The Energy-Efficient Old House

By Clem Labine

While it is important for old-house owners to pay attention to energy conservation, it's equally important that we not rush in thoughtlessly and tack on every gimmick that's being hustled by fast-buck salesmen. Much of energy conservation is common sense. Significant savings can be made by changing habits—without ever touching the house.

As an example of the pitfalls that await the unwary, we recently saw an 1815 Greek Revival farmhouse that had an 1895 addition. The 1815 section had been insulated two years ago with loose fill blown into the side walls. Today, all the paint is peeling from the clapboards on the insulated walls. The 1895 section, which wasn't insulated, has its paint still intact.

Owners of historic houses, especially, should beware of taking steps in the name of energy conservation that will either alter the architectural character of the house or else harm the fabric of the structure. There are often less drastic methods that can achieve comparable results. For instance, re-examine the way you operate the house. These pointers seem self-evident, yet most of us have developed profligate habits that are a carry-over from the era of cheap energy.

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Coming Next Month

WOOD STOVE KNOW-HOW

Changing Habits

Here are just a few checkpoints against which you can measure your own energy-consciousness:

(1) In winter, set thermostats at lowest possible settings. Insulate yourself with sweaters (that's easier and cheaper than insulating the house).

(2) In summer, utilize natural cooling as much as possible before turning on the air conditioner (more on this later).

(3) Don't heat (or cool) rooms that aren't in use. Close off areas of the house that aren't being occupied.

(4) Reduce levels of illumination. (Contemporary interiors are over-lit by historical standards, anyway.) Besides the power consumed by lighting, heat from the lights adds to the cooling load in summer. If you are using an air conditioner, it puts you in the position of using electricity to make heat (in the lights) and electricity (in the air conditioner) to remove the very same heat.

(5) Heating plant should be cleaned regularly for maximum fuel efficiency. If you can't do this yourself, have a

(Continued on page 105)
Notes From The Readers...

Removing Paint From Brick Fireplaces

EDITOR'S NOTE: In the July 1977 issue, reader Jean Watson posed the question of the best way to remove paint from a brick fireplace. The responses we received indicated that there isn't any super-easy procedure (at least that we've been able to discover). Two representative replies appear below.—CL

To The Editor:

IN RESPONSE to the question from Jean Watson, I had the same difficulty with a brick kitchen fireplace. Eleven previous coats of paint stoutly resisted chemical removers.

I FOUND that a hand-held propane torch and a scraper are the most effective. Start in a remote corner to judge the heat and time required to bubble the paint. With time and patience you'll have a clean surface. Good ventilation should be provided in case any of the paint being torched has lead pigments.

IT IS VERY DIFFICULT, however, to use the torch in areas where chemical removers have been tried. The torch works best when you can remove thick layers in a single pass.

Joseph S. Lada
Bridgehampton, N.Y.

To The Editor:

WE MANAGED TO CLEAN PAINT from my huge floor-to-ceiling fireplace by renting a sandblaster. I realize that sandblasting exterior bricks can have adverse effects on their weather resistance, but this is not a problem facing interior brickwork.

A BRAVE FRIEND and I rented a huge compressor (the kind on a trailer), the sandblaster, and all the protective gear from a rental tool company for $40. We had it from about 3 p.m. on a Saturday until Monday morning.

PREPARATION WAS THE SECRET. We taped plastic over every doorway, removed everything we could from the living room, then used masking tape and plastic to form a huge floor-to-ceiling "bag" in front of the fireplace to work in. The entrance was an overlap of about 4 ft. in the plastic. We also found a floor fan useful to blow in the entrance—to blow some of the dust up the chimney (it doesn't settle).

I REMOVED THE WOODEN TRIM from the fireplace, and protected the adjacent plaster walls with fiberboard sheets. The only damage that occurred was a narrow groove cut into the plaster where it joined the brick. This was easily repaired.

THE SANDBLASTING ITSELF was not difficult, as it resembled handling a garden hose. The stream of sand did exert more force than water, however, and I would have tired quickly had there not been a second worker. The only caution is that the sand cleans extremely quickly and will abrade any surface it touches. This means using a light touch and protecting all surrounding materials.

TOTAL TIME to clean the 8-ft.-wide fireplace was 3 hours—and most of that was time spent waiting for the dust to settle. Immediate cleanup is imperative, as the brick dust generated by the sandblasting is extremely fine.

THE FIREPLACE came out beautifully and required no repointing or repair. I understand that smaller sandblasting units are available...and these would probably be fine for smaller areas.

Candace Plato
Chevy Chase, Md.

Back To The City Conference: October 28-30

THE FOURTH ANNUAL "Back To The City" Conference will be held this year in San Antonio, Texas, Oct. 28-30. Like its predecessors, the meeting will focus on problems and techniques of urban revival and urban preservation.

SESSIONS WILL cover such topics as: Organizing neighborhoods; planning for renovation, waterfront districts, new construction in old districts, and paint techniques for old houses. In addition to the sessions, all who attend will be dinner guests one evening in a restored San Antonio home.

By Renee Kahn

THE PEOPLE NEXT DOOR live in a bungalow. They were quite surprised to hear this, having assumed that their modest cabin just grew, without any aesthetic rhyme or reason.

THEY WERE EVEN MORE SURPRISED when I explained that their humble bungalow was far more than a winterized cottage, and that its heritage was a combination of Japanese, Spanish, Bengali, and Swiss architecture, to say nothing of our native barns, log cabin, stick, and shingle style. As if this wasn’t impressive enough, I threw in Frank Lloyd Wright and the Prairie style. "A variation of Bungalow," I explained.

THE TERM ITSELF comes from the Hindustani word "Bangla" (literally—from Bengal) and signifies a low house surrounded by porches. These houses were not typical native dwellings, but were the "rest houses" built by the English government in India for the use of foreign travellers. Rambling one storey structures, they were designed to withstand the heat of the Indian climate, and had wide overhanging eaves, stone floors, and long, breeze-filled corridors. Deep verandahs (another Indian word) provided additional shade. The word "bungalow" was brought back to England by retiring civil servants, and eventually came to describe any modest, low-slung residence of picturesque lines.

IN THE UNITED STATES, the term "bungalow" supplanted the word "cottage" and was popular because of its euphonious sound and exotic connotations. During its heyday, prior to World War I, thousands of bungalows were built.

SOME WERE EXTRAORDINARY examples of fine craftsmanship, such as those built by Greene & Greene in California, while most were hastily slapped together from $5.00 mail order plans.

DESPITE WIDE VARIATIONS in style, cost and location, the bungalow had certain, almost universal characteristics. Its lines were low and simple, with wide, projecting roofs. It had no second storey (or at most a modest one), large porches (verandahs), and was made of informal materials. It was primarily for use as a summer, or resort house, except in the warm California climate, where it was easily adapted to all year round use.

CONSTRUCTION MATERIALS emphasized the humble and the unostentatious. One wit defined the bungalow as "a house that looks as if it had been built for less money than it actually cost." Another famous remark was "the least house for the most money." Although low cost materials such as rough boards, and fieldstone were emphasized, the bungalow was not an inexpensive house to build. With 11, or most of the rooms on one floor, there was a need for more of the costly wall and roof area than in a two storey house of comparable size. In addition, more land was needed to accommodate this spread out plan. Despite these cost factors, the one story house, without stairs for the housewife to climb, was enormously popular, and was eventually transformed into the ranch house of today.

PORCHES WERE an essential part of the Bungalow style, but unfortunately, they were designed for sunnier climates, and darkened the interior of the house. This was often overcome by constructing the porch with an open roof, like a trellis, which could be covered by vines or an awning. Porch roofs frequently echoed the gable of the house, but were placed off to one side.

And advertisement for bungalows that appeared in "House Beautiful" in May 1908.

BUNGALOWS DIRECT FROM BUNGALOW LAND
PERFECT GEMS OF HOME COMFORT AND AESTHETICNESS

Design No. 18. "Bungalow Style." Cost $2.800

Now in the time to build as cheaper and labor are 20 per cent cheaper than it was two months ago.

If You are Interested in Home Building—
Take Advantage of My Special Offer

My designs have been adapted from the very best types of bungalows in Southern California, which have become popular throughout the country. Special specifications are prepared by an expert familiar with all the details of each and every locality.

I will send my book containing exterior and interior views of typical one and a half and two-story California residences—150 illustrations and the most complete specifications and material lists ever offered at a lower price. Two special numbers have been published at a lower price and are the very best examples of California architecture. These books are sent free of charge to all who wish to see these designs and to use for making plans, etc., are stamped on the back of each photograph.

The designs are entirely different from anything that has been published thus far.

F. G. BROWN, Architect

And advertisement for bungalows that appeared in "House Beautiful" in May 1908.
California was traditionally receptive to experiments and new ideas. The mild climate, and spacious terrain lent themselves to informal construction and casual living. There was also no conservative colonial tradition to return to, as there was in the East. Whatever tradition there was, was the Spanish hacienda style which was readily compatible with the bungalow.

THE PROXIMITY with the Orient also encouraged an interest in the Japanese house, and contemporary magazines referred to "Bungalows in the Japanese style" or "the Japanese Bungalow." These buildings were rambling and irregular in plan with much open timber work, lightweight posts, and deep eaves. Other Oriental touches were posts resting on sunken round stones, and turned-up eaves, pagoda style.

THE CALIFORNIA BUNGALOW reached its zenith in the turn of the century work of the brothers, Charles and Henry Greene. They were architects in the Craftsman style, not as famous as Frank Lloyd Wright, but arising out of the same tradition. They succeeded in creating a rambling, informal house which used natural materials, and was superbly integrated with the landscape. While Japanese, Swiss, and Spanish influences are evident, they managed to transform them into a uniquely Californian expression.

While the name and original concept of the Bungalow style came from India, it was native Japanese, Spanish, and Swiss architecture which influenced it the most. There were other influences as well: Creole plantation architecture, and American Stick and Shingle styles. Even barn and log cabin construction played a part. In other words, the entire repertoire of international timber building styles.

IT MAY SEEM DIFFICULT to comprehend, but the Chicago World's Fair, the great Columbian Exposition of 1893, which plunged America further into a Classical revival, also encouraged the development of the Bungalow style.

THE ECONOMIC SETBACKS of the 1890's provided a need for simpler residences, and the Fair showed the public how these might be made to look. Much attention was focused on the Japanese buildings, as well as the Louisiana exhibit, styled after a Creole plantation house. In the decades following the exposition, Chicago's wealthy North Shore became dotted with bungalows, largely influenced by Louis Sullivan who had experimented with the form a few years earlier.

IT WAS CALIFORNIA, however, which became the hotbed of the bungalow. Here, the one storey cottage, planned more for comfort than elegance, became a symbol of the state. A number of factors were responsible. First of all, California was traditionally receptive to experiments and new ideas. The mild climate, and spacious terrain lent themselves to informal construction and casual living. There was also no conservative colonial tradition to return to, as there was in the East. Whatever tradition there was, was the Spanish hacienda style which was readily compatible with the bungalow.

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THE WORK of Charles and Henry Greene is best known for their beautiful "ultimate bungalows" built during the first decade of this century. Part of the Arts and Crafts Movement, their famous California buildings are shown in photos and drawings in a new book, "Greene & Greene." This comprehensive study not only explores the structures and their interiors, but is an excellent biography of the famous brothers as well. This large, hardcover book is $24.95 from: Peregrine Smith, Inc., 1877 East Gentile Street, Layton, Utah 84041.
At the other end of the quality spectrum were the innumerable plan books which spread the California Bungalow style. "Direct from Bungalow land," they advertised. Henry L. Wilson, the "Bungalow Man," one of its most successful promoters, produced a book in 1910, partially entitled: "The Bungalow Book, A Short Sketch Of The Evolution Of The Bungalow From Its Primitive Crudeness To Its Present State Of Artistic Beauty And Cozy Convenience..." It cost a dollar, and in two and a half years time went into five editions. While Wilson claimed Oriental and Spanish Colonial influences, his most obvious source of ideas was the Swiss chalet.

It would be almost impossible to list all the variations of the bungalow style. There were almost as many as there were bungalows. However, certain broad classifications do exist.

One of the most popular would have to be Southern California type and its offshoot, the patio bungalow. Next, was the Swiss chalet, which was easily adapted to the bungalow form, most because of its wide, overhanging eaves. These were frequently built on a hill, or mountainsides, and had quaint balconies with sawn board railings.

Another prominent variety was the Adirondack lodge, or Catskill summer home, which was usually a glorified log cabin. They soon became a fad with wealthy city families, and provided an elaborate mountain retreat for entertainment purposes. Built out of horizontally laid logs, they came the closest to a native American style of construction.

Also common in the East was the New England seacoast bungalow, which had a strong Colonial flavor. Long and narrow, it stretched out along along the dunes, capturing the view and the ocean breezes. In keeping with bungalow philosophy, the seacoast bungalow harmonized well with its surroundings. Low, horizontal lines repeated the rhythm of the dunes, and silvery shingles captured the reflections of the water.

The idea of harmonizing a house with its natural surroundings also lay behind much of the work of Frank Lloyd Wright. His versions of the Bungalow style were known as Prairie houses, and contributed significantly to the Bungalow vogue. Like the prairie, they emphasized gentle, horizontal lines. Their dormerless, wide-eaved roofs enhanced the feeling of closeness to the ground. While Wright was reluctant to acknowledge it, he was greatly influenced by Japanese architecture, especially in the strong relationship of his indoor and outdoor areas. Unlike the typical resort bungalow, Wright's houses were meant for all year round use, and were often two or more storeys high.

Interiors

The flood of literature after the turn of the century brought much advice on how to furnish the bungalow. Simplicity, and lack of pretension were the main goals. Gustav Stickley, the furniture maker, was also editor of the magazine "The Craftsman," and was one of the major promoters of the Bungalow style, which he referred to as "Craftsman Homes." In 1909 he wrote: "When luxury enters in, and a thousand artificial requirements come to be regarded as real needs, the nation is on the brink of degeneration."

Stickley, a disciple of William Morris, was also responsible for the sturdy oak furniture commonly known as "Mission." These comfortable, handcrafted pieces were considered appropriate for the bungalow, as were the plain versions of wicker and rattan. Easy-to-care for leather or canvas covered the seats. No pretty bric-a-brac lay about, only sturdy Art pottery and brass or copper bowls. Matting and shag rugs were suggested for the floors; however, Orientals were "never out

Described in the 1908 Sears, Roebuck catalog as a "strictly Mission rocker," this style of furniture was proclaimed by Sears to be "no longer an experiment but one of the most popular styles for all those who appreciate beauty and simplicity of design."
An Arts and Crafts interior—bungalows were meant to be furnished in a similar style. The predominately wood rooms were highlighted with touches of brass, copper, and lighting fixtures with colored glass or candles. Illustration from "The Forgotten Rebel," a monograph on Gustav Stickley by John Crosby Freeman, published by Century House.

STILL OTHER acceptable interior finishes were burlap, matting, or panelling made out of stock lumberyard doors nailed together. Ceilings were often beamed, especially in the living room.

FIREPLACES were a dominant feature of the bungalow, and one publication flatly stated that "a bungalow without a fireplace would be as strange as a garden without flowers." In keeping with the informality of the house, these were usually made of large, untrimmed rocks, and were without fancy mantels.

A FIREPLACE in the living room was an absolute necessity, but smaller ones could also be placed in other rooms. Generally speaking, "inconspicuous informality" was the goal.

The Style

IT SEEMS IRONIC that the bungalow originally had its greatest impact upon the intellectual upper middle class who valued it for its "honesty" and "practicality." Despite its lofty aspirations and exotic sources, the style ended up sloppily imitated in thousands of tacky boxes. It has come to represent both the best and the worst in American architecture from the turn of the century until the 1920's.

IT DID, HOWEVER, make positive contributions to the American home with its lack of pretentiousness, its use of natural materials, and its effort to integrate the house with its surroundings. Its direct descendant, the ranch house, a somewhat characterless version of the bungalow, remains today one of the most popular forms of domestic architecture.

STICKLEY SAW THEM as "...the kind of houses that children will rejoice all their lives to remember as 'home,' and that give a sense of peace and comfort to the tired men who go back to them when the day's work is done."

NO SMALL TASK.

Renee Kahn is a painter-printmaker, and teaches Art History and American Art at the University of Connecticut's Stamford Branch.

These wood and glass lighting devices were popular for the bungalow along with pierced metal lanterns.
Portieres

A PORTIERE is a curtain or drape used over an arch or doorway. They were both decorative and functional and can serve the old-house owner for these two purposes today.

THE USE OF PORTIERES began in castles to keep the heat from the fireplace in a room and the drafts out. Colonial homes seldom required portieres as our first American houses were small and generally had doors between the rooms.

THE VICTORIAN HOUSE, with its high ceilings and generously proportioned rooms, brought back the portiere. Hanging an elegant drape in a doorway also fit in well with the Victorian's love of luxurious fabric and desire to leave no space undecorated. Often a portiere would be hung just for appearance and fastened to the doorframe so that it could not be drawn.

BUT IT IS THE FUNCTIONAL use of the portiere that is of interest in our present economy. By drawing a heavy velvet drape across a door of the room in use, and leaving the room not being used unheated, the big old house will require far less fuel. They can also keep heat in rooms and out of halls.

IN THE 19TH CENTURY portieres were almost always made with a cut or uncut velvet fabric. They were often made with a different color fabric on each side so that each room could have, in effect, a different drape on the same rod. Occasionally, in a richly furnished set of rooms, portieres would be hung on both sides of a door—usually the huge sliding doors between parlor and dining room.

FROM THE 1880's up to the turn of the century, maroon was the favored color. And maroon was most often combined with buff—maroon on one side, buff on the other. Also popular was maroon with crimson or olive. Deep browns and greens were the next most favored colors. Applique, embroidery and gimp were added for decorative interest.

THE HEAVY PORTIERES were generally taken down for the warm weather and lighter silk drapes were hung for strictly decorative effect. Because late Victorian houses had so much wood—walnut or oak—in the main rooms, the color, pattern and texture of the portiere was a desirable break in the austerity of the woodwork.

AS HOUSES BUILT after the turn of the century came under the influence of the Classical Revival and walls and wood became lighter, the portiere was made in lighter fabrics and in lighter colors—such as striped silk. But these were not much more functional than the beaded curtain that had a brief popularity in the 1890's. What we are concerned with here is the functional portiere.


two portiere designs from the popular decorating book, "Hints On Household Taste" by Charles L. Eastlake, 1878.

Making Portieres

TO MAKE A PORTIERE it is necessary to have a good, heavy fabric. Velvets are available in mohair, cotton and silk. Brunschwig & Fils and Clarence House (see OHJ Buyers' Guide for addresses) can do embossing with 19th century rollers in many patterns. They also have the tassels and trim that were used for the most fashionable types of portieres. These firms deal only with the professional, however, and fabric and trim are quite expensive.

WASHABLE SYNTHETIC VELVETS are widely available and their appearance is very much the same. They are durable and far less expensive. The trimmings are not available but a little creativity can substitute. For instance, with a maroon velvet drape, stop about a foot from the floor and finish with a buff velvet. This would give the same proportion to the panel as it would have with trim. Horizontal bands of fabric in contrasting colors will also add to the period look and substitute for expensive gold trimmings.

FOR FULL INSULATION BENEFIT (also for sound-proofing) the drapes should be lined. In
England, where portieres are commonplace, cotton flannel is used for a lining. Good results can also be obtained with dacron filler normally used for making comforters. Ingrain carpets were often used for portieres. An ingrain carpet has double or triple woven cloth and is reversible. They were quite popular and relatively inexpensive. Usually woven in 36 in. widths, they required no more than adding rings on one end and to be hung on a rod. The Oriental rug was also used to make portieres, in particular, the type known as a "Turkey carpet."

The most common way to hang portieres was on a wooden pole with wooden rings attached to the drapes. Poles were either set inside the door frame or hung on brackets attached to the face of the door casing. When attached to the casing, a deep valance was often used over the drapes.

A more unusual way of hanging the portiere was to drape the curtain over a rod and let a portion hang down to form a valance. Called a "Queen's Curtain," the curtains were embroidered and appliqued and could be ordered through mail from drapery firms. Since the part hanging down from the rod could be any length, and because they were meant to bunch up at the hem, it was truly a "one size fits all" item.

The English Victorian homeowners had a clever but simple trick they used to keep drafts out of the house. A long, sausage-shaped object made of fabric and stuffed with sawdust, was placed along the joint between the upper and lower window sash or along the sill and on the floor in front of the doors.

Traditionally made of fabric that was red in color, the draft-excluder can be sewn from any remnant of material. When making a portiere, a yard or two of the same fabric could be used for a draft-excluder, giving this homely little object a touch of class.

In lieu of not-so-readily available sawdust, any heavier filler--like beans--can be used. If there is a chance the draft-excluder might get wet--as one on the floor on a wet day might--it would be better to use a filler that would resist water. Aquarium gravel would be ideal.
Planting deciduous trees on south and west sides of a house is a traditional way to provide natural cooling.

Energy Efficiency—Cont’d. from pg. 97

Service man to do it. The hot water tank should be flushed once a month to get rid of the sediment that accumulates at the bottom and which reduces heat transfer. If the furnace is an old coal boiler adapted to oil, consider replacing it with a new unit with higher fuel efficiency.

Operating The House Efficiently

In addition to the above, there are a series of "soft technology" operational steps that were common in the old days, but which fell into disuse in the era of cheap energy. These steps help you control the environment within the house without heavy capital expense or consumption of energy.

A long-term step is the planting of deciduous (leaf-shedding) trees on the south and west sides of the house. The leaves shield the house from the sun in summer—and provide additional cooling vapor through transpiration. Evergreen trees planted on the side of the house facing prevailing winter winds can also act as a windbreak.

Before planting any trees, however, consult an experienced nurseryman about proper placement of the young trees. Most people underestimate the size of adult trees—resulting in trees that eventually have trouble with branches, fallen leaves in the gutters, etc. On the other hand, if trees are placed too far from the house, benefits are dissipated.

Shutters, window shades, drapes and window awnings are old-fashioned—but effective—devices to control interior house climate. These devices are used to counter the fact that single-thickness window glass can allow an enormous amount of heat to enter—or escape from—a house.

In the summer, the old-time householder would open up the house in the morning to let it fill with cool night air. Then as the sun began to heat things up, shutters and window shades would be drawn on the sunny side—and perhaps awnings let down also.

Conversely, in winter, shutters and heavy drapes can be closed to prevent radiant heat losses to the cold side of the house. But on the sunny side, everything is pulled back from the windows to let the sun's warming rays stream in.

Fireplace dampers are also an operational control. On warm days, the dampers can be opened to allow warm air to rise up the chimney, which promotes air circulation. On cold days, of course, the dampers should be closed to prevent heat from escaping.

For late 19th century and turn-of-century houses, portieres are an appropriate and attractive way to cut down on drafts within a house (see article on page 103).

Old-fashioned ceiling fans have suddenly taken on a very practical—as well as nostalgic—look. They consume only as much power as a large light bulb...and far less than an air conditioner. On all but the hottest days, the cooling provided by a ceiling fan is adequate. And there's another energy-saving aspect to ceiling fans: During the winter, a ceiling fan can help warm a cold-heated room. That's because hot air tends to rise and collect in a stratified layer at the top of a tall room. Running a ceiling fan at low speed recirculates the hot air back to the floor level—evening out the temperature in the room and lowering the fuel demand on the furnace.

RADIATORS should get special attention; efficient transfer of heat from the radiator to surrounding air is critical to fuel conservation. Dust or clean radiators at least once a month during the heating season. Avoid painting radiators if possible; use radiator covers instead. If it is necessary to paint, use the special paint designed for this purpose. If an old radiator is covered with paint, it would be a good idea to strip it. If you have a strong friend, the easiest way to strip a radiator is to remove it and take it to a shop that has a sandblasting rig.

You can increase heat output from a radiator by placing a small fan on the floor and aiming it at the radiator.

Consider Color

Exterior paint color has an impact on energy efficiency. In southern areas where cooling is the primary consideration, light colors reflect more of the sun's heat, keeping the walls cooler. In northern areas, where heating is the primary consideration, darker colors will absorb more of the sun's...
heat during the winter. Of course, paint color selection has to take into account aesthetics and historical precedent. But there are certain combinations that are both aesthetic and ecological disasters—such as a Victorian house in Buffalo, N.Y., that is painted white!

**Insulation**

Because heated air rises, much of the heat loss from a house is through the roof. Every old house will benefit from attic insulation. Technical problems are few because it usually is possible to get the proper vapor barriers installed. It is essential that any insulated attic have proper ventilation to prevent condensation of moisture. (See The Journal, Sept. 1976, p. 9.) Best way to insulate an attic is to put insulation between the attic floor joists with vapor barrier facing down. Worst place to install insulation is between the rafters directly against the roof boards. This doesn't allow for adequate ventilation under the roof.

Insulation in the side walls of an old house should be the last energy-saving step tried. Because of the difficulty of installing adequate vapor barriers, side wall insulation can cause serious paint peeling and rot problems. (The Sept. 1976 article discusses side wall insulation in greater detail.) Consider side wall insulation only after every other step in this article has been tried and the resulting energy savings evaluated.

**Storm Windows**

Single-thickness window glass plus gaps around old sash account for large heat losses. So storm windows are a logical energy-saving step. The only problem is finding windows that don't detract from the house's appearance. It is almost impossible to find wooden storm windows these days, so most of us have to come to terms with aluminum. Just avoid the raw aluminum look. Aluminum windows now come in a variety of pre-baked finishes. If you can't find a color that is compatible with your trim paint, buy white or the color that is closest to your desired color, and then paint them yourself.

Condensation is frequently a problem with storm windows on old houses. If the storm windows leak cold air, you may find condensation on the inside windows. Usual solution: Caulking thoroughly between the storm window and the exterior window frame.

If condensation occurs on the inside of the storm windows, it means that loose-fitting inside sash is leaking moisture-laden air into the space between the two windows. Usual solution: Using rope-type caulk to seal around the inside sash.

**Air Infiltration**

Air leaking through small cracks and holes in a building's exterior is a major source of heat loss (as well as heat gain in summer). If you add together all the small apertures on the typical old...
house (including cracks around doors and windows) you'd have a hole 5 ft. x 5 ft. or more. When you imagine all the heat that would escape on a cold winter day through an open 5 x 5 window, you see what a major problem air infiltration can be.

BECAUSE THE OPENINGS ARE SMALL, stopping them all up isn't as easy as closing a single 5 x 5 opening. Reducing air infiltration involves a methodical series of steps:

- On wood structures, make sure that the exterior paint film is in good condition.
- On masonry structures, make sure that the mortar is sound. Repoint if necessary. Avoid, however, application of masonry sealers—except in highly unusual circumstances. Sealers can trap moisture in masonry walls and cause accelerated deterioration.
- Caulk all construction joints with a high-quality acrylic or butyl caulk. Fill all holes in exterior wood with putty or glazing compound.
- Caulk gaps in interior woodwork—especially where it butts plaster surfaces—and around electrical outlet boxes where necessary. You can tell which interior gaps need filling by passing your hand along the woodwork on a cold winter day. Chances are you'll be amazed by the amount of cold air you feel squirting into the room.
- Insert strips of felt between wide gaps in floorboards that allow cold drafts. Felt is better than any solid filler because it can expand and contract with the boards.
- Weatherstrip around doors and windows. This is especially important where there are no storm windows to cut down on drafts. (See "Sealing Leaky Windows," The Journal, Oct. 1973 page 5.)
- On very old houses, check for gaps where the roof rafters meet the side walls. They may be big enough that you'll have to stop them up with fitted blocks of wood.

DON'T WORRY if you don't stop 100% of the air infiltration—a house has to take in some fresh air to replace oxygen used by respiration and combustion.

The Alternate Fuel Fallacy

SOME PEOPLE SEEM TO FEEL that all they have to do to solve the energy crisis is to switch to burning wood in a fireplace or stove. Besides the fact that a fireplace is the least efficient of all home heating systems, there is an additional fallacy in the switch-to-wood syndrome.

YOU CAN ONLY FEEL ENERGY-VIRTUOUS if: (1) You are burning only fallen wood; or (2) You are managing your own woodlot and are growing as much wood as you are burning.

TREES, although renewable, are not an infinite resource. There are many countries—including China—that have been stripped virtually bare of trees by wood-burning householders.

REGARDLESS OF THE SOURCE of the energy, the old-house owner's first priority should be to make your house consume LESS. If no one has ever fitted up your home for maximum energy savings, you should be able to save at least 25-40% of your annual energy consumption by following the steps outlined in this article.
Ceiling Medallions

Relatively flat ceiling medallions made from a papier-mâché material (called "Anaglypta") used to be produced in England. That source of supply has dried up—but similar patterns are now being made in styrene.

THE STYLES available (6 of them) are basically Georgian and Adamesque in design. They would look best in Georgian, Federal, Greek Revival and Colonial Revival houses. They can be attached easily to the ceiling with contact cement.

MEDALLIONS are inexpensive, ranging in price from $5.50 to $10.80. Literature is free. Write to: James B. Weaver, Jr., W.T. Weaver & Sons, 1208 Wisconsin Ave., Washington, D.C. 20007. Tel. (202) 333-4200.

Brass Beds

Brass beds lend an attractive period accent to almost any old-house bedroom ranging from 1865 to 1920. An exceptionally well-crafted line of brass beds is produced by Joao Isabel, Inc. All parts are solid brass—with handcrafted joints for maximum durability.

14 DESIGNS are shown in ahandsome 4-color catalog. But since each bed is hand-crafted, considerable customizing is possible. For example, they can make any special size. They also make brass tables, coat trees and accessories.

PRICES for complete beds range from $445 to $2,900. Catalog available for $3 by writing to: Cal Donley, Joao Isabel, Inc., 120 East 32nd St., New York, NY 10016. Tel (212) 689-3307.