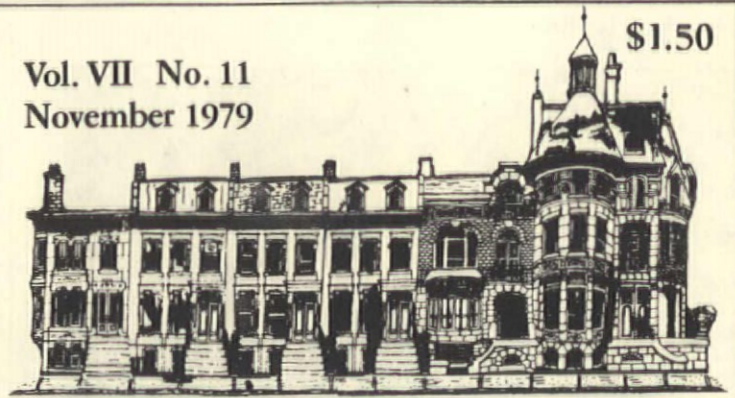


THE OLD-HOUSE JOURNAL

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Restoration And Maintenance Techniques For The Antique House

The Craftsman House



By Carolyn Flaherty

THE CRAFTSMAN HOUSE expressed the principles of the Arts and Crafts Movement. More specifically, the true Craftsman house was built to conform to the philosophy espoused by Gustav Stickley, the most important voice of the Arts and Crafts Movement in America.

IN HIS MONTHLY MAGAZINE, The Craftsman, (published from 1901-1916) he presented designs for cottages, bungalows, suburban houses and city dwellings, variations of farmhouses and log cabins, as well as California Mission style houses. They were designed by the staff of The Craftsman and what they had in common was that they were built according to the tenets of the Craftsman philosophy.

TWO BASIC PRINCIPLES of this philosophy can be summed up as follows:

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Coming Next Month

GOLD-LEAF HOUSE NUMBERS

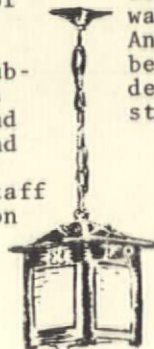
1- To express the structure honestly. The structural elements became the decoration. (The whole Arts and Crafts Movement was, after all, a reaction to the elaborate decoration of the late 19th century.)

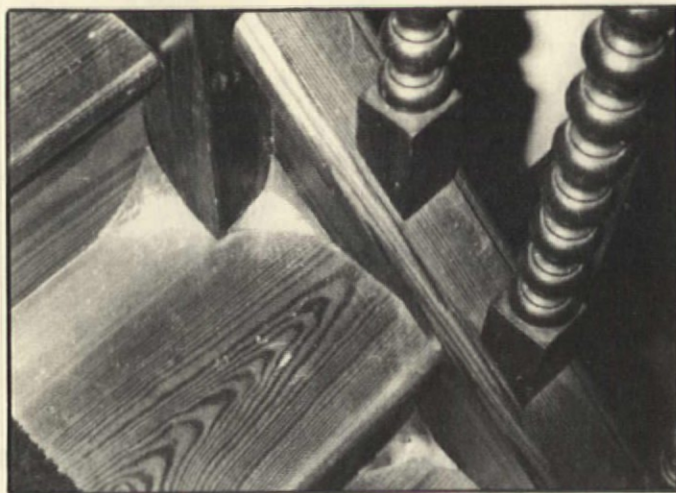
2- The "honest" use of materials. Stickley thought that simple, rustic (or crude) building materials (fieldstone, hand-split shakes, or even cement) used in a state that was not highly finished, best expressed the principle of honesty.

HOWEVER, the name "Craftsman" became widely used and the simple, relatively inexpensive look of the houses published in the magazine was widely imitated--and sometimes poorly. An imitation Craftsman house might have timbers pasted on in the same manner that ornate decoration was applied in the late Victorian styles.

THE SIMPLE, RUSTIC COTTAGES and faintly Tudor stone-and-timber house along with the ubiquitous bungalows from the pages of The Craftsman were the kind of small houses that were built in America during the first decades of the 20th century.

(Cont'd on page 123)





Source For Dust Protectors?

To The Editor:

WOULD ANY OF your readers know of a source for these staircase corner brass dust protectors? They were designed to keep dust from getting trapped in the corners on stair treads. I believe they date from the Victorian era—and were popular in many parts of the South.

WE NEED some replacements and so far have been unable to locate any. We'd greatly appreciate some help. Thanks!

Mark Hordes
Houston, Tex.

Beware Enamelac On Exterior Shutters

To The Editor:

IWOULD LIKE to add one comment to the discussion of peeling paint on exterior shutters that have been stripped by dipping in a chemical bath (OHJ August 1979, pg. 94).

ONE OF THE READERS suggested Enamelac as a sealer to isolate the finish coats of paint from any chemical residue left in the wood. We in fact used Enamelac on our shutters—the ones that were the subject of discussion in the case history in your August issue. And we experienced massive paint failure!

ON ANOTHER OCCASION, we had 100% paint failure within 3 months on all shutters on an exterior job where we had used Enamelac as a sealer.

ENAMELAC AND BINS are essentially pigmented shellac sealers. In talking with painting contractors and in independent research, I have come to the conclusion that shellac-based materials should never be used outside. Experienced painting contractors dislike using Enamelac to spot-seal knots on exterior trim, for

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example, because it will attract water even when protected by a finish coat of paint—and the paint is likely to blister in this spot. Instead, they use aluminum paint to spot-seal knots.

ENAMELAC is a great product for interior use on new soft woods, knots and the like. But I will never again use it for exterior work—regardless of what it says on the label.

Sandra Bergmann
Richard Bergmann Architects
New Canaan, Conn.

A Finish For Slate

To The Editor:

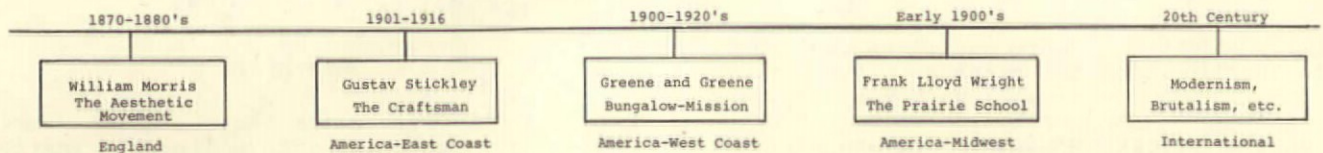
IRECENTLY PURCHASED an old slate sink that bears a metal tag stating it was made by the Munson Slate Co. The slate is in good condition, but bears some scratches from use and abuse.

I LOOKED IN VAIN for any "official" instructions on how to revive the old slate. I ended up just cleaning it as best I could with soap and water, then wiping on a coating of mineral oil. The mineral oil was then wiped off with a soft rag so that only the thinnest possible film remained on the stone.

THE OIL removed most of the discoloration and acts as a good sealer. I renew the coating about every two months. The scratches remain, but they are much less noticeable. I am quite happy with the results, but am still wondering if there is another procedure I could have used. Any feedback from other readers would be interesting. For example, can the scratches in slate be sanded out as they can with marble?

Karen Cooper
Hartford, Conn.

Leaders of The Arts And Crafts Movement



(Craftsman--Cont'd from page 121)

Gustav Stickley

GUSTAV STICKLEY began as a late Victorian furniture manufacturer and eventually ruled over a Craftsman empire. In addition to his Craftsman magazine, he opened a 12-storey building in Manhattan in 1913. The Craftsman store sold every conceivable item for home decoration and maintenance--rugs, draperies, lighting fixtures (all Craftsman designed) as well as building materials, nursery equipment, paints, etc.

THE MAGAZINE OFFICES (originally in Syracuse) occupied the 10th floor; club-rooms, library and lecture hall filled the 11th and The Craftsman restaurant was on the top floor. It featured food grown on Stickley's Craftsman farms in New Jersey; served by Japanese waiters in a setting of Craftsman furniture, textiles, lighting and even place settings.

THE CRAFTSMAN BUILDING was headquarters for over 50 representatives across the country. As a publisher, architect, furniture and interior designer, store, mill and factory owner, Stickley was able to spread his doctrine of good workmanship and simplicity to a vast audience.

UNFORTUNATELY, Stickley went bankrupt in 1916. He had most likely over-extended himself and he also blamed his own bad business practices. But the effect of the Colonial Revival and the interest in "colonial" decoration may have had as much to do with the demise of The Craftsman.

Bungalow-Mission-Craftsman

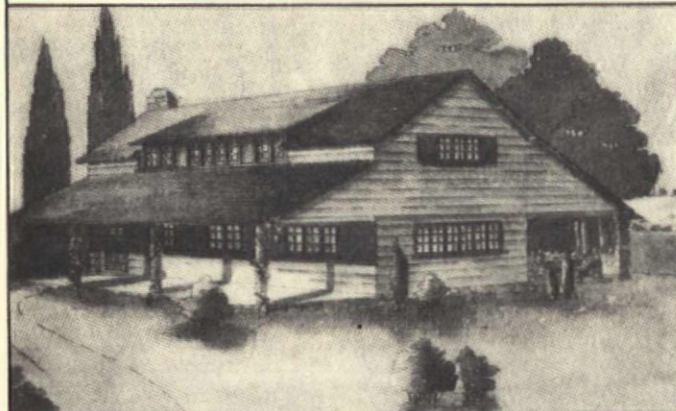
ALTHOUGH Craftsman houses are not all bungalows, there is a good reason for this popular misconception. Greene and Greene, two gifted architects in Pasadena (already under the Arts and Crafts spell) were greatly influenced by The Craftsman. They even furnished one of their houses with pieces entirely selected from a 1901 issue of The Craftsman.

THEIR BUNGALOW STYLE incorporated Craftsman principles with features adapted to the western climate--low pitched roofs, broad overhanging eaves, wide banks of windows. Stickley began publishing their designs in 1907. He also presented many concrete houses in the California Mission mode. In 1912 (at this point, ironically, the Greenes were moving away from the bungalow) he featured 13 pages of the Greene and Greene bungalow style. This publicity, at the height of Stickley's influence, forever blurred the distinctions of the Bungalow-Mission-Craftsman styles. It did, however, bring the bungalow from California to be accepted as a popular style all over the country.

Following are three designs for houses from The Craftsman magazine with the descriptions given them at the time of publication.



Cement house showing lavish use of half-timber as a decoration. 1909.



A roomy, inviting farmhouse, designed for pleasant home life in the country. 1908.



A comfortable and convenient house for the suburbs or the country. 1907.

The Craftsman Interior

A CRAFTSMAN HOUSE is more easily recognized by its interior than its exterior. It featured a liberal use of wood with many structural elements: Beamed ceilings, wainscoting, fireside inglenooks, window seats, and often built-in furnishings (settles, desks, even a piano.) Staircases and landings were sometimes the prominent feature in a room. The object was to have each room so interesting in itself that it seemed complete before a single piece of furniture or decorative accessory was added to it.

Wall Treatments

TYPICALLY, wall spaces were divided by wainscoting, stencilled panel, and frieze. The Craftsman room depended on the richness of wood for its color scheme. Indeed, after the wainscoting, bookcases, and (in dining rooms) the plate rail, there was little wall space left to decorate. The wall itself was generally left in a rough plaster state and painted (or pigment added to the plaster) in warm earth tones--mustard, tan, soft gold or sage green. The rough texture was intended to radiate color rather than reflect it as from a smooth surface. The color was deliberately uneven so that "there is a chance for the sparkle and play of light."

Stencilling

THE STENCILLED FRIEZE is a characteristic feature of the Craftsman room and a very attractive one. The stencil patterns are sparse and quite sophisticated. They are, unfortunately, not easy to imitate. But the Craftsman home-owner could conceivably duplicate this feature with the aid of the Dover book mentioned on the following page. A stencil pattern can be taken from ones shown on the walls of the various rooms or, just as easily from the many needlework patterns shown. The stencilled pattern was often repeated around the edge of a rug (rugs were usually solid-colored, with a border) and this is an op-

portunity to add a Craftsman effect by painting and stencilling a floor area.

Fabric

SOFT LEATHER was by far the most often used upholstery material with pillows in leather, sheepskin, or fabric. The most popular colors for leather were brown, biscuit, yellow, gray, green and fawn. Silks, tapestries and all delicate fabrics were definitely out--and those that possessed the qualities of sturdiness and durability were used for all other upholstery, curtains and table coverings. The favored fabrics were woven of flax and left in their natural state or given a color that resembled a "nature hue." These included roughly woven, dull-finished silk, linen and canvas. Nets and crepes of the same general character were used for curtains--hung simply from a wooden pole. Fabric was not monotonous, however, as they were applied or embroidered in bold and simple designs--again reflecting nature: Pine cones, ginkgo leaves, poppies. Craftsman needlework is as interesting a subject for study as any of the other decorative arts.

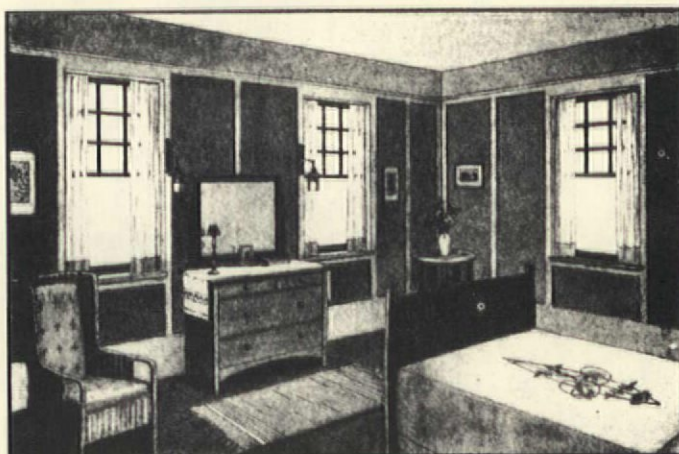
Metalwork



STICKLEY THOUGHT IT of the utmost importance that the metalwork in a Craftsman interior should be of a fitting character. Therefore, he designed lighting fixtures, fireplace accessories and door hardware. All were designed and finished to avoid a highly-polished or machine-made look. He encouraged his readers to set up home workshops to produce their own metalwork and so few designs were complex. Rather an exception is the electrolier shown here, in fumed oak and hammered copper. Most lighting fixtures were lanterns attached to the wall or hung with chains. A favored Craftsman way to light a dining room was to use many lanterns hanging from the beam above the dining table.



Living room with split boulder fireplace, nook with built-in bookcases and desk, division of wall spaces by wainscoting, stencilled panels and frieze, with casement windows set high in the wall.



Bedroom showing a typical Craftsman scheme for decorating and furnishing a sleeping room. Note the division of wall spaces into panels by strips of wood. The panels are covered with Japanese grass cloth.

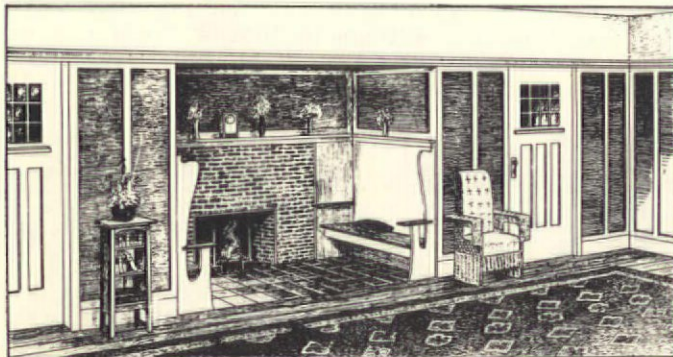
Craftsman Furniture

STICKLEY'S FUNCTIONAL, sturdy furniture was enormously popular--the first truly American style to become so. He believed his furniture designs were "the clearest concrete expression of the Craftsman idea." He had, of course, many imitators (including his own brothers) who marketed similar pieces under various names: Mission, Hand-Craft, Arts and Crafts, Crafts-Style, Roycroft, and

Quaint. But furniture from the Craftsman workshop always carried the mark shown above.

CRAFTSMAN FURNITURE was durable and rustic enough to be used as lawn and porch furniture (porches were a favorite house feature) and to furnish country and seashore homes. Many people who did not live in Craftsman houses used the furniture for this purpose. In fact, both Astor and Rockefeller hired Stickley to furnish their country homes in the Hudson Valley. Henry Ford, always a rustic, on the other hand, decorated his Manhattan apartment with Stickley furniture.

STICKLEY ALSO USED wicker for indoors and outdoors. To be exact, willow; he did not like rattan. He thought wicker excellent because it had the obvious look of a handicraft and because it harmonized well with his severe and massive oak pieces.



This interior (from the Craftsman 1905) shows three typical Stickley pieces: small bookcase, willow chair and two built-in settles in the fireplace nook.

ANYONE INTERESTED in the Craftsman style will want a copy of a fine new book, Craftsman Houses. This book is a reprint of the 1909 edition of the book by the same name and is a gathering of design from The Craftsman Magazine. Contents include: 40 house plans and drawings, Stickley's essays on interior design, metalwork, furniture, needlework, wall treatments and floors, plus woodworking and wood finishing techniques.

TWO REPRINT FURNITURE CATALOGS will be of interest to those who wish to know more about Arts and Crafts furniture:

1. "Craftsman Furniture Made By Gustav Stickley" -- his 1909 furniture catalog which includes some metalwork and fabric as well as some house illustrations. \$6.00.
2. "The Arts & Crafts Furniture Work of L. & J.G. Stickley" -- Gustav's younger brothers (and imitators) who marketed their furniture as "Mission," or "Hand-Craft." Complete furniture line. \$5.00.


Both books can be ordered from: The American Life Foundation, Watkins Glen, New York 14891.



Art Nouveau lady

THERE IS GREAT INTEREST today in both the Arts and Crafts Movement as well as another decorative style of the period-- Art Nouveau. The difference in these two major styles is best summed up by the noted art historian, John Freeman, who wrote (in 1965) this interesting comment:

"The Art Nouveau's emphasis on the wavy line, stylized ornament, and overt eroticism

never found great acceptance on these shores, except in advertisements and other graphic media. Far more successful was the Arts and Crafts aesthetic of harsh, geometrical outline and sparse ornamentation. The difference, then, between Art Nouveau and the Arts and Crafts was sexual. Voluptuous woman with long flowing hair and prominent feminine features--and exotic feather trappings were the two most often repeated motifs of Art Nouveau design. Woman is almost totally absent from Arts and Crafts design and when she is present she is either saintly or sexless. Muscular, hard, rude, and brutal, Arts and Crafts design is male-oriented. Art Nouveau outlines are smooth, soft and flowing. Those of the Arts and Crafts are rigid, sharp, and unyielding." 

THIS EDITION is 8-1/2 x 11, soft-cover, with 224 pages and 296 black and white illustrations. Four interiors are reproduced in color on the inside covers. Amazingly, the price of this handsome book is only \$6.00.

TO ORDER Gustav Stickley, Craftsman Houses #23791-5, send \$6.00 + 70¢ postage, to: Dover Publications, Inc., 180 Varick Street, New York, N. Y. 10014.

Stripping With The Heat Gun

By The OHJ Staff

STRIPPING THE LAYERS OF PAINT from vintage woodwork is time-consuming and tedious. Yet many old-house owners strip and refinish doors and window frames, panelling and wainscot, mouldings, and even whole staircases...because the results are so worth the trouble.

DIFFERENT PAINT-STRIPPING projects require varying tactics. Refinishing experts agree that, whenever practicable, hand stripping wood pieces is preferable to dipping them in a strong chemical bath. A heat gun, which removes paint using flameless high temperatures, is often the best overall tool for taking paint off wood surfaces.

Advantages Include Safety

A HEAT GUN makes paint-stripping safe and quick. If you have lots of woodwork to do, it's the most economical way as well.

THE HOMEOWNER AVOIDS the large doses of methylene chloride vapor given off by stripping chemicals. Also, while propane torches pose the danger of lead-poisoning by volatilizing old lead-based paint, the flameless lower heat of the gun avoids this hazard entirely. And of course, there's less likelihood of fire and burns.

IT'S A FAST METHOD, because the paint bubbles and lifts as you go along. There's no waiting for chemicals to soak in, no multiple recoatings, and far less cleanup.

AS FOR ECONOMY: These guns are long-lasting industrial products, so the initial cash outlay is promptly made up in savings on the \$12 per gallon stripper you're no longer buying in quantity. Even after much heavy use, a worn-out heating element can be replaced by the owner for about \$7.

YOU SOON GET THE KNACK of using an electric heat gun. For a tried-and-true method of operating one, see Mike Carew's account in the following section.

Heavy-Duty

AS MENTIONED BEFORE, a heat gun is a heavy-duty tool. It draws 14 amps, and since most household circuits are rated at 15 amps, not much else can be plugged in at the same time, or you'll blow fuses. (A heavy-duty grounded extension cord only should be used.) Its operating temperature is between 500-750F. Sensible precautions should be followed.

THE RISK OF FIRE IS MUCH LOWER than with a propane torch, but care should be taken that combustible dust is removed from your work area. Remember that baseboards, carved mouldings, and the like are dust-collectors, so be sure to clean and sweep just before using the gun.

THE OLD-HOUSE JOURNAL STAFF has found the following procedures are NOT recommended:

- Don't use a heat gun to remove shellac and varnish.
- Don't use it to strip Early American milk paint. (Only ammonia works on that.)
- Don't try to strip paint from slender window muntins--it's always possible the panes will crack from prolonged heat.
- Don't attempt to strip the exterior of your whole house--it's too slow. But it works fine on porch parts and exterior ornament.

WHEN THE WOOD IS BARE...an electric heat gun can do other jobs too. It is, for instance, an excellent aid in prying up old linoleum. (The heat will go right through the linoleum to soften and loosen the synthetic resin paste that glued it down.) It has been used to thaw frozen pipes in the winter. And it will soften old putty when you're replacing window glass.

The Voice Of Experience

By Mike Carew

I WAS ALREADY well into the restoration of my 1890s Brooklyn brownstone when I discovered the heat gun. Though most of the woodwork in my house was in its original condition, the dining room and kitchen downstairs were covered with paint. The first stripping project I attempted was one of the dining room's focal points: the Eastlake-style breakfront wall.

WITH GALLONS OF STRIPPER, scrapers, and reams of paper towels in hand I went to work. But removing numerous layers of paint with chemical stripper took much longer than I'd expected. I was so discouraged with the amount of time, effort, and expensive stripper it took, I postponed any further work while I searched for a better way. Many of my neighbors were in the same process, using everything from propane torches (which burned the wood), to Roto-Strippers (which chewed the wood to bits.)

ABOUT THIS TIME I started my job at The Old-House Journal. I learned that the heat gun was highly recommended by readers, so I purchased one hopefully.

FOLLOWING THE INSTRUCTIONS provided, I held the gun one or two inches away from the surface to be stripped. Within two minutes the paint bubbled and melted. Slowly I scraped the soft paint with a two-inch broad knife while continuing to heat an adjoining section of painted surface as I moved up. (See photos) The stripped paint that accumulates on the scraper hardens almost immediately, so you don't have to worry too much if it falls on the floor. (I put the paint goop in empty coffee cans.)

THE HEAT GUN removed all the layers of paint down to the original coat of varnish. I found that the gun will not remove varnish...it tends to burn it and eventually will scorch the wood. This is where the final stripping process comes in.

The Detail Work


AFTER COMPLETING the flat surfaces of the wood-work, I did the narrow grooves and the intricate detail. For this part of the job I used an icepick (for the grooves); a screwdriver (for the narrow turned places); and the smallest paint scraper I could find at the hardware store (for the narrow flat surfaces a two-inch blade won't reach.)

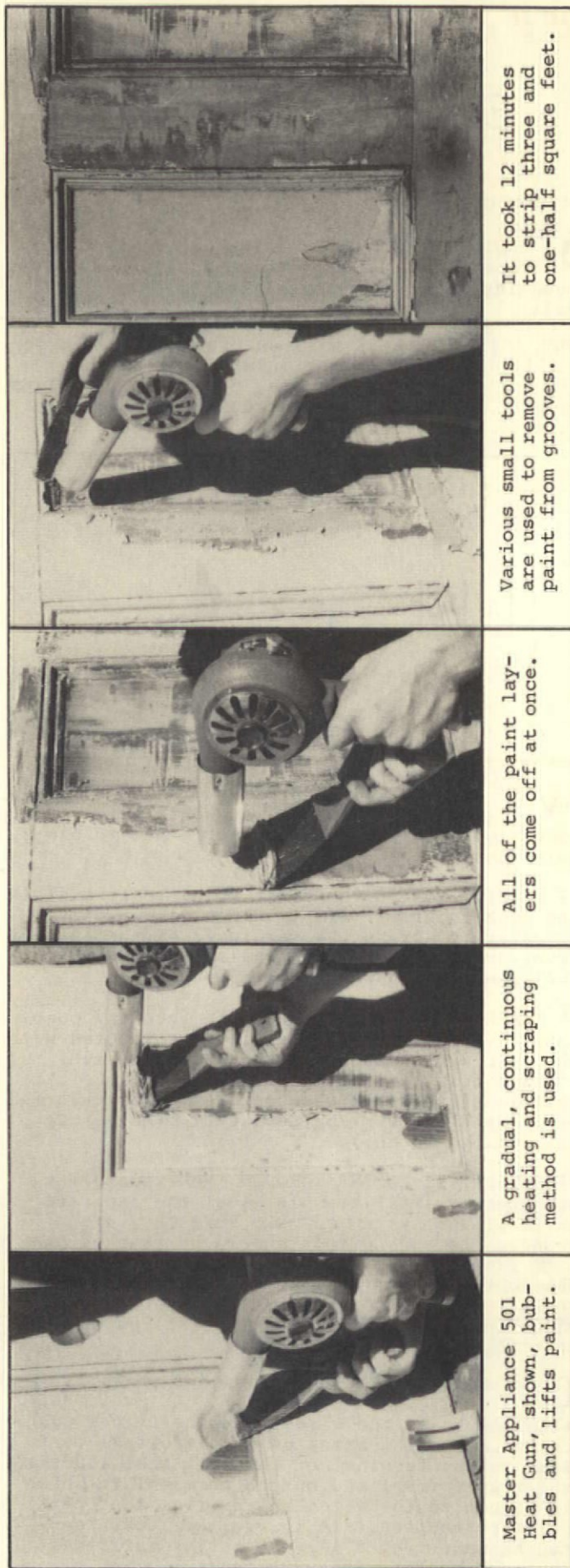
FIRST I AIMED THE GUN at the grooves and, using the icepick, got as much of the paint out as possible without scorching the wood. Don't worry if you can't get all the paint out of the grooves, because you'll be able to remove the rest in the final stripping process.

AFTER THE GROOVES ARE DONE you can go to the narrow flat surfaces of the wood and the detail. A little experimentation turns up the most appropriate tool for the surface you're tackling. It's not too difficult. But remember--don't spend too much time on one area or you might scorch the wood. When you've done as much stripping with the heat gun as you can, you're ready for the final stripping process. Be sure to work in a well-ventilated space--use a fan if you have to--and wear gloves.

FOR THE FINAL CLEANUP, a two-step system worked well for me. Working on a small section at a time, I coated the wood with liquid chemical stripper. After waiting for it to soak in (not long because there was very little paint left), I removed it with a scraper and rags. I then recoated the same area lightly and went over it with medium (00) steel wool--this effectively removed the old varnish. Now you should have a pretty clean surface.

IF IT'S AN OPEN-GRAINED WOOD, you may still have a vague whitish residue. In that case you can try the remedies given in the January 1976 or the December 1977 issue of the Journal.

HAPPY WITH THE MORE immediate results, I went on to the kitchen. 



It took 12 minutes to strip three and one-half square feet.

Various small tools are used to remove paint from grooves.

All of the paint layers come off at once.

A gradual, continuous heating and scraping method is used.

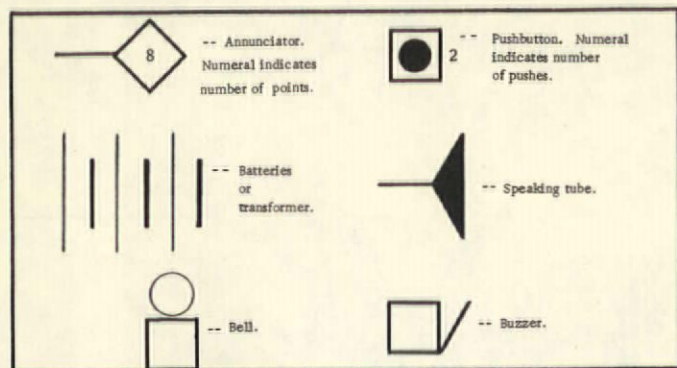
Master Appliance 501 Heat Gun, shown, bubbles and lifts paint.

Finding Faults In Electric Bell Systems

By Tom H. Gerhardt

IN PART I OF OLD-HOUSE INTERCOMS, I described three signalling/intercommunications systems: Speaking Tubes, Mechanical Bells, and Electric Bells.

SOME DETECTIVE WORK will uncover what was originally in the house for intercommunications. If they're still available, the builder's plans usually indicate these devices using the standard architectural symbols shown here.



WHEN AN ELECTRIC BELL SYSTEM is non-working, but reasonably intact and worthy of repair, some simple tests should be performed to pinpoint the trouble.

IF NOTHING WORKS, the first thing to look at is the power source. Simply place a screwdriver momentarily across the terminals of the bell transformer to see if there is a spark, which indicates that power is being produced.

IF THERE IS NO SPARK, check the incoming power supply (the large wires that are connected with the regular house current) by using a high-voltage test lamp on the circuit. If the circuit is alive, then chances are the transformer is dead and must be replaced. (Make sure the ratings match.)

IF CURRENT IS COMING THROUGH the transformer but there's still trouble, test the separate parts of the system to make sure they are sound. The pushbuttons should be removed one at a time and the wires touched together to make certain that trouble doesn't exist in the contacts. (It is wise to clean the contacts with fine sandpaper, so that corrosion won't interfere with the current.)

IF THE ANNUNCIATOR still does not work:

●**TEST A:** Leave the wires touching at one pushbutton. Put the wires of a low-voltage test lamp on the terminal of the bell that leads to the transformer, and on the terminal to which is connected the wire leading from that particular pushbutton. (A low-voltage test lamp can be made from a 14-volt series Christmas lamp and socket with wire leads.)

IF THE LAMP LIGHTS, the wiring for that circuit (leading to the annunciator) is intact. So, there must be a loose wire in the annunciator...or the solenoid coil for the indicator on that circuit is burned out...and/or the bell is not making contact. If the lamp does NOT light in Test A, the wiring leading to the annunciator must be traced to look for a break.

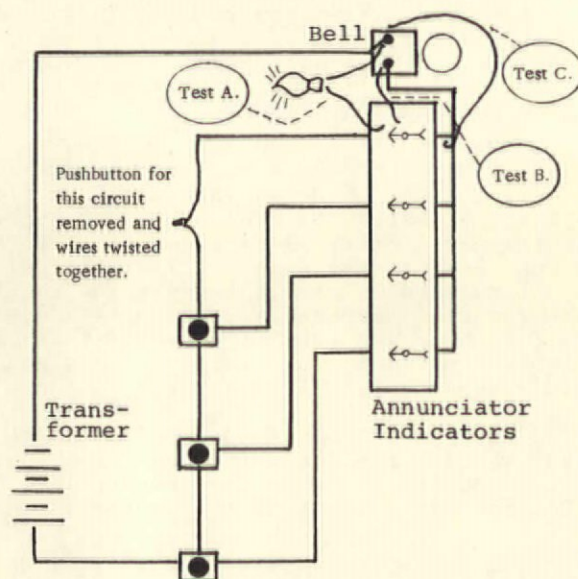
●**TEST B:** After determining that the wires leading to the annunciator are intact, a test for the bell can be made by connecting the bell directly to the power source, bypassing the solenoid. This is done by taking a jumper (a short length of insulated wire with bare ends) and touching one end to the annunciator terminal (as in Test A) and the other end to the bell terminal where the solenoid wire connects. (See the diagram below.)

IF IT DOESN'T RING, the bell may be the cause of all the problems. Sometimes bell trouble can be detected (with the wires touching together at the pushbutton) by flipping the clapper to see if there's any reaction at all. Bells now and then can be restored to working order by adjusting the screw on the contacts, after cleaning the contacts with sandpaper.

IF THE BELL IS NON-WORKING and cannot be fixed, a new one--usually an ordinary modern door-bell--can be installed, preferably in an unobtrusive manner that doesn't require removing the old bell (it might be built-in on the annunciator.)

●**TEST C:** If the wiring to the annunciator is good and the bell rings using Test B, but there is still trouble, then put the jumper on the bell terminal leading from the transformer, and on the bell-to-solenoid wire that is connected with the pushbutton (the one with wires touching.) If the proper indicator does not move, it means either the solenoid is burned out and must be rewound, or there is a loose wire between the solenoid and bell.

OF COURSE, ALL CIRCUITS must be tested in this manner, until the problems are ironed out. Happy troubleshooting! ⚡



Maintenance of Gutters

By The Old-House Journal Technical Staff

BUILT-IN GUTTERS (also called box gutters) that we discussed in last month's article present severe maintenance problems. This month, we'll look at hung wooden gutters--and also examine an interesting compromise between a built-in and a hung gutter.

HUNG WOODEN GUTTERS work quite well, are reasonably attractive, and will last indefinitely--if properly maintained. They are much stronger than aluminum gutters and resist sagging, especially under heavy ice and snow loads in cold climates. (The tendency of metal gutters to sag leads to water collecting in low spots... with resulting deterioration.) The joints between sections of wood gutters should in the long run remain at least as watertight as metal ones, again assuming proper maintenance. The wood joints tend to remain tight partially because wood swells when it becomes damp.

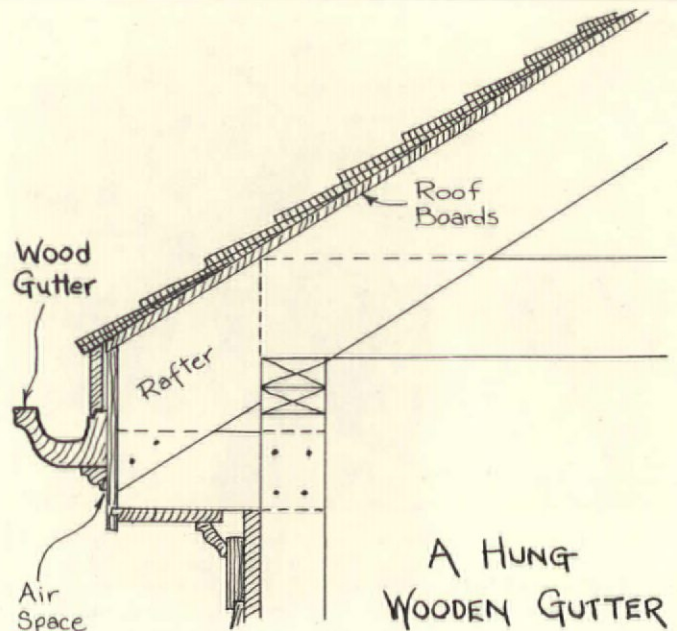
THE BIGGEST DISADVANTAGES of wood gutters are: (1) If they aren't properly maintained they will rot; (2) It is now very difficult to find wooden gutter stock should you have to replace some; (3) It may be difficult to find someone to handle the relatively simple carpentry needed to install them.

Keep Gutters Painted

REGULAR MAINTENANCE is the key to keeping wooden gutters in good working order. As part of normal maintenance, they should be inspected and cleaned at least once a year; more often if nearby trees drop a lot of debris in them. Caulking of joints should be checked (and renewed if necessary) at the same time.

EVERY FOUR or five years, the interior of the gutters should be wire-brushed, primed and given one or two finish coats of paint. Ordinary exterior house paint can be used, although some experts swear by aluminum paint. Aluminum paint stands up well and is slick and slippery...and thus tends to get washed clean.

IF YOU HAVE WOODEN GUTTERS that have gone without paint for some time so that the wood is



dried out and cracked, before painting use a primer composed of 50% boiled linseed oil and 50% wood preservative (like "Wood Life"). Brush this solution on generously, letting the wood absorb as much as it will take. (Be sure to do this only when the gutters are completely free from all dampness.) Allow the gutters to dry for 48 hours, then repeat the treatment. Let this second coating dry for a week, then add one or two finish coats of paint.

IF THERE is minor damage to wood surfaces resulting from rot, you might want to repair the wood with epoxy wood consolidants before treating the rest with wood preservatives. Epoxies are expensive materials, so whether this treatment is practical would depend on the amount of surface area needing repair. You can use a material like "Git-Rot" to encapsulate the rotted wood fibers in epoxy. Then you could use a flexible epoxy mending putty to build up the surface. These epoxy mending materials are available from marine supply stores. If there isn't one near you, a mail order source is: Defender Industries, Dept. OHJ, 255 Main St., New Rochelle, N.Y. 10801. Send \$1 for catalog.

IF YOU are planning any significant use of epoxies to restore rotted wood, it would be a

Needed: Source For Wood Gutters

THE EDITORS have been unable to locate a source for wooden gutters. Some of our readers have been able to find old stock squirreled away in the back of some lumber yards. (A reader purchased some last year for \$2.65/linear ft.)

IF ANY of you know of a mill that is still producing wood gutter stock, please write the editors at: Old-House Journal, 69A Seventh Ave., Brooklyn, N.Y. 11217. Thanks--C.L.



This wooden gutter has been in service many years...and will last decades longer if properly cared for. The inside should be wire-brushed, primed and painted. Caulking should be renewed at all joints. Note metal angle iron that reinforces the mitered corner.

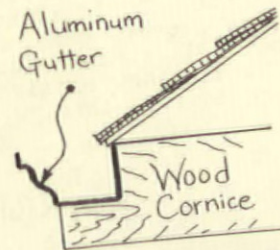


A Hybrid Gutter System

THE HOUSE above had built-in gutters on the porch which had rotted out. To replace the old system, restoration carpenter Ted Ewen fabricated a hybrid system that provides much of the visual camouflage of a built-in gutter with the economy of using readily available aluminum gutter stock. The gutter selected had an outer lip with a profile similar to a classical moulding.


THE WOOD CORNICE was rebuilt (which had to be done anyway) with a recess to accept the new aluminum gutter stock. The recess was shaped so that the outer lip of the aluminum gutter becomes an integral visual element in the cornice.

BIG ADVANTAGE of this design is that it relies only on the carpenter's skills— which many homeowners already possess. It avoids the need for a custom-fabricated metal lining in the gutter—and the periodic resoldering of joints that is part of maintaining a conventional built-in gutter system.



good idea to get the new government report on the procedure. It's called: "Epoxy for Wood Repairs in Historic Buildings" and is available for \$2.50 from the Supt. of Documents, Washington, D.C. 20402. Ask for stock #024-016-00095-1.

QF EQUAL IMPORTANCE are the things that you shouldn't do to wooden gutters. The interior surface should never be tarred with roofing cement. This unfortunately is a common practice. Problems arise as the tar hardens, while the wood below continues to expand and contract with the weather. Eventually, a small gap occurs between the tar and wood, leaving a space where water can collect and/or condense. This, of course, is a perfect environment for rot and decay. Eventually, the treatment that was designed to prevent decay causes it.

IF YOU HAVE ACQUIRED a house that has gutters that have been tarred, you have two options. The first is to try to remove the tar. This is a frustrating business, best tried on a cold day when the tar is brittle and easier to chip out. Some folks have used dry ice to chill the tar even more. The second option is to leave the tar in place and to try to nurse the existing tar system along by flowing liberal amounts of wood preservatives into any cracks that might admit water. 

SPECIAL THANKS for help with this article to Ted Ewen, a restoration carpenter residing in Scarsdale, N.Y. Ted has been involved with old houses for 40 years, and also has skills as a shipwright and boat designer.

Moving Historic Buildings

the possible loss of historical and architectural integrity, the owner must be fully aware of the questions to be answered.

A PAMPHLET HAS BEEN PUBLISHED by The Heritage Conservation and Recreation Service (U.S. Dept. of Interior) which covers the subject very well. Written by John Obed Curtis, curator of Old Sturbridge Village, it plainly states the problems and outlines a rational step-by-step plan. From the Introduction:

"MOVING a historic building is a delicate operation; it should not be undertaken until all other possible ways to save a structure from demolition have been investigated. This report has been prepared to serve as a guide for just such a situation. Its aim is to explain the precautions to take, and to suggest procedures to follow during the relocation...."

"ALTHOUGH the art of house moving is neither a new nor technically complex invention of the 20th century, engineering a building move must be done with care to ensure the safe and successful relocation of a historic structure. It cannot be overemphasized that such buildings should be moved only as a last resort, and if they are moved, precautions must be taken so that the structure...is harmoniously integrated with its new site. If those who are about to embark upon such a project follow the advice given in the text...their relocation project should be greatly facilitated."

FEW OPERATIONS IN PRESERVATION are as complex as that of moving an old house. While house-moving technology is not new, the planning and carrying out of each step requires knowledge not usually possessed by any one contractor or architect.

IN ADDITION, each individual case brings special considerations: What is the fabric and condition of the structure? Should it be moved intact, or in partial or complete disassembly? If it is a building with National Register designation, how will the move affect its status and funding? Who should be employed to do archeological and historical research? Is such study always necessary? What licenses are needed? And so on.

BUILDINGS HAVE BEEN MOVED at least since the 1700s and some of them have weighed 10,000 tons; the procedure can obviously be dealt with satisfactorily. But to prevent harmful mistakes and

CURTIS HAS ADVISED on the entire procedure, from wisely hiring professionals, through mapping the best route, and to site-planning and community involvement. With both archival and new photographs and diagrams liberally illustrating the text, the publication serves as a capsule history of the technology as well as a guide to procedure.

THE BOOKLET concludes with an actual case study written by Charles A. Parrott III. A selected bibliography is thoughtfully included. This pamphlet is necessary introductory reading for architects and other preservation professionals. Home-owners who contemplate a house-moving should find that the information will make planning, hiring and talking to contractors much easier.

THE 50-PAGE PAMPHLET costs \$2.50. Orders for "MOVING HISTORIC BUILDINGS", stock #024-016-00109-5 should go to: Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.



This remarkable move took place in Brooklyn in 1923. The Perry Mansion was moved across the street and to lower ground. Because traffic could not be interrupted, a sophisticated cribbing was built to extend over the roadway. The structure was pulled across and re-situated 200 feet from its original site.

Products For The Old House

Decorative Hardware

BBROADWAY SUPPLY is the parent company and major retail sales outlet for The Heritage Collection. The Collection features many restoration hardware items and a complete line of bathroom fixtures and fittings.

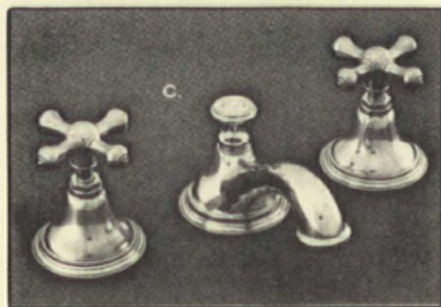
PRODUCTS are organized into 14 coordinated "design suites", each including bath fittings, door hardware, and such accessories as hooks and switchplates. The fittings are of the highest quality materials: solid brass, porcelain, crystal, and wood.

SUITES RANGE from the simple and elegant "Colony White" porcelain to several fired-in porcelain flower patterns, and the unique "Millwood" set-walnut-stained ash fittings with a turn-of-the-century flavor. All appointments are solid brass, available in four finishes.

THEIR DECORATIVE HARDWARE is of formal French and English derivation. Unusual exterior door hardware (mail slots and boxes, knockers) is available. In addition, The Collection includes a wrought iron hardware line.

OF SPECIAL INTEREST are the hard-to-find replacement sink bowls, and porcelain spoke-handled faucets.

FOR THE LARGE color catalog, readers should send \$3.00 to: Broadway Supply Co., Dept. OHJ, 601 W. 103rd St., Kansas City, MO 64114. Telephone (816) 942-8910.



THOSE LITTLE white tile hexagons are elusive today, but they were a popular choice for bathroom floors at the turn of the century and during the Late Victorian period. Old-house owners often need them to repair existing floors. Others want them to help create a period feeling in a new or renovated room.

OLD-FASHIONED unglazed tiles are perfectly appropriate for bathrooms, entrance vestibules, and kitchens. They're practical as well--the unglazed surface isn't slippery, and the small tiles come pre-spaced on a paper backing for easy installation. And, as many old-house owners can testify, they seemingly last forever.

SEVERAL VARIETIES of period-style tiles are manufactured today. The 1-in. squares and ubiquitous 1-in. hexagons are still available, and so are 2-in. unglazed hexagons in a full range of colors.

HOMEOWNERS CAN CALL or write either of the following companies for the names of local distributors.

WE'VE FOUND two major domestic manufacturers:


●AMERICAN OLEAN TILE CO.
1000 Cannon Ave. Dept. OHJ
Lansdale, PA 19446
(215)855-1111

AMERICAN OLEAN makes 2-in. unglazed hexagonal tile, and 1-in. square tile in 23 colors. In addition, they manufacture a 3-in. x 6-in. glazed wall tile called "Caribbean", a glassy, creamy-white tile that is appropriate for turn-of-the-century bathroom walls. Product sheets are free--please specify your interest.

●WINBURN TILE MFG. CO.
P.O.Box 1369 Dept. OHJ
Little Rock, AR 72203
(501)375-7251

WINBURN makes 1-in. and 2-in. white unglazed hexagonal tiles. They also manufacture 1-in. and 2-in. unglazed square tiles in a range of colors. There is also a line of unglazed and glazed 4-in. x 8-in. pavers which were often used in kitchens.

WINBURN has long manufactured specialty tile for the restoration of historic landmarks. Please write or call the Little Rock offices for further information about this special service.

THEIR BROCHURE is free. 

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Recipes For The Antique House

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Coming Next Month

THE FEDERAL HOUSE

Fixing Double-Hung Windows

By James McConkey, Washington, D.C.

IT'S TOO BAD window manufacturers abandoned the counterweighted design. Spring-loaded and friction-fit windows are easier for manufacturers to assemble, but that's about their only advantage. Springs and friction must constantly resist the force of gravity, while counterweights work in unison with it. And repairs in new windows mean replacement of costly manufactured components which may become obsolete and unavailable due to further "improvements" in design.

CONTRAST THIS to the simple sash cord needed to repair a counterweighted window. Unlike modern replacement parts, its cost is minimal, it's not difficult to replace, and it's in no danger of obsolescence. Properly kept, counterweighted windows were designed to last the life of the house.

Anatomy Of A Window

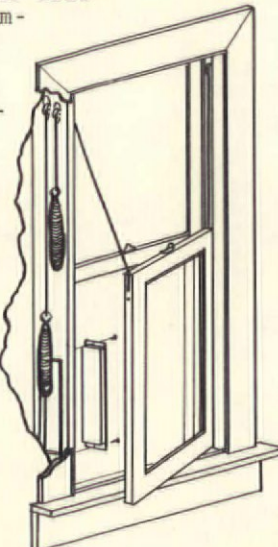
A QUICK DESCRIPTION of window anatomy shows there's nothing mysterious about them: A window is simply an open-ended box set through a wall. The bottom of the box, the SILL, is of heavier stock and slopes to shed water

outward. The STOOL caps the sill on the inside. The other three sides are called the JAMB. The two vertical sides are sub-classified as STILES. The SASH is the wooden frame that holds the glass, and is housed within the jamb. The bottom horizontal member of the outer (upper) sash, and the top member of the inner (lower) sash are called MEETING RAILS.

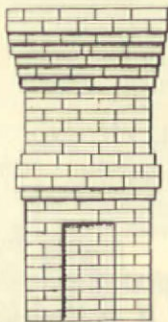
DOUBLE-HUNG WINDOWS, which we're dealing with here, are so named because there are two sashes hung in place on SASH CORDS or CHAINS. The sashes slide up and down in runways called SASH RUNS, formed by mouldings affixed to the stiles. The first moulding is the STOP, and the one behind it is the PARTING BEAD, which parts the inner sash from the outer. Removing both sashes means removing both mouldings.

NEAR THE TOP of each sash run is a PULLEY. The cords pass over the pulleys into the WEIGHT POCKETS, and there are tied to SASH WEIGHTS. The weighted mechanism acts as a counterbalance so the window stays put.

(Continued on page 138)



More On Flue Liners

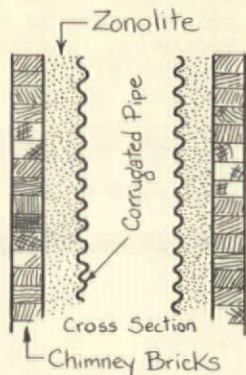


To The Editor:

YOUR ARTICLE on the do-it-yourself flue liner (OHJ, Sept. 1979) reminded me of a similar project we executed successfully on our home. The theory was similar, but the materials used were quite different.

FOR THE LINER ITSELF, we used standard corrugated galvanized drain pipe (the kind that's used to make drainage culverts under roads). This pipe has several advantages: (1) The corrugations provide self-locking in the surrounding mortar—eliminating the need for a clamp at the top of the chimney; (2) The pipe comes with attaching collars, which makes assembly a breeze. The pipe is available through distributors that sell to road contractors.

TO FILL THE SPACE between the bricks and the pipe, instead of concrete we used a material called Zonolite. This is a building material that is used (among other things) to pour into the spaces in cinder block walls to add insulation. There are several types of Zonolite; the type we had was mixed one bag of portland cement to one bag of Zonolite. The advantage of Zonolite over concrete is its extremely light weight. This can be an important factor if you have to haul many buckets of the stuff up to the roof.



IN OUR CASE, we had four chimneys to do. So I built some scaffolding that not only provided a work surface around the chimneys, but also let me build a mortar mixing box right up on the roof. I worked with two helpers on the roof, letting down a section of pipe with a rope, fastening a new section with a collar, then lowering it down another section. This process continued until the corrugated pipe came to rest against the damper.

AFTER THE PIPE WAS IN PLACE, I stuffed all the holes around the damper tight with newspaper, then poured a loose mixture of Zonolite down the chimney to pack in around the pipe. After the Zonolite cured for a couple of days, I had a mason rip out the old damper and install a new one—taking into account the revised geometry due to the new chimney liner.

ONCE THE SCAFFOLDING was in place on the roof, the work went quite rapidly. We were able to line two chimneys in a single day.

S. M. Mahan, Jr.
Montevallo, Ala.

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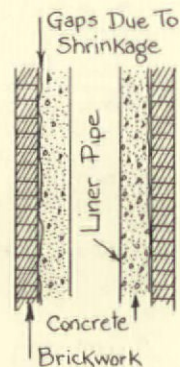
Concrete Concerns

To The Editor:

IWOULD LIKE to add some cautionary comments to the article on flue liners in your September 1979 issue. After inspection of many old chimney stacks, I would suggest that the procedure outlined in the article be used only as a last resort and if it is impossible to install a more conventional tile lining. This caution is especially true in colder areas of the country that are subject to freeze-thaw cycles.

(1) Concrete mixes that are high in water tend to shrink when they cure. So putting a soupy mixture of concrete down the chimney to surround the galvanized pipe may mean that you're going to get small cavities created when the concrete shrinks.

IF WATER penetrates any gaps in the brickwork during the winter, water that is trapped in these voids can freeze—with consequent damage to the masonry. That's why experienced masons try to leave an air space between a tile lining and the chimney bricks. That way, if any water intrudes, it can drain harmlessly away.



(2) If the chimney was constructed of lime mortar, I'd be wary of using a portland cement concrete. The OHJ has carried numerous warnings about adding "hard" portland cement to "soft" lime mortar brickwork.

Charles Walker
New York, N.Y.

Restoring A Block In Chicago



This is a 1906 view of Jackson Boulevard in Chicago, looking east toward downtown.

Photo courtesy of the Chicago Historical Society.

By William L. Lavicka

MY WIFE, Alys, and I had practiced for the fine art of renovation by experimenting on a large apartment on the west side of Chicago before charging out to do our own home.

OVER THE COURSE of three years we managed to do all the building trades using a bedroom as our workshop. We made plenty of mistakes, but in the end we had a pretty good handle on old buildings. We also knew that we liked the convenience of inner city living and wanted to buy a house in the area.

NOT JUST ANY HOUSE, but an 1880's house complete with cornices, mansard roof, elegant entrance hall, marble fireplaces, parquet floors, tall windows and high ceilings. But everything that was available was plain and often "remuddled." However, in the course of our intensive search we found four other couples who were looking for the same things. Separately, we had all zeroed in on the 1500 block of West Jackson Boulevard, twelve blocks from the Loop.

WHEN WE SET OUT TO FIND out why this block alone had remained untouched by years of urban renewal, we discovered that the majority of

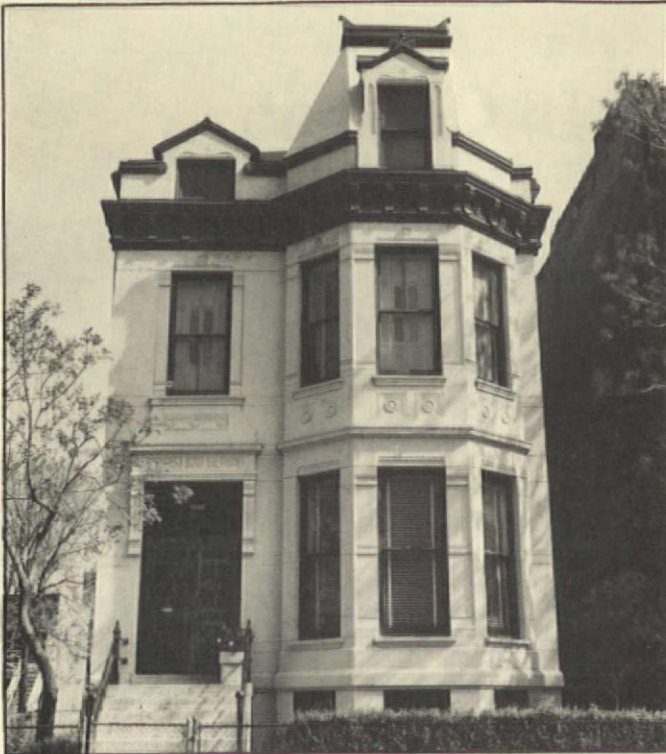
the 29 houses and small apartment buildings were either owned or managed by elderly women. They were much too strong-minded to have been displaced by mere bulldozers or frightened by the deterioration around them. But now, in 1974, they were generally willing to sell or retire.

WE FIVE COUPLES PLEDGED to buy together on this block. We hoped to interest additional new buyers as well as to encourage those owners who wished to stay to renovate and improve their properties.

THROUGH GOOD HARD PUBLIC RELATIONS WORK and solid backing by the city we were able to find new buyers for about 20 of the houses within one year. All sales were made on a one-to-one basis without real estate agents, and we made special efforts to interest buyers who planned to live on the block. I published a brochure on the block and a half dozen articles were printed in Chicago papers. We brought our plan to Lewis Hill, the Commissioner of Planning and Development for the City of Chicago.

"WE LIVE IN THIS TREMENDOUS SLUM," we told him. "We need assistance. Tell us before any building is to be torn down. Involve us with the city plans."

NO ONE HAD EVER VENTURED into this district



After four years of work, the 6,000 sq. ft. house looks as it did when Chicago's West Jackson Boulevard was an elegant neighborhood within walking distance of the Loop.



A view of the dining room from the second parlor before restoration.

ALYS' HIGHEST PRIORITY was the kitchen. I had salvaged white marble slabs from a derelict apartment building; they became our kitchen counters. A bricklayer built the barbecue stove enclosure. Standard kitchen cabinets with specially made cornice and new appliances bought at a local repossession outlet completed the kitchen.

before. The powers-that-be were intrigued. Mayor Daley toured the area. A demolition order for the block was removed. We were given two years to sink or swim. The city, for its part, gave us funding to restore the boulevard to its former narrower width, to resurface, install new curbs and gutters, and plant a double row of linden trees. For just over \$200,000, eight hundred feet of West Jackson Boulevard began to look as it had when it was home to the mayor of Chicago, business magnates, doctors and lawyers.

FINANCING WAS DIFFICULT to obtain, and most of the new owners spent sweat equity. For the better part of the first year we all held down full time jobs and worked on our buildings at night and weekends. We were hailed by the papers as "urban pioneers," and it was true. There was a certain wagon train aspect to our endeavor. Our prairies, however, were ones of broken glass and brick, and our trails were of asphalt.

ABOUT A QUARTER OF THE WAY through our own renovation, Alys and I decided that I should devote all my time to the house while she held down a full-time job. In the two years since 1974 we had renovated two apartments--one in the rear coach house and one in the main house at garden level. These provided income for utilities, taxes, insurance and the purchase money mortgage.




The dining room as restoration is almost finished--the floors are not yet sanded.



Evidence pointed to a plasterwork arch between the front and back parlors. Bill reconstructed the arch in wood with plaster corbels.

THE PATCHING, PLASTERING and painting continued downstairs with my piece de resistance being the replacement of an arch that once existed between the first and second parlors. It had evidently been similar to the ornate plaster arch which remained upstairs over the alcove in the master bedroom.

MY FORTE, however, is working with wood, so I pieced and routed out an arch in wood to slip into place. A mould was made of expanding foam on the upstairs corbels. Again, amateurs beware. Plaster of paris was the casting material for the downstairs. Because the relief was light and there had been layers of paint on the original I had to carve the relief to deepen in on the castings.

RENOVATION HAS CHANGED MORE than our house. Our block--the Jackson Boulevard Historic District--is on the National Register of Historic Places. Houses on neighboring blocks have been renovated. Alys and I are now partners in Historic Boulevard Services, a company founded for the express purpose of renewing and restoring old buildings. 

(Photos by Lisa Pitman.)

NEXT MY SMALL CREW of novice craftsman and I moved to the second floor with four bedrooms and three baths. Nailed back, built-in shutters were liberated and stripped in a lye tank in the garage. I want to caution anyone trying amateur lye stripping. It is only recommended on pine and fir. We discovered the hard way that oak and other hardwoods shrink or swell and seem to dissolve.

PARQUET FLOOR BORDERS WERE PATCHED under leaking radiators, using new maple, oak and mahogany. We cut the new strips in half so they would match the thin old wood. Plaster cracks were gouged out and taped with regular wall-board tape and Durobond 90, a hard-setting tape compound. Several thin coats of Durobond were finally spread over the entire wall. Practice this technique in closets first. Skim the surface with a plasterer's sweeping passes with sprinklings of water to smooth the compound.

THE PLUMBING HAD BEEN in reasonable condition and it was decided to patch leaking pipes, put in new lavatory water mixers and replace old faucet washers. Since we had the time we were able to salvage and update all our existing mechanical and electrical systems.

BEFORE WE HAD BOUGHT the house there had been a serious fire in the dining room. The previous owner had gotten very little money from insurance since insurance companies will pay for fixing a room in proportion to the total house and total insurance. As a result there was a definite challenge in the dining room.

A FRIEND HAD FOUND TRIM similar to ours, but only half of the required quantity. I began to mill the remaining woodwork with an electric router, table saw and a couple of hundred dollars worth of various router bits.

THE ADDRESS OF Historic Boulevard Services is 1520 West Jackson Boulevard, Chicago, Illinois 60607. Telephone: (312) 829-5562.



The kitchen (previously purple and brown) was the first room in the house to be renovated.

THE TOOLS YOU NEED:

- Hammer
- Block of wood
- Utility Knife
- Paint Scraper
- Red Devil "Windo-Zipper"
- Steel Pry Bar (12-16 inches)
- Six feet of string with a small weight--like a screw--tied to one end
- Pliers
- Screwdriver
- Household Paraffin
- Flat File

Disassembly

IT'S POSSIBLE to do all the work from inside. Keep three things in mind while working: (1) When scarring wood is unavoidable, do it where it won't be seen. (2) When you pry against or hammer on visible parts of the window frame, use a block of wood to protect the surface. (3) Never leave a loose sash sitting upright in the jamb. A gust of wind will easily knock it over.

FIRST REMOVE ONE STOP to take out the inner sash. Before prying it loose, use the utility knife to score the paint along the seam between the stop and the jamb. Work the pry bar under from behind the stop bead to keep any initial scarring concealed. Work up and down the strip, prying a little at a time. Remember: Old wood is brittle, so you can't just yank it off. You can pry from the front once the stop is loose.

IF THE STOP BREAKS, similar lumberyard stock is available. However, even if it's the right shape, it may be smaller than the original... so you'd need enough to replace it on the entire window.

IF THE WINDOW WON'T OPEN due to paint build-up, take the Windo-Zipper to the seam between the window sash and the stop moulding. Don't force the tool into the crack; cut the paint film in long, moderate strokes. If the window still won't open, it's probably painted shut on the outside too, and in this case going outdoors will help. If this is impractical, try at least to loosen the stop from behind, above the sash. With the utmost care, proceed prying from the front. When the stop is off, pull or pry the sash toward you to break the grip of the outside paint. Absolutely do not pry upward from below on the stool--this always results in obvious gouges. (Of course, you can pry up from the outside.)



IF THE SASH STILL doesn't come out, see if the problem is attached weatherstripping.

IF YOU WANT to remove the sash, but don't need access to the weights, **SECURE THE ROPE OR CHAIN** and **DON'T** let it fall with the weights down behind the jamb. Otherwise, cut the sash cords and let the weights fall into the pockets. Put the sash in a safe place.

JUST AS YOU removed the stop to take out the inner sash, now you remove the parting bead to get to the outer sash. Because it's thinner, the parting bead is even more likely to break than the stop moulding, but it too is commercially available.

THE PARTING BEAD is in a groove in the stile, so you can't get the pry bar under it at first. Score the paint seams and pry carefully again.

TO GET THE SASH MOVING, reach outside with the Windo-Zipper and rip the seam between the sash and the **BLIND-STOP** (so named because the exterior shutters--called "blinds"--stopped against it when closed.) If it won't yield to pulling, pry downward at the top from the outside (where it's inconspicuous) and tap gently downward on the meeting rail. Too much pressure or hammering can break the meeting rail and pull it loose at the ends--so take it easy. When there is space for your fingers at the top, pull down on the sash from there. If nothing makes it yield, see if it is nailed shut. (This is a common way of keeping the sash up after the cords break. Also, some people do it to keep burglars out.) If finish nails were used, just drive them on through. If common nails were used, get under the heads and pull them out. Here, a bit of scarring could be the price of somebody's earlier incompetence.

NOW, **EXAMINE** the inner sash runs. You'll see a screw, probably encrusted with paint, about a foot or eighteen inches up from the sill. A section of the stile is removable here, to give access to the weight pockets... and that screw holds the section in place. It may take awhile to find and remove the access plate. If there is no screw, a previous workman may have discarded it and undoubtedly nailed the section back in. It's usually rabbetted to run under the parting bead, and if so you must remove the parting bead on both sides. Reach inside the pockets and pull out the weights.

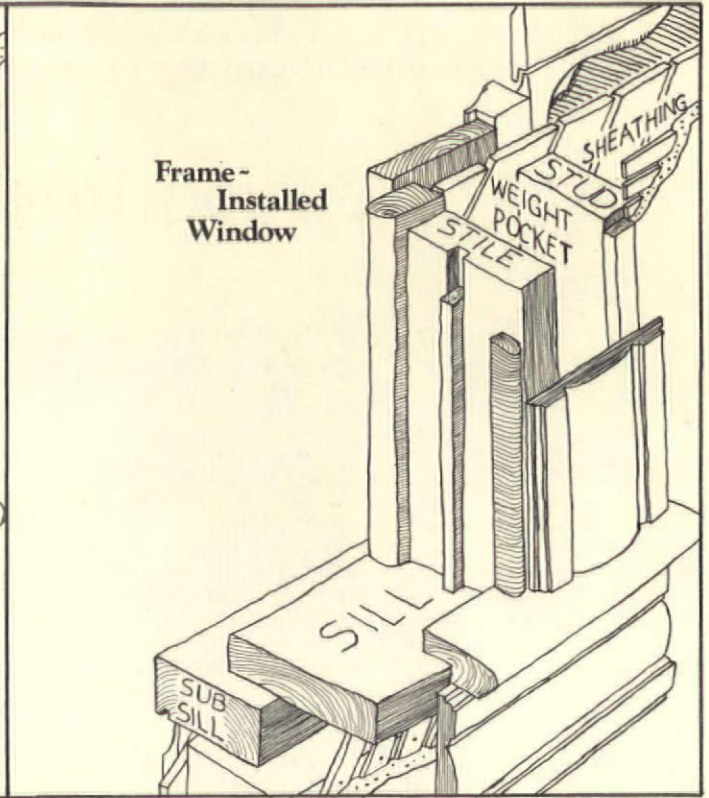
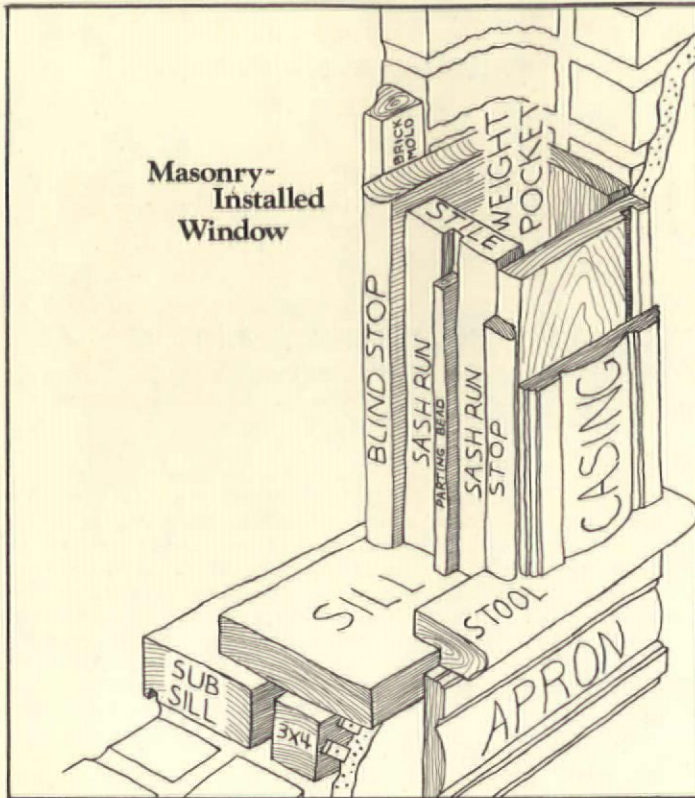
(NOTE: Some windows, particularly in pre-1860 and rural houses, don't have access holes. To get to the weight pocket, it's necessary to remove the casement moulding.)

Repair & Replacement

WITH THE WINDOW THUS DISMANTLED, you're ready for any maintenance tasks. Ridges of paint build up on the sashes where they encounter the stop moulding and parting bead. These ridges should be scraped, as should any other areas of excess or loose or flaking paint. I recommend using the sharpened paint scraper because it neatly makes fast work of thick paint. Don't try baring the wood with the scraper, no matter how sharp. If you want bare wood, use paint remover. File the scraper often.

THIS IS THE TIME to repair broken glass, and to replace loose, dry putty. May as well wash the windows too.

YOUR LAST STEP is replacing the sash cords. Cotton rope with a nylon center is sold in hanks, specifically labelled "sash cord." How-



ever, since the same weights and pulleys are used with chain or rope, consider switching to sash chain: It can't rot or stretch or get stiff. This flat steel chain, too, can be purchased in pre-packaged lengths.

GAUGE THE LENGTH of new cord according to the old. To adjust the rope length: Hold the sash against the parting bead as you raise it to the top. Look at the weight in the access hole--with the sash up, it should be three inches above the sill. If not, adjust the rope at the sash.



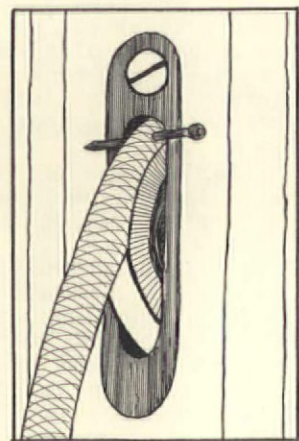
IF YOU ARE USING CORD, now the weighted string comes in handy. Push the weighted end over the pulley into the weight pocket and let it drop to the access opening. Tie the free end to the new sash cord and pull the cord into the pocket, down and out through the access. Tie the sash weight to the sash cord. Use a knot that will stay tied but isn't bulky, such as a slip-knot. (Shown)

THE SASH CORDS are housed in slots in the vertical sash pieces--called STILES like the vertical jamb members. Put the cord into the slot, and thread it through the hole beneath. Tie a knot in the end and push the knot back into the hole, where it will support the sash. (If you're using metal chain, attach the end of the chain to the sash with wood screws.)

Smooth Sliding

PUTTING THE WINDOW back together is just the reverse of taking it apart. Take the block of paraffin and wax both the edges of the sash and the insides of the sash runs; this helps the sash slide smoothly.

GRASP THE OUTER END of the cord and pull the weight all the way to the top. Temporarily put a 4-penny finish nail through the cord near the pulley, across the pulley hole. This enables you to attach the free end to the sash without the weight constantly tugging at you.



THE ONE CRITICAL STEP is renailling the stop moulding. It shouldn't be so tight that the sash is hard to move, nor so loose that the window rattles. About five 4- or 6-penny finish nails hold the stop on each side. Drive one part-way in, check the movement of the sash, drive another and recheck, and so on till all the nails are in place. Drive them down and set them.

AFTER SOME MINOR spackling and paint touch-up, that obdurate old window is ready for another fifty years of service!

Gilding With Gold Leaf

By Patricia Poore

GILDING is the application of metal leaf or metallic paint to a surface--and it's been a popular decorative technique since Ancient Egypt. Gilded furniture probably arrived in this country with the first wealthy colonists. In the nineteenth century, gold leaf was applied to furniture, picture frames, and mouldings; stencilled onto walls; and used on window glass.

LEAF IS AN OLD and versatile form of gold. Various metals are supplied in leaves: Silver, aluminum, bronze, palladium, variegated copper, and lesser alloys. But nothing compares to gold leaf; besides its deep-rooted magic, gold will not tarnish and offers an unparalleled brilliance.

XX GOLD (23 karat) is the most pure and important variety of gold leaf. The grades run down through lemon-gold (18 karat) and pale-gold (16 karat), to white-gold (12 karat), which is half gold/half silver, and has its own special applications.

GOLD LEAF is supplied in books of 25 leaves, each leaf measuring 3-3/8 inches square. The gold is beaten down to an approximate thickness--or rather thinness--of .0000035 inches (three and one-half millionths, or three hundred thousand leaves to an inch.) One book covers 1.5 sq.ft., and costs \$7-\$8.

Old Techniques

THERE ARE TWO distinct methods in gilding. **SURFACE GILDING** is the application of metal leaf to the surface of a solid object. In surface gilding, the leaf is transferred to an adhesive ground (size) straight from the book. The size has an oil/varnish base. **GLASS GILDING** uses a water-based size with a binder such as gelatin. A gilder's tip is used to transfer the leaf from the book to the wet size on the glass.

THE PUBLIC LIBRARY may have a book or two about surface gilding, especially on antique furniture. But the only book that explains glass gilding in enough detail is Raymond J. LeBlanc's **GOLD LEAF TECHNIQUES**. (See box, p. 142. This book is a gem; the author writes about his craft with pride and integrity, yet with a plainness and humility that somehow keeps the craft from escaping into Art. All phases and all nuances of gilding are explained.)

A STEP-BY-STEP account of gold-leafing a house number follows. This is not a how-to article, however, as sign-painting, especially with gold leaf, is rather complex. The LeBlanc book does provide all the information you need, but previous experience or some practice after reading the book is recommended. Knowledge of basic brush lettering and a little practice with gold leaf will allow a novice gilder to do a respectable job.

WHETHER OR NOT you try your hand at gold leafing, understanding the process contributes to appreciation of the gilded piece. In our synthetic times, a process that makes use of such earthy materials as beaten gold and fish-bladder gelatin, and that relies on the moisture in one's breath and the oil in one's hair, takes on a nearly mystical quality.

Gold-Leaf House Number

THIS IS A BRIEF OUTLINE of the most basic glass gilding process: Burnished gold leaf with a gelatin/water size. The job was done by an amateur gilder who has minimal signpainting experience. He is, however, knowledgeable in layout and basic drawing, and he possesses patience and a steady hand.

THE MATERIALS used in this job are (in order of appearance): (1) A Bon-Ami cake; (2) Sterile cotton sheets--a drugstore item; (3) White grease pencil; (4) Two gelatin capsules dissolved in one pint of distilled water; (5) A water-size brush--short thick camel hair; (6) XX Gold Leaf; (7) Gilder's tip--a specialized brush; (8) Backing-up paint--mixed japan color and rubbing varnish; (9) Signpainter's brush--French brown camel quills, longish and soft; (10) Mahl stick--see pictures; (11) Paper paint cup/palette; (12) Alkyd resin varnish.

☞ **CLEANING:** The gold will not adhere if there's anything on the glass. Bon-Ami cleans thoroughly without scratching or leaving a residue.

☞ **LAYOUT:** House numbers and other small jobs are usually laid out in grease pencil on the outside of the glass. A pounce pattern is generally used for larger or repetitive jobs. This is a perforated drawing of the inscription on paper, which is transferred to the glass using a pounce bag (broadcloth etc.) filled with talcum powder, talc and charcoal, or tailor's chalk powder.



1 LAYOUT: On outside of glass, in white grease pencil.

5 SECOND GILD: Size flowed over inscription burnishes it.

2 SIZING: Water/gelatin adhesive ground is flowed on (inside.)

6 BACKING-UP: Figures are painted over gold. Note mahl stick and paint cup.

3 LAYING LEAF: Gilder's tip brings delicate leaf to wet window.

7 WHEN PAINT DRIES, damp cotton removes extraneous leaf. Protective varnish is last step.

4 REMOVING SURPLUS: Dry cotton removes loose leaf.

8 FINISHED JOB: Note choice of letter style.

☞ **SIZING:** In burnished (mirror finish) gold applications, the gold leaf is stuck to a simple gelatin and water size. This simplest sizing operation is used for the house number. Historically, plain water, egg-white solution, and isinglass (a gelatin made from fish bladders--still available) were used.

THE SIZE is flowed on with a camel-hair brush in an area just large enough for a few pieces of leaf at a time.

☞ **LAYING THE LEAF:** This is the tricky part. The gold is so thin you can't touch it. So the gilder's tip (see photo) is used to pick up the leaf and to transfer it gracefully (good luck) to the wet glass. For each piece, a sheet of the rouged paper that separates the leaves is folded back. (When the gold comes up with the paper because of static, breathing heavily on the paper discharges the static with the moisture in your breath.) Then the gilder's tip is drawn gently and slowly across your HAIR--the oil makes it pick up the gold. The tip is brought quickly to the wet glass, and "slapped" into position, where the water pulls the leaf strongly into contact with the glass.

☞ **SECOND GILD:** About twenty minutes later, the dry gold leaf is rubbed lightly with cotton to remove non-adhering surplus. Then water size is again flowed over the entire inscription, to bring the leaf to a high lustre (ie: burnish). At this time, small patches of gold are applied where needed.

☞ **BACKING UP:** When the gold is thoroughly dry, the numerals are painted over the gold, through which can be seen the original grease-pencil layout. The numerals are, of course, painted on in reverse. The paint is a mixture of japan color and rubbing varnish--fast-drying and tough. For this step you need a small brush, a mahl stick to steady and guide the hand, and a little hand-held paint cup. (The latter two can easily be made according to directions in the book.)

☞ **REMOVING EXCESS LEAF:** When the paint is dry (an hour or so later), a damp wad of cotton is rubbed across the inscription to remove all the extra leaf. Dry cotton removes the final residue. This step is done before the gelatin hardens too much and the paint becomes brittle--by the next day.

☞ **VARNISHING:** In most burnished gold leaf jobs, an outline or shade would be added at this point. In this job, however, the size and configuration of the numbers was considered enough embellishment, and the burnished gold was sufficiently readable. In any case, brushing on a protective coat of varnish is the last step. Alkyd resin varnish adheres well to glass and isn't much affected by sunlight. It extends just a hair beyond the edges of the numbers for best durability. The glass isn't washed for several weeks; after that, the varnish will protect the gold for years provided no harsh detergents or abrasives are used to clean the glass.

Skill And Imagination

SPECIAL EFFECTS are created by various techniques. If leaf is applied over varnish, the effect is matte, or dulled. The most commonly seen use of matte gilding is for the center of letters or numbers, combined with

a burnished (shiny) outline. The matte centers can be done in XX Gold, like the burnished part, for a rich appearance. Or, lemon-gold or pale-gold can be used for a different effect. The practical advantage of matte centers is that they are readable in all lights.

GOLD-LEAF LETTERS can be outlined or shaded, or both. One popular combination is the two-tone single-gild with black outline, known as "Boston Style." This means matte centers in a burnished outline (two-tone), gilded in one operation with the center varnish applied first (single gild), and the whole letter surrounded by a black or dark outline. Double outlining is another relatively simple way to create a unique look.

THE MATTE PORTION can be placed in a particular position in each letter to give a convex (3-dimensional) look. Such convex lettering was popular with signpainters in Chicago.

OF COURSE, COLOR centers in any tint can be painted in instead of matte-finish gold.

BURNISHED FILIGREE ORNAMENTATION is a treatment in which fine-line designs are done in burnished gold in the center of letters. A letter is gilded solid in the burnished gilding, just as before. Then, the letter is backed up in outline only, while a fine design is painted in at the same time. Naturally when the excess leaf is cleaned off, only the gold under the painted decoration will be seen. The open portions can be left, filled in with matte treatment, or painted a color.

EMBOSSSED CENTERS are created by tooling a design into unhardened damar varnish. When the gilding is done over the embossed varnish (with water size), the effect is textured. Last, the centers are backed up as usual.

LIKE GRAINING AND STENCILLING, gold leafing is a painters' craft that has become rare in this century. It's true that a great deal of skill and experience are needed to be a successful gilder, but the techniques are fairly straight-forward, employing uncomplicated tools and materials. Possibilities for application are limited only by the imagination of the leafer. ☞

ORDERING INFORMATION

GOLD LEAF TECHNIQUES, by Raymond J. LeBlanc, is available from:

M. Horowitz & Sons Sign Supplies
166 Seventh Ave., Dept. J
New York, NY 10003
(212) OR 4-3284

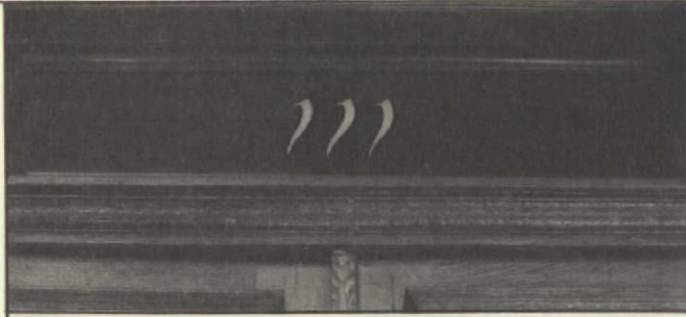
The book costs \$7.00 plus \$1.00 postage. All gold-leafing supplies are available from Horowitz--please telephone miscellaneous orders--and from:

M. Swift & Sons, Inc.
10 Love Lane, Dept. J
Hartford, CT 06101
(203) 522-1181

Swift has a free how-to booklet and distributors nationwide.



Burnished Gild



Burnished With Black Outline



Burnished With Black Outline, Embellished



Burnished With Maroon Shade



Burnished, Black Outline



Matte, Black Outline



Matte Center In Burnished Outline, Black Shade



Burnished With Light Outline, Dark Shade



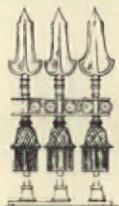
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Black Numbers, Matte Gild, Green & Rose Decoration

Victorian Fashions Revived

Helpful Publications



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A HARDCOVER BOOK, 192 pages, it has over 200 excellent black and white photos, line drawings and plates from old catalogs.

"ORNAMENTAL IRONWORK" is \$20.00 and can be ordered from the publisher: David R. Godine, Dept. OHJ, 306 Dartmouth St., Boston, MA 02116.

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(Photo by Joan O'Reilly)



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