

Photos: Thomas P. Ford

Restoring a Porch

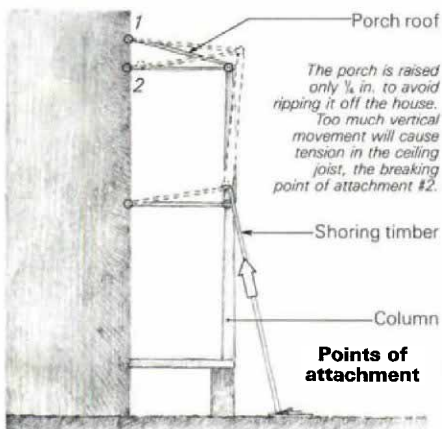
A fast, inexpensive method
that doesn't require house jacks

by Roy F. Cole, Jr.

Some contractors use elaborate house jacks, and plenty of them, to repair two-story porches. Others jack and shore small sections, one at a time, eventually working from one end of the porch to the other. I've found both these methods too expensive because of the costly jacks and extra time involved. By restoring a fair number of two and three-story Charleston porches over the years, I've developed a method for repairing them well and repairing them fast. I shored up the whole porch with timbers, and never use jacks. They are just not necessary. I've done this on one-story porches too, but the challenge of the big ones is more to my liking.

Old Charleston is going through a major resurgence now, and there's plenty of restoration work going on. Luckily, the town was spared Victorian buildings because so few people had

The timber shoring on the porch at left is tied together to prevent workers from knocking it out of place. Cole's method of shoring allows for repair or complete replacement of columns and decking, as in the renovated porch below.



A notch is cut at the upper end of the shoring (top photo) to receive the sill of the second-story deck. Cole places one 4-in. by 6-in. plank next to each column, at left. The base of the shoring sits on a 2-in. by 6-in. plank. Above center, an oak wedge driven between the shoring and the plank raises the second-floor deck. Once weight is off the column, a second wedge is driven under the first and nailed to the plank; then a wood block is nailed to the plank to stabilize the shoring.

any money to spend on houses from the end of the Civil War until the 1930s. So these porches, except for their poor structural condition, are originals. They are elaborate additions to wood or brick houses built after a major fire burned many of the wooden ones in 1861. They also survived an earthquake in the 1880s. Since porches were always popular in Charleston's hot, muggy climate, they were never removed, except for those that removed themselves.

To restore the two-story porch shown on the facing page, we had to replace column bases and plinth, some rotten decking, the sill and damaged hand rails. Luckily, the roof was in good shape, but it was a pretty extensive job nonetheless. We had to raise the second-floor porch deck and roof so the first-floor columns could be removed or lifted for repairs. The trick was to raise the roof no more than absolutely necessary. It was attached to the house at the two points shown in the drawing above, and over the years

had settled into a comfortable position. Disturbing this by too much jacking could have ripped the porch roof away from the house.

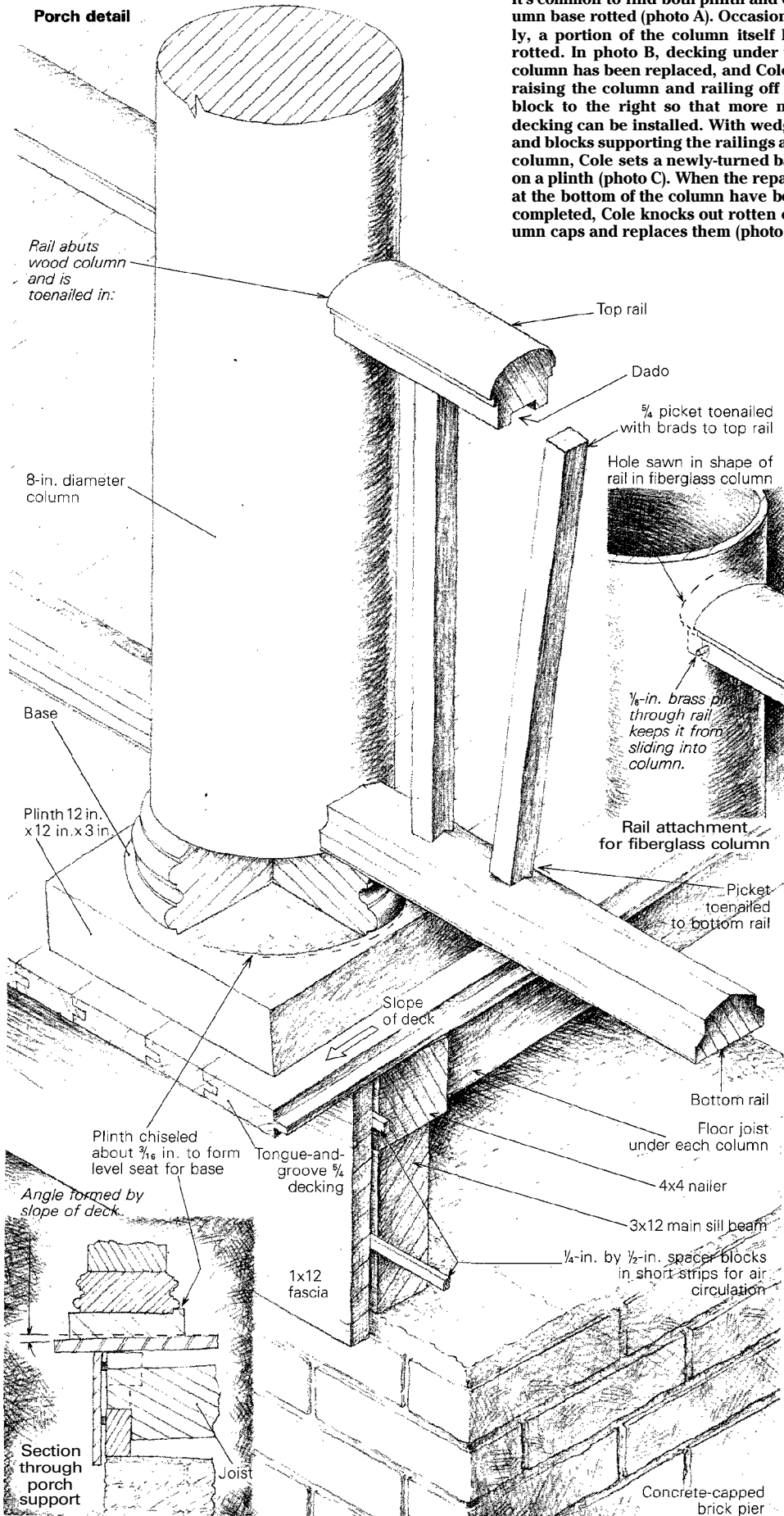
My method for taking the weight off the columns by shoring up the whole porch at one time allows us to perform each task only once. This saves a lot of time. Because of the weight involved we use 4-in. by 6-in. shoring timbers of southern yellow pine at each column, as shown directly above. I notch the tops of the timbers (top right photo) to receive the sill beam of the second-story deck. The angle of the notch is not critical. I place the base of the shoring timber on a 2-in. by 6-in. plank about 4 ft. long, and insert an oak wedge between the timber and the plank. The timber should be long enough so that its base is about 4 ft. from the porch; this leaves enough room to work.

Starting at one end of the porch, I tap the wedges with a heavy sledgehammer until each shoring timber relieves the weight on its col-

umn. Upward movement of no more than a fraction of an inch is enough to free the column from the upper-story sill. With the column free, I nail another oak wedge on top of the first and nail a wood block to the plank behind the wedge, as shown in the photo above. Friction between the 4-ft. plank under the shoring and the brick paving prevents the shoring from slipping backward. When no rough paving is available and the shoring must be supported on grass or bare ground, I increase the width and thickness of the planks, depending on the weight of the porch roof to be raised. For instance, I use 3-in. by 8-in. by 4-ft. planks (if the ground is fairly dry) to support shoring for a one-story porch. After all the columns are tapped free, I nail lightweight purlins horizontally to each shoring member to tie them together and prevent accidental movement. Then restoration work begins.

During porch restorations I do not remove columns or any other parts unless it's necessary for

Porch detail



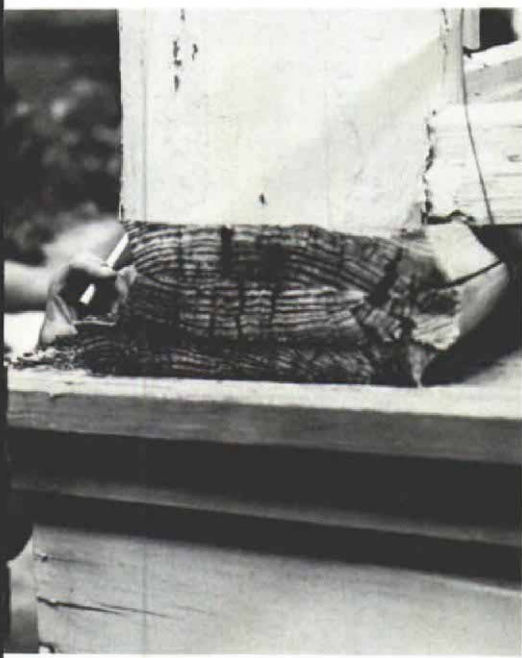
It's common to find both plinth and column base rotted (photo A). Occasionally, a portion of the column itself has rotted. In photo B, decking under the column has been replaced, and Cole is raising the column and railing off the block to the right so that more new decking can be installed. With wedges and blocks supporting the railings and column, Cole sets a newly-turned base on a plinth (photo C). When the repairs at the bottom of the column have been completed, Cole knocks out rotten column caps and replaces them (photo D).



repairs. Frequently the columns are original to the house; on the porch shown here, they are solid, heavy longleaf pine. When their bottom sections have rotted (as was the case with three columns on this job) they have to be removed. A 1-ft. length is cut off the bottom and the column is sent to a lumberyard to have that foot replaced and turned to match samples of the original. (This costs us about \$100 per column.) Once the column has been scraped and repainted it is difficult to tell the old from the new.

There are times I have to completely replace columns. I use hollow, built-up wood columns, which, of course, are not as strong as solid ones that cost from \$500 to \$750 each. However, there is another replacement: fiberglass columns and plinth covers. When seen up close these columns do not look like wood, so I don't recommend using them in a true restoration. They are strong and rot resistant, but joining the wood rails to the column is a problem. To solve this, we carefully cut holes in the column for the top and bottom rails, slip them in, and pin them in place. (See drawing at left.) Also, because porch decks pitch away from the house for drainage, the plinth also slopes. The vertical column does not sit squarely upon it unless the plinth is beveled or chiseled to form a level seat, or the base of the column is cut on an angle. This is a critical detail to attend to when setting hollow wood and fiberglass columns. If the column does not seat evenly all around, stresses will build up, cause checking and eventually split open the column. The method I use is to put the plinth in place on the deck, then take a level and mark a horizontal line on the side of the plinth. I chisel out the seat for the base to approximate the angle drawn.

If the column is solid and only the base and plinth are rotted (photo A) which is the usual case, only the rotted parts are removed. To do



B

this, we place a block and wedge on each side of the column under the bottom rail. We hammer in the wedge and remove the base and plinth. When the decking under the plinth is also rotten, we remove it and replace it with new decking. Once the new decking is in place, we put a block and wedge directly under the column, transferring the weight to this block and the new decking (photo B). Then the decking on either side of the column is replaced as required.

Weight is placed back on the original blocks once rotten decking has been replaced, and a new base and plinth are slipped under the column (photo C). Then we remove the blocks on either side of the column. At this point, with no weight on the column, we knock out and replace broken caps (photo D). As we complete each column we loosen the shoring until the second story and roof are supported by the column.

If the porch substructure must be changed we do this before replacing the decking. The most common problem here is a rotten 4-in by 4-in. nailing strip behind the fascia where water gets in. I replace it with treated lumber and put a 1/2-in. spacer between it and the fascia to allow air circulation, as shown in the drawing at left.

Once all rotten columns, substructure and decking have been replaced and the shoring is removed, handrails are replaced. If rails are missing or destroyed I take samples to a lumberyard that reproduces millwork. New rails are cut to length, and their ends shaped to butt the round columns. They are toenailed in place with countersunk finishing nails. Then the old pickets are tilted and nailed into place as shown in the drawing at left. The porch is painted, and we move on to the next one. □



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Roy Cole is a contractor who specializes in house restoration in Charleston, S.C.