Repairing Old Floors

An article in the February issue dealt with methods for stiffening floors that could be worked on from the cellar. Here we'll deal with sagging floors on upper stories and techniques for repairing the floorboards themselves.

A SAGGING FLOOR on the ground level of a house is less of a problem than on the upper stories—because on the ground floor you can make repairs from the cellar. And your handiwork will be visible only to those you invite down to the workshop.

A SAG IN AN UPPER FLOOR is more vexing because with the joists covered by flooring above and plaster below you can't tell whether there is structural damage or merely harmless shrinking and settling.

ONE SPECIAL CASE is when structural beams have been left exposed as part of the basic design of the house. In this event, it is easy to see if any cracks have developed. But repairs have to be made carefully because the mends will be visible. Two methods for making such repairs are shown at the right.

IN SKETCH A, a T-shaped angle iron is used to bridge a crack. The beam is slotted with a circular saw to accept the web of the angle. Bottom of the beam is mortised to let in the flange of the T so that it is flush with the rest of the beam. Holes are drilled in both ends of the flange so it can be fixed to the beam with long screws.

IF YOU'D RATHER have exposed metal on the sides of the beam because of a particular sight line, sketch B shows a beam mortised on both sides to accept iron plates, which are fastened with heavy screws.

IN EITHER CASE, you may have to use a couple of jack posts to move the beam back into correct alignment before fitting the mending plates.

PAIRS GET MORE COMPLICATED when the joists are hidden by floorboards and ceiling plaster. The situation is greatly simplified if you are planning to replace the ceiling anyway. The plaster can be torn down so you can see what the real trouble is. If you do not have to replace the ceiling—and you suspect structural damage—there is no alternative to lifting some floorboards to take a look.

Two Methods For Mending Cracked Beams

Iron Plates Set Into Each Side Of Beam

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Perspective...

An Expensive Psychosis: The Let-It-Be Syndrome

Many owners taking title to an old house find themselves paralyzed by the "Let-It-Be" Syndrome. This malady can be defined as: "An unwillingness to disturb a surface in order to probe for mechanical problems that may be lurking underneath." In mild cases, this syndrome leads to a few extra dollars in expenses. In severe cases, serious troubles go undetected until disaster strikes.

CausE Of the let-It-be Syndrome is fear: Fear of making a mess; Fear of making holes where none existed before—and fear of not being able to put things right again.

One reason that plumbers and electricians have no difficulty completing their work with dispatch is that they have no emotional involvement with the structure. If they need to open a wall to see what's going on, the wall is torn open—quickly and ruthlessly.

Often the repairs that the hired workman makes are quite simple once the wall, ceiling or floor is open—well within the capabilities of most home craftsmen. What the homeowner is really paying for in these cases is the emotional detachment that lets the workman make holes as needed.

It's unfortunate if the new owner lets someone else do all this exploratory surgery. Not only does it add to costs to have a skilled craftsman do demolition work, but, more important, you really get to learn about your house when you get a chance to poke a few holes yourself. You get a feeling for the house that you can get in no other way.

With the techniques for surface restoration outlined in The Journal (in this issue, for example, we're dealing with floor problems) we're giving the old-house owner the procedures needed to patch any hole good as new.

We make a great distinction, however, between making holes that can be readily repaired and actual removal of material from the structure. Removal of any part of the house's fabric should be undertaken only after a great deal of thought and study. Many an old house has been forever damaged by a new owner's zeal to make "improvements" that have resulted in detail being destroyed or proportions of the house being altered.

—R. A. Labine

Notes from the Readers...

Restoring Rotten Wood

To the Editor:

Occasionally the old-house owner runs into rotten wood in a place that makes it very difficult to splice in new wood. I've discovered a couple of boat supplies that greatly simplify repairs.

One product is called "Git-Rot." It is an epoxy material that penetrates into the wood, and arrests rot by encapsulating the fibers in resin. It hardens into a tough, resilient adhesive that bonds the wood particles into a mass stronger than the original wood.

If the surface has to be filled in, there's another boat material called Marine-Tex. It also is an epoxy and makes a thick paste like spackle. It can be applied to rotten wood after the fibers have been treated with Git-Rot.

Using these materials, I've restored the legs on a 1700 canopy bed and clapboard siding on my 1845 Greek Revival house.

Peter D. Snow
Charlotte, N.C.

Editor's Note: Both products are available through marine supply stores. In addition, Git-Rot can be ordered by mail from Mutual Hardware, 5-45 49th Ave., Long Island City, N.Y. 11101. Price is $3.95 for 4 oz. (plus 75¢ handling) and $10.65 for 1 pint (including postage and handling).
N A SUNDAY MORNING in 1946—a time when Victorian was "Aunt Gertrude's hideous junk" and Tiffany-style lampshades went for $10 to anyone who'd take them down from the kitchen ceiling—writer Carl Carmer, snug in his New York brownstone, picked up the New York Times and read a real estate ad for "a house so ugly that it's beautiful." Intrigued, he and his wife, Elizabeth, drove up the Hudson to Irvington and saw for the first time Octagon House.

HALF-WAY UP THE FRONT STEPS, Mr. Carmer knew Octagon House was going to be his. The price was $8,500. But when you're 20 years ahead of the times, you deserve a bargain.

OCTAGON HOUSE has been described as "an arrested carousel," an image that seems perfect if for no other reason than the emotional response the house evokes. There is about it a sense of exuberance and elation, memories of parties and music, children and dogs, good conversation and loving relationships—the latter perhaps a reflection of the Carmer's marriage of 46 years. At any rate, three minutes inside the front door and one is prepared to believe all of Orson Squire Fowler's claims for the octagon as the ideal shape for a home.

Fowler (1809-87) was a Victorian phrenologist and amateur architect who in 1848 published a book called: "A Home for All, or the Gravel Wall and Octagon Mode of Building." Fowler noted that "nature's forms are mostly spherical...in order to enclose the most material in the least compass," and he mathematically proved that the octagon contains one-fifth more room than a square with the same perimeter.

FOWLER'S OCTAGON HOUSE DESIGN has a central stairwell providing easy access to all parts of the house, receives twice as much sunlight as a square, has no cross lights, accommodates an encircling porch with eight exposures, has no hallways dividing the house and therefore no costly and "unhealthy drafts." He later amended his recommendation of gravel or concrete walls to include brick and frame as well. His intention was a simple, unadorned and therefore inexpensive octagonal structure. Fowler promoted his ideas on the lecture circuit and an octagon fad swept the nation.

IN 1852 ARCHITECT Samuel Sloan proposed elaboration of the simple Fowler octagon. The interesting thing about the Carmer house is that it incorporates both philosophies.

OCTAGON HOUSE WAS BUILT in 1860 for Philip Armour (the meat packer) as a two-story brick house with a hip roof. Armour sold the place in 1868 to an importer of far eastern spices and commodities, named Steiner. Surely under the influence of Sloan (himself influenced by oriental design), Steiner had the hip roof

The verandah, encircling all eight sides, imparts a great sense of motion, making a walker feel as if house were revolving.
removed and added the slate-tiled dome and cupola, resulting in two additional floors. He also built an extraordinary verandah, with wood and cast iron railings. At the same time, the original brick exterior was sheathed with wooden boards.

THE RENOVATION WAS COMPLETED IN 1870, and Mr. and Mrs. Steiner proceeded to fill the 16 rooms with children and servants, until it became necessary to move to a larger house. Octagon House had an ensuing variety of interesting owners, but none more appreciative than the Carmers. They have filled the house with their collection of Federal and Victorian furniture, Hudson Valley primitive paintings, Schimmel eagles and most importantly, friends—to whom their hospitality has been a delight over the years.

WELL IT IS that the Carmers like people, because an architectural showpiece attracts a steady stream of them, curious strangers tumbling in the doors and windows at odd and unexpected hours. And there is another price of living in a highly ornamented and decorated piece of American history: Maintenance.

The slate tiles of the dome are extremely difficult to replace. To work on the roof requires the ministrations of a genuine steeple-jack—and not many homeowners can make that statement. The most recent painting of the verandah cost $5,000 (nearly 3/5 of the purchase price of the entire house) because of the incredible amount of detail that requires careful attention.

ART OF THE DETAIL on the verandah is a mystery that has puzzled the Carmers for 30 years: Who was Prince? The head of a dog—with the name "Prince" showing clearly on its collar—is cast into the center medallion of each railing section. He was probably a treasured pet of the Steiners... but we'll never know. Having invested so much of their lives in the care of Octagon House, the Carmers are naturally concerned about who will maintain it in the future. Listing this important structure on The National Register would help ensure its preservation for future generations.

Of particular interest to readers of The Journal is Carl Carmers's book, "The Hudson," newly issued in paperback by Holt, Rinehart, Winston. It's a history of the river valley that includes all its important old houses.
Re-Creating Period Window Hangings

by Carolyn Flaherty

LD-HOUSE OWNERS WILL FIND very little relevant information in print that deals with window treatments. Oddly, even the manufacturers who reproduce documentary fabrics and re-create 18th and 19th century patterns do not tie in their fabrics with good suggestions on how to use them.

ONE LARGE MANUFACTURER'S current advertisement in the "house and garden" magazines shows some nice documentary patterns—and then suggests that you send $2.50 for a booklet and a cocktail apron made out of this historic fabric.

OBVIOUSLY, THIS WILL NOT HELP you treat your windows to an 18th century lambrequin or a Victorian valance in keeping with the period of your home.

A LITTLE do-it-yourself research of period windows will result in more authentic and often simpler ideas for decorating than the abundance of glossy photos depicting acres of pinch-pleated curtains and wall-to-wall fabric usually offered by decorating magazines.

ALTHOUGH PERIOD DECORATING is rarely done outside of museums and historical societies, it can be simple and rewarding. Since your house is not a museum, you can be free to experiment: You can substitute less expensive and easier-to-care-for fabrics and modify styles, while still restoring much of the original look and feel to a room.

TO GIVE YOU A HEAD START with your own research we have put together some ideas for the handy person and suggestions about fabrics.

FOR PERIOD WINDOW TREATMENTS requiring lambrequins, certain valance styles and decorative cornices (illustrated and explained in the April 1974 issue) you will need a basic cornice board.

FIRST CUT a 1 x 6 in. pine board to a length that will extend to the outer edge of the window casing. Attach to the top of the window using a small shelf bracket, held in place with 3/4 in. screws.

ABOUT THE ONLY CAUTION is to make sure that the cornice board is level before tightening the screws down.

TO MAKE A LAMBREQUIN YOU must first make a pattern. You can do this by simply looking at pictures of period rooms or by visiting museums or historical restorations and copying the scalloped or scroll shape you like best. When using cotton or other lightweight fabrics, it will probably be necessary to stiffen the material. Buckram can be cut in the same shape and glue-stiffened to make it easier to pin or baste the material over it. When covering the buckram with the fabric, be sure the pattern design is centered properly.

WHEN USING A VERY HEAVY fabric such as crewel, wool, brocades, it will not be necessary to use more than a lining. Many colonial lambrequins were made in such heavy wools that they were used without a lining. This kind of lambrequin doesn't have a tight-stretched look to the fabric but is soft and heavy in appearance. Welting, gold braid and other trims outlining the bottom edge also give the lambrequin additional weighting.

TO ATTACH THE LAMBREQUIN, sew hooks on the back of it, and place screw eyes in corresponding positions on the cornice board. The fabric can then be removed when necessary while leaving the board in place. Curtains or drapes are then hung on a rod behind the cornice board.

IF YOU WISH TO MAKE A FLAT, STIFF lambrequin, glue the fabric onto a Masonite pattern which has been tacked to the cornice board. Wallpaper paste works well for gluing fabric.
How To Make A Cornice

FOR A MORE FORMAL APPEARANCE, some period window treatments can use a wooden cornice that projected from the window casing and covered the top of the valance, drapes and curtains.

WHILE OLD-TIME CARPENTERS USED many different joinery techniques in cornice construction, it's possible for the old-house handy-person to fabricate a basic cornice that will be in keeping with the period of your particular house. Many basic design ideas can be copied from cornices seen in period rooms.

WE'LL SHOW HERE HOW TO MAKE a simple cornice that would be appropriate in not-too-formal rooms, the especially early 19th century. The basic idea is to make a cornice that will slip over the basic cornice board that was described on page 5.

THE CORNICE can be built up from standard lumber as shown in the cross-section. The 1" x 6" pine board is cut so that it surrounds the front and sides of the cornice board. These three pieces are glued and nailed. A 4" wide plywood strip (or similar stock) is glued and nailed to the 1" x 6" frame. Strips of 1" x 1" square molding is nailed to the inside of the frame at a point that will allow the cornice to rest at an appropriate height on the cornice board.

FINALLY, 3 pieces of crown molding are cut and attached to the outside of the frame. Careful planning is required here because the corners require a compound miter—cutting two angles simultaneously. It's hard to explain in words, but you'll quickly discern the problem once you get into it. If the cornice is going to be painted or gilded, you can use wood filler to compensate for a near-miss at the corner.

THIS SIMPLE CORNICE will slide right onto the cornice board, resting on the 1" x 1" molding strips. It can be held in place with hooks and eyes fastened to the top of the cornice board.

THE HANDYPERSON WHO'S A WHIZ with a sabre saw and router can fabricate more elaborate cornices with scrollwork, scallops, etc. There is also more elaborate period molding that you can use instead of the lumber-yard standards.

THE BEST SOURCE FOR PERIOD moldings we have located is Driwood Moulding Company, Florence, S. C. 29501. Their catalog (price, $1.00) contains a dazzling selection of period moldings in such hardwoods as oak, poplar, walnut and cherry. They also have a limited selection of moldings made expressly for window drapery cornices. Even if you're not making a cornice, if you enjoy woodworking you should have the Driwood catalog in your files.

Swag Valances

IT IS EASIER TO HANG A SWAG valance if you alter the position of the basic cornice board by turning it 90 degrees. (See diagram below.) A swag valance can be simply tacked to this lath board, letting the sides fall into a jabot effect. For a simple window treatment, this valance—with the sides falling to mid-length or sill-length—was used commonly in the 18th century without out under curtains. The skirt-like valance across the top was sometimes drawn up in the center with stitching. Modern gathering tape simplifies the task. A tassel hanging from the middle was a popular trimming.

IN FORMAL ROOMS with large windows, the swag valance is often seen made in rich silks and velvets with drapes of the same fabric. Large decorative rings or ornate metal tie-backs can be screwed into the lath board at each side. The material is then pulled through the rings, falling into a jabot on each side. To hold a heavy fabric in place, it will probably be best to staple the back of the valance to the back of the lath board.
**Formal Valances**

Some formal valances require a tight, square corner with the sides of the valance hanging down in a precise manner. To facilitate hanging this kind of valance, you can construct a window board.

Add two short boards at right angles to the underside of the basic cornice board illustrated on page 5.

An elegant but simple valance can be made by stapling a long, rectangular piece of material (brocade, brocatelle, velvet, wool, moire, satin, etc.) across the top of the window board. Drape the center portion to fall into a graceful curve and staple to each side. The side pieces are brought from the top to drape over stapled portion on each side and carefully placed in folds that fall into a jabot effect down the sides of the window. They are stapled to the back of the window board to hold them in place.

Another formal, more complicated treatment is the Austrian valance. It requires an elegant but lightweight fabric, such as silk taffeta, that will gather attractively. The fabric is fitted and stapled to the window board and drawn up in two or three places with gathering tape or stitching. Trims and tassels can dress an Austrian valance to the desired degree of 18th century elegance or 19th century Victorian opulence.

**The Venetian Curtain**

Venetian curtains are a simple way to combine shade and drapery in one piece of fabric. It was a forerunner of the Venetian blind and the Austrian shade. Early Venetian curtains were made simply to draw up in one piece, forming a bunchy gathering when raised to the top. The simplest kind, illustrated below, were mounted on a board at the top, with a stiffening strip of wood at the bottom. A series of rings were sewn in a row along both sides of the curtain. Cords, attached to the stiffening strip, ran up through pulleys or eyes. The cords, used to raise or lower the curtain, were secured to a hook or a knob on the window casing.

VeN ETIAN CURTAINs of this type, made in heavy, rough fabrics (linen, cotton, wool or combinations) were popular in England and introduced widely into the colonies in the 1700's.

Lighter fabrics such as silks or cotton dimity, which formed graceful festoons, were used for Venetian curtains in more formal rooms.

One or more additional rows of rings would with corresponding cords. With softer fabric, the wood stiffener at the bottom was often omitted. A cornice or lambrquin was frequently used to cover the apparatus at the top.

The Austrian shade of today is really a Venetian curtain made of a thin, opaque material, often with many sections for wide windows.

While it is fairly easy to purchase a standard Austrian shade, suitable for a formally furnished room, the Venetian curtain usually has to be made to order. Even then, it is usually a narrower version of an Austrian shade in a slightly heavier fabric.

If you wish to make the Early type of Venetian curtain, heavy cotton, wool, or one of the rough-textured synthetic fabrics, perhaps with cotton or wool fringe, would be appropriate. You will then have a simple and authentic window treatment particularly attractive in an early 18th century room.

**The French Rod**

The French rod offers the simplest way to duplicate period window hangings. It has been used for centuries in wood, iron and brass in Europe and America in every period. Popular all through the 18th century, the decorative French rod became very fashionable around the beginning of the 1800's. Drapery hardware firms manufacture a large selection of plain and ornamental rods that are widely available.
Fabric

Many fabrics are available reproducing the cotton printed fabrics (chintz, calico, toiles, "indienne" prints with tree-of-life motifs) popular in the 18th century. Finding heavier weights such as velvets, malmes (called "moreen" in the 1700's) and heavy brocades and figured velvets, is more difficult. Because of the high cost of reproducing these fabrics, most manufacturers carry few, if any, of these luxurious fabrics in their lines. Also, the old-house owner trying to find reproduction fabrics, particularly for the Victorian period, will find that fabric houses have not quite reached the 19th century as inspiration for their reproductions.

Since the Victorian home owner can only duplicate the heavy drapes of the period, rich in color and texture, at great expense—substitutes may be called for. Large printed cottons, especially in multicolor India prints, hold their own on large windows. The white under-curtains of lace and embroidered cottons are available today in natural and synthetic fabrics. The following is a list of manufacturers who offer fabric for period window decoration.

Brunschwig & FilS, Inc. 979 Third Avenue, New York, N. Y. 10022. Specialists in documentary fabrics for museums and restorations. They reproduce authentic designs often using the original technique. Toiles de Jouy, scenic designs printed on cotton, which originated in Jouy, France, were printed with a copperplate. Brunschwig still uses this method which gives a sharp detail not equaled by modern methods. Their museum and restoration reproductions are incorporated into their large collection of period fabrics and are available around the country but only through interior designers.

Schumacher, 939 Third Avenue, New York, N. Y. 10022, has a huge selection of documentary and interpretative period designs including:

- The Williamsburg Collection reproduces documentary designs from Colonial Williamsburg.
- Sleepy Hollow Restoration Collection has designs culled from documents and fragments found in this historic area. Includes cottons, linens, and figured velvets.
- The Designer's Choice collection contains patterns from their library, interpreted by 8 designers. While some have a contemporary look, "Plumer Toile" is a lovely oriental-inspired toile of the kind popular in the 18th century. "Shansu" is a geometric design that recalls Eastlake-inspired decoration.

- New hand-crafted Heritage Collection features woven and screen-printed fabrics interpreting documents and artifacts from the Brooklyn Museum. All Schumacher fabrics are available in major department stores around the country and through interior designers. They also have damask, brocade and velvets in wide price range.

Scalamandre Silks, Inc. 979 Third Avenue, New York, N. Y. 10022. Specialists in restorations such as Winterthur, Williamsburg, Monticello, San Simon. All their fabrics are printed by hand-screening, from Elizabethan embroidery patterns to 18th century toiles, and luxurious 19th century silk damasks. Showrooms around the country, but available through decorators only.

Waverly Fabrics, 58 West 40th St., New York, N. Y. 10018. Documentary fabrics including the Bicentennial Heirlooms Collection. There is also a Waverly line of made-to-measure draperies and bedspreads available in department stores around the country.

Gurian's, 276 Fifth Avenue, New York, N. Y. 10001. Importers of crewel-work fabric (hand-embroidered wool on a natural hand-loomed fabric) from India. Crewel was very popular in the 18th century, particularly for bedhangings. An excellent fabric for making lambrequins. It has also been used for upholstery and drapes since early colonial times up till today. Send 50¢ for swatch and color catalog.

Thomas Strahan Company, Chelsea, Massachusetts, 02150. Their documentary fabrics, correlated with their wallcoverings, are available in wallpaper and department stores around the country. Their sample books contain a swatch of the fabric and the history and date of the pattern is printed on the sample page. The Colonial American Collection and 88th Anniversary Collection contain many English floral and Indian stripe cottons along with some large patterned Victorian designs.

Help for the Sew-It-Yourselfer

The complete book of curtains, slipcovers & upholstery by Marguerite Maddox and Miriam Morrison Peake. A very good book, with over 500 drawings and diagrams plus hints on fabric, hardware, and charts for yardage. The portion on drapes and curtains pays more attention to sewing for period windows (lambrequins, valances) than ordinary how-to-do-it books. Send $1.49 plus 75¢ for postage and handling to the Gramercy Publishing Co., 419 Park Ave., South, Retail Dept., N. Y., N. Y. 10016.
Where You Can Buy Drapes And Curtains

NORMAN'S OF SALISBURY, P. O. Drawer 799, Salisbury, North Carolina 28144. The Norman line of window treatments is carried by more than 4,000 specialty stores around the country: Home furnishing stores, carpet shops, paint and wallpaper stores, etc. Their Fabric Library is grouped according to color and use. Although they have their own line of designs, they custom-make styles to customer's wishes. Besides their own 27 different valance designs, they will also make a valance or lambrunet to original designs if a pattern is supplied. Austrian shades similar to the Venetian curtain are available. Free booklet offered.

(Repairing Floors—Continued from p. 1)

IT MAY WELL BE that joists have been weakened by plumbers hacking away to make room for pipes. This is especially likely around bathrooms where there are lots of pipes and the joists in all likelihood weren't designed to take tile floors and heavy fixtures (especially bathtubs filled with water).

IF THE CONDITION is severe enough to require exposing the joists, 2 x 4 stiffeners can be spiked to the joists. Additional bridging can also be nailed in place to help spread the load. Where notching has weakened beams, cuts can be bridged over with 2 x 4's. If after these repairs there is still a bothersome sag that has set into the joists, you can level the floor by nailing long wedge-shaped pieces (cut from 2-in. stock) to the tops of the joists.

AN ALTERNATIVE SOLUTION would be to install a girder to support the upper joists. This pre-supposes that you've got some headroom to spare on the lower floor. Since the girder would be a load-bearing element, your best bet is to get an architect or engineer to develop the design. The girder can be boxed in and made a design element. Inside the girder enclosure you can also run wiring, ductwork and piping that has to be concealed.

ANOTHER WAY TO HANDLE a need for additional support is to install columns and then camouflaged them with bookshelves, storage units or a partition. Such a post, however, shouldn't just rest on the floor below

Ready-made colonial curtains can be ordered by mail from:
Country Curtains, At The Red Lion Inn, Dept. 51, Stockbridge, Mass. 01262. Simple ruffled tie-backs or tiers in off-white (unbleached) muslin or white muslin, some with ball fringe are offered. Free brochure available.

Old Colony Curtains, Box 759, Westfield, N. J. 07090. They have a variety of colonial styles (swags, tiers) in both muslin and polyester and cotton no-iron fabrics. Extra-wide styles available. Free brochure available illustrating styles and suggested window treatments.

—in all probability you'll just make that floor sag, too. The load has to be transferred to a load-bearing surface—usually the foundation or footings in the cellar or the central girder beneath the ground floor. It is acceptable practice to line up columns vertically with intervening joists. The joists will transmit the load from one column to the next.

Repairing Floorboards

IN MANY OLD HOUSES the floorboards impart much of the antique character to a room. So floor restoration should be approached gingerly, recognizing that variations in color and texture are what gives it an old appearance.

DEPENDING UPON ITS AGE, a house will have a floor consisting of heavy boards laid directly on the joists, or it will have a finish floor laid on top of a rough sub-floor. We'll look first at houses with no sub-floors, a type of construction common in the 1700's and early 1800's.

IN HOUSES WITH PLANK FLOORING, there are at least four possible ways that the boards could be joined:

Types of Floorboard Joints

<table>
<thead>
<tr>
<th>Butt</th>
<th>Shiplap</th>
<th>Spline</th>
<th>Tongue-and-Groove</th>
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BUTT JOINTS make it easy to take up floorboards for repairs without disturbing neighboring boards. But shrinkage can create wide gaps between the planks. To prevent drafts blowing up through cracks in butt-join floors some housewrights laid thin strips of wood, 4-6 in. wide, on the joists beneath each joint. If there are no strips beneath the joints and the cracks are bother-
some, there are several possible remedies. On a floor over a cellar, you usually can nail a strip of thin wood over the crack on the underside of the floorboards. Where you can't operate from the underside, there are several ways to fill cracks from above. A long wedge of wood, stained to match the rest of the floor, can be inserted in the crack and fastened with small finishing nails to the edge of one of the floorboards. (Fastening to only one of the boards allows for expansion and contraction.) Small cracks can be filled with a variety of proprietary fillers. Or you can make your own filler from sawdust and white glue, or sawdust and varnish. If the floor is to be painted, an even better filler is a synthetic-type caulk (such as butyl). These remain flexible for many years and expand and contract with the floor.

**Flooring Techniques** changed little between pre-revolutionary times and the Civil War. The wide floorboards used are thicker (1-1/8 in.) than today's because the joists were more widely spaced. White pine was the favored material, planed smooth on the top and left rough underneath. Attics were floored with the rejects, so that although you may be able to find replacement boards in your attic, it's unlikely they will be top-quality pieces.

**Plank Floors** will need attention if the boards are loose, badly warped or very deeply worn. Loose boards must be re-fastened to the joists. Occasionally you can re-tighten the boards just by pounding the old nails in further. But in most cases this has been tried so often by previous owners that the nails will no longer bite.

**Hand-Made Nails** were used on many old floors, and their exposed heads form part of the pattern of the floor. If you need more of these old-style nails for a patch, contemporary sources are available. If you have to re-nail a board that already has exposed nailheads, you'll want to make the new nails invisible so that you don't disrupt the nail pattern. If the board can be pushed back into the proper position merely by standing on it, you should be able to re-secure it with a couple of flooring nails. Drilling small pilot holes (about three-fourths the diameter of the nail) will help avoid bent nails as you nail into the old dry joists. Driving the nails at an angle will help prevent their working loose under foot traffic.

**Nailheads Should Be Countersunk** and the holes filled with wood filler or a color-matched putty.

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CREWS CAN BE USED for boards that need extra holding power to keep them in place. Too, screws are less likely than nails to work loose over the years. Pilot holes in the joists are a must. Screw holes should be counter-bored and plugged with wooden dowels stained to match the rest of the floor. For this kind of work, a power screwdriver is a real asset. If you encounter difficulty driving screws into the joists because they're so dry, try lubricating them with soap.

**If Boards Are Badly Warped,** they can be straightened by saturating the wood with water...keep damp rags on the boards for several days. Then screw and plug as described above.

**Soak With Water**

**Sometimes a Board or Section of Board has to be Replaced.** If the boards are butt-jointed, it's not hard to lift one without damaging neighboring pieces. If the boards are interlocked, however, the procedure gets more involved.

**If the Board is Cracked,** you can probably work it loose with a hammer and chisel. If there's no crack, it will probably have to be cut out. You don't want to take out more than the damaged portion, which may not be a whole board. In this case, drill a hole next to a joist big enough to admit the blade of a keyhole or sabre saw. A lengthwise cut will allow you to free the damaged portion. Since the board is cut off flush with the edge of a joist, you'll need to attach a 2 x 4 nailer to support the end of the replacement board.

**For Replacement Boards,** you may be able to salvage an old piece from an inconspicuous part of the house or barn. But such "borrowed" lumber is likely to be thicker or thinner than what you require...and probably won't match very closely in color. So it's no great tragedy if you have to go to the lumber yard to get a new board.

**New lumber, however,** will doubtless require cutting and fitting. For one thing, new lumber will be thinner than its old counterpart, due to changes in lumber standards. This dictates use of thin wooden shims on the joists to bring the new board up to the level of the rest of the floor.

**If the New Board is Considerably Different in color,** experiment on a scrap with various

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*One Source: Tremont Nail Co., Elm Street, Wareham, Mass. 02571.*
stains until you come up with the right combination that blends the new in with the old.

IN CASES WHERE DAMAGE is confined to the surface, you may be able to get a quick replacement by turning the board over. In pre-1850 houses, the undersides of the boards will probably be quite rough... and planing will be required. The board shouldn't be sanded glass-smooth, however, because the overly level board will present too much of a contrast with the rest of the floor. Planing will reduce the thickness of the board so you'll have to use shims to bring it up to the proper level.

FUTURE ARTICLES in this series on floors will cover repairs in strip hardwood and parquet floors, and sanding and refinishing techniques for hardwood and softwood.

An Extra-Large Square
A VERY LARGE SQUARE can come in handy for jobs like laying out partitions. One can be made very simply based on the classic 3-4-5 right triangle. Fasten long straight 2 x 4's in an approximate right angle using a lapped joint. Measure 30 inches along one leg and 40 inches along the other. Then nail a 50-inch piece of 1 x 2 connecting these two points. The result will be a perfect right angle—and you can make it as big as you need.

Helpful Publications You Can Send For

San Francisco Victorians
In a project designed to foster interest in restoring San Francisco's glorious Victorian frame houses, the Stanford Research Institute compiled a 32-page guide for Victorian research in San Francisco. Although some of the material is unique to San Francisco, many of the sources and techniques discussed will be useful to any individual or organization involved in research and restoration of late 19th century homes. Send $1 for "SRI—Victorian Booklets" to: Stanford Research Institute, Rm. M2390, Menlo Park, Calif. 94025.

Painting & Wallapering
Whatever else the old-house owner has to do to his dwelling, there's sure to be lots of painting and papering. As this 128-page book points out, there's a lot more to painting than picking out your favorite color. Proper preparation of the substrate is essential. Book also contains useful review of painting problems. Very useful introduction to the mysteries of exterior and interior painting. $4.95 plus 25¢ postage and handling from: Arco Publishing Co., 219 Park Ave. South, New York, N. Y. 10003.

Before Restoration Begins
Any individual or group that is attempting to restore an historic house should observe one rule above all others: Go slow! After acquiring a house, the urge to make a quick show of progress is hard to resist. But the rush to clean up, paint up, fix up, may forever destroy evidence needed to document the building's history. This 8-page technical leaflet summarizes the things that can be done to make a house weather-tight so that restoration can proceed in an orderly way. Technical Leaflet #67, "Before Restoration Begins," is 50¢ from: American Assn. for State and Local History, 1315 8th Ave. South, Nashville, Tennessee 37203.

Fire Protection In Old Buildings
Old houses with their dried-out timbers are especially vulnerable to fire. During a renovation, while many walls are open, it is a good time to consider a fire protection system for your house. This 40-page booklet has been designed primarily for historic buildings but contains many useful guidelines for the individual homeowner. "Protecting Our Heritage;" $2.00 from American Assn. for State and Local History, 1315 8th Ave. South, Nashville, Tennessee 37203.

Period Wood Moldings
Wood moldings can add a dramatic finishing touch to a construction project—be it a cabinet or a room. Here is a handsome 32-page catalog that sets out the most extensive line of ornamented hardwood moldings we've seen. All designs are historically authentic. Moldings can be used for cornices, wall panels, pilasters, chair rails, ceiling panels, picture molding, door heads and bases. Catalog contains 4-color photos of period rooms that show how moldings can be used. Catalog $1.00 from Driwood Moulding Co., P. O. Box 1369, Florence, S. C. 29501.

Painting & Decorating Tools
There are a lot of little tools that will take some of the pain out of a paint-up fix-up job. A top-quality line of painting and decorating tools is illustrated in this 30-page booklet. There are probably tools here you didn't know existed. Companion booklet gives tips on how to use the tools. "Hyde Tool Shop" booklet from Hyde Manufacturing Company, Southbridge, Massachusetts 01550.
Products For The Old House

Reamer Set
Not only can this 3-piece set be used for reaming and deburring wood, plastic and steel, but it also can serve as an all-purpose drill set. Bits will make holes any size from 1/8" to 3/4" depending on how deep they're inserted. Fit all electric drills; cutting points start their own holes. No. 1580 M 3-piece Multi-Drill set is $5.45 post-paid from Arco Tools, 421 W. 203rd St., N.Y., N.Y. 10034.

Aged Wood Finish
"Wood Age" imparts a patina of age to new wood. Can be especially useful where you have to patch new wood into old material. After applying this liquid darkener, wood can be stained and finished in normal fashion. $2.95 for 10 oz. from Buyers' Bonanza, 131 Kiel Ave., Butler, N.J. 07405.

Router Overarm
Router overarm holds router over the workpiece and can be maneuvered to do precise cutting work. Especially useful for fancy moldings and repair work. Not inexpensive ($282), precision tool is designed for the sophisticated woodworker. Brochure from: Bryden Router Overarm, 2407 Arden Dr., Champaign, Ill. 61820.

American Federal Ceiling Tile
Armstrong Cork Company—better known for its contemporary designs—has just introduced a new ceiling tile called "Constitution." Original design for the tile first appeared during the middle 1700's in a London country home, The Sion House. It later became the inspiration for many plaster ceilings in classic homes of the American Federal period. Deeply sculptured, Constitution is highlighted with antique gold tracings on a warm beige background.

This type of ceiling tile could be appropriate for an 18th or early 19th century home that has a plaster ceiling that is beyond redemption.

The Old-House Journal Subscription Story: "For Sale"
Enclosed is my $12 for a one-year subscription to The Old-House Journal.

Name
Address
City
State Zip
Donor's Name
Mail to: The Old-House Journal, Dept. 7, 199 Berkeley Place, Brooklyn, N.Y. 11217

The faded "For Sale" sign had a bold red "Sold" nailed diagonally across its front. The sign was a jolt for those who had taken the Old House for granted. The Old House (it was said as if "Old" were the house's surname) had been on the market for four years. It was common knowledge in town that no one would buy it. No eye saw the stately beauty beneath the peeling paint. Rather, all that was perceived was the history of its previous owners... unhappy years ending in an acrimonious breakup.

The car rolled slowly past the Old House, the driver viewing his new acquisition with a glow of anticipation. His bearing was straight, his face strong, open and honest. The town would take to him.

Later it would not be recalled whether it was the informative publication on his dashboard, or some other reflection on his impeccable taste. But in years to come he would always be referred to as The Old-House Colonel.