Refinishing Floors

Think Twice Before Sanding

By Dr. Frederick Herman, Architect

One of the more vexatious problems in dealing with an old house is the question of what to do with the floors. We all have romantic visions of a mellow floor, reflecting soft highlights cast by beeswax candles. Looking at floors in the harsh light of reality, however, we see several important facts emerge:

(1) WHAT WE THINK a floor should look like does not necessarily look the way our forebears thought a floor should look. And the further you go back in time, the more true this becomes.

(2) ALL FLOORS are not alike. There are different woods. A heart pine floor will never and should never look like an oak floor, while parquet flooring is in a class by itself and its patterns vary with periods.

(3) METHODS OF CLEANING, and of floor finishing, have changed drastically.

Until the middle of the nineteenth century, softwoods such as pine were in primary use in the East and South. In the Midwest, plentiful hardwoods such as chestnut, hickory, and walnut were pressed into service. If one really wanted to impress the neighbors, black walnut was used; at the end of the nineteenth century, when exposed flooring became more fashionable, parquet came into vogue, amongst other things helping to satisfy the late Victorian mania for decorated surfaces.

Now, let's see what typically may have happened to your floor. If it was a pre-1850 softwood floor, chances are excellent that it has been "improved." At the minimum, it has been scraped or sanded a few times, probably been stained at least once to accommodate changing tastes, maybe had a hardwood floor nailed over it, or even been covered with linoleum or carpeting.

Such a floor may be so worn and splintered that it is not salvageable. In some instances, a new floor compatible with the period of the house is more desirable than a super-heroic effort to save the unsalvageable. Remember, too, that the original builders would not have hesitated to replace worn-out building parts with what were considered better or more fashionable items.

(continued on page 44)
Remuddling
For The Masses

By Benita Korn

Sensitive rehabilitation of old houses is being set back 10 years by the TV show "This Old House" produced by WGBH, the public television station in Boston. Not content with encouraging the remuddling of Boston's old houses, the producers have syndicated the program to public television stations across the country.

The lack of sensitivity toward the old house in the program moved the New York Times to wonder "...why the builders did not simply raze the Victorian house and build a tract home."

Unfortunately, the remuddling approach is being further promoted by Little, Brown with the publication of a companion book "This Old House" compiled by the producers of the TV show. Our dismay about the book and the TV program was echoed in this review that originally appeared in "The Brownstoner." — C.L.

T HIS MUCH-TOUTED, highly rated production (it was shown in the Boston area last year) will take viewers through every step of an old-house renovation, from the first look to the moving in. However, episodes so far have proved to be more infuriating than illuminating.

IN THE VERY FIRST installment, the building inspector points out that leaky gutters have been dribbling dampness into the walls for years and a dandy case of rot has set in. He notes, too, that the ornamental brackets should be saved. And we had no quarrel with his finding that the truly ancient furnace was almost certainly a huge fuel waster and should be replaced promptly. Those, however, were our only points of agreement.

"It's Old—Got To Go!"

T O BE FAIR, our disgust with this show may lie in the script's ignoring reasons, and that may be traceable to time constraints. Irritation is acute when the direction leans toward the "talking head" school of cinematography—we want to see what, since Who could be any one of us.

IN ADDITION TO GENERAL CAVILS, we have specific ones. In the first episode, for example, we do see the gutter rot and the furnace, a total of maybe a minute of air time. For the rest of the 29, the camera relentlessly zooms in on the face of the "engineer" and we watch him say "Eyah, that's old! Got to go!" about everything he (but not we) sees. The mudroom. Has he never had to scrub a floor? Curlicued but leaky radiators. Has he never heard of valve packing and hole patching? Oak "veneer" floors that are "only" about a half inch thick. Has he never heard of floor refinishing? Bathrooms (apparently because the cast-iron tubs are "old"). Kitchen (solid wood cabinetry, cast-iron double sink, but "old").

IN EPISODE TWO we were shown a do-it-yourself demolition of a small partition wall and were given appropriate warnings about electrical outlets and pipes therein. But not a word about determining beforehand that a wall isn't holding up something important, like rooms and roofs above it. We also heard about the plans drawn for the new ground-floor layout. There they were, taped up on a wall for all to see. Except us. We got a swell close-up of the owner describing them.

SOMETIME BETWEEN installments two and three the furnace died and we saw it laid to rest. And the kitchen plans had changed to accommodate the collapse of something once integral. Of course, nobody really explained what fell and why the change. This time, though, we did get a look at the plan. It provides for an L-shaped room, with the kitchen on the short leg and a family room on the long one. And I wouldn't have it as a gift. The formal dining room is "only about 15 steps" from the kitchen area through the family room. And I hope that the guy who drew that plan has to schlep the 50-pound turkey to the table. At the other end of the family room is the doorway, and without that mudroom...

T HIS BROUGHT US to insulation. On the ground floor, several walls were being opened from the inside, allowing insulation with a vapor barrier to be stuffed in before new sheetrock was applied. But in upper reaches, plaster was intact, so treated cellulose was being blown in...with NO vapor barrier.

DO WE RECOMMEND watching? Why not; it's free. Of course, one often gets nothing for nothing.

Benita Korn is Editor of "The Brownstoner," the newsletter of The Brownstone Revival Committee, 200 Madison Avenue, New York, N.Y. 10016.
AST MONTH's article on Restoration Basics stressed the need for developing a comprehensive plan before plunging into work on a building. The first priority in your plan should be a program to make the building weathertight. If water has been penetrating the structure for months or years, you have to go through a two-step process:

(1) Inspect the building thoroughly to get a total picture of damage that has occurred and repairs that will be required;

(2) Make immediate repairs that will stop the flow of water into the house.

A PROFESSIONAL BUILDING INSPECTOR or architect/engineer will be well worth his or her fee in this inspection phase.

WATER IS THE #1 ENEMY of old buildings. In the continual battle against water, the roof is your first line of defense. Because they are on the most exposed portion of the building, however, roofing materials take the heaviest beating from sun, wind, rain, snow and ice. As a result, the roof should be the part of the building that gets the most frequent inspection and attention. Unfortunately, the opposite is usually true. Since the roof is out of sight, it is often out of mind.

IT'S NOT UNTIL rain is pouring through the top floor ceiling that many folks will pay attention to the roof. And then, it's more likely to be thought of in terms of "fixing the roof" rather than analyzing it as the most critical element in the entire structure.

IN ADDITION TO ITS functional importance, the roof plays a major role in how the building looks. Both the type of roofing material and how it is applied can have a highly positive--or negative--impact on the building's appearance.

The Inspection Process

WHEN MAKING AN INSPECTION of a building's roof for the first time, the following factors should be considered:

• Are there active leaks that must be patched on an emergency basis until a determination is made about the fate of the entire roof?

• Do the existing flashings show signs of breakdown?

• Is there deterioration that can be traced to design errors in the flashing, gutter and leader systems? (If so, these call for design changes rather than mere replacement of materials.)

• Can the existing roofing material be repaired and maintained, or is it at the end of its service life?

• If replacement of roofing material is in order, does budget permit replacement with an historically appropriate material?

• If budget does not permit the historic material, what contemporary material comes closest in texture, color, and over-all appearance?

SPECIAL ATTENTION should be paid to the flashing system, which is the weakest link in many roofing systems. If the existing flashing shows signs of repeated patching, then it may be about at the end of its service life—and replacement may be in order.

REPLACEMENT of flashing, however, can be a major job, often
One side benefit of replacing the roof is that it allows you to thoroughly check the condition of roof decking, rafters and cornice. This is the time to replace boards that have rotted from leaks, condensation, etc.

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New Roofs Over Old?

While it is possible to lay new roofing over old material in many cases, this is not the best practice. It adds additional weight to roof framing that may not be adequately supported by the increased load. More important, you may just be papering over rot conditions that will continue undetected.

On flat roofs with asphalt roll roofing it's an especially good idea to remove existing roofing before putting on a new one. Moisture is often trapped between layers of the old roof—which will raise blisters on your new roof. And new roofing should never be laid over a slate roof.

The decision as to whether to replace a roof or nurse it along with patches involves a typical set of old-house trade-offs... especially when the existing roof consists of a hard-to-replace historic material. It's a fact of life that the simplest and cheapest replacement roof is asphalt shingles. That's what the average contractor is familiar with, and that's what 99 out of 100 will try to sell you—no matter what is on the house now.

While asphalt shingles may be the cheapest on an initial cost basis, they may not be the cheapest buy when the total life and maintenance costs are considered. More important, a cheap asphalt shingle job can radically detract from the beauty of a building that originally had a more distinctive roof.

Your Choices

Because you can predict in advance what his answer will be ("Replace with asphalt shingles!") there's little point in asking the average roofer his opinion when you are dealing with traditional roofing materials. You have to balance cost on one hand against longevity and appearance on the other.

If you wish to replace with traditional materials, but the budget won't stand the initial cost, then you could consider a two-phase program:

1. Patch existing roof system if possible to squeeze a few extra years of life out of it;
2. With the extra couple of years gained, build up a Roof Replacement Fund so that you can get the material of your choice.

If you opt for one of the traditional roofing materials, also be aware that you are going to spend extra time searching for the 1 roofer out of 100 who won't insist that asphalt shingles are the only way to go.

Slate roofs, in particular, are apt to elicit the comment: "There's no way to fix that." In many cases, the problems may be confined to flashing and a few broken or missing slates. Slate repair is not all that difficult (see O.H.J May 1980, pg. 49). And replacement slate is available (see O.H.J Catalog).
TRADITIONAL ROOFING MATERIALS

WOODEN SHAKES—Handsplit along the wood’s grain lines, shakes have a rough, textured appearance. They curl less than sawn shingles because of the natural grain shaping. Because of unevenness, however, shakes don’t make a very tight roof.

WOODEN SHINGLES—Shingles are machine sawn, as contrasted with handsplit shakes. Allowing proper air circulation under wooden shingles—to permit them to dry after a rain—is essential for getting maximum roof life.

SLATE—A properly laid slate roof should last a century or more. Vermont, New York and Virginia slates tend to be more durable than Pennsylvania slates, which are subject to delamination from weathering and pollution.

IRON AND STEEL—Ferrous metal coated with tin (tin plate), zinc (galvanized) or tin and lead (terne) was popular in the late 19th century and can be appropriate as early as the late 19th century, and can be appropriate for certain types of buildings. Asbestos-cement shingles were used in the early 20th century and can be regarded as a “traditional material” in some circumstances.

METAL SHINGLES—Embosed tin plate and galvanized shingles have been used from the late 19th century right up to the present. Traditional metal shingles required regular painting. However, authentic patterns are now also being made in corrosion resistant metals (see OHJ Catalog). Metal shingles are a relatively inexpensive way to impart a traditional textured look to Victorian and turn-of-century houses.

CLAY TILE—Clay tile roofs have been used in this country since the 1600’s. Flat tiles as well as pantiles (S-curved tiles) have been used in many variations. Clay tiles are associated primarily with Italian Villa, Romanesque Revival and Spanish Mission styles. As with slate, many roofers are unfamiliar with clay tile today and will urge the removal of a clay tile roof and were used on many churches, public buildings and expensive homes. Copper flashings may also be used in conjunction with less expensive sheeting materials. Copper is identified by its characteristic green patina. Lead-coated copper (gray in color) is still in use as a premium roofing and flashing material.

COPPER—Standing-seam copper roofs are extremely durable and were used on many churches, public buildings and expensive homes. Copper flashings may also be used in conjunction with thin coat of roofing cement and press

IT’S ONLY WHEN a significant portion of the slates are delaminating from pollution or weathering that replacement of the roof may be necessary. Another extreme case can occur when the slates are sound, but the fixings are failing because iron, rather than copper, nails were used. In this instance, it is possible to pull up the old slates and re-lay them, using copper nails. It’s a labor-intensive process—but it can be done.

Facts On Flashing

ROTTUSIONS through the roof, like chimneys or dormers, present opportunities for water leakage. The only safeguard is adequate flashing installed completely around the object. Flashing is made up of thin sheets of waterproof material, lapped in such a way that water can’t penetrate or back up under a roof. Flashing is usually made of thin metal, such as copper, aluminum or galvanized steel. On older buildings, the flashing is often deteriorated—or missing altogether.

WHEN VERTICAL WALLS intersect roofs (such as at dormers, porches, etc.), the siding should be at least 2 in. above the roofing with flashing protecting the joint. On vertical joints, 2 pieces of flashing are normally used: (1) Base flashing that extends at least 4 in. under the roofing; (2) Cap or counterflash that laps base flashing at least 4 in. The counterflash keeps water from leaking behind the base flashing. The junction between the house wall and porch roof, too, should be protected by a metal flashing (see sketch below).

OOOF COVERINGS—shingles, tiles or whatever—should extend at least one inch beyond any wood at the eave and rake edges. Otherwise, water can curl under the shingles and drain over the fascia boards. This leads to paint failure and decay. For additional protection, it is a good idea to have a metal flashing (called a “drip edge”) at the edge of the eaves that diverts water away from the cornice or rafter ends. If flashing wasn’t installed when your house was built, it can still be added. Just slip a strip of noncorrosive metal (bent as in diagram above) under the shingles and fasten to the edge of the roof deck with non-corroding nails.

TEMPORARY REPAIRS for small holes in flashing can be made by cutting a piece of sheet metal about 1 in. bigger on all sides than hole being patched. (Patch should be same metal as the original flashing.) Coat back of patch with thin coat of roofing cement and press into place.

IN GENERAL, you should avoid daubing roofing cement over anything but asphalt roofing. Recourse to "tar pot" patching makes a roof look like it has black measles. Quick-and-dirty patching can be justified only if you are doing minimum-cost repairs so as to save enough money to replace the roof in a year or two with the appropriate materials.
By Katharine Conley

Italian Style Decoration

With its broad architectural vocabulary, Italian style decoration was predominantly eclectic. Among the styles it combined was one known to Victorian Americans as "Renaissance." This included French and English Renaissance motifs as well as the more conventional Italian. Renaissance mode decoration was popular in all styles of houses, but was particularly appropriate to houses built in the Italian style, based on villas and palaces built where the Renaissance began.

More often than not, Italian style interiors reflected the style of the day. And since the Italian style, including both villas and Renaissance Revival townhouses, spans mid to late 19th century, "the style of the day" can vary widely. Samuel Sloan, author of The Model Architect, wrote of the Italian style in 1852, "The irregularity of the ground plans and vertical outline and great freedom in general design, give considerable room for the exercise of taste." This room for taste included simple cottage furniture and massive architectural "suites."

The effect of the front hall was meant to be formal and imposing. This was primarily achieved by the impact of the hall floor which was made to simulate marble. The most popular configuration was a pattern of black and white tiles, which were marble in fancy houses. Encaustic tiles in rich tones of red, yellow or black were an alternative hall floor covering recommended by Downing. These were an expensive proposition, and remain so. Sometimes the formality was toned down by the cozy addition of draperies hung on doors and windows in winter. These usually featured tassels hanging down from the valance.

Sloan's villas were modelled after the basic designs in A. J. Downing's The Architecture of Country Houses (1850). According to Downing, the curved line is the ruling principle of the Italian style. The interiors of Downing's villas featured coved ceilings, arched bay windows and doors, interior columns, and friezes just below the cornice. Sloan added pilasters to the formal rooms.

Halls

Halls were frequently reached by double, raised panel, round-topped doors. Where there was a vestibule, the second set of doors often featured etched or frosted glass instead of raised panels. But the glass in these panels, and in the transoms that sometimes appeared above the doors, would never have been stained glass because stained glass had a "medieval" effect, antithetic to the classical themes of the Renaissance.

Sloan specified there should be 14 inch deep cornices in the halls. The walls, according to Downing, should be in "sober tones of gray or stone." Later on, when hardwood replaced pine in most villas and wealthier Renaissance Revival houses, mahogany or walnut wainscoting might have continued up the graceful stairs.
Parlors

The parlor was the most formal room, often used only for special occasions. The plastered walls were only occasionally papered, and if they were, the paper was chosen according to current taste. Early patterns were often landscapes, or small, discreet patterns. Later patterns were larger and more brightly colored. Most photographs however show no papers on the walls, except for border papers simulating painted freizes below the cornice.

OWNING AND SLOAN recommended all woodwork be painted. This was partly because pine was the wood used in their villas. Renaissance Revival houses had more expensive hardwoods which were allowed to show. Most common however was a mixture. More "feminine" rooms—the parlor and bedroom—might have painted woodwork, while those rooms thought of as "masculine"—the dining room and library—would have unpainted trim. Another reason for painting the parlor woodwork was to imitate the stone and marble used in 16th century Italy. Mouldings, painted or not, combined sections of circles in their design.

Downing's Advice

Downing's advice for painting the walls included pale, classical colors such as "ashes-of-rose, pearl-gray, and pale apple-green." Those with loftier aspirations might paint their walls white and gild the highlights such as picture mouldings, or window cornices and capitals of pilasters. If the owner could afford it, frescoes were painted on the walls. If he couldn't, papers that resembled frescoes were sometimes used.

Later on in the century, a Renaissance Revival townhouse might have had pale rose walls with pale yellow marbleized pilasters and a cream-colored cornice with a white ceiling. Pale purple was thought to be elegant in more elaborate houses, such as the houses on Nob Hill in San Francisco. Ceilings might have had painted borders in lacy designs or border papers. Although Renaissance Revival townhouses were grander in scale than Downing's villas, the color schemes used were the same.

Renaissance Revival style houses, often built later than the country villas, were built in the Renaissance style partly to show off the wealth of the owner. The Renaissance style lent elegance and the cachet of past grandeur to new American houses. Downing's villas on the other hand (1840's-60's), sought primarily to provide a romantic alternative to the Greek Revival fashion in building. And yet the inspiration was still classical for both grand and simple styles—just as the inspiration was classical for both palaces and villas built during the Renaissance.

The Elegant Touch

Italian style mantels were marble with round-arched fireplace openings, often with a keystone. The mantel tops often had curved, serpentine edges. The marble was real or merely marbleized wood or slate. Gilded mirrors were considered to be the most appropriate overmantels. They frequently spanned the width of the mantel. The chimney breast protruded from the wall, especially in Renaissance Revival townhouses.

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IN ADDITION TO the gilded mirror over the mantel, a gilded pier mirror between the street windows brought extra elegance to a parlor. The mirrors lent the room the illusion of greater space. Light and shadow cast by these mirrors and gilded mouldings also helped break up the expanse of tall, pale walls.

FLOORS were usually made of narrow pine planks, and were carpeted for the most part. Brussels carpet was a type frequently seen in old photographs. Although popular, Brussels carpets were costly and prized items that not everyone could afford, until the turn of the century when you could order them from Sears Roebuck. They came in a mixture of bright floral colors and patterns. The example above combines greens, blues, wines, tan and corn with "pretty contrasting colors."

TODAY YOU CANNOT buy Brussels carpets. But "level-loop Wilton" carpets are made in the same manner as the 19th century Brussels carpets were. Even in the 19th century, both Brussels and Wilton carpets were made by the same process.

THE POPULARITY of wall-to-wall carpets declined in the last decade of the 19th century, when smaller throw rugs were spread over the hardwood floors that replaced pine floors in new buildings. In some houses this practice is evidenced by the economizing measure of laying softwood down in the center of the floor where the carpet was intended to be, and hardwood around the edges.

Dining Rooms & Libraries

VEN THOUGH ladies supervised food preparation, the dining room was considered to be more of a masculine room. After all, the men would stay there to smoke cigars and drink brandy while the ladies retired to the parlor, or upstairs.

THE DINING ROOM WALLS were usually a darker color than in the parlor, and the furniture was heavy and dark. By the 1870's, Renaissance dining room furniture was mass produced and readily available. The floor was carpeted and the woodwork unpainted to match the dark furniture.

THE LIBRARY was to be "quiet and grave", according to Downing. A fawn color was suggested. And whatever the style of the house, it was frequently Gothic in style. High style Renaissance mode libraries at the turn of the century had gilded leather, Lincrusta or Anaglypta on the walls to add a suitably rich touch. Sears Roebuck sold "Gilt Embossed Papers" in cream, mauve, salmon and terra cotta for those who couldn't afford leather. Today Anaglypta is the only appropriate wallcovering still available.

Bedrooms

BEDROOMS WERE usually comfortable. In townhouses the master bedroom was above the parlor, often with an extra alcove over the front hall. The woodwork was designed to be painted. Renaissance bedroom suites, just like dining room suites, were readily available by the 1870's. Those who did not buy the fashionable new sets kept their old furniture, lending the bedroom a particularly eclectic look.

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ranged around the edges of the room, and might have included "French Antique" furniture modelled after Louis XVI styles, together with more classical Louis XVI and eclectic Elizabethan side chairs.

This turn-of-the-century bedroom's cornice, etched-glass chandelier, painted woodwork, interior shutters and arched closet door are in the Italian style. The bed is in a post Civil War Renaissance style, and the Renaissance settee is covered in damask. The wallpaper is a typical late 19th century pattern. While the window valances and hangings seem inappropriate, they may well have been part of the original design and show how bedrooms mixed styles in decoration. Courtesy of Reed Wallcoverings.

FLOORS WERE CARPETED in winter and in summer were regularly covered with matting over cut greens or newspaper. Upstairs mirrors were rarely gilded. Wallpaper was common, and varied according to the period. Papers were replaced as the design went out of fashion.

This 1902 parlor has a Renaissance parlor table in the far room with "trumpet" legs. Notice the piano, and the border freize wallpaper. The door to the left has a heavy frame and is hardwood. Most of the furniture was available from Sears Roebuck Catalog. The parlor has a painting, while the far room has only framed prints on the walls. Austin-Whittemore House, SD. Courtesy of the Historical Preservation Center, SD.

Furnishings

RENAISSANCE PARLORS were arranged around a central table. Early parlor tables resembled Downing's low, circular pedestal table. Later versions had a smaller circumference, were taller and featured "trumpet" legs. The rest of the furniture was often ar-

AS A FINAL TOUCH, Downing also advocated hanging paintings if affordable, and prints or engravings if not--anything to show good taste and culture. Similarly pianos were absolutely necessary symbols of culture because although "it by no means follows that a knowledge of music is equally universal, the desire for it certainly is."
"Forge" a Fancy Iron Fence

Last month, Ron Pilling wrote about buying and learning to use an electric arc welder. Here, he shares his method for fabricating an old-fashioned hairpin-and-spike garden fence.

By Ron Pilling, Baltimore, Maryland

Graceful iron hoops and spikes fenced yards of blooming hibiscus and peonies in pre-chain-link days, when ironworkers manufactured thousands of miles of ornate iron fencing. Much remains to be salvaged and restored, but even the most rusted, bent and broken iron fencing fetches a high price. If, however, you've been resourceful enough to do your own plastering, plumbing, or bricklaying, the prospect of "forging" your own iron fence is not outrageous.

Only one tool that isn't part of your regular arsenal is required—the electric arc welder. Besides that, you'll need vise-grip pliers, an electric drill and bits, a hack saw, a bench vise, a wooden mallet, some files, a couple of spring clamps, and an assortment of screwdrivers. If you need more than thirty feet or so of fence, the cost of both a new welder and the materials will probably be less than what you'd pay for an antique fence.

Much iron fencing incorporates heavy cast-iron ornamentation—flowing grape vines and intricate floral motifs, for instance. But another type consists of vertical posts topped with cast finials (like arrowheads or pineapples), sometimes with curved "hairpins" surrounding the spikes. It is a hairpin fence that I will discuss designing, fabricating, and installing.

The Parts & Pieces

Hairpin and spike fencing is made up of five components: (1) The corner and support posts upon which the fence sections are hung; (2) The horizontal bars through which the hairpins and spikes pass; (3) The vertical spikes and hairpins themselves; (4) The cast-iron decorative finials; and (5) The nuts and bolts, corner braces, and hardware which hold the whole thing together.

The horizontal bars are made of channel steel. That is, the profile of the piece is akin to a wide shallow trough with sharp corners and low sides. Some fences use simple rectangular bars, but the short sides on the channel add strength to the fence, and because channel steel is thinner it is easier to drill.

For the hoops and spikes, you'll need round bars from 3/8 to 1/2 inch in diameter. Call any steel dealer and tell him you want cold-finished steel, giving him the channel width and the diameter of the round bars. Mild steel comes in 20-foot lengths, but you can have it sheared to more manageable lengths if you plan to pick it up yourself. Remember, though, that most metals suppliers will deliver, and you'll have less waste with the 20-foot lengths.

Corner posts can be made from steel sold for the installation of modern "wrought iron" rails. Montgomery Ward and other home-improvement centers sell square steel tubes; buy pieces about an inch square and long enough to sink a foot into the ground. Victorians often compensated for the simplicity of their spike fences by suspending them from ornate scrolled corner posts, atop which sat heavy cast-iron finials. These days you might find such a corner post, still in good shape, but without the fence sections.

New cast-iron finials

Cast finials to cap the ends of spikes might be salvage, or new castings in iron or aluminum. Sources for new finials are listed on page 40. Your local hardware store will have all the fasteners and hardware you need for installation.
Graph Paper Layout

Careful planning in the beginning will pay off with an easy installation. Measure the area to be fenced and prepare a scale drawing on graph paper. The fence is made and installed in sections, with posts set in cement at each junction between sections. If, for example, you need twenty feet of straight fence, you'll want to work with four 5-foot sections. Don't forget to take the size of the corner and support posts into consideration, as two or three inches can make a big difference when you find your sections are short by just that much.

Having determined the length of each section you need, sketch a measured drawing of a single section on your graph paper. If you're planning a hairpin style fence, figure the diameter of the hoops before deciding on the best spacing of hoops and spikes. (More on hoop bending and diameters below.) With the sectional drawing finished, you'll be able to begin cutting and bending the hairpins, the first actual fabrication step.

Bend Steel In Your Bare Hands

It isn't necessary to be Superman to bend steel in your bare hands, as you'll discover. Hoops are formed easily by bending the round iron over a cast-iron waste pipe. Each pipe has a variety of diameters...around the pipe itself, or around any of the several ledges made by the female collar. Choose the diameter which best fits into your plans. Iron waste pipe is available from 1-1/2 to 6 inches, giving you a wide range of sizes.

Clamp and chock the pipe section securely to your bench. Using a plumb line, mark top dead center of the pipe. Now measure the circumference of the pipe with a tape measure as you would bend the actual hairpins. With this circumference, plus the planned height of the hoop sections, it's easy to figure out how long the bars must be before bending. Keep in mind that the steel is in 20-foot lengths; try to adjust the length of the bars to minimize waste.

Mark the center of the cut round bar and clamp the bar to the pipe so that the top dead center mark and the mark on the bar line up. Pull slowly and smoothly down on the ends, gripping the bar as close to the pipe as possible. Pull until the open end measures the same as the inside diameter of the hoop. If the vertical legs become bent, they can be straightened with a wooden mallet on the bench top.

Hairpins are bent over a cast-iron waste pipe.

The finials that go on the spike ends can be spot welded if made of cast iron. (Cast iron may become brittle when subjected to the extreme temperatures of arc welding. Spot welding probably will not cause cracking, but care should be taken with valued salvage finials.) Another way to attach a finial to a spike is to fill the base of the finial with auto body putty, ram the pre-cut spike into it, and wipe away the excess that oozes out.

After the hoops and spikes are finished, it's time for the most laborious part of the job--drilling holes in the channel steel. Measure and cut the channel to the determined length, then mark off the holes with a sharp center drill.
THE WELDING FRAME, built from straight 2 x 4's and held square by corner braces. Three sides are assembled, then horizontal rails are screwed to the frame sides through welded-on corner braces (circled in drawing). "Bottom" or fourth side of frame is attached after all spikes and hairpins have been slid through rails. Fence is thus assembled and welded one section at a time—frame is reassembled for each section. During welding, frame and fence section stand upside-down so welds will not be visible.

punch. Choose a bit 1/32-inch larger than the diameter of the spikes, and be very generous with the oil as you drill. Place the bar over a solid 2 x 6 (or larger) to receive the bit after it has pierced the steel. If you have a drill press attachment for your portable drill, now is the time to get it out.

ASSEMBLY AND WELDING is facilitated with a jig or frame to hold each section square until it is fully welded. A simple frame can be made of straight 2 x 4's. Cut two pieces of lumber as long as the fence is tall for the frame's sides. The top of the frame—a 2 x 4 the length of the channel steel plus 3 inches—can be attached to the sides using large corner braces and wood screws. These corner braces square up the frame.

SMALLER CORNER BRACES will be used to bolt the fence sections to the support posts. But first these smaller braces will be used to attach the section to the sides of the welding frame. (See illustration.) Pre-drill each corner brace so it can be bolted to the frame, and later bolted to its adjacent post.

WELD A PRE-DRILLED BRACE to both ends of each channel. Be sure they are all even, so the horizontal channel rails will line up after installation of the fence. Now lay the channel rails inside the three-sided frame, and mark the correct distance between horizontal channel rails in the wood. Drill holes in the wood frame, and use wood screws to attach the rails to the frame through the welded-on corner braces. By reusing these screw holes for subsequent sections, a consistent width between channel rails is established.

NOW YOU CAN SLIDE the spikes and hairpins into place. If you have difficulty getting some of the ends through, spray a little silicone spray around the holes and drive the hairpins into place with a wooden mallet. You may have to file a slight bevel on the ends of the bars to get them through. When they are all in, attach the bottom frame member with large corner braces as you did the top. When you stand the frame up for welding, the bottom will ensure alignment of the hairpins.

Another example, with cast-iron ornaments

There are endless variations on the hairpin-and-spike fence.
The antenna came folded up and could easily be slipped onto a pipe or wall, but windows and floorboards on the way down presented too many obstacles so I had to run it on the outside of the house. I knew that if I placed it carefully and painted it the same color as the house it wouldn't show. I drilled a hole through the attic wall so the cable would come out near the roof molding. I planned to run the wire inconspicuously along the edge of the molding, I strung and stapled it (with care so as not to break it) down along the cornice moldings until they met a vertical board. Then I followed the edge of the board down to the level of the basement ceiling. The cable went through a hole into the basement and then over to the TV area. I drilled the hole to the TV above through the quarter-round molding, since it was easier to replace than a section of flooring should we ever move the TV set.

I WANTED THE CABLE to be as inconspicuous as possible. Ideally I would have fished it down inside the exterior wall, but windows and floorboards on the way down presented too many obstacles so I had to run it on the outside of the house. I knew that if I placed it carefully and painted it the same color as the house it wouldn't show. I drilled a hole through the attic wall so the cable would come out near the roof molding: I planned to run the wire inconspicuously along the edge of the molding, I strung and stapled it (with care so as not to break it) down along the cornice moldings until they met a vertical board. Then I followed the edge of the board down to the level of the basement ceiling. The cable went through a hole into the basement and then over to the TV area. I drilled the hole to the TV above through the quarter-round molding, since it was easier to replace than a section of flooring should we ever move the TV set.

ANXIOUSLY, I hooked up the TV to see what kind of reception we'd get. It worked--reception was more than adequate. Had it not been good enough, I could've bought a television signal amplifier and hooked it into the system, but it wasn't necessary. TRY IT! Think of the improvement to your streetscape....

Dan Miller
Elgin, Illinois
Restorer's Notebook

Freeze It Off!

For removing some adhesive from floors—such as that used in laying asphalt tile or linoleum—I've had success with big blocks of dry ice. Leave it sitting on the floor, and after only a few minutes (if it's going to work at all) you can break the adhesive right off by putting a little pressure on a corner of the mess with a thin scraper. This doesn't work on all adhesives but on some it's almost miraculous. It's good, too, for getting chewing gum off even the most delicate fabrics and rugs and parquet floors…it just pops off.

Use thick gloves when handling dry ice, don't put it in a metal container (contact with metal makes a weird noise), and ventilate well so the CO₂ can diffuse. I order it 24 hours in advance from a cold storage place.

Julia L. Cauthorn
San Antonio, Texas

New Faucet Handles

In the house we are restoring, I have found many items broken but stored away. Among these was a set of threaded bases for bathtub faucet handles—but not enough porcelain spoke handles to go around. I bought the epoxy material that is mixed and kneaded ("plumber's putty") and fashioned spokes. When they cured, I painted them with refrigerator enamel touch-up.

After more than three years of daily use, they have neither cracked nor yellowed. For very little investment, I got a usable and almost-matched set of appropriate handles where there were misfits before.

Ruth H. Pierce
Blessing Historical Fdn.
Blessing, Texas

Quick-Dry Patches

Much of the time, joint compound patches or tape seams on a plaster wall should be allowed to dry overnight. But for shallow patches and tiny holes, we've used our Master Heat Gun to speed the drying. It doesn't take long, works fine—and you can get right on with your painting or papering.

Bruce Veeder
Voorheesville, N.Y.

Soot Cleaner

When Winter's over you'll want to clean up the hearth and fireplace. Here's an old-fashioned formula that will remove troublesome soot and creosote: Make a soft soap by adding 1 quart hot water to 1/2 cup yellow laundry soap (like Fels Naptha). Heat the mixture until the soap has dissolved completely. When the mixture has cooled, add 1/2 pound powdered pumice and 1/2 cup ammonia, and mix well. Now brush a thick coating onto the soiled areas. Let it remain at least 30 minutes, then scrub it off with a stiff brush and warm water. Rinse thoroughly.

Courtesy of Oswego Co. Cooperative Ext.
Mexico, N.Y.

Refinishing Soapstone

When I was looking for a black slate sink like our neighbor's, a fellow showed up with what he thought was one. It had been sitting in a shed, covered with paint and grime, and its bottom was pitted. At first I was disappointed to find it was actually soapstone, but we took it for $20, not wanting to delay completion of the bathroom any longer.

Its badly worn edges were easily renewed and rebeveled with a sanding block. An orbital sander prepped up the stone faces. Black epoxy paste was used to fill deep pits and to caulk the joints. (Silicone compounds don't stick well—they call soapstone "nature's Teflon.") We drilled faucet holes in the splashboard with a regular hole saw that chucks into a portable drill.

Still not impressed with its chalky-grey appearance, I first rubbed a very small amount of vegetable oil into the soapstone. What a difference! The veins of color (green, grey, and red in the predominantly black sink) came out; even the epoxy in the pits looked natural. But the oil became tacky after a while, so I scoured it with detergent and turned to Glidden's Glid-Tone Clear Finish Oil, following their directions for use on wood. It, too, brings out depth and color highlights but doesn't get tacky. Similar oil products would work as well, I'm sure.

I love my sink!

Linda Snow
Farmington, N.H.

Got Any Tips?

Do you have any hints or short cuts that might help other old-house owners? We'll pay $15 for any short how-to items that are used in this "Restorer's Notebook" column. Send your hints to: Notebook Editor, The Old-House Journal, 69A Seventh Avenue, Brooklyn, N.Y. 11217.
Dumb-Waiters

In the past year, a number of subscribing members have asked for information on dumb-waiters. Since the OHJ editors had nothing in the files on the subject, we asked for help in the November issue. And the members listed below came through in heroic fashion. Among the data sent in were numerous drawings and specifications from turn-of-the-century manufacturers, and Xerox copies from several out-of-print books. Most interesting were some 1916 data sheets from the Sedgwick Machine Works. It turns out that Sedgwick is still in business, turning out essentially the same dumb-waiter (see box).

Special Thanks To...

...the following OHJ members for answering our call for help on the subject of dumb-waiters:

Richard Lucier, Jacksonville, OR
Arthur Meggert, Architect, Hamilton, NY
Francis O. Krupka, Historical Architect, Denver, CO
John Vetrano, Victorian Reproduction Enterprises, Minneapolis, MN
Dale Michels, Parkersburg, WV
J. R. Stuckey, Manhattan Beach, CA

We also received product data about the following old companies: John W. Kiesling & Son, Brooklyn, N.Y.; The Storm Manufacturing Co., Newark, N.J.; and James Murtaugh Co., New York, N.Y. We've been unable to locate current information about these companies and assume that they are out of business.

History

DUMB-WAITERS were used primarily for carrying things to and from the kitchen, especially in commercial establishments and in tall narrow city row houses that had many flights of stairs. Dumb-waiters would transfer food from a ground-floor kitchen to the formal dining room above. They were also used to hoist supplies from the cellar to the kitchen, to transport laundry and supplies throughout the house, and to send garbage to the cellar.

DUMB-WAITERS were in use as early as the beginning of the 19th century—and probably earlier. Loudon's "Encyclopaedia of Cottage, Farm and Villa Architecture and Furniture" published in London in 1834 contains sketches of what Loudon calls "rising cupboards." These operated on the same principle as the devices that came to be known later as "dumb-waiters."

A DUMB-WAITER consists of a car enclosed in a shaft and suspended by ropes from a pulley, or pulleys above, so that it may be raised or lowered by means of a hand rope. The car is counterbalanced by iron weights. The extra weight of a load in the car is offset by friction in the pulleys, or is resisted by some sort of locking mechanism or brake. Sedgwick, for example, had (and still has) a model they call the "Automatic Brake" dumb-waiter. There is a lock in the front bearing of the main shaft so that the car is always "locked" except when the rope is pulled.

DUMB-WAITERS or light elevators intended for buildings of several storeys were usually provided with a brake for the hand wheel. A check rope is attached to the brake lever, which allows the operator to regulate the speed of the car when descending. The counterweight is adjusted so that the car will descend when the brake is released. The drawing at the right shows the band brake mechanism (published in 1906) for one of the Sedgwick heavy-duty dumb-waiters designed for large buildings.

The car is steadied in its movement up and down by guide rails that are fixed to the shaft framing. Sometimes the entire assembly of pulleys, gearing, car, ropes, runs, counterweights, etc., were bought as a package from the manufacturer and assembled on site. The builder could also just buy the hoisting machinery and have a local carpenter fashion the car and guide rails, and install the ropes.

Restoration Pointers

Hand-operated dumb-waiters are relatively simple mechanisms. Assuming that all of the pulleys are still in place, there are two major problems that are likely to occur: (1) Ropes stretch and/or break; (2) Guide rails get out of alignment. Problems with the guide rails can be quite troublesome. The reason that the installation specs call for bridging every 30 in. (see drawing opposite) is to provide a firm anchorage for the guide rails. However, if the house frame itself has shifted or settled, then obviously the bridging will move, too. In many cases, it should be possible to undo and re-align the guide strips.

For minor alignment problems, some cars had a guide adjustment at the top of the car. You may be able to correct small problems by adjusting this mechanism.

In some houses, people who no longer wanted to use the dumb-waiter converted it to a small closet by nailing the car to the framing. If the pulley machine is still in place, it should be possible to re-activate these systems by installing new ropes.

Note that all systems use a counterweight to balance the car, similar to a double-hung window. In a restored system, where some of the components (especially the car) have been replaced, you may have to adjust the counterweight.

Three Sources for Dumb-Waiters

- Sedgwick Machine Works, Prospect St., P.O. Box 630, Poughkeepsie, N.Y. 12602. Tel. (914) 454-5400. This is the oldest company in the dumb-waiter business. It manufactures both electric and hand-powered dumb-waiters. Free catalog.

- Vincent Whitney Co., 1760 Bridgeway, P.O. Box 335, Sausalito, CA 94965. Tel. (415) 332-3260. This firm specializes in hand-operated dumb-waiters. Capacities range from 5 lb. to 250 lb., with prices from $500 to $1,850. Free brochure; specify whether for residential or commercial use.

- Flinchaugh/Murray, 390 Ebert Lane, York, PA 17403. Tel. (717) 854-7720. Sells electrically powered dumb-waiters only. Free brochure.
EARLY METHODS of floor cleaning did not help improve floor appearance, either. Well into the nineteenth century, softwood floors were periodically—even daily—scrubbed with lye water. This not only acted as a cleaner, but also as a preservative and, over a period of time, gave the floors a brown to brown-grey matte color. In the 1870's, a formula for cleaning or scouring boards called for:

"Lime, 1 part; sand, 3 parts; soft soap, 2 parts. Put a little on the boards with a scrubbing brush and rub thoroughly. Rinse with clean water and rub dry. This will keep the boards of a good color and also will keep vermin away."

A SOURCE from the same period recommends the following to obtain a "beautiful appearance":

"After washing them very nicely with soda and warm water and a brush, wash them with a very large sponge and clean water. Both times observe to leave no spot untouched, and clean straight up and down, not crossing from board to board, then dry with clean cloths, rubbed hard up and down in the same way.

"The floors should not often be wetted, but very thoroughly when done, and once a week dry-rubbed with hot sand and a heavy brush, the right way of the boards.

"The sides of stairs or passages on which there are carpets of floor-cloth should be washed with a sponge instead of linen or flannel, the edges will not be soiled. Different sponges should be kept for the above two uses, and those and the brushes should be well washed when done and kept in a dry place."

TO THIS TREATMENT was added occasionally a rub-down with clay or brick dust. It should be obvious that, while the floors may have been sanitary, all this did not provide the kind of finish we like today.

HARDWOOD AND PARQUET floors were probably spared most of this treatment. Instead, they were treated to create the color which was worn and bleaching was common. The dark color of walnut was "de rigueur" after World War II. Most floors will have previous finish coats and an abundance of wax build-up, giving them a dirty, lifeless look.

"Just Like New"

UNLESS THERE IS an overriding concern for historical accuracy, you are now confronted not necessarily with saving the whole floor, but with arriving at something (a) with which you can live, and (b) which is compatible from an aesthetic point of view with your building (and this does not have to mean a slavish copy of the old).

HOW DO you do it? The first thing you don't do is call in someone who will guarantee to give you a "like new" floor and who shows up with all sorts of sanding machines to take the floor down to a nice smooth surface so that a nice new finish using the latest polyurethane sealant can be applied. While conditions do indeed sometimes merit sanding, this approach ignores the fact that there is a world of difference between "an old floor" and "a floor made of old wood." Sanding the former will make you end up with the latter.

AN OLD FLOOR depends for its character upon the patina it has acquired and the wear it has undergone. A floor can be cleaned and polished, its splinters removed, holes filled, and still retain its character. But power-sand some fine old floors--wide-plank especially--and you may regret it. Where once you had mellow boards, each a little different in color and wear from its neighbors, you may end up with boards that have an unappealing sameness about them.

IN THE CASE of parquet, which often is a thin layer of wood, extensive sanding might leave you with no parquet at all. But whatever type of floor is at hand, too often machine sanding is the only refurbishing option considered. Sometimes it is possible to skip the whole dusty process.

THE AUTHOR'S PREFERRED OIL FINISH

IF YOU PREFER to use an antique-type finish, you have to realize that it takes more maintenance. The following is one method for obtaining such a finish:

AFTER CLEANING, if the floor retains some of its original patina and sealing, devote your attention only to the new boards added during repairs. Coat these with boiled linseed oil. This will take about a week to dry enough for recoating. (This depends on time of year, temperature, and humidity.) Once the floor is dry, add another coat. If new boards are a different color from the rest of the floor, add a small amount of pigment to the second coat of oil to blend in the new boards. In adding color, use as little as possible. It is better to apply the tint two or three times in small quantities which also allows one to modify the color between applications, if necessary, rather than to try to save time by smearing on a thick layer.

ONCE THE FLOOR has thoroughly dried, it is then lightly waxed to provide a wearing surface. It will have to be waxed from time to time and it will have to be stripped as wax build-up occurs. It should not, however need refinishing or any other treatment unless it is subjected to damage other than that of regular use.
LET'S ASSUME you want to keep your old floor but want to fix it up. You first have to clean it. Start with a good scrubbing with soap and water, simply to get rid of the accumulated grime. Be sure you use a bristle and not a wire brush. If some dirt won't come up, use a full-strength detergent. (Some of these are almost the equivalent of mild paint strippers.) Do not let water stand on the floor, and rinse off all soap, detergent, etc.

IF THE FLOOR still has remains of varnish and paint on it, the next step is to try a water-soluble paint remover. It is advisable to try this in an inconspicuous spot first to see how it works and to develop the proper application procedure. This work has to be done in small areas at a time. Do not spread a gallon of paint remover around on the floor and then try to clean. Be sure the clean areas overlap each other. [See "Floor Refinishing--A Radical Alternative", Aug. 1977 OHJ.]

AFTER THIS initial cleaning and paint removal, allow the floor to dry thoroughly. Then clean the floor a second time with a non-caustic cleaner. These are manufactured by various companies under assorted trade names. As always, apply with bristle brushes only to a small test area first, and use according to label directions.

Floors With Character

YOU WILL NOTICE, after cleaning the floor, that there will be spots and some discoloration. These are probably water stains, or the result of some other agent having penetrated so deeply into the wood that no amount of cleaning will remove them. You will also find that there are some floorboards which have deteriorated or have been so abused that they are no longer serviceable. You will undoubtedly have to deal with conditions such as splintering, nail holes, holes from pipes, termites, or excessive wear. If you feel you cannot accept certain of these stains and signs of age as marks of character, or if they are hazardous, the affected boards will have to be removed.

There is a world of difference between "an old floor" and "a floor made of old wood." Sanding the former will make you end up with the latter.

REMOVAL OF BOARDS is not easy. Most flooring is tongue-and-grooved and blind nailed. Unless great care is used in removing the board, damage can be done to adjacent boards. I have seen the center of the bad board cut, then the two edge pieces freed. [See "Fixing Old Floors" in this issue.] When replacing boards, match the wood and texture of the existing floor, and do remember that early boards were not sanded but planed smooth, which gives the wood a different surface appearance.

WHEN YOU HAVE the floor repaired and clean, you need to decide whether you want a modern or antique (traditional) finish. Modern finishes are easier to obtain, and the polyurethane ones wear well and can be put down quickly. Their drawback is that they bear no resemblance to old-time finishes. Their high reflectivity does not look like even the most highly polished and waxed floor. An old-time finish gives the wood visual depth and warmth. It almost feels as if you can look into the wood below the surface. A modern finish reflects your gaze, which never penetrates to the wood.

A modern floor finish is not necessarily incompatible with an old house. You have to make a clear distinction between aesthetic appropriateness and historical accuracy.

IF YOU OPT for a modern finish, your best bet is to get a professional to do the job. Some of the materials used are highly volatile. If you do the job yourself, read all instructions carefully and follow them exactly. And above all, have lots of ventilation and no open flames. You might also prepare yourself for feeling as if you'd had "one too many" if you inhale the fumes. A modern floor finish is not necessarily aesthetically incompatible with an old house. Much will depend on your furnishings, color schemes, and of course, the use the room gets. You have to make a clear distinction between aesthetic appropriateness and historical accuracy.

INCIDENTALLY, the greatest harm to floors and rugs is done by the grit which we carry on our shoes. This acts as an abrasive, wearing down the finish no matter which you've chosen. If you want to minimize floor maintenance and save your carpets, take off your shoes at the door and put on felt-soled slippers. An additional bonus: Your house will stay cleaner.

I'D LIKE TO reiterate a couple of fundamental points before closing. First and foremost, do nothing in haste. Each floor is a separate and distinct problem. Don't assume that power-sanding is the only way to renew the floor. Always experiment in a small and inconspicuous spot (inside a closet is ideal). And finally, decide whether you want modern convenience or museum accuracy. What is acceptable and satisfying in your home is emphatically not what would be appropriate in a museum.

There are no floors in a museum.

DR. FREDERICK HERMAN is an architect practicing in Norfolk. He is a partner in the firm of Spigel, Herman, Chapman, Ltd., and has served as chairman of the Virginia Historic Landmarks Commission. Dr. Herman has written for THE JOURNAL before, on topics from masonry to picket fences.

Coming: FLOOR FINISHES COMPARED
**Mold Is Alive**

To The Editors:

**WE HAVE A 30-YEAR-OLD log house, built in a heavily wooded area above an inland lake. The house is built on a two-foot-high crawlspace. After a particularly damp summer, we are plagued with mold in the crawlspace. Any suggestions?**

John Dunn

Pontiac, MI

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**Freshening Stucco**

To The Editors:

**I HAVE A PRAIRIE-STYLE house, built in 1905. It is stuccoed on the lower part and shingled on the upper portion. What can be done to the exterior stucco? Can it be restuccoed to give sharp features? If so, is it expensive and does there come a time when it can't take any more layers? Or shall I just wash it?**

George Dietz, MD

Oak Park, IL

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**Stripping A Tub**

To The Editors:

**THE PORCELAIN on the inside of my antique claw-foot bathtub is in good condition. But the unporcelainized cast iron on the outside needs refinishing. What is the best way to remove the paint, and what kind of paint should be used to repaint the surface?**

Cheryl Roth

Fort Wayne, IN

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**Carpet Strip Holes**

To The Editors:

**OUR COLONIAL REVIVAL house has oak floors that have always had carpet over them. Therefore, they should be in good shape for refinishing, except for the holes caused by the carpet strip. What would be the simplest method to patch them?**

Jan Jennings

Stillwater, OK

---
You can fill small holes with wood putty. This hardware-store item comes as a powder and is mixed with water just before use. Putty can be stained to match the wood.

The carpeting strip is usually right along the edge of the room, under the baseboard molding, where a shoe molding would ordinarily be. If new shoe molding is installed after the carpeting strips are lifted, the molding will cover the holes.

**Beetles and Weevils**

To The Editors:

We have discovered powder-post beetles in some of our wood cabinets, and wish to get rid of them. Should we use Chlordane or penta?

Jamie Alexander
Cincinnati, OH

Answer:

Chlordane is a highly controlled substance these days. Pentachlorophenol is the poison in such wood preservative products as Wood-Life. Penta should not be used indoors.

Powder-post is a name incorrectly applied to a whole group of beetles and weevils (even by pest-control people). Actually, there is a true powder-post beetle, but it mostly attacks new wood. If your pantry cabinets are old, you probably have anobiid beetles or weevils.

First you should determine if the colony is still active, or if the evidence you see is just an old scar. If you have an active colony, call in a professional. Anobiids and weevils attack both hardwood and softwood.

**Dirty Bathroom Tiles**

To The Editors:

How can we clean the little white hexagonal tiles on our bathroom floor? We'd like to get the existing floor clean, without replacing the tiles.

Sheila & Randy Thunfors
W. Stockbridge, MA

Answer:

The advantage—and disadvantage—of those old-fashioned tiles is that they are not glazed. This makes them non-slippery even when wet, but it also allows them to pick up stains. A good hands-and-knees scrubbing with detergent and household bleach mixed in hot water will improve the color of the tiles. Journal editors have had success bleaching dingy tiles by just letting a strong solution of bleach and hot water sit on the floor for an hour.

Dirty or deteriorated grout between the little tiles contributes to a dingy appearance. The grout can be brightened by washing with muriatic acid (from the hardware store). Or, you may want to have the floor regROUTed.

**Beeswax**

To The Editors:

You recently published a formula for an old-fashioned furniture wax (OHJ Nov. 1980, pg. 175) based on beeswax. Where does one get beeswax these days?

Eleanor Hamilton
Trenton, NJ

Answer:

You can get finishing-grade beeswax from Behlen Bros., Rt. 30 N., Amsterdam, NY 12010. (518) 843-1380. Cost is about $6 per pound; call for latest prices before ordering.

The Bee Supply Co. sells beeswax straight from the source. It has already been somewhat purified, but can be further purified by melting down. Cost is $4 per pound, plus shipping. Supply is limited. Write 60 Breakneck Hill Rd., Southboro, MA 01772. (617) 485-8112.

**Hardwood Source**

To The Editors:

Can you help me locate a source for exotic hardwoods—such as ebony, rosewood or black walnut? I have had trouble finding a supplier for these woods in my area.

Peter Maneck
Cary, IL

Answer:

Fine Woodworking magazine published a list of hardwood sources by state, in their January/February '80 issue. Their back issues cost $2.50, and may be ordered from The Taunton Press, 52 Church Hill Rd., Box 353B6, Newtown, CT 06470.

Send your questions with pictures or drawings, if possible. (We prefer black & white photographs.) We cannot promise to answer all questions personally, although we will try to answer all questions from current subscriber/members. Questions of general interest will be answered in print. Write: Questions Editor, Old-House Journal, 69A Seventh Ave., Brooklyn, NY 11217.
LAST MONTH we looked under the floor—at joists, girders and posts—for problems that cause sagging, sloping and creaking. That discussion is continued on p. 50 in this issue, with directions for installing jack posts.

UNDER THE FINISHED FLOORING you can see, there is probably a rough sub-floor spanning the joists and supporting the load. Not every floor is made up of a sub-floor and a finish-floor, though. In early American construction, a single layer of heavy boards was laid perpendicular to the joists. These boards were left rough underneath, but planed smooth on top. By the early nineteenth century, builders would lay a sub-floor of rough boards, with a thinner finish-floor put down at right angles (90°) to the sub-floor, and so parallel to the joists.

SOMETIME AROUND 1920, diagonal (45°) sub-flooring was introduced, making it possible for the finish-floor to be laid either perpendicular or parallel to the joists.

THICK PLANKS of pine and other softwoods continued to be used as flooring long after 1800, of course, and there were other anachronisms. Even if your house was built in the mid-Victorian period, for instance, you might find only sub-flooring laid in some rooms. This is because popular wall-to-wall carpeting was occasionally put down right over the sub-floor. Attempts to refinish rough sub-flooring as a finish-floor are usually unsuccessful, by the way. Save your socks from splinters and, instead, put down a covering of hardwood, parquet, carpeting, or a modern material.

IN A LATE 19th century house, you might even find a floor with softwood in the middle, and finished hardwood around the edges. This generally means the center of the room was intended to be covered by a large carpet—and the original owner was economizing on expensive hardwood.

**Sub-Floor Repairs**

SUB-FLOORS don't often need major repairs. Nevertheless, if this part of the understructure has gotten very dry or very wet over the years, it may need attention. If the floors in your house were constructed with a rough sub-floor under the finish-floor, you'll have to be sure this sub-floor is sound before getting around to visible repairs on top of the floor.

IF THE SUB-FLOOR has dried and shrunk, it may not be resting on the supporting joists and so will creak when weight is applied at that point. If there is a space between a joist and a sub-flooring plank, drive a wedge between them; this tightening will silence squeaks. If much of the floor creaks, brace the sub-floor by nailing a length of 2 x 6 or 2 x 4 to the sides of the joists, up tight against the sub-flooring boards.

EXCESSIVE WATER, especially around toilets, bathtubs, and the kitchen sink, may have rotted the sub-flooring. Look for symptoms in the finish floor: Buckling of the surface, discoloration of wood, a spongy texture under-
When the floor is over an unfinished single layer of flooring can be an asset or a problem depending on what kind of floor you have. Thick planks of mellow heart pine in an 1820 house should not be covered over with linoleum or carpeting, nor should they be refinished as you might refinish a 1920 strip-oak floor. On the other hand, some early plank floors are today in unsalvageable condition, stained and splintered, with impossibly large cracks between boards. Too, a single layer of boards may be the sub-flooring, left when an early carpeted, linoleum, or hardwood floor was removed. As previously mentioned, rough sub-flooring rarely makes a suitable top layer.

If you have a single layer of flooring, you might decide to cover it with a resilient covering (linoleum, asphalt tile), carpeting, or ceramic tiles. This will require that you first put down an additional underlayment of 5/8-in. plywood, or 3/8-in. hardboard, before installing the finish-floor material. Rough spots, low spots, and cracks will show through and eventually damage resilient coverings and carpeting. A single layer of boards is apt to give a little, so cemented or grouted coverings will soon work loose.

First, be sure that the existing sub-floor is sound—not cracked or rotted. Walk over it, and wherever it squeaks or deflects under your weight, drive extra flooring nails through to the joists. Plane down high spots, and shim low spots with thin pieces of wood or several layers of building paper. Then nail the plywood or hardboard over that, countersinking every nail head. Now the final finish layer can be put down.

Hardwood floors, if at all possible, should be repaired and finished naturally...not painted or covered over with carpeting. A hardwood floor is a valuable asset, as the cost of repairs and replacement boards will attest, and well worth your investment of time and/or money to restore. In Part 3, we'll cover visible repairs to the finish-floor, which is the final step before surface refinishing.

**Floorboard Joints**

1. **Butt Joint.** Simple butt joints make it easy to take up damaged boards without disturbing adjacent ones. Such floors are likely to have developed wide spaces between the boards. To prevent drafts coming up, many builders laid a thin slip of wood (1/8 in. thick by 4 in. wide) under each joint.

2. **Shiplap.** Still a simple joint, this one was used in early construction.

3. **Spline.** This is a rare type of joint for flooring. It was used in high-quality construction from the early 18th century until tongue-and-groove flooring took over.

4. **Tongue-and-Groove.** This is a later method of joinery, very common and still in use today. It provides a strong joint between boards, and allows each board to be blinded through its tongue.
**Using Jack Posts**

**First Position** the base plate. (Use lead expansion anchors to attach the base plate to the concrete, or follow directions that come with the post.) Set up the steel tubes, raise the post to the approximate height, and insert the pin or pins in the proper holes to lock the post in the raised position. Follow instructions for attaching the adjustable screw jack on top. Be sure the screw jack is fully lowered with the top plate almost touching the beam against which it will press.

SLOWLY RAISE the adjusting screw only until the top plate is in firm contact with the timber. Now check to see that the post is perfectly plumb, or vertical. Give the screw one more 1/4 turn, then STOP. That's enough pressure for now.

THREE OR FOUR DAYS later, give it another 1/4 turn. You must proceed very gradually because this tremendous pressure could damage other areas of the house. Continue turning the screw no more than 1/4 turn every three or four days, until the floor is level. Faster jacking could cause cracking of plaster walls, damage to other structural beams, and even rupturing of masonry or plumbing. Each time the jack is elevated, the house must have time to slowly settle.

T**he steel jack post can be used merely as a jack, later to be replaced by a wood post. It can also be left in place permanently. (Some municipalities will require that you weld the screw jack in position, or that you box it in.) If you intend to replace the jack post with a wood post or metal lally column, jack the floor a bit off mid-point of the sag to allow for proper placement of the permanent post. Use hardwood shims to bring the permanent post to the precise level of the jack post(s).

REMEMBER: Metal jack posts can’t be the answer to every sagging, sloping floor problem. When the cause is not adequately understood, you risk lifting the whole floor—sag and all—upwards and right off the sill. Always correct structural problems first...and sometimes jack posts will be part of the overall solution.

**To Find the Sag**, and determine placement of the new jack posts, look at the under-floor structure. The low point may be clearly visible, but you can also check the underside of the sagging joist or girder with a spirit level. Or, stretch a string tightly across the floor of the room above and measure the distance from the string to the lowest point of the sag.

OCCASIONALLY one post, strategically placed under the sag’s mid-point, will suffice. Much of the time, though, you’ll need two posts and a piece of heavy timber as a brace for all the joists under the sagging area. (You can use two 2 x 10’s bolted together as a girder.)

AS YOU BEGIN to jack up the sagging floor, the post will exert as much downward pressure as it exerts upward, so it is important that the post rest on a solid foundation. If the basement floor is at least 4 inches thick and not cracked or crumbling, it will probably support the weight. Otherwise you’ll need to pour a footing for the post to bear on. Break a hole in the cellar floor, 2 ft. square and 12 in. deep. You can mix up your own concrete from 1 part Portland cement, 2 parts coarse sand, and 4 parts gravel. (If you buy dry ready-mix concrete, get gravel mix.) Let the new footing cure for a week before installing a post on top of it.
The first 15 issues of The Old-House Journal (Oct. 1973 through December 1974) are now out of print. That means that those first 180 pages of know-how and old-house common sense are no longer available...except to those people who buy "The Old-House Journal Compendium."

When the folks at Overlook Press heard that inventory problems were forcing us to discontinue those 1973-74 issues, they urged us to include that information in a collection of OHJ material that they proposed to bring out in book form. That’s how "The Old-House Journal Compendium" came into being. It includes all of the significant how-to articles from October 1973 through December 1977.

In addition, there’s 40 pages of new introductory material by Clem Labine, Editor of The Old-House Journal. The new articles cover a lot of the restoration basics, including: Selecting The House That’s Right For You; Determining Your House’s Style; Appraising The Structure; Avoiding Remuddling Mistakes; Constructing A Master Plan; When To Hire An Architect; Selecting A General Contractor; Remodel Or Restore?; The Interpretive Restoration.

The Compendium is a great gift...either as a housewarming present for a friend, or as a treat for yourself. If you like the monthly Old-House Journal, you’ll love the Compendium!

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"The Old-House Journal Compendium" is available at all quality booksellers. If they don’t have it in stock, they can order it for you from Viking Press.
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Examples of types of ads eligible for free insertion: 1) Interesting old houses for sale; 2) Architectural salvage & older house parts for sale; 3) Restoration positions wanted and vacant; 4) Hard-to-find items that you are looking for; 5) Trades and swaps; 6) Restoration and old house services; 7) Meetings and events.

Free ads are limited to a maximum of 50 words. The only payment is your current OHJ mailing label to verify your membership/subscriber status.

Deadline will be on the 5th, 2 months before the issue. For example, ads for the December issue are due by October 5th.

Write: Emporium Editor, Old-House Journal, 69A Seventh Ave, Brooklyn, NY 11217.

BOOKS AND PUBLICATIONS

BOOKLETS REPRINTED by old-house dwellers especially for preservationists, handypersons! "Coal Furnace Operation" * "Weatherproofing Old Houses" * "Old Plumbing/Water Heaters" * "Steam Heating Systems" * "Slate Roofing" * "Tile Roofing" * $3. each, first class postpaid. STU MAHLIN, 2500 Observatory, Cincinnati, OH 45208.

INVENTORY OF HISTORIC SITES in Calvert County, Charles County and St. Mary's County. The soft cover 192 pp. book contains descriptions of 928 historical sites, many accompanied by photographs or drawings. Also architectural history of each county, $10, includes postage and handling, must be prepaid. Maryland Historic Trust, 21 State Circle, Annapolis, MD 21401.


VICTORIAN DETAIL DICTIONARY for potential collectors of Victorian furniture, profusely illustrated with historical background, by Francis Mayers. $13.95, Oak Cottage Farm, 103 High St., Armonk, NY 10504. (914) 666-4418.

WANTED

ETCHED GLASS: To match pattern as represented in above drawing. Douglas C. Purcell, Box 53, Eufaula, AL 36027.

SUMMER SCREENS for our 4 fireplaces. 3 at 20 or 20 1/4 in. wide x 30 in. tall. 1 at 24 ft. in. x 30 in. tall. Please send price list. S. Thompson, 710 W. Second, Madison, IN 47250. (812) 265-3174.

WANTED TO BUY—Piece of fancy interior fretwork (prefer teak) 1 ft. to 8 ft. long, approximately 2 ft. high. To be used as a divider between front parlor and bay window ceilings. Send photo. M.J. Kelly, 637 So. Main St., Dayton, OH 45402. (513) 222-6658.

MACHINE ROLLED GLASS such as that found in my front vestibule. See rubbing above. David Rosensthal, 273 W. Chestnut St., Kingston, NY 12401.


ALEX SMITH CARPET (Designer Gallery) "Needlepoint Garden" pattern. Almost any shape or size that is anything near 9 ft x 12 ft New or Used. Contact Desperete, 251 12th St. SE, Washington DC 20003.

DOUBLE ENDED Victorian tubs: "Rheims", "Hague" or "Venice", preferably made by Tey Plumbing Supply, Dickson Woodworking, P.O. Box 537, Pescadero, CA 94060. (415) 877-0842.

TOOL with which to make dark bead between mortar joints on foundation of 1893 Chicago house. The bead measures about 1/4 in. in width. T. McManamon, Berwyn, IL 60402.

CUSTOM-MADE ARCHITECTURAL ornamentation/artwork available in lightweight, pre-engineered polymers for antique structures—mouldings, ceiling medallions, overdoor pieces, recessed domes, etc. Hallie Bromley, Special Services, Focal Point Inc., 2005 Marietta Rd., NW, Atlanta, GA 30318. (404) 551-0529.

WANTED & NUMBERED pen & ink prints of old homes and buildings of Western KY. 11 in. x 14 in. sepia on ivory paper. Subjects are: Log House — Courthouse — Relay Station — Dr's Home — 18th century Inn. $7.50 ea. PPD. Roger Morris, P.O. Box 183, Carsons, KY 42030.


WIDE PINE BOARDS approx. 20 in. wide. Also wide oak boards. Dale Carlisle, R1, 123, Dept. RPN, Stoddard, NH 03464. (603) 446-3527.

AUTHENTIC ANTIQUE American residential leaded, stained and beveled glass windows. Ask for Greg or Sue. (614) 889-0894.

OLD FRENCH DOORS—Beveled glass, original finish 60 in. wide x 80 in. high. Mint, $500. set. Also glass-chip (fractured) set with refinished pine frame encasing 10 lites/door $400—48 in. wide x 78 in. high. Photos $2 each. Architectural Antiques Warehouse, P.O. Box 3065, Stn "D", Ottawa, ONT, CAN K1P 6H8. We ship anywhere.

HANDCRAFTED BRASS & copper lanterns, leaded art glass, lighting fixtures restored, lighting fixtures of distinction. $2 Catalog. Henderson Lighting. P.O. Box 585, Southbury, CT 06488.
OLD WHITE PORCELAIN pedestal sink with faucet. 12 in. sq. base tapering to 4 in. sq. column. Very good condition $50. Also eight 4 in. plate, solid brass steeple finial hinges. Brand new $120. 325 Moira Cove Rd., Roslyn Harbor, NY 11576. (516) 621-1126, after 7 pm.

EMBOSSED HARDWOOD mouldings stocked and special millwork manufactured on a quotation basis. 2 catalogs available with pictures, sizes, etc. for a cost of $6. refundable on orders of $100 or more. Driwood Moulding Co., P.O. Box 1729, Florence, S. C. 29503. (803) 689-2478.

RESTORATION SERVICES


ARCHITECTURAL/RESTORATION woodworking - Cabinets, furniture and reproduction doors. Will work from architect's drawings or reproduce existing woodwork. References available. In New York City area. Lawrence Mead, 955-3884 days, 766-3221 evenings.

ARTIST ILLUSTRATOR will draw renderings of houses from photographs. Contact Dale Michels, 1126 Avery St., Parkersburg, WV 26101.


Expert HELP FOR old-house owners (and owners to be), deluding architectural services, research and National Register nominations, technical writing, and consulting services. McKee & Associates, 25 Englewood Rd., Bronxville, NY 10708. Contact Dr. Mckee, 1126 Avery St., Parkersburg, WV 26101.


REAL ESTATE

1805 HISTORIC CENTRAL chimney cape with 5 fireplaces, 1 with bake oven, wide board floors, 4 bedrooms, living room, family room, dining room, Woodmode kitchen, 2 full bathrooms, 2 car garage, set on scenic 3/4 acre (more land available) in upstate NY. 1 mile from the village of Morrisville. $57,900. (315) 655-6333.

COLUMBIA VA - Large 7 bedroom, 3 bath Victorian home, 4,000 sq. ft., modern kitchen and 19th century store building equipped with original shelves and counters, 8,400 sq. ft. on 2+ acres, located in 18th century town on the James River. Could be used as artist's studio or country store for large family. $89,500 for both buildings. Boyer & McGarock, Ltd., Reed Rooms, Three Boots Inn Lane, Charlottesville, VA 22901. (804) 293-6131. Deborah Murch, eves. (804) 589-3083.


HISTORIC 1843, 2 story brick home on 1 acre, 1500+ sq. ft. living space. Twelve rooms, 2 baths, modern kitchen, spiral staircase, 2 fireplaces, wood burning furnace, $110,000. M.B. Smith, 3 Capitol Hill, St. Louis, MO 63136.

OLD PORTLAND style family home with natural wood set in oak floor, beamed den, open spaces, window seat. Pamela Webb, 2706 SW Hamor Ave, Portland, OR 97210. (503) 224-2508.


1870's VICTORIAN ITALIANATE, National Register, 20 miles SE of Columbus, OH. Restored. New furnace, insulated. Natural woodwork, graining, and wide-plank red pine floors. 1840's saltbox log cabin in rear section, brick springhouse and frame summer kitchen. Curvilinear staircase. 4-5 bedrooms, 2 parlors, dining room, modern kitchen, 2 marble fireplaces. M. Shore, 350 W. Main St., Amanda, OH 43102. (614) 569-4520.

NORTHBOROUGH, MA. 9 room, center hall, 2 chimneys, Georgian Colonial. 4 fireplaces, other antique features. Deed back to 1823, probably older. Big barn, shop, outbuildings on almost 2 acres bordering forest course. 45 min. to Boston. Picture available $145,000. (617) 933-6843.

1905 HISTORIC CENTRAL chimney cape with 6 fireplaces, 1 with bake oven, wide board floors, 4 bedrooms, living room, family room, dining room, Woodmode kitchen, 2 full bathrooms, 2 car garage, set on scenic 3/4 acre (more land available) in upstate NY. 1 mile from the village of Morrisville. $57,900. (315) 655-6333.

MEETINGS AND EVENTS

ON MARCH 6-8, 1981 at the Durham Civic Center in Durham, NC. Houseworks: A Marketplace of Preservation Ideas will present a wide variety of craftspeople and business owners in the preservation field. Lectures, movies and demonstrations will supplement the exhibits. If you are interested in exhibiting contact: Stagsville Center, P.O. Box 15628, Durham, NC 27704.

PRESERVATION ENGINEERING for the homeowner: 6th Annual Historic Preservation Conference, Jonesboro, TN Historic District, April 9-11 in Tennessee's oldest town. Norman R. Weiss, Richard I. Ortega, and David C. Fischetti. Topics will include Basic Principles of Structures, Recognizing Problems in the Old House, Behavior of Traditional Building Materials, Modern Engineering Repairs, etc. Participation is limited to 100 applicants. For information contact: The Jonesborough Civic Trust, P.O. Box 159, Jonesboro, TN 37659. Tel. (615) 753-8281. Co-sponsored by the Jonesborough Civic Trust and The Old-House Journal.
New!

1981 Catalog

Take Advantage Of 33% Subscriber Discount

Practically Everything Is New about the 1981 Old-House Journal Catalog: New companies, new listings, and new information about old companies. Here's a partial list:

- More pages—40% more than the 1980 edition;
- 328 companies were added—ones that did not appear in the 1980 Catalog;
- More than 1,100 companies are listed;
- 74% of the companies who are repeating from the 1980 Catalog have changed addresses, phone numbers, product lines or literature prices;
- 53 companies were deleted because they have gone out of business, or because they didn't return the verifying questionnaire, or because they didn't live up to the editors' service standards;
- 18 entirely new categories were added to the Product & Service Directory;
- 1,640 new listings will be found in the Product & Service Directory.

Use Order Form on pg. 51E. Or send $7.95 (price to non-subscribers is $9.95 + $1 postage) to: The Old-House Journal, 69A Seventh Ave., Brooklyn, N.Y. 11217. Catalogs are shipped via United Parcel Service, so give street address—not a P.O. Box number. Allow 4-5 weeks for delivery.

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The electric heat gun softens paint in a uniform way so that it can be scraped off with a knife. Some clean-up with chemical remover is required, but the volume needed—and the mess—is vastly reduced. The Heat Gun is safer; it avoids the hazards of methylene chloride vapors present in paint removers. Operating temperature is lower than a propane torch, avoiding danger vaporizing lead. See article in November 1979 OHJ for operating details.

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IF YOUR GROUP NEEDS TO RAISE MONEY...

Last Year, The OHJ Awarded $10,000 In Matching Grants.

Here's How To Get Your Share In 1981.

The Old-House Journal Group Rate Plan is like a matching grant program. It's a fast way for any preservation group or neighborhood organization to raise money. These groups were awarded $10,000 in 1980, and there's a lot more available in 1981. Here's how the program works:

1. Minimum number of subscriptions eligible for the group discount is 10 at a time; (2) Subscription orders should be submitted on forms supplied by OHJ; (3) Deadline for subscriptions qualifying for the group rate discount is November 30, 1981.

Here's one hint: The groups that had the most success raising money with the plan last year did it via in-person presentations at one or more of their meetings. Groups that relied on selling subscriptions by mail or through their newsletters had much less success.

To get full details and the necessary order forms, write to us on your group's letterhead, or fill out the coupon below. Or you can call us at (212) 636-4514.

The Old-House Journal

Please send details on how our group can raise money with the OHJ Group Rate Discount Plan.

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Mail to: The Old-House Journal, 69A Seventh Ave., Brooklyn, N.Y. 11217.
IN ADDITION to their 10 standard plans, the Bunkers do custom designs. For example, they designed a house for a doctor in Crested Butte, CO, that fits into the existing neighborhood. The new house is in keeping with the 1860's neighborhood's character.

You can get their brochure and price list for $4.00 from Victorian Home Plans, Box 53, Dept. OHJ, Hygiene, CO 80533. (303) 772-3882.

**Lightning Rods**

We're often asked where to buy old-fashioned lightning rods—the kind with gleaming copper, and glass balls. Victorian Reproduction Enterprises sells rods that are both decorative and functional.

These rods are designed to be grounded, but anyone planning to use one as a lightning protection system will be asked to supply a detailed roof-line drawing with measurements. Decorative parts—which are also sold separately—include wind-vanes, star ornaments, and durable plain and colored glass balls.

The complete system for a 3-storey house runs between $500. and $1000. This company offers a catalog for $5., refundable on first purchase: Victorian Reproduction Enterprises, 1601 Park Ave. So., Dept. OHJ, Minneapolis, MN 55404. (612) 338-3636.

**Corner Beads**

Corner bead is a rounded wooden rod, notched to go on the outside corner of a plaster wall. It is useful as well as decorative. It can also protect wallpaper by keeping it from tearing at the edges. Corner beads were commonly found in turn-of-the-century houses, but were often removed later on.

Crawford's Concepts stocks corner beads in unfinished pine so that they can be stained or painted to match existing trim. They measure 47 3/4 in. x 1 5/8 in. and are notched at 45°. Price ranges from $8.50 for a single bead to $8.00 each for a lot of 12. Write or call Crawford's Concepts, 301 McCall, Dept. OHJ, Waukesha, WI 53186. (414) 542-0134.

**House Plans**

Bunker is a builder and his brother Ron is a designer. After working on old houses for about 6 years, they started designing plans for Victorian houses that can be made with new materials, and cost about the same as a regular new house.

**Products For The Old House**