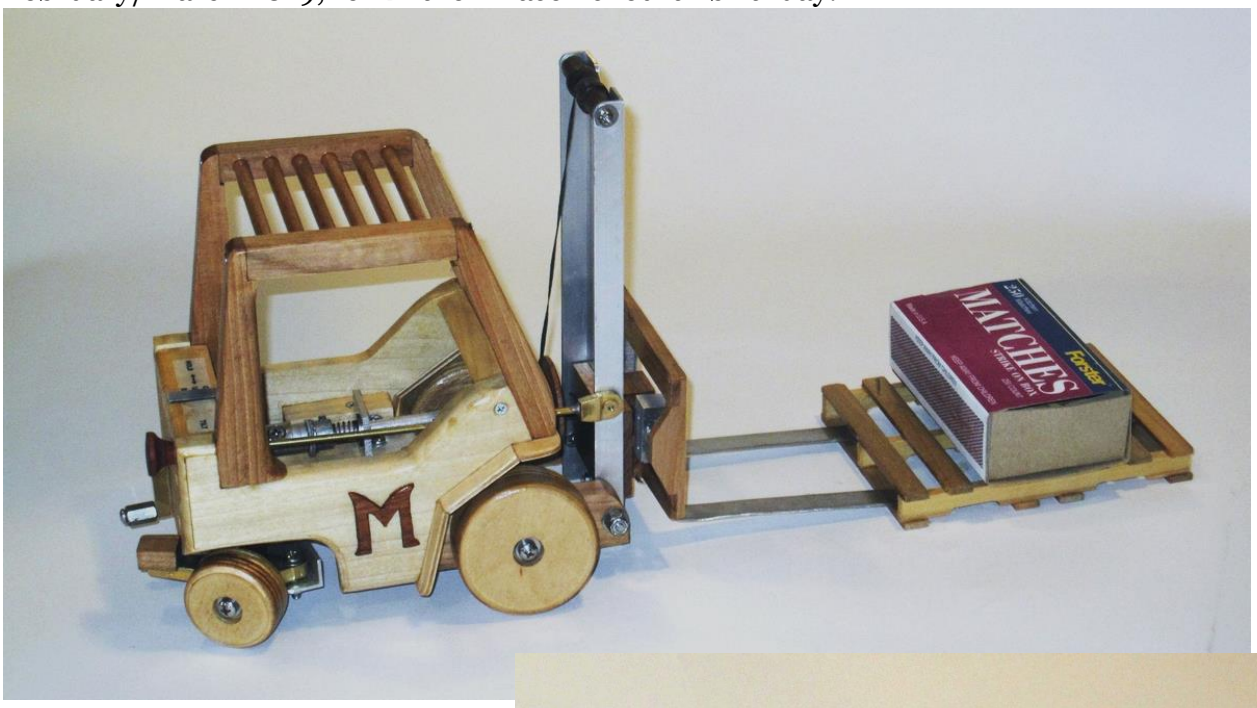


November 2018: Toy flat-bed wrecker and grumpy wrecked race car for Mason's Christmas.

One of Mason's parent's close friends is Tim Daugherty, who races his #88 car (so far NOT wrecked) in figure-8 races at the Antelope Valley Fairgrounds in Southern California. I hope he didn't mind my version.

Cranks operate a winch and position the truck bed. A lock holds the bed in position for transit, and the winch has a locking lever.

February/March 2019; forklift for Mason's fourth birthday.



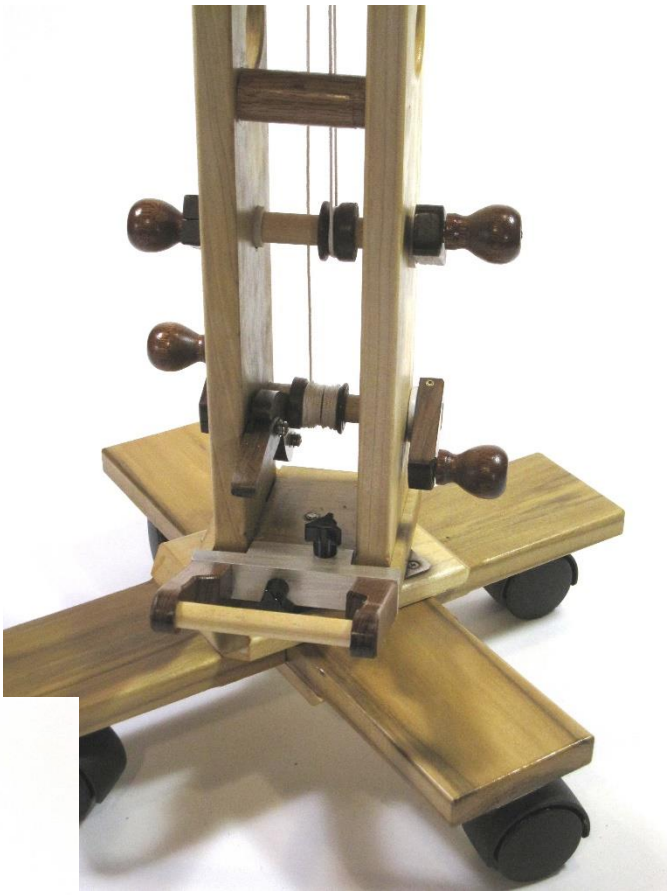
The crank at the rear moves the forks up and down. A friction brake holds the fork in position for transport. The dark knob at the right rear is a two-position fork tilt control. The lever at the lower right controls rear-wheel steering.


Forster
MATCHES
STRIKE ON BOX
250
M


Jib boom
Trolley
Strut
Hook
Fork lifter
Trolley crank
Mason's Tower Crane
Hook brake
Slew handle
Hook crank

Note: The tower crane design is roughly based on a similar toy crane built by Fagus in Germany, but this one is more advanced in its mechanism, to ensure smooth operation. Designed and built December 2017-February 2018: This will be sent to Mason for Christmas 2019. I didn't send it earlier because its operation is rather complex, and I felt he should be older to use it effectively.

◄ I made the hook/pulley assembly from brass with stainless steel fasteners. Below—controls:

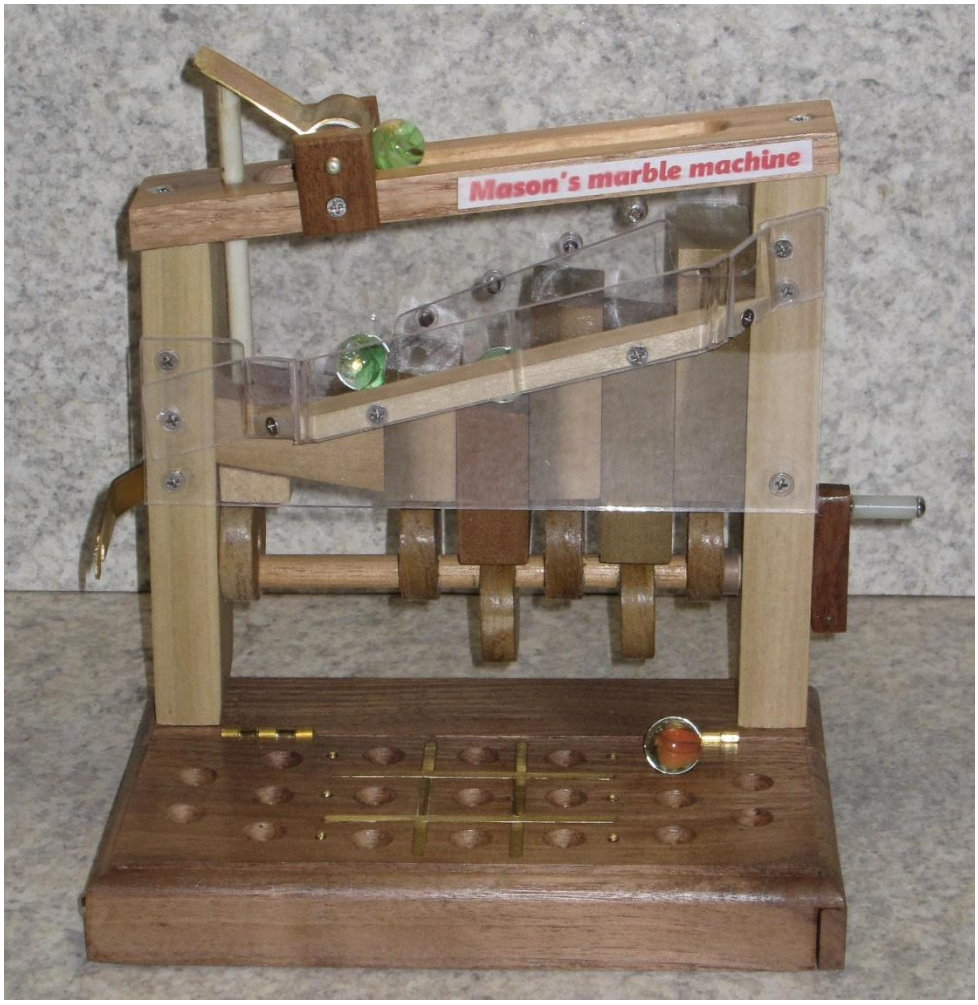


The jib boom arm folds down for shipping and storage. Note triple-pulley assembly at the top of the tower for the control cords.

Tower height (assembled) 32 inches.

December 2019, For Mason's next birthday—A box full of small traditional toys:

January 2020 (for Mason's next Christmas):



Marbles vary considerably in size, at least the ones sold by Walmart. I selected 12 the same size in two different colors to work with this; they're stored in holes in the right end of the folding base. The machine also has (bottom front) a tic-tac-toe board for playing with the marbles.

Gifts for great-granddaughter Genesis:

For Christmas 2017, I made her a three-drawer oak jewel box, 14 inches wide, 6-1/2 inches high, 10 inches deep. Work began shortly after my 82nd birthday, in October.

The applied "G" is black walnut; the porcelain knobs are antique.

The upper drawer is divided into 30 compartments for earrings and other small jewelry; the middle drawer has six compartments; the bottom drawer is undivided. Drawer lining is ultrasuede, synthetic that is better than real suede for this purpose, because it doesn't draw moisture.

Joints between sides and top/bottom in main case are hand-cut dovetails.

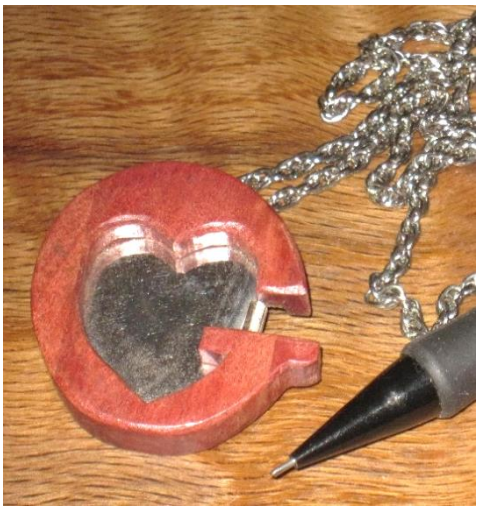
For Genesis' seventh birthday, July 23, 2018, I made her this glass-door shadow box, and included a fairy figurine to begin her collection. The outside is red oak, same as her jewel box. Dimensions are 16 x 20 x 3-1/2 inches.

For Christmas 2018, Grace passed along to Genesis her gold chain and "G" initial (with three small diamonds) that I'd given to Grace many years ago. I made a tiny jewel box from purpleheart wood, with a yellowheart wood initial. These are both South American exotic hardwoods. The lid pivots, and is held closed with an embedded rare-earth magnet in the body and a mild steel button in the lid.

In June 2017, I'd sent each of my great-grandchildren a piggy bank made of Monterey pine. 8-1/2 inches long:

I did the original design in 2006, when I made two other banks and sold them at our church bazaar, along with wooden boxes, kazoos, and other wooden gift items. I made two more in 2022, one for my newest ggd, Adaline Victoria.

For Christmas 2019, I made a pendant for Genesis, of pink ivory wood (Africa) and sterling silver:



Gadgets and Stuff:

Not long after Grace and I were married, a wheelchair-bound man in the church we were then attending gave us a stepstool with a handle. He'd made it of pine shelving, and called it a "peewee lifter." (It was supposed to be a bathroom aid for young boys.) We used it as a general-purpose stepstool for years, until it fell apart. It was so useful, I had to make a replacement immediately. In 2013 I made similar stools for family members, and again in (I think) 2017 I made six more as gifts for friends, and several more later. They become essential to people that have them, as they keep telling me. The handle makes the difference (and even contributes to safety).

I modified the original design considerably, with stronger joints, but kept the critical dimensions; step height 11 inches, handle height 32 inches. Monterey pine for light weight.

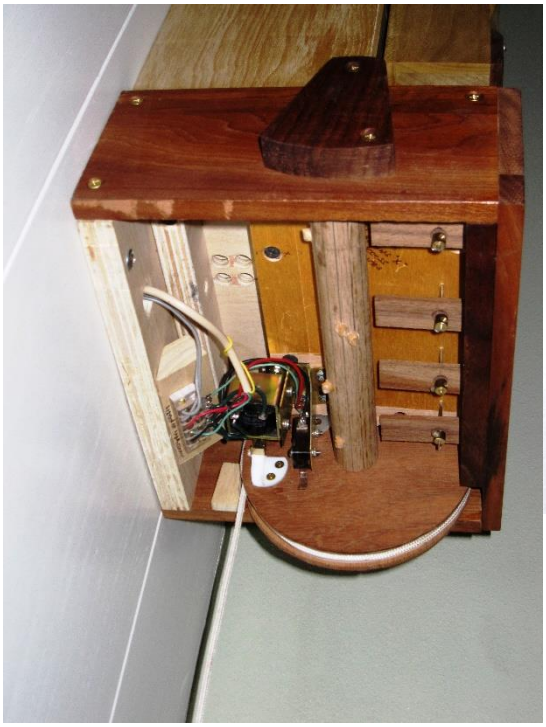
Two-step version for Mark and Shalerie, to use with their backyard pool. Mark painted it for weather resistance.

Doorgan:

I've always been fascinated with pipe organs, and decided (spring of 2013) to try to create one, of sorts. I was inspired by the delightful Gastown steam clock in Vancouver, B.C., which Mark and Shalerie had visited during our trip to Alaska (and their wedding) the previous year.

When I started, I thought the odds of success were somewhat low, but it all worked out. A weighted falling piston in the rectangular chamber at the rear compresses air to operate the organ. The valves for the pipes are actuated by pins on a drum rotated by the cord attached to the piston. Overall height—26 inches. Poplar and Indian rosewood.

When the doorbell button is pushed, the



"doorgan" plays eight notes—the second half of the Westminster tune. Reset is manual (pulling the cord at the bottom), but if not reset, a transfer switch connects the original doorbell.

Valentine music box:

(See additional photo on cover of album.) I made this for Grace for Valentine's day 2014. This was inspired by a music box movement that I got somewhere that played the Carpenter's hit song "Close to You." The words begin, "Why do birds suddenly appear, any time you are near? Just like me, they want to be close to you." I made the bird from poplar whitewood, the case from red oak, and the heart cutout from some of that Indian rosewood. The mechanism takes advantage of a rotating large gear on the movement, rotating a rod via a superglue-hardened beveled leather washer that runs against the gear and rotates the rod.

In March 2019 I made an additional music box for Genesis' 8th birthday, similar to the one for Grace. The bird is copied from a glass bird that caps a Lalique perfume bottle we own. The label on the bottom of the box:

Designed and crafted by Howard L. Brady (83) for my great-granddaughter, Genesis, March 2019, as a present for her eighth birthday, July 23rd. The tune is "Dominique," by Belgian nun "Sœur Sourire" ("Sister Smile"). Main case is bloodwood (*Brosimum rubescens*); heart is pink ivory (*Berchemia zeyheri*) a rare wood from South Africa. Both these woods are extremely dense, heavy and close-grained. The bird is carved from poplar sapwood (*Liriodendron tulipifera*).

I made another for the new sister of Genesis, Adaline Victoria, in November, 2020, for Adaline's first Christmas. The music box plays Brahms' Lullaby:

Jewelry boxes:

March/April 2001: For Grace's birthday. 24 x 9-1/4 x 10 deep, 100 small compartments for earrings and small items (top four drawers). Drawer fronts are wormy chestnut. All joints in case and drawers are hand-cut dovetails.

Wall-mounted necklace box, built about 2002. Chestnut heartwood. 8 x 16 x 4-3/4.

For Christmas gifts in 2006, I made five jewel boxes similar to that made for Genesis (p. 8), but with drawer handles routed into the drawer fronts. The two top boxes were made from Indian rosewood, from a local tree destroyed by one of the 2004 hurricanes. The bottom three were made of black walnut salvaged from an old parlor organ case dating from around the turn of the previous century.

In May/June of 2005, I made the one below for my stuff (mostly not jewelry), where I first tried the routed handles. Drawer fronts are purpleheart given me by Les Alexander, retired master woodworker, outer case is red oak. Photo below was before I lined the drawers with ultrasuede.

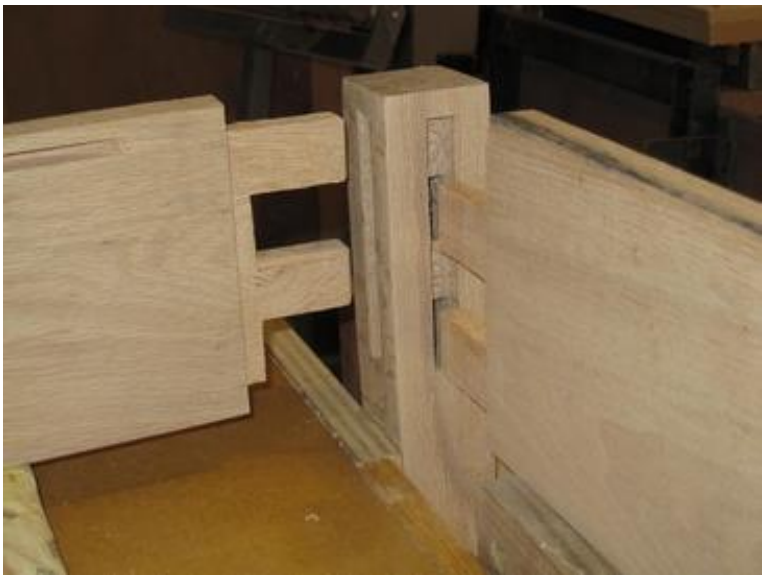
I've built two of these spoon cabinets, one for Grace, one for Grace's Bunco friend Connie. Many of the spoons were collected by Grace's mother, Helen. I also built a somewhat larger, deeper version of this cabinet to hold my collection of antique wood planes, and three similar cabinets for daughter-in-law Shalerie, for her collection of shot glasses.

Arts and Crafts Style Library Table

Designed by and built in the home workshop of Howard L. Brady, 1836 Pinewood Road, Melbourne, Florida; October-November 2013. The main boards in the top are from a curly red oak one-by-twelve with extreme figure I found at Home Depot many years earlier, probably about 1990. I decided I'd better use that board while I was still able, since I turned 78 years old in October and arthritis is becoming a real limitation.

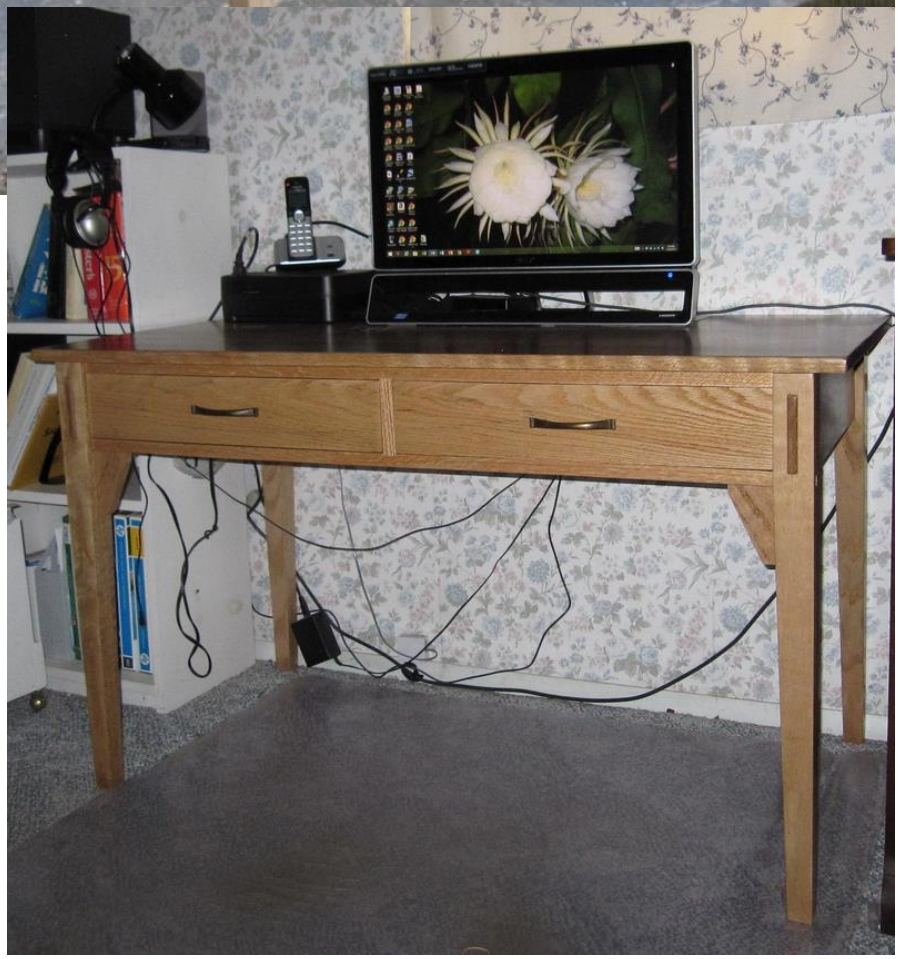
(Above is label in left drawer)

Interlocked mortise and tenon joint at rear corner of apron. The solid oak and the exposed through-tenons are typical of Arts and Crafts furniture (e.g. Stickley Brothers) from a century ago, which was a reaction to the over-ornateness of Victorian designs.



Below: Components ready for assembly:

I hid the ugly wires later (4/14) after seeing this photo:



Curly red oak with this much figure is a rarity. The technical term for the three-dimensional appearance is “chatoyance.”

Other Furniture:

◄Around 1979 I made four teak dining room chairs. If I were making them now, they would be constructed with sturdier joints (I used dowels), but they turned out surprisingly comfortable, and survived for 40 years so far.

I built the clock in 1993, after a Shaker design. The quartz movement is really precise—I only need to reset it twice a year for the DST-EST changes. 19-1/2 inches high, not including hanger tab.▼

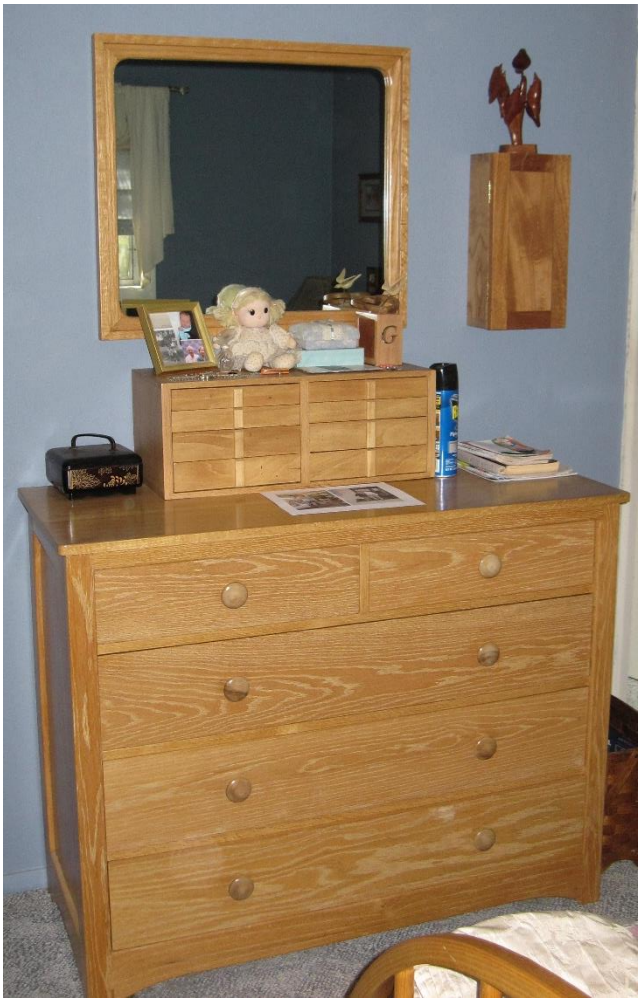
Blanket chest, Monterey pine, with lots of hand-cut dovetails. 17 inches high, 16 x 32. ▼

Living room furniture was built, I believe, in the middle and late 1990s. I neglected to label them with dates. The coffee table has drawers for my music. All solid red oak.

Dimensions (inches): Stereo cabinet 41 w, 34 h, 16-1/2 d

Coffee table: 42 w, 16 h, 26 d

Side table, with half-lapped grid shelf: 19 square, 19 high to bottom of glass (30 in. diameter)



The bedroom furniture was built starting in late 1991, and completed in spring 1993. All solid red oak, except panel inserts on sides are oak plywood. Second identical bedside table not shown.

The mirror over Grace's dresser was done about that same time. Note the rounded interior corners on the frame.
Dimensions (inches):

Grace's chest of drawers: 37 high x 46 x 20

Howard's chest of drawers: 45 high x 38 x 20

Bedside tables: 23 high x 23 x 16-1/2

Valet stand 40 high (oak with black lacquer)

Barstool for my daughter Londa:

She wanted a single barstool, and gave me the height (25 inches) and seat dimensions (12 x 18 inches). I constructed it from wood I had on hand. The top is hard and heavy, araracanga (I think), legs are teak, the rungs are hard maple. Built February/March 2020. Joints between top boards are reinforced with inserted wood biscuits, plus six short stainless-steel straps underneath. Finished with wipe-on polyurethane.

Tools

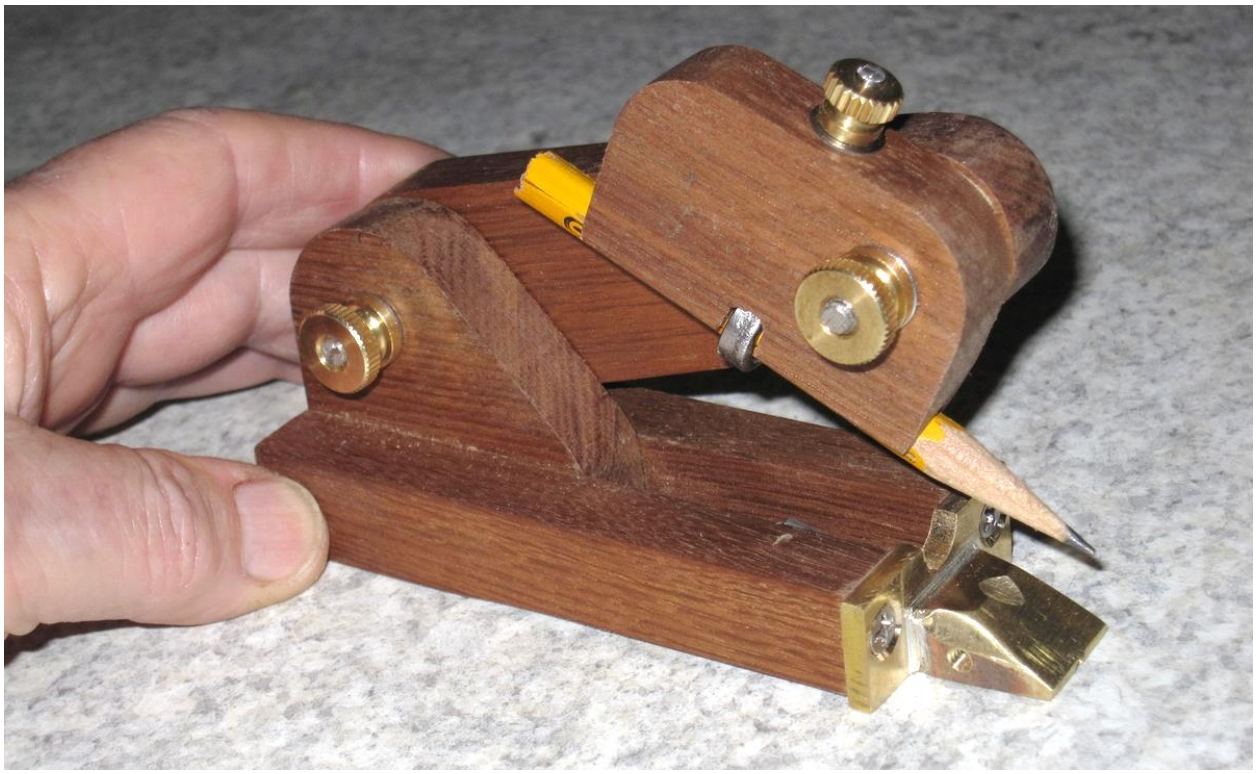
Building woodworking tools is another chance to use exotic hardwoods and some ingenuity.

Top to bottom, left to right:

- Indian rosewood/stainless steel shoulder plane;
- mortise plane (mainly used to cut mortises for hinges), live oak/stainless steel, Indian rosewood knob, crafted October 2022;
- eucalyptus spokeshave;
- cherry chisel plane;
- small router plane with camphor wood knobs/Baltic birch ply & brass body;
- small (palm) block plane, Indian rosewood/brass and stainless steel.

- Scraper plane used to remove thin shavings from contrary woods, eucalyptus;
- Left and right pair of side rabbet planes, Indian rosewood;
- Travisher (used to scoop out depressions), poplar;
- Round-bottom plane (one-inch radius), cattley guava.

My version of a commercial tool called an “Accuscribe.” Black walnut, brass, stainless steel, piano wire retractable point. Allen wrench for point-locking setscrew is inserted in the end toward my hand, held in place by a neodymium magnet. Works as a height or width marker, contour-following scribing marker, compass (with point extended).



Designed and built July 2017, working in the shop in early mornings to avoid summer heat. Below: Drawknife, built April 2020.

Grooving Plane:

(April 2019) Cuts a 1/8-inch groove for glass or thin plywood. Body is ipé, with hard maple insert and knob. Working parts are brass, O-1 steel blade. Adjustable mouth, by loosening front knob to set position of front brass plate.

Quick and easy to use; the groove in the poplar board below was cut in nine strokes.

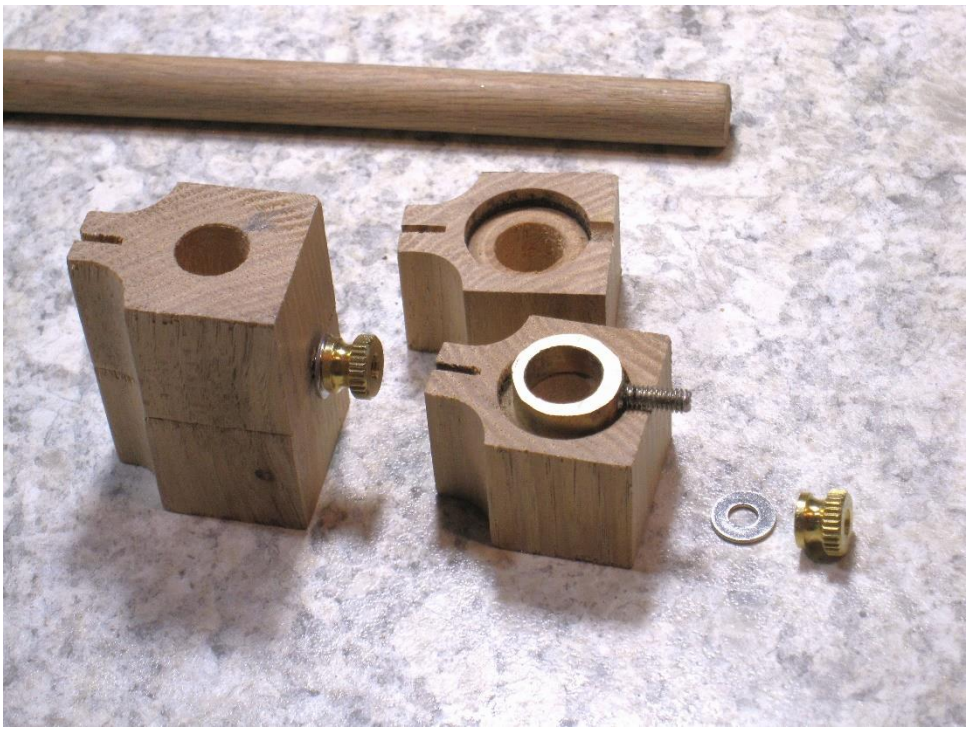
More shop-made tools: Measurement and marking—

A – height gauge; B – medium try square; C – small try square; D – large inside/outside calipers; E – mortise gauge; F & G – scribing knives; H – dovetail layout tool; I – brass hammer; J – small center marker; K – clamp stop for 12-inch scale; L – miter square; M – circle center marker; N – transfer square; O – small scribing gauge; P – clamp stop for 6-inch scale; Q – large (panel) scribing gauge

Some other tools:

A – coping saw; B – flex strip sander; C-C-C-C – carving knives; D – knife box; E – T-square; F – scratch awl, from kit by Rockler. I made several of these.

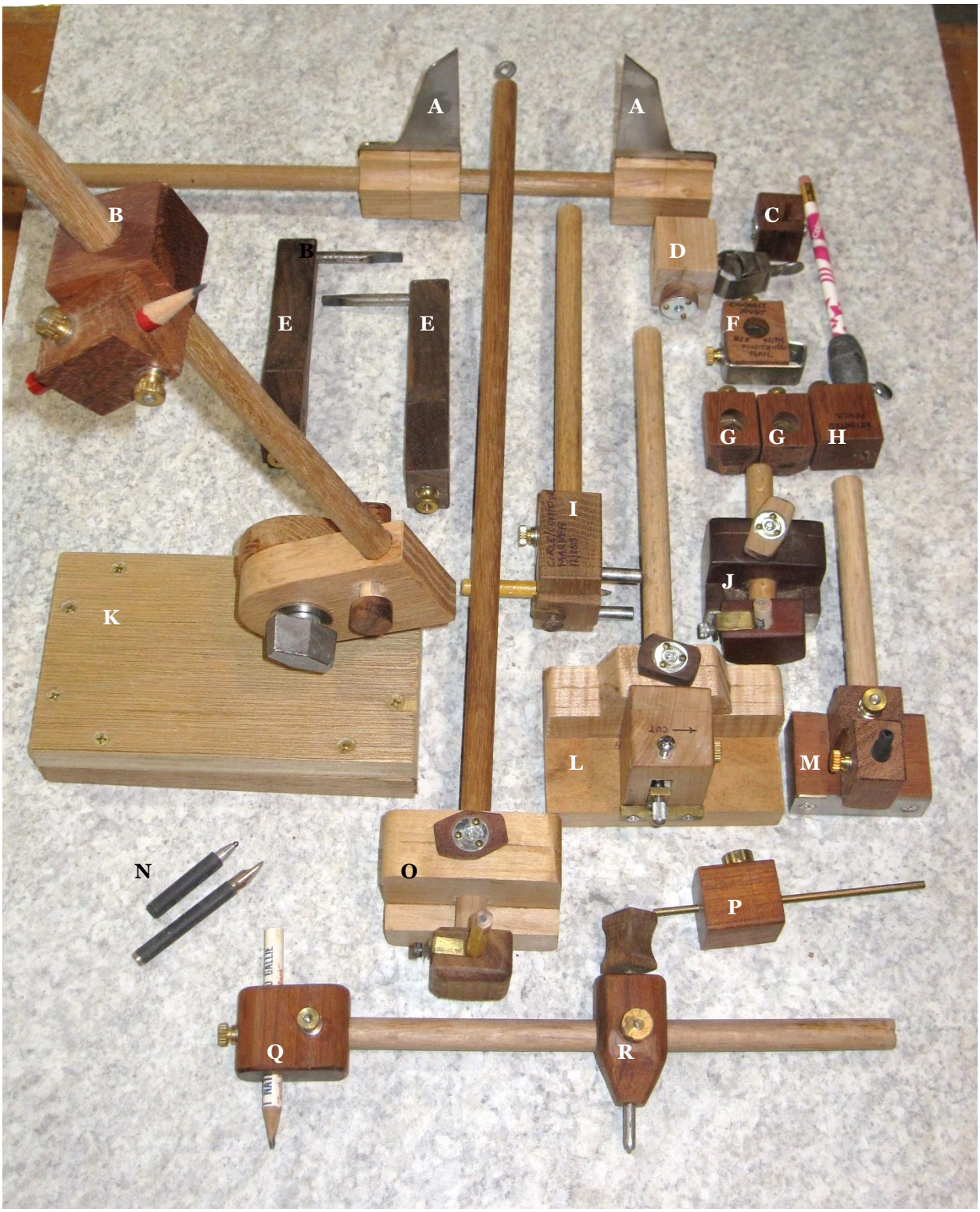
Brass ring tools:



About 2018, it occurred to me that I could make marking and layout tools that all used ½-inch dowels as backbones, with the tools clamped to the dowel using rings in tension. This would avoid scarring of the dowel by the clamp. I have since made a large family of tools, many with interchangeable parts, using brass clamp rings. (The ring clamping system also works to clamp pencils or scribe tips, with appropriate-sized ring holes.) I made the rings from ¼-inch brass, with stainless-steel screws threaded and soft-soldered into the rings. The rings are embedded (with clearance for motion) into the wooden blocks, and the block and ring are drilled after glue-up assembly with a 33/64th drill bit. This is sufficiently oversize to allow slip fit for most ½-inch oak dowels.

Opposite:

A-A – Caliper points; B – tilting pencil/scribe holder; C – coupling for two dowels; D – dowel-end holder for large markers; E-E – blind caliper points. The steel points are held by magnets, and can swing away when removed from blind location; F – compass pivot for use with finishing nail at circle center; G-G – sliding points for ellipse marking, used with H – weighted pencil holder; I – marker that can ride along edge of circle, marking interior concentric circles; J – small pencil marking gauge; K – weighted stand for vertical or angled dowel; L – cutting gauge, uses Xacto blade; M – medium gauge with micrometer adjustment added to block; N – scribing points (carbide and steel) that can be used in place of pencils in all markers; O – long (panel) marking gauge; P – depth gauge; Q – dowel-end pencil holder; R – compass pivot point with free-rotating top knob held by magnet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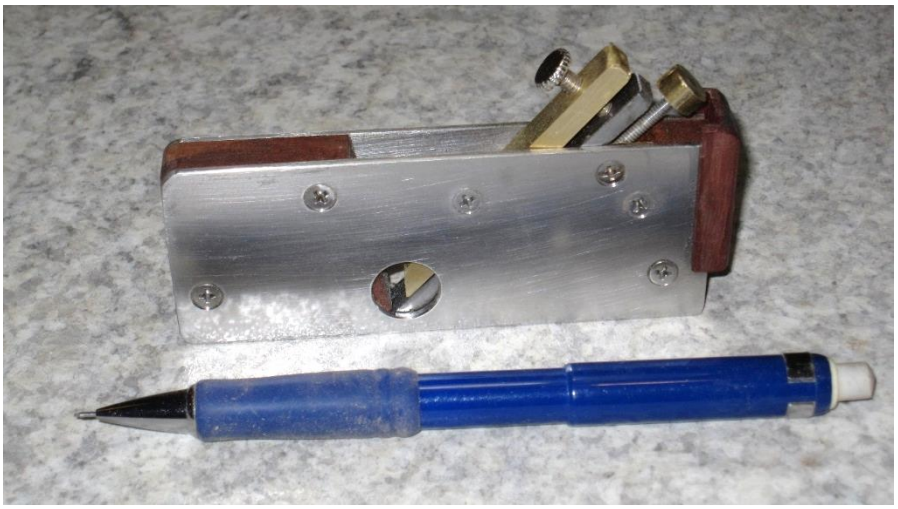
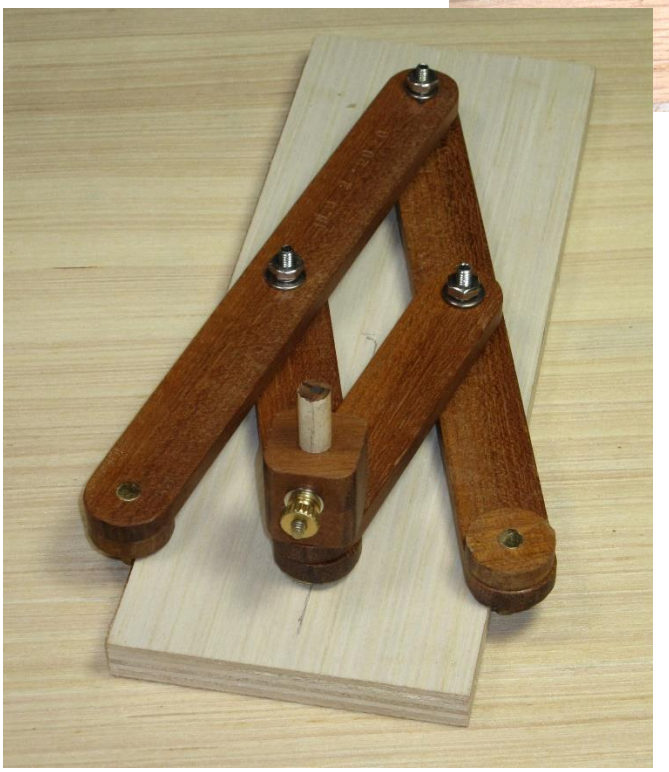
Corner-Rounding Plane

January 2020 (Completed 1/18)—I saw a plane like this advertised (for a hefty price), and decided to try building one. It breaks sharp 90° edges, cutting a tiny radius. In the past, I did what this plane does this when I sanded, and I really don't need this tool, but it was fun to build and turned out well, with screw adjustment of the depth of cut. I may make a second blade to use with this plane body, with a straight edge to cut an adjustable 45° chamfer. Wood—South American "bloodwood" (I think). 1/16-inch stainless steel side plates.





Centerline Marker

Completed 2/9/2020: It's surprising how often I need to mark the centerline on a piece of wood. This pantograph-type device does it quickly. It required a great deal of precision in wood machining, and some deep thought about how to position and hold the pencil at the center of rotation of the front center pivot. Confession—This is the third one I made before I got everything right. This works for boards up to about 14 inches wide. Wood is ipé, I think, or some other similar dense, heavy South American hardwood. A smaller one for narrow boards: p. 32.

Other wooden goodies:

Police display case for nephew Jonathon Brady, April 2014. Oak stained mahogany.

Pantry potato box for daughter Londa. Red oak & plywood.

Tall hall tree for Mark's hats. ►

Display case for Mark, 16 x 20 inches; miniature medieval weapons made by family friend Hugh Barbour (d. 1994). The weapons were made in early 1960s. Mark has a collection of brass toy cannons also made by Hugh.

Christmas post figures for church bazaar, 2006. The birdhouses (behind figures) were painted by Grace.

Tilting bed trays (built seven total), based on an old commercially-made tray owned by Lincoln Richards, that he found in a house he bought in NYC. The quilt was made by Grace—her original design.

Box built for Norwegian friend, artist and sculptor Siri Anker Aurdal, April/May 2019. Sides are East Indian rosewood, top and bottom are black walnut, plaque and corner gussets are hard maple.

My nephew, Brian Drew Brady, while living in Yuma, AZ, bought a section of old brass-front post office boxes that had been used as a movie prop. He asked me to make a cabinet. Red oak, stained pecan. Designed/crafted December 2020.