

Benjamin Seaton's TOOL CHEST

Our redesign of this historic tool chest brings it up to date for today's power tools.



THIS 18TH CENTURY ENGLISH TOOL CHEST is one of the more interesting mysteries in the history of woodworking. Unlike other tool chests of its day, this chest and its tools — which are now in the Guildhall Museum in Rochester, England — went virtually unused and are in the same condition as when they were new in 1796.

How did this chest survive? Why didn't Benjamin Seaton, the maker of the chest, ever use his tools? Was he planning to come to the New World to begin a cabinetmaking business? While historical records cannot fully answer these questions, they do tell an interesting tale of a would-be woodworker.

Benjamin was born in 1775, the son of a cabinetmaker and church elder. When Benjamin turned 21, his father bought him a complete and very expensive set of woodworking tools, and Benjamin began building this chest to house them on Jan. 1, 1797. He finished it April 15. Three months later, Benjamin made an inventory of the chest's contents (which survives to this day). The Guildhall Museum suggests that Benjamin was preparing to emigrate to America. However, Benjamin remained in Chatham and tended to his father's business after he died in 1811.

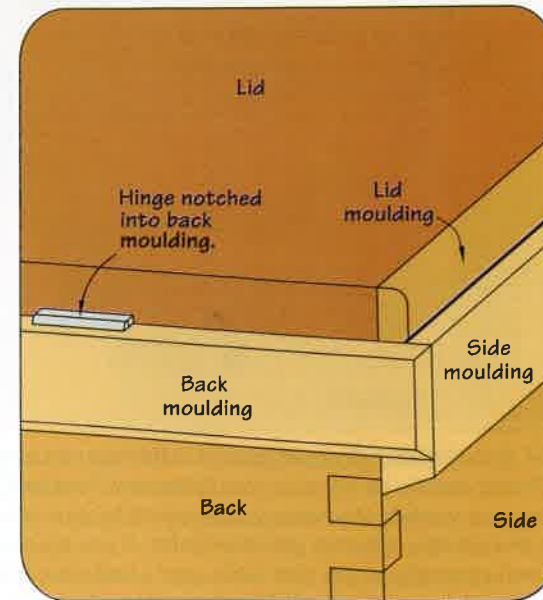
Benjamin died in 1830, and his will describes him as a

cabinetmaker, upholsterer, auctioneer and undertaker. His chest remained in his family, with the tools intact, until it was given to the museum in 1910.

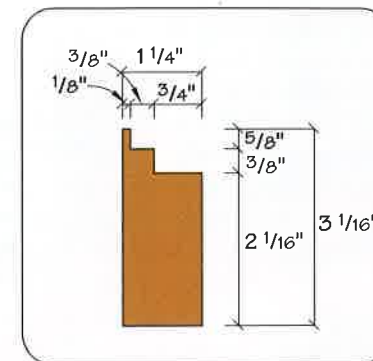
A few years ago the Tool and Trades History Society in England published a book, "The Tool Chest of Benjamin Seaton," which is now available in the United States (see "Want to Know More?" for information on ordering the book). After reading the book, I became convinced that this tool chest would be great for a set of 20th century tools — with a few modifications. So I built one. And it didn't take three-and-a-half months.

The large outer case holds many of my modern hand-held power tools: a jigsaw, drill, router, circular saw, random-orbit sander, belt sander and biscuit joiner (with room to spare). The removable case (called a till) with its lids and drawers holds just about every hand tool a well-equipped shop needs. If I wanted to go overseas and set up a cabinet shop, I could load the chest on a steamer and go. Instead, the large case now sits on the floor next to my bench, protecting my power tools until I need them. The till sits on top of my bench, keeping my hand tools at arm's length. It's a perfect system for a small shop that's low on both space and built-in cabinets.

Diagrams



Detail of back corner of case



Detail of till runner

Schedule of Materials: Seaton's Case			
No.	Item	Dimensions T W L	Material
2	Sides	7/8" x 23 1/4" x 23 1/2"	Pine
2	Front & back	7/8" x 23 1/4" x 35 1/2"	Pine
1	Top	7/8" x 23 1/2" x 35 1/2"	Pine
1	Bottom	7/8" x 22 5/8" x 34 5/8"	Pine
2	Cleats	1 1/2" x 4 3/4" x 14 3/4"	Pine
2	Runners	1 1/4" x 3 1/16" x 21 3/4"	Pine
	Bottom moulding	11' of 3/4" x 2 5/8" moulding	
	Top moulding	11' of 7/8" x 2 1/2" moulding	
	Lid moulding	11' of 1/2" x 1 3/8" moulding	

Schedule of Materials: Seaton's Tool Till			
No.	Item	Dimensions T W L	Material
2	Sides	3/4" x 11" x 11"	Veneered pine
1	Back	3/4" x 11" x 32 3/4"	Veneered pine
1	Top	3/4" x 11" x 33 1/2"	Walnut
1	Bottom	3/4" x 10 5/8" x 32 3/4"	Pine
1	Front	3/4" x 2 1/2" x 32"	Veneered pine
3	Horz. dividers	3/8" x 10 5/8" x 32 3/4"	Pine
2	Vert. dividers, top	3/8" x 2 1/8" x 5"	Pine
2	Vert. dividers, mid	3/8" x 2 3/8" x 5"	Pine
2	Vert. dividers, bot	3/8" x 3 5/8" x 5"	Pine

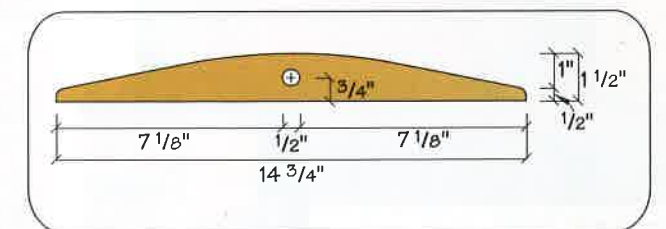
NOTE: The Schedule of Materials for the drawers is in the PullOut Plans, as is the construction drawing for the tool till.

SUPPLIES: Lee Valley Tools 800-871-8158. Chest lock \$10.95, item# 12K04.01 • Case hinges \$20.25 a pair, item# 00D03.04 • Till hinges \$17.50 a pair, item# 00D06.02 • Flush ring pull \$12.50, item# 00L02.02

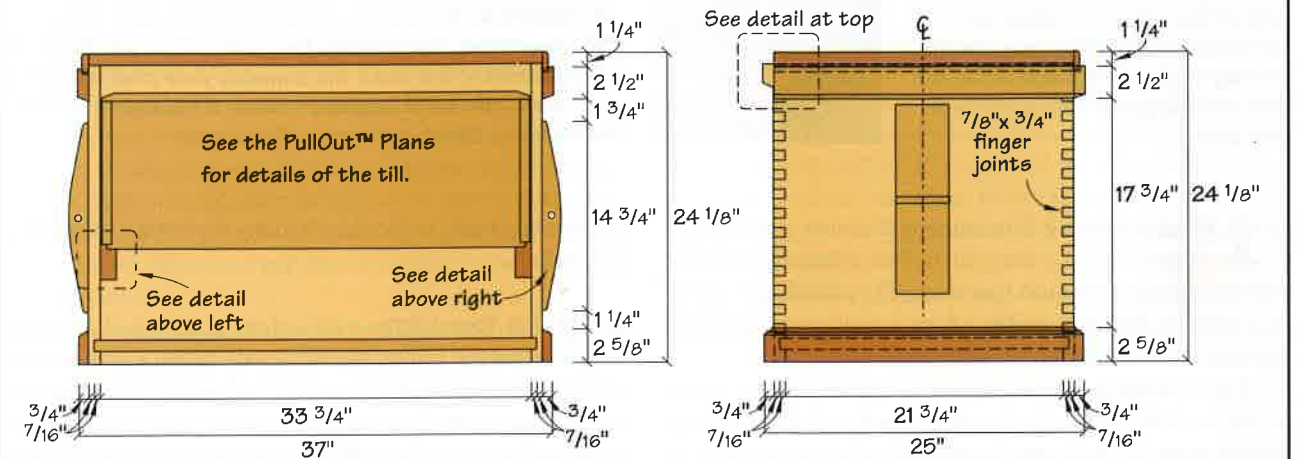


Are we on target?

To see more projects like this in future issues, circle "P3" on the postage-paid card in the Resource Directory.

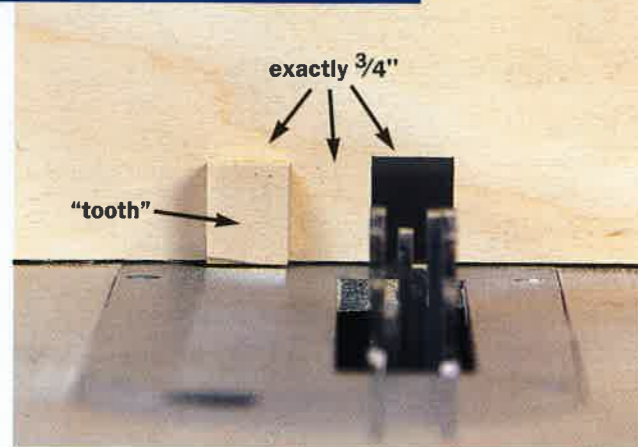


Detail of cleat



Elevation (Cut away to show detail)

Profile



1 FINGER JOINT JIG • The trick to finger joints is to make sure the width of your dado stack is precisely the same as the space between the dado stack and the stop, which I'll call the "tooth" in this article. The tooth should also be exactly as wide as your dado stack. Begin by screwing a large piece of plywood (8" high; about 25" long) to your table saw's miter gauge. Set up your dado stack to the desired dimension and run your jig through the saw. Take the jig off the saw and attach the tooth to the jig with glue and screws. A good bond is essential.



3 STOP THE DUST • First cut the roundover on the small piece of moulding for the lid (top). Then rabbet the larger moulding and cut the chamfer on the bottom. Nestle the big moulding in place under the lid's moulding and nail or screw it into place.

STEP 1 Finger Joints • Constructing the outer case is pretty simple. Finger joints join the four sides; the bottom is captured by a groove in all four sides. The moulding is nailed or screwed to the exterior. The lid has a small piece of moulding attached to it that acts as a dust seal.

Begin building the case by gluing up the 7/8"-thick panels for the sides, top and bottom (Benjamin was lucky enough to have some 24" wide pine boards and didn't have to glue up his sides). Now make the jig to cut your 3/4" x 7/8" deep finger joints. Take your time with the jig because a little preci-



2 CUT THE JOINTS • It might seem a little scary to hold 39" long boards on edge on your table saw. Feel free to clamp your work to the fence you screwed to your miter gauge, though this will slow you down a bit. If you proceed slowly and carefully — and your table saw's table is sufficiently waxed — you shouldn't have a problem. Once you cut the first space, pick the board up and place that space over the tooth in your jig. Then run the work through the saw again.



4 VERTICAL DIVIDERS • Add these after your till is assembled. Try to make the grain run up and down on these pieces to minimize the chances your case will break open when the wood begins to move. A little glue on the front ends of these dividers is all you need.

sion and patience will result in joints that won't split or beg for putty.

STEP 2 Cut Your Joints • Now that the jig is built, it's time to cut the joints. The trick with finger joints is to get all of the "fingers" and "spaces" to line up and mate correctly. If one board begins with a finger, then its mate must begin with a space. To make a board that begins with a finger, place it on end on your table saw against the tooth on the jig and make your cut. To begin a board with a space, place a

WOOD WORDS (wood'wurds) n.

Swage: Swaging your hinges is done by compressing the two leaves, eliminating the space between them, usually by putting the hinge in a metal vise.

Ogee moulding: Any moulding that has a serpentine — or S-shaped — profile.

Gel stain: A stain that has the consistency of peanut butter. On woods that tend to blotch, such as pine, gel stains are great because they aren't absorbed into the wood as much as regular stain.



5 MORTISE YOUR HINGES • Using a straight bit in a router or trimmer is a great way to cut the mortises for your hinges. You just have to be careful not to go over the edge you marked, which is an easy mistake to make. The easiest way to prevent this problem is to pare the edges with a chisel or a knife. When your bit gets near the pared edge it shears away, leaving a square edge.

spacer between the dado stack and tooth. I used some scrap finger joints that I ran as a test with this jig; these worked great. Then place your board on end against this spacer and run it through the saw. Remove the spacer and cut the remainder of the joints on that edge.

Now cut the 7/16" deep by 7/8" wide grooves in the sides that hold the bottom in place. The grooves should be 1" up from the bottom edge. You can stop these grooves before you cut into your finger joints and finish the grooves with a chisel. Or you can just run these grooves right through your joints — after all, they will be covered by the moulding on the outside of the case.

Assemble the case using glue on the finger joints. Allow the bottom to float in its groove. Clean off as much glue squeeze-out as you can. Clamp and allow your case to dry.

Begin making the moulding by routing a small ogee profile on the bottom moulding pieces. Miter the pieces, then attach them with nails or screws (Benjamin used screws that he recessed into the wood and then covered with putty).

STEP 3 Dust Seal • Dust and grime has never been good for tools, and 18th century cabinetmakers went to extreme lengths to keep their tools separated from dirt. Benjamin used a simple but effective seal. Begin making the seal by cutting the lid to size and mortising the hinges into the case and lid.

Now rout a 1/4" roundover on the three pieces of moulding for the lid. Miter and nail this moulding to the front and sides of the lid.

The second piece of moulding adds another layer of protection. Begin by cutting a 9/16" by 1/2" rabbet into one edge of the moulding. You also could use a roundnose bit in a router to cut a profile that will nest with the roundover on the lid's moulding. Next cut a 25-degree bevel on the bottom of the four pieces of moulding. Miter three pieces of moulding and nail or screw them to the front and sides of the case.

Do not miter the back edges of the moulding that goes on the sides. Cut these flush with the case. Now make the moulding for the back. This moulding is different because it helps seal the back of the case and acts as a stop for the lid. It's pretty ingenious. Take a piece of moulding back to the table saw and rip off the rabbet. Now attach this moulding to the back, flush to the top edge of the case. You'll have to cut notches in the moulding for the barrels of the three hinges that hold the lid. Screw and glue this moulding to the back.

Now cut the cleats for the sides that hold the rope handles. Use a band saw to cut them to rough shape and sand them down. Then drill a 1/2" hole through the center for the rope. Attach the cleats with screws.

If you want to add a lock to your chest, now is the best time. I used a small full-mortise chest lock. You can now add the dividers for your power tools at the bottom of the case. Fill all your screw holes with water putty and finish sand the exterior of the case to 120 grit. Paint the exterior blue. Now it's time to turn your attention to the till.

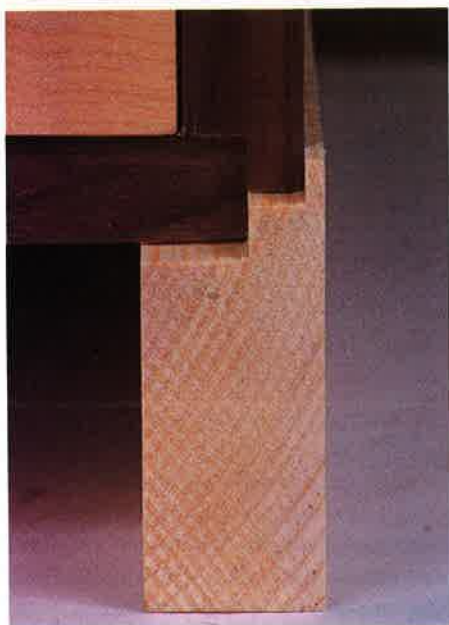
STEP 4 Build the Till • The till is a box that's divided into four "stories" by wide 3/8"-thick pine boards that are dadoed into the back and sides. You access the top level by opening the lid of the box. The bottom three levels are for nine drawers. I wanted my till to weigh as little as possible, so I made the case from pine veneered with walnut (have lots of clamps). The top is solid walnut; the bottom is plain pine.

Begin building the till by cutting the boards to size and then cutting 3/8" x 3/4" rabbets in the sides for the back. Now cut 3/8" x 3/8" rabbets in the sides and back to capture the 3/4" bottom. The bottom sticks out of the case 3/8", which allows the till to slide on runners in the large case.

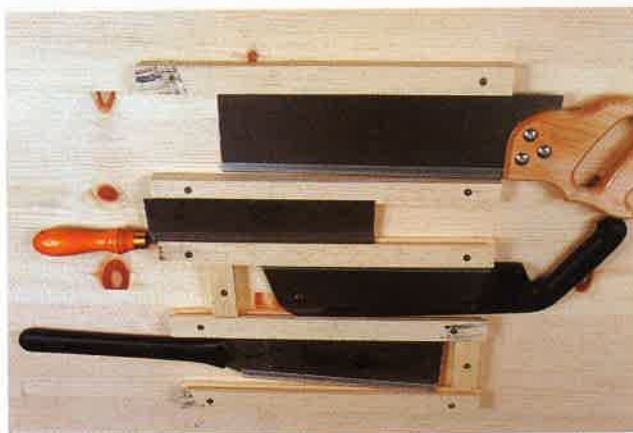
Now cut the 3/8" x 3/8" grooves in the sides for the three horizontal dividers in locations shown in the PullOut™ Plans. Then cut the 3/16" x 3/8" grooves for the six vertical dividers that separate the drawers.

Dry assemble the case. When everything fits, assemble the till with nails and glue. Attach the vertical dividers last. Use only nails when attaching the horizontal dividers to allow for wood movement. Attach the vertical dividers with a little glue and a dead blow mallet.

Now, using nails and glue, attach the front piece at the top that encloses the top tool area. Cut your top to finished size and cut a detail on the top edge to soften the look. I routed a



6 RUNNERS • When your runners are finished they should look like three steps. The top step is $\frac{1}{8}$ " thick and $\frac{5}{8}$ " high. The second step is $\frac{3}{8}$ " thick and $\frac{3}{8}$ " high. The third step is the remainder of the board. See the diagram for all the dimensions for the runners.



7 SAW HOLDER • Make sure when you set up your strips that you position your saws with the teeth facing up. This prevents them from getting damaged when you open the lid.

$\frac{3}{8}$ " deep by 1" chamfer on all four edges. A table saw also would do this job nicely. Finally, I mortised a flush ring-pull into the lid to make opening the lid easier.

STEP 5 Till Details • Swage your hinges and then mortise them into the till and the lid. Then start dividing up the top tool area for the hand tools that you reach for most often.

I made a rack for my chisels and cubbyholes for my small planes. Finally, I built two holders that flip up. One holds my drill bits, the other holds my screwdrivers and a marking gauge.

If you've veneered your case, now is the time to add a piece of veneer to the front piece and to cover all the other pine edges that show. I used walnut veneer tape for all the dividers. This tape costs about \$3 for an 8' length. After you've veneered the entire till, fill your nail holes with putty and sand the case.

Now cut your drawers. Mark all your pieces because you'll have 40 pieces to keep track of. The nine drawers are all assembled in the same manner. On the $\frac{3}{4}$ " thick drawer fronts, cut a $\frac{3}{8}$ " x $\frac{3}{8}$ " rabbet on each end. On the $\frac{3}{8}$ " thick sides, cut a $\frac{3}{16}$ " deep by $\frac{3}{8}$ " wide dado for the back. Then cut a $\frac{3}{16}$ " deep by $\frac{3}{8}$ " wide groove in the front and sides for the bottom. Sand your pieces and then assemble the drawers with nails and glue. Fit your drawers into the till. Finish sand everything and cover the till with two coats of clear finish. Add a chain to the lid to prevent it from opening too far.

STEP 6 Build the Runners • The till rests on runners screwed into the inside of the large case. These runners are made by using your table saw to cut two rabbets in $1\frac{1}{4}$ " pine. Screw the runners to the inside of the case. Make sure that

you leave a couple inches of space above the top of the till to allow room for the saw holder.

STEP 7 Saw Holder • Make the saw holder by screwing strips of 1" thick pine to the lid of the large case. Position the strips for your own set of saws. You might want to cut rabbets or dadoes in the strips depending on your particular saws. I

made the front face of the saw holder from pine and leftover walnut veneer. After cutting the panel to size, cut a $\frac{1}{2}$ " x $\frac{1}{2}$ " rabbet on all four edges. Miter and glue four strips of maple into the rabbet.

Screw the front face to the strips and cover the screw heads with caps. I cut my own diamond-shaped caps from some scrap maple. Stain the interior of the large case and lid. I wanted to make the inside look old and weathered. So I first put down a coat of walnut oil stain and allowed that to dry. Then I applied a cherry gel stain. Finally, I covered the interior and saw holder with two coats of clear finish, sanding lightly between the coats.

Even though the tool chest is made almost entirely of pine, it weighs quite a bit. In fact, when the chest is fully loaded, it takes two strong backs to move it. And after lugging it around it made me think that maybe this is the reason Benjamin Seaton decided to stay in England.

One side note about this tool chest. Even though Benjamin never made it to the New World, his

tool chest made the trip a few years ago. Colonial Williamsburg, Va., displayed his chest for two years as part of its exhibition that was named — somewhat ironically — "Working Wood in 18th-Century America." **PW**

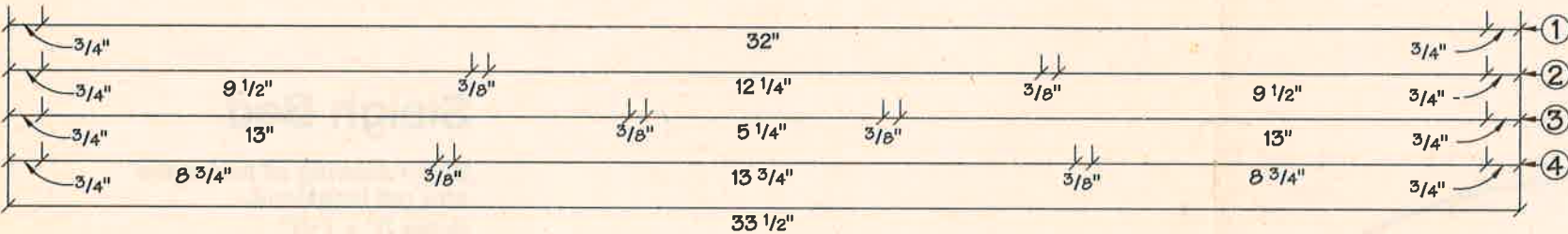
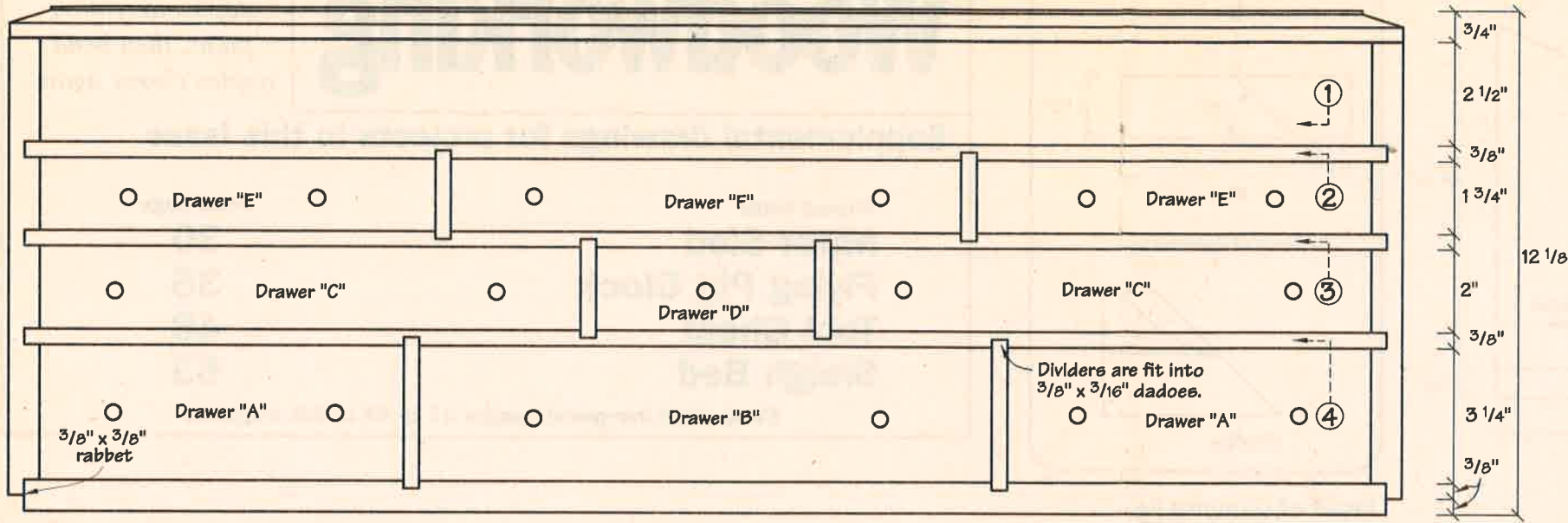
—Christopher Schwarz, *PW* staff

Want to Know More?

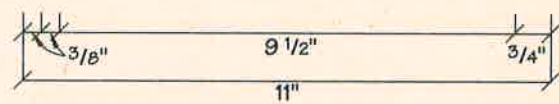
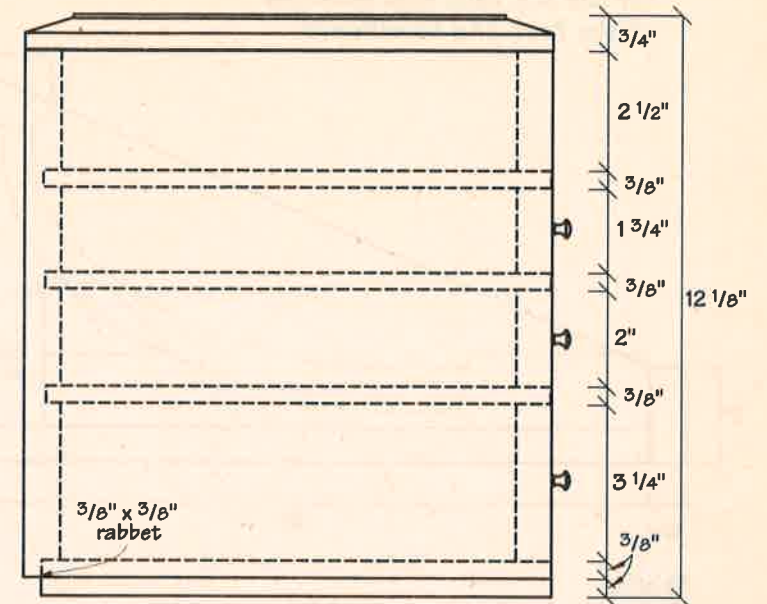
If you like old tools, you'll enjoy reading "The Tool Chest of Benjamin Seaton," which is published by the Tool and Trades History Society. The book gives a brief overview of the Seaton family and then delves quickly into the chest's 200 fascinating tools. The book is available in this country through Astragal Press, 973-543-3045 in Mendham, N.J., for \$14.95.

Tool Chest

Diagram of till with
drawer dimensions
Scale 3" = 1'-0"



Elevation



Profile

Schedule of Materials: Till Drawers Drawer A (two drawers)			
No.	Item	Dimensions T W L	Material
2	Drawer front	3/4" x 3 1/4" x 8 3/4"	Maple
4	Sides	3/8" x 3 1/4" x 9 7/8"	Pine
2	Rack	3/8" x 2 5/8" x 8 3/8"	Pine

Schedule of Materials: Till Drawers**Drawer A (two drawers)**

No.	Item	Dimensions T W L	Material
2	Drawer front	3/4" x 3 1/4" x 8 3/4"	Maple
4	Sides	3/8" x 3 1/4" x 9 7/8"	Pine
2	Back	3/8" x 2 5/8" x 8 3/8"	Pine
2	Bottom	3/8" x 8 1/8" x 9 1/2"	Plywood

Drawer B (one drawer)

No.	Item	Dimensions T W L	Material
1	Drawer front	3/4" x 3 1/4" x 13 3/4"	Maple
2	Sides	3/8" x 3 1/4" x 9 7/8"	Pine
1	Back	3/8" x 2 5/8" x 13 3/8"	Pine
1	Bottom	3/8" x 13 1/8" x 9 1/2"	Plywood

Drawer C (two drawers)

No.	Item	Dimensions T W L	Material
2	Drawer front	3/4" x 2" x 13"	Maple
4	Sides	3/8" x 2" x 9 7/8"	Pine
2	Back	3/8" x 1 7/16" x 12 5/8"	Pine
2	Bottom	3/8" x 12 5/8" x 9 1/2"	Plywood

Drawer D (one drawer)

No.	Item	Dimensions T W L	Material
1	Drawer front	3/4" x 2" x 5 1/4"	Maple
2	Sides	3/8" x 2" x 9 7/8"	Pine
1	Back	3/8" x 1 7/16" x 4 7/8"	Pine
1	Bottom	3/8" x 4 7/8" x 9 1/2"	Plywood

Drawer E (two drawers)

No.	Item	Dimensions T W L	Material
2	Drawer front	3/4" x 1 3/4" x 9 1/2"	Maple
4	Sides	3/8" x 1 3/4" x 9 7/8"	Pine
2	Back	3/8" x 1 1/8" x 8 7/8"	Pine
2	Bottom	3/8" x 8 1/8" x 9 1/2"	Plywood

Drawer F (one drawer)

No.	Item	Dimensions T W L	Material
1	Drawer front	3/4" x 1 3/4" x 12 1/4"	Maple
2	Sides	3/8" x 1 3/4" x 9 7/8"	Pine
1	Back	3/8" x 1 1/8" x 11 7/8"	Pine
1	Bottom	3/8" x 11 7/8" x 9 1/2"	Plywood