

# An 18th Century Pennsylvania Farm House

By H. Weber Wilson

**"I**MAGINE," declares Bill Bowers, present "squire" at Irwinton near Greencastle, Pennsylvania, "we were tightening up the woodwork around the fireplace when it dropped out."

WHAT DROPPED OUT was the broken end of a brass watch key wrapped in a paper. After carefully laying back the folds, Bill and his wife Dorothy found themselves looking at a dance invitation addressed to the original owners and builders their house. The date read January 3, 1792.

"SOMETIMES WE WONDERED about taking on all the responsibilities of an old house," declares Dorothy, "but finding an authentic artifact like that becomes a real link to the people who lived in the house before. It somehow lets us know that others saw tough times in these very same rooms, and that gave us inspiration and confidence to complete our restoration efforts."

**T**HE BOWER'S HOUSE is known as Irwinton, after the Irwin family which built it and a mill along side a winding waterway called Conococheague Creek. In local Indian, that means "it is indeed a long way."

"AND IT'S BEEN QUITE a long way for us," says Bill. "We had a pleasant house near Chambers-



burg and weren't really thinking of moving. Then a six-lane highway was built behind us, and we began to look for some peace and quiet."

"WE WERE LOOKING FOR A COUNTRY PROPERTY," continues Dorothy, "and actually had the chance to buy Irwinton twice. The first time we were still debating the pros and cons of buying an old house when we learned it had been sold to someone else. About a year later it became available again, and that time we didn't hesitate. We've been delighted ever since."

"THE MAIN HOUSE was built in 1768," says Bill, "but plumbing and wiring weren't added until the 1950's. This was an advantage because we didn't have to redo a lot of rusty iron pipes and frayed wires from the Victorian era."

"ON THE OTHER HAND," exclaims Dorothy, "the place had been rented to tenant farmers for a couple of decades, so it needed a complete going over."

"WE CHECKED it from top to bottom," adds Bill, "especially the stone walls. We soon realized how well built such an old house can be, and that gave us confidence to complete all the work we wanted to do."

THE HOUSE WAS BUILT to face south so that the sunlight can fill the front rooms during winter. The narrow west end, which faces the cold wind, has no windows except for two small openings in the attic gable.

**L**IMESTONE from the surrounding fields was used to build the chimneys and two-ft.-thick walls. "From the beginning this place was a notch above average," declares Bill. "Each storey is 12 ft. high; much more like a Virginia plantation house than a Pennsylvania farm of the day."

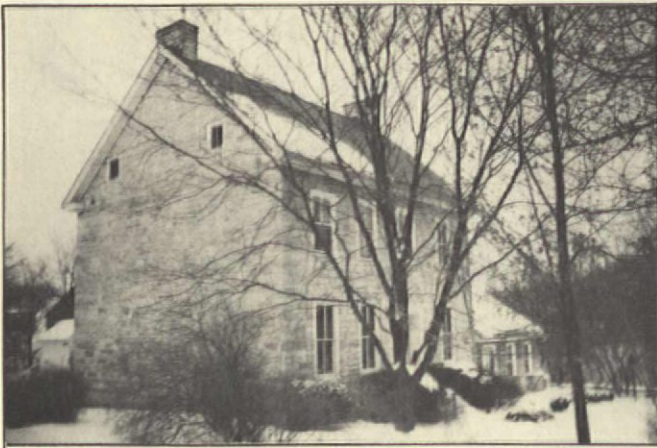
THE MAIN PART of the house measures 36 ft. x 33 ft. and features the expected central hall/four room plan. On the main floor are two

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The narrow west end of this house, built in 1768, faces the cold wind and has no windows except for two small openings in the attic gable.

parlors, an "office" and a smaller room now converted to a bath.

“**E** RIGINALLY, the walls must have been left unadorned," explains Bill, "but the house was still a showplace." Most doors are "double panelled" with detailed mouldings front and rear, and almost all have HL hinges. Most of the massive brass door lock assemblies have survived the past two hundred years as well.

"WHEN WE FIRST bought Irwinton, we planned to use it for summers and retirement," Bill continues. "But each time we stayed here we grew more and more attached to it. It wasn't long before we wanted to live here permanently."

"OF COURSE THERE WAS A LOT of hard work before that happy day," adds Dorothy. "I remember when the old plaster and wallpaper was ankle deep in the hallway and we wondered if restoration was the right thing to do. But as each part regained its personality, we could see that the results were well worth our energy and frustrations."

"DOING A PROPER JOB means no short-cuts or make-do," says Bill seriously, and the door to the "office" is proof of his dedication. "I started to strip it," he explains, "but found the top layers of paint extremely hard. Then I discovered that for some reason the original paint did not bond to the newer layers, and a blunt putty knife could chip the top coats off much faster."

“**I** FINALLY GOT the 'new' paint off and found that the door was originally grained to imitate mahogany. I had to mix new paint to match up both the base coat and the 'plume' of the graining because several spots on the door had been worn clean from the thousands of times it was open and shut as customers came and went from the mill."

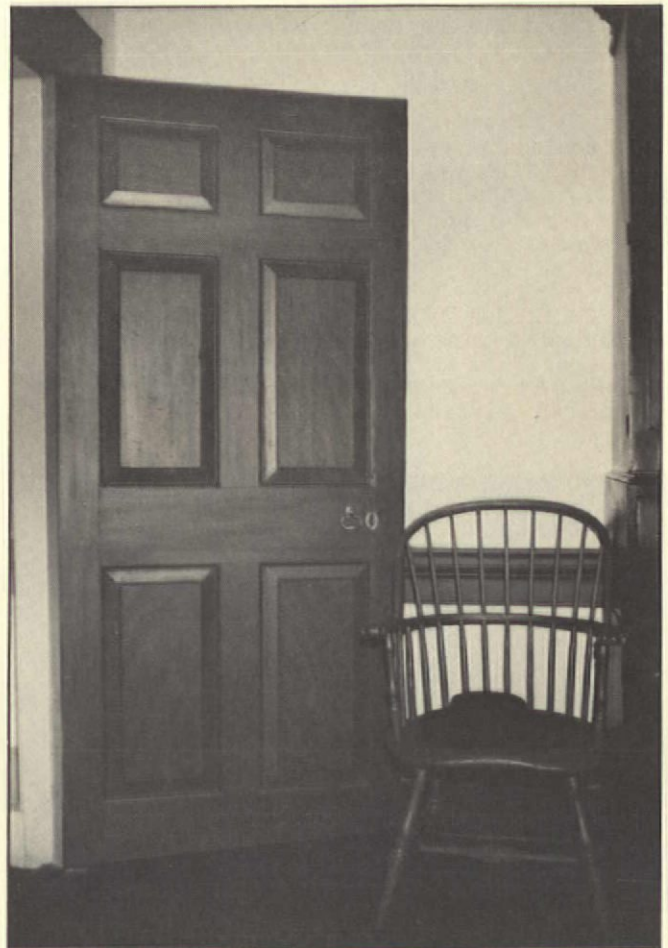
"IT WAS TWO WEEKS before both sides of that door were refinished," concludes Bill with a smile. "With all that time, the brass lock assembly, and those HL hinges, I call it my \$1000 door."

IN EACH PART OF THE HOUSE the Bowers stripped a bit of woodwork to determine the original paint color, then mixed new paint to match. "I prefer water-based vinyl paint," Bill explains, because it dries quickly and keeps the same color it had when wet."

**T**HE SECOND STOREY FLOORS at Irwinton were replaced in the 1870's and had been painted battleship grey when the Bowers bought the house. "We had to sand them down," explains Bill, and then it was impossible to imitate the dark patina which would really be the proper 'finish' from so many generations of wear."

"REFINISHING COLONIAL FLOORS to a light and shiny color is a modern misconception," declares Bill, "so we opted to paint them a dark brown, which we feel is an honest compromise."

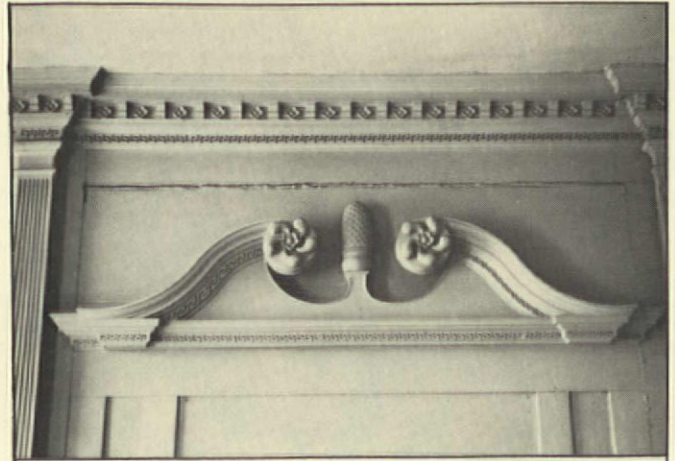
THE ATTIC FLOOR does contain some of the original 18 in. wide floor planks, dark from thousands of heavily shod footsteps. Up there under the rafters, which are joined with half-dovetail tie-beams, one also notes the absence of a ridge board at the roof peak. Just heavy timbers held together with a lap joint and wooden peg.



Bill Bowers' "\$1000 door"--with its mahogany graining restored and a new brass lock assembly.



The "best" parlor is the highlight of the house with its beautiful fireplace wall.



Detail of the scrolled pediment with two magnolia buds and a pine cone in center.

AT EACH GABLE END the two stone fireplace flues rise from the floors below like legs of a giant "A" and merge into the single chimneys which emerge from each end of the roof.

BACK DOWNSTAIRS the woodwork in the parlors can only be described as spectacular. "It's most unusual to find such quality in what was basically a working man's house," explains Bill.

THE FIREPLACE WALL in the "best" parlor is the highlight of the house, and is equal to what one finds in Georgian homes built for the wealthy. Bill has a vast library, and it was exciting to find what must have been the carpenter's reference on Plate XXVI of "Palladio Londinensis," a 1734 pattern book by William Salmon.

"THE SCROLLED PEDIMENT and carved magnolia bud are the work of a master builder," says Bill. "Quite possibly it is the work of John Aris who built the great houses of Locust Hill and Harewood in Virginia."

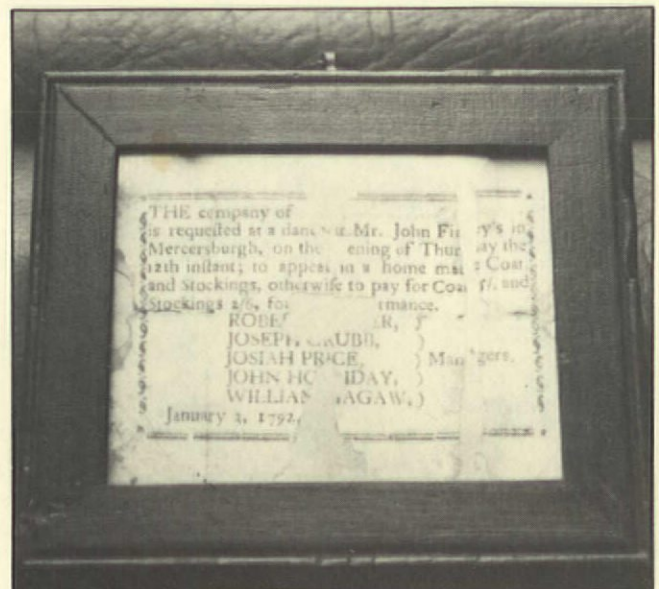
"LUCKILY," adds Dorothy, "there have been few coats of paint to blur the detail since it was installed for the first wedding here on December 25, 1792.

**D**OROTHY KNOWS THAT HISTORICAL detail because she became so caught up with the lives lived at Irwinton that she published a book detailing the whole fascinating history of that pioneering family.

"TRACING THE GENEALOGY of the Irwins helped us tremendously," exclaims Dorothy. "For example, when Bill was stripping the woodwork in the office, he uncovered the signature of Elizabeth Irwin, under the mantel. Knowing that in 1780 she would have been just old enough to have good handwriting--yet young enough to do such an impish thing--gave us excellent evidence that the elaborate woodwork was added in time for the first wedding." ■ ■



An upstairs bed chamber--note the lack of architectural decoration on walls. Clock in corner is probably an original furnishing of the Irwin family.



Dance invitation addressed to the original owners, dated January 3, 1792.

# Floor Refinishing — A Radical Alternative

By Daniel J. Mehn

**I** AM GOING TO MAKE a statement that many readers will challenge: I believe that using paint & varnish remover on old floors is easier, less messy and usually less expensive than machine sanding or hand scraping methods. Further, when one adds up all the time involved, I'm certain that the paint remover method takes less time—and as a bonus puts less strain on the family unit than the sanding/scraping way. And the end result looks better.

NOW, YOU SAY, how can this character make such sweeping claims for a method that isn't given any serious consideration by any of the standard "how-to" manuals? The answer is easy: I've tried both ways. I'll never sand again.

I INCLUDE IN MY SWEEPING statement all types of floors: Hardwood, softwood, wide and narrow, toe-nailed and face-nailed, painted and varnished/waxed floors. It can also assist those facing the "gunk" of old linoleum and tile paste.

**W**HEN I BOUGHT my first old house, I faced all the typical problems: Too many coats of paint on what had been beautiful woodwork; too many layers of wallpaper in every room (except where there were too many coats of paint on top of too much wallpaper)... and floors that had been waxed weekly for too long, with (maybe) an occasional cleaning and re-varnishing.

AFTER COPING WITH the ceilings, walls and woodwork, it came time to face the floors. Having some previous experience (helping my father lay floors) plus the usual assortment of "how-to" books, I set out to do the conventional sanding job. I obtained the usual assortment of sanders: A walking belt sander for the large open areas; a small belt hand sander for the edges and (because I was wary of disk sanders) both orbital and disk sanders for the corners—plus the usual collection of large and small hand scrapers for small corners, door saddles, etc.

NUMEROUS COATS OF WAX and varnish gummed up many sanding belts, but the job got done.

	Sanding	Chemical Stripping
<b>Pro</b>	<ul style="list-style-type: none"> <li>No wet mess</li> <li>"New floor" look</li> <li>Major unevenness fixed</li> <li>Gets it all done at once</li> </ul>	<ul style="list-style-type: none"> <li>Containable wet mess</li> <li>"Old floor" look, including both patina and natural bumps</li> <li>No loss of thickness</li> </ul>
<b>Con</b>	<ul style="list-style-type: none"> <li>Potential fire hazard from sanding dust</li> <li>Inhalation of dust</li> <li>Dust everywhere for long time</li> <li>Loss of patina and character</li> <li>Nailheads need resetting</li> <li>Loss of thickness (a major problem with old parquet floors)</li> <li>Unevenness at sides and corners</li> </ul>	<ul style="list-style-type: none"> <li>Potential fire hazard (if flammable remover is used)</li> <li>Wet mess</li> <li>Inhalation of vapors</li> <li>More cleanup stuff required (steel wool, scraper, rags, etc.)</li> <li>Possible disposal problem</li> </ul>

## FINANCIAL & OTHER FACTORS

	Sanding	Chemical Stripping
<b>Pro</b>	Can contract out; larger the job, the lower the price per unit If do-it-yourself, sanding machines can be rented. Only belts need be purchased	Most amenable to do-it-yourself a piece at a time
<b>Con</b>	Should be done all at once, both for best price and to contain the sanding dust to a single occurrence	Lots of expendable "use-it-up" items Not likely to be contractable Requires bent-over diligence & perseverance; uncomfortable

Ultimately, I obtained a job that I could take pleasure (but not pride) in. Friends thought I had a new floor. (They didn't see the pits and gouges along the edges and in the corners.) Besides, does one want a new floor in an old house? And, they didn't live with the weeks and months of sanding dust slowly settling down, again...and again...

### Hints On Stripping

**H**ERE ARE SOME SPECIFIC tips for stripping floors with paint remover (subtitled: "Don't be stupid like I was!"). Some of these hints are also applicable if you are sanding floors in the conventional way.

1. **SCHEDULE** the project carefully. Allow more time than you think necessary. I can now do a 15 ft. x 15 ft. floor in 6-8 hr., but it took more than twice as long the first time.

2. **MOVE ALL THE FURNITURE** out of the room and then live that way until the floor is completed. Though the speed of the job will be affected by such things as the weather and your physical endurance, allow about a week for the complete stripping and refinishing job.

3. **DECIDE IN ADVANCE** what you want to do about connecting surfaces, such as baseboards, shoe mouldings, door saddles, floor registers and the floor area leading to the next room, etc. Here are my suggestions for these areas:

a. **REMOVE THE FLOOR REGISTERS.** Put a plastic wastebasket into the void so that people don't step into the hole.

b. **STRIP THE FLOOR** about one foot into the adjoining room (unless it has already been done). Later, finish that part maybe six inches into the room, leaving a not-done area for catching up with when the next room is done.

c. **IF THE BASEBOARDS** are going to be stripped, now is the best time to do them. The mess from each helps the other. This also means that you won't have to remove the shoe mouldings...avoiding all the problems of possible splitting, replacement, etc.

d. **IF THE BASEBOARDS** aren't to be stripped, then you'd best remove the shoe mouldings. If the baseboard is painted, run a sharp knife between the shoe and the baseboard to cut the paint film so it doesn't chip or flake.

### The Happy Accident

**M**ARRIAGE AND A FAMILY brought me to another (and, I hope, final) old house, with precisely the same set of problems I had encountered before. And it was on this set of floors that I learned...a better way!

THE HOUSE HAD strip pine flooring. Underneath the wax and discolored varnish was what appeared to be a fine patina from years of sunlight streaming in through the windows. The floor fairly shouted at us that it needed to be refinished, and I vowed to do it...as soon as the other projects were completed.

AND THEN...the great accident occurred. While working with paint remover on the wainscoting, some paint remover fell on the floor. In scooping up the gunk, I found that it picked up all the wax and varnish from the floor. One thing led to another, and after some experimentation I concluded that stripping a floor with paint remover was superior to sanding. The pros and cons of each method are summed up in the chart above and on the preceding page.

LOSS OF THICKNESS can be especially troublesome on thin parquet floors. I know of at least one case where a parquet floor was totally destroyed by sanding; it simply curled up at every corner and exposed edge. The moisture content was severely disturbed by the loss of the surface coating and the outer compressed and surface-coating-impregnated wood cells.

e. AREAS AROUND PAINTED DOOR FRAMES that you don't want to have to repaint require careful stripping. Strip an area about 2 in. wide, using a ½-in. brush and very clean wiped spatulas first. Then, clean a wider area to about a 6 in. distance with a wider brush—before progressing to the floor itself. This way, you've cleaned the critical areas first—before fatigue and the temptation to rush sets in.

## Non-Flammable Remover

**B**E SURE TO USE a non-flammable remover to eliminate any danger from an accidental spark or flame. And be sure to ensure adequate ventilation. (See The Journal May 1976, p. 9, for a discussion of potential hazards of paint remover fumes and safety procedures to follow.)

PLAN YOUR MOVEMENT through the room, not only in terms of avoiding painting (or, rather, stripping) yourself into a corner, but also in terms of supply or materials, removal of gunk, rest area, etc.

HAVE MORE CLEANUP MATERIAL than you think you'll need. This includes newspapers, plastic or cardboard buckets or cans (to wipe tools with and to contain the scraped-off gunk), lots of #3 (coarse) steel wool, extra rubber gloves, and lots of rags (old towels or wash cloths are ideal).

DO CORNERS FIRST, and then the edges. If there are any other unique or problem areas, get them done first—cleaning around them to a width of 6-12 in.

IN DOING THE CENTRAL FLOOR area, I'd suggest a space about 18 in. wide (a width you can easily reach across) by 4-5 ft. long—running with the flooring—as a basic working unit. Coat the first unit with remover, then go on to coat a second unit. By then, the first unit should be ready for scraping with a wide-bladed spatula. If necessary, wait a little longer until the remover has soaked all the way through. Let the remover do the work.

Use the spatula to get the wax and floor coatings off, sweeping the gunk to the second unit. Then, coat the first unit a second time, coat a third unit, and scrape the second unit. I find I can work three units at a time this way—but never more than three!

## Back And Forth

**W**HEN YOU COME BACK TO THE first unit (having scraped the second, coated a third and recoated the second), get a good fistful of steel wool in your gloved hand, and, with a circular motion, stir the residue in the area. The object at this point is not to pick up the gunk, but rather to use the cutting edge of the wool to cut through the more stubborn spots. Now, go on to the second unit and do the same circular swirling stirring up.

COME BACK TO THE FIRST UNIT, and with a "picking up" motion of the wool, try to wipe up much of the gunk. (If the finish is very thick, you may need some more stirring. But I've done most floors with just two coats, using this technique.) Once you've used the steel wool to wipe up—always in the direction of the next unit—as much sludge as you can, use a piece of absorbent rag to wipe up the residue, working with the grain of the wood.

YOU SHOULD SEE FLOOR, cleaned, at this point. Use a clean rag to wipe hard again to really clean the area. Then go on to the next unit for the steel wool and rag pickup. The floor that is cleaned, but still slightly damp from the remover, will look the way the floor will ultimately appear after the final finish is applied.

AS YOU CONTINUE, you may see a spot or two that still has finish remaining. Unlike sanding, this is easily remedied by going back with a bit more remover, steel wool and rags.

REMEMBER, as you progress, to overlap units slightly to ensure that no lap marks show up. When you start to work across the floor, the new units should overlap the completed ones by the width of one floorboard.

## Finishing Touches

**Q**UONCE YOU'VE finished the entire room, the temptation is to relax. Don't! Go over the entire floor again with a careful eye. With a sharp scraper in one hand, and a terry cloth rag wet with remover in the other, hit any of the minor spots that need further work. The reason for not waiting is that any finish remaining will still be internally soft from the big job. They are much easier to remove while in that softened condition than when they've had a chance to dry. A thin-bladed, rounded-edge screwdriver often is an asset at this point in clearing grooves and cracks between boards. A nutpick is also helpful.

IF THE FLOOR HAD BEEN STAINED, you should find that much of the color came off with the original coat of remover. But if you still want more of the stain up, use another medium coat of remover. Leave it on until it has almost dried out, then attack the surface again with medium or fine steel wool and the terry cloth rags for pickup. It's fairly easy—since the remover is doing all the work—but it does take more time.

IF THE FLOOR HAS SLIVERS or board edges that must be reattached, wait a couple of days for the remover to evaporate fully. Then, in stockinged feet, go over and lift the sliver edges. With whatever tool works best, get the dirt, sludge and wax off both surfaces. Then glue the splinter back down. I've had good luck with epoxy; but if you don't get the surfaces thoroughly clean, the epoxy won't hold. Keep whatever glue you use off the surface of the floor. The glue will seal the pores of the wood and will keep any stain or finish from sinking in.

FINALLY, reset any nailheads that showed up during the stripping operation. Now you are ready to apply the final finish.

## The Best Floor Finish

**E**VERYONE HAS his or her favorite floor finish. Several articles on this have appeared in previous issues of The Journal. I'll pass along my experiences which may be of benefit to some.

I AM TOTALLY DISENCHANTED with polyurethane varnishes. Scratches and nicks seem to be magnified by the slight crazing of the plastic coating around the scratch or nick. As these nicks and scratches accumulate, the floor looks worn beyond its years.

NOR AM I PLEASED with the "gym" floor finishes. Not only is the coating too evident for my tastes, but the drying times touted on the can can only be considered an optimistic estimate for a very dry day. Never have I had the drying time less than three days. Once I waited five days to recoat. You can imagine the problems of dust control while waiting for the tackiness to go away.

I PREFER a satin finish for a floor rather than a high-gloss appearance. I find I get best results with a penetrating oil finish... specifically Watco Danish Oil Finish. It is manufactured by Watco-Dennis Corp., 1756 22nd St., Santa Monica, CA 90404. It's the only finish I'll ever use on my own floors again.

BESIDES THE SOFT SATIN appearance the penetrating oil gives, it has several other advantages that I like:

- It's easy to touch up a heavily worn area by simply applying more of the penetrating oil (after surface cleaning). No need for sanding or stripping.
- You can refinish one floor and then go on to strip and refinish an adjacent room. When the two refinished floors are joined, there are never any overlap marks where the new and old work meet.

THE ONE DRAWBACK of the penetrating oil is that it is not the easiest finish in the world to apply. You flood the surface with penetrating liquid, reflood after 30 min., and then rub the excess off after another 30-60 min. If you don't rub the excess off in time, the surface residue gets tacky, and has to be "dissolved" with more liquid. No big deal, but it is easy to let your belief in your own rubbing ability get the best of you and cause you to coat a bigger area than you can rub in the allotted time.

## Floor Maintenance

**L**IKE MANY PEOPLE, I'm lazy, and frequently my intentions are better than my follow-through. Floors with a penetrating oil finish should be waxed. And I have used a paste wax (Trewax) on some of my floors—hand applied and buffed. But there

are other rooms where I just haven't gotten around to waxing. With the single exception of the entry area (where the traffic is the greatest) the unwaxed floors have held up fine.

ON THE WORN AREAS of both the waxed and unwaxed floors, I've successfully come back a year or two later and touched up the bare spots with more Watco. I just let it soak in, then buff off the excess. The surface looked as good as new, with no "patched look."

WAXING TWICE A YEAR is a good idea for rooms that get heavy use. In lighter wear areas it's not really necessary—as long as you touch up the bare spots once a year or so. ■■

Daniel J. Mehn is an application development analyst for a large computer maker. A native New Orleanian, he now lives in an old house that is only 10 blocks from the house he grew up in. Dan also refinishes and builds furniture (with champagne taste and a beer budget, he says).



**W**E WANTED to add air conditioning to the main parlor of our restored Federal-era home...but the idea of a big machine sitting in our beautiful windows was more than we could bear. Central air conditioning was out of the question because we didn't have the ductwork. And we weren't about to cut a hole in the side of the house just to accommodate the electric monster.

THE SOLUTION, when it occurred to us, seemed strange—but it worked fine: Install the air conditioner in the fireplace! An air conditioner is essentially a heat pump. It absorbs heat from the air in the room and transfers it to the outside air. So why couldn't the machine pump hot air up the chimney, we asked.

I MOUNTED THE MACHINE by placing it on a sturdy wooden box on the bottom of the firebox. I then cut a plywood panel that would mask off the rest of the fireplace opening. Cracks around the edge of the panel were plugged with putty-like rope caulk that's sold for sealing drafty windows. The panel was painted black suggest an open fireplace.

IT ONLY TAKES a couple of minutes to undo this setup in the fall when we want to use the fireplace.

D. J. Brown  
Richmond, Va.

(Shingles--Cont'd from page 85)

build up on shaded portions of a roof and in time will force the shingles apart, allowing moisture to enter. Dirt and debris can accumulate on a poorly maintained roof surface, slowing the run-off of water and allowing the shingles to absorb moisture, inviting fungus attack. Even the most decay-resistant woods will show signs of rot if they are allowed to stay damp over extended periods of time.

**WHEN SHINGLES** become pulpy and soft from rot, weather extremes to which they were immune when sound will help accelerate deterioration. The roof will become especially susceptible to driven rain and wind.

## Reroofing

**WHEN THE DECISION** is made to reroof a house with wood, the choice of whether or not to roof over the existing surface must be faced. Many roofers seem to be of the opinion that there really is no choice, that the old roof must come off--it isn't so!

**SUCCESSFUL OVERROOFINGS** HAVE BEEN going on for years. The prejudice against the maneuver seems to lie in the fact that the result tends to look lumpy at times. Rather than taking the time to explain why the rocky roof job wasn't his fault, most roofers would rather avoid them altogether. There are numerous advantages to leaving the old roof intact.

**OVERROOFING** provides a double roof with extra insulation value and storm protection. The interior is safe from the weather during the application period. Eliminated is the mess in the yard along with the corresponding clean-up; and one is saved the misery of stripping the old roof off.

**THERE ARE DISADVANTAGES** AS WELL. It may be very difficult to find a sound surface in which to nail. As mentioned previously, over-roofing onto a badly disintegrated roof may cause the finished surface to appear very irregular. Any roof sheathing which proves to be rotten must be replaced; this procedure isn't possible without removing the roof over it, so any roof with a preponderance of bad sheathing might as well be stripped completely. One last remark on stripping off old roofs: many areas of the country have building codes which limit the total number of roofs on a structure; three is common.

## Overroofing

**WHERE OLD ROOFING** is to remain, a six-in.-wide strip of the existing shingles must be removed from all eaves and gable edges around the perimeter of the roof. Onto this stripped-back area new boards of one in. thickness (1x6) should be applied.

**THESE BOARDS** PROVIDE a sturdy base at the edges of the roof and conceal the old roof from view, eliminating the "Dagwood sandwich" look one so often sees at the eaves of an overroofed house.

**NEXT, THE EXISTING RIDGE** covering must be taken off and replaced with a strip of bevel siding on either side, with the butt edges overlapping at the peak. This step precludes the formation of a mound of roofing material at the ridge where roofing is applied in extra layers. (See figure 1)

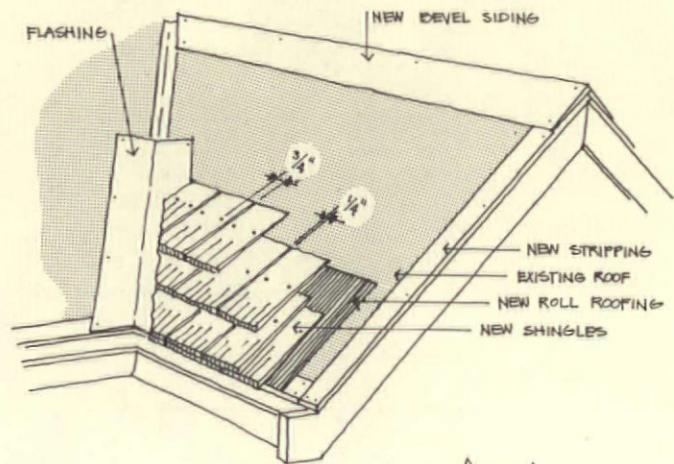


Figure 1

**NAILING OF THE SHINGLES** is extremely important. Use nails that are able to penetrate at least one-half in. into the roof sheathing underneath the old roof. In most cases this would be either 5 penny (1-3/4 in. long), or 6 penny (2 in. long) nails. Be sure to use rust-resistant nails. Aluminum nails will do, but there is nothing like a hot-dipped zinc-coated nail for holding power. Ordinary galvanized nails, like aluminum ones, are rust resistant but smooth.

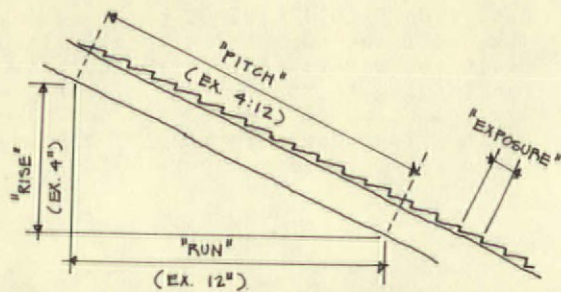
**TRY TO ASSURE** THAT any flashing used is of the same material as the nails. Don't mix aluminum flashing with galvanized or vice-versa. The dissimilar metals will react with each other. Don't use bright or blued steel nails as they are not rust resistant.

**TO BEGIN THE SHINGLE COURSING**, first determine the exposure required on the roof. The exposure is the amount of each shingle exposed to the weather. Red cedar shingles come in three lengths: 16, 18, and 24 inches. To determine the exposure, see the accompanying chart. Shingles are not recommended for a rise of under 3 in. in 12 in. of "run." (See chart on next page.)

**NEXT, BEGIN** with a double thickness of shingles at the bottom edge (eave) of the roof, applied over the new 1x6 strip board. In very cold climates it is recommended that a strip of smooth-surface 45-lb. roll roofing be laid under the shingles at the eaves to act as a waterstop for any moisture backed up by ice dams formed during cold spells. Ice dams often build up on the overhang of roofs and in gutters causing melting snow water to back up under shingles. Damage to ceilings inside and to paint outside results. Lay the roofing over the eaves extending it upward well above the inside line of the wall.

**LET THE SHINGLES PROTRUDE** over the eave edge to assure the proper drip into the gutter.





SHINGLE EXPOSURE CHART

ROOF PITCH	SHINGLE LENGTH		
	16"	18"	24"
EQUAL TO OR MORE THAN 4:12	5"	5½"	7½"
LESS THAN 4:12	3¾"	4¼"	5¾"
LESS THAN 3:12	SHINGLES NOT RECOMMENDED		

\*as recommended by the Red Cedar Shingle and Handsplit Shake Bureau.

About two in. would normally be sufficient. After the first course is laid at the eave, tack a long, straight board onto the shingles five in. or more up from the edge, depending upon the exposure desired. The board will act as a straight edge to line up the next rows of shingles. Start the next row against this guide and nail each shingle down using the proper length and type of nail, two to a shingle only. Now matter how wide the shingle, use only two nails.

**P**LACE THE NAILS NO FURTHER than ¾ in. from the side of the shingle and make sure that the next row above will cover the nails by about one in. Drive the nails until the heads meet the shingle surface, but not further, as nails have less holding power when driven with the heads into the shingle surface. (Especially if they cause the shingles to split.)

**S**PACE SHINGLES ¼ in. apart, allowing the individual shingles to expand and prevent possible warping. Joints between the shingles should be offset at least 1-½ in. from the joints between shingles in the course below. Joints in succeeding courses should be spaced so that they do not directly line up with joints in the second course below.

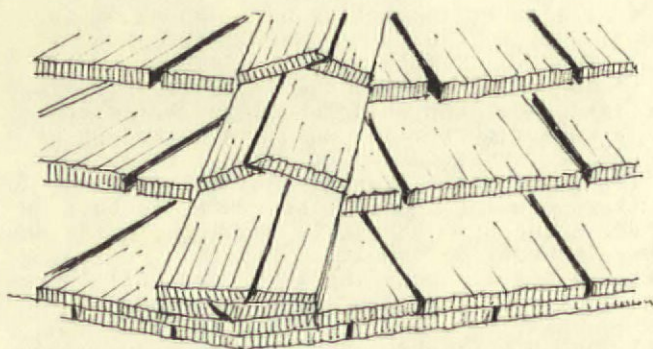


Figure 2

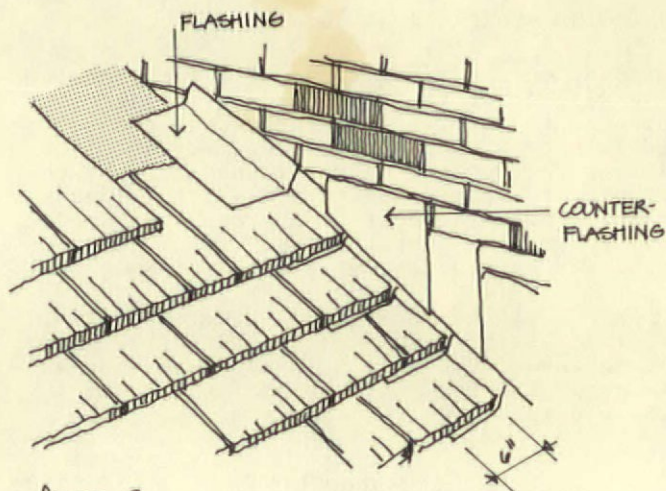


Figure 3

**W**HEN THE RIDGE is reached at last, choose shingles of uniform width, 3 to 5 in. Cut back the edges on a bevel and alternate overlap. A great deal of time and effort can be saved here if factory assembled hip and ridge units are available. (See figure 2)

**V**ALLEYS CAN BE ESPECIALLY troublesome. Most roof leaks occur at points where water joins to run off the roof, or where the roof abuts a vertical surface. In these potential problem areas use metal valleys and flashings to maintain a watertight roof. Extend valley flashings beneath shingles at least ten in. on either side of the valley center if the roof pitch is less than 12 in. in 12 in.

**F**OR STEEPER ROOFS, the valley sheets should extend at least seven in. up either side. As the roof shingles are laid, those which adjoin valleys should be trimmed parallel with the valleys to form a six in. wide gutter. Be sure that the grain of the shingles is the same as it is in the main body of the roof to maintain a pleasing appearance. Keep nails as far from the valley center as possible. If you pre-cut shingles to be used in the valleys from wide shingles found in the bundles, you will have a good supply of the proper size. Furthermore, the sections cut off can often be used on the other side of the roof hips.

**A**NYTHING WHICH PROTRUDES through the roof or abuts it should be flashed and counter-flashed to prevent water leakage. Flashing should extend at least 6 in. under the shingles and should be covered by counter-flashing. (See figure 3)

**V**ENT PIPE FLASHING can cause problems if not applied in the proper manner. Allow the flashing to show on the down-slope side of the vent. The inexperienced person trying for a neat appearance will often try to cut the shingles out all around the vent. This will have the effect of forming a dam on the down-hill side, creating a place for debris to collect and subsequently backing up runoff water. By leaving the down-slope side of the flashing showing, debris will wash away. One should

also allow about one in. clearance around the vent pipe on the other three sides to assure that no debris will hang up at these points.

**A COUPLE OF MORE POINTS.** To avoid leaks, wood shingle roofs should not be subjected to unusual strains. If it is essential to walk over a roof for any reason, wear soft soled shoes and tread lightly. When applying the roof, the same rule pertains; never wear spiked footwear. And finally, when the roof is completed, keep it clean. Assure that no leaves and twigs are lodging behind the chimney or vent pipes. With proper care, the wood shingle roof you have applied should give years of durable service. A good source of

additional information is: The Red Cedar Shingle and Handsplit Shake Bureau, Suite 275, 515 116th Ave. N.E., Bellevue, WA 98004.

C. R. Meyer is a member of Seattle's Historic Preservation and Development Authority, a public corporation created for the preservation and enhancement of Seattle's historic heritage. He is presently involved with the restoration of the Stimson-Green house on a professional basis, and of his own 1911 house on Queen Anne Hill.

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## Helpful Publications

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### Storefront Rehabilitation

A VERY HELPFUL leaflet is available for those involved in storefront rehabilitation. The aim of the leaflet is to help store owners improve their storefronts so that the result is both architecturally and commercially attractive, and it contains step-by-step guide to developing a rehabilitation scheme, including architectural investigation, cleaning and painting, and choosing effective signs. Copies of "A Practical Guide to Storefront Rehabilitation" are available for \$1.00 postpaid, from the Preservation League of New York State, 13 Northern Boulevard, Albany, New York 12210. Special rates are available for large quantity orders.

### Slate Roofs

THE VERMONT STRUCTURAL SLATE COMPANY has reprinted a 1926 book, "Slate Roofs." It is a manual for the proper design and installation of slate roofs, including architect's specifications as well as information on repairing a slate roof. The book is written for the professional, but the homeowner who has a slate roof can benefit from the design and repair information. Send \$5.25 (includes postage) to the Vermont Structural Slate Co., Inc., Fair Haven, Vermont 05743.

### Caring For Old Photographs

OLD PHOTOGRAPHS are an important tool in restoration. Historical societies and individual home owners are collecting photographs. These people will find a wealth of information in "Collection, Use, and Care of Historical Photographs," by Robert A. Weinstein and Larry Booth. This book is the first guide for amateurs to cover both the technical and the philosophical aspects of collection. It is intended not only for hobbyists but also for

archivists, librarians, curators, and others who encounter historical photographs in their work. This hardcover book, 222 pages, contains 83 historical photographs as well as a bibliography, appendix, and index. To order, send \$16.00, postpaid, for each copy of "Collection, Use, and Care of Historical Photographs," to: American Association for State and Local History, 1400 Eighth Avenue South, Nashville, Tennessee 37203.

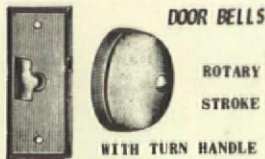
### Furniture Refinishing

WHILE REFINISHING FURNITURE may not always be much fun, a new book by George Grotz can make the chore far more pleasant. Written in an entertaining style, it is also full of information on how to fix and refinish over 50 styles of furniture--from Queen Anne to Eastlake. Grotz discusses the characteristics of woods and the way to repair, stain and refinish. There is also specific instructions for individual problems from Armoires to Zatlins. "The Fun of Refinishing Furniture" is \$4.95, plus 50¢ postage, from The Pequot Press, Dept. J, Chester, Connecticut 06412.

### Antique Doorknobs

MAUD EASTWOOD has perhaps the largest collection of antique doorknobs in the country. She has put her knowledge gained in the collecting process and, in over 350 photos, a good deal of her collection into an informative little book, "The Antique Doorknob." Facets of the collection include: history, dates, design sources, patents, advertising, schools of ornament. The readers gains a good deal of knowledge about American design and manufacturing as well as door hardware in general. A doorknob will never again be unnoticed and she also provides display ideas for those who get the collecting bug. To order, send \$5.95 to: The Antique Doorknob, 3900 Latimer Road North, Tallamook, Oregon 97141.

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CATALOG #277 can be ordered for \$3.00 from: Cumberland General Store, Dept. O, Route 3, Crossville, TN 38555. It's delightful for browsing—even if you never order a thing.



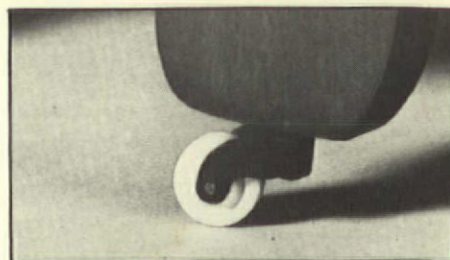
## Exterior Lanterns

**B**ACK IN NOVEMBER 1975, Stanley Levine of MarLe Co. asked us if we thought there was a market for turn-of-the-century exterior lanterns.

WE TOLD STANLEY we'd ask the readers—and published a sketch of the proposed lantern in the November issue. The response was quite encouraging—so he went ahead and had molds made for the lantern you see illustrated above.

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MARLE NORMALLY charges \$2 for its catalog. But Stanley Levine says he'll send one free to fellow Journal subscribers. Write to him at: MarLe Co., 170 Summer St., Stamford, CT 06901. Tel. (203) 348-2645.



## White Porcelain Casters

ANTIQUE style white porcelain casters are now available new. The wheel is ½ in. wide and 1-1/8 in. dia. Die cast housing has a black finish. Caution: If you have an old piece of furniture, the shank on these casters might be different from the holes in your piece. You might have to re-engineer the openings.

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