

Joint-Quality Edges Cut on a

When I tell my students that a lot of professional woodworkers use a tablesaw to get glue-ready edges, I sometimes hear gasps of disbelief. Most woodworkers think the tablesaw cuts crude, uneven edges, which must be cleaned up on a jointer. The assumption is that the smoother surface a jointer gives is better for glue, but this isn't always true. Glue must penetrate below the surface of the wood to do its job, so it needs open pores to seep in and grab hold. Jointer knives can compress the wood as they cut, glazing the surface and preventing maximum glue penetration—especially if the knives are dull or if the board is run

over the jointer too slowly. However, running an edge over a jointer too fast cuts a pronounced wave pattern. If severe enough, only the tips will touch when two boards are put together, creating a wider glueline than is desirable.

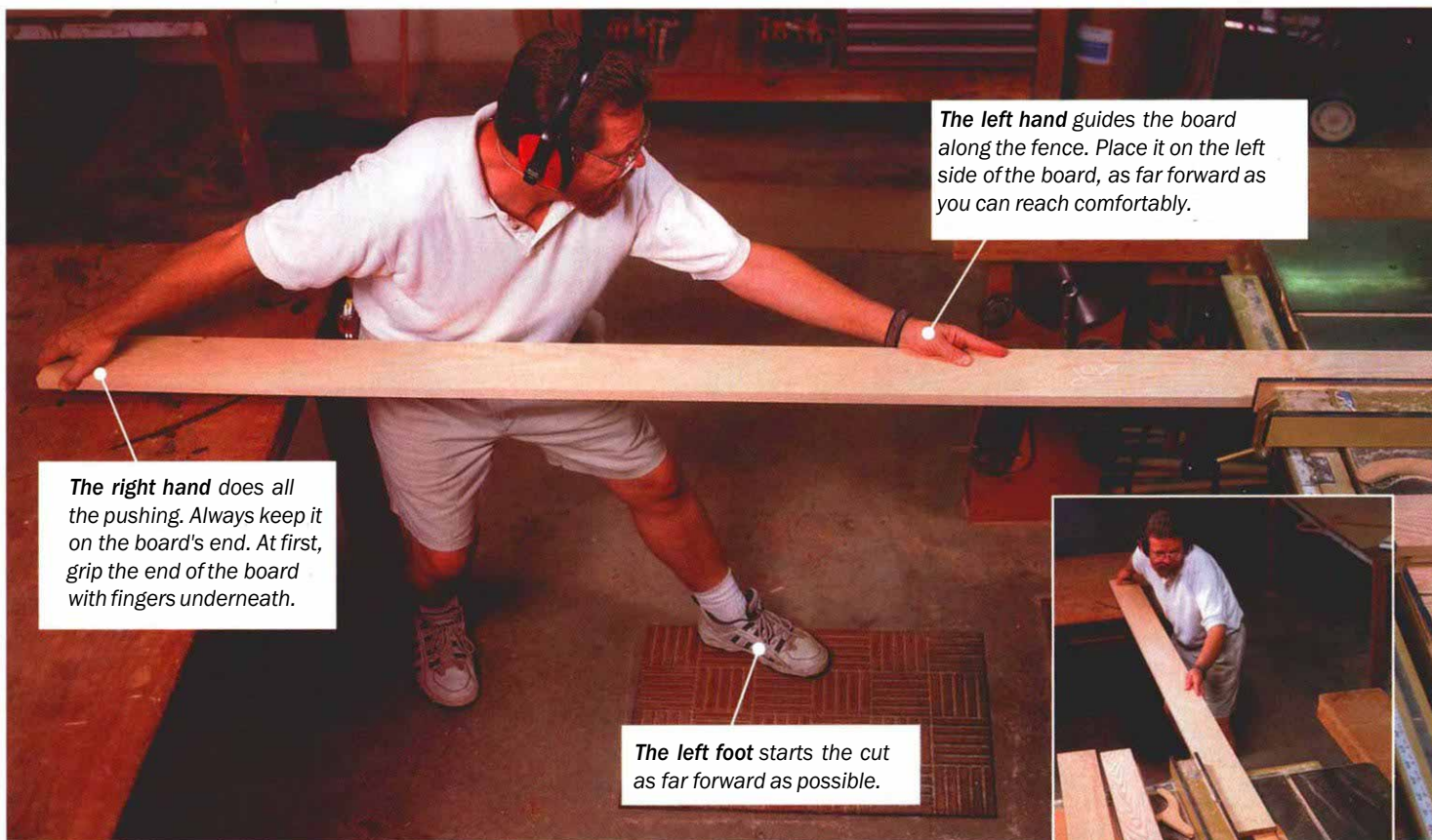
The right technique on a tablesaw creates a straight, square and slightly abraded surface, which is ideal for glue joints. And a properly sawn edge, if it's to be left exposed, needs only light sanding to be finished. The trick is mostly in the way in which you feed the board through the cut. It has to move through the blade at a constant speed without wavering. All you need is a tablesaw with a powerful motor (3 hp

or more), a good quality triple-chip blade and an outfeed table. The rewards are great—less milling time for stronger glue joints and finished edges.

Two-step at the tablesaw

To cut a clean edge on a tablesaw, you'll need to rethink how you move the board over the saw, as well as how *you* move. The commonly accepted technique of standing next to the saw and feeding boards hand over hand ensures an uneven edge and, frankly, is a dangerous habit. There is a total reliance on friction between the hands and the top face of the board to feed it forward, hold it down on the table and press it

DANCE STEPS FOR A SMOOTH RIPPING TECHNIQUE



The left hand guides the board along the fence. Place it on the left side of the board, as far forward as you can reach comfortably.

The right hand does all the pushing. Always keep it on the board's end. At first, grip the end of the board with fingers underneath.

The left foot starts the cut as far forward as possible.

Start the cut by holding the end of the board...

Tablesaw

The trick is learning the steps in the dance

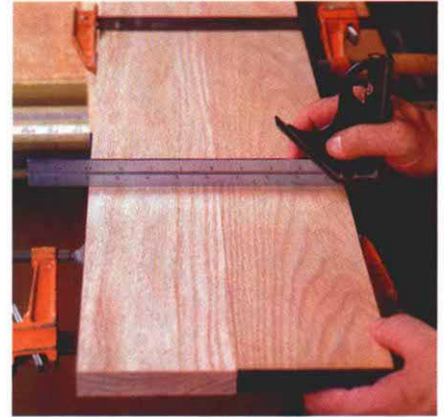
BY LON SCHLEINING

against the rip fence. The body is out of balance, and the hands (especially the left) move very close to the blade. One slip and the unthinkable might happen.

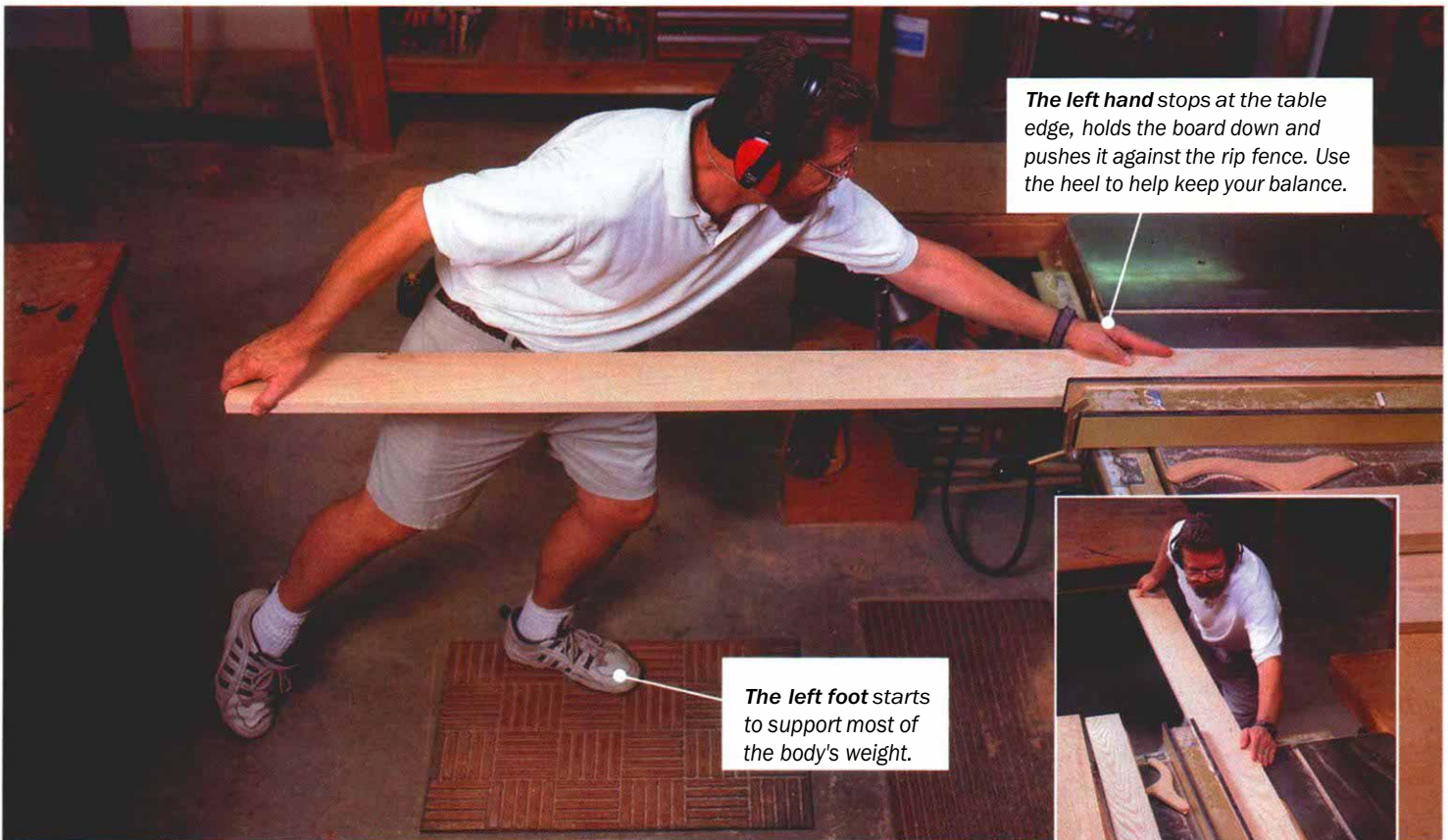
The following technique is a lot safer, but somewhat more complicated. It's very much like a bowling step. You need to coordinate your feet, hands and body into one fluid movement to ensure that the board goes over the saw steadily. I'll walk you through the technique presuming that you have one edge of the board straight already. As you might have guessed, I straighten the first edge on the tablesaw instead of the jointer (see the box on p. 84), but use whatever method suits you.

The main focus of the technique is to keep the board moving safely and at a constant speed during the cut. This requires that you start and end the cut with your right hand pushing from the end of the board. Guide the board with your left hand, placing it as far forward on the board as you can comfortably.

Depending on how long the board is, you may need to start the cut standing a certain distance back from the saw, and take a step or two toward the saw during the cut. This is when keeping the cut steady becomes more difficult, though by no means impossible. The key is to start with your left foot as far ahead of you as possi-



A clean joint line fresh from the table-saw. Sawn edges without further preparation can make perfectly good gluejoints.

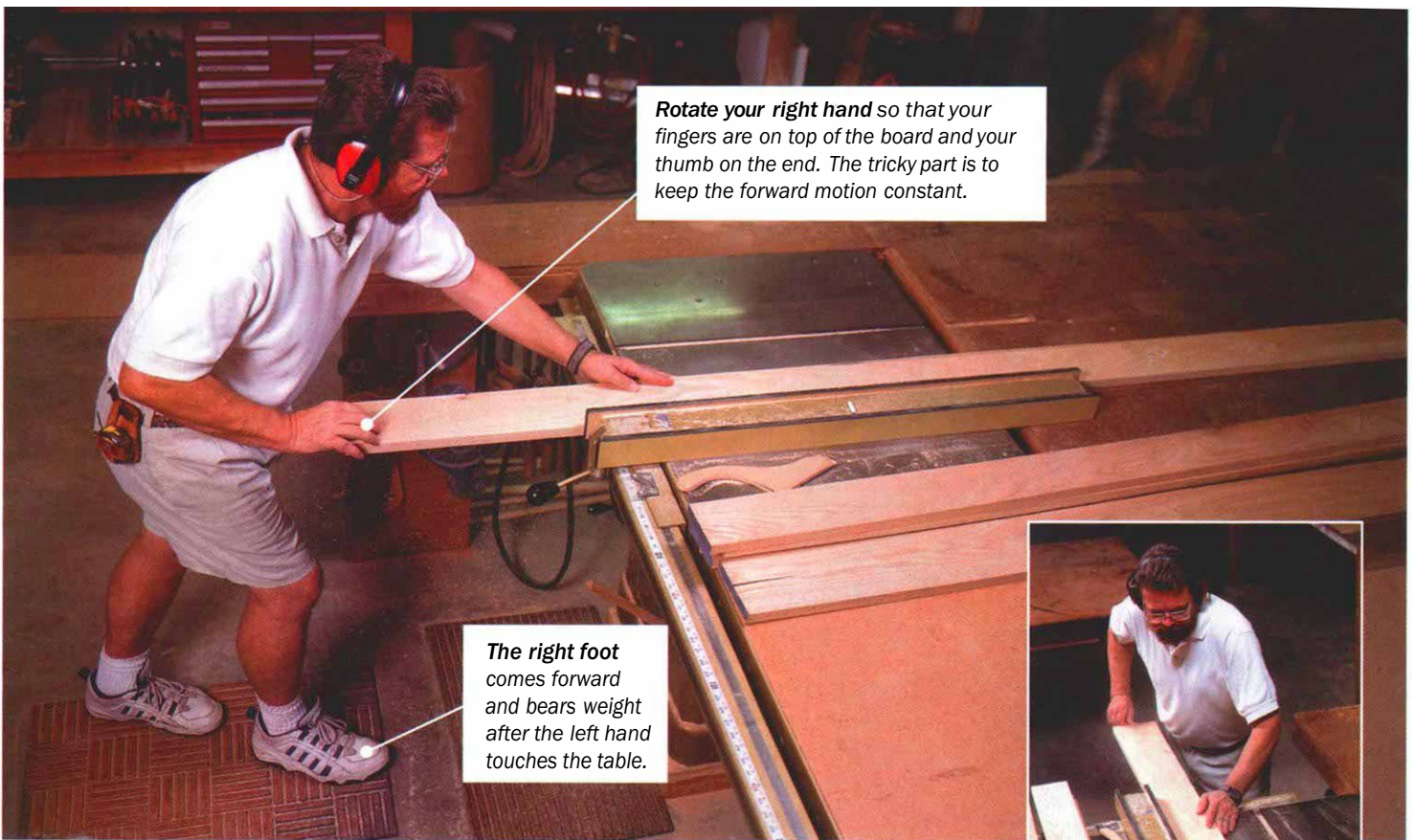


The left hand stops at the table edge, holds the board down and pushes it against the rip fence. Use the heel to help keep your balance.

The left foot starts to support most of the body's weight.

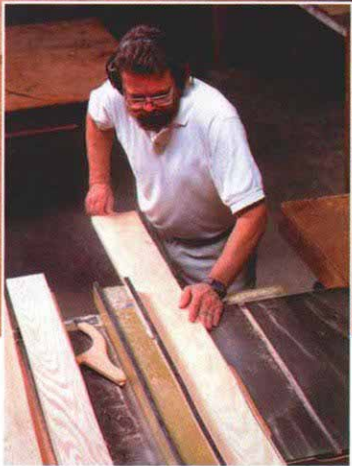


lean into the cut, shifting your weight forward...



Rotate your right hand so that your fingers are on top of the board and your thumb on the end. The tricky part is to keep the forward motion constant.

The right foot comes forward and bears weight after the left hand touches the table.



turn your right hand over when the board's end comes alongside you.

ble so that you need only take one smooth step with your right foot to reach the saw and finish the cut (the photos show how to complete this movement).

A triple-chip blade on a powerful saw

The right blade with this job, as for many things in life, is a compromise. In my expe-

rience, combination teeth can't remove material rapidly and produce a smooth edge. But pure rip grinds are often a bit too aggressive to cut cleanly. They remove material much faster than a combination grind but leave an edge that is too rough for gluing. Triple-chip grinds are less aggressive but remove material rapidly enough to

provide the cleanest overall ripcut. However, beware of cheap triple-chip blades: I've found a range of quality among them that substantially affects performance.

Tablesaw setup is just as important as blade choice (for more on tuning up your tablesaw, see *FWW* #114, pp. 60-64). The blade must run parallel to the fence. If it

Getting the first edge straight on a tablesaw

The jointer is unmatched at making a warped board straight and flat on its face. It's what they were designed to do. However, they aren't the only machine that can get a first edge straight on an uneven board. For edge-jointing the S2S lumber I buy, I choose my tablesaw every time. I find it works faster. Where it might take 10 passes over a jointer to get a straight edge, I can do it on the first pass over my tablesaw with a minimum of set-up.

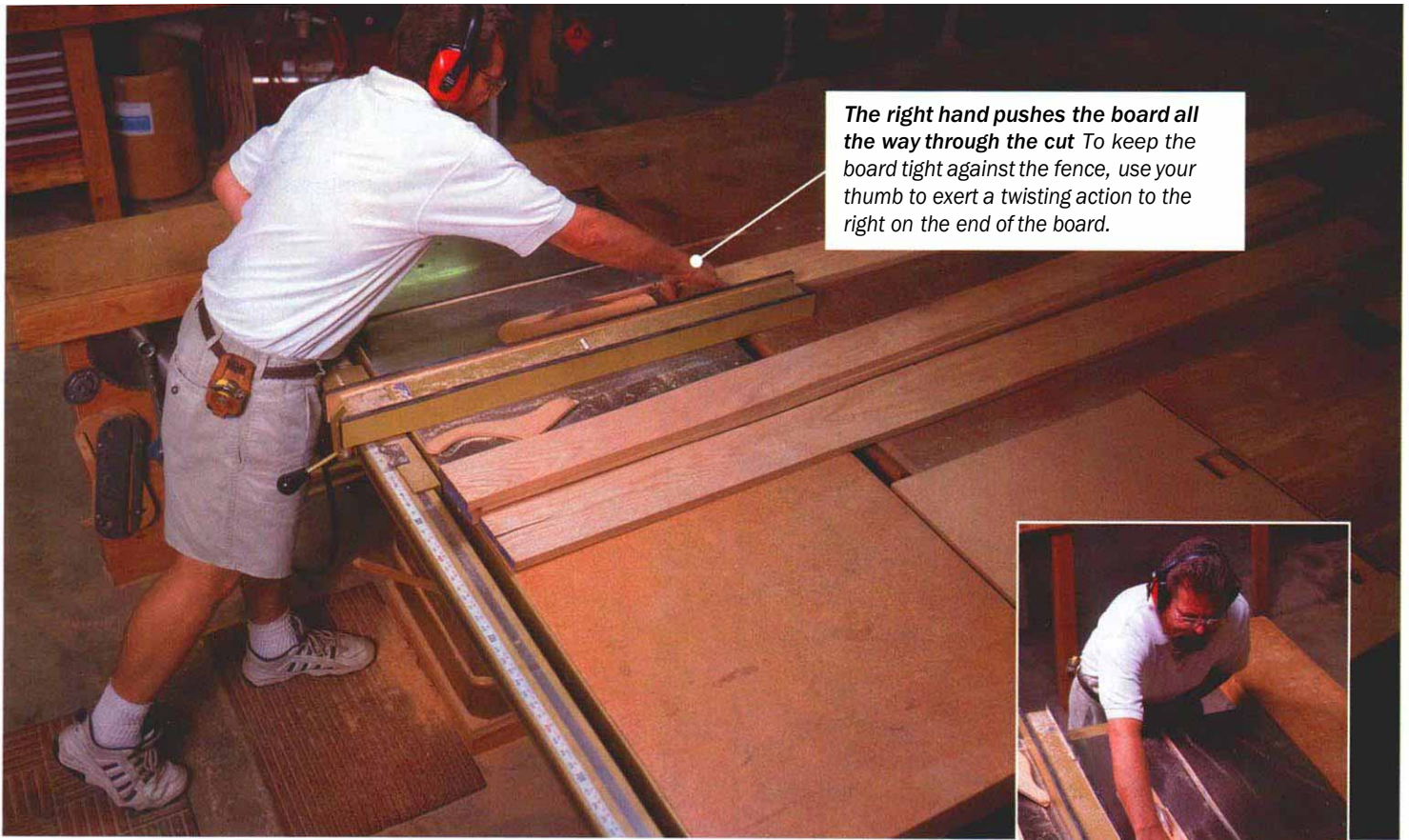
Unlike the jointer, the tablesaw needs a guide to do this. A piece of 3/4-in.-thick plywood for a template, slightly wider than the board to be cut, and a few brads are all you need. Make sure that the edges of the plywood are straight and parallel.

I align one edge of the plywood along the board exactly where

I want the cut to take place so that the waste edge of the board is peeking out from under the plywood. I then nail the plywood to the top of the board with small brads. You usually only need one nail at each end, and by using a longer-than-needed board, you can cut off each end where the nails left holes.

I set the fence to the width of the plywood and guide the assembly through the saw as I would if it were a single board (see the photo at right). I keep the edge of the plywood against the rip fence, and just like magic, the edge of the board below is cut straight as a string pulled tight.

This technique can be used to straighten rough edges, crooked edges or to cut tapers. —L.S.



The right hand pushes the board all the way through the cut. To keep the board tight against the fence, use your thumb to exert a twisting action to the right on the end of the board.



and finish the cut with your right hand only.

doesn't, you'll get a condition known as heel and toe, which can produce deep swirl cuts down the edge of the board. For ripping long boards, the hands of a well-intentioned helper are no substitute for a solid outfeed table. The smallest amount of lateral wandering from the line of cut will give you a less than perfect edge.



Edge-jointing without a jointer. Template registers against rip fence and guides uneven boards through a straight cut

There is no substitute for power to get the best edges. It's possible to do it with less than 3 hp, but lower horsepower machines have smaller sweet spots—the range of feed rates that a motor can handle without burning the edge or bogging down. The technique isn't impossible on a contractor's saw with a 1½-hp motor (I used one for years), but it's a lot harder.

If you push a board through any saw too fast, the motor will bog down and the blade will wobble, producing an uneven cut. But if you slow down too much, accumulated friction will burn the board. Both problems will leave you with a flawed edge. Higher horsepower motors can handle a wider range of feed rates—between burning at slow feed rates and bogging down at high feed rates. This makes it much easier to get a clean edge because you're not walking a tightrope between too slow and too fast.

Practice makes perfect

If this all sounds complicated, it is—at first. My suggestion for learning this technique is to practice. I recommend using an 8-ft.

length of ¾-in. particleboard about 10 in. wide. Its weight and cutting resistance are similar to hardwood. Using particleboard keeps you from turning a lovely piece of cherry into kindling. The idea is to practice the hand and foot movements until the motion is entirely fluid.

Make several cuts in succession, taking off about ¼ in. with each cut, but never less than ⅜ in. or just enough so the blade is fully engaged with the board. If the blade runs free, it will oscillate slightly. As it engages the wood, the kerf made in the wood dampens this oscillation. The design of a good blade takes this into account. If it is cutting only on one side—not fully engaged in the wood—a tablesaw blade will continue to oscillate and produce a gouged edge.

For the learning session, use your utility tablesaw blade because particleboard is quite abrasive and will quickly dull a triple-chip blade. After a dozen or so cuts, the process should start to feel familiar and will become as natural a movement as any. □

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