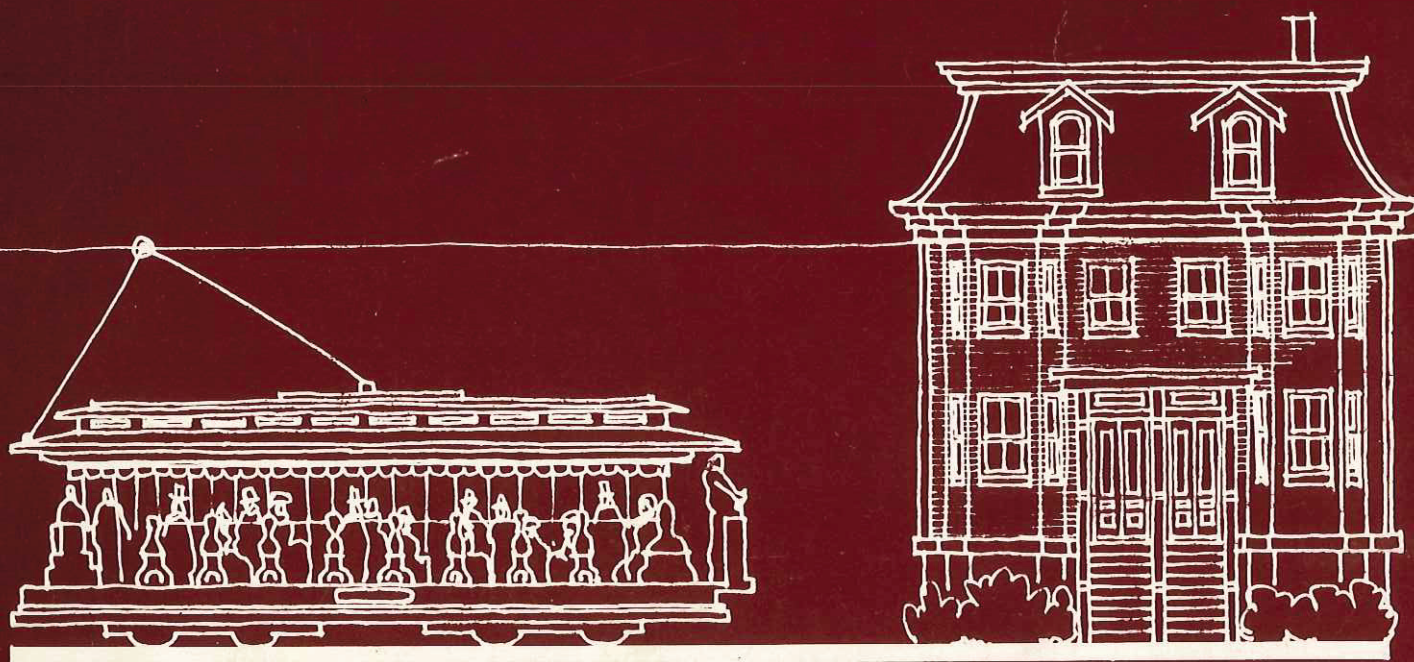
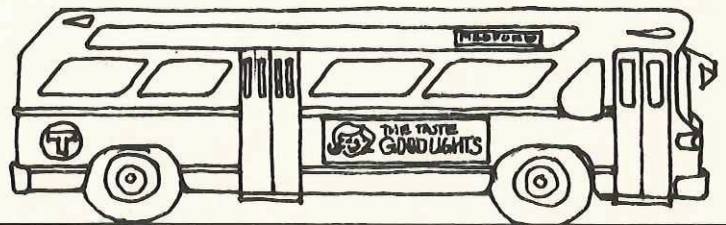


Your House in the Streetcar Suburb



The History & Care of Houses in Medford, Mass.

author's forward



My sincere thanks to the many people whose knowledge and efforts have made this guidebook a reality, to the lasting credit of the City of Medford.

Gary Davis, architect and Medford Historic Commission member, deserves credit for perceiving the need for this publication, and being of invaluable support during its preparation. My knowledge, and subsequent appreciation for the fascinating history of the city's evolution would not have been possible without the generous time given me by local historians Paul Barter and Joseph Valeriani. Few cities are fortunate to have the resource represented in the knowledge of these two scholars. To them my sincere appreciation and wish for expanded local recognition and support for the Medford Historical Society, an agency whose efforts on behalf of the city rest squarely upon their labors. Preservation professional Patricia Lawrence has been uncom-

monly generous in donating her time and knowledge. This publication is predicated upon her earlier efforts on behalf of identification and preservation of Medford's historic buildings. Charles Sisitsky, Director, and Scott Bander, Federal Programs Coordinator, of the Office of Community Development, deserve the thanks of all Medfordians for supporting this publication. It is through this agency and their efforts that technical advice and financial aid is being made available to homeowners for the renovation and preservation of the many houses, modest and grand, which make Medford a unique New England community. I thank them for this opportunity to participate in their efforts.

Cynthia Howard A.I.A. & Associates
Cambridge, Massachusetts

Your House in the Streetcar Suburb

The History & Care of Houses
in Medford, Massachusetts



prepared by:

Cynthia Howard A.I.A.

for:

The City of Medford, Massachusetts
Department of Community Development

September, 1979

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City of Medford

MASSACHUSETTS

HISTORICAL COMMISSION

Medford is fortunate in a substantial heritage of old buildings from its long past. On this architectural and historical inheritance depends, in major measure, Medford's identity as a city set apart from other cities.

A handful of Medford's historical structures are outstanding, renowned, relatively large structures which attract the public eye; these constitute hardly 5% of Medford's heritage. The other 95% consists of medium-sized or small private houses including an estimated nearly eighty from the Greek Revival era and many others from the Victorian era: the homes of ordinary, sometimes humble citizens.

Many of these are not striking in themselves. Taken together in streets and neighborhoods, however, they constitute Medford's chief source of uniqueness and pride. In no other respect but in her historically registered buildings does Medford rank within the top 1% of American communities.

Medford must depend on you, its citizens, to keep, maintain and preserve the authenticity of this source of her pride. Help is needed here: almost none of us is an architectural historian or trained in the arts and crafts of preservation.

The new Medford Rehabilitation Handbook meets this need. In it and through expert and attractive drawings and diagrams Cynthia Howard tells us all how to undertake the many tasks of private house preservation. She tells us also where to go for further help. Nor is this a guide to fanciness and large expenditure but to sensible and often inexpensive means of preserving the real value built uniquely into your own house. Often, the value of authentic older structures has increased more in recent years than the value of new — and usually less distinguished — construction.

These great values the Medford Rehabilitation Handbook will help you enhance and preserve. I thank Cynthia Howard, Gary Davis and the Office of Community Development for making this handbook a reality.

The rest is up to you!

Gregory Henderson
Chairman
Medford Historical Commission

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To the reader

This handbook has been prepared to assist homeowners in Medford, Massachusetts. Whether you are fortunate enough to live in one of Medford's remaining Federal or Greek Revival houses, in one of its more numerous turn-of-the-Century homes or, perhaps, are in the process of moving into a new Medford house, your home represents not only a substantial personal investment, but a bit of Medford's history as well.

Often the history of the growth of a city, and subsequently, the individual house's place in that history, is difficult to understand. Economic and transportation forces which shaped Medford have changed drastically over the years, (the construction of Interstate 95 through the heart of the city is a recent example), and each change has tended to wipe out evidence which would enable today's residents to understand the forces which created the city's early housing stock. This book attempts to remedy some of this difficulty by examining the major periods of Medford's growth and the houses this growth fostered.

Beyond an understanding and renewed appreciation for Medford's houses, this handbook offers renovation, and in particular, energy conservation, advice for homeowners. While inherently soundly built, (many houses were built by former shipbuilders), the older house is often in need of upgrading to meet today's energy efficiency standards. Conservation measures advocated for the new house can be inappropriate for older buildings; a number of "energy-saving" materials may even seriously damage the older house. The alternatives and advice available to the homeowner can be contradic-

tory. We attempt to sort out some of this confusion for you; to point out what to look for in your house; and to suggest further sources of information to guide you.

Many renovation handbooks for historic areas have been published, and much of this information would be appropriate for Medford. However, most guidebooks have been written for places whose essential character was formed prior to 1875 (Beacon Hill, New Bedford, Salem). Medford differs from these places in that the city as we know it today was largely shaped in the period c. 1860-1910 when new developments in transportation (railroad, horse trolley, electric car) enabled waves of immigrants crowded in Boston tenements to make a new home in the areas accessible to Boston by streetcar. While Medford can boast of nationally recognized 18th Century houses such as the Isaac Royall house, its story is one of the middle class creation of home and community in the suburbs. These 19th Century builders and commuter-workers have left the city with an irreplaceable stock of housing. While often modest in appearance and unrecognized by historic house buffs, (the significance of the triple decker, for instance, is just now being acknowledged), the houses and streets of the streetcar suburbs hold an important place in the architectural history of New England.

It is to the appreciation and preservation of Medford, the Streetcar Suburb, that this handbook is dedicated.

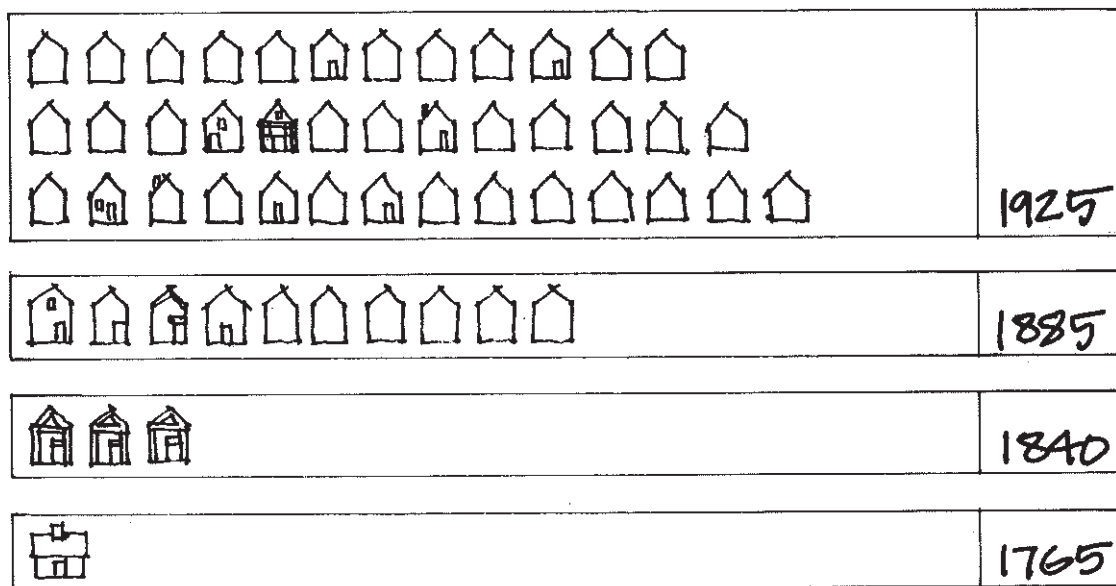


fig. 1

On this graph illustrating the growth of Medford each house represents approximately 1,000 households. Medford grew from a town of 10,000 people in 1885 to a city of over 63,000 in 1931.

advice

All your questions can not be answered in this one publication. Many good references exist for the history, restoration/renovation, and energy needs of the older house. We have called these to your attention at the end of each section. Agencies are available to answer your questions; some can provide direct aid. These resources are listed in the final section of the handbook.

A brief history of Medford

by Patricia J. Lawrence



fig. 2
A southern view of Medford. (From a 1832 publication; courtesy of the Medford Historical Society.)

Medford, one of the oldest settlements in the State, and in the Country, was formally established in 1630, when Mathew Cradock, the first Governor of the Massachusetts Bay Company, sent his men to Medford, or Meadford, on the Mistick, to establish fisheries and to farm. Cradock was the richest member of the Massachusetts Bay Company, founded in 1628, and especially instrumental in its systematic attempt to permanently settle the Colony.

Mathew Cradock never came to the Colony on the Mistick, though the major part of the territory of Medford was owned by him and called "Cradock's Plantation". His business was wholly in the hands of his agents. Subsequently Medford was called a "peculiar" rather than a town by the General Court, as most of its land was owned by one man. John Winthrop, for many years the Governor of Massachusetts, a leader of the Puritan migration, and a friend of Mathew Cradock, established his plantation, "Ten Hills Farm" in Med-

ford near Cradock's.

The settlement at Medford flourished until 1641 when its patron, Mathew Cradock, died. His estate was divided into large tracts. Without his support Medford languished for many years until about 1715 when the population began to grow and Medford became a major thoroughfare for travelers and traders from the north heading for Boston. The course through Medford and over the Cradock Bridge was the nearest land route to Boston from points north for 150 years, the Cradock Bridge being the first toll bridge in New England. A number of industries began in Medford at this same time, Medford rum becoming a noted example. The exact time when the business of distilling liquors began is uncertain, but probably between 1715 and 1720. The manufacture of rum continued through the late nineteenth-century, led by the Hall family and its descendants.

Medford played its part in the birth of the nation, as did the surrounding communities. In 1773 the people of Medford resolved to defend and preserve "the security of their rights and privileges" against the Crown. On the evening of April 18th, 1775, Paul Revere rode through Medford to alert Isaac Hall, captain of the Medford Minutemen, of the British movements. The next day, fifty-nine Medford men marched the road to Concord. From that time on throughout the Revolutionary war, the hills and valleys of Medford, Somerville and Cambridge were a rendezvous point where patriots camped, marched and fought. Medford men were with Washington at Monmouth, at Brandywine, at the Crossing of the Delaware, and throughout the war. The population

of Medford at this time was 967.

During the nineteenth-century Medford passed into its most expansive era, when its industries reached the pinnacle of prosperity. Beginning in 1803 shipbuilding became a major enterprise when Thatcher Magoun built his first ship at his yard of Riverside Avenue near the foot of Park Street. In the next seventy years 568 ships were built along the Mystic at Medford. The Middlesex Canal, the first in New England, opened for navigation at the same time. It passed through the entire length of Medford, and taverns, including one still extant, sprang up along its route to serve those who passed by. Other profitable industries included wagon building and leather manufacturing. Brickmaking was an active and profitable business due to the many valuable clay deposits in the soil around Medford. The first recorded mention of a clay yard in Medford was as early as 1660.

During the mid-nineteenth-century Medford was caught up, like the rest of the country, in the state's rights, anti-slavery issues. Several Medford citizens, among them Lydia Maria Child and the Reverend John Pierpont, were heavily involved in the anti-slavery movement. Medford sent her full quota to fight for the cause. The Medford Lawrence Light Guard was one of the first companies to volunteer in 1861, and one of the last mustered out of service in 1865, at the end of the Civil War.

Transportation played a major role in Medford's nineteenth-century development. Public transportation from Medford to Boston previous to 1831 was by means of stage coaches or private carriages. In that year the Boston and Lowell Railroad was surveyed through West Medford, and

seven years later was opened. The railroad was the most important factor in opening up real estate west of the Mystic. The stations of the B & L Railroad, later called the southern division of the Boston and Maine, were at West Medford, Medford Hillside, and Tufts College. In 1845 the Medford Branch of the Boston and Maine, which connected with the B & M tracks at Wellington, was incorporated. The terminal station was on Main Street, and the way stations were at Park Street, and Glenwood in East Medford. This opened up the rest of Medford to development.

Medford became an attractive place to live for people who worked in Boston but desired suburban homes. It was also a popular place for wealthy Bostonians to build their "summer residences." Medford's great estates were divided up into house lots and streets as Medford's population continued to swell. The street railroad was another factor in Medford's growth. The Medford and Charlestown Railroad Company was incorporated in 1855; the road was built and operating until 1873, when it was discontinued, only to be reopened in 1884. By 1890 Medford's population had grown to 11,079. Fifteen years later the population had doubled to 23,000. In 1970 the population reached 64,397, but meanwhile, one by one, Medford's own ancient industries of brickworking, rum and shipbuilding had died. Despite the expansion of Tufts University and the founding of some business, Medford looked less toward its own industry than to housing those working in Boston and its environs.

I. MEDFORD HISTORY & HOUSES

A. Farming & trading town

fig. 3
Craddock Bridge. From
Medford Past and Present,
1905.

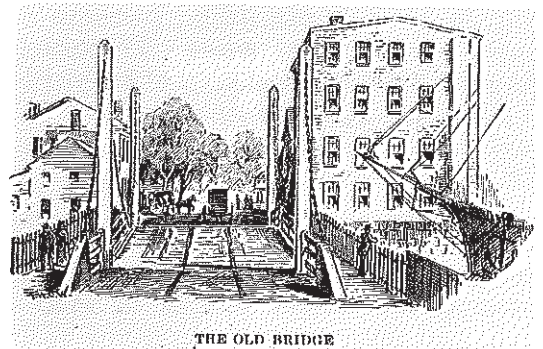
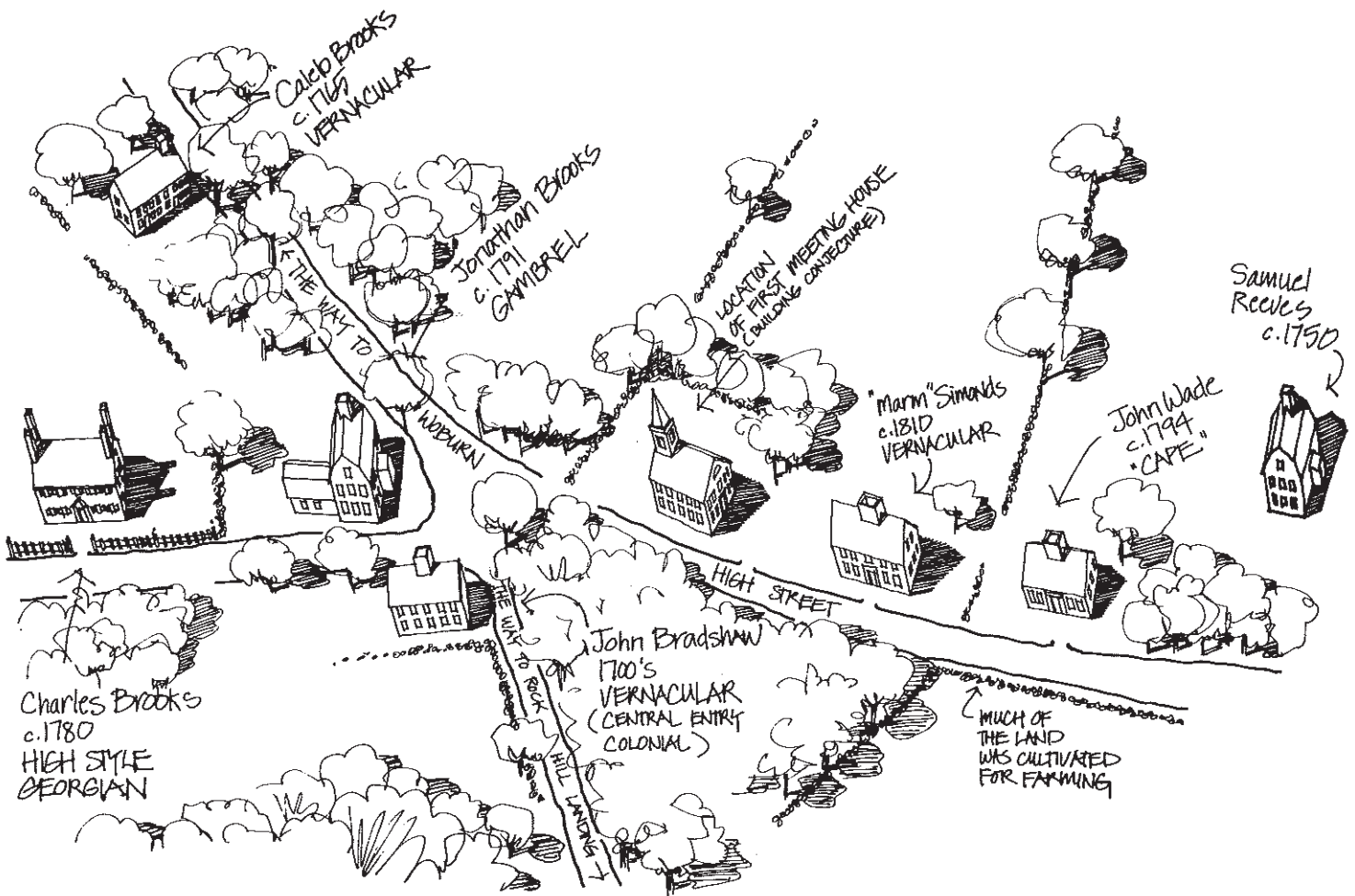


fig. 4
Rock Hill (Jenkins Square)
as it may have looked c.
1820.



c. 1634-1820

Buildings in the English tradition

From the first Medford settlement of overseers established in 1634 to secure Governor Graddock's land grant, there are no remaining examples. These First Period houses would have been very modest indeed, as the first priority of labor was to till the soil. Still, it is worth describing these early structures as a number of their characteristics continued on well into the 1700's in the buildings of modest means and architectural pretension which are known as "vernacular" houses.

example

The Paul Revere house, Boston, and the House of Seven Gables, Salem, are First Period houses with which most New Englanders will be familiar.

The earliest New England houses continued in the Medieval English tradition, and were marked by very tall steep roofs (necessary to shed rain and snow from the thatch). The houses were small, usually one room deep with a sleeping loft above. Chimneys were massive, and centrally located to combat the severe winters. For the same reason windows were few, very small, and located according to need rather than design. The door was often off-center, and of the simple board and batten type.

In the vernacular house many of

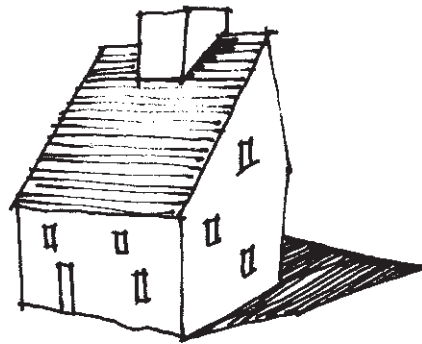


fig. 5
The earliest New England houses had small windows, steep roofs and massive central chimneys.

First Period

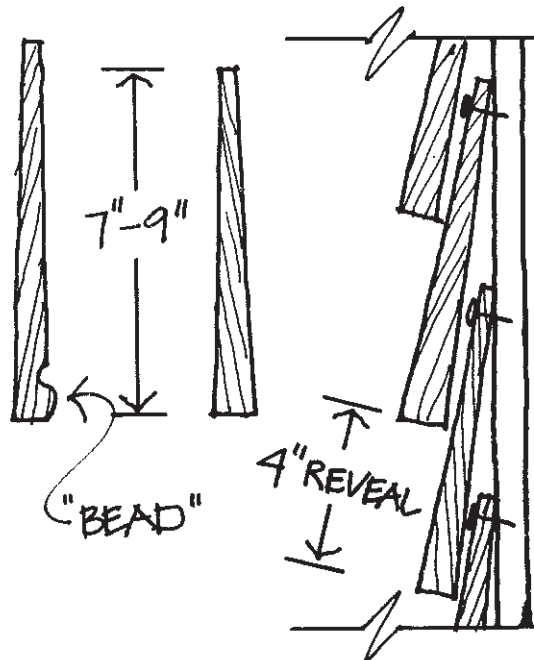


fig. 6
Clapboards, whether beaded or plain, cast fine shadow lines on the facade of the house; a distinctive feature of most early styles.

Vernacular

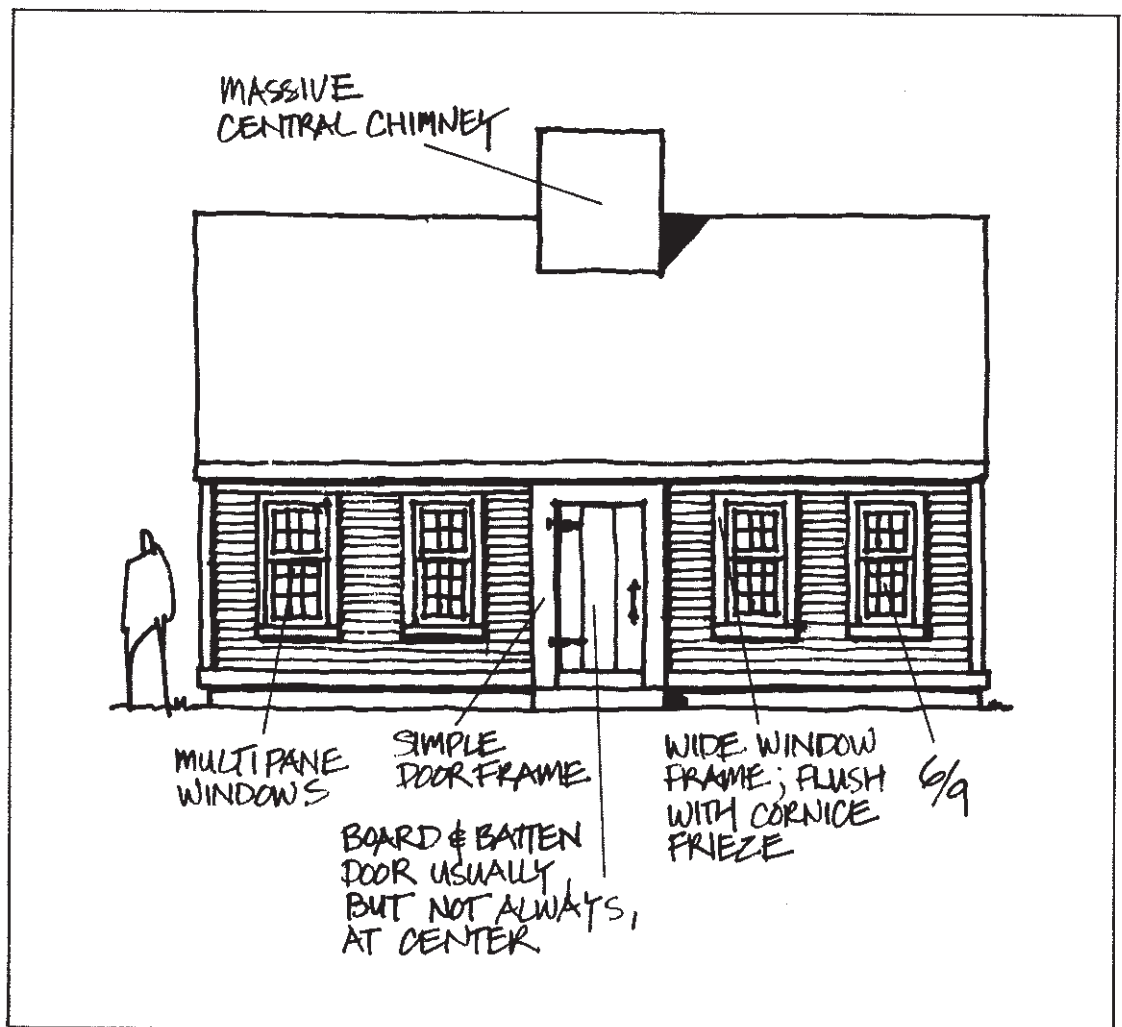


fig. 7
The simple New England "Cape" is a good example of vernacular building, and its popularity as a house type has extended from the 17th Century up to the present.

these traits continue. The central chimney is likely to be seen, and a general disregard for the symmetrical placement of doors and windows — a hallmark of later styles — is evident. A plain treatment of the entry trim and the simple board door continues in use in vernacular houses.

example

Captain Caleb Brooks house (1765), 24 Woburn Street, is a gable house one room deep with seven window openings along the long side. The simply detailed doors are asymmetrically placed in the third and sixth openings.

Where earliest houses had small diamond-paned casement windows, by the time of the Georgian style all were built with double-hung windows of many small panes and very wide muntins (the wooden bars supporting the glass).

The hallmark of the Georgian house was the entry framed by classical columns or pilasters and topped with elaborately carved architectures or pediment. Doors had 6 or 8 panels with the small panels in the center, and were often crowned with a row of panes of glass to let in light (the transom).

examples

The Isaac Royall house, 15 George Street, with its massive dentils and corner quoining, typifies the Georgian style at its most elaborate. The Reverend David Osgood house, 141 High Street, is a classic end-chimney Georgian house.

As greater prosperity came to

Georgian

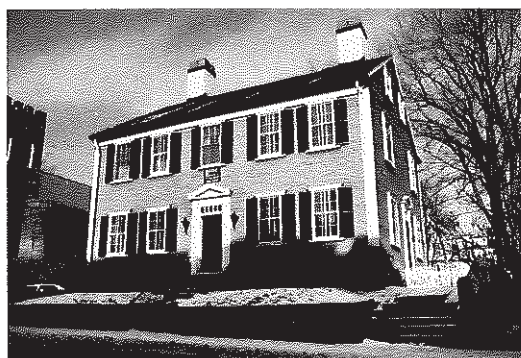


fig. 8
The Reverend David Osgood house.

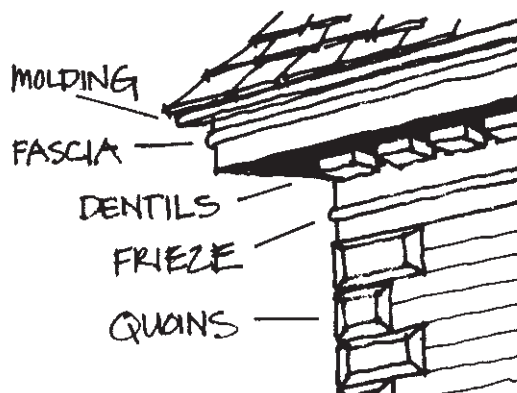


fig. 9
A closer look at ornate classical wooden detailing. Dentils look like a row of wooden "teeth" under the protruding ("box") cornice, and quoins are made to imitate the look of wood at the edge of the facade.

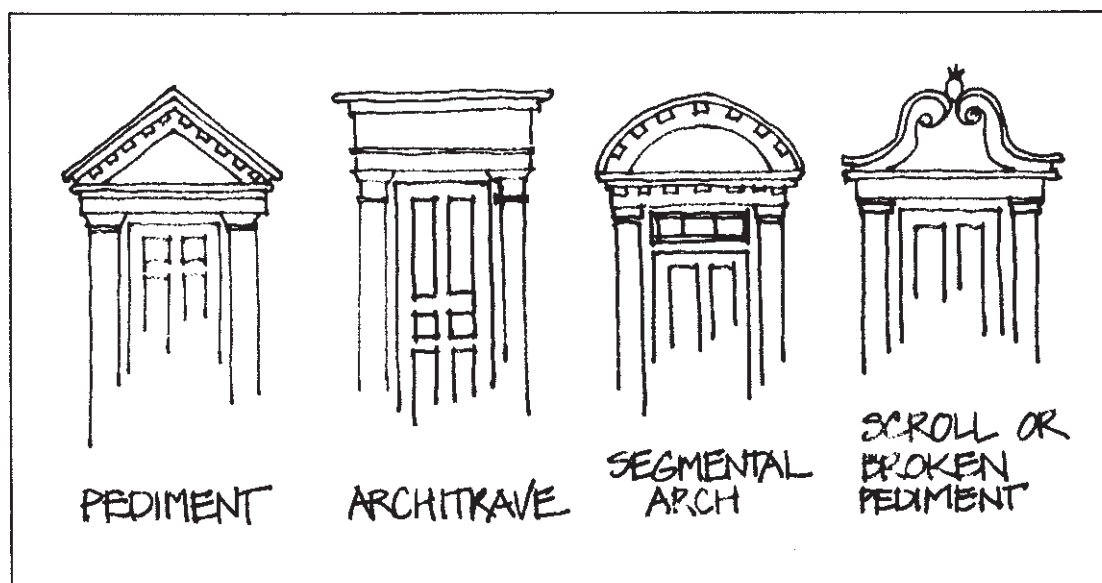


fig. 10
The classical doorways of the Georgian style.

fig. 11
Medford's famous Royall
House.

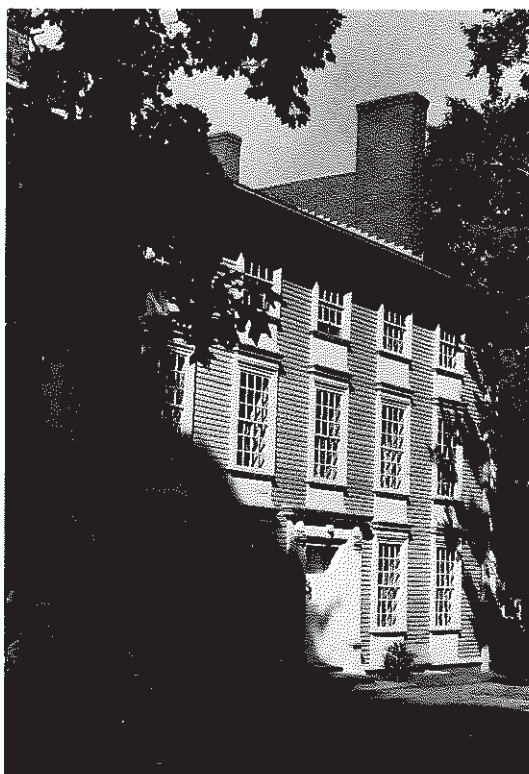


fig. 12
The Hall family houses
which once stood on High
St. in downtown Medford.



the early Medford families through farming and more significantly through profitable trading at the bridge at the ford in the Mystic (now Medford Square), both the size and elaborateness of the houses increased. Profits from bakeries and the rum, brick and lumber industries made many wealthy men of the 750 people who lived in the town of 1765; and they sought to display this wealth by building houses in the English manner. Books brought over with trading vessels from London guided the New England builder in this new mode of building.

The most significant changes were the introduction of symmetry and addition of classical detailing to entry and, on the more expensive houses, on the windows and cornice. The typical Georgian house — 2 rooms deep, two stories high, 5 bays wide with center entry on the long side — proved to be so popular that, as a type, it persisted well into the 1800's (note the "Gothicized" example on pg. 34). The large central chimney continued into the Georgian style, but on the homes of the very wealthy (slaves would tend the fires) two, or even four, end chimneys were common. Roofs were gable or gambrel (a shape which extended the usable space under the eaves).

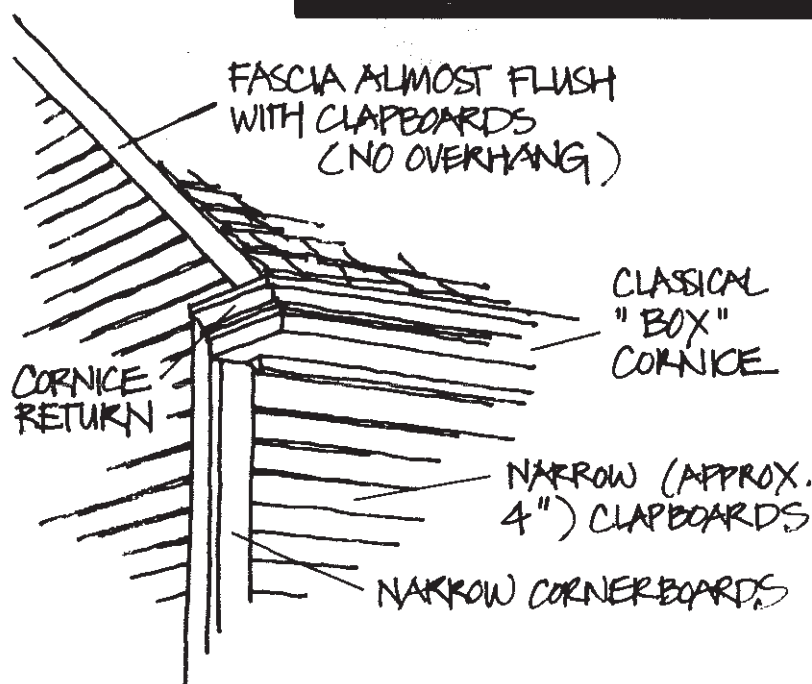


fig. 13
Details often seen on the
Georgian frame house.

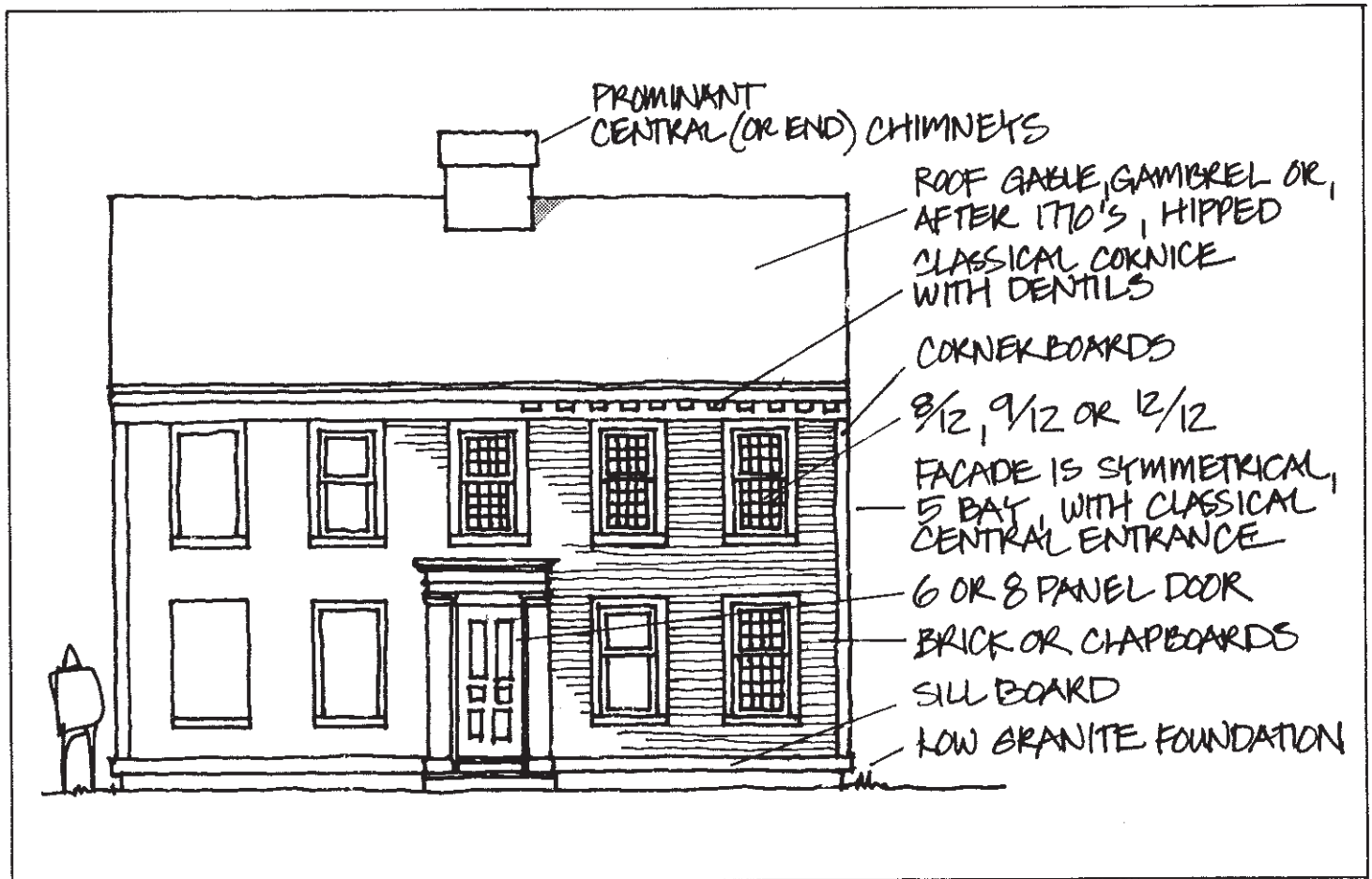


fig. 14

The Georgian style, popular c. 1725-1785

characteristics

doorway	Main doorway placed in the center of the long side. Often a row of rectangular windows called "lights" were placed in to door itself, or above. Columns or pilasters framed the door. Usually six or eight panel door.
windows	Double-hung sash, symmetrically placed. 8/12, 12/12, 9/9
roofline	Gambrel or gable roof. Hip roof became popular in the 1770's.
materials	Exterior surface either clapboard or brick.

trim

On finer homes plain eaves were replaced with molded cornices and decorative dentils. Quoins, which are heavy blocks of wood cut to imitate stone, were used at the corners of the building to strengthen its visual appearance, and add to the overall decorative richness.



fig. 15
An old photo of the Jonathan Brooks House on High St. From the collection of the Medford Historical Society.

fig. 17
Window muntins (the wooden members supporting the panes of glass) became progressively more slender over time.

The Federal style, like the Georgian, coincided with a great era of prosperity for Medford and New England. These were the great days of whaling, shipping, and China trade along the East Coast. For Medford, it was the Colonial "Golden Age" of trading and the beginnings of its shipbuilding era.

Still seeking to imitate the fashions of England, this change in architectural style was inspired by the imported architectural copy books of the work of the Englishman, Robert Adam. Adam built in a "refined" classical mode; the entrances of Federal buildings are larger and more elegant than in the Georgian style, with a great deal more glass, and with tall, slender proportions to the classical columns. The elliptical fan light over the door, with side lights to within $2\frac{1}{2}$ feet of the floor on either side of the door, are hallmarks of the Federal house. The door is still paneled, but now with smaller panels at the top.

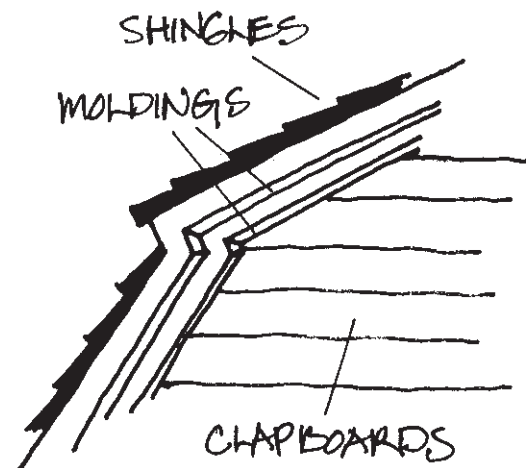
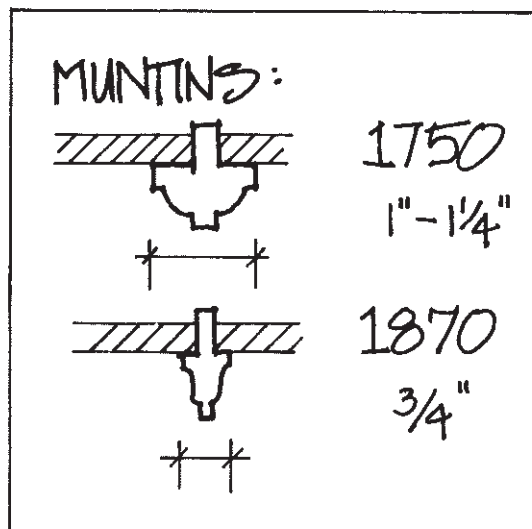


fig. 16
Detail at the rake (change in pitch) of an 18th c. gambrel roof.



The hip roof, which had just begun to be popular in the Georgian style, is frequently seen. The hip is often very low, with a balustrade ("fence" at the edge of the roof) so as to make the roof appear almost flat when seen from the street.

Windows are larger, taking up more wall space and are 6/6, with noticeably thinner muntins.

It is interesting to note that contrary to our popular image of early American house styles (largely shaped by later revivals of colonial building), dormers were seldom seen on 18th century houses. Perhaps energy considerations were an influence, but it was not until the 19th century that dormers became a common house feature.

There are few high style examples of the Federal style in Medford, perhaps reflecting a conservatism on the part of early Medford land-owners; the Georgian style was associated with aristocracy; the Federal style symbolized the equality of the country after the Revolution of 1775.

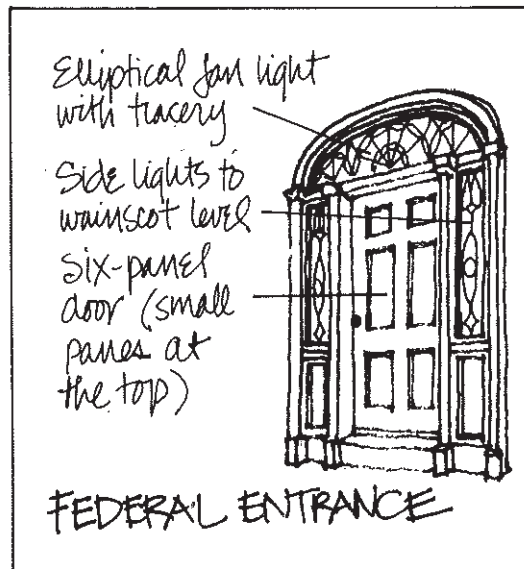


fig. 18
Federal Style door with fan and side lights.

fig. 19
Federal Style houses, c. 1785-1820, continued the traditions established by earlier Georgian houses, but tended to have more elaborate classical detail — noticeably more slender and "refined" — on windows and entry.

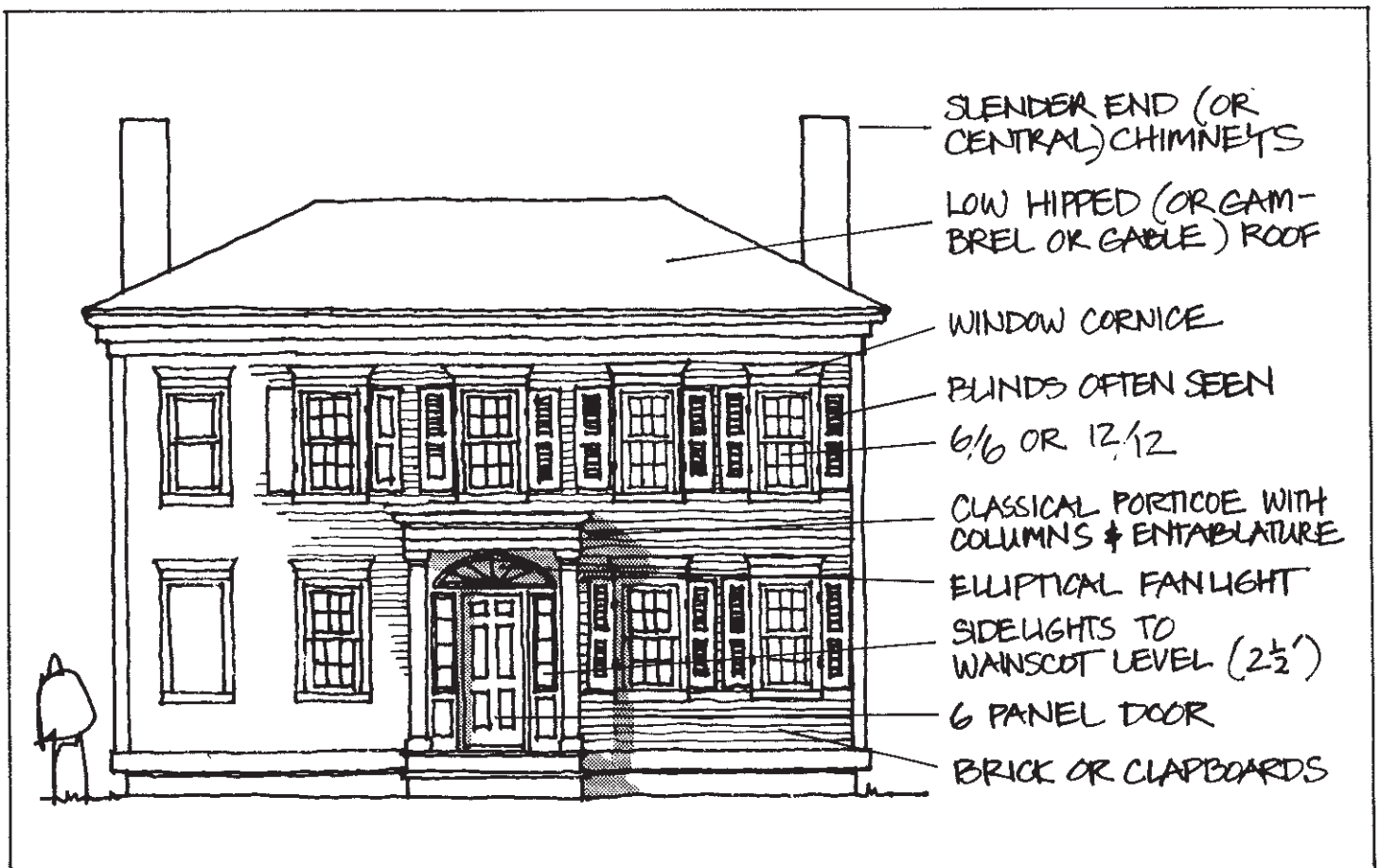




fig. 20
Perhaps the finest Federal
Style house in Medford;
number 50 Park St.

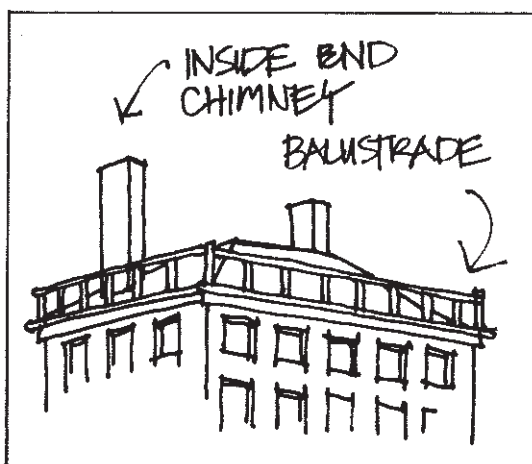


fig. 21
The hip roof became
popular around the 1770's.
A balustrade around the
roof edge is a common
feature of high style Fed-
eral hipped roof houses.

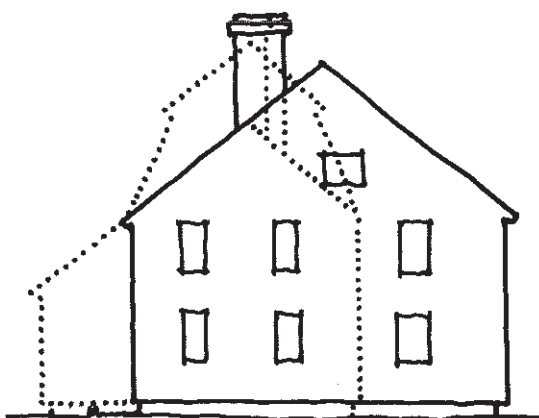


fig. 22
Common house shapes
from 1650 to 1850.

example

The house at 50 Park Street built c. 1810 for a family associated with Medford's then-thriving shipbuilding industry, is a handsome example of the Federal style. The semi-circular portico with its slender columns, and the side and transom lights with their delicate window patterns (called "tracery") are hallmarks of this style.

characteristics

- | | |
|------------------|---|
| doorway | The doorway was placed in the center of the long side of the house, often with a semi-circular fanlight and side-lights. The door was typically flanked with slender columns or pilasters. Entrance way often framed by a semi-circular or rectangular portico. |
| windows | Tall and narrow, usually 6/6 sash, symmetrically placed. |
| roofline | Gable or shallow hip roof, often hidden by a balustrade. Chimneys on the end walls. |
| materials | Executed in wood or brick. Sometimes clapboards were used on the front, with brick on the sides and rear. Popular paint colors were pale yellow, off-white, beige, pale green, medium blue. Light colored trim. |
| trim | Light, restrained detail, not as fancy as the Georgian. |

books

Two excellent histories of early Medford available at the Medford Library are:

History of the Town of Medford, Middlesex County, Massachusetts by Charles Brooks and James M. Usher, Boston, 1886.

Medford Yesterdays, by Frank W. Lovering, Medford, 1963.

For further reading on the styles of early American buildings:

How to Date a House by David Hart, available for \$2.00 from the Society for the Preservation of New England Antiquities, Boston, MA. (227-3956)

Amateur's Guide to Terms Commonly Used in Describing Historic Buildings by Harley J. McKee, available for \$2.60 from the Landmark Society of Western New York, 130 Spring St., Rochester, NY 14608.

A Guide to Old American Homes, 1700-1900 by Ottalie and Lionel Williams published by Barnes, South Brunswick, NJ, 1977 (\$4.95). This well illustrated account of all major styles of American domestic architecture is also available at the Cambridge Public Library.

B. Medford's "seaport" era

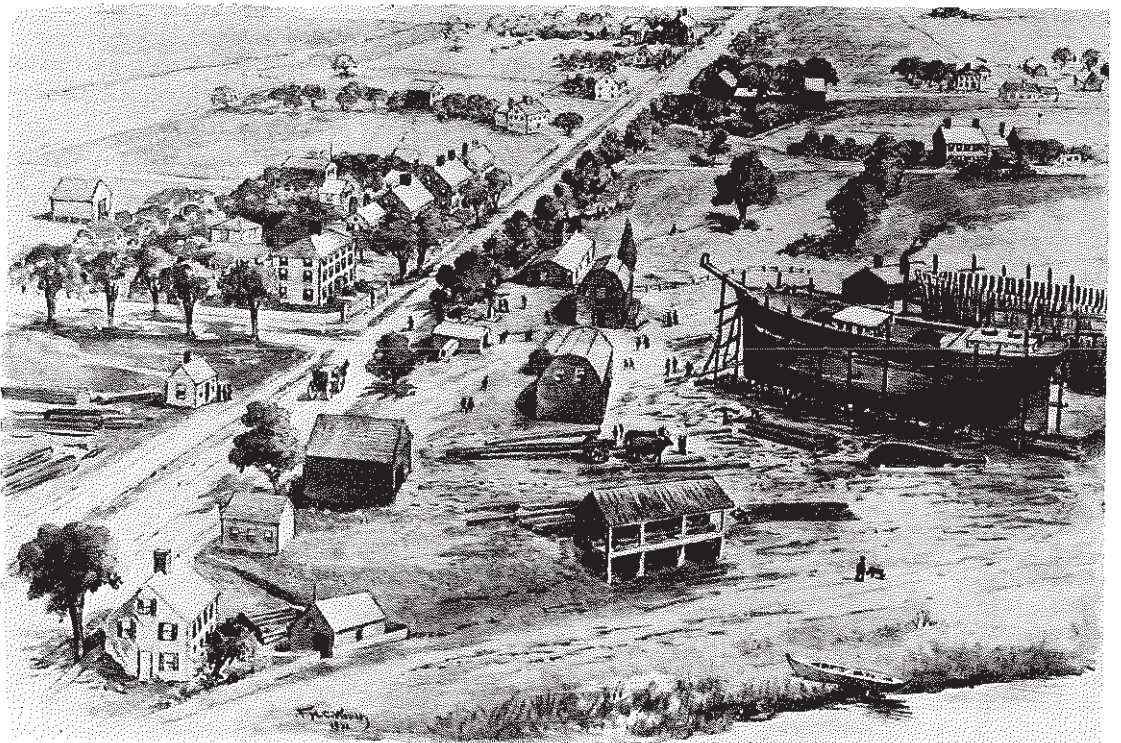
fig. 23

The Mystic River at the Craddock Bridge in former days when the river was still tidal and ships along its banks were a common sight.



fig. 24

The Ship St. shipbuilding yards. Watercolor sketch by Fred H. C. Wooley.



c. 1803-1855

The first American style

The Greek Revival style of architecture is often called "the first truly American style", and arose out of the young nation's desire to identify with the ideals and architecture of the ancient Greek Republic. Earlier styles had been inspired by English fashions and frequently were copied from English "pattern books".

From the early 1800's through the middle of the century, Greek architecture was avidly studied by architects and builders. Guides to building in the Greek Temple mode were widely circulated. The most typical Greek Revival structures were those which faithfully reproduced the temple facade with free standing columns, or with columns tucked into the facade as pilasters.

Numerous examples of the Greek Revival can be found in Medford, especially in areas settled by those involved in the ship building industry: South Street, Riverside Avenue, and Pleasant Street. A cluster of Greek Revivals can also be found in the Myrtle Street area, and the Ashland/Water/Oakland Street area. Both the grand Greek Revival house with the two-story colonnaded porch, and the more modest Greek Revival cottage, are represented in Medford.

example

The Paul Curtis house (1839), 114 South Street, with its free-standing pedimented temple-front and ionic columns, is one of the numerous superb examples of this style in Medford.

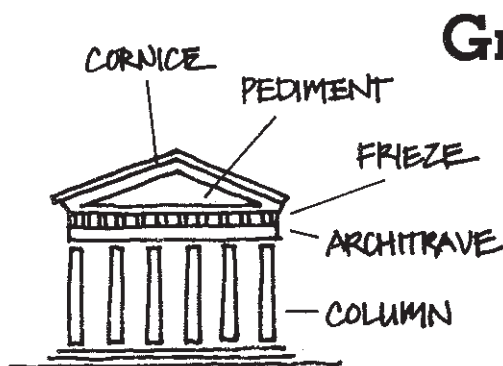


fig. 25

Components of the Greek temple.

fig. 26

In Medford the Greek Revival style, c. 1820-1850, is associated with a prosperous period of ship-building. This legacy remains today in the many fine homes along Riverside Ave. (formerly Ship St.).



fig. 27

Tufts College crew on the Mystic (Ship St. in background); used by permission of the Tufts College Archives.

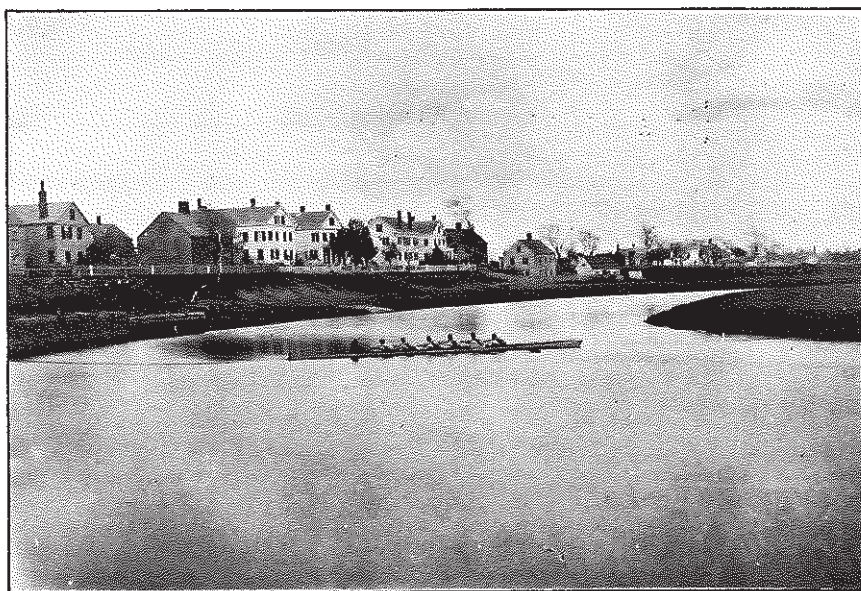
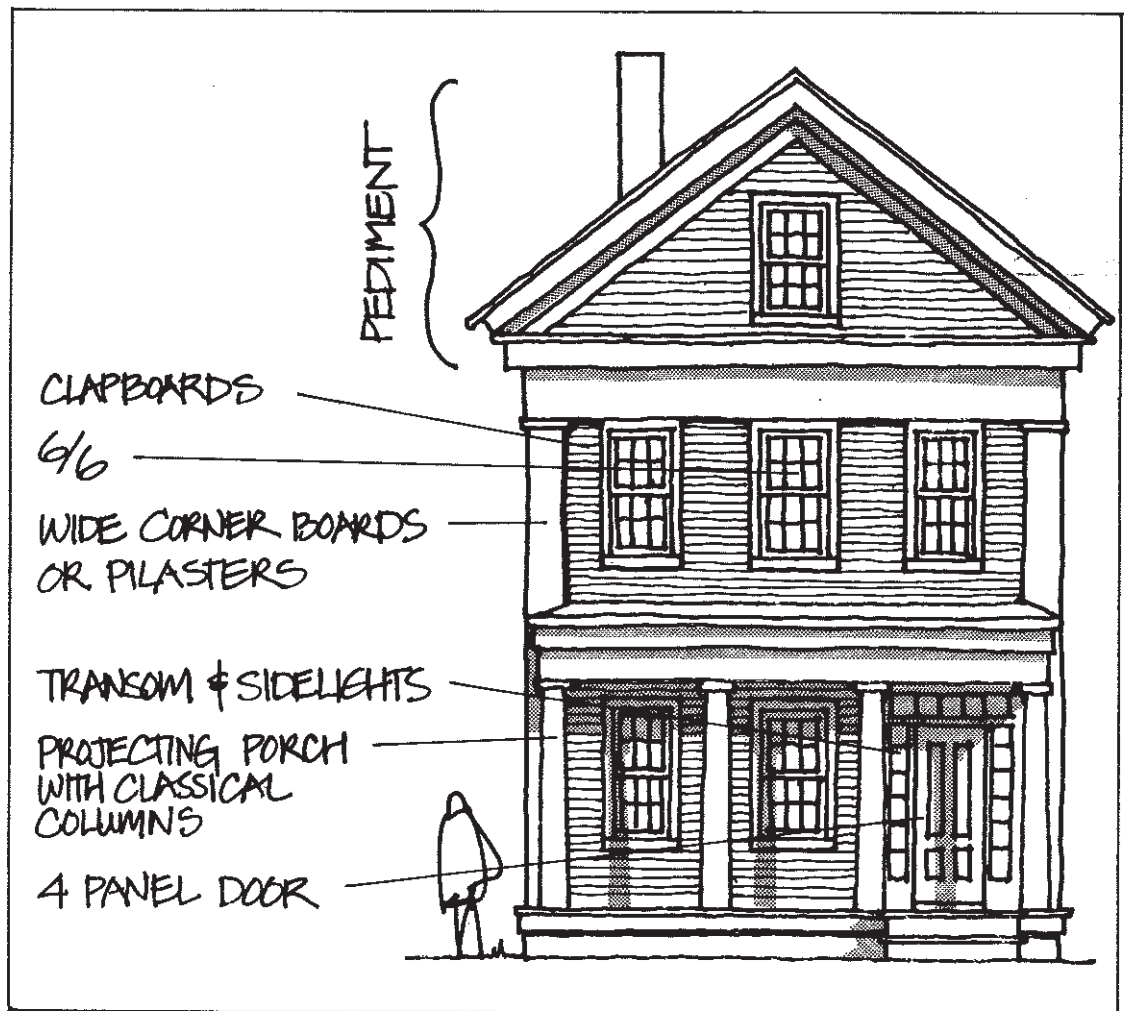


fig. 28
The Greek Revival Style,
popular c. 1803–1895.



characteristics

doorway

For the first time the entrance was shifted from the long side of the house to the short, gable end. The main door was typically recessed and framed by narrow floor length sidelights, and flanked by pilasters which supported a molding above the door opening. Four panel door with smaller panels at the bottom.

windows

Tall and narrow, 6/6 sash.

roofline

Gable of medium or low pitch. Chimneys became small and insignificant.

materials

Exterior surface usually covered with clapboards. Paint colors were very pale and meant to imitate marble or sandstone. White was a popular base color with trim often painted dark-green or black.

trim

Use of Greek Temple motifs. The triangular gable end of the house was analogous to the temple pediment.

fig. 29 (photo opposite)
A classic Greek Revival
entrance; this is a house on
Fountain St.

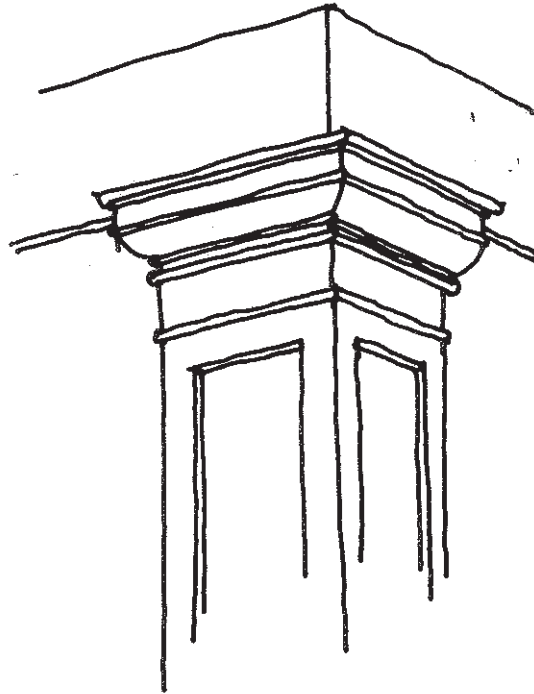
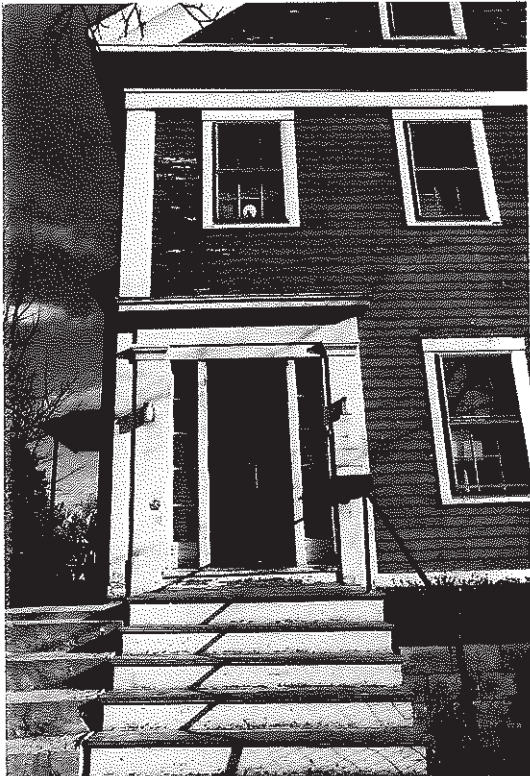


fig. 30

In the Greek Revival style cornerboards were enlarged to become pilasters (flat square columns placed directly on the wall surface), often with recessed panels which create bold shadow patterns on the building facade.

fig. 31

The entry porch of the Issac Sprague house, 314 Riverside Ave., a high style Greek Revival house. Notice the Ionic fluted free-standing columns on the porch, the Ionic pilasters supporting the entablature over the door, and the enormous size of the 6/6 windows.



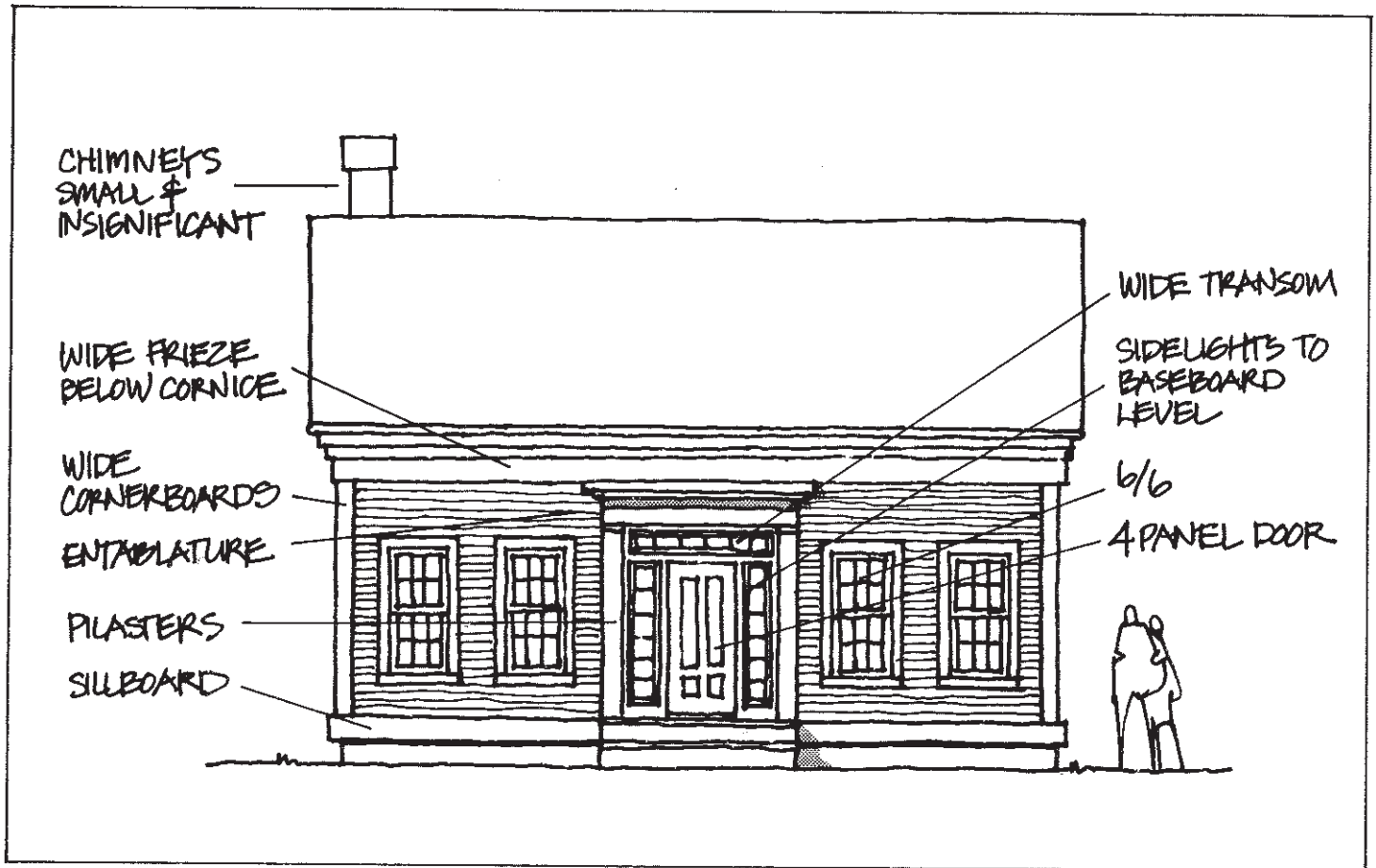


fig. 32

A modest house with a classic Greek Revival entrance. Comparison with an earlier vernacular house (page 5) illustrates how the change in styles was often just a matter of details: cornerboards, door and window trim.

fig. 33

The John Wade House, 253 High St., c. 1784-1794. Although an earlier house, the entrance and end pilasters exhibit signs of house "renovation" during the Greek Revival period.





books

The Modern Builder's Guide by Minard Lefever is a reprint of an 1833 interesting and informative handbook of Greek Revival details with many technical descriptions of building processes. A paperback, this book is available for \$4.00 from Dover Publications, N.Y. and can be found in many local bookstores.

The American Builder's Companion by Asher Benjamin is another Dover Publications reprint (of an 1827 edition). This book was a major source for Federal and Greek Revival details and carpenters' construction methods. Illustrations show typical early 19th century architectural designs. (\$4.00)

fig. 34
The Paul Curtis House, 114 South St., with its free-standing columns, is one of Medford's most high-style Greek Revival houses.

"The suburbs of Boston are famed as the most beautiful in the world . . . nature has been assisted by art in a way that has entirely girdled the city with a succession of delightful communities."

Bacon's Dictionary of Boston, 1883

C. Great estates & streetcar suburbs

With the decline of the shipbuilding industry around the middle of the 19th century, (steam had rendered the great schooners obsolete), Medford began that period of growth which largely shaped the city it is today. Prior to this time the wealth of Medford was generated within the community — farming, trading, and rum, brick and shipbuilding industries. Although Boston was a primary purchaser for these goods, few Medford residents commuted daily to Boston for their major means of employment.

But Boston itself went through major commercial and population growth during the period 1850-1900, and in order to understand Medford's history of this period one has to look to Boston.

The Railroads and the Rural Ideal

Prior to 1850 it had been common for wealthy upperclass Bostonians to have two houses — a town house in the city and a summer country estate or retreat, perhaps in Maine or Cape Cod.

With the opening of railroad commuter lines to Boston (by 1888 there were 10) many of the richest Bostonians took advantage of their greater control over hours of work and the fashion for suburban living to build big houses on the best streets and hills of outlying areas, often using these homes as spring/fall residences. As commuter tickets were expensive, these early suburbs were established for the affluent merchant

or professional, were often architect-designed and, in contrast to the cramped formal architecture of inner city living on Back Bay or the Hill, were romantic in architecture and intent. These first suburb houses were an attempt to revive in the lands beyond Boston the ideal town house — detached and on its own garden lot — which had existed in Boston until scarcity of land had obliterated that ideal in the 1820's.



fig. 35
The John B. Angier House.

example

The imposing Gothic Revival John B. Angier house on High Street, designed by the architect Alexander J. Davis in 1842, is a particularly fine example of the residences built by the first wealthy Medford suburbanites.

The establishment of the West Medford train station in 1835, and the Park Street Station east of Medford Square in 1845, brought pressure on the old land-owning Medford

c. 1850-1930

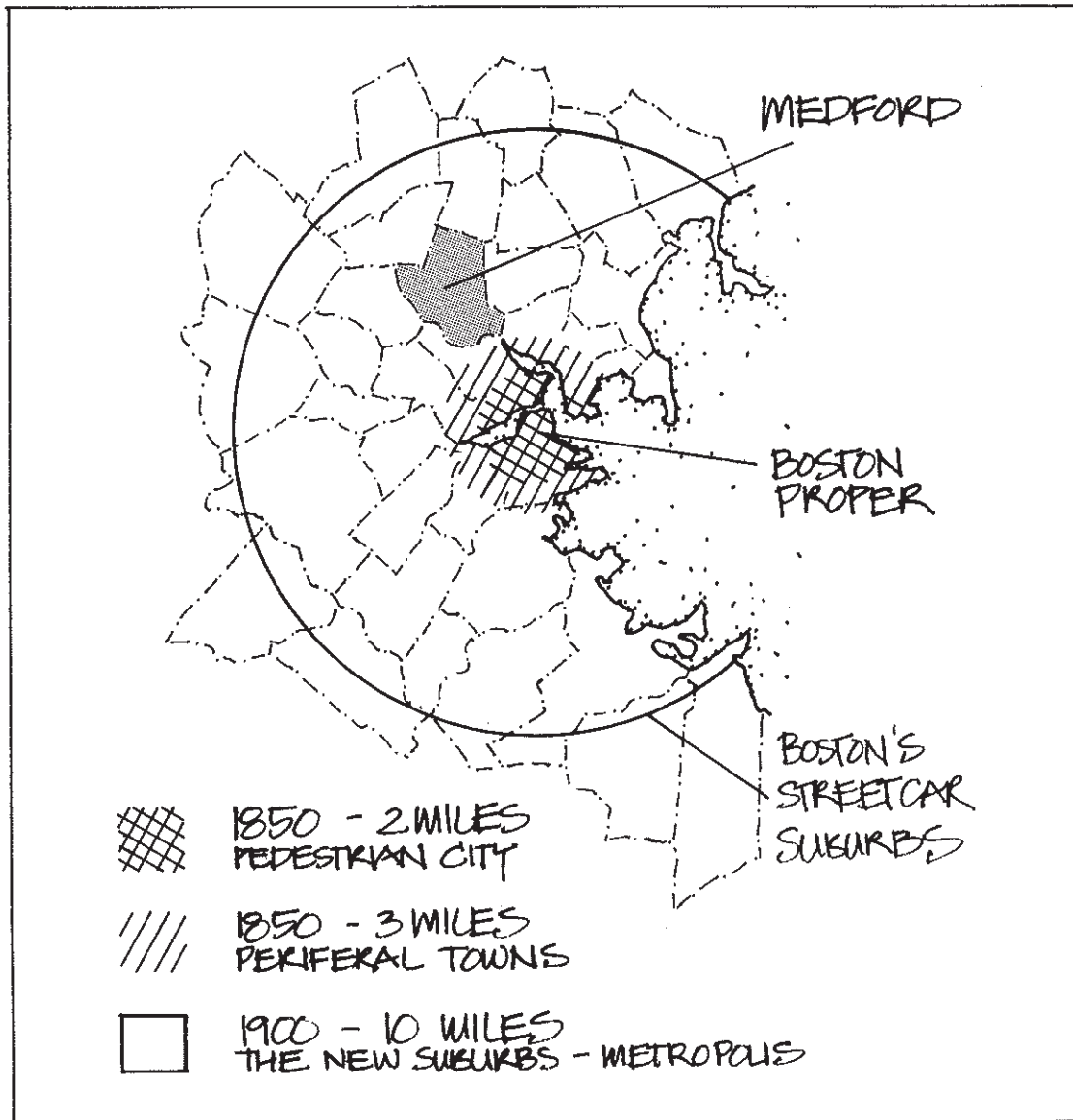


fig. 36

The pedestrian city of 1850 and the suburban metropolis of 1900. Map from *Streetcar Suburbs* by Sam B. Warner, Jr. in which the author states: "... this era (saw) the rearrangement of the physical form of the city itself. In fifty years it changed from a merchant city of two hundred thousand inhabitants to an industrial metropolis of over a million. In 1850 Boston was a tightly-packed seaport; by 1900 it sprawled over a ten-mile radius and contained thirty-one cities and towns."

families to sell and/or subdivide their land for the profit to be gained in the development of these new suburbs. However, it was not until the 1870's in Medford that sizeable pieces of "old land" were sold. And not surprising, when these upperclass suburbs were built, they were located on the highest hills (Hasting Heights/Mystic Mount) and bear the names either of the original land

owners or rural identity they sought to capture (Summit, Terrace and Bradlee Roads; Hall, Hillside and Grand View Avenues; Chestnut, Ashland and Garden Streets; Prospect Park).

fig. 37
Medford Square, from a
postcard of 1911.

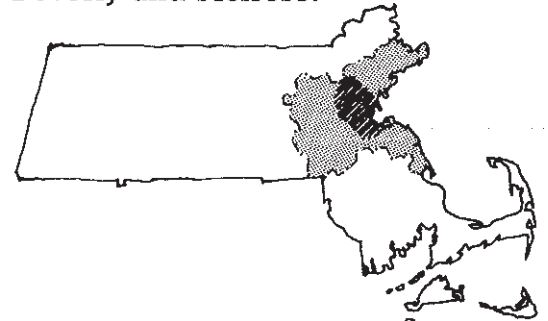


Immigrants, Tenements and Trolleys

Industrialization and immigration together had fired the economy and growth of Boston since the beginning of the century, yet it was not until the disastrous Irish potato famine of the 1840's that the sheer number of newcomers began to strain the city's capacity to accommodate them. Penniless Catholic Irish peasants arrived by the boatload: by 1875 they numbered 60,000; by 1900 they represented up to 40% of Boston's population. As Irish immigration slackened, new waves of people arrived from Southern, Central and Eastern Europe; by 1890 Italians and Jewish peoples became an important part of the city's population.

With growing industrialization, old Yankee money and the labors of the swelling population, Boston grew wealthy as never before. This process left behind not only the suburban Great Estates of the very wealthy, but almost overnight transformed once rural communities into a dense fabric

of tree-lined streets and handsome middle class houses for a full ten mile ring around Boston. Indicative of metropolitan growth is the number of towns that became cities during this period of immigration: Cambridge and Roxbury in 1846, Medford in 1893, and by 1900: Charlestown, Lynn, Chelsea, Somerville, Newton, Gloucester, Brockton, Malden, Waltham, Woburn, Quincy, Everett, Beverly and Melrose.



The process was stimulated by Boston's physical inability to adequately house its swelling population, but was made possible by: 1. Availability of open land in outlying areas; 2. The development of the horse cars ("bobtail trolleys") and the later

fig. 38
Boston's inner and outer
suburbs. The inner sub-
urbs like Medford repre-
sent the most dense,
heavily developed, and
taxed areas in Massachu-
setts. The advancing edge
of metropolitan growth
has long since passed on
to the areas ringing Route
128. The growth policy
for these older inner sub-
urbs is not one of expan-
sion, but of conservation
and adaptive reuse of in-
place resources.



fig. 39
New Brookings St., a Medford housing real estate "development" of c. 1900.

electric streetcars enabling metropolitan workers to live beyond the city limits; 3. The ability of the new Americans through hard work and industriousness to rise to the status of the middle class.

In Medford the first bob tail car was established in 1860, and ran from Medford Square to Charlestown until the Depression of 1873. It was re-established in 1884, extended to West Medford, and electrified with a double track to Scollay Square by 1889. As later lines were established they were such a determining force for land development that the areas they served are even today seen in the eyes of many residents as distinctly separate communities: Wellington, West Medford, Medford Center, the Fellsway, and the Hill-side/Tufts area.

In Medford two periods of suburban development occurred. Prior to about 1890 most houses were built by their owners. A commuter would buy his lot of land and hire a local builder, (often a former shipbuilder who had turned his skills to house build-



fig. 40
The mix of architectural styles seen along Boston St. is characteristic of the early wave of suburban housing.

ing), and build in one of the number of styles fashionable at the time. Streets of this period, whether upper or middle class, tend to have a variety of house types and styles reflecting this development process.

Later, certainly by 1900 when there was a public notice of land subdivision every week in the local *Mercury*, the demand for housing in Medford was so strong it became profitable for developers to buy up large holdings, divide the land and actually build whole new streets of houses on speculation. Neighborhoods built by this process can be

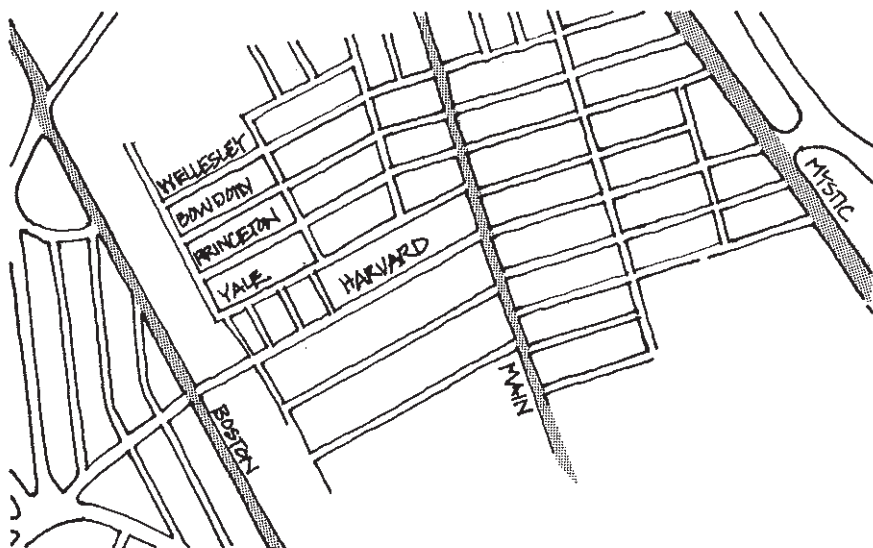


fig. 41
Often it is possible to detect the time and method of housing development simply by reading a map. This area in the southeast corner of Medford can easily be read as a turn-of-the-century suburb development by the presence of long blocks with their short sides turned towards the major traffic streets (Boston, Main and Mystic), and the tell-tale common theme to street names.

fig. 42
The uniformity of house styles along this stretch of Boston St. is characteristic of the turn-of-the-century housing built for streetcar commuter-workers.

fig. 43
The land development pattern of the streetcar suburbs.

identified by a common theme to street names and the repetition of the same basic form of style from house to house. The area off Boston Avenue bounded by the streets named Exeter, Amherst, Vassar, Dartmouth, Radcliffe, Wellesley, Bowdoin, Yale and Harvard, is an example. While



early suburbanization ended to produce single family homes almost exclusively, in the later decades of the century two and three unit structures became popular, bringing suburban living within the means of an even larger income spectrum.

These later developer-built areas can also be identified by their regular grid street layout with uniform lot size and set-back. Typically they form long blocks perpendicular to a major traffic (streetcar) street, and at this narrow end of the block

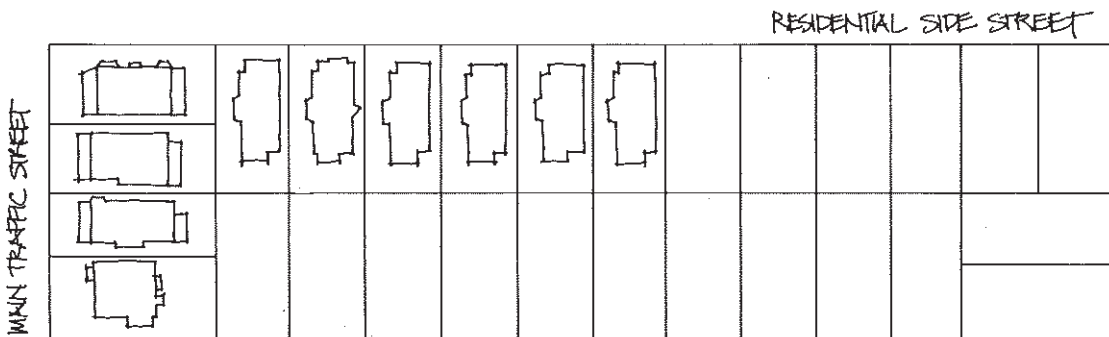
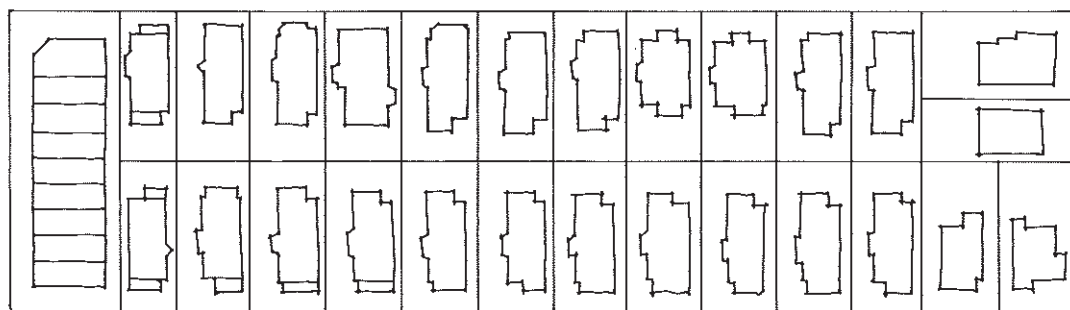




fig. 44
Developer-built "mid-price singles" along Park St.

fig. 45
A common sight in the streetcar suburbs: the corner store at the traffic street end of long residential blocks. Corner of Washington and Dudley Streets.

are placed corner stores, multi-family structures, or a structure with ground floor commercial and rental units above.

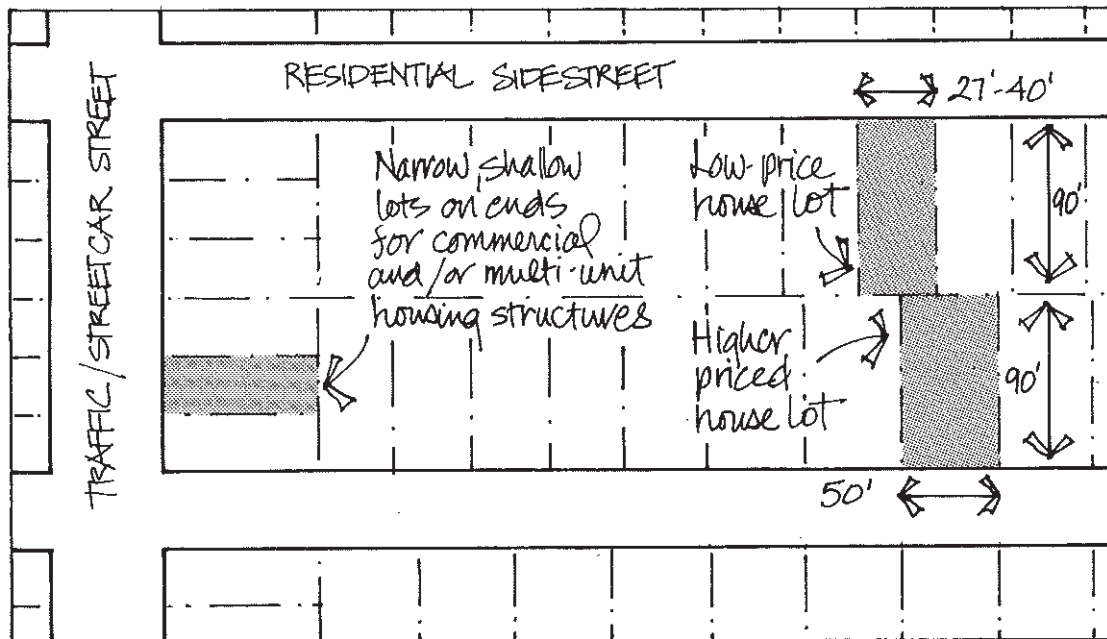


fig. 46
The grid system was a marvelously flexible form of land development. By simply varying the widths of the house lots, developers could accommodate a range of income levels within the same basic street layout.

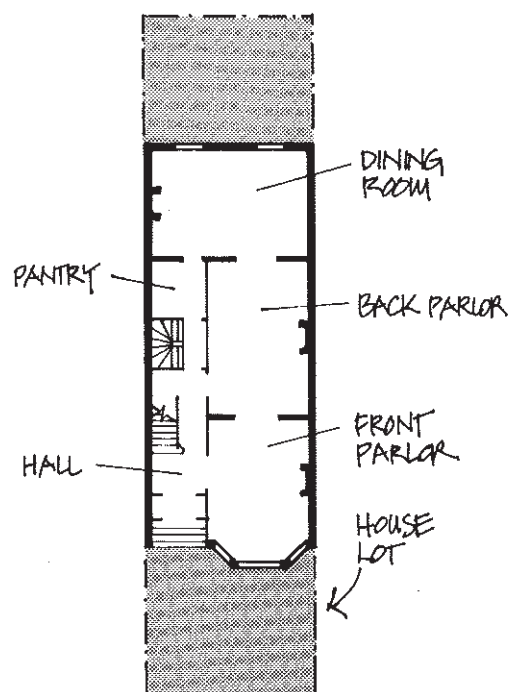
New house types for the middle class

If it were possible to envision the housing conditions for the lower middle and middle class workers and families in the Boston of this period; (the 1918 North End population was 125,000 per square mile!); their demand for and subsequent spurring of the development of vast numbers of homes in the suburbs can be more readily appreciated.

Most workers lived in crowded tenements. The best of city living — the town house, which itself could not compare in land, size and light to a comparable suburbs house — was beyond their means. (When the South End was abandoned by the upperclass as "unfashionable" in the 1870's, it was quickly developed into rooming houses in order to be affordable to the working class.)

fig. 47

Typical floor plan of a Back Bay Boston town house. Only the relatively wealthy could afford these houses in 17th c. Boston. Note that light enters from only two sides.



Single family

The first house type for these new residents was not new at all — the traditional gable-fronted simple rectangular house with brackets and bay or porch which is often called a "worker's cottage". The single family house was the most sought-after house type (as it is today), and remained popular during, and was easily adapted to, the changing architectural styles of the second half of the 19th century. A single major change did occur, however, in the 1890's when continued increases in the quantity of land per house (lot size) and a return to Colonial (Revival) styles brought about a change

fig. 48

Until the Greek Revival style most Medford houses were rectangular with the entrance on the long side. During the 1890's the square shape became popular for most new houses.



of house shape from the long rectangular plan to the square shape.

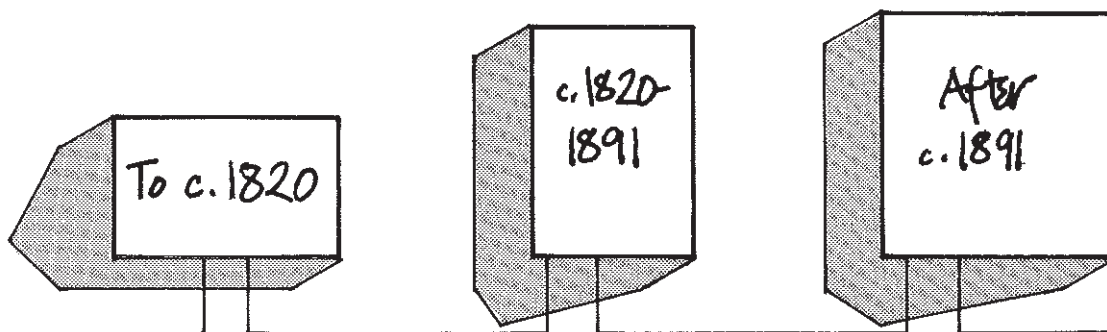


fig. 49

A new type of square frame house was developed in 1891 in the Boston area by the philanthropist Robert Treat Paine. Working through a division of his bank, the Workingmen's Business Association, Paine attempted to improve upon ordinary cheap construction. These model houses were twice as big as the little Boston row houses of the 1880's, and though they cost twice as much, by providing financing through the then-novel amortizing mortgage, he was able to bring such houses within the means of the working family. In Medford this basic house type can be found with a variety of contemporary ornamentation.

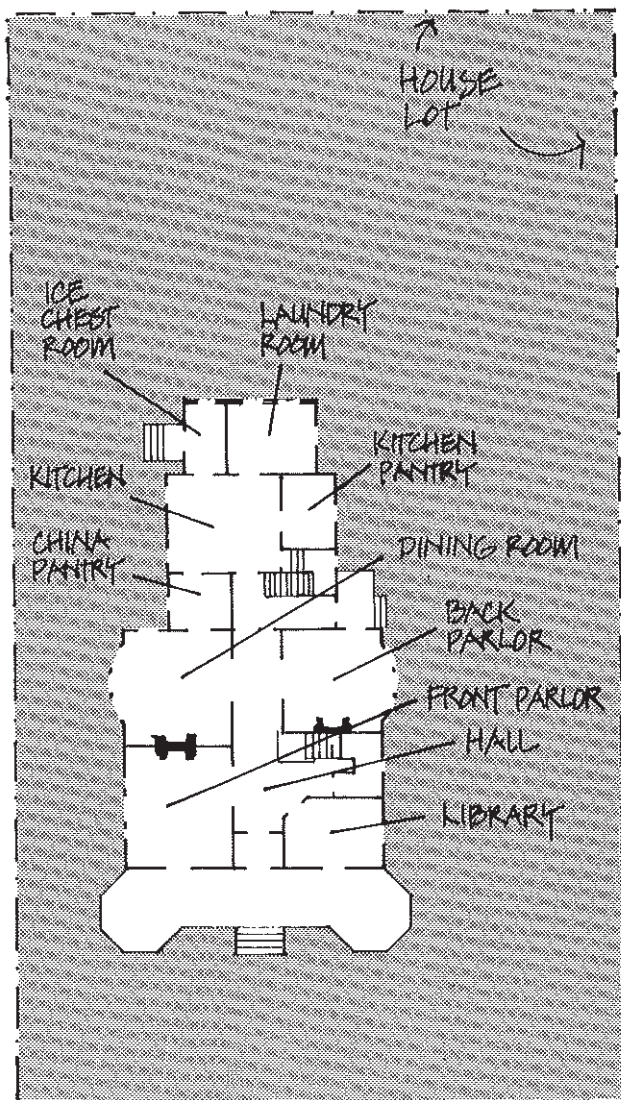


fig. 50

A moderate-price single family house of the street-car suburbs. A comparison of house and lot size of this suburbs house with the housing alternatives of the inner city (plan, page 25), illustrates dramatically the enormous appeal of suburbs living for so many families in the 1800's.



fig. 51

The most economical type of house available in the suburbs. These houses near the Fellsway were built in the square-shaped plan popular after 1891.

Double side-by-side

fig. 52
A double side-by-side house on Magoun Ave.



fig. 53
The double one-over-one (or "doubledecker") house became the more popular two-family house type after c. 1880.

Double one-over-one

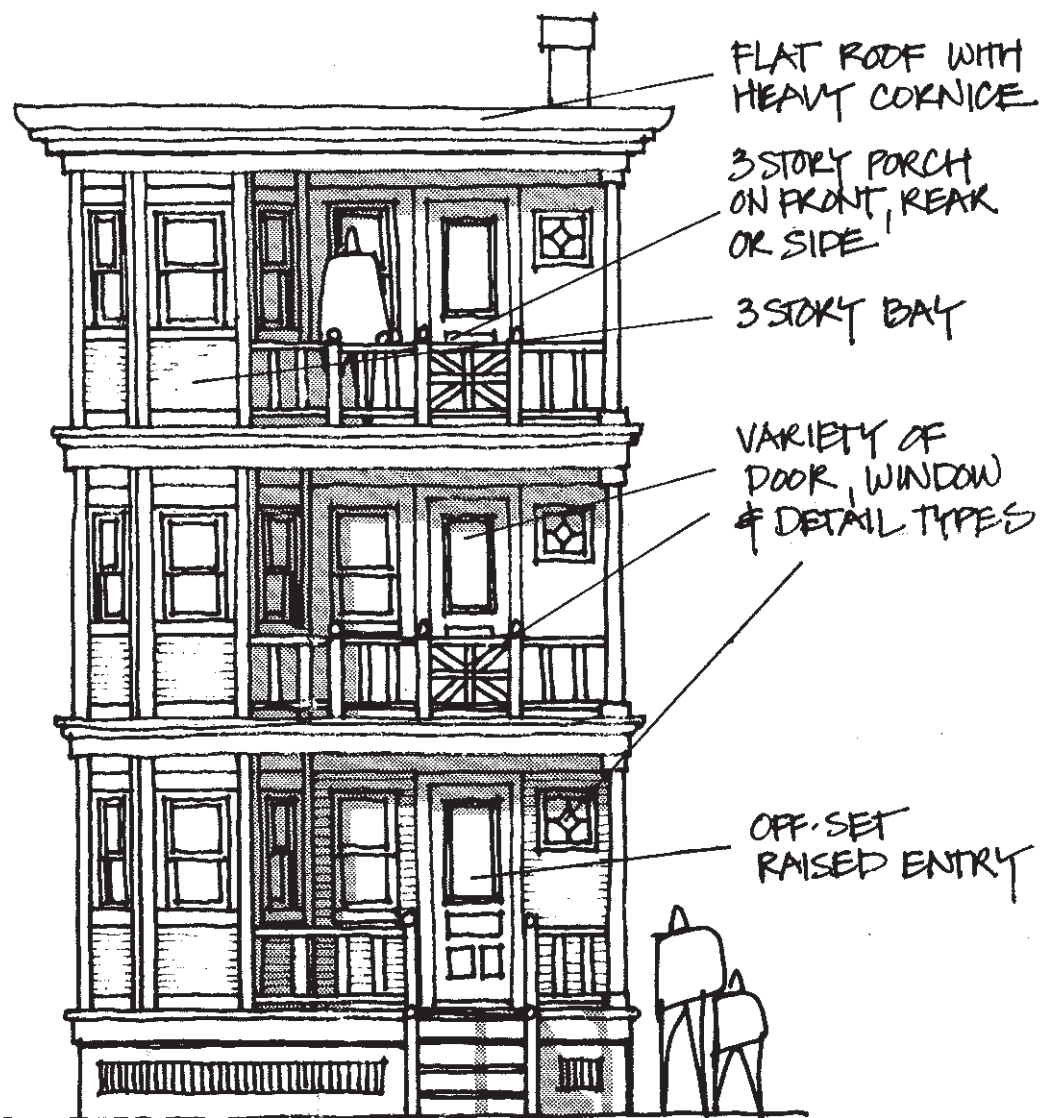
As owning a home was beyond the means of many who sought to live in the suburbs, the double house was a popular type. The double side-by-side house, which can be found as early as the Federal period (c. 1775) retained its popularity only until the 1880's when the double one-over-one house became the prevailing two-family solution, (largely for the extra light this design afforded). In addition, the one-over-one was more adaptable to the later developer grid



system. Not requiring the extra lot front width the double side-by-side necessitated, streets and lots could be laid out in a uniform manner able to accommodate either (or both) single or two family one-over-one structures.

The one-over-one housetype fulfilled an additional function. It created prosperous looking streets of what appeared to be single-family homes of a scale much grander than would be possible with more numerous but modest true single-family structures.

Today, when new single-family homes are becoming beyond the means of many families, and the only alternative seems to be highrise apartment living, we should look to this 19th century house type with fresh appreciation and perhaps ponder the 1893 observation of Edward Everett Hale on houses such as these . . . "all the . . . buildings stood with windows or doors on each of the four sides, and in most instances with trees, or perhaps little



Triple decker

lanes, between; as all people will live when the Kingdom of Heaven comes."¹

Demand for multi-family living units increased year after year, not only in Boston, but in the suburbs, and amongst all class levels. As the scale of the suburban residential streetscape was unfriendly to very tall structures, people preferred not

to climb too many stairs, and elevators were too costly for middle class housing, the triple decker (the standard one-over-one with an extra floor) became the limit in house size.

The house type enjoyed great popularity in the years 1870-1920. Though some have labeled it "Boston's weed", this is far from true. With light on all four sides and 6 or 7 generous rooms per floor, the triple decker was cited as an "ideal type of

fig. 54
The triple-decker house;
popular c. 1870-1920.

1. Douglas Shand Tucci, *Built in Boston, City and Suburb*, p. 86.

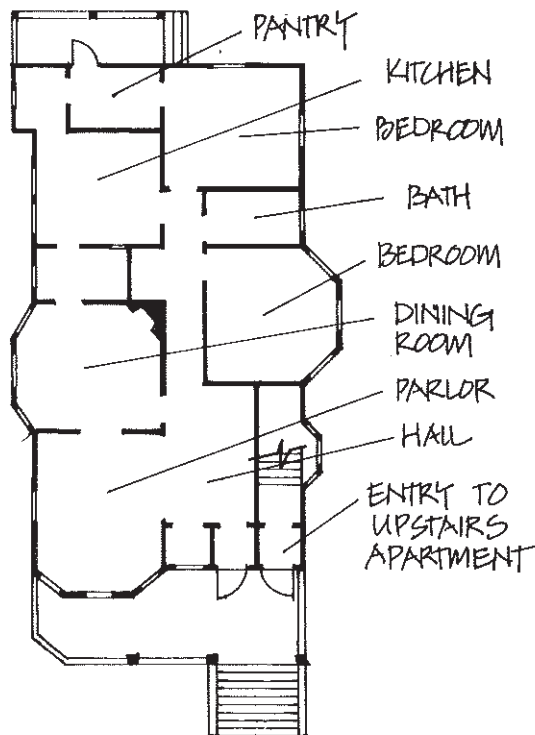


fig. 55
A typical floor plan for a double or triple decker house.

house" at an 1918 Housing Conference in Boston. The conference participants concluded that "the values which the tenant receives in his modern flat in the three-decker are so little short of luxurious it is no wonder that they are in demand. A flat which rents for from \$20 to \$25 per month includes a parlor, dining room, kitchen with set tubs, cook stove with water heater attached, two bedrooms, front and back piazza, hot air furnace, electricity and hard wood floors."²

Perhaps the triple decker has an undeserved image as a less desirable housing type due to zoning legislation outlawing them in Boston and many suburbs during the 1920's. This change in zoning appears to have been spurred by a prejudice against multiple dwellings of any kind rather than the triple decker in particular, and the many fine examples of this housing type which remain in Medford deserve to be protected.

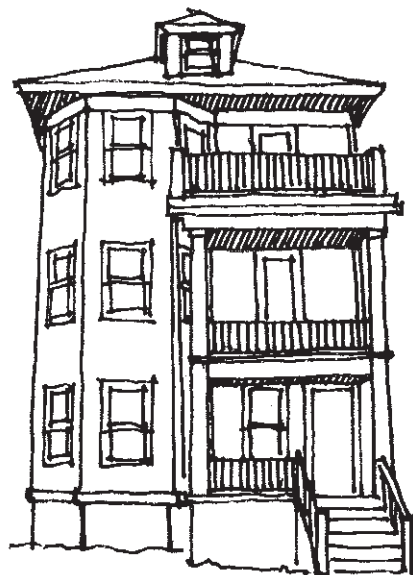


fig. 56
A hipped roof triple decker with classical details.

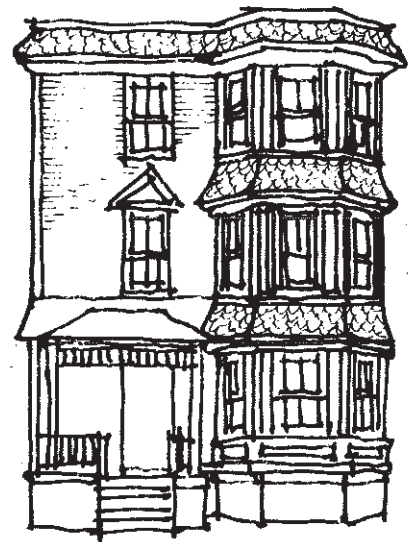


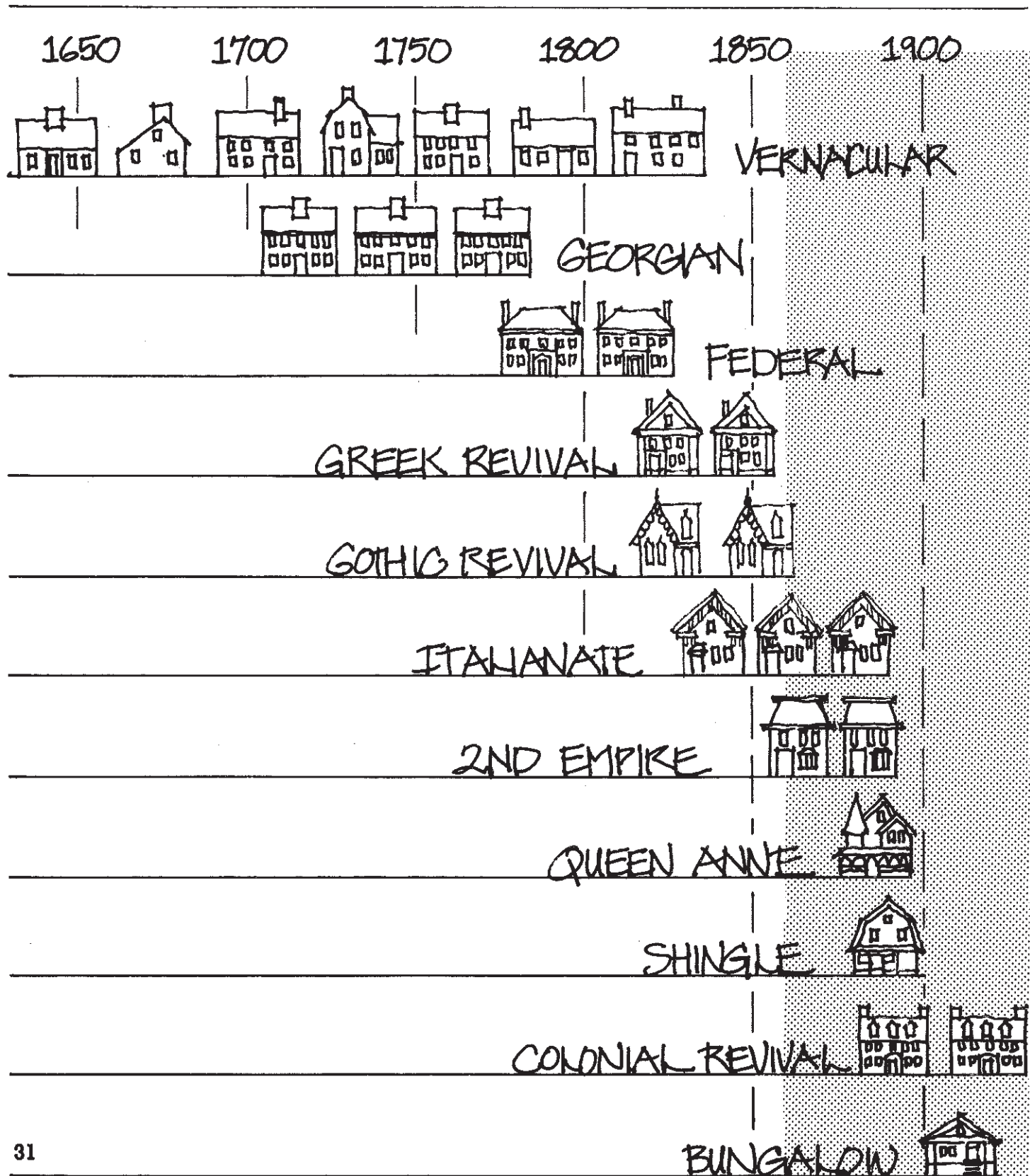
fig. 57
A triple decker with Queen Anne details.

books

For further reading on the process of growth in Boston and its suburbs c. 1800-1950:

Streetcar Suburbs by Sam R. Warner, is published by Atheneum Press, NY in paperback (\$2.95) and can be found at the Medford Library and many book stores.

Built in Boston, City and Suburbs by Douglas Shand Tucci, is a glossy hard-back 260 page book published by the New York Graphic Society, Boston, 1978. Although expensive (\$23.95), it is a worth-while investment for the serious reader on the subject.



The fashions of the suburbs

The period of suburbanization of Medford, c. 1850-1920, coincided with a great change in architectural fashion for the country as a whole. Whereas in the Georgian c. 1700-1785, Federal 1875-1830, and Greek Revival 1825-1850 periods there had been only one "fashionable" style during a given period, the second half of the century is marked by a great number of contemporaneous architectural styles from which the architect or homeowner might choose. This was a great period of "eclecticism" — of inventive borrowing and mixing of design and detail ideas from the architecture of a number of countries and periods in history.

This wealth of different styles

and details was spurred partly by the homeowner's desire to display his new wealth and prosperity in his home, but was made possible by a rapidly growing building industry in which great specialization produced skilled roof slaters, stair builders, masons and carpenters, and enabled elaborate wood and metal brackets and fences, doors and windows, bronze hardware, mantel pieces and gas fixtures, to be gotten from all over the country. The publication of books of plans for "gentlemen's estates" and "country cottages", and the increasing number of architects as well as the growing skill of builders, all combined to produce a half century of architectural creativity which has not been equaled since.

*fig. 58 (opposite)
A time line of architectural
styles.*

The 19th century Gothic Revival style (c. 1830-1860) took its inspiration from the heroic architecture of European castles and cathedrals of the 12th-16th centuries. This style was definitely inspired by Romantic notions. Literary taste had turned to the "Gothic novel" and, being bored with the familiar classicism of previous styles, the wealthy homeowner soon desired to live in a house that was different in appearance. The distinctive pointed arch and narrow tracery windows of the Gothic style provided this new image.

Books of designs in the "Gothic Mode", such as that by Andrew Jackson Downing, a pacesetter of the style, popularized this house type. High style examples of the Gothic Revival, such as the Angier House



(1842), Page cottage (1846, 43 Powder House Rd.), and Peter C. Brooks III cottage (1860, 3 Apache Trail) are quite rare; Medford is fortunate to have such fine examples. More frequently the Gothic style will be expressed by the simple addition of a pointed gable peak and/or bargeboards on an otherwise Greek Re-



*fig. 59 (above)
A high style Gothic
"cottage".*

*fig. 60
A detail of the John B.
Angier House.*

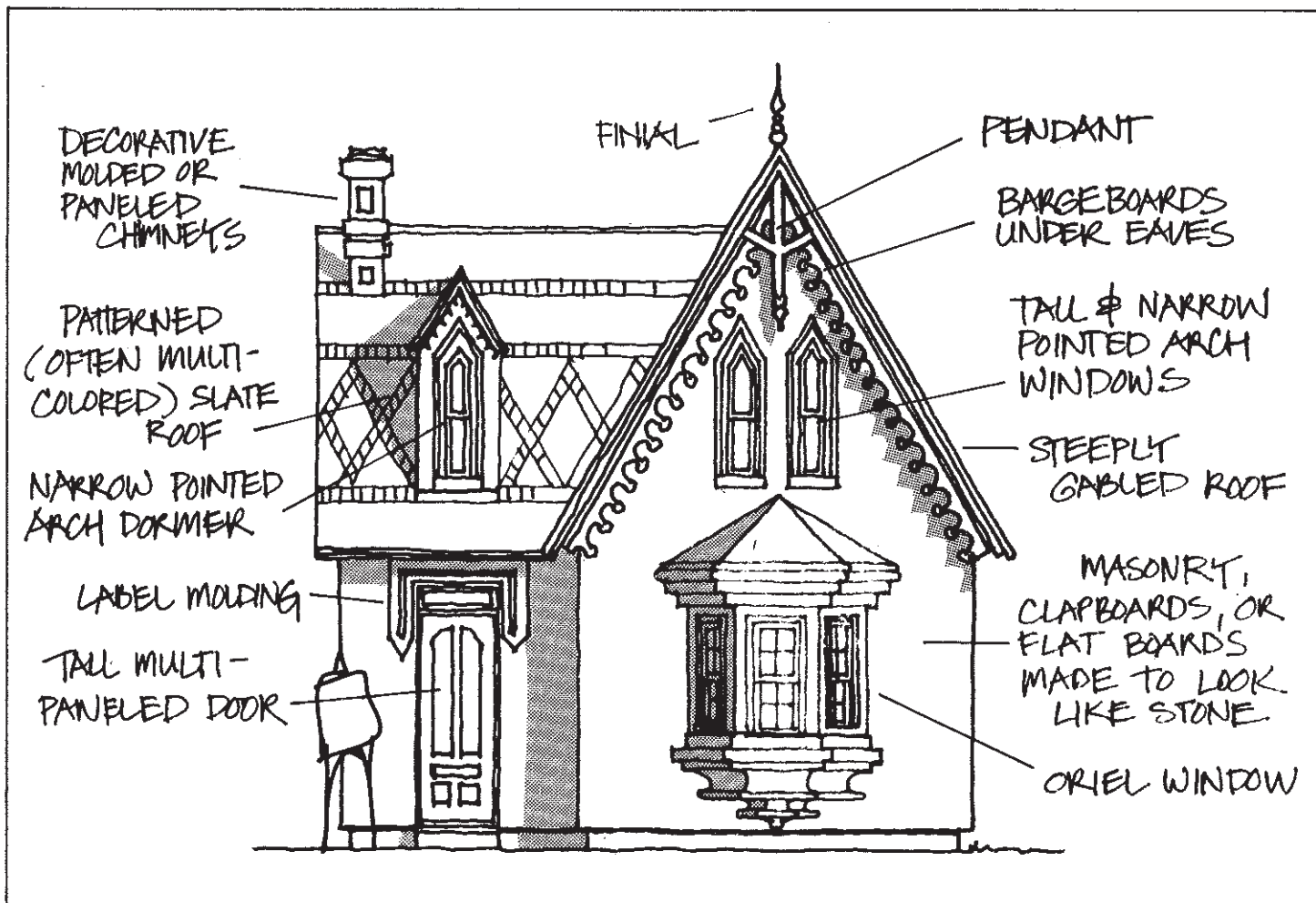


fig. 61.
A high style Gothic Revival house, or "cottage" as they were often called. These houses were often stone or brick.

vival or Italianate house. Remember, builders were inventive during this period, and felt free to mix a number of stylistic features on the same building!

characteristics

- | | |
|----------------|---|
| doorway | Often double doors with a pointed or low tudor arch above. |
| windows | Tall and narrow, often with a pointed arch. Window tracery (the lacelike subdivision of the window into small panes) is an immediate clue to the style. |

roofline

Very steep gables decorated by lacy carved wood boards under the eaves known as "bargeboards". Metal pointed finials and spikes at top of eave, and wooden carved hanging pendants below, are often seen.

materials

Of stone, flat wood boards made to look like stone, clapboards or stucco.

trim

The steep arch, whether on roofs, windows or decorative trim elements, is a hallmark of this style.



fig. 62
The Gothic Revival Style as it is more often seen. It can be called Gothic solely by virtue of its steep pointed entry gable.

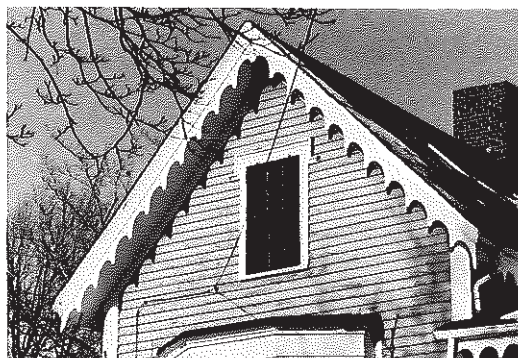


fig. 63
The Peter C. Brooks III cottage, 3 Apache Trail (1860).

fig. 64
A carved wooden vergeboard (also called "bargeboard") is a common Gothic detail.



fig. 65
A handsome Gothic Revival house on Jerome St. in West Medford.

fig. 66
Mid 1800's illustration of the popular Gothic Revival style.

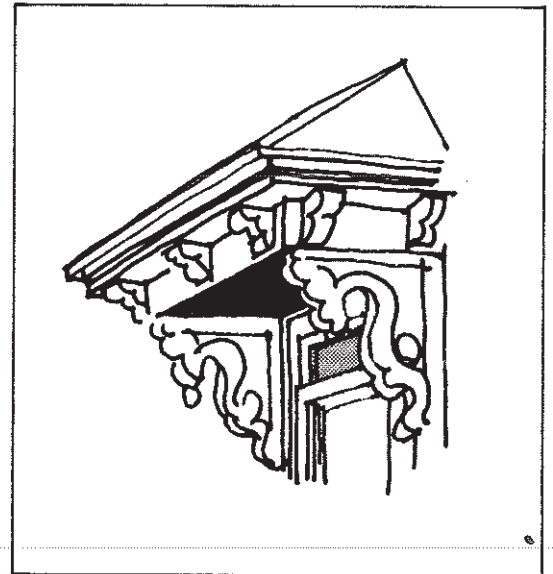
Italianate



fig. 67
The Italianate Style, popular c. 1865-1890.

fig. 68
The small brackets under the cornice are called "modillions"; the massive brackets supporting the door hood are called "consoles". This entry hood might be found on Italianate or 2nd Empire houses.

"Italianate" is a broad term for a romantic style that was inspired by Italian Renaissance country villas. Buildings of this type are easily identified by heavy wooden brackets or pendants set under wide cornices and under door and window hoods. As the popularity of the Italianate style increased, brackets were added to Georgian, Federal and Greek Revival houses in an attempt to "modernize" them. Many homes in the Italianate style can be found scattered throughout Medford. One fine example is the Prince House, 9 Bower Street; others can be found in the Oakland Street/Chestnut Street area.



characteristics

doorway	Heavy molded doors, often double. Heavy wooden bracketing and hood over door.
windows	Tall and narrow, 2/2 windows.
roofline	Roofs of the low hip variety, (with a gentle slope), or gable.
materials	Executed in wood and covered with clapboards, or brick and stuccoed. Interest in strong contrasting color combinations such as yellow-green base with dark green trim.
trim	Style identified by use of heavy wooden brackets in a variety of forms and shapes. Extensive use of towers, cupolas and bay windows.



fig. 69 (above)
A particularly fine example of an Italianate house; on Jerome St.

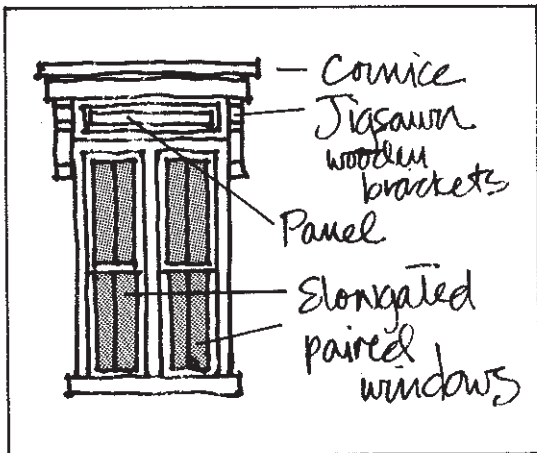


fig. 70 (left)
Elongated paired windows are common on Italianate houses.

fig. 71
Notice the characteristic brackets and bracketed entry hood of this Italianate house on Myrtle St.

fig. 72

The commonly-seen gable-fronted Italianate house. This handsome house type was also called a "worker's cottage"; a handsome group of these houses can be found on Myrtle St.

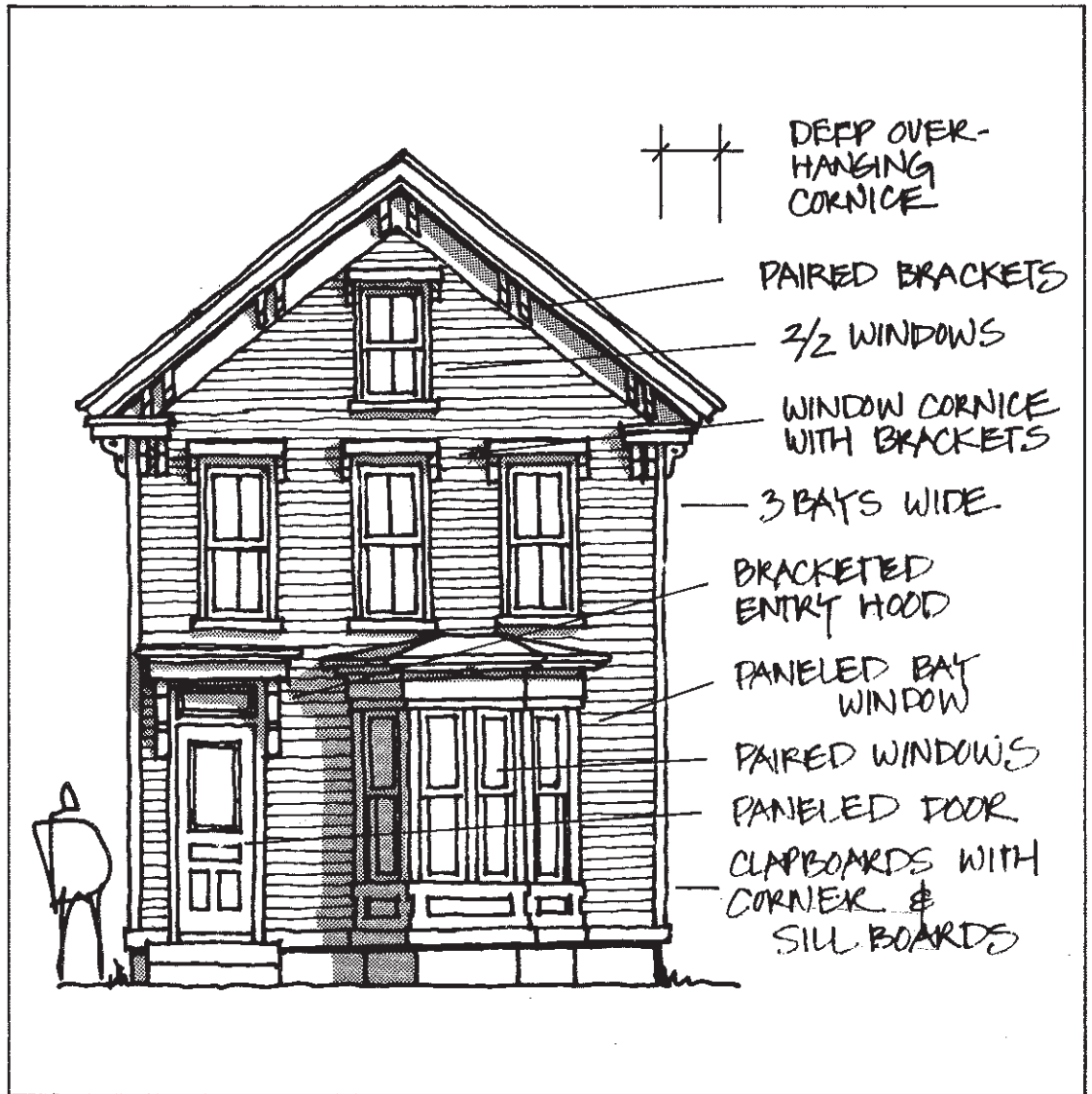


fig. 73

A popular Italianate and 2nd Empire window type.

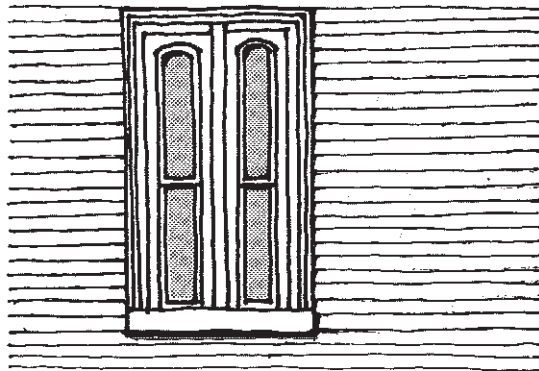


fig. 74

Myrtle Street.



Second Empire

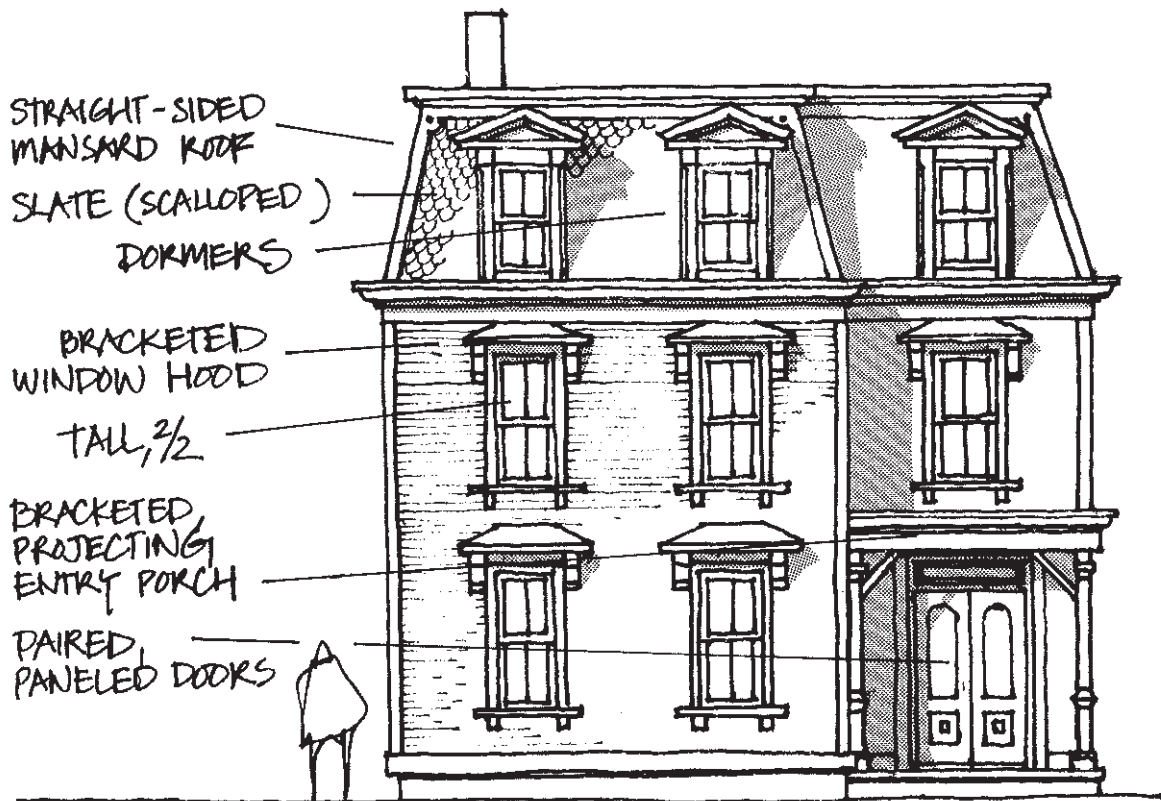
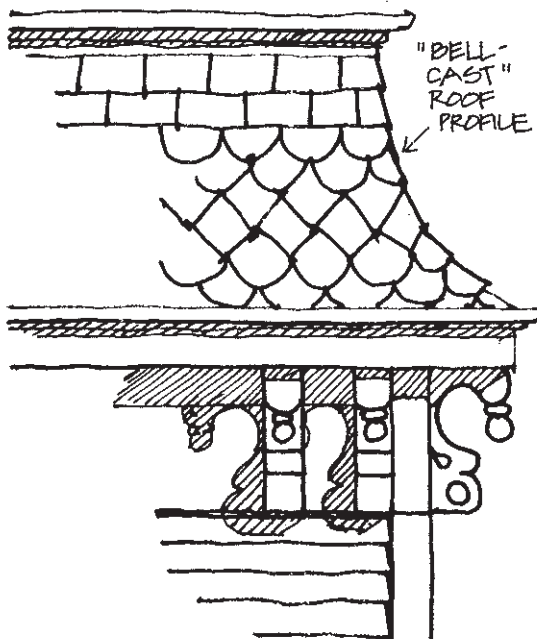


fig. 75
A high style Second Empire Style house.



The Second Empire style (c. 1860-1880) originated in France during the reign of Napoleon III (1852-1870) and took its name from the distinctive roofline popular at that time. This double-pitched roof, referred to as a "mansard" roof, gives to the building a somewhat top-heavy appearance. Mansard roofs generally rise a full story high, and many were originally covered with slate tiles laid in patterns. Dormer windows of various shapes, capped with heavy pediments, project from the straight or curved ("bellcast") sides of the mansard roof.

fig. 76
Slates cut in a variety of shapes were often combined to create an interesting pattern and texture on the mansard roof of 2nd Empire houses.

fig. 77

In the 19th C., (seldom before), low shrubbery and planting around the foundations of houses became fashionable.



characteristics

doorway	Central doorway no longer a dominant feature.
windows	Slender and elongated. Dormer windows of great variety projected from the roof.
roofline	Distinctive mansard roof. Sides of roof often laid with slates of various colors, or tin plates.
materials	Executed in both wood and brick.

trim

Ornate molding, especially around windows. Brackets borrowed from the Italianate style used under roof cornice and door hood. Spacious porches and bay windows common. Ironwork often used in balustraded fashion to crown lower roof.

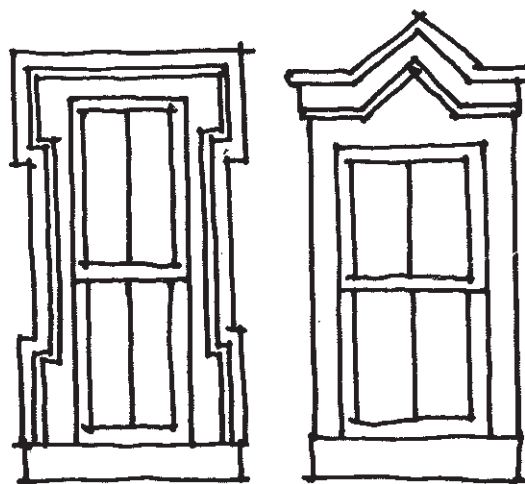
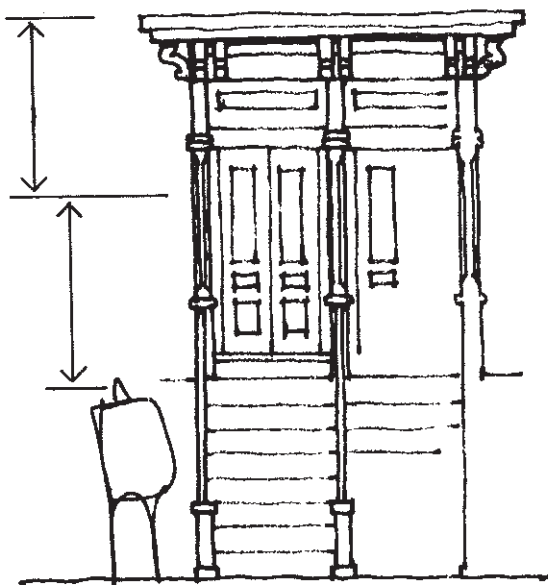


fig. 78

Italianate and 2nd Empire buildings not only had very tall and elongated doors, but often had very high foundations which gave the houses an elegant and impressive appearance.

fig. 79

Two inventive 19th C. window types. Numerous catalogues offered wood, stone and metal window and door trim for sale to carpenter builders — an early example of "pre-fab" housing components.

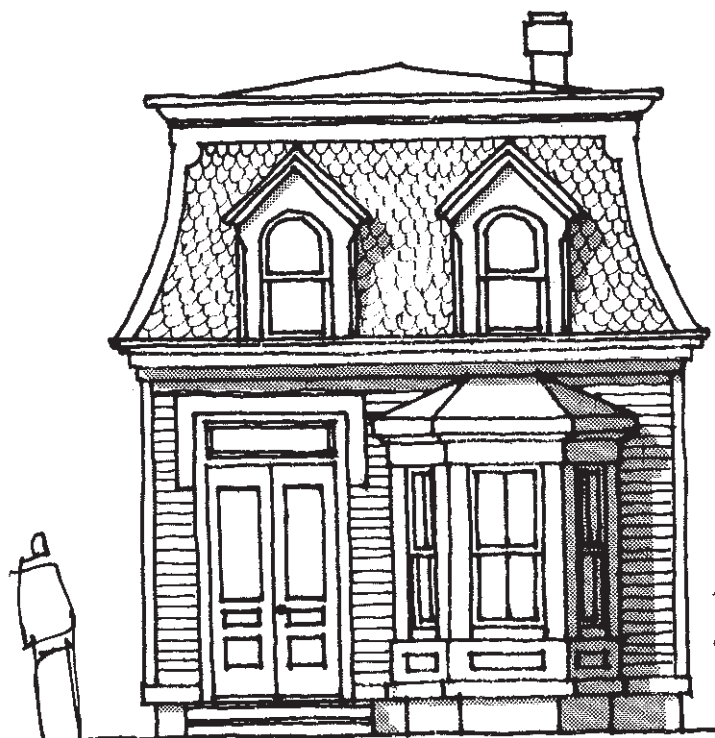


fig. 80

The style as interpreted for a mid-price single.

Queen Anne

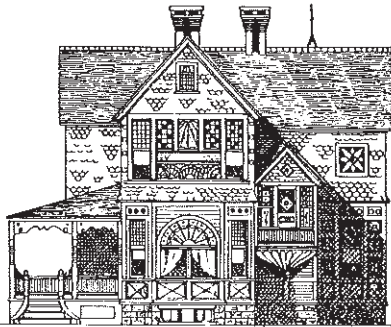


fig. 81
*The Queen Anne Style,
from an illustration of the
period.*

fig. 82
*Queen Anne houses in the
Hillside Historic District.*



The Queen Anne, c. 1875-1890, was perhaps the most consciously "Picturesque" and "Romantic" style of the 19th Century. Although loosely based upon a revival of late Medieval English architecture, it was not a revival in the true sense, but a wholly American invention of irregular medieval shapes with "misused" Renaissance decoration which exhibited a never-before-seen exuberance of surface texture, towers, turrets, bays, and inventive variety of new window types. It is in this style that the skill of the 19th Century builders is shown at its height.

Characteristic features include a strongly asymmetrical building mass with multi-gabled roofs, high decorative chimneys, and a rich mixture of construction materials: wood, brick, stucco, stone and decorative cut shingles.

examples

Groups of Queen Anne houses can be found in the Hillside/Grandview Ave. area; the Summit/Terrace/Crest Road area; and along Oakland Avenue.

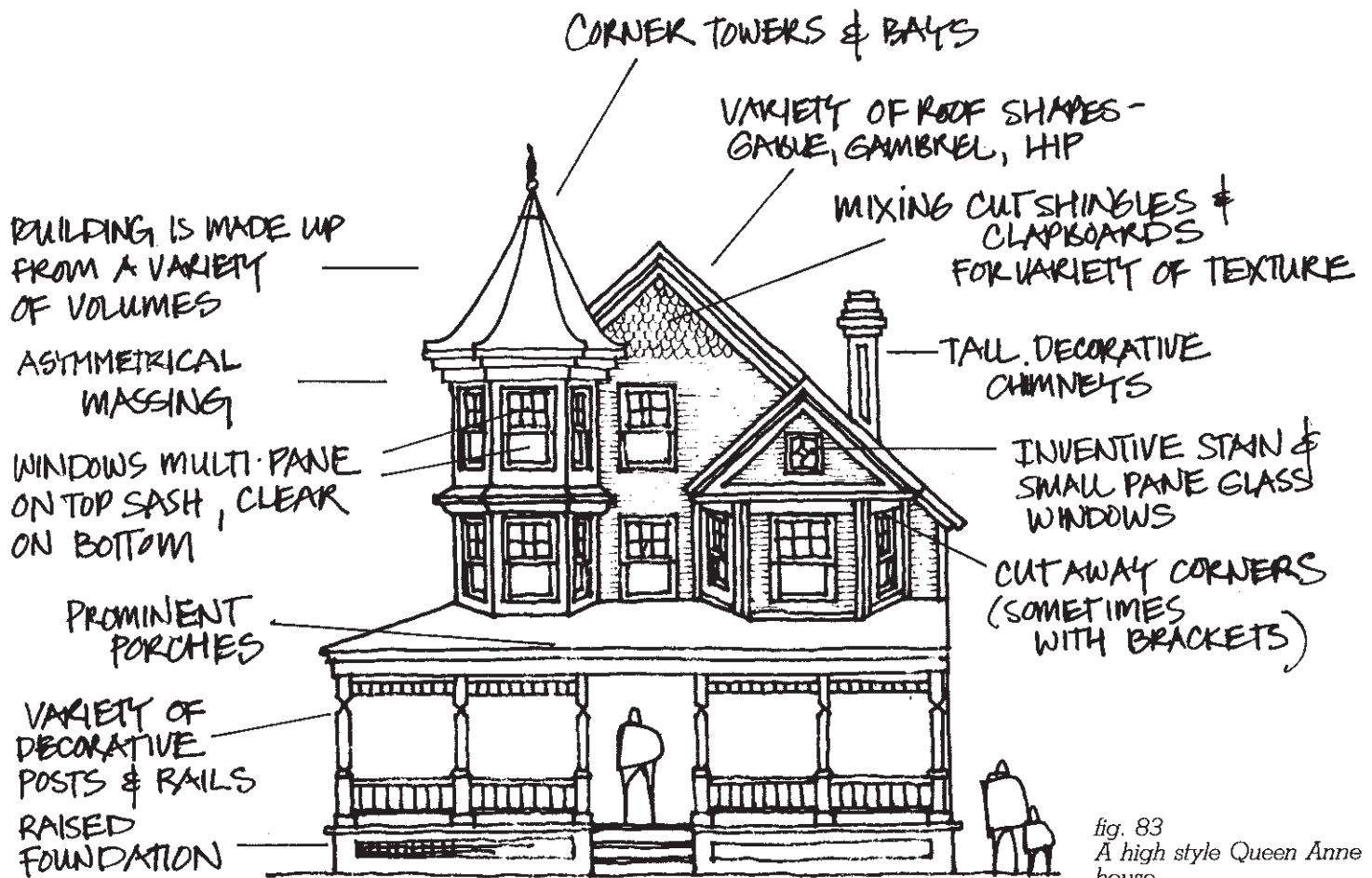
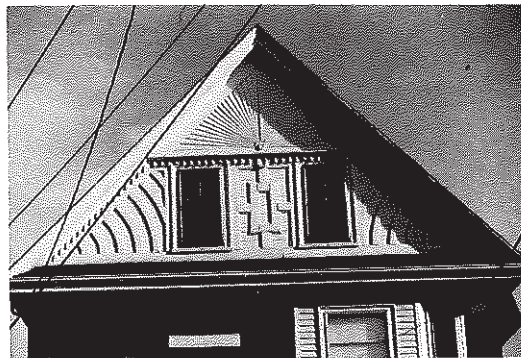
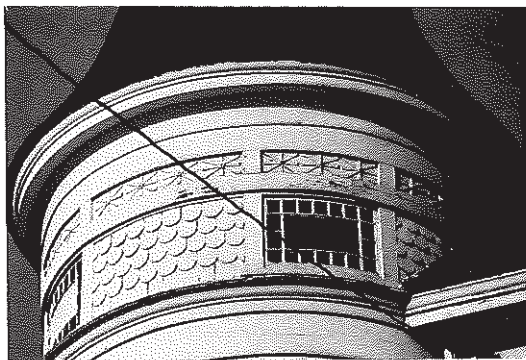


fig. 83
A high style Queen Anne house.



figs. 84, 85
Elaborate wood carving, decorative cut shingles, and the "sunburst" decorative motif are characteristic of the Queen Anne Style.



fig. 90

The sunburst and sunflower were favorite motifs for Queen Anne houses, and can be seen in the design of brackets and carved wooden panels.

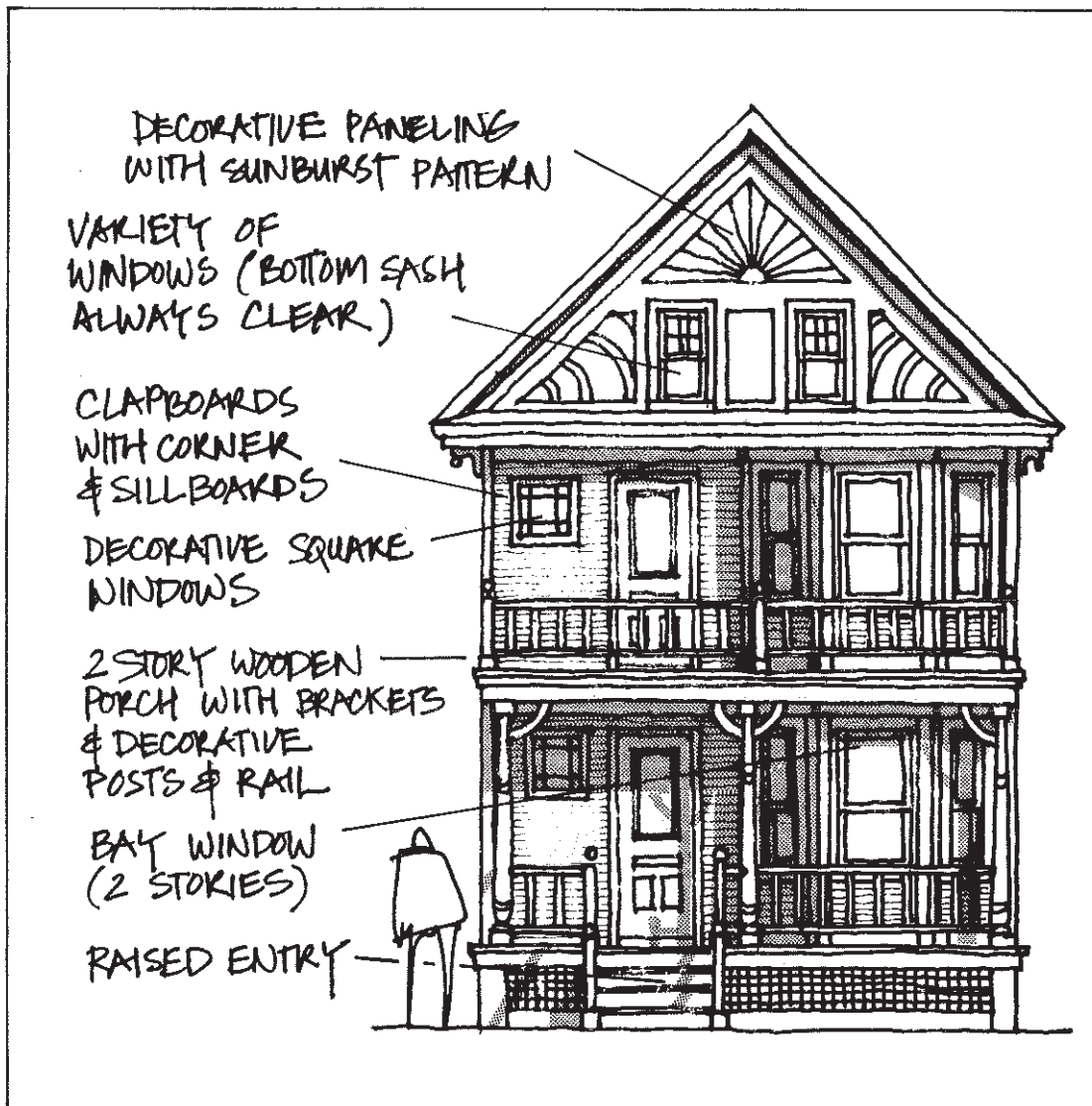


fig. 91

The square window, often with stained glass, was a Queen Anne feature which retained its popularity into later styles.

fig. 92

The style as often seen on the double one-over-one (or "double decker") house.

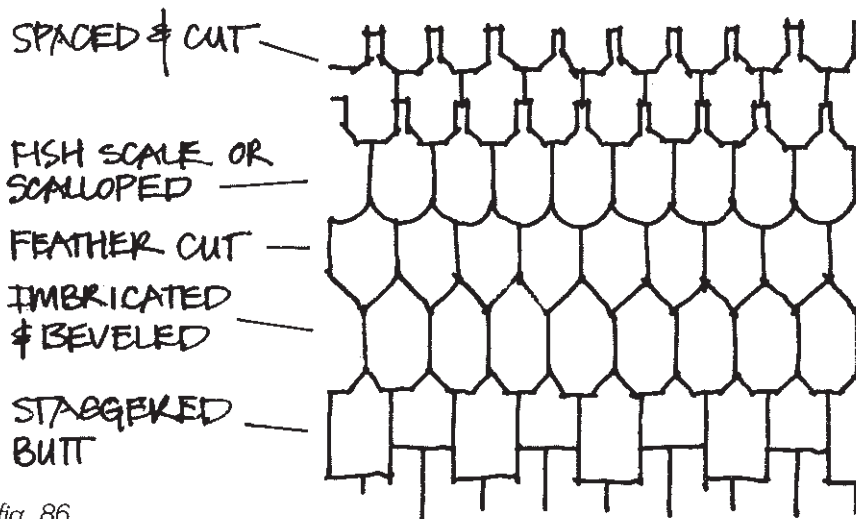


fig. 86

19th Century decorative cut shingles.

fig. 87

Windows with multipanes above and clear sash below are an almost certain clue of the Queen Anne style.

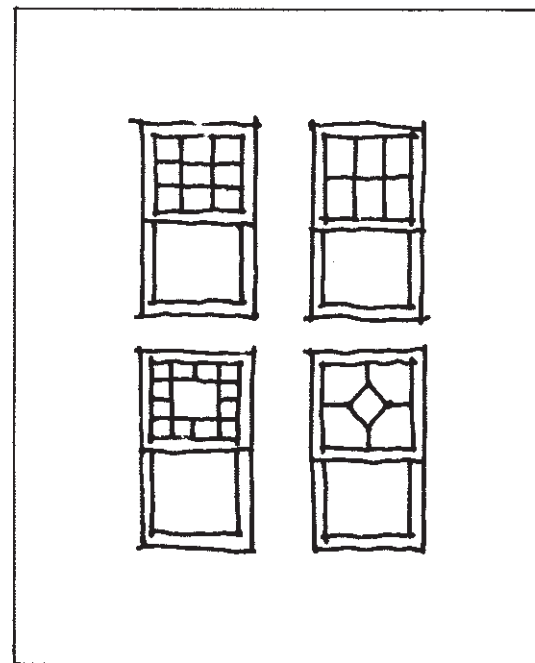


fig. 88

A handsome Queen Anne house on North St. The wide porch, tower and irregular massing are hallmarks of this style.

fig. 89

A Park St. Queen Anne Style house.



characteristics

- doorway** Asymmetrical placement. Multi-paneled doors, upper portion often glass.
- windows** Square shaped multi-paned (often stained glass) window common. Double hung windows with multi-panes in top sash, clear glass below.
- roofline** Irregular multiple gables, towers and projecting bays. Half-timbering sometimes seen.
- materials** Rich mixture of materials, textures and colors in horizontal bands along the building surface.
- trim** Extensive use of brackets, towers, colored glass. Porches with highly original sawn and turned wood posts and balusters. The sunflower and sunburst motifs were a favorite decorative pattern.

Shingle

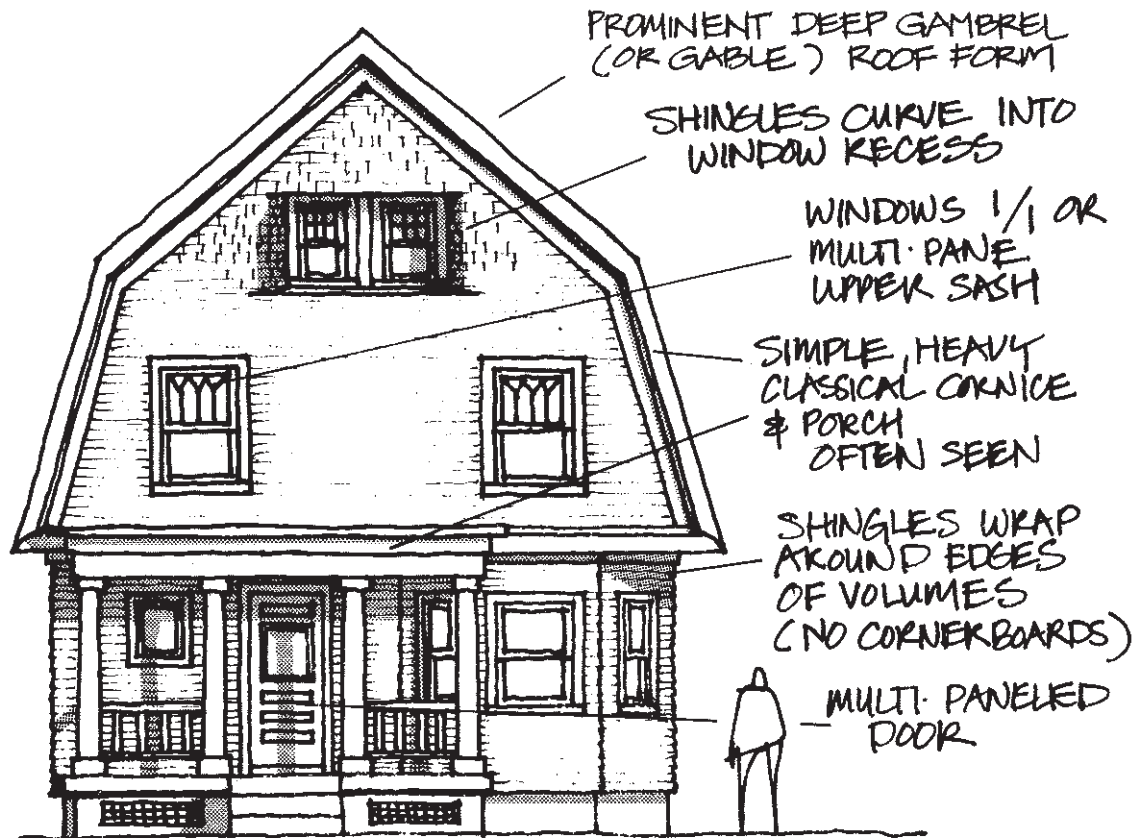


fig. 93
Shingle Style house.

It can be argued that the Shingle Style (c. 1880-1900) is not really a new style at all, but a mature and more restrained form of the Queen Anne. Indeed, many Medford homes combine characteristics from both styles.

The volumetric massing of Shingle houses is less complicated than the Queen Anne, and its attitude towards decorative textures and detail is entirely different. Gone are the rich mixture of surface textures, and in its stead a "skin" of shingles wrapping around the bold, (often "bulging" or "sunken in"), volumes of the building. On full-blown examples of the style even the structure is hidden. (Note how porch supports are wrapped in a fish-scale-

like mantle of cedar rectangles.)

More simple, massive, deep roof shapes tend to predominate and the gambrel roof shape is a favorite of this style.

example

The Charles Green House, 17 Green Road, c. 1890, is a fine example. It is interesting to note that a 1890's local directory lists this as the *summer* residence of Charles Green, a Boston doctor.

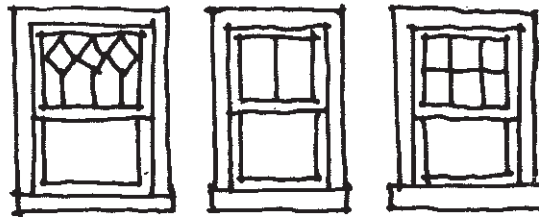


fig. 94
The gambrel roof shape was a favorite of this style.

fig. 95
A Shingle Style house on Warren St. (Notice the Italianate house beyond.)

fig. 96
Windows on shingle houses are similar to Queen Anne, but often of shorter and more squat proportions.

fig. 97
A "skin" of shingles, and elements which appear to be swallowed into or bulging out from the main volume of the building, are characteristics of the Shingle style.

characteristics

doorway	Not a prominent feature; usually hidden under a porch or tucked beneath the roof volume itself.
windows	Like Queen Anne, though often wider. 1/1 windows also seen.
roofline	Deep, bold sweeping roofs, often gambrel shaped.
materials	A skin of cedar shingles; absence of cornerboards. Shingles often left "weathered."
trim	Relative absence of trim, or trim features (posts, balustrades, cornices) in a heavy restrained classical mode.

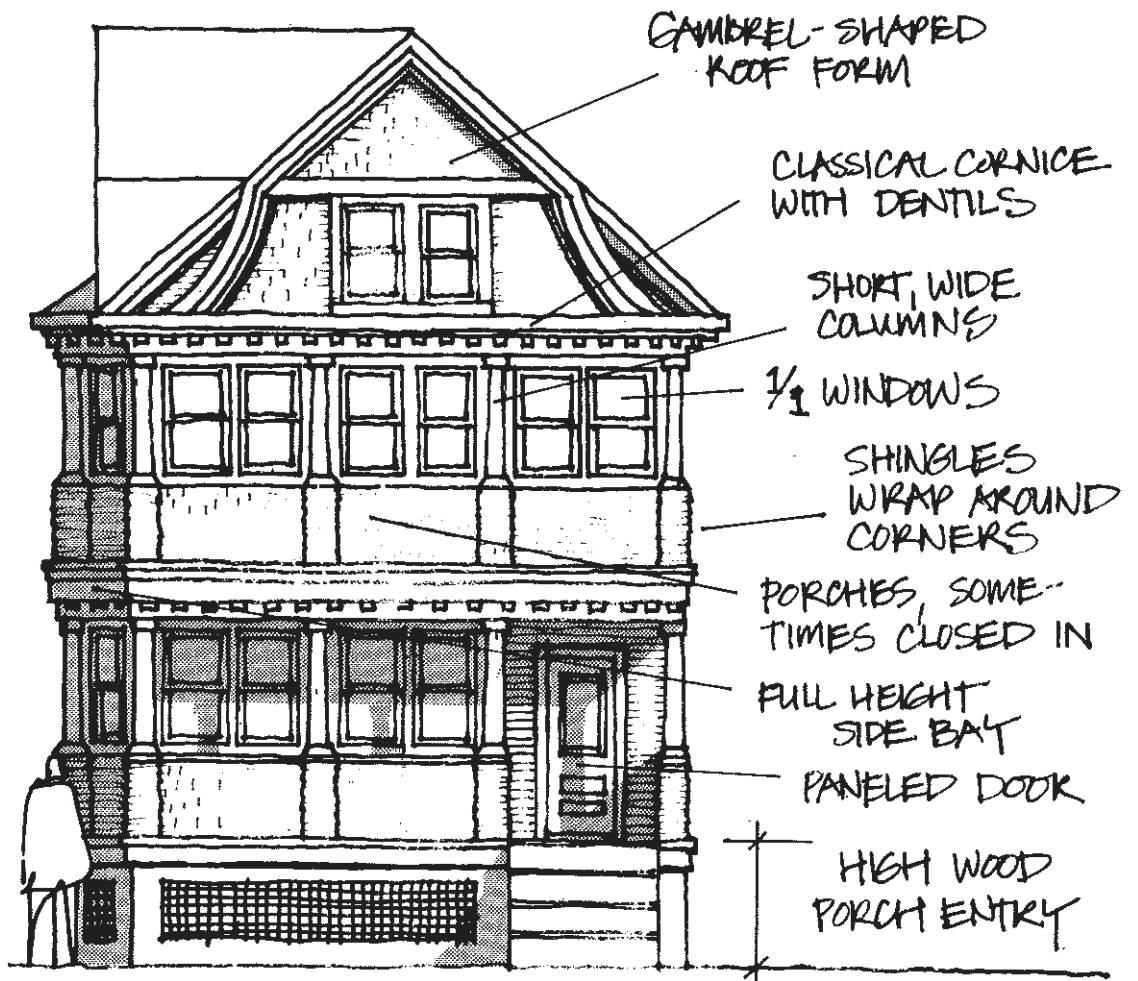


fig. 98

A skin of shingles wrapping around the building (no cornerboards), and the relative absence of detail, are enough clues to distinguish the Shingle style house.

The 1876 American Centennial revived an interest in the early architecture of New England, and inspired a return to the more restrained classicism of the Georgian and Federal periods — perhaps in reaction to the picturesque “excesses” of the prior period of Queen Anne building.

Although inspired by earlier styles, houses of this later revival were substantially larger, more grand, and ornate than their prede-

cessors. Quoins, dormers, shutters and Palladian windows were in fact quite rare on the houses of 1700-1820 and were found on only the most high style homes of the very wealthy. In the Colonial Revival these are common design features, as are elaborate porticoes and pedimented windows and dormers.

Colonial Revival

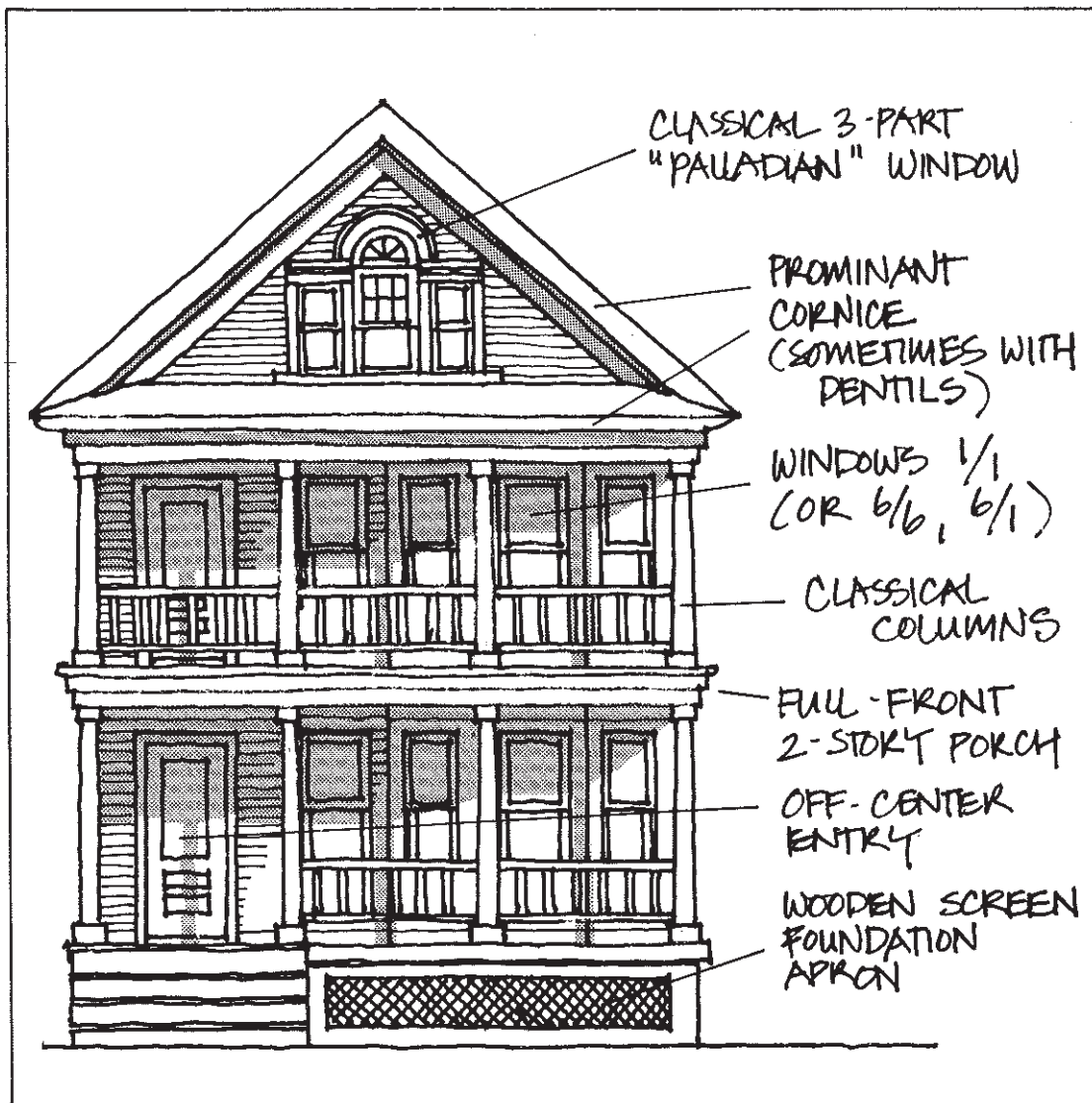


fig. 99
A Colonial Revival Style
double-decker.

Although the first years of this return to the classicism of early American building took its inspiration primarily from the high style homes of the Georgian period (and is in fact often called "Georgian Revival"), it can be argued that a predilection for the Colonial Revival style persists even today — as the many "Garrison Colonials", "Capes" and "Center-Entry Colonials" going up in the new suburbs circling Route 128 would indicate.

Although it is not possible within the scope of this guide book to cover all the house styles in Medford until the present, the reader who familiarizes him/herself with the characteristics of the various early New England house types will soon be able to see them as source of inspiration for the many houses built in Medford during the 20th century.

fig. 100
*The James W. Tufts House,
72 Luther Rd.*

fig. 101
*A Georgian Revival one-
over-one.*



examples

The Harry Brooks House of 1895, 34 Grove Street (now the Emery Nursing Home), and the James W. Tufts House of 1898, 72 Powder House Road, designed by the firm of Burr & Sise, are both high style examples of the Colonial Revival.



Bungalow

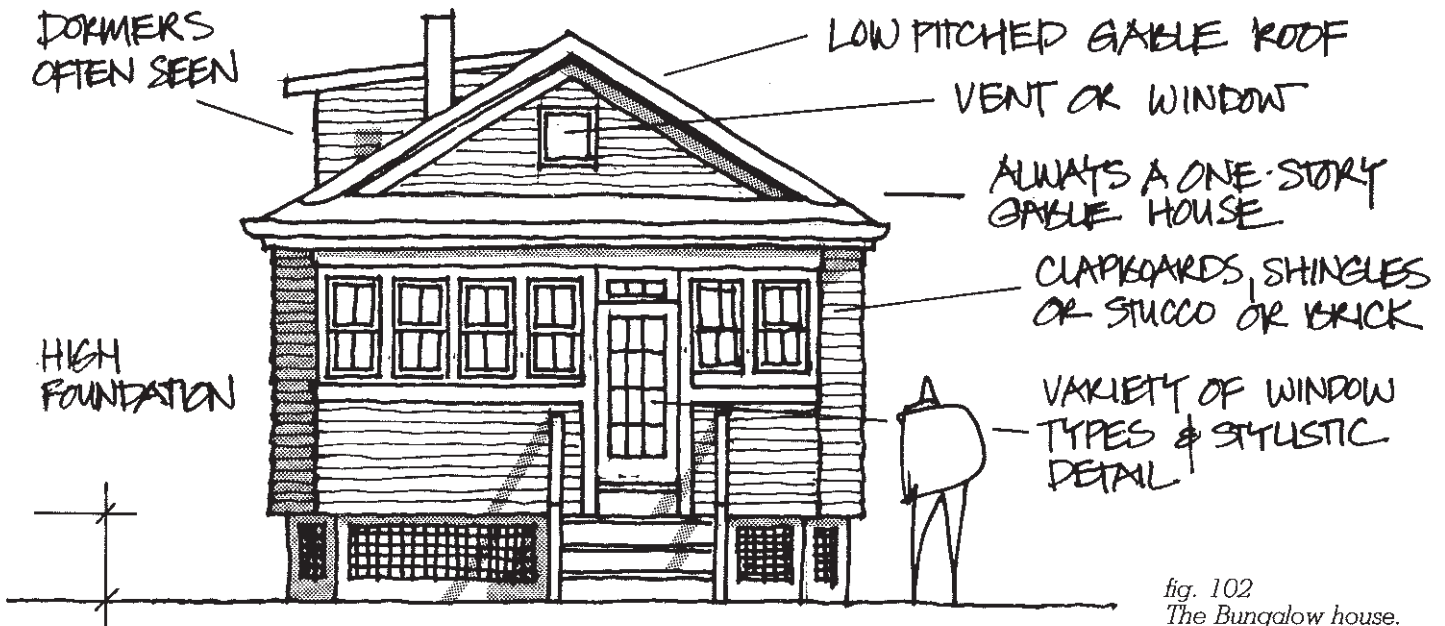


fig. 102
The Bungalow house.

The true Bungalow is a small one story house with a distinctive very low wide pitch to the roof. Although the space under the eaves may be made usable by a dormer or windows in the gable, a full second story would disqualify the building as a bungalow as the style was understood by builders and owners of this type of dwelling. However, the adjective "bungalowoid" is applicable to a type of two or three story house "built along bungalow lines", which have very low pitched roofs (often hipped) with deep projecting eaves with exposed roof rafters extending out to the roof edge.

This style was popular from c. 1900-1920, when sets of working drawings for bungalows could be bought for as little as five dollars.

BUNGALOWS

DIRECT FROM
BUNGALOW LAND
Perfect Gems of Home Comfort and Attractiveness

My designs have been selected from the very best types of bungalows in Southern California, which have become so popular throughout America. They are practical in every part of the country. Special specifications are prepared by an expert familiar with all the details of eastern and northern localities.

Now is the time to build, as lumber and labor are 30 per cent cheaper than it was six months ago.

If You are Interested in Home Building—

Take Advantage of My Special Offer



Design No. 18 North of Stockton Route, Calif. Cost \$2,200

I will send my book containing exterior and interior views of typical one and a half and two-story California residences—also 24 California Bungalows—prepared in one package for one dollar—post office or express money order. These houses range in price from \$1,500 to \$10,000 and are the very best examples of Southern California Architecture.

To all who order plans this dollar will be refunded.

My experience of over ten years in the East enables me to prepare specifications and make structural details suitable for building these houses in cold as well as in warm climates.

My terms, for making plans, etc., are stamped on the back of each photograph.

These designs are entirely different from anything that has been published along these lines.

F. G. BROWN, Architect

621-S Security Bldg. LOS ANGELES, CAL.

fig. 103
Contemporaneous advertisement for mail-away Bungalow house plans.

fig. 104
One of a number of bungalows in the Park Street area of Medford.



books

American Architecture Since 1780—A Guide to the Styles by Marcus Whiffin, 1969, MIT Press, (\$15.00), is perhaps the best "dictionary" reference to the styles and is profusely illustrated with photos. This is a "must" book for the professional or serious old-house amateur.

The Architecture of Choice: Ecclecticism in America 1880-1930 by Walter C. Kidney is published by George Braziller, N.Y. (1974). This paperback (\$5.95) is available at many book stores.

American Building Art: The 19th Century by Carl W. Condit, published by Oxford University Press, N.Y. (1960).

American Victorian Architecture: A Survey of the '70's and '80's in Contemporary Photographs, edited by Arnold Lewis and Keith Morgan is a Dover Publications paperback (1975).

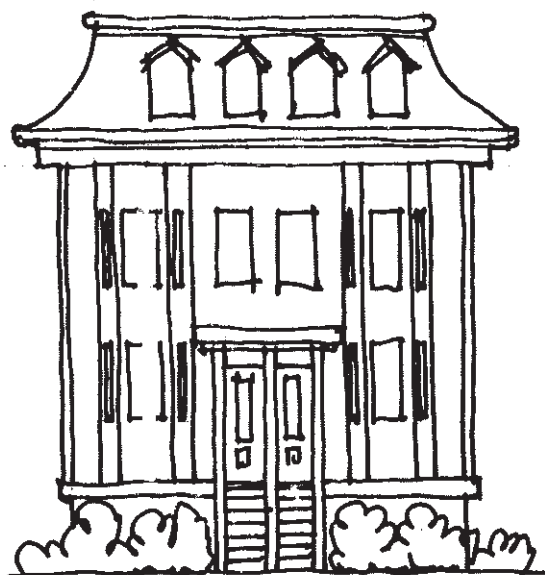
The Shingle Style and the Stick Style, by Vincent Scully is an \$8.95 paperback available at most book stores (published by Yale University Press, New Haven, 1971).

Dwelling House Construction by Albert G.H. Dietz is a thorough account of all aspects of house building, and very helpful as background reading before beginning rehabilitation work. MIT Press (1971), paperback.

Readers' Digest Complete Do-It-Yourself Manual published by the Readers' Digest Association, Inc., Pleasantville, N.Y. (1973), hardback, \$17.95.

Remodelling Old Houses Without Destroying Their Character by George Stephen, Alfred A. Knopf, New York (1977), paperback, \$3.95.

II. RENOVATING YOUR HOUSE



Renovating an older house can be (and usually is) a time and money-consuming undertaking. Don't rush into it! Take your time getting to know your house and preparing a strategy and schedule for repairs which you know you can live with comfortably.

Here are some suggestions on where to begin and what to consider:

1. Careful Research.

Gather as much information as you can about your house *before* you start work. Try to determine exactly when it was built, what style it is, and when additions were made. Old buildings invariably have been added to and remodeled over time.

The first source to consider is the *Inventory of Historical and Architectural Assets of Medford, Massachusetts*, available in the reference section of the Medford Public Library. Seventy-eight extant historic or architecturally noteworthy properties are listed in this inventory, each with a brief history and discussion of style. The library also has a number of ex-

cellent books on New England Architecture.

If you are looking for old photographs of your home, the Medford Historical Society and the Medford Public Library maintain extensive photo files. Members of the Medford Historical Commission and the staff of the Office of Community Development may also have helpful advice and information.

2. Plan Ahead.

Develop a realistic work schedule before you begin. It might be necessary to consult a professional. Do not be hasty. Getting the right information often takes time, but will help avoid costly complications in the future.

3. Keep Original Materials.

When renovating the exterior of a house keep as many of the original materials and features as possible. Old homes were built when labor was much less expensive than it is today. Much of the ornamentation found on older buildings can no longer be reproduced economically.

Do not assume that partly deteriorated woodwork or plaster cannot be fixed. New high strength waterproof glue, for example, makes it possible to repair a rotted section of valuable woodwork. If the original elements of a house can be retained, the value of the building will be considerably higher.

4. Document Your Progress.

Photograph your home before, during and after your work. Leave a record for the future. Measured drawings of the building are the ideal place on which to note what has been removed or added.

A. Consider design

Know your house

If you are persistent and lucky (and have the time to do it), you may be able to uncover a recorded history of your house and its former owners. This isn't necessary, however, for you to know enough to make intelligent choices about how best to renovate the house to enhance its historic character. Looking carefully at your house to identify its style (refer to the earlier style section) and its special features is the first step. A familiarity with some of the terms used to identify these building features, and the elements of architectural design (proportion, scale, etc.) is also helpful. If you do the work yourself you will come across many of these terms in the homeowners' repair books you will want to consult; if you hire a contractor and/or architect to do the work, you will want to know how to speak their language.

fig. 105

The "facade" is the face of the house or building, and includes projecting features such as porches, cornices, steps, etc.

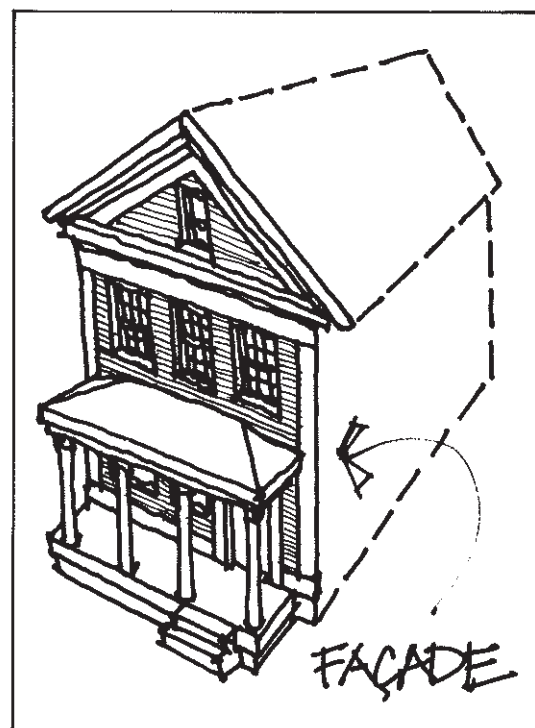
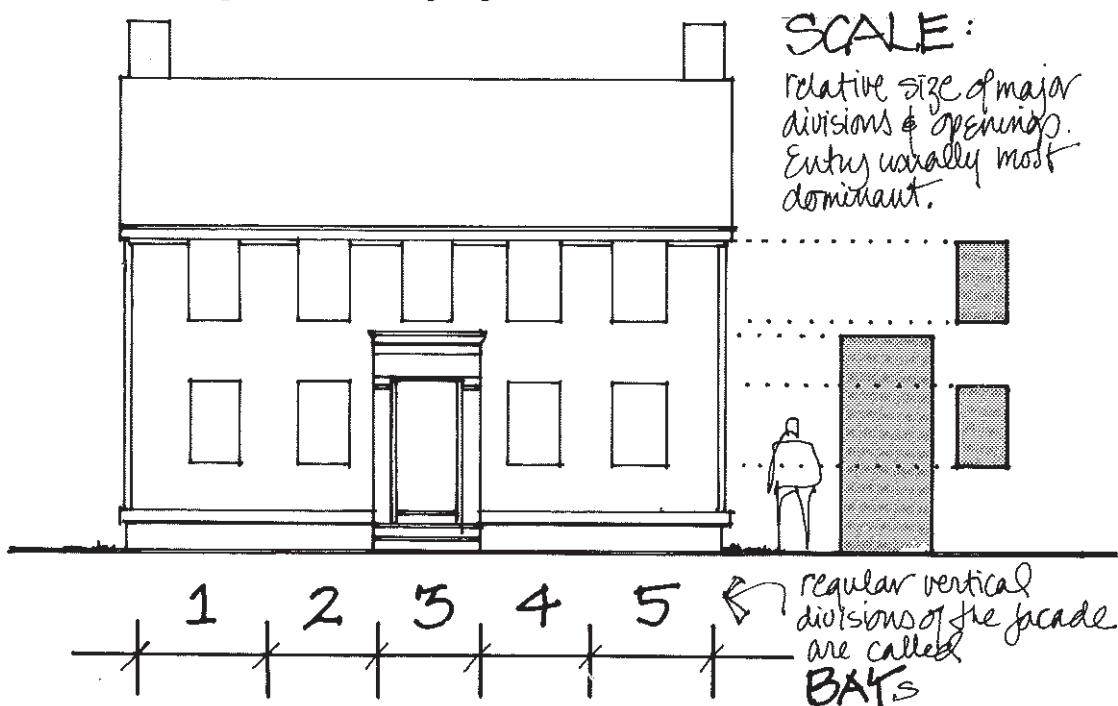


fig. 106

The size and position of openings on the facade is perhaps the most obvious and important design feature. Prominent, often projecting, doorways not only afford weather protection, but by their greater size and detail, extend a visual welcome.



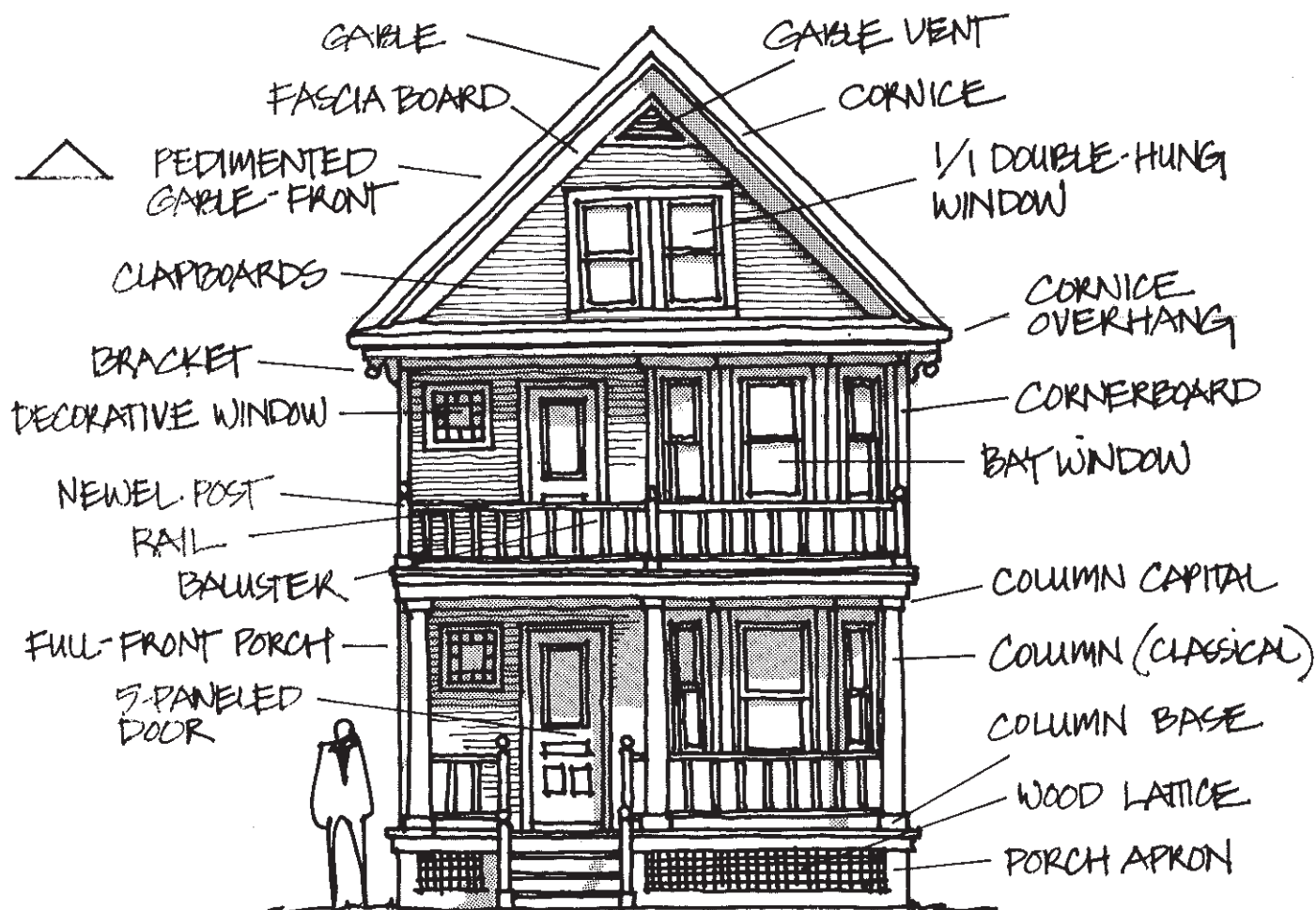
With careful looking and investigation you will soon have a familiarity with your house's construction, and will develop a feel for its history, peculiarities, changes over time and perhaps even for its former "lives" far richer than can be conveyed through mere recorded facts.

Like the former inhabitants, your repair actions and dwelling in the house are part of its history. As your knowledge of your house increases, so too will pleasure and pride in homeownership.

fig. 107

Common house features of a pedimented gable-fronted one-over-one house with decorative Queen Anne windows and classical porch posts and rails. (Additional architectural terms and features are illustrated in the previous style descriptions.)

PARTS OF A HOUSE:



Respect its character

Most older Medford houses, even those built as inexpensive housing for middle class commuter-workers, (such as small Italianate "workers' cottages," and triple-deckers), exhibit a wealth of carved and sawn wooden detail which give them a unique character and which can not economically be duplicated in today's housing market. Unfortunately these details are often the first to show signs of wear and weathering if careful maintenance has been allowed to slide in the house's

fig. 108

c. 1880-1910 one-over-one house with square Queen Anne windows and two-story columned porch.



past. There is also commonly a desire on the homeowners' part to have his investment dollars "show" on the house leading him/her to a "modernization" solution which can strip the house of those very features which express the building's age and history.

Although many contractors will argue for this quick so-called "maintenance-free" solution in lieu of repair of the existing building, few houses are so deteriorated as to be beyond economical repair by the time-tested means of painting, flashing and carpentry.

It makes sense, often saves money, (see the following cost-outs section), and usually produces an architecturally more pleasing result to work *with* the special character of the building, rather than covering it up or removing it when undertaking renovation.

Compare the two drawings on these pages for an illustration of this principle. While not the most "high style" or "historic" of the type of houses found in Medford, this turn-of-the-century one-over-one house has cornice, bracket, window and porch details which reflect the careful craftsmanship and artistry of a former era. Their size and detail give the house an enlivened, inviting appearance. In contrast, the "modernized" version of the same house appears stark and, well, "plastic." While (fortunately) few houses are so completely stripped of their details as this example, each action to remove original features diminishes the original strengths and appeal of the older home. Evaluate your house's character, and beware of the "quick solution" arguments!

"MODERNIZATION" CAN STRIP THE HOUSE OF ITS CHARACTER :

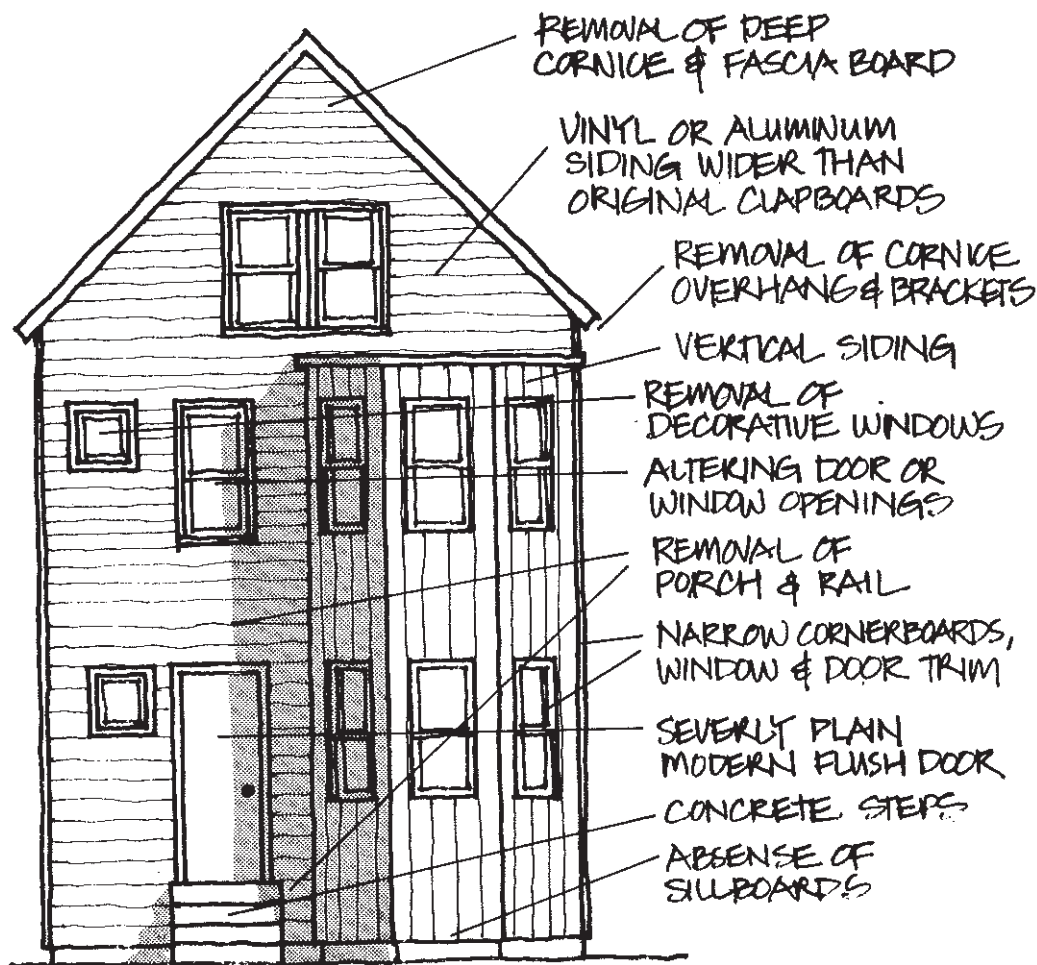


fig. 109

The same house as it might be "modernized". The removal of the two-story wooden porch produces a devastating loss of visual appeal.

There are many so-called "colonial" house components on the market, many of them available as stock lumberyard items for the do-it-yourself homeowner. Few of these items are accurate reproductions of 17th or 18th century building features, yet their extensive use confirms the great appeal of the "old fashioned" look. What is ironic is that many a genuinely old-fashioned house has been partially stripped of its old features, and then partially "modernized" only to be embellished with the addition of modern "old" windows, doors, entrys, shutters and, of course, the "colonial eagle", (in the 17th century

used to designate a house free and clear of debt).

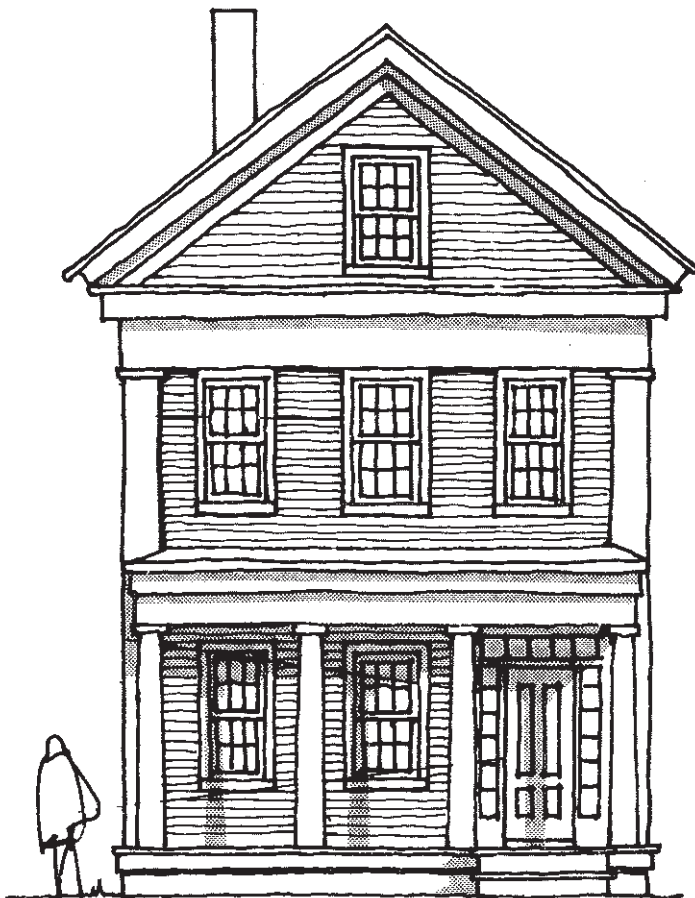
In Medford in the recent past this phenomenon has been occurring in alarming numbers amongst its many handsome Greek Revival homes, surely some of the most important and historic architecture of which the city can boast.

Compare the original house (this page) with the drawing of the building as it might be "remodeled" and "colonialized." (This type of renovation is often called "remuddling".) The major features — pedimented gable, corner pilasters, 6/6 windows, projecting columned porch, and the side and transom lights around the 4-panel door — have all been removed. In its stead are modern unconvincing approximations of old building features — shutters, bay window, door and eagle. Genuine history has been destroyed, and an undistinguished hodge-podge created. (Building components of styles *before* the house was built should never be added — such as the multi-pane "18th century" bay window.)

Identify the historic features of your house and try to keep them. Modern components, though costly, can actually cheapen the value and investment you have in your older Medford home.

fig. 110

A classic Greek Revival house such as those seen along Riverside Ave. in the Ship Street Historic District.



AVOID "COLONIALIZATION":
IT CAN BE COSTLY "FAKE HISTORY"

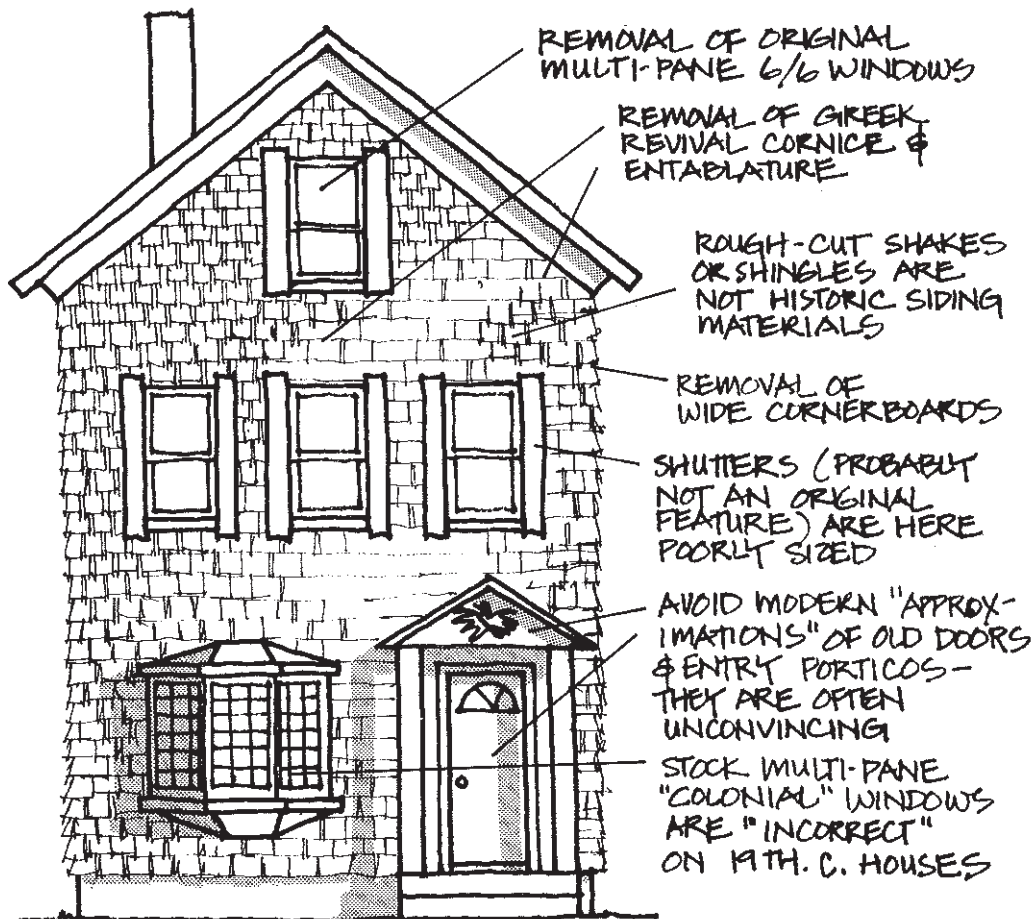


fig. 111

The same building, drastically altered. Its intrinsic historic value is lost.

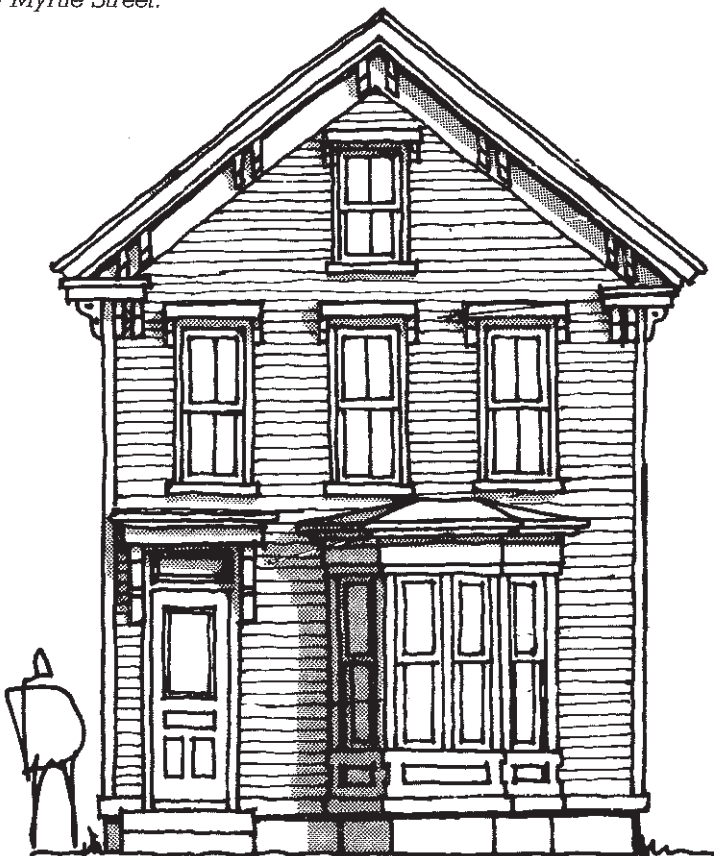
As you look around Medford (or similar New England cities) you will notice whole streets of old houses which decades ago were covered with asphalt siding "shingles" or "pressboard" stamped to resemble brick or stone. One can conclude that the salesmen for such items were persuasive indeed, and that once one homeowner had altered his house in this manner it must have caught on as the fashionable thing to do, and spread like wildfire down the street. Somewhat the same thing is occurring today with the use of vinyl or aluminum siding as a cladding material over wood clapboard houses. Although these materials have their

benefits and drawbacks from a cost, maintenance, insulation, water vapor and fire point of view (see the following section on siding), from an appearance point of view they frequently have a detrimental impact on the old house. The spoiling of the house's appearance with the addition of synthetic or metal siding stems not so much from the material itself as from the all-too-common practice of ripping off or covering up key design elements when the material is applied.

The house on this page could be covered with wood or artificial siding — when properly installed the change in materials is undetectable from a distance. However, the house on the opposite page (same house, "renovated"), illustrates the drastic change in character which can occur when decorative wooden trim is removed to facilitate the installation of the new siding. A contractor may encourage you to follow this course in the interest of your long-term maintenance (when he's really concerned about his short-term labors). Those old details he may want you to get rid of may be the most valuable asset of your old house (and growing more valuable with each passing year). Find a contractor sympathetic to old houses, and one who will do what you want him to, before undertaking this renovation action.

fig. 112

c. 1850 Italianate
"worker's cottage". A
handsome group of this
type of house can be seen
along Myrtle Street.



AVOID IN RENOVATION :

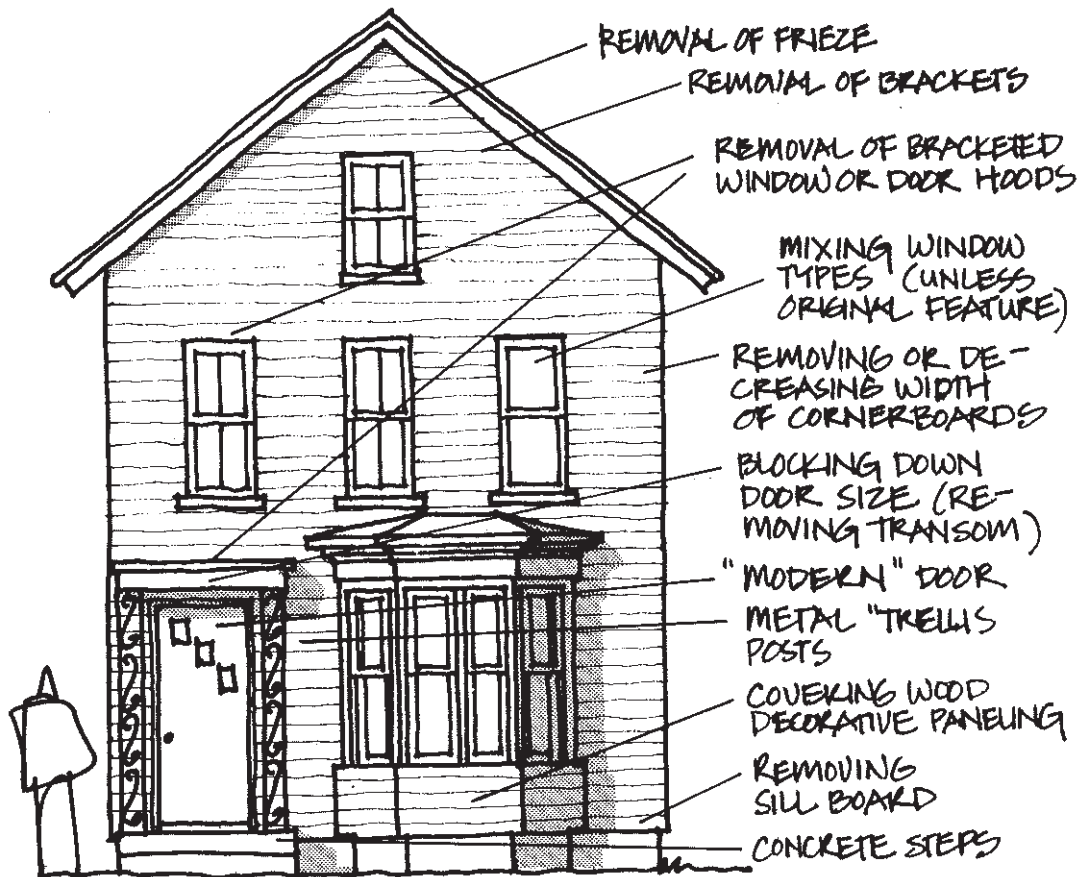


fig. 113

Renovation actions which are almost certain to spoil the character of the old house.

Fortunately, complete alteration of an old house's character such as that illustrated on these pages is a rare sight, although the individual actions taken (pointed out by the arrows) are frequently seen. Yet the illustration is useful in pointing out some of the things to avoid when trying to preserve the character in the renovation of the old house such as this second Empire mansard-roofed example.

Perhaps the most important thing to consider (for example when you want to alter dormers or windows for more room and/or light), is to make any major alterations to the house on the *off-street* side, where it will be less visible. On the other hand, if you think you'd like to keep your house "authentic" and do a paint/restore job but believe from a maintenance

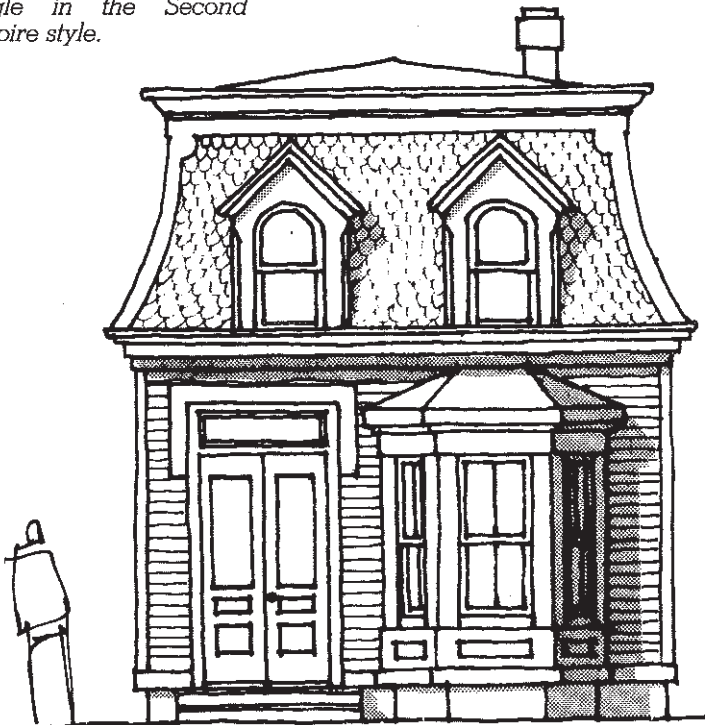
and money point of view vinyl or aluminum siding is your choice, you could consider cladding three faces with artificial siding and doing a thorough and historically accurate restoration on the front face.

As mentioned before, drastic changes are often done to a building so the money invested will "show". One often overlooked, and relatively inexpensive way to accomplish this objective is to spruce the house up with a lively new paint job and color scheme. You'd probably be surprised at the variety of bright colors (often many on a single house) which were commonly used on 19th century homes (refer to the following painting section). This solution will delight your neighbors, enhance the value of your home, and will be much less costly than more dramatic measures (such as the mix of vertical and horizontal sidings illustrated).

A thought to keep in mind: When you are evaluating the costs of renovation alternatives remember to weigh the value of the investment you have in your house's character. Actions which *enhance* this character will produce a greater return to you in the long run.

fig. 114

c. 1870's inexpensive
single in the Second
Empire style.



AVOID IN RENOVATION :

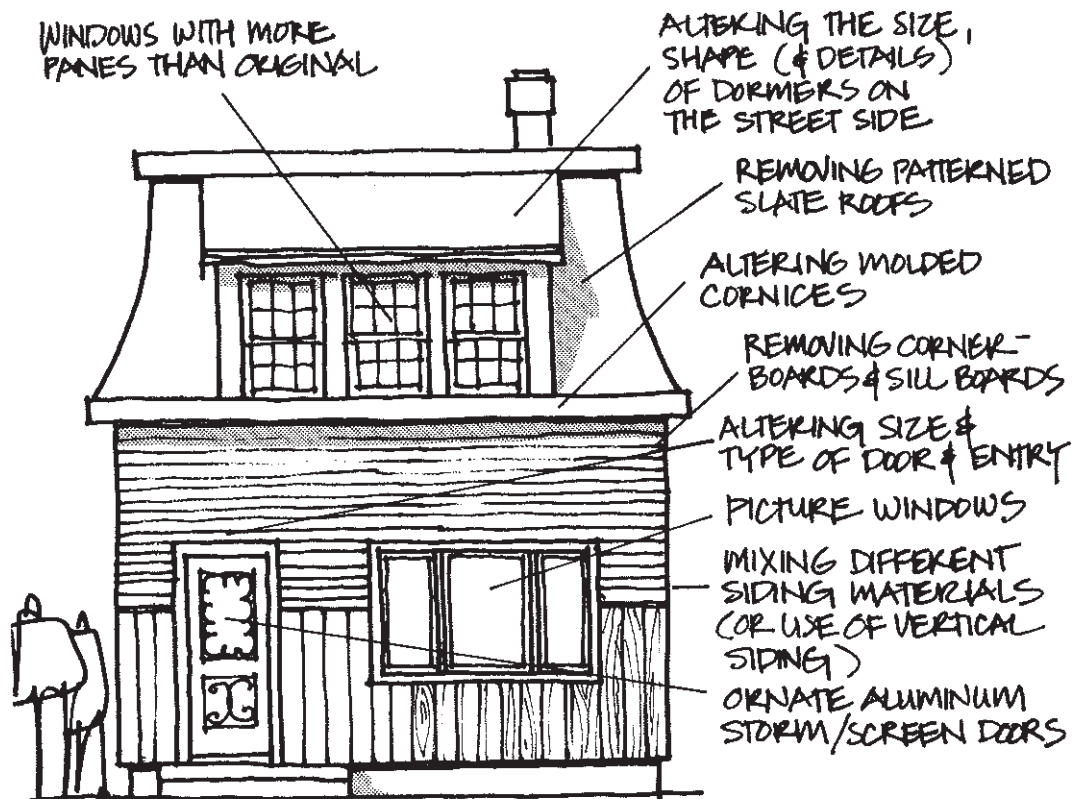


fig. 115

The same building as it might be (and, alas, is frequently) altered.

B. What will it cost?

Throughout this guidebook we have tried to alert you to the style and design features which determine the overall appearance of your house. Though appearance should influence any home improvement decision, the cost of renovation work will be the primary concern of most homeowners.

Some renovation actions for the older frame residence are relatively inexpensive; many are costly. The following demonstration cost-outs for renovations of four Medford homes is designed to acquaint you with this range of rehabilitative actions and costs to enable you to get a feel (and perhaps develop a strategy and schedule) for renovation which may be appropriate for your own house.

Keep in mind that these estimates are for specific buildings, and reflect their individual materials, size and extent of deterioration. Though they can give you a feel for the work and expenses you might anticipate, an estimate by a competent contractor should be gotten before budgeting expenses for your own house.

As you will note, on each cost-out we have addressed only *exterior* work; and in each case the figures include the costs for the *completed* work; (both materials and labor). As labor is usually significantly more than the materials cost for a given repair, the ambitious do-it-yourself homeowner may be able to renovate his home for much less than the amounts we have calculated. Bear in mind too, that since you are paying a premium today for labor charges (and your own time is valuable), it makes no sense at all to scrimp on

materials. Paying a little extra for the most durable materials and a job done right will insure the maximum lifespan (and return on investment), for your home improvement dollars.

You should also keep in mind that these are February 1979 prices, and that building materials costs can fluctuate wildly over time. Again, your local contractor is your best source for current costs.

For your reference, unit costs on which the following cost-outs are based:

Repointing brick or granite foundation	\$2.50 p.s.f. ¹	Large two-family house	\$1,500-\$1,800
Rebuilding chimney above roofline	\$200-\$250 each	Triple-decker	\$1,800-\$2,500
New Wood gutters and leaders (4" x 5")	\$6 p.l.f. ²	Painting trim & sash only	half of above costs
Replacing cornice and board trim	\$5.40 p.l.f.	Solid core paneled wood door	\$175 each ⁵
Corner board replacement	\$4.20 p.l.f.	Wood picket fence and posts (3' high)	\$4.50 p.r.f. ⁶
New fire-treated wood cedar shingle roof ³	\$160 p.s. ⁴	Wood fence gate	\$35 each
New asphalt shingle roof ³	\$110 p.s.	New wooden entry platform (4'x5') with 4 wooden steps & wood lattice skirt, all painted	\$335 (approx.)
Slate roofing (\$75 minimum the job)	\$5.00 per slate	Wood platform (fir)	\$4.25 p.s.f.
New Window sash 2/2	\$70 each	Wood steps (fir)	\$18 per step
6/6	\$80 each	Lattice skirt (pine)	\$2.15 p.s.f.
Window frame replacement	\$65 each	New lally columns (if required)	\$75 each
Window pane replacement	\$10 each pane	New brick entry (4'x5') 4 steps	\$510 (approx.)
Paint, scrape and putty existing windows	\$12 each	Platform	\$150 each
Replace small basement window & frame	\$60 each	Steps	\$90 each
New clapboards	\$125 p.s.	New concrete entry (4'x5') 4 steps	\$340 (approx.)
Aluminum or Vinyl siding (add \$15 p.s. for 3/4" styrofoam board wall insulation)	\$135 p.s.	Platform	\$100 each
Fancy decorative cut shingles	\$175 p.s.	Steps	\$60 each
Remove asphalt or shingle over clapboards	\$20 p.s.	New classical wood entry pediment	\$400-\$450
Painting (includes trim & sash)		Wood classical columns (8' high, 10" diameter)	\$96 each installed ⁸
Small one-family house	\$650-\$800	Aluminum or fiberglass classical columns (8'x10")	\$85 each installed ⁸
Large one-family house	\$900-\$1,100	Wood porch post (pine, 2x4s covered with 4 1x6, 8' height)	\$25 each ⁹
Small two-family house	\$1,200-\$1,400	Decorative wood porch railing with pickets 8" o.c.	\$7.50 p.r.f. ¹⁰
		Wood shutters (vinyl \$5 less)	\$30 per pair

¹p.s.f. = per square foot.

²p.l.f. = per linear foot.

³Includes all flashing, all new felt and roofing paper. If the new roof can be installed over existing roofing materials, the cost is \$25 less per square.

⁴p.s. = per square. A "square" is an area 10 feet by 10 feet.

⁵Includes painting, all hardware and, as are all the items listed, installed in place.

⁶p.r.f. = per running foot.

⁷Assumes must be custom-designed by good finish-carpenter.

⁸When replacing rotted classical columns, try to match the

original as much as possible. You may have to do a little hunting. Sources for hard-to-find parts for the old house can be found in *The Old House Journal Buyers' Guide 1979*. Copies of this sourcebook can be found in the Medford Library, or at the Medford Historical Society.

⁹It is worth noting that the modern aluminum trellis-like "wrought iron" posts so often put up as replacement for wood posts, supposedly for economy's sake, cost approximately \$38 each, and are more costly than plain historically appropriate simple built-up wooden posts.

¹⁰A "wrought iron" aluminum porch railing will cost \$12 p.l.f.

1. Costs: Renovation



fig. 116
44 Tainter St.

Building Component	Action	Cost
Foundation		
Chimney	Rebuild (1)	200
Roof & Flashing	New asphalt roof (roll on flat; shingles on gable)	1,700
Gutters	Replace wooden gutters & downspouts	540
Cornice & Trim	Replace top cornice, repair fascia bottom cornice	750
Porch	Replace steps; new wood platform with two new lally columns; reuse posts; new rail; lattice wood skirt; new cedar shingles on porch roof.	
Siding	Remove asbestos pressed-board siding from walls and gable.	100
	New clapboards	625
	New cornerboards	168
	Decorative cut shingles in gable	90
Windows	Replace 15 broken panes; paint, scrape and putty all windows	300
Door	Scrape, paint & weather strip	30
Painting	Clapboards	325
	Remaining trim (not included above)	150
		<u>\$5,668</u>
Additional	Remove shrubbery & reseed lawn	32
	TOTAL:	\$5,700

Though a small house, 44 Tainter Street is a particularly fine example of the ornately-detailed Second Empire Style. Although broken window panes, a fallen cornice, and its covering of pressboard materials made to resemble brick and shingles, are obscuring its former grandeur, this building is in quite sound condition. And because of its modest size, a relatively small investment would be needed to renovate.

The homeowner should realize that when old siding materials previously applied over clapboards are removed, it is nearly impossible to assess in advance the

condition of the underlying clapboards. For this cost-out we have assumed the worst — and have indicated costs for replacement of all clapboards and cornerboards. (Quite likely complete replacement will not be necessary.)

The brackets, pedimented dormers and paneled double doors on this house are historic house details which would be difficult and expensive to reproduce today. A careful renovation is all that is needed to protect the future of this unusual c. 1860 Medford building.



fig. 117
Renovated appearance.

2. Costs: Renovation & Site Improvements



fig. 118
15 Pleasant St.

Building Component	Action	Cost
Foundation		
Chimney	Repoint (1)	75
Roof & Flashing		
Gutters	Replace rotted portion	250
Cornice & Trim	Replace cornice on entry porch	100
Porch	Remove "colonial" light & projecting iron rooster sign. Remove projecting brick steps. Paint brick wall of entry porch same color as main body of house. Trim shrubbery to just below entry porch window. Rebuild entry steps of wood.	200
Siding	Remove vines from face and side of house and repair damaged clapboards.	125
Windows		
Shutters	Remove inappropriate "picket" shutters. New wood shutters — five pair on front only.	150
Painting	Repaint house (dark to medium color)	750
	Repaint trim (contrasting light color)	500
	Note: or paint house light, trim dark.	
	Paint garage with same or complementing colors	650
		2,800
Additional	Remove brick piers and curbing.	60
	Install all new picket fence with entry gate.	240
		\$3,100

One of the many fine Greek Revival houses in Medford's historic Ship Street District, this house at 15 Pleasant St. is in a basically sound, well-maintained condition. This cost-out for renovation and site improvements illustrates how small changes, at modest cost, can dramatically enhance the best features of the houses's style — "putting the frosting on the cake" so to speak.

Although built in the Greek Revival style (c. 1850), the building has signs of numerous later changes. The handsome little Italianate garage with round-headed window and lantern, and the side projecting bay window, were probably constructed c. 1870. The massive brick piers, front brick and wood entry porch, and picket-type shutters, are more recent additions.

Renovation calls for removal of the vines on the building's surface (they can cause damage), removal of the piers which are out-of-scale with the building, and re-

moval of the historically incorrect shutters. As the building very likely never had shutters and would be handsome without them, replacement with paneled wood shutters (\$150) would reflect the owner's preference for the visual appeal of shutters.

Foundation plantings and 'frontlawn' shrubbery were seldom seen during the time of the Greek Revival style; the existing rhodadendron should be trimmed back to fence rail height — about 3'.

The wide cornice, cornerboards, and window frames are hallmarks of this style and could be visually enhanced by a contrasting paint scheme which would emphasize these features. Grey with white trim is an historically correct color scheme. If more color is desired the owner could paint the house yellow, trim white and shutters dark green; also historically correct colors for this style.



fig. 119
Renovated appearance.

3. Costs: Renovation vs. Restoration



fig. 120
284 Riverside Ave.

Building Component	Renovation	Restoration
Foundation	Repaint 50% brick 1,914	Repaint all brick 3,825
Chimney	Rebuild (2) 500	Same 500
Roof & Flashing	New asphalt roof over existing 880	New cedar shingle roof 1,280
Gutters	New aluminum 410	New wood 492
Cornice & Trim	New cornice 162	Same 162
		New corner & sill boards 420
Entry	Repair concrete steps 80	Remove & replace with wooden steps & platform 300
	Remove rotted entry entablature & pilasters; replace with plain boards, scrape, paint & putty side lights 50	Remove same & replace with entablature board with cornice, pilasters with cap and base & replace sidelights with new as per drawing 250
Siding	Patched damaged shingles 300	Remove shingles 360
		Repair & replace clapboards as req'd. (assure 50% replacement) 1,500
Windows	New windows 2/2 and frames (17) 2,330	Same, plus remove two modern 3-part windows and restore 5, 6/6 3,500
	New cellar windows & frames (4) 240	Same 240

Door	Scrape, paint & weatherstrip 3 existing doors	105	New solid core paneled wood door	175
Painting	Paint trim, and shingles on right side to match left side	800	Scrape, paint, weather strip (2)	70
		8,957	Paint clapboards and all trim	1,300
				14,374
Additional	Trim hedge to 2'		Same, or remove and install fence with gate and molded cap rail	200
Total Cost		\$8,957		\$14,574

Few observers would recognize 284 Riverside Ave. as a very old and potentially handsome Medford building. Built c. 1830 in the Federal style, but with a classic Greek Revival entry, this house has undergone extensive alterations of which the right-hand windows are only the most obvious.

Because of its age and severe lack of maintenance (a rare occurrence in Medford), renovation calls for more extensive rebuilding than one would commonly encounter in either the restoration or renovation of an old frame building. The original windows, for example, have been so poorly cared for that both window sash and frames have rotted beyond the point of salvage.

For this building we have costed out two courses of action for its future. The first, a renovation, calls for only those repairs needed to return the building to a sound

condition. All deteriorated components are replaced, or repaired where possible. Historically incorrect materials or alterations are left intact in those instances where they still provide a useful function; the shingles, for example, are merely patched and painted to unify the appearance of the house facade.

A restoration, costing almost half again as much for this particular building, calls for more extensive work as its entails bringing the building back to its original appearance (as determined from remaining evidence).

As can be seen in the drawing of the fully restored house, the visual difference between a simple renovation and a full restoration is truly dramatic; a strong argument for the additional investment of a restoration can be made on increased market value alone.



fig. 121
Appearance after restoration.

4. Costs: Renovation vs. Modernization

Often times when the older wood frame house begins to show signs of wear the owner is tempted to "modernize" its appearance with the variety of new materials (vinyl, aluminum) and so-called "colonial" elements readily available from building suppliers (bay and picture windows, "carriage" lanterns, etc.). For some, this decision is made in part for lack of information on the original style of the house, and for lack of ready access to the required correct building components needed to duplicate the original features. Although some particularly high-style component may indeed involve some tracking-down, most of the parts can be located or duplicated by knowledgeable local contractors. (In the Medford library or Historical Society one can refer to *The Old House Journal Buyer's Guide* for sources of hard-to-find house parts.)

More often the homeowner undertakes modernization in the belief that it will be less

costly than a renovation which repairs and respects original stylistic features. As this cost-out illustrates, this may not always prove true. Note, for example, the very high cost (\$1,300) of installing a "colonial" bay window. If, instead, the owner had elected to keep and simply patch, paint and reputty the two original windows replaced by the bay, his costs would have been approximately \$24.

Sometimes the owner will be sold on these "modernization" actions by a persuasive local contractor or materials supplier. Watch out for these people! For them your house represents a potential short-term profit; for you it is a long-term investment, and its appearance is a primary factor in its total value. (It is interesting to note that Cambridge, Mass. has made available grants to owners of historic homes for removal of vinyl and aluminum siding!)

Building Component	Renovation	Modernization
Foundation		
Chimney	Repaint (1) 75	Same 75
Roof & Flashing	New asphalt shingle 1,840	Same 1,840
Gutters	New wood gutters 492	New aluminum gutters 410
Cornice & Trim	Repair cornice and fascia board on sides & rear. Replace same on front. 162	
Porch/Entry	New wood platform with lally columns. Three steps. 380	Slate topped new brick platform. Three steps 425
	New Greek Revival entry-entablature, pilasters with cap and base, sidelights 250	"Custom" pediment two 250 aluminum fluted columns 160 Aluminum door and side light trim 90
Siding	Remove shingles over clapboards, corner & sill boards. Patch and replace existing clapboards (assume 50% replacement) 906	Install new aluminum siding and trim pieces (interior insulation 3/4" styro. required.) 2,250
Windows	(Included in painting)	New "colonial" bay window 1,300
Door	New four paneled solid core wood door 175	New flush solid core wood door 150 Aluminum storm door 40
Painting	Siding & trim 1,150 5,720	6,990
Additional	New wood fence 135	New chain link fence 110
	TOTAL \$5,855	TOTAL \$7,000



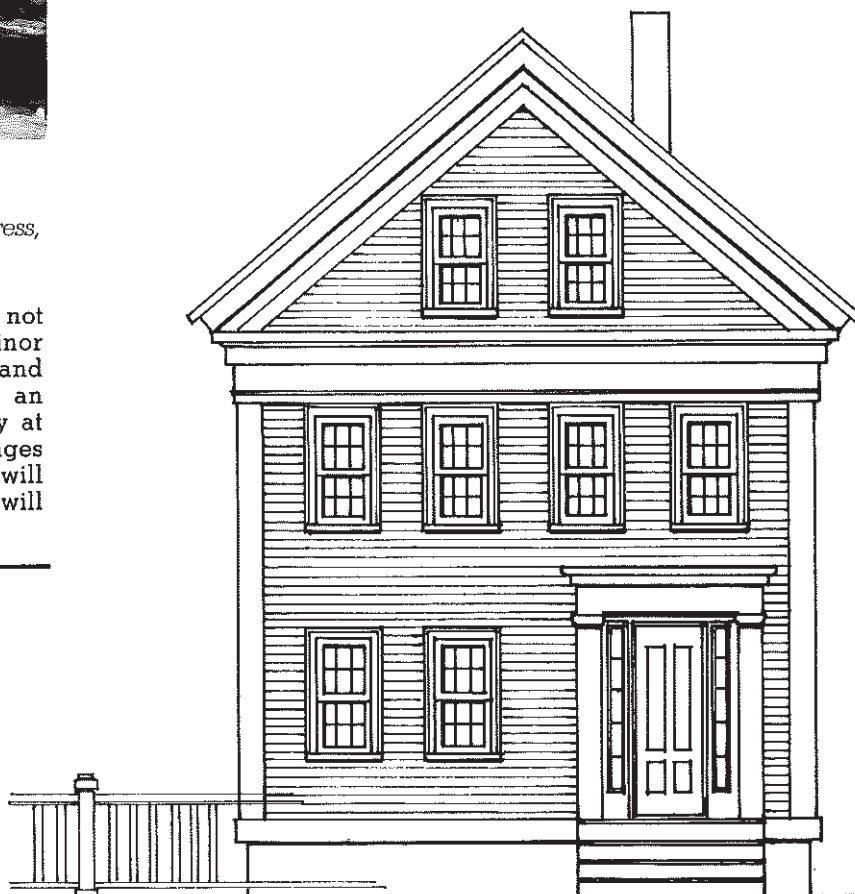
fig. 122
58 Pleasant St. with modernization in progress,
12/78.

Just because a house is old does not necessarily mean that it is historic. Minor buildings may not merit restoration, and some form of modernization may be an appropriate thing to do. Look carefully at your own house, and undertake changes only when you are confident of how they will look when done, as well as what they will cost.



fig. 124
On the as yet unresided
side of the house evidence
of the original wide corner
and fascia boards can still
be seen. Notice the origi-
nal wide window frames.

fig. 123
House as it might have looked if the owner had
chosen to renovate instead of modernize.



C. Energy measures

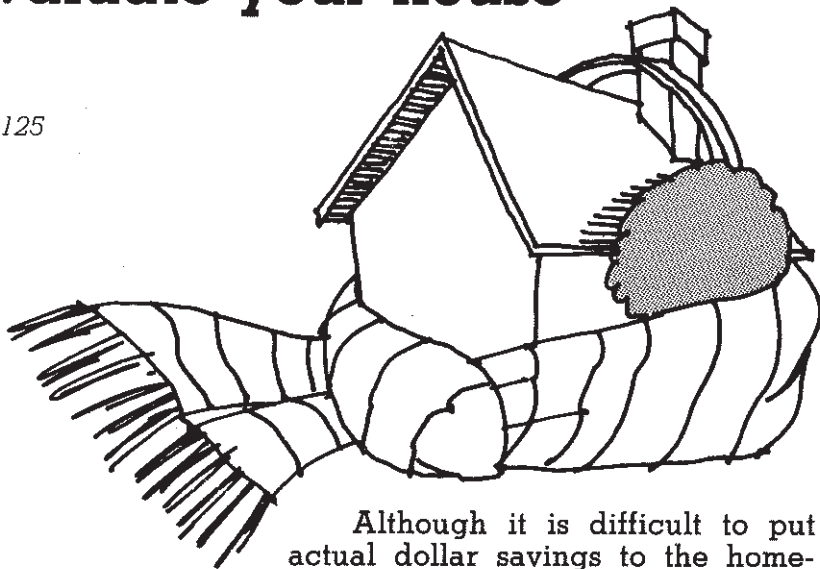
If your house was built before 1960 it most likely falls short of currently accepted residential energy efficiency standards. If before 1930, chances are it has no insulation at all! One scientist recently prophesied a cooling trend in the earth's weather pattern, bringing even longer and more severe winters in the years ahead. And daily, it seems, there is news of rising energy costs.

With larger and larger bites of our earnings going towards home heating and cooling, and much of

these energy dollars going out the roof and windows through insufficient insulation and caulking, it is difficult to argue that investing in the restoration of your old house's visual appearance should be your first priority. It shouldn't. The sooner you can make your house more energy-conserving, the sooner you will save money (or at least stop wasting money by needlessly heating the air outside your house!), and that savings can then be freed up for other home investments.

Evaluate your house

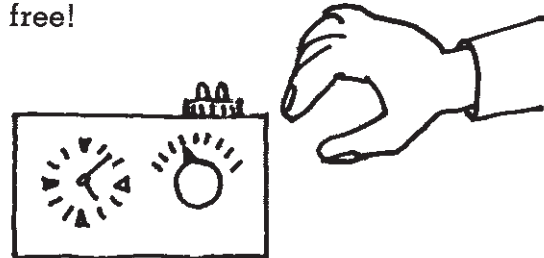
fig. 125



Although it is difficult to put actual dollar savings to the homeowner on different energy-saving measures which can be done to the "typical" old house,¹ (since each house will have different conditions — tightness and number of windows, roof surface area, amount of insulation already in place, etc.), there are some actions which can be taken which will always return savings with no, or little, investment. These require that you take a careful look at

the way you and your family use your house.

Turning down your thermostat and learning to adapt comfortably to lower heating (and cooling) levels is a first step. A 6° lower house temperature during the heating season can save as much as \$100.² And it's free!



Next, look at the entry most often used in winter. Many early houses have an oversized front door leading into a reception area which is open to the living room and stair beyond. 300 cu. ft. of warm air (more if the wind is blowing) can be lost each time such a door is opened, and heating this much air at winter temperatures to a comfort level of 67° can be expensive indeed! Using a smaller door

fig. 126

Turning back the thermostat by 6° in the winter can save you over \$100 a heating season!

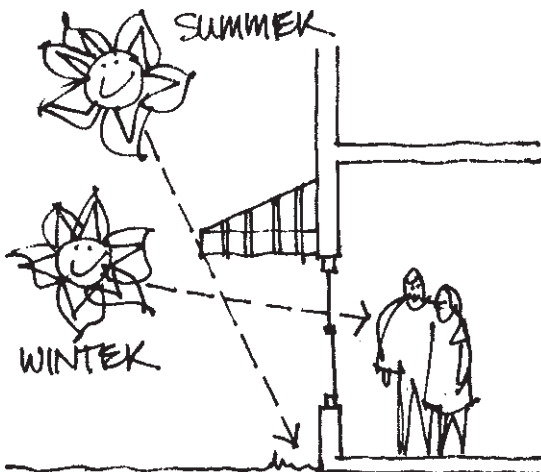
¹You can do this rather easily for your own house following the step-by-step methods in *In the Bank or Up the Chimney?*

²In *In the Bank or Up the Chimney?*, pg. 3, adjusted for current heating costs (\$.62/gallon).



(perhaps the rear kitchen door); one that opens into a smaller enclosed area if you have one; can reduce this air exchange by as much as half. You may even want to think about adding on a rear vestibule for this purpose — you'll find the added room very useful for storage and wet clothes, boots and shovels.

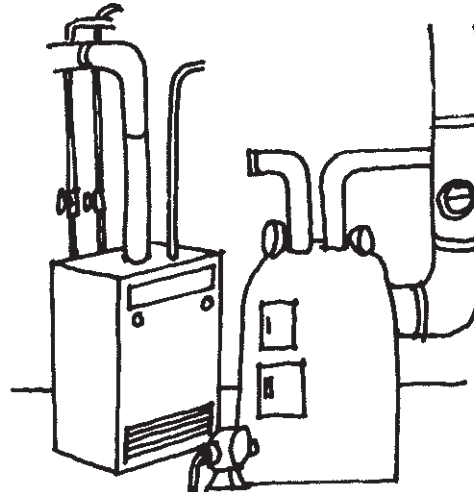
Another measure which is free and will save energy is to be sure to close off chimney dampers when not in use. In a large house sealing off two or three chimneys can result in as much as 10% reduction in energy loss.³



³"Ways to Save Energy and Stay Warm" by Douglas C. Peterson in the March/April issue (Vol. 31, No. 1) of *Historic Preservation*, a magazine published by the National Trust for Historic Preservation. (pg. 42.)

Next, you may want to consider the use of awnings (cloth, preferably — aluminum awnings can spoil the appearance of the old house) in summer to cut down on heat gain through the windows. Planting deciduous (leaf-shedding) trees on the south side of the house can accomplish this same purpose. In summer their leafy canopy provides shade. In winter their bare branches allow the low rays of the winter sun to penetrate and warm the house.

Lastly, you will want to take a close look at the efficiency of your heating plant. An annual furnace tune-up, including replacement of the nozzle, flue cleaning, air screen replacement and burner adjustment, can cost as little as \$25, and return savings as high as \$35-100! When you have your heating system cleaned, request an efficiency test. If the efficiency rating is 60-70% for oil, or 65-75% for gas, then installation of an oil-fired flame retention burner or controlled forced-air gas burner should be considered. These devices can increase efficiency by 10% — a \$100 savings on a \$1,000 annual heating bill!⁴



⁴"Ways to Save Energy and Stay Warm", pg. 43, and *In the Bank or Up the Chimney?*, (pg. 3.)

fig. 127

A vestibule entry is an efficient way to cut down on heat loss through open doors during winter months.

fig. 128

Awnings are an efficient means of cutting back on heat gain through windows in the summer. (Projecting wood window hoods do this too.) Fabric awnings are best on older houses.

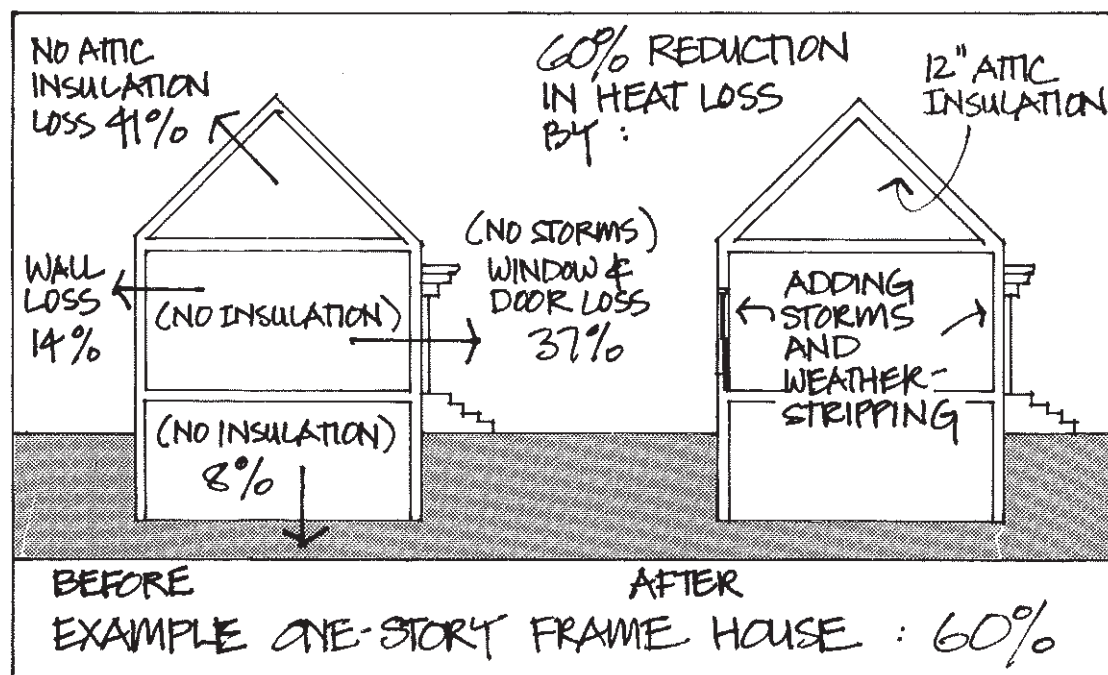
fig. 129

Check your heating systems' efficiency rating.

Your energy dollars

fig. 130

While an extreme case, old houses without any insulation at all are occasionally seen. The most common energy measures — attic insulation, and weather-stripped storm windows — can reduce heat loss by 60%. (Both of these examples are taken from *Insulating the Old House*, by Greater Portland Landmarks, Inc.)



As the drawings of the example one and two story frame houses exhibit, by far the greatest loss of energy occurs through the roof and windows and doors of the old house. Consequently, the greatest return on investment will be gained by adding attic insulation, (10" to 12" total - fiberglass blanket and/or loose fill are best), and taking steps to prevent air infiltration around wall openings (caulking, weather-stripping and storm windows). Many New England homes can realize a 30% reduction in energy loss through these measures⁵, and as energy costs rise the "payback period" (point where savings in energy equal cost of improvement) will shorten.

⁵From *Retrofit '78*, a report on a Regional Conference on Community-Based Retrofit Programs for New England, held in Durham, N.H. in December, 1977. (pg. 3.)

Insulating an unused attic is an easy do-it-yourself job. However, if your attic is walled-in, the job may require a professional. When adding another layer of insulation over in-place insulation, never add a second vapor barrier, and be sure you've provided for adequate attic ventilation. (Total vent opening area should be 1/300 of the attic floor area if you have a vapor barrier; 1/150 if there is no vapor barrier.)

Caulking and weather-stripping if done yourself are almost "free", (it does take time, but the materials are very inexpensive), and dollar-for-dollar, it will generate the greatest energy savings.

The energy losses listed on the drawings of the one and two story example houses merit further ex-

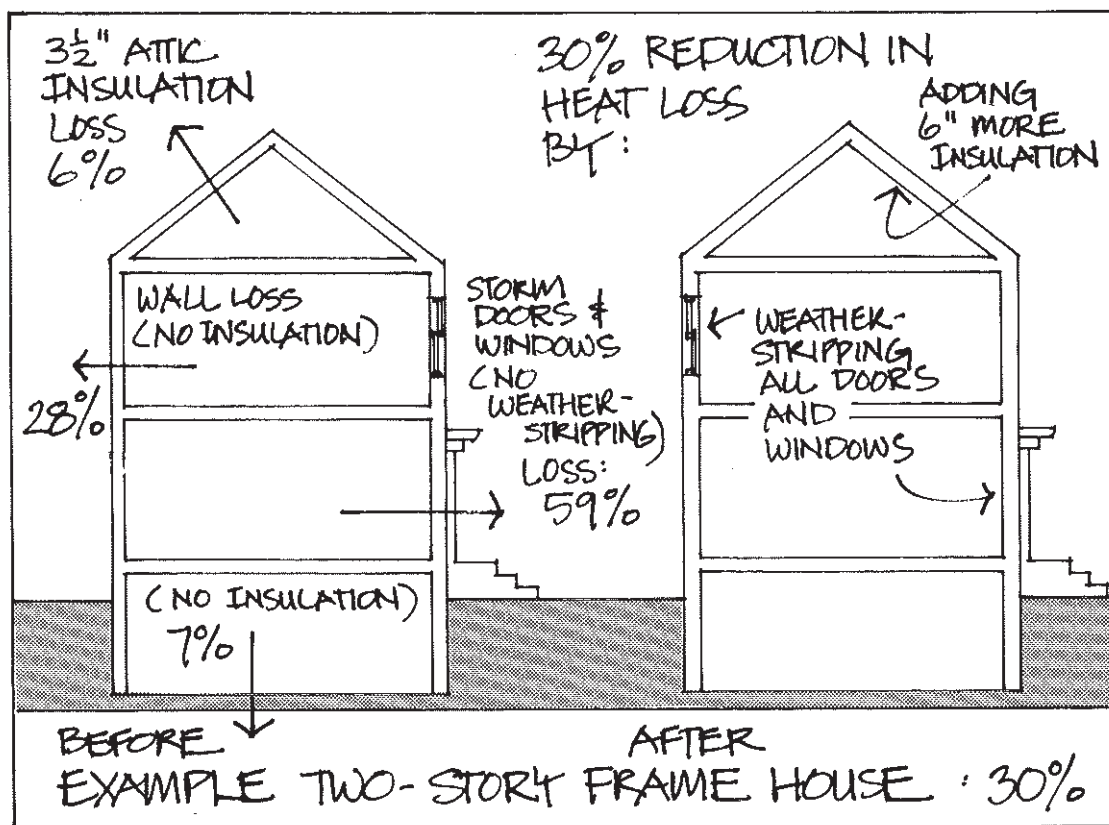


fig. 131

A more common condition in the old house is to have some, but less than adequate, attic insulation, and storm windows which are loose fitting. (Windows typically lose more heat through infiltration than from heat loss through the glass. A 1/2 inch crack, 2 feet long, increases heating costs by \$1.25 a year, according to the Energy Bank, a Cambridge-based firm!) By increasing insulation to approximately 12 inches, and tightening up existing storms, savings of 30% of prior heat loss can be realized.

planation. The wall losses (4% of total in one case, 28% in the other) look like substantial figures, and may lead the homeowner to believe that wall insulation would be a good energy investment. This is usually not true. First, the percentages refer to the energy loss due to inefficiency of the house's structure. If your house is 75% efficient, (that is, 75% of your fuel does serve to heat you and your house; 25% is wasted thru loss), then the actual loss through the walls is 14% of 25% of your heating bill — 3% of your heating bill (one story house). However, when you upgrade the efficiency of the house by other measures and make it, say, 85% efficient, the cost of heat loss through the walls drops even lower. Given that you have a lot of wall sur-

face, insulating walls is expensive (and almost impossible in some houses) and can actually cause damage to the house, it makes sense to put your money elsewhere.

Many people wonder about solar energy as an alternative for the old house. Although federal legislation calls for an income tax credit for residential solar installation, at present the costs far outweigh projected savings. Many solar experts advise consumers to improve insulation rather than buy solar equipment for the old house. Solar heating for hot water needs is a less costly undertaking than for space heating needs; if you have high year-round hot water consumption in your household, and are able to spend \$1800-\$3000 to install a system that will meet 75-80%

of your needs, in approximately ten years the system will have paid for itself, after which this portion of your hot water will be free from the sun!⁶

solar energy information

Thinking about a solar energy installation? Contact the Massachusetts Solar Action Office, Rm. 1413, One Ashburton Place, Boston, 02108 for assistance.

The Solar Home Book by Bruce Anderson and Michael Riordan, 1976, is one of the best texts for the layman, with particularly good coverage of passive devices for existing houses. This paperback is available for \$8.50 from Cheshire Books, Harrisville, N.H. 03450.

Moisture control

A house is a living thing, it "breathes". It's inhabitants, their activities (bathing, cooking, washing), and the higher temperatures inside the house produce a higher moisture level inside than is in the outside air. This moisture tries to (and does) escape through the walls. Old houses were built to allow this to happen without damaging the house's structure; the general principal of construction being "tight inside — loose outside". Painted hard plaster walls partially impede the flow of water vapor to the outside. The vapor which does escape passes into the wall cavity (in the old house, uninsulated), where a drop in temperature causes the vapor in the air to condense and freeze on the studs and facing surface of the outside wall. As the outside air warms, and is able to migrate into the permeable clapboard wall, drying breezes evaporate the accumulated frost. This principal of tight inside — loose outside, (it works the same way in the attic or in

the basement or crawl space), assures the delicate balance of forces which prevent dry rot damage to the house from moisture build-up. (An interesting illustration of this principle: the reason moisture and dry rot problems arise most often on the south wall of a house is due to the prevailing winter winds from the north side penetrating through the walls where they are warmed and pick up moisture. The net flow of air in the house is from north to south. When this warmed air with relatively high humidity hits the cold surface along the south wall moisture is left behind in the form of condensation in the south wall. You may have noticed more rapid paint peeling on this wall; if you decide to place a vapor barrier and/or insulation in *any* wall, the south wall should be the one.)

Remember to consider moisture when undertaking any energy improvement in your house. If you suspect there may be moisture build-up — ventilate!

Although the old house should be able to "breathe", it should not be so open as to allow the penetration of moisture in the form of rain, wind-driven rain, or melted snow. While,

⁶"Solar Economics Comes Home", by Mark Hyman, Jr., published in *Technology Review*, February, 1978, pg. 35. It should be noted that the homeowner who takes out a mortgage to install a solar system will gain immediate savings because of the tax benefits. (It is assumed in the figures that the typical annual home hot water consumption is 100 gals/day.)

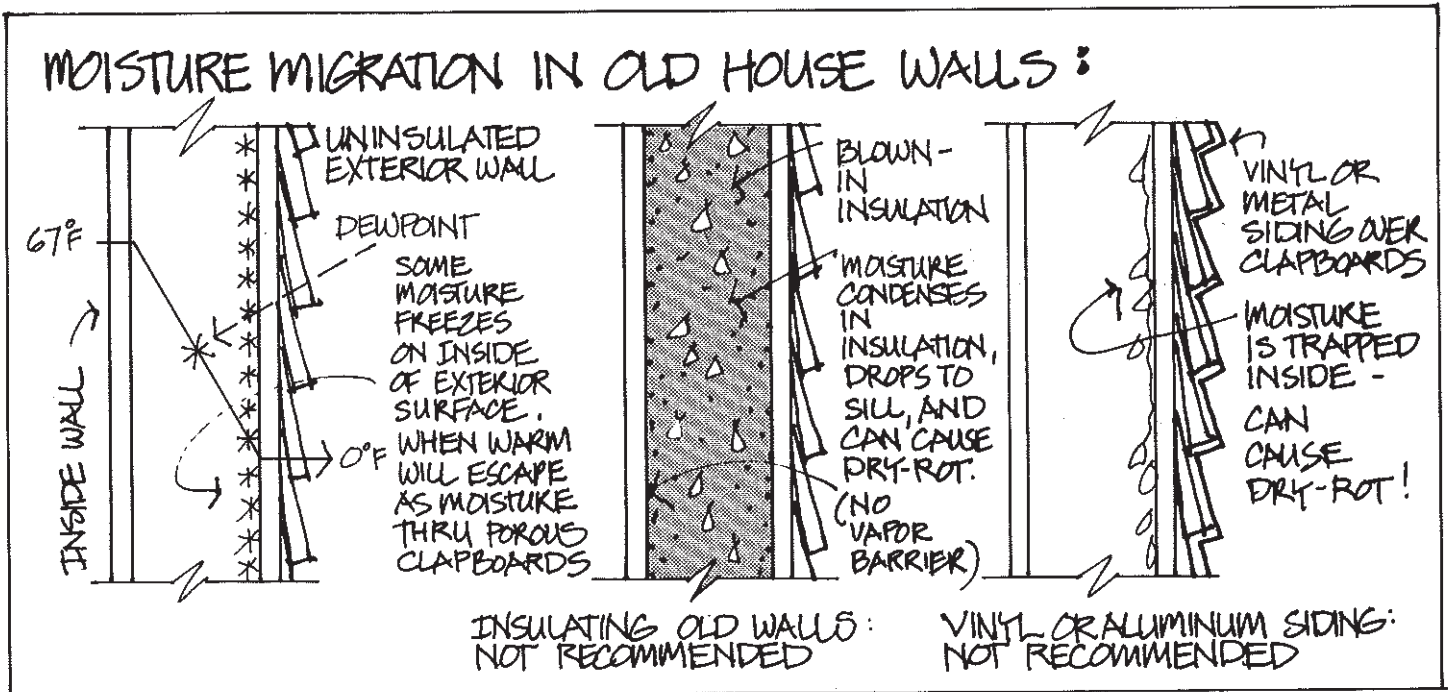


fig. 132

Moisture migration in exterior walls.

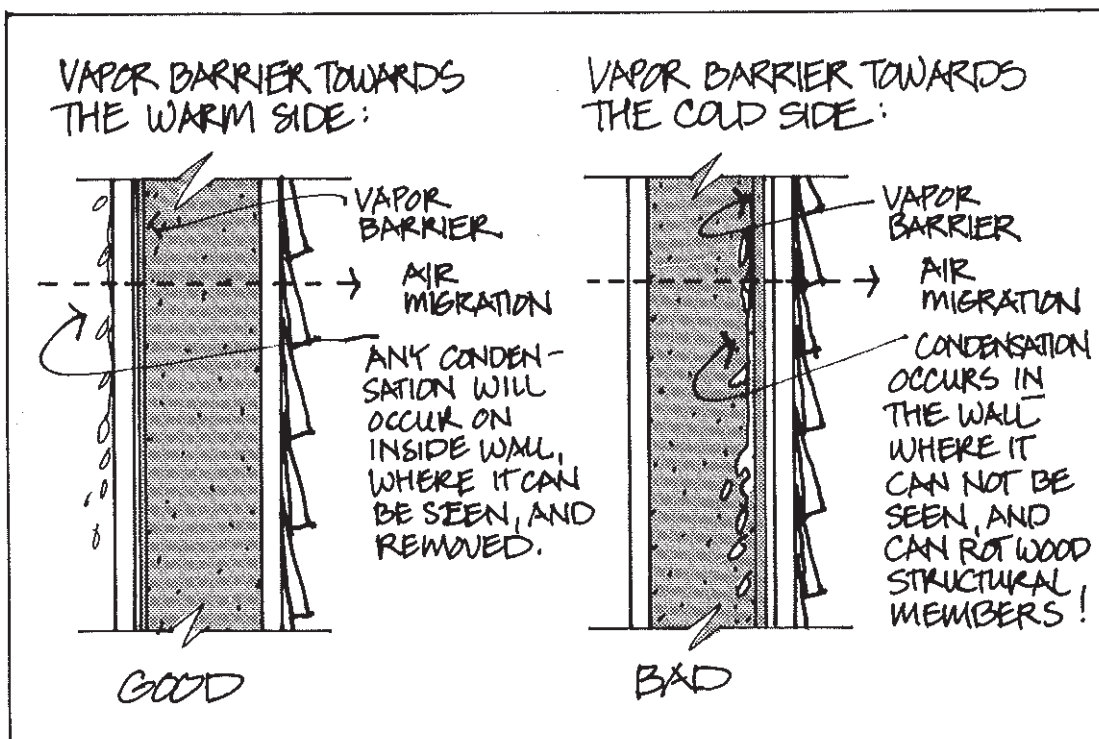


fig. 133

Remember that synthetic siding is not a recommended procedure as it forms a vapor barrier on the wrong side of the wall.

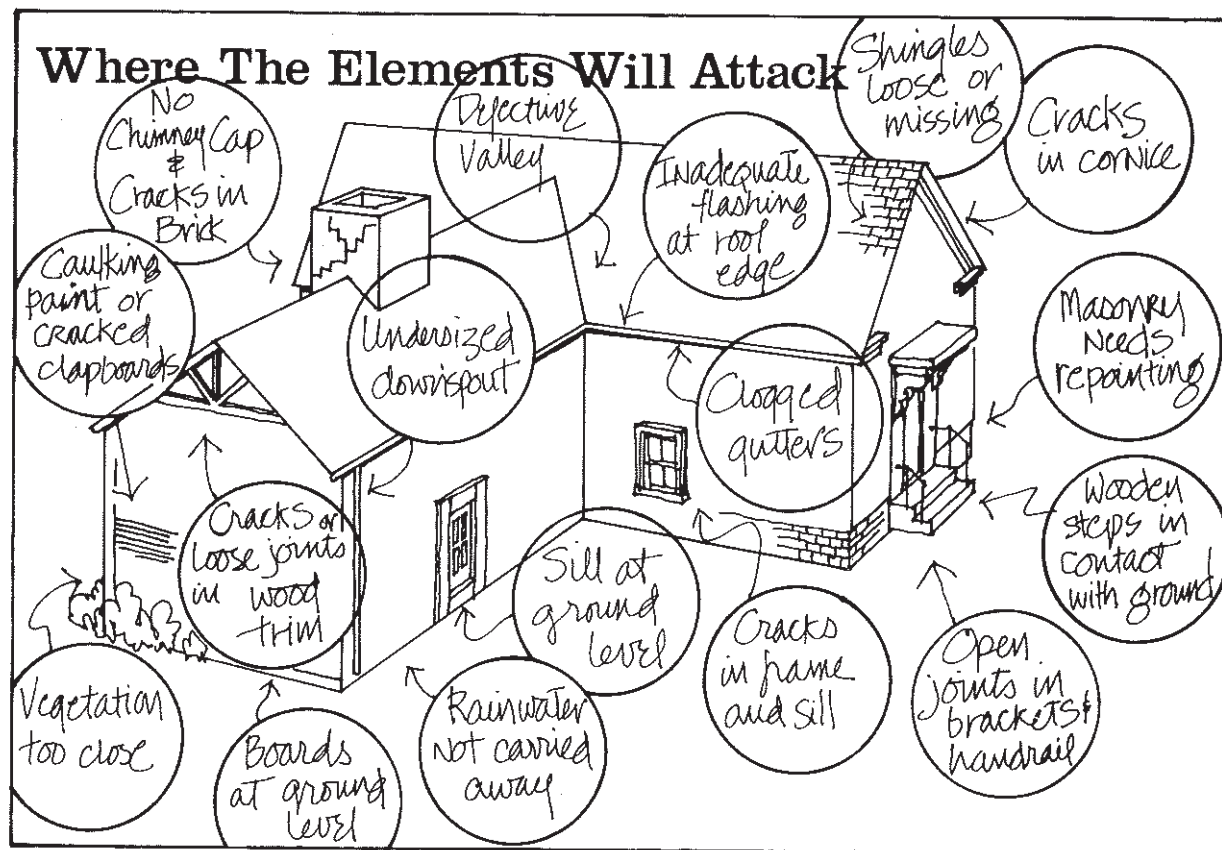


fig. 134

Drawing (by the author) from The Salem Handbook, prepared by Anderson Nottor Finegold Inc. for Historic Salem, Inc., 1977, pg. 65.

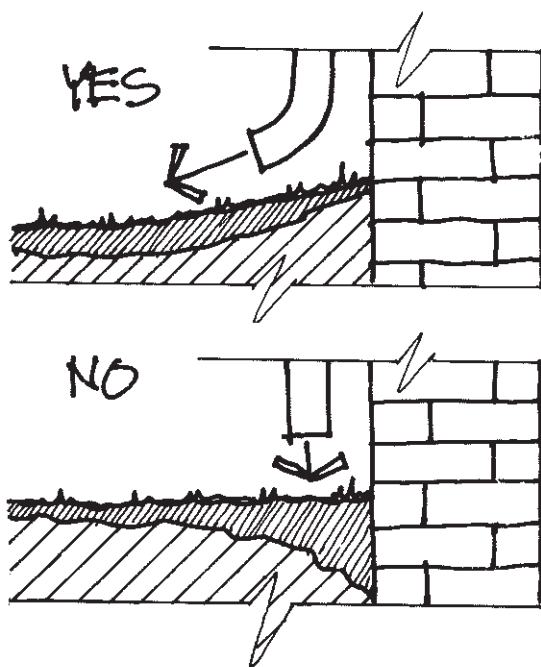
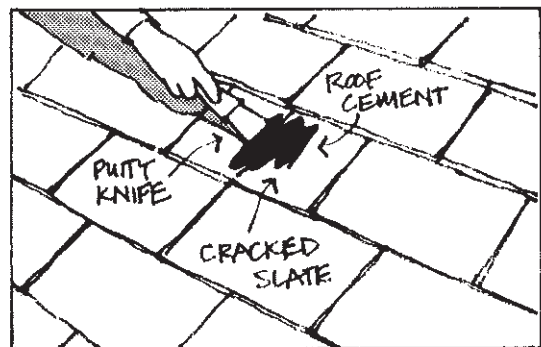
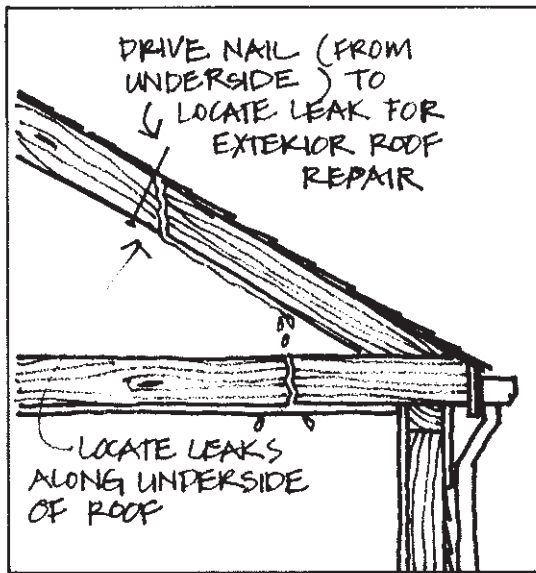
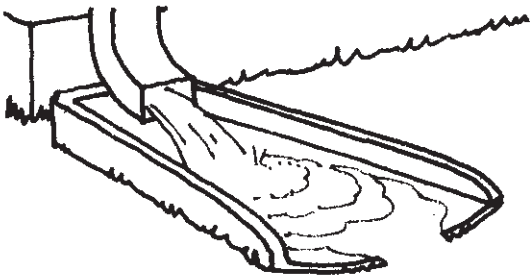


fig. 135

Check to see that gutters and downspouts are sound, and direct water away from the building to prevent damp cellars.

strictly speaking, not "energy conservation measures", steps taken to prevent the seepage of water *into* the house are critical to its structural stability. Look carefully at the illustration, Where Elements Will Attack. Routine inspection of these areas can uncover minor problems before they become serious ones; many of the repairs you will want to make, (such as caulking around door and window frames), serve the dual purpose of preventing the seepage of water *in* and the escape of warm air *out*.



WHERE TO FLASH

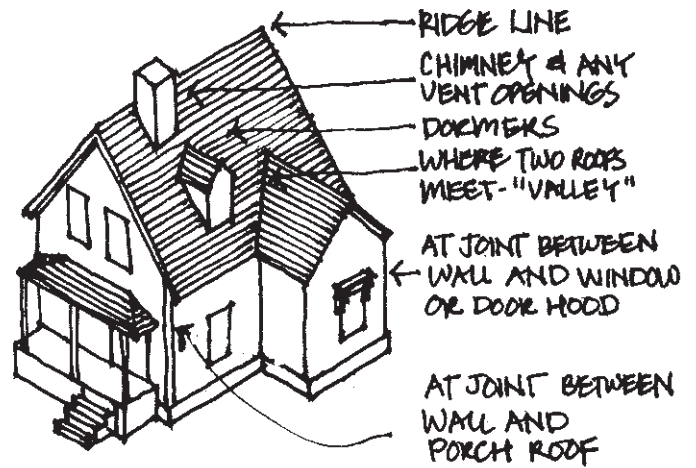


fig. 136

fig. 137

To divert rainwater use a ready-made concrete splash block (available from most building supply dealers).

fig. 138

Roof leaks are seldom directly over the visible stains or wet spots.

fig. 139

If still in position, a cracked slate shingle can be protected with a liberal application of roofing cement. More extensive repair of slate roofing is best left to professionals.

Insulating attic & crawl spaces

fig. 140
Insulating an attic is an easy do-it-yourself job.

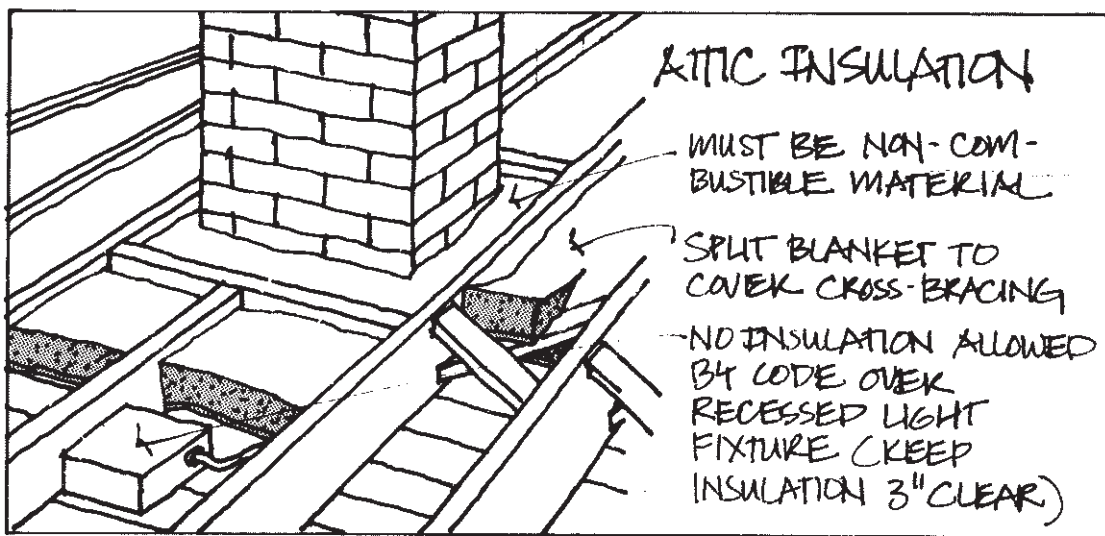


fig. 141
When handling fiberglass insulation, it's a good idea to wear gloves.

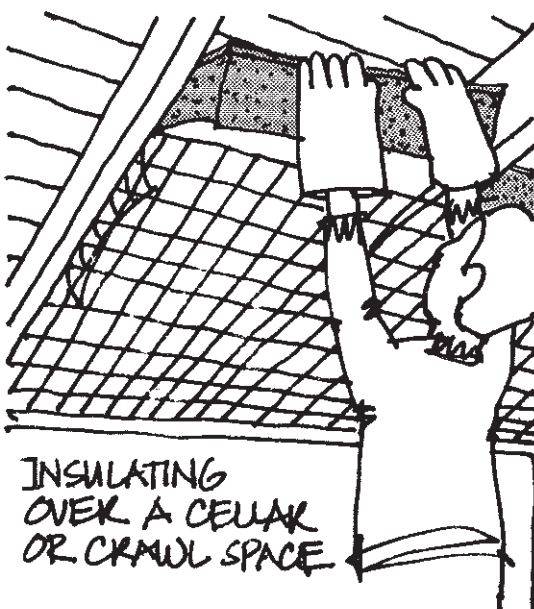


fig. 142

These measures are top priority for the old house, and easy to do yourself. 10"+ of fiberglass is recommended in the attic, 3"+ over an unheated basement or crawl space. Remember to measure the space to be sure you have enough material to complete the job, wear gloves when handling fiberglass, and these two cardinal rules: 1. Always place the vapor barrier towards the warm space and, 2. Assure adequate ventilation of attic and crawl spaces.



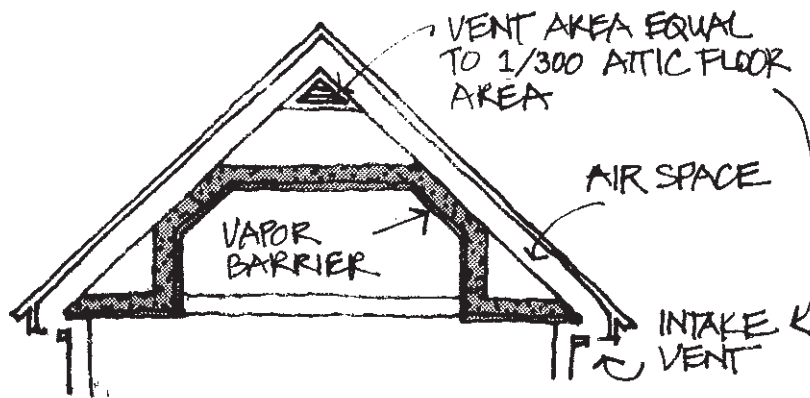
insulation values

MATERIAL	VALUE PER INCH THICKNESS	PROS	CONS	COMMENTS
Fiberglass bat or blanket/or Rock wool	3.1	-inexpensive -fire and moisture resistant -easy to install -widely available	-can irritate skin (wear gloves when handling)	-recommended for most home applications as the best choice for insulation
Fiberglass or Rockwood loose fill (poured or blown in place)	2.2	-easy to spread into irregular spaces -can be blown into walls	-can settle or shrink causing loss of effective- ness	-a good choice of material when adding depth of insulation over existing blanket insu- lation in unused attics.
Cellulose	3.7	-good insulation value -easy to get into irregular spaces	-if untreated, is highly flammable and absorbs moisture -can settle, shrink and deteriorate causing loss of effectiveness	-not recommended
Vermiculite (Mica)	2.1	-same as fiberglass	-lower insulation value -absorbs moisture -can settle or shrink	-use only in visible, well ventilated places
Perlite (volcanic ash)	2.7	-same as fiberglass	-same as vermiculite	-same as vermiculite
Sprayed foam urea formaldehyde	4.1	-high insulation value	-odor and irritating fume problems -may give off poisonous fumes if burned. -can shrink, diminishing effectiveness. -difficult to install well. -expensive	-may soon be banned in Mass. as unsafe. -Don't use!
Sprayed foam urethane	6.25	-highest insulation value	-same as urea formaldehyde	-same as urea formaldehyde
Rigid board polystyrene	6.25	-useful for below-grade floors -moisure-resistant -highest insulation value	-highly flammable unless treated or covered -gives off poisonous gas when burned	-must be covered or treated with a fire- rated material increas- ing its cost -avoid its use where possible
Urethane board	6.25	-same as polystyrene	-same as polystyrene	-same as polystyrene

Source of information: Federal Energy Administration and U.S. Consumer Product Safety Commission. (The comments are those of the author.)

fig. 143

Be sure to adequately vent your attic space. If no vapor barrier is installed (as is recommended by some) then you will need gable and eave vent openings equal to 1/150 (3%) of the total area of the attic floor. Installing these vents is usually a job for the professional.



INSULATION FOR OCCUPIED ATTIC

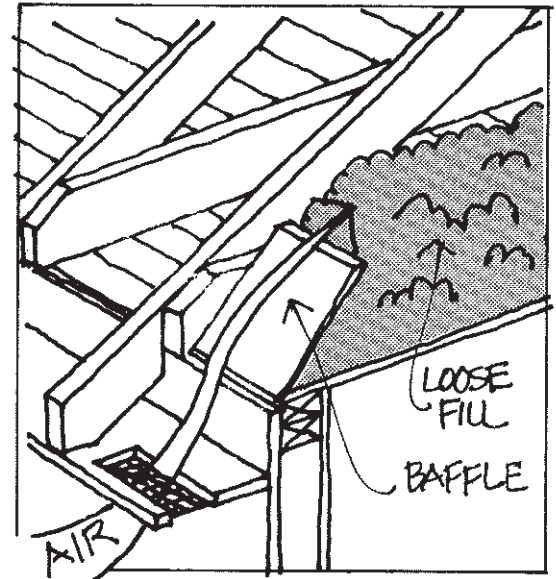


fig. 144

Be sure to install insulation so that it won't block the passage of air from the vents into the attic.

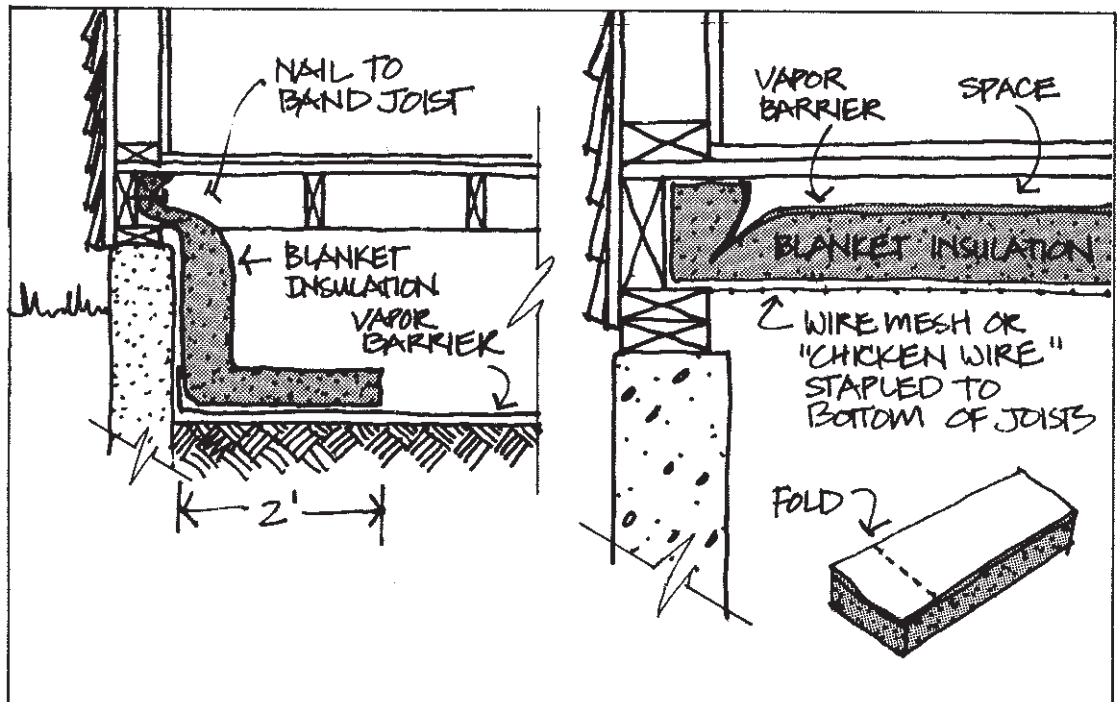


fig. 145

Insulating a crawl space. 6 mil. polyethylene plastic is laid on the earth for a vapor barrier.

Insulation on the underside of a floor over a crawl space. Be sure the vapor barrier side of the blanket insulation faces up.

Storm doors & windows

First, let's get the somewhat controversial issue of storm doors out of the way. It's awfully difficult to find a modern storm door which will harmonize with the design of a fine old 18th or 19th Century entrance, and many people find their appearance objectionable on the old house. Are they really energy-savers? Well, maybe, although a good weather stripping of the old door in lieu of a storm door will often be more effective, and always cheaper. If your old door is already tightly weather stripped and caulked and you feel you still need a storm door, the door will pay for itself (through energy savings it generates) in approximately 12 years time.⁷ Compared to the other energy investments you might make, storm doors generate a very low return indeed!

Storm windows are a better investment — taking anywhere from 6 to 9 years to pay for themselves. Storm windows must be weathertight to be effective as most heat loss is through air infiltration, not through the glass; so be sure to get a capable person to install them.

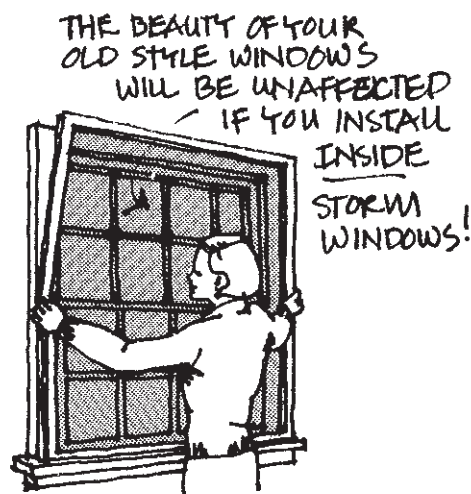
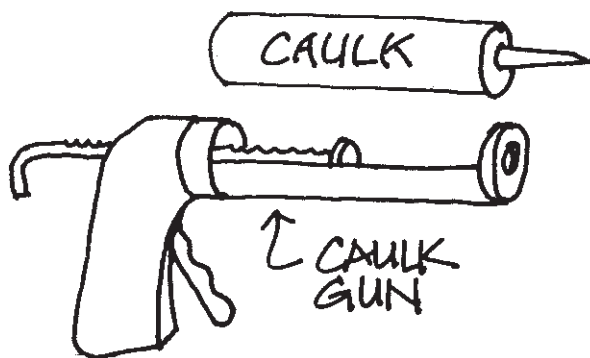


fig. 146
Plastic storms.

If at all possible, try to match the color of your storm windows with the color of the existing window trim. Aluminum storms now come in many baked-on colors. When treated with a zinc chromate primer, "raw" aluminum windows can be painted to match the existing trim color (use epoxy-based paint).

Weather stripping & caulking



If you are short on cash, and feel you'll have to postpone energy improvements for another heating season — don't! For relatively little money, few tools, but a substantial investment of time, you can begin now to weatherstrip and caulk your house. And this can be one of the most effective means of cutting down on energy losses in the old house. Take, for example, the two-story frame house from the illustration a few pages back. Assume that that

fig. 147

Tools for caulking. Caulking also comes in rope forms which you can force into cracks with your fingers.

Allow for 1/2 cartridge per window or door; 4 cartridges for the foundation sill.

⁷From *Retrofit '78*, pg. 3.

fig. 148

Weatherstripping is sold by the running foot or in kit form for each window. Measure your windows (total distance around edges of moving parts) for the length you'll need.

fig. 149

Before caulking between clapboards and windows clean the area with solvent. (Use a putty knife to lift off any old deteriorated paint or caulking.) A wide bead of caulk may be necessary, and it may take a little practice to be sure the bead overlaps both components for a tight seal.

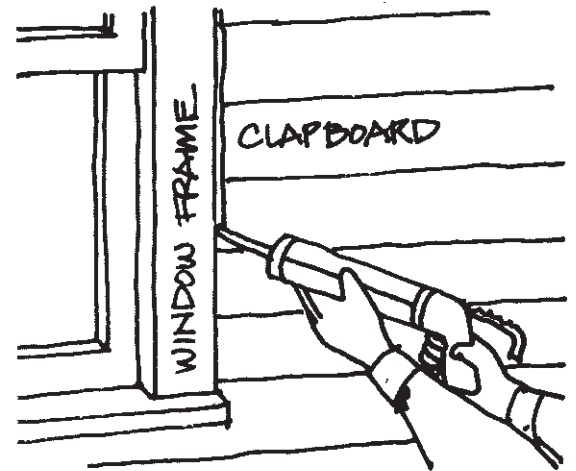
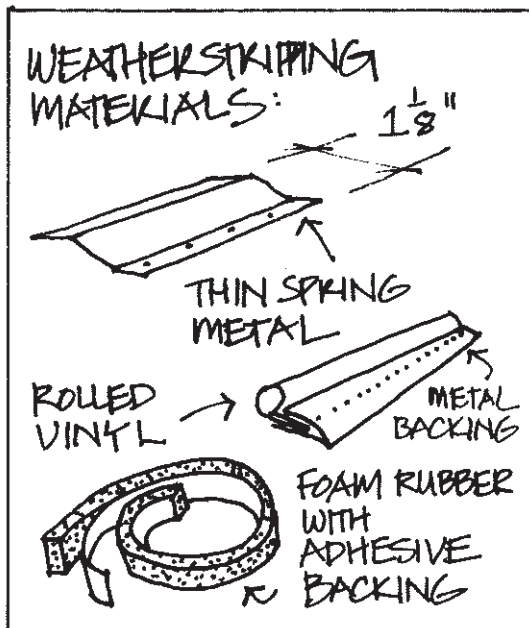


fig. 150

Foam strips are invisible when installed and very easy to apply. But they are not very durable and tend to be more effective on doors than windows.

house had storm doors and windows, 6" of attic insulation, and $3\frac{1}{2}"$ of wall insulation (not recommended, but we'll leave it for the sake of analysis). If the owner did nothing but install weatherstripping, he would realize a 35% reduction in heat losses.⁸ And caulking will increase those savings! It's a relatively simple job — one the whole family could do, and probably accomplish in a few weekends.

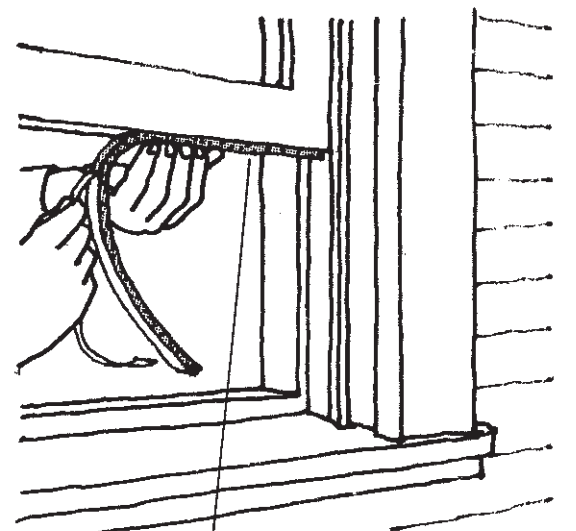
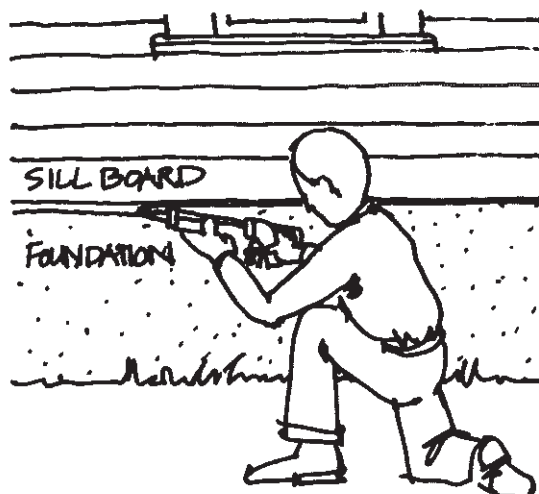


fig. 151

Check all places where two dissimilar components or materials meet. This is where you are likely to find cracks and openings, and where you will want to caulk.



ADHESIVE-BACKED
FOAM STRIP

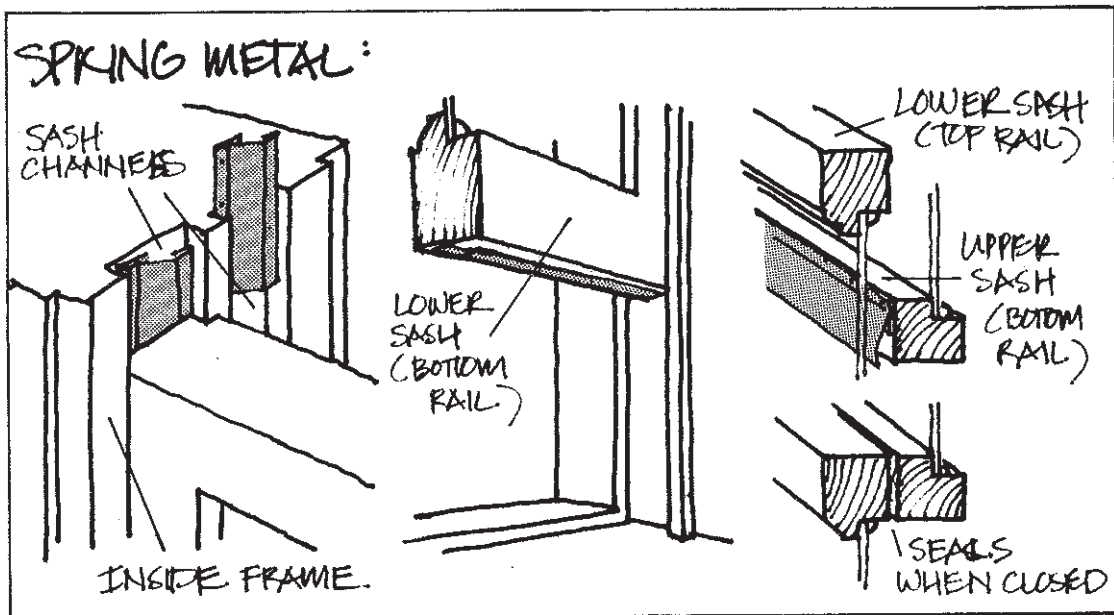


fig. 152

When attaching spring metal weatherstripping be sure to sink nails slightly to avoid catching and assure a tight seal.

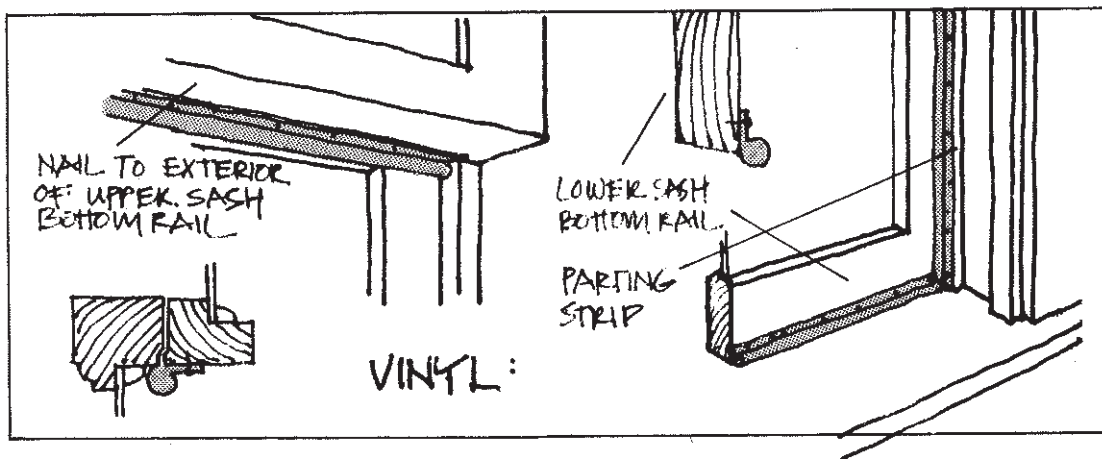


fig. 153

Both strip metal and rolled vinyl (with or without metal backing) are durable weatherstripping materials. (Vinyl is somewhat easier to install.)

Insulating ducts & pipes

If steam pipes at 240°F pass through a cellar or crawl space at 50°F, or a 50°F cooling duct passes through a 120°F attic, tremendous heat losses will occur unless the pipes and ducts are insulated. Insulating these elements is easy and inexpensive, and will pay for itself in 1 to 3 years.

Generally insulation for pipes and ducts comes in 1" and 2" thicknesses — the 2" is best. For air conditioning ducts, be sure you get the kind of insulation that has a vapor barrier (the vapor barrier goes on the outside). Seal the joints of the insulation tightly with tape to avoid condensation.

Insulating walls

Insulation of walls has been left as the last energy item for discussion in order to emphasize to the homeowner that of all the conservation steps to take for the old house, insulating walls should be the *last* improvement, and in most old houses, should probably not be done at all.

As mentioned earlier, there is no such thing as an "air-tight" house. When there is a difference of temperature on two sides of a partition water vapor will migrate through that partition from the warm air side to the cold air side — and this is true whether the walls are frame or masonry. A water vapor placed towards the warm side (never, never the cold side!) will cut down significantly on this passage. But in the old house installing wall insulation with a proper water vapor requires that the inside surface be completely ripped out to expose the studs and wall cavity — an extremely expensive undertaking which can not be justified by the relatively modest energy savings to be gained by wall insulation. Although modern plastic foams (urea formaldehyde and urethane) can be blown into the walls through small openings without tearing

down walls, their potential poisonous fumes, difficulty of proper installation (filling cavities completely without shrinkage), lack of vapor barrier, and irreversibility, make their use questionable for the old house. Moisture can build up in these materials and their bulk impedes the drying breezes which previously had assured the removal of water from within the wall cavity. Instead, the water can migrate to the sill, settle and cause dry rot. Because you can't see inside your walls, signs of this happening will only become apparent when the damage is much too severe to be easily corrected. Don't use these materials! (Urea formaldehyde may soon be outlawed in Massachusetts.)

Follow the general principal of old house construction: *tight inside — loose outside* and you will protect your old house's time-tested manner of adapting to the natural flow of water vapor in the old house. Once you understand this process you will be more aware of some of the problems encountered with such modern materials as vinyl and aluminum siding — to be discussed in greater detail in the following section.

interior storm windows

Plastic interior storm windows (which you can easily cut yourself for odd-sized windows) are sold at many home supply stores. One brand, the Insider Storm Window, is available through Plaskolite, Inc., P.O. Box 1497, Columbus, Ohio, 43216.

a useful service

Did you know that a frequently-used fireplace may require a chimney cleaning once every two years? Accumulated soot can not only be a fire hazard, but will cut down on the performance of the fireplace. *Master Chimney Sweepers*, #235-8616 offers free chimney inspections. And don't forget to close the flue in winter!

energy information assistance

For answers to just about any energy-related question, you can call the Massachusetts Energy Hotline. The toll-free number is 1-800-922-8265.

As discussed elsewhere, the use of blown-in wall insulation to significantly affect home energy consumption is questionable. But if you're going to do it, be sure to write to the Massachusetts Energy Office, 73 Tremont St., Boston, 02108 and ask them for their list of tested/certified installers of this type of insulation. (The key to its effectiveness is proper installation. As it's in the wall and you won't be able to see the job, you'll want to get an experienced installer of these products.)

tax credits

Did you know that you can get a credit (i.e. tax savings) on your federal income tax for money spent on

home insulation, storm windows and other energy savings home investments? Call the IRS, #367-1040 and ask for a *Form 5695, Residential Energy Credits*. If you have questions about this new tax credit, call #523-1040.

useful books

Insulating the Old House, A Handbook for the Homeowner. A publication of Greater Portland Landmarks, Inc., 165 State St., Portland, Maine. (\$1.90). Easy to understand, includes a good bibliography for further reading, and covers all the special considerations for old houses.

In the Bank or Up the Chimney?, A Dollars and Cents Guide to Energy-Saving Home Improvements, published by HUD (U.S. Dept. of Housing and Urban Development). Available through the U.S. Government Printing Office, Washington, D.C., 20402. (\$1.70). If you refer to just one book on home energy efficiency, this should be the one. In an easy to understand way this publication will take you step-by-step through the process of evaluating the energy losses in your house and calculating what kind, and how much insulation you need where. It does it in such a way as to enable you to determine where to invest your dollars to get the greatest return in energy savings per dollar invested. An added bonus: it illustrates step-by-step instructions to do energy saving measures yourself.

how to save energy in an old house

ITEM	WHEN OR WHERE TO APPLY	% REDUCTIONS IN ENERGY BILL	EXPECTED PAYBACK PERIOD/COMMENTS
Lower thermostat	anytime it can be done for over 6 hrs.	5% - 10%	No cost - only savings
Close fireplace dampers	at all times between use	5% - 10%	No cost - only savings
Install flame retention burner (oil burners)	when efficiency cannot be raised above 70%	5% - 10%	1-3 years
Insulate hot water pipes or steam pipes or warm air or heating ducts	in unconditioned areas	5% - 10%	1-3 years (for water pipes use closed well foam tubing. For steam pipes, use fiberglas.)
Weatherstrip windows and doors	everywhere	5% - over 10%, depending on number and previous condition.	1-3 years
Caulk window & door frames	at juncture of wall and frame, and glass and frame.	5% - 10%	1-3 years
Insulate attic	if insulation is below recommended level	to over 10%, depending on prior level of insulation	depends on prior insulation (Be sure to provide proper ventilation.)
Insulate floors over cellar	when cellar is 40° or cooler	less than 5% to as much as 10%, depending on temperature and area	depends on temperature and area
Insulate crawl spaces	only when crawl space is dry	less than 5% to as much as 10%, depending on temperature and area.	depends on temperature and area. (Provide for adequate ventilation. Insulation can trap moisture. If your crawl space tends to be damp, do not let insulation touch wood floor as termites could become a problem.)
Install storm windows	when proper weatherstripping of windows can not be done and/or additional conservation measures are desirable.	5% - 10%	6 to 9 years. (On houses where modern storm windows may be objectionable from an aesthetic point of view, the homeowner can install interior removable plastic storm windows.)

Use an entry opening onto an "air lock"	in winter (and summer if house is air conditioned)	less than 5%	No cost - only savings
Keep air conditioning units and refrigerator free of obstructions	at all times	less than 5%	No cost - only savings
Close off rooms not in use	when room can be closed off for more than 4 days	from less than 5% to as much as 10%, depending on area, temperature and time.	No cost - only savings
Use light bulbs that meet the need - do not oversize	at all times	less than 5%	No cost - only savings
Turn off lights & appliances when not in use	at all times	less than 5% to 10%, depending upon prior household energy habits	No cost - only savings

Source: This chart is an abbreviated version of a chart from the article, "Ways to Save Energy and Stay Warm" by Douglas C. Peterson, published in *Historic Preservation*, March/April 1979. Douglas Peterson is general manager of The Energy Bank, a division of Technology & Economics, Inc., a consulting firm in Cambridge, Mass. The Energy Bank conducts residential energy audits and will establish a set of priorities on energy-related improvements for the homeowner.

D. Renovation advice

Renovating and properly maintaining your own house can bring you life-time rewards — both monetarily (from the dollars you will save over contracting out the work to a professional and from the enhanced value of the house), and from the pleasure to be gained by identifying the history and character of the house in the process of assessing alternative renovation procedures.

There are many easy to understand guides for renovation of the old house; you will find it enormously helpful to read one of these books before plunging into any major renovation procedure.

useful books

Perhaps the best general guide-book for remodeling, (not a restoration manual), is *Remodeling Old Homes, Without Destroying Their Character*, by George Stephen (and Alfred Knopf, New York, 1972, \$3.95). This book can be found in most paperback book stores, and at the Medford and Boston Public Libraries.

A further excellent source of "how-to-do-it" advice for the problems (interior and exterior) the old-house owner can encounter, is *The Old House Journal*. This publication is a monthly newsletter (\$12.00 annually) published by the Old House Journal, 199 Berkeley Place, Brooklyn, New York, 11217. Copies are available at the Medford Library and the Medford Historic Society.

The *Old House Journal Buyers Guide* is an invaluable resource for hard-to-find parts and materials for early houses, with over 4,000 items and their suppliers indexed for easy reference. Copies of this book can also be found in the Library or Historical Society.

a must for home reference

Every home should have a general house maintenance reference such as the *Readers' Digest Complete Do It Yourself Manual* (1973, hardback, \$17.95). This reference covers all general repairs and has excellent sections on adding insulation and repairing wood clapboards.

Wood clapboarding was the most commonly used siding material for Medford's early houses. The narrow horizontal wood strips were attached to a layer of wood sheathing which in turn was nailed to the frame of the building. Wood has always been cheap and plentiful, and easily worked. Its insulating qualities, adaptability and resistance to denting has resulted in its long popularity. No other siding material is likely to look better than the original clapboarding.

There are many non-wood products available today which are intended to cover a wood house. If you decide to use them, choose carefully! Artificial stone and brick siding should be avoided. Generally these materials do not even look like the real thing. When artificial stone siding is applied to a building a pattern is detectable which is highly unconvincing.

In recent years aluminum and vinyl siding have become popular, yet these relatively new materials have not proved their long-term endurance. These synthetic siding materials lack the distinctive visual quality of wooden clapboards, even though they more closely match the original materials than other types of siding.

The visual appeal of an older building is in large part due to the decorative wood details. Window trim, door trim, corner boards and other wooden features should always be retained. When repairing or replacing a section of siding, never discard the trim. If the trim or other wooden decorative elements have rotted, have them replaced; otherwise you lose the character of the building which makes it unique.

In addition to their appearance,

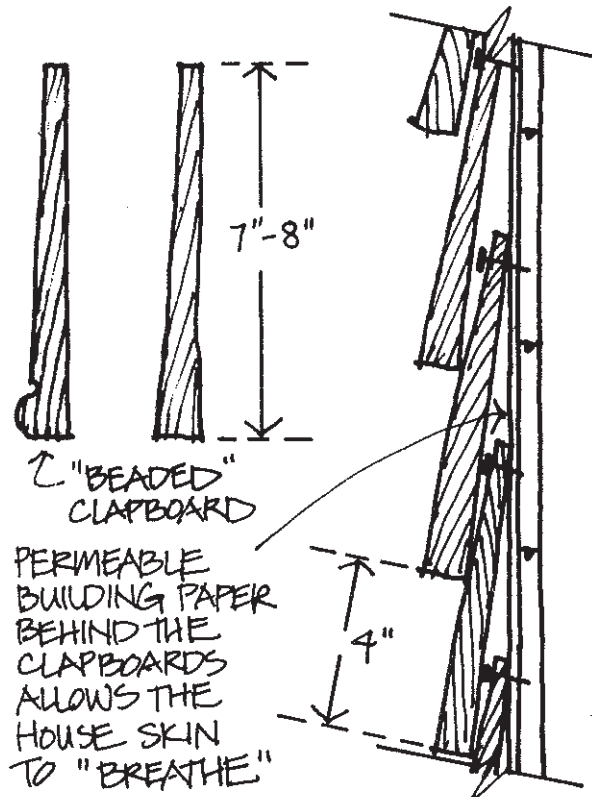


fig. 154
Wood clapboards were the most common siding material on early Medford houses. Many have lasted a hundred years. With proper care, they could last another hundred.

most of the modern materials which are sold as a covering surface over wood clapboards can be criticized from a performance point of view. Salespeople for vinyl and aluminum siding and for "perma-stone" types of spread-on materials often try to sell their products as "energy-saving" materials. In all but a few applications this is absolutely false. Vinyl

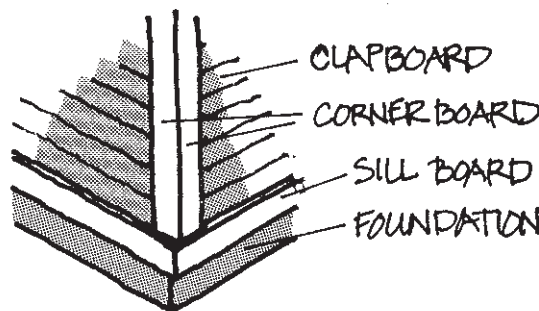


fig. 155
Avoid removing corner and sill boards.

Walls

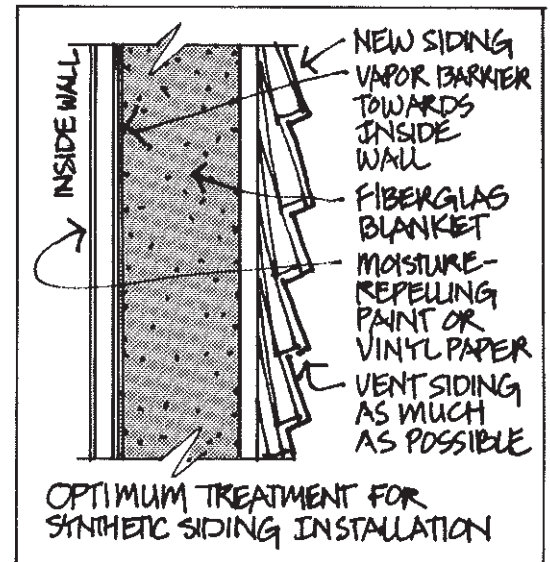
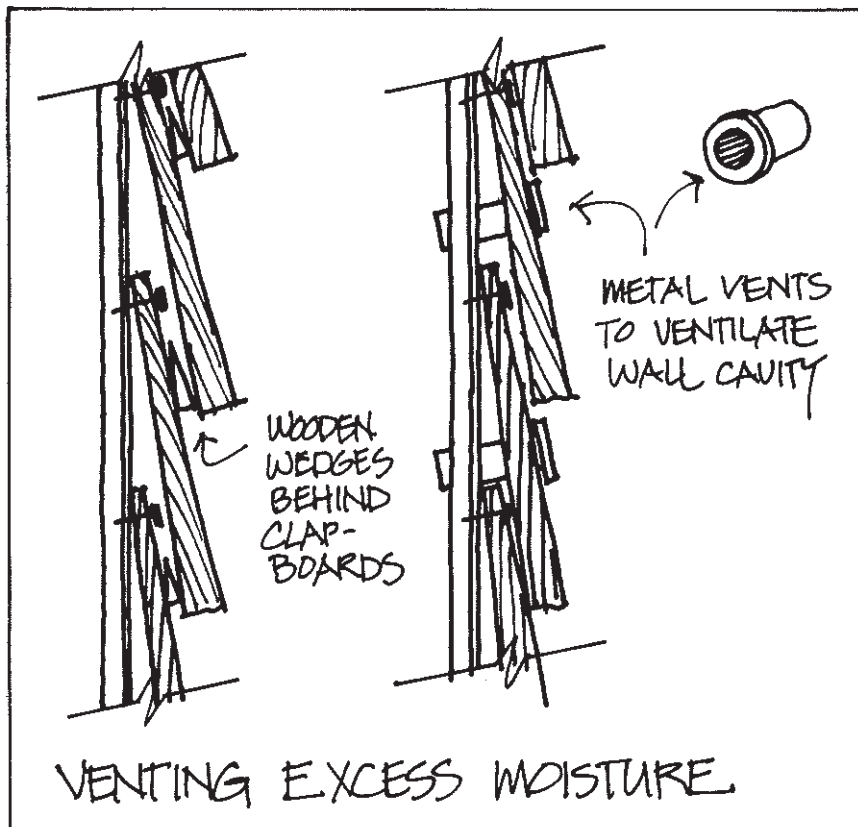
Siding

and aluminum have no insulation value. And a salesmen who tries to tell you that these materials will save energy by cutting down on air infiltration don't know the basics of old house energy performance! ("Tight inside, loose outside" . . . review I.C., Energy Measures.) In fact, vinyl or aluminum sidings will be successful materials only when they are extremely *well ventilated* (vents along the underside of the "clapboards"). In cases where it is possible to install an *interior* vapor barrier and the new siding is well-ventilated, these materials (with proper installation with regard to original details) can be a successful siding material for the old house. However, the homeowner should be aware of pos-

sible dangers of these materials in the event there should ever be a fire in the house. Many fire-fighting officials believe that vinyl and aluminum siding may intensify a fire or make it more difficult to control. And vinyl releases toxic gases during combustion. "PermaStone"-type materials can *never* be successful on an old house as it is impossible to adequately ventilate these materials. And once installed, they are impossible to remove.

figs. 156, 157

These measures can help to remedy the problem of excess moisture build-up which can cause excessive paint peeling.



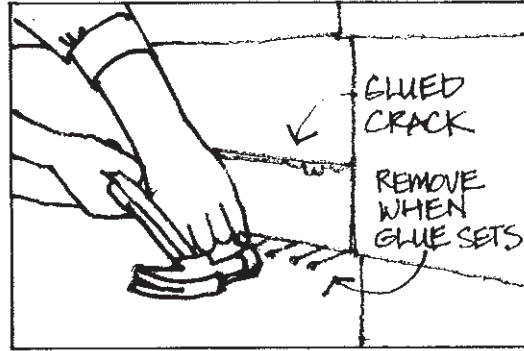
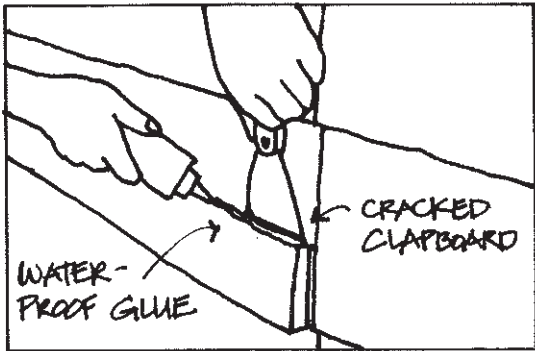


fig. 158

Repairing a split clapboard. Pry out the loose piece and apply water-proof glue to both sides of the split.

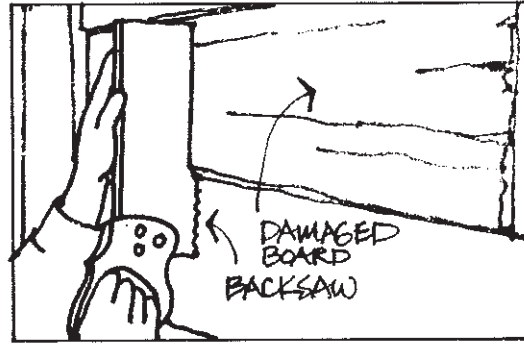
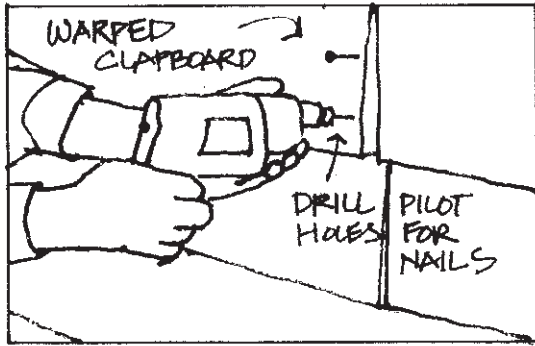
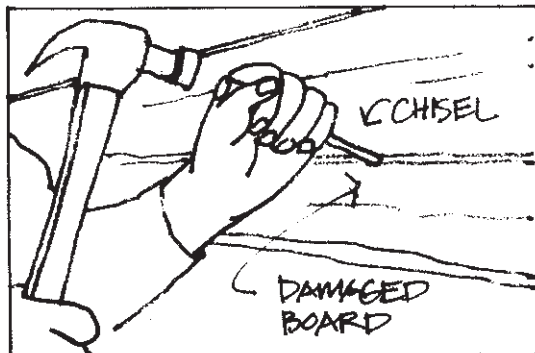


fig. 159

Clamp the split together until dry. Bend driven nails up to close crack. (Be sure to remove when glue sets.)

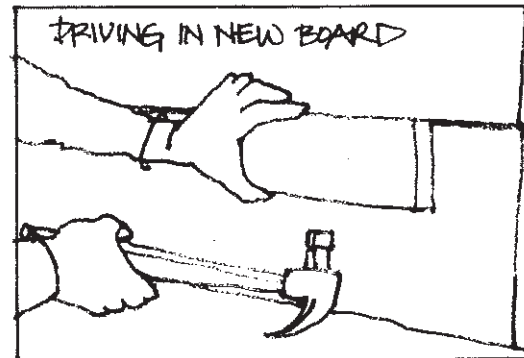
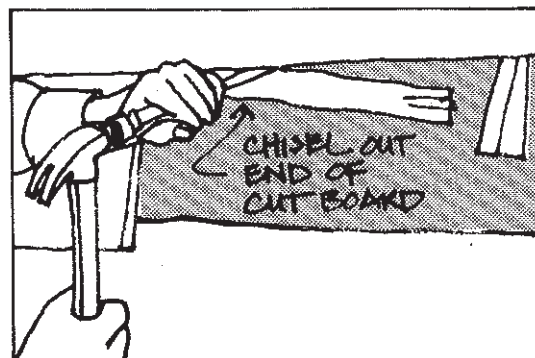
fig. 160

Warped clapboards can be nailed flat. Drill pilot holes to avoid splitting.



figs. 161-165

Replacing a clapboard. First cut the damaged section at both ends, then use a sharp chisel and hammer to remove chunks of the cut board. Insert wedges under clapboard above and use a hacksaw to cut nails through the overlapping board. When you've removed all of the old board be sure to replace any rotted building paper. Once you've driven in the replacement board, nail in place, making sure to countersink nails and fill with putty; then paint.



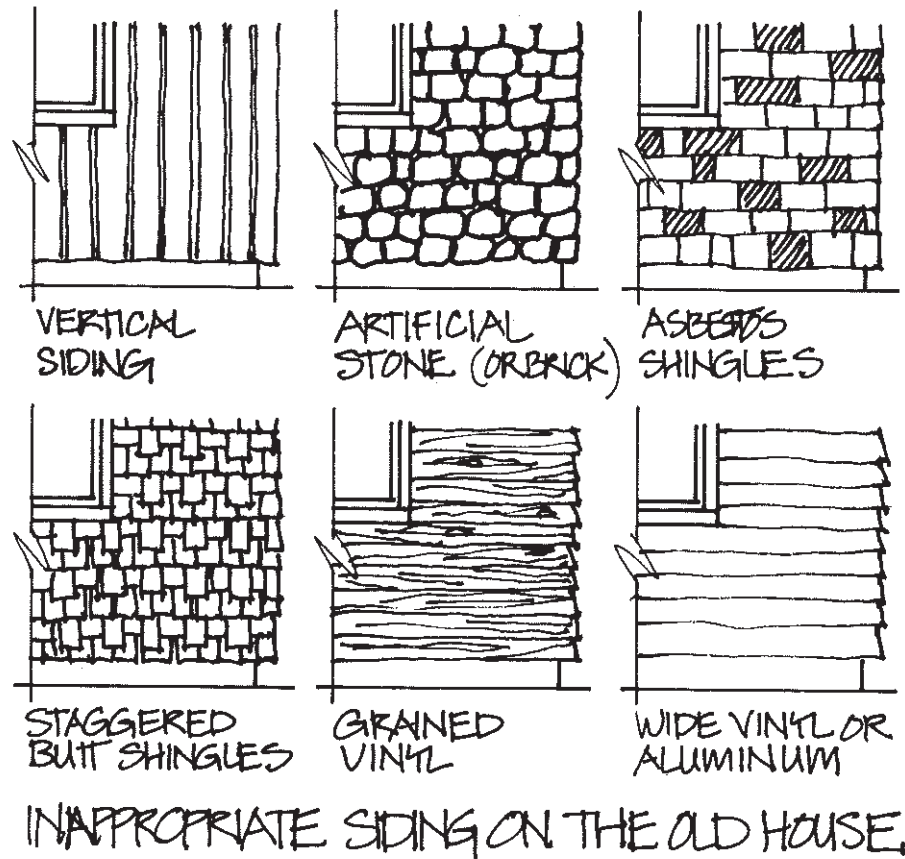


fig. 166
Avoid these materials for
the old house.

Painting

The color of your house establishes its "personality." Although many 19th Century houses were "polychrome" (i.e. many-colored), great care must be taken when using more than two colors on the house. The best way to use color is to choose a neutral matte-finish paint for the body of the house, a contrasting color or lighter (or darker) shade of the main color for trim features, and a touch of bright gloss paint for the door. If you decide to use more colors on the house (Queen Anne, Italianate and Mansard houses often had more), take great care in picking

the colors. It's best to use bright colors in limited amounts just to emphasize the detail on smaller components such as brackets or porch trim.

Painting is one of the best ways to give the house that so-admired new/fixed up look, and if you choose one of the distinctive color schemes associated with your house's style, you'll really be able to boast about your home renovation investment.

help for choosing colors

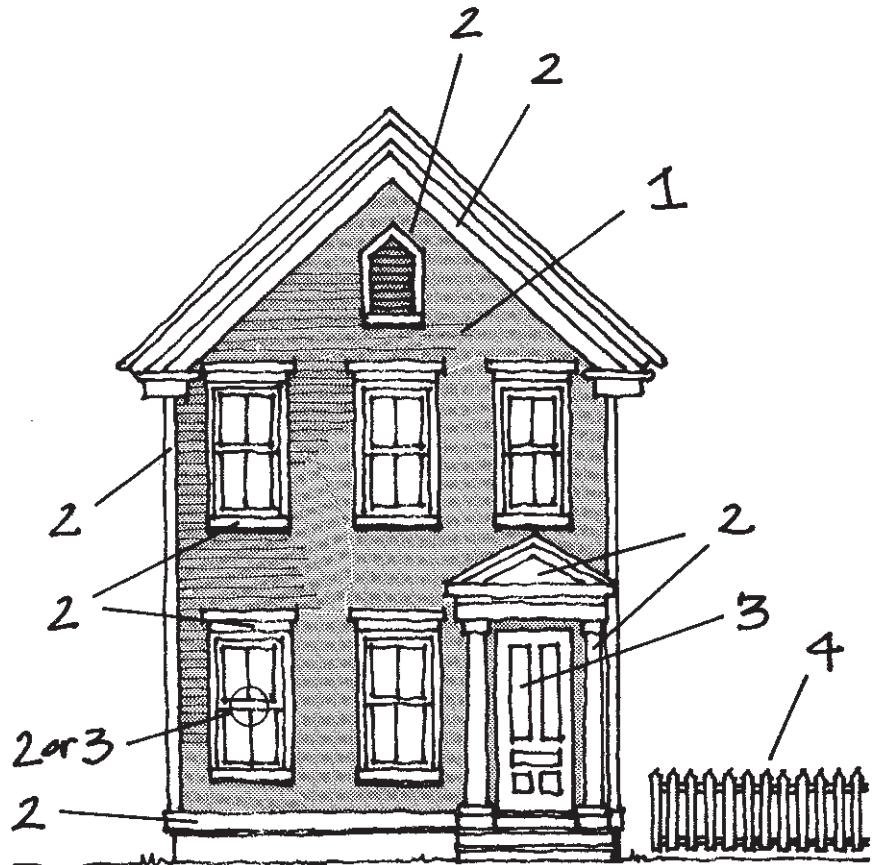
The Cambridge Historical Commission has compiled a list of color combinations associated with 19th century styles, *Paint Colors for Your 19th Century House*. The list is particularly helpful as it refers by number to specific shades of readily-available Benjamin Moore paints. This 20-page publication is available, free, from the Commission at 57 Inman St., Cambridge, Mass. 02139, or call and ask for a copy, 498-9040.

Painting is usually the most common maintenance chore for the owner of a wood frame home. Before repainting your house, determine if any problems exist which could shorten the life of a new paint job. Most defects are the result of poor paint, or poor preparation of the surface and/or poor workmanship.

Blistering indicates moisture under the paint. As dampness comes to the surface the paint above it develops small irregular loose flakes. The problem can often be cured by ventilating the air-space between the outside and inside walls with small ventilator plugs. Another cause may be moisture from a damp leaky basement penetrating wall cavities.

Cracking is caused by insufficient paint adhesion. It generally occurs for one of two reasons: incompatible types of paint were used, or paint was applied to a dirty, greasy, or a previously cracked surface. Paint applied in cold or wet weather is also susceptible to cracking. Never paint if it looks like rain, in direct sun, or extreme cold. Cracking areas should be scraped, sanded and wiped clean before painting.

Proper surface preparation is the key. If there is evidence of paint



problems on your house it is probably best to scrape off the old paint and start fresh. Most old houses have been painted five or more times and the paint may be so thick that moisture can no longer pass to the surface. If the paint coat is not capable of "breathing" it will invariably peel or crack.

Preparing the surface usually involves scraping and sanding. If an area is extensively blistered and cracked, most of the old paint should be removed. Removing old paint is a time consuming task, but will prevent problems in the years to come and extend the life of the paint. There are three removal methods: sanding, burning off with a propane torch, or

fig. 167

Use of color: 1. Main body color, usually matte, neutral. 2. Contrasting trim color. 3. Bright gloss color — use sparingly! 4. White, or same as 1 or 2.

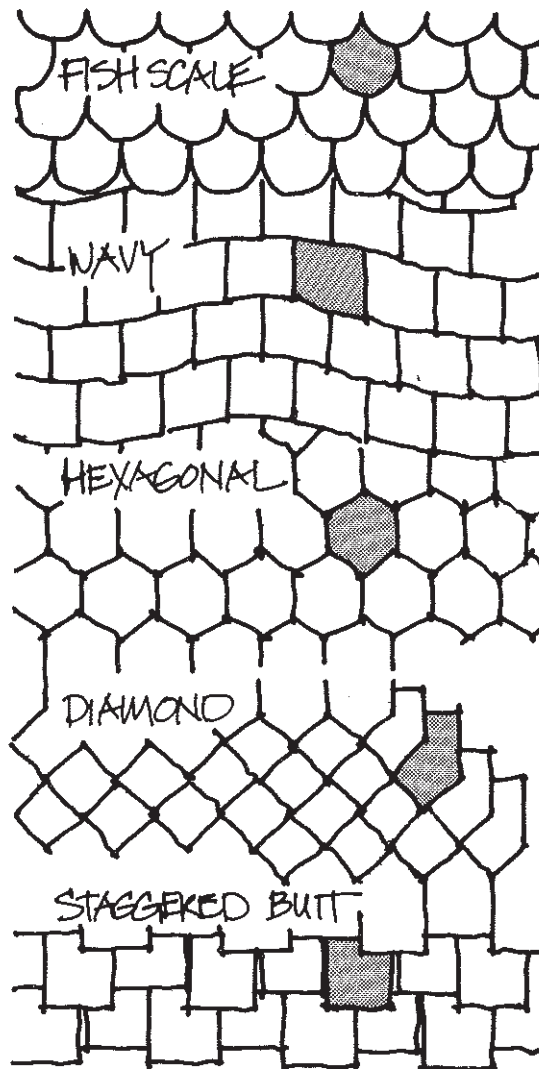


fig. 168
Inventive shingle patterns
frequently seen on
homes built after c. 1870.

chemical removers. When using a torch be careful not to scorch the wood. Remove loosened paint with a putty knife, then scrape and sand the surface.

Before applying the paint other routine maintenance chores may be necessary. Don't skimp. Caulking exterior joints provides added protection and will prevent moisture penetration.

When the building is ready for a new coat of paint, apply a coat of primer first. This will condition the surface and is recommended for older buildings. Use only a good grade of well-known house paint. Always use an oil base paint over an old oil base coat. The oil in the new paint helps the old paint adhere to the surface. Using water base paint on wood that has been painted with an oil base paint usually is unsatisfactory. For doors and porches consider a polyurethane finish in place or varnish or shellac. Prepare the surface by roughing it up with sandpaper or a wire brush before applying the polyurethane. When cracking or peeling and blistering paint are recurring problems, consider using one of the new heavy-bodied opaque stains.

Entrances

Visually the entrance is the most important single feature of the old house. It is usually highly decorative and characterized by fine craftsmanship. For each house style an entryway type developed and became an important part of the buildings' overall design. The size of the entryway

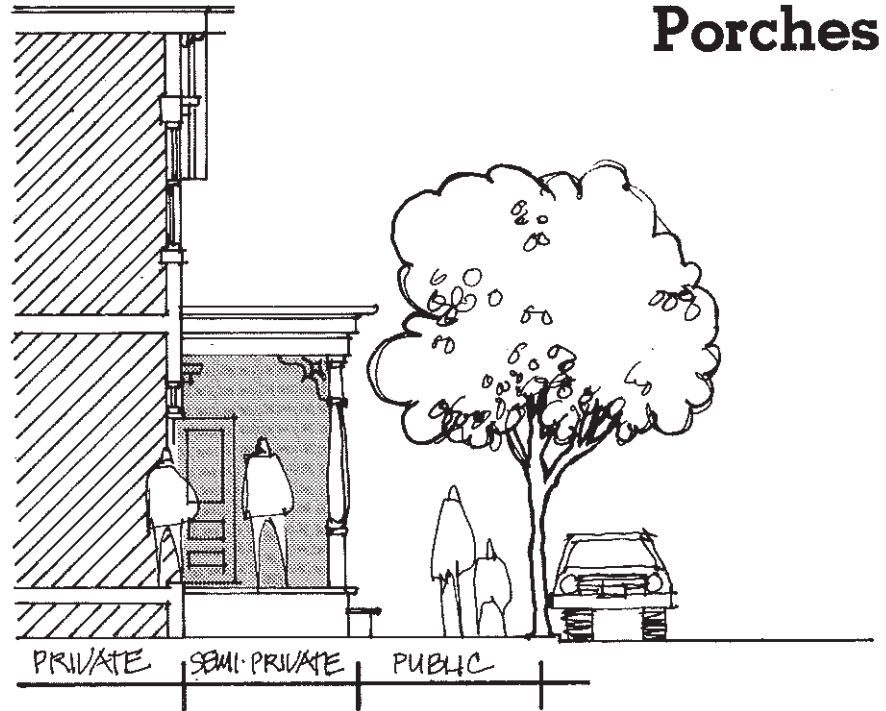
directly relates to the mass of the building. Removing entryway features often destroys the buildings' original design. In renovation, the original door and entrance treatment should be retained wherever possible.

The older house styles invariably had their entrance centered on the interior hall. The door was symmetrically placed in the entrance, often with lights above and to each side. When renovating Georgian, Federal, and Greek Revival homes, be aware of the importance of symmetry. The freer mid to late 19th Century styles allowed for asymmetrical entrances and door placement.

Frames around the door can either be more or less flat, or porches providing a covered entry for the doorway. When renovating these features it is important to retain all the essential parts. Avoid standard

fig. 169, 170

Porches provide a welcoming transition place between the public zone of the street and sidewalk and the private zone of the individual houses.

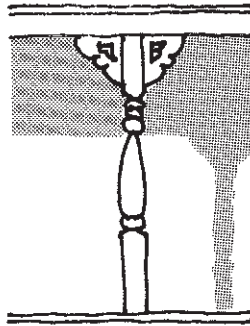
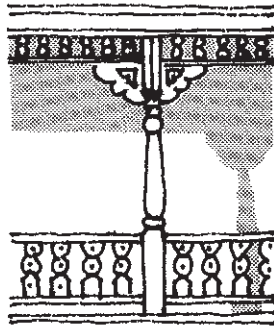


Porches

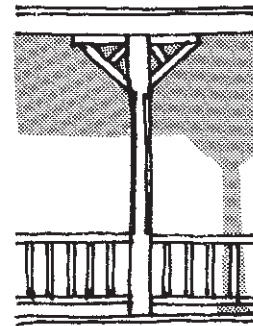
CONSIDER
PORCH
ALTERATIONS
CAREFULLY:

"VICTORIAN"
PORCH →

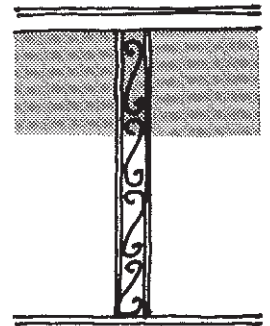
CLASSICAL
PORCH ↘



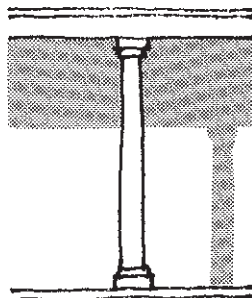
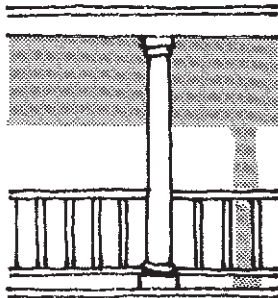
SIMPLIFICATION-
MAYBE



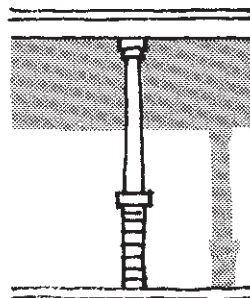
APPROXIMATION-
MAYBE



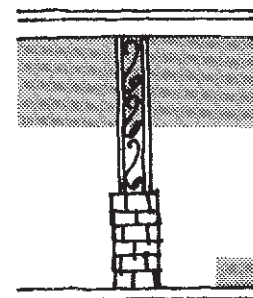
NO



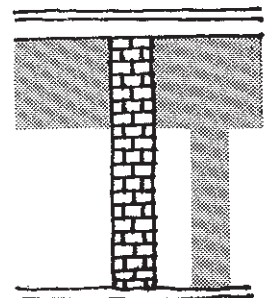
REMOVING RAIL-
MAYBE



NO



NO



NO

ENCLOSING A PORCH: TREATMENTS TO AVOID



fig. 171

Alterations such as these
will destroy the historic
character of the old house.

lumberyard parts.

Porch posts and balustrades have a shape and texture that makes them appealing and that suited the building. If it is necessary to replace original posts or columns on entries or porches with new material, remember that replacements, simplified in detail, will work only if they have the visual weight of the original.

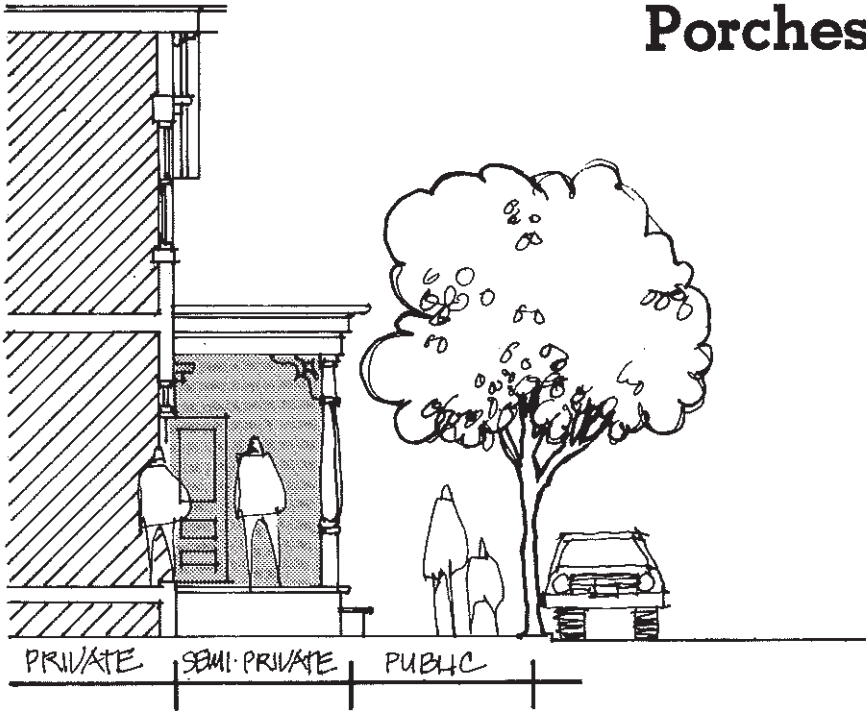
Wrought iron supports currently available do the job structurally, but visually appear weak and inadequate under the substantial "lid" of the roof, and from a distance they appear invisible. The building will be devalued if you replace porch columns with wrought iron trellises, or cover railings with siding so it blends with the wall behind. Avoid enclosing

Porches

The older house styles invariably had their entrance centered on the interior hall. The door was symmetrically placed in the entrance, often with lights above and to each side. When renovating Georgian, Federal, and Greek Revival homes, be aware of the importance of symmetry. The freer mid to late 19th Century styles allowed for asymmetrical entrances and door placement.

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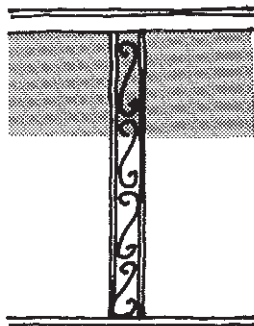
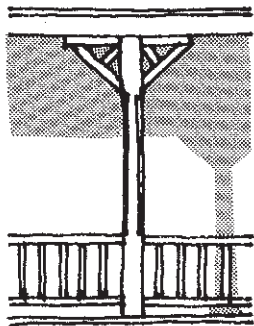
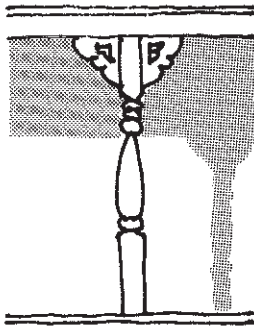
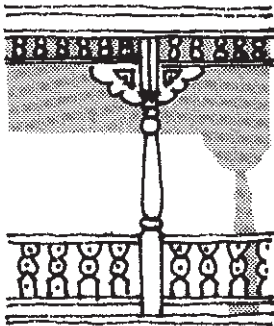
fig. 169, 170
 Porches provide a welcoming transition place between the public zone of the street and sidewalk and the private zone of the individual houses.



CONSIDER
 PORCH
 ALTERATIONS
 CAREFULLY:

"VICTORIAN"
 PORCH →

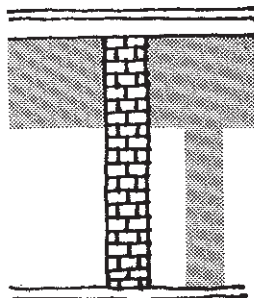
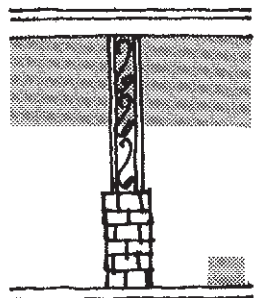
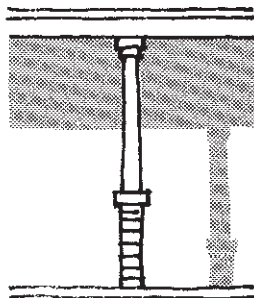
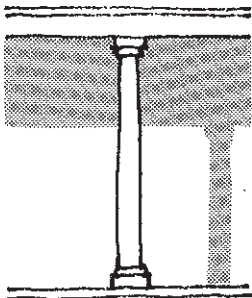
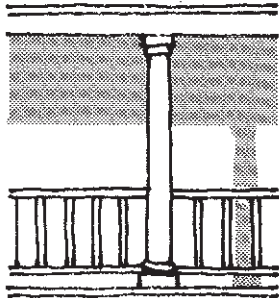
CLASSICAL
 PORCH ↘



SIMPLIFICATION-
 MAYBE

APPROXIMATION-
 MAYBE

NO



REMOVING RAIL-
 MAYBE

NO

NO

NO

ENCLOSING A PORCH: TREATMENTS TO AVOID



fig. 171

Alterations such as these will destroy the historic character of the old house.

lumberyard parts.

Porch posts and balustrades have a shape and texture that makes them appealing and that suited the building. If it is necessary to replace original posts or columns on entries or porches with new material, remember that replacements, simplified in detail, will work only if they have the visual weight of the original.

Wrought iron supports currently available do the job structurally, but visually appear weak and inadequate under the substantial "lid" of the roof, and from a distance they appear invisible. The building will be devalued if you replace porch columns with wrought iron trellises, or cover railings with siding so it blends with the wall behind. Avoid enclosing

ENCLOSING A PORCH: A GOOD SOLUTION

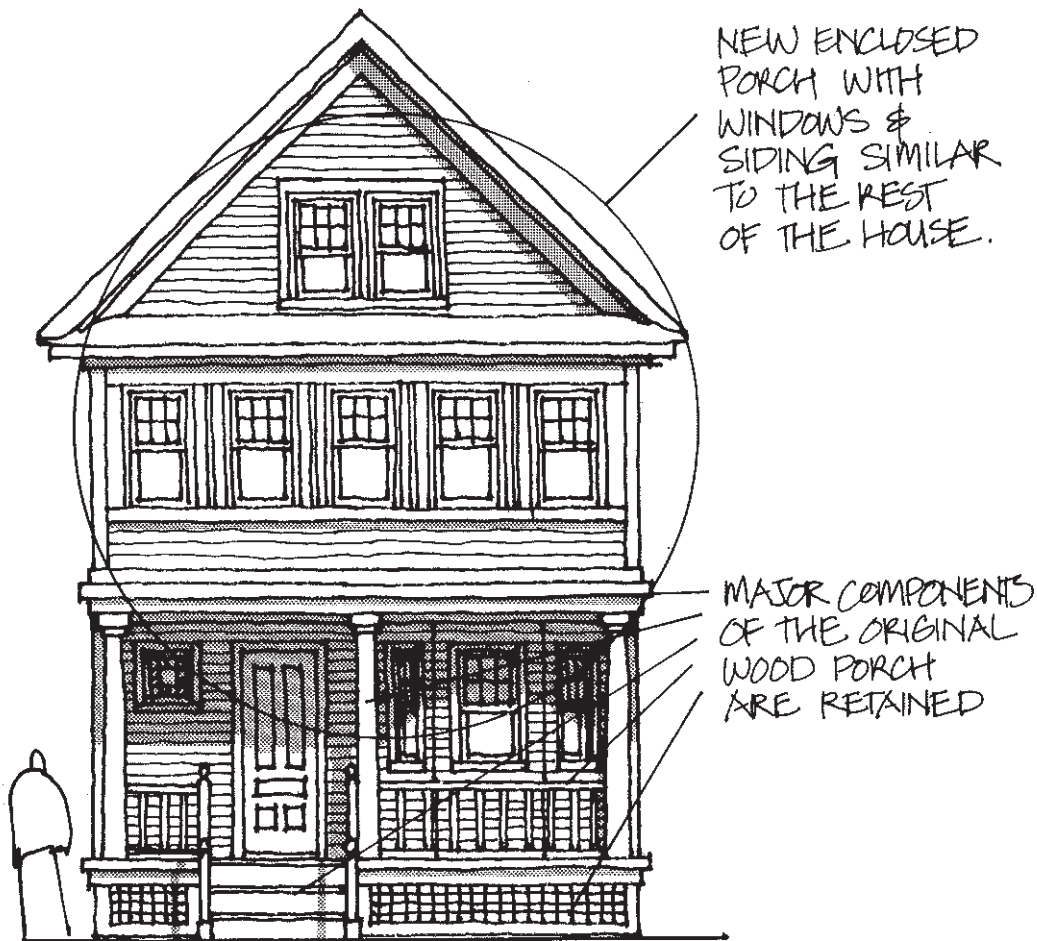


fig. 172

As this drawing illustrates, it is possible to make alterations to the old house without destroying its character.

porches in a manner that destroys that intended appearance.

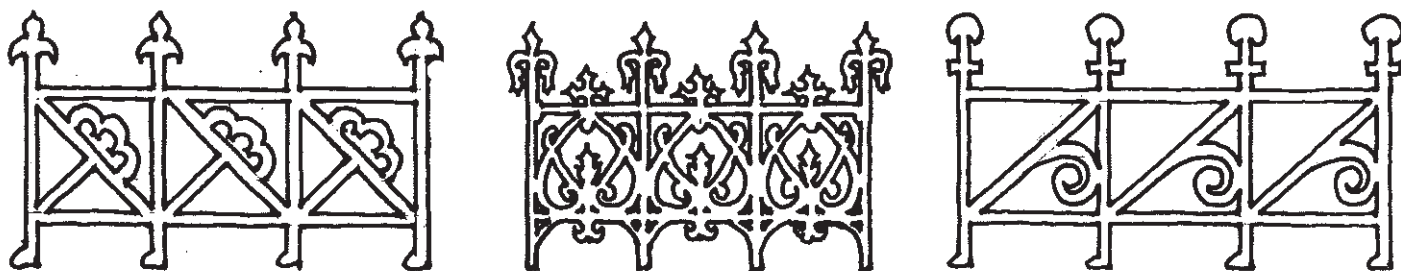
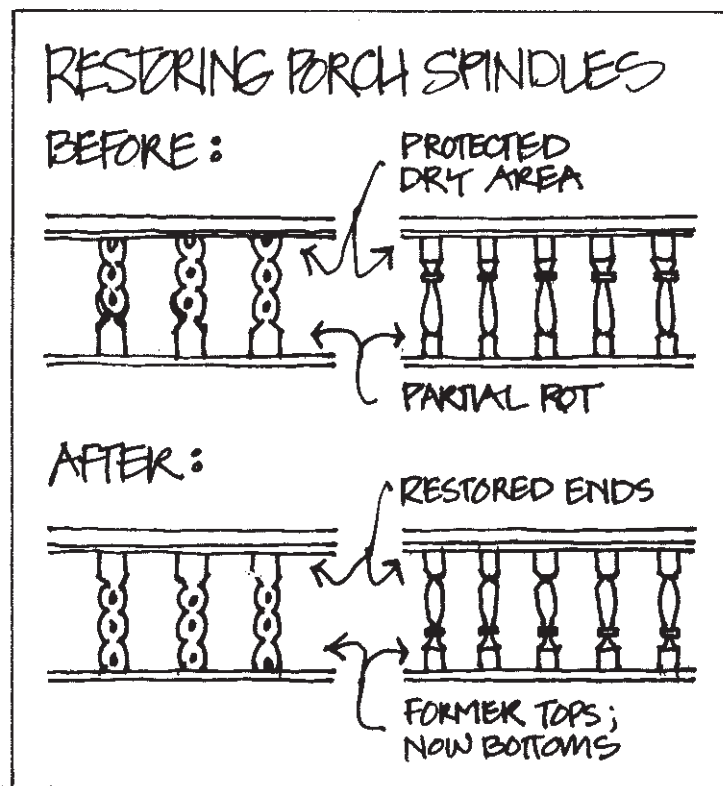


fig. 173

Inventive 19th C. roof cresting patterns. Cresting looks like a little fence running along the roof top edge, and was made of wrought or cast iron. Unlike wood, iron trim is very expensive to replace. If you have some, cherish it!

fig. 174

Treat partially rotted ends with wood preservative before reinstalling. This technique is best done when the spindles are almost symmetrical — so there will be little visual change.



Wooden trim

"Trim" refers to the ornamental details applied to a house such as cornices with their dentils, frieze or bracketwork, cornerboards, finials, pendants, bargeboards, window and door casings.

Trim elements should be properly maintained to prevent loss through deterioration. Loose trim can be re-fastened. Missing trim can be duplicated with a portable jigsaw and drill. If you cannot duplicate a piece

exactly, match the size and shape of the original. Remember that seemingly complex details can be built up from simple pieces.

Waterproof synthetic materials can be used to preserve and recondition partially rotted wood details and ornaments. Epoxies, polyesters and other synthetic resins can be used in filling and shaping, repairing details, and building up partially rotted areas of your house. Some



resins allow partially rotted wood to regain its strength through impregnation. If you cannot redo parts of the trim yourself, a local carpenter may be able to repair or duplicate it.

When economy does not permit keeping all the original details which are in poor condition, the second best course is to simplify details while maintaining original dimensions. A corner board or carved

pilaster can be replaced with a simple wood member of the same size. Remember to make a sketch or photograph of any original details before they are removed. Metal and plastic materials are inappropriate for replacing these features on older houses.

fig. 175

Avoid removing cornice and window trim.

CORNER & SILL BOARDS:

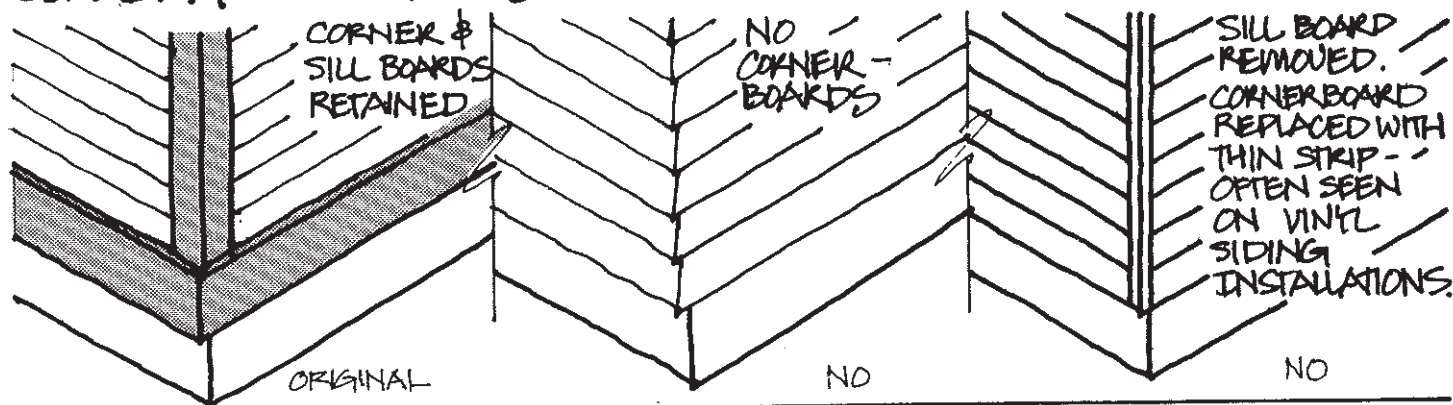


fig. 176

Do not remove edge trim boards when residing.

fig. 177
Classical wood trim features.

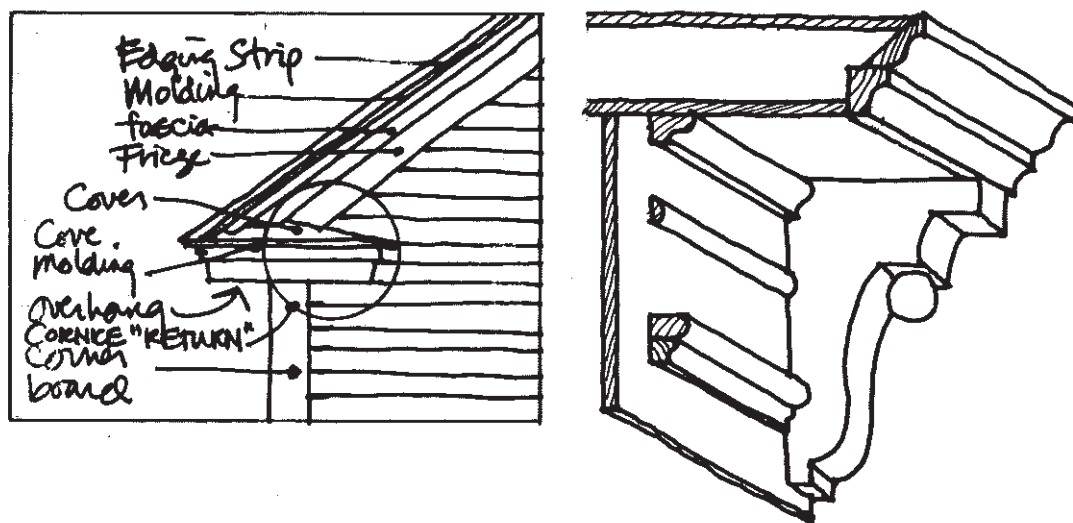


fig. 178
Seemingly complicated wood trim features can often be built up from readily-available wood pieces.

Doors

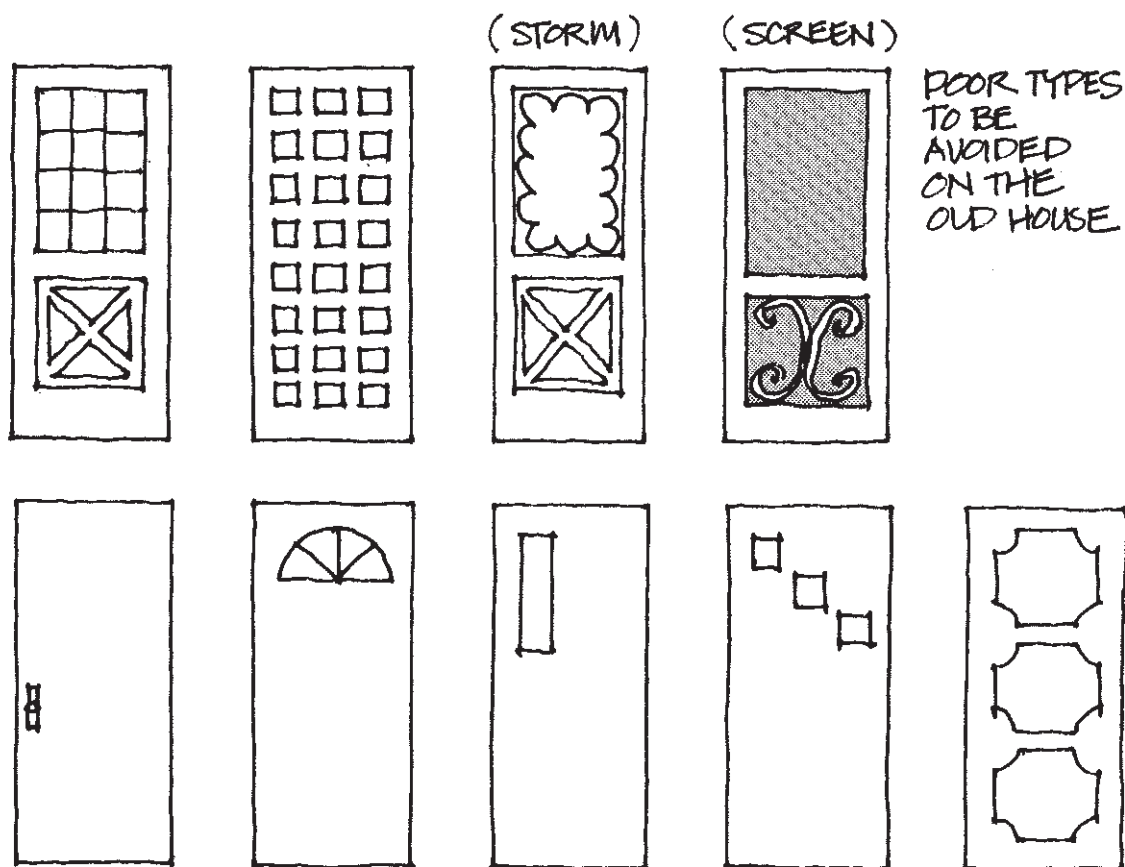


fig. 179
Modern door types — not for the old house!

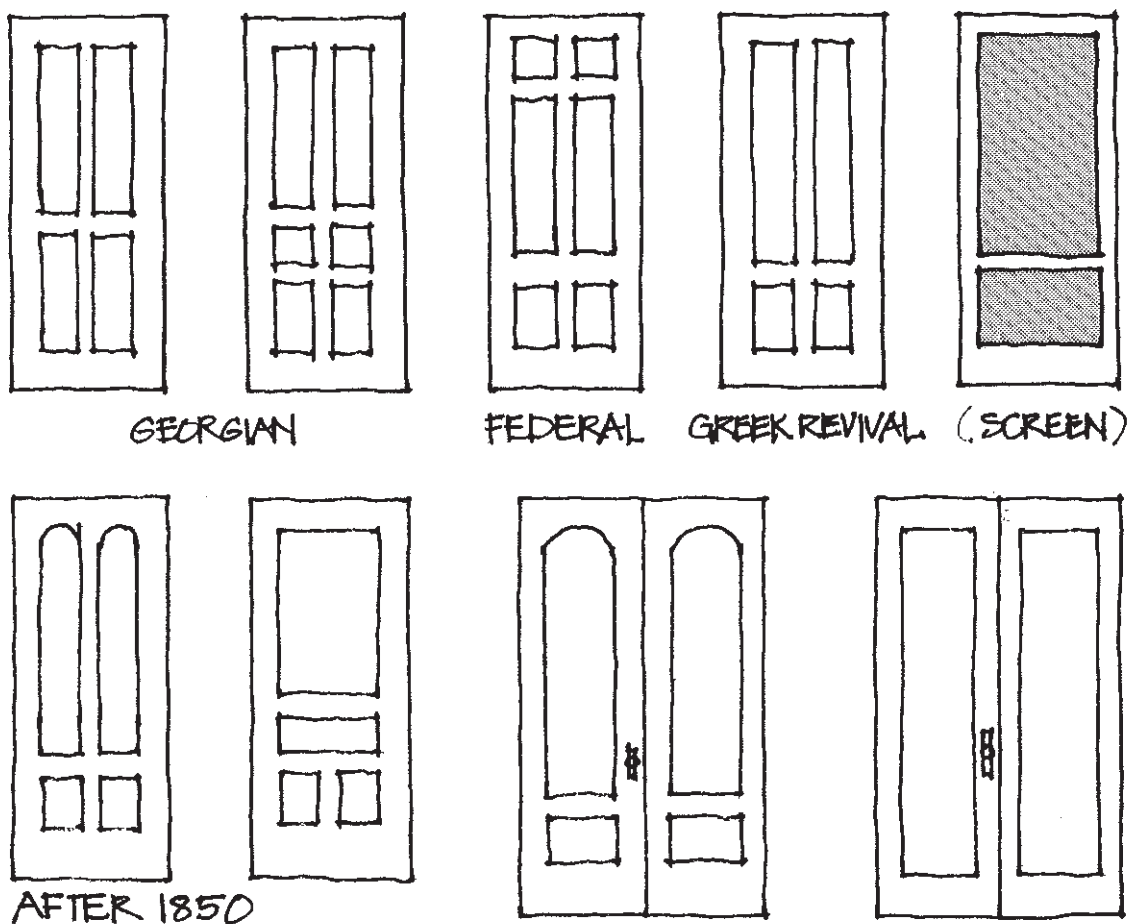


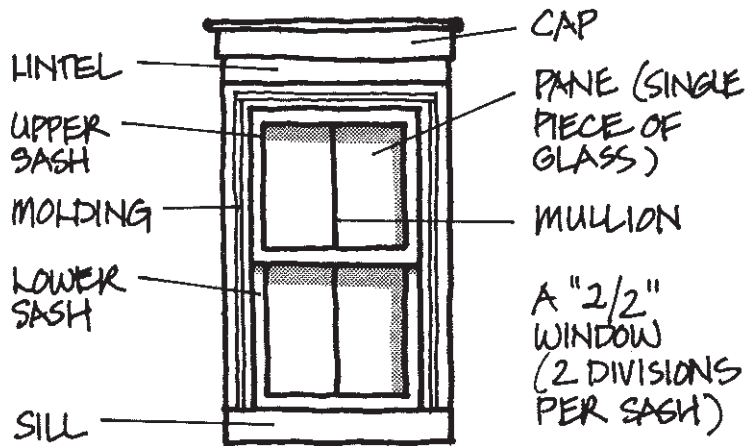
fig. 180
Some of the doors found
on early Medford houses.

The design of doors is one of the most distinctive features of the styles of early Medford houses. Georgian and Federal doors were usually six or eight-paneled; Greek Revival four-paneled. Doors on houses built after the first half of the 19th Century exhibited a greater variety of design, although typically they were multi-paneled, often with glass set in one or more of the panels. It is always best to refinish an original door rather than replace it. The old-fashioned looking "colonial" doors readily available today are generally not authentic duplications of early doors, and would not be appropriate on houses built after c. 1775 anyway.

Early doors are often taller or wider than the standard size doors available today, and replacing an old door with a modern stock door would require that the proportions of the original opening be altered. This can be an expensive process, and will spoil the historic entry. If the original door is beyond repair, or missing, and a replacement cannot be found, investing in the building of a custom door to match the original should be considered instead of altering the opening.

Old heavy wooden doors are a good investment, and if fitted with weatherstripping have very good insulating value.

PARTS OF A WINDOW:



Always retain the existing window opening. Windows have a proportional relationship to the structure as a whole and altering the size will destroy the scale and the proportion of the building. Windows are inappropriately blocked-down for a number of reasons, the main one being that modern sash does not fit the tall windows found on older homes. Instead of filling in the opening, try to find the proper size sash or have it made-to-order. New ceilings also cause window problems when they are hung below existing window heads. The effort should be made to keep the new ceiling above the top of the window opening, or to slope up the ceiling at the outside wall to meet the top of the window opening.

The number of panes of glass in a window sash vary with the building style. Only the earliest Colonial homes (none of which exist in Medford) had diamond leaded pane windows. Pre-1850 windows were usually 12/12 or 6/6 sash. After 1850 window types included 2/2, and after 1860 1/1 sash were introduced. After 1875 variations such as 12/1 were popular. In each building style a range of win-

Windows

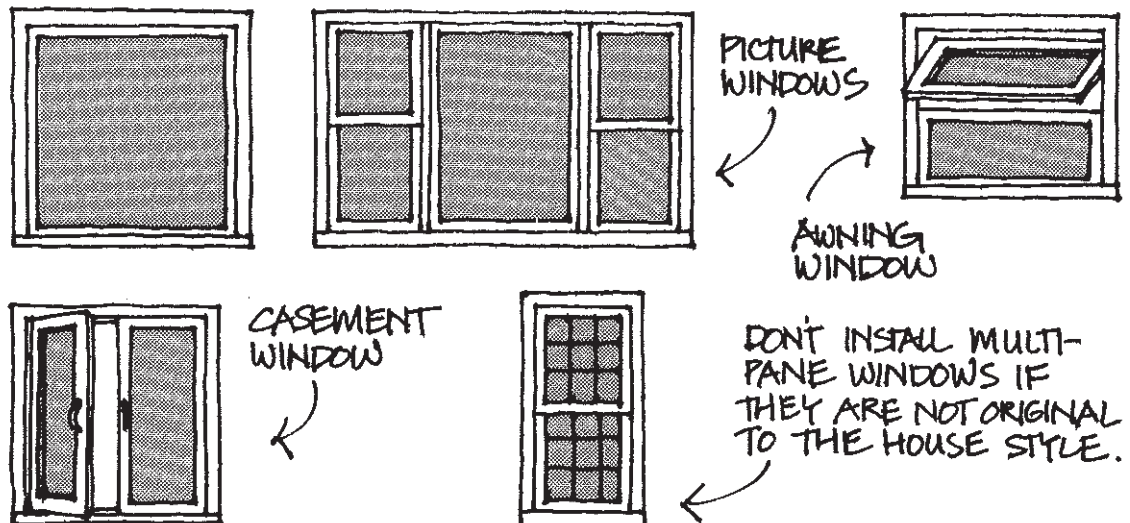
fig. 181

Parts of a window.

Windows are a major feature of a building exterior and vary with each building style. Care must be exercised when repairing or replacing windows. If original windows are removed and replaced with modern types the basic character of the building will be substantially altered. The trim elements surrounding the glass — the sill, lintel, and cap — should always be retained.

fig. 182

Windows to be avoided on the old house.



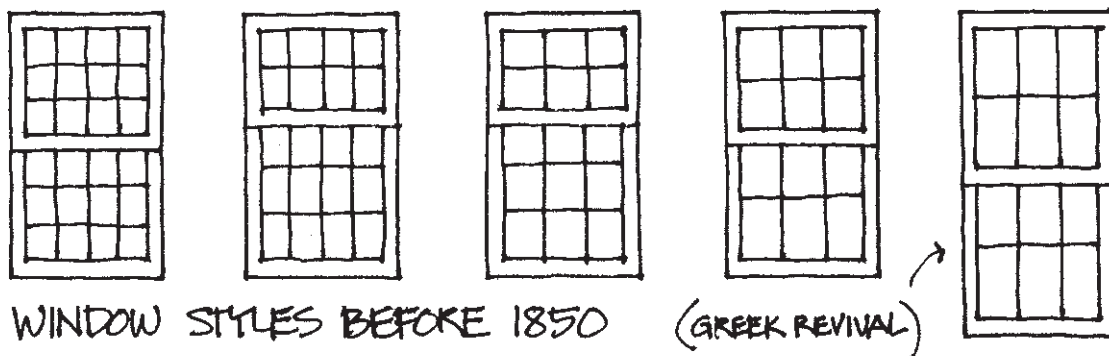


fig. 183
Window types associated with early house styles.

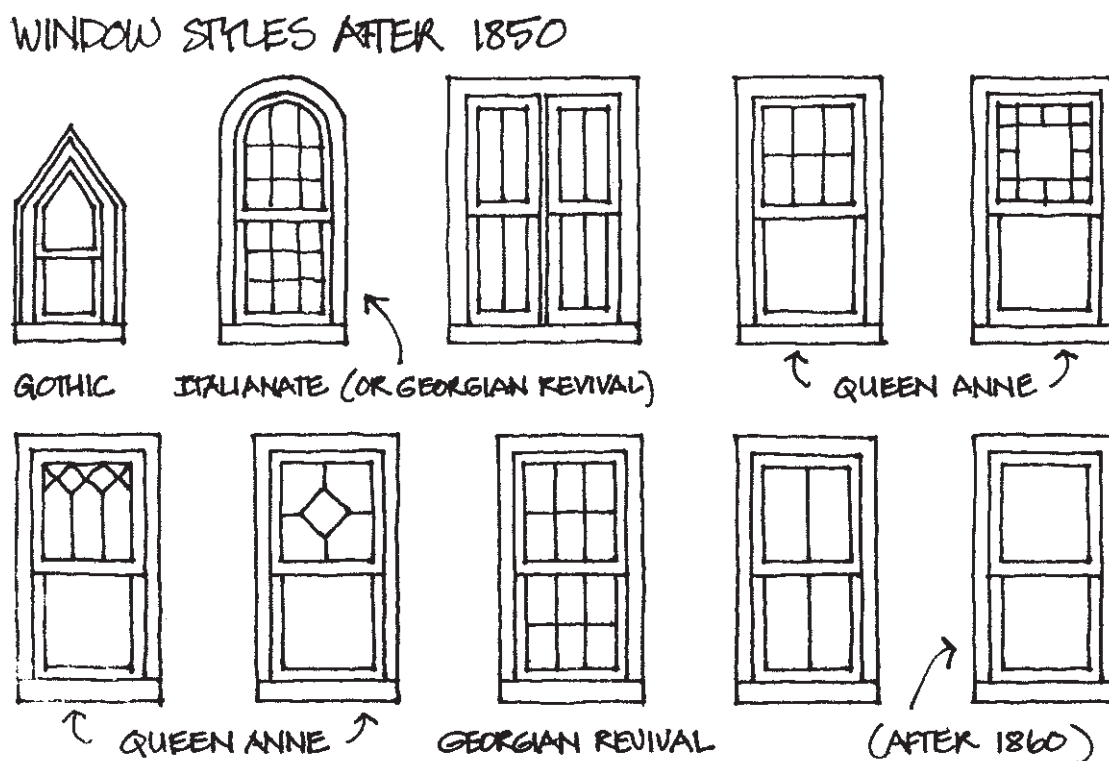


fig. 184
Window types popular after 1850.

dow types are appropriate. Even though your windows may have originally had many small panes, (12/1, 6/1), you will find that it will look all right with a few large panes (2/1, 1/1) if these were available at the time the house was built. As long as a simplified version of the original has the same size and proportion, it can be successful.

Stock window sizes are not appropriate for renovating older buildings if they do not closely match

the original window size and shape. Large picture windows, casements, and bow windows that are currently popular, are inappropriate in most renovations. If a large window is desired, place it on a side of the house where it will not be visible from the street. When selecting replacement windows wood is always preferred as metal sashes have a thinner profile and produce a less desirable appearance.

Shutters



fig. 185

Shutters are a popular decorative feature today for both old and new houses.

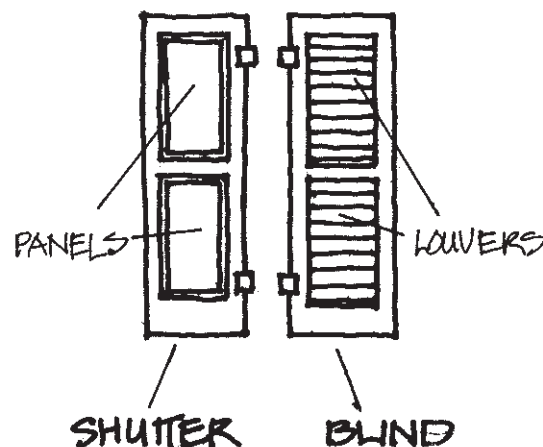
fig. 186

Shutters with louvers are correctly called "blinds".

The terms "shutters" and "blinds" are frequently misused. Shutters have solid wood panels between the rails and stiles, blinds have louvers, either fixed or moveable. Most houses today have blinds, but they are so commonly referred to as "shutters" that we will let this term stand.

Shutters were always an optional feature on a house, and their frequency of use in the past was much less than commonly assumed today. Shutters are appropriate on most houses built before c. 1860, and declined in use between c. 1860 and the beginning of the Georgian Revival style.

Before deciding whether you would like to add shutters to your old house, explore the sides of the window frame for evidence of old hinges to establish if the house ever had them. (Generally, Queen Anne houses did not ever have shutters.) Shutters were never used on places



where it was impossible to pin the shutter to the flat wall behind when open — on dormer windows, mansard roof windows, where windows are spaced too close, or on multiple windows as were used in the Queen Anne style.

Today the appeal of shutters is for their decorative qualities; in the

PROPER SHUTTER INSTALLATION:

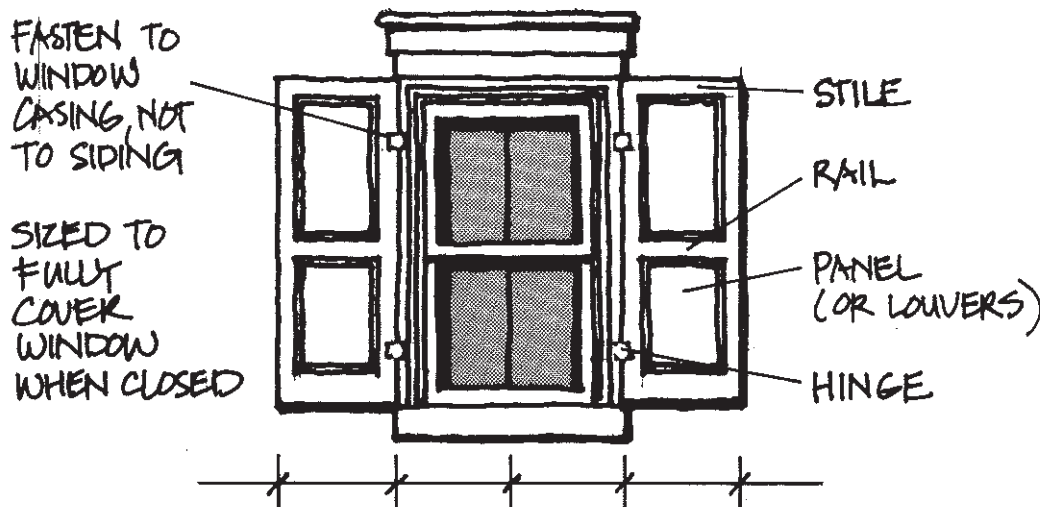
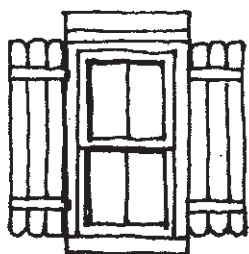
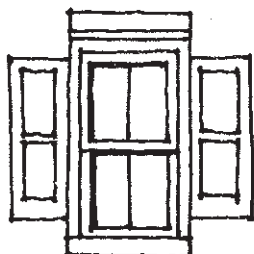


fig. 187

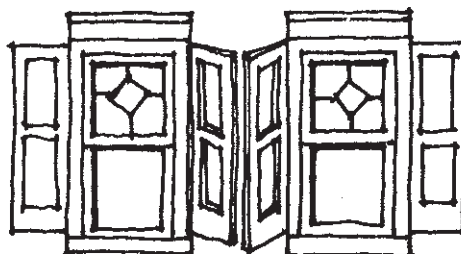
Correctly sized and placed shutters.



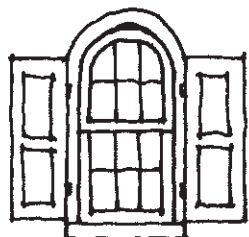
VERTICAL "RANCH
STYLE SHUTTERS



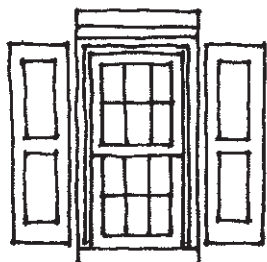
POORLY SIZED
(TOO SMALL)



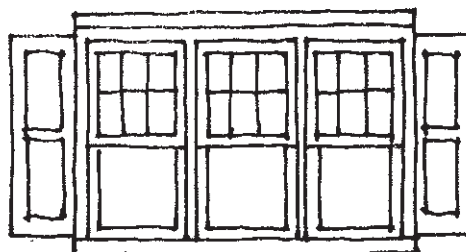
SHUTTERS CAN
NOT LAY FLAT



WILL NOT COVER
WINDOW WHEN SHUT



SHUTTERS
NAILED TO WALL



WINDOWS THAT WERE NOT
MEANT TO HAVE SHUTTERS

past they were added as an energy-saving device and were always installed so that they could work — cover the entire window when closed. If you add shutters today be sure to properly size them. They should be as tall as the full height of the window opening and no taller, and one half the full width of the window opening. Fasten to the window casing, not to the wall surface.

Choose a traditional shutter style with panels or louvers. The more contemporary vertical slat ("popsicle stick") shutters, and the types that have little decorative figures in the upper panel are not appropriate for the old house. Traditional wood shutters will look best. Aluminum shutters should be avoided as they dent easily.

fig. 188

Shutter types and installations to avoid.

Modern additions

fig. 189

Avoid locating air-conditioning units on the front facade of the house.

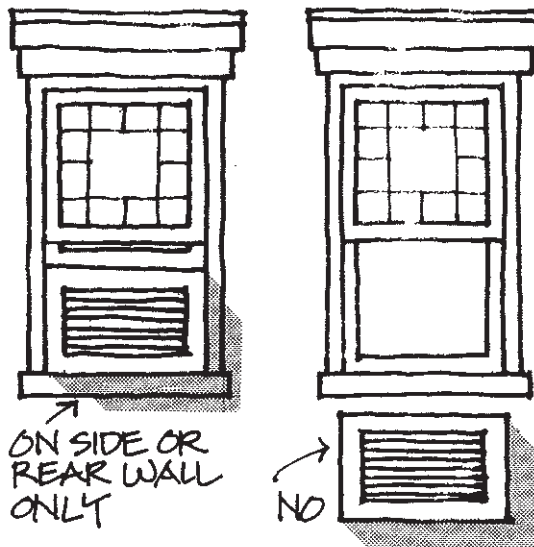
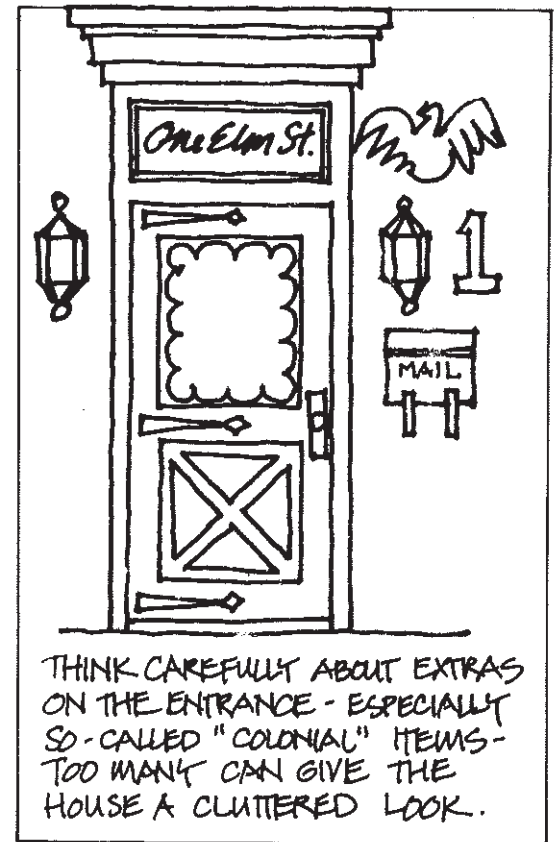


fig. 190

"Colonial" decorative elements are inappropriate on houses built after c. 1850.

Modern conveniences such as television antennas and air-conditioning units can pose a problem for the homeowner who is trying to keep and enhance the historic appearance of an old house. Whenever possible these fixtures should be located on the side or rear. Never, never cut a hole in the wall for air-conditioning units as it will look unsightly, is expensive and time-consuming to do, and will involve difficult flashing work.

Although older houses were once insulated with interior shutters, shades or heavy drapes, today installation of storm windows is the more common method of decreasing heat loss through window openings. Ideally, storm windows should be of the same design as the older windows behind. On older houses with multipane or unusual-shaped windows this can become expensive and impractical, and one-over-one storm windows are typically installed over many multipane window types. Be sure to



match the trim color of storm windows with the windows behind. ("Raw" aluminum windows, when treated with zinc chromate primer, can be painted with any color epoxy-based paint.)

If you have an irregularly-shaped or sized window you may want to consider installing interior plastic storm windows. These do-it-yourself windows can be cut to almost any shape, are available at many home supply stores, and will enable you to decrease the energy loss through the window without spoiling its exterior appearance.

Additions — both small additions to the facade such as lights, mail boxes, eagles, etc., and major additions such as garages, carports or added-on rooms — require careful

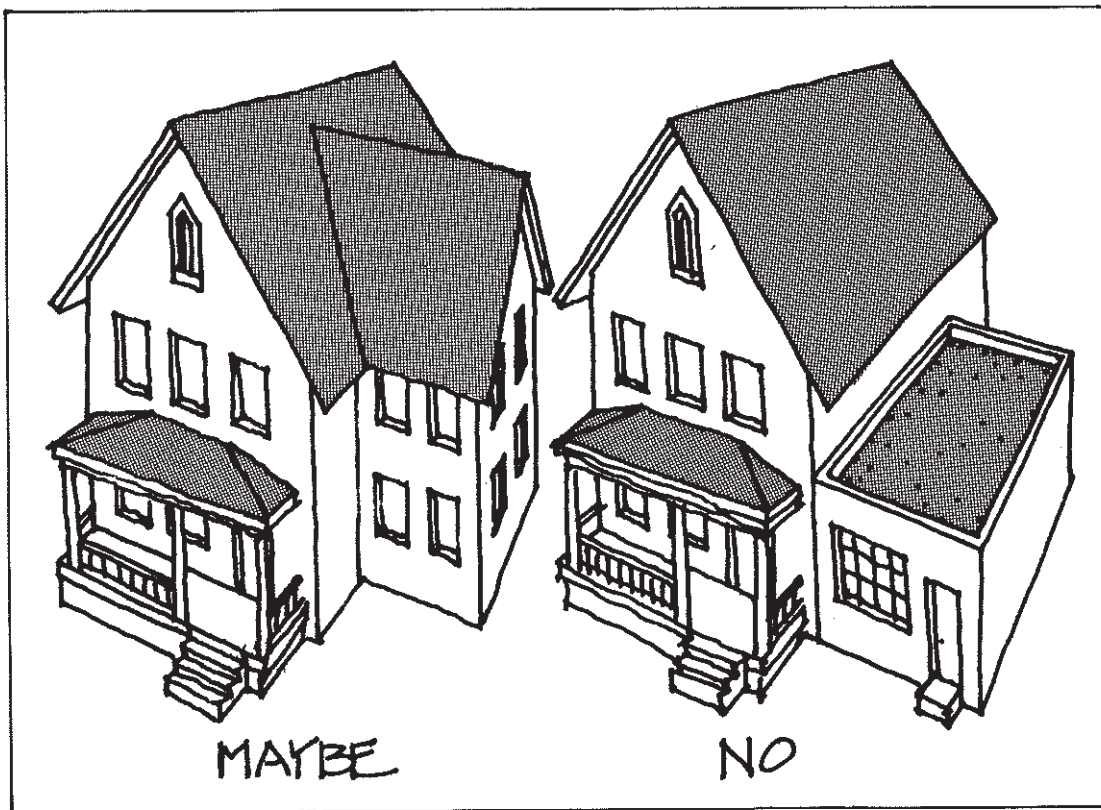


fig. 191

To be successful new additions should respect the original character of the house.

design to be successful on the old house.

Be sparing about adding "ornament" to the house; if possible add only those fixtures which might have been original to the house, and are of the same style as the house. "Colonial" ornaments are not appropriate for houses built after c. 1850.

Major space additions, including porches, should not visually overpower the original house. In materials, roof shape and placement of openings, the new addition should relate to the design of the house. This can be tricky, and you should seriously consider hiring either an architect or contractor who has a proven track-record in designing for older buildings to help you sketch out some possible designs before you embark upon a major addition.

Architects' fees are not as high as is commonly believed, and many architects will be willing to draw up a quick simple sketch from which you, or your contractor, could work to build an addition. You may also be able to find an architecture student who will be willing to work with you for a very reasonable fee. If this interests you, call and inquire about student workers at the Massachusetts Institute of Technology (253-7791), the Harvard Graduate School of Design (495-2571) or the Boston Architectural Center (563-3170). The Boston Society of Architects (267-5175) or the Society for the Preservation of New England Antiquities (227-3956) will be happy to give you the names of architects who specialize in the kind of design service you may need.



Streetscape

fig. 192

A handsome Medford streetscape of late 19th century one-over-one houses with original features retained and enhanced by picket fencing and careful plantings.

Although Medford has a number of fine 18th Century houses, and particularly handsome groupings of Greek Revival houses in its Ship Street Historic District and South Street areas, the hallmark of the city is its many fine tree-lined streets of houses built during Medford's greatest period of growth and immigration; c. 1850-1920. Perhaps few structures along these streets would

be singled out as individual "historic" buildings, yet together these houses combine to make an urban residential environment of exceptional visual, and historic, importance.

The owner of an old Medford house should be sensitive to the design similarities between the houses along his/her street. Major alterations to the house, or removal of important design features, (porches, fences, door and window trim), can

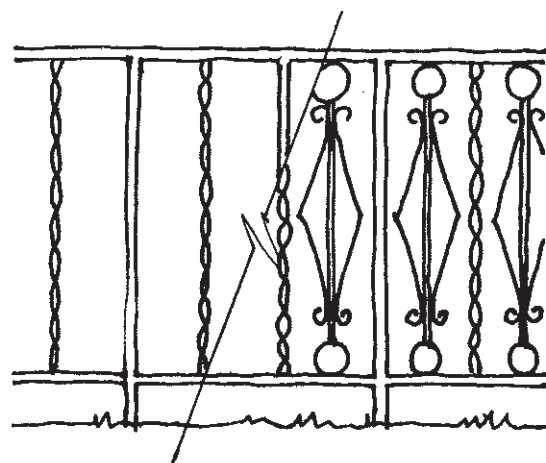
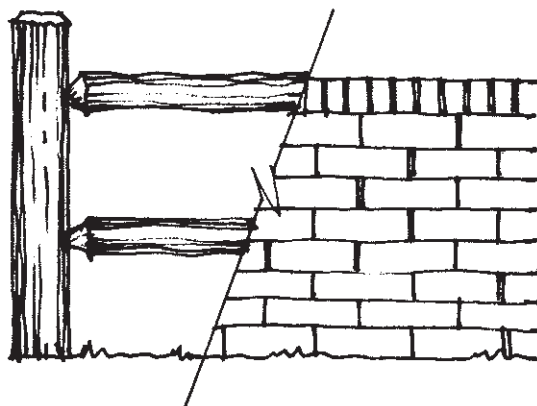


disrupt this important house-to-house design similarity. The use of new materials not originally found on the house, (brick, chain link, aluminum, split-rail, etc.), should be avoided. When you undertake improvements to your house or property, including painting and landscaping, consider your neighbors, and make only those changes which will harmonize with other houses along your street.

fig. 193

The quality of such a streetscape is eroded when original porches, fences and trim features are removed or altered with modern materials inappropriate to old frame houses.

figs. 194, 195
These modern fences
should be avoided for the
old frame house.



III. HELP FOR THE HOMEOWNER

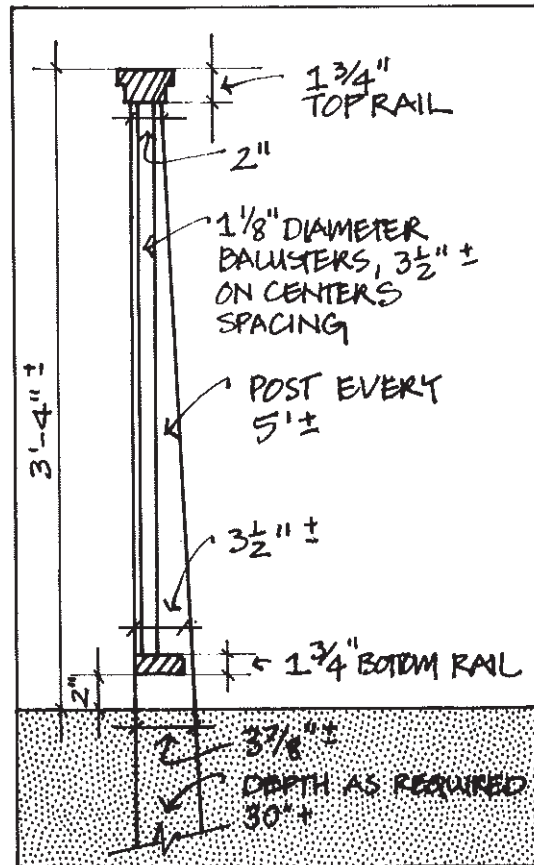
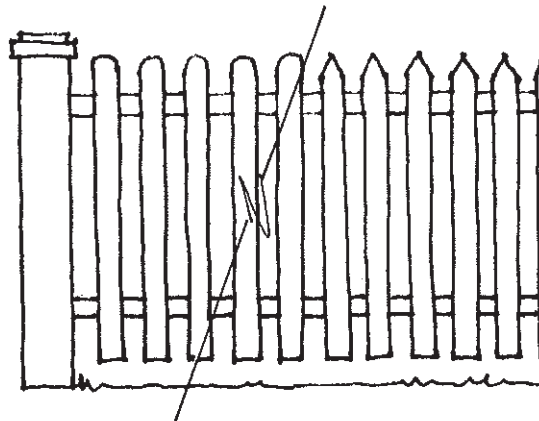
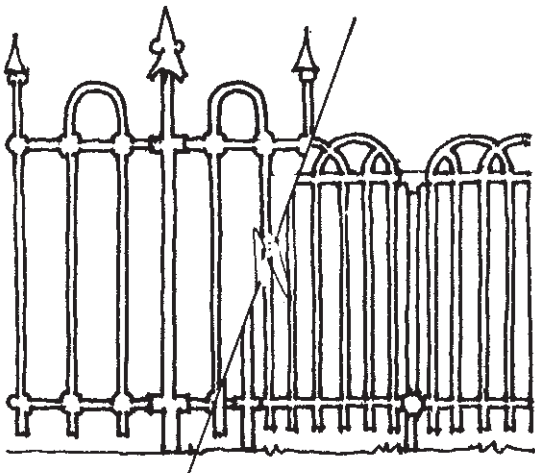


fig. 196

A simple picket fence with top rail appropriate for Greek Revival houses.



figs. 197, 198

Popular 19th century fences.

A. Programs & people in Medford

The OFFICE OF COMMUNITY DEVELOPMENT has Federal funds available for property owners undertaking rehabilitation programs. This financial assistance is distributed through a reimbursement program. Property owners should request an application from the Office of Community Development, complete and return it for review.

Contact: the Office of Community Development is located on the third floor of the Medford City Hall. (617) 396-5500 ext. 52



*Use this space for notes or
phone conversations.*

The MEDFORD HISTORICAL COMMISSION is responsible for compiling a list of the historic assets of the City of Medford and promoting public awareness of these architecturally and historically significant buildings, sites and structures. It is also the commission's duty to devise a Preservation Plan for the protection of these cultural assets. The commission has assembled a selection of relevant readings on home rehabilitation which are available at the Medford Public Library, 111 High Street, in the Reference Section. Commission members are also available to answer questions about appropriate restoration of an older building.

Contact: Gregory Henderson, Chairman of the Medford Historical Commission, 12 Rock Hill Street, Medford, Mass. 02155 (617) 391-4962

The MEDFORD HISTORICAL SOCIETY, located at #10 Governor's Avenue, is an invaluable resource for anyone interested in Medford's history, or who may want to research the history of their home or neighborhood. The Historical Society Building is open on Sundays, 2-4 p.m.

B. Agencies to guide you

The MASSACHUSETTS HISTORICAL COMMISSION is the state historic preservation agency. It is responsible for compiling the state inventory of historic assets and coordinating the National Register program. Every year, owners of properties listed on the National Register are eligible to apply for matching grants to be used for protecting, preserving, rehabilitating or restoring their historic property. In Medford there are over 70 buildings listed on the National Register.

Contact: Massachusetts Historical Commission, 294 Washington Street, Boston, MA 02108
(617) 727-8470

The SOCIETY FOR THE PRESERVATION OF NEW ENGLAND ANTIQUITIES (SPNEA) is the oldest and largest regional preservation organization in the country. Besides operation a large number of historic house museums, it has a Consulting Services Department which offers technical assistance to those seeking to conserve or renovate an older building. (Fees are charged for services.)

Contact: SPNEA, 141 Cambridge Street, Boston, MA 02114
(617) 227-3956

The NATIONAL TRUST FOR HISTORIC PRESERVATION is a membership society dedicated to protecting America's historic environments and informing the public on national and international preservation activities. Members receive a monthly newsletter, *Preservation News*, and a bi-monthly handsome glossy color magazine, *Historic Preservation*. The Trust has a bookstore from which members can order a wide variety of books at discount, and a list of publications available will be sent upon request.

Contact: The National Trust for Historic Preservation, 1785 Massachusetts Ave., N.W. Washington, D.C. 20036 (202) 673-4000.

C. Sources of Old House Components

Antique and "junque" shops occasionally have old doors and windows for sale, and the owners of these shops frequently have opportunities to buy these items in their search for merchandise. Let your local antiques and used items salespeople know what you need, and chances are they can locate these items for you. Be sure to give them the dimensions and style of the doors and/or windows you are looking for.

Capitals cast in a hard composition material which fit on top of wooden materials can be obtained in the Roman Ionic, Greek Ionic, Roman Doric, Modern Ionic, Roman Corinthian, Modern Ionic with Necking, Greek Erechtheum, Scamozzi and other modes from the A.F. Schwerd Manufacturing Co. of Pittsburgh, Pa.

Schwerd and other such suppliers can be reached from well-informed local supply outlets such as Builders Specialty and Hardware Corp., 26 Western Ave., Somerville, Mass. 02144 (Weston Ave.), 666-3000.

Architectural Composition Ornaments can also be obtained from Fischer and Jirouch Company, 4821 Superior Ave., Cleveland 3, Ohio.

A large stock and wide variety of architectural and ornamental supplies saved from old houses in this area which have been torn down can be viewed and purchased from Jorge Epstein at From Old Mansions, 487 Norfolk St., Mattapan, Boston, telephone 296-0737. These include original mantelpieces, doors, mouldings, panelling, posts, fences, chandeliers, lighting fixtures and other innumerable outside and inside decorative elements.

An excellent general source is

American Building Restoration, 9720 S. 60th St., Franklin Industrial Park, Franklin, Wisconsin 53132 (414) 761-2440, also Gillett Restoration, Box 63, Maynard, Mass. 01754 (1-731-4452 — especially Victorian), and Antique Building Supplies, 979 Greenway Dr., Xenia, Ohio 45380, (513) 426-9543. For exterior wood columns and capitals, Bendix Moulding, Inc., 235 Pegasus Ave., Northvale, N.J. 07647; C.F. Morgan Building Products, 601 Oregon St., P.O. Box 244, Oshkosh, WI 54901; Guyon, Inc., 65 Oak St., Lititz, PA 17543, and for mouldings and gingerbread trim, Hallelujah Redwood Products, Star Rt., Mendocino, CA 95460, and The Preservation Technology Group, Ltd., 2230 Q St. N.W., Washington, D.C. 20008 (202) 667-0686. For clapboards, Cohasset Colonial, Ship St., Cohasset, MA 02025 (617) 383-0110.

The above list does not pretend to completeness. The City of Medford and its agencies cannot in any way guarantee that the above suppliers are necessarily the best in these fields and that all they offer is necessarily recommendable. They represent some points of contact with which you may start inquiries. It is frequently better to have an architectural consultant such as those connected with the Society for the Preservation of New England Antiquities, 141 Cambridge St., Boston, 227-8054. A much more complete guide to suppliers is "The Old-House Journal Buyers' Guide" which lists sources for 205 hard-to-find products and services for the restoration, maintenance and decoration of Vintage Houses. The Guide is available with other historic preservation materials at the Medford Public Library.

D. Glossary of architectural terms

- balustrade** A railing with a top rail and spindles or posts installed above the cornice on the outside of a building. (Looks like a fence along the outside roof edge!)
- bargeboard** A decoratively carved board attached to the projecting edges of the rafters under a gable roof, most often seen on houses of the Gothic Revival style. Also called a **vergeboard**.
- bay** The regular external divisions of a building marked by windows or other vertical elements. (A three bay facade.) Also an external projecting feature; (a bay window).
- bracket** A small carved or saw-cut wooden projecting element which supports a horizontal member such as a cornice, or window or door hood.
- capital** The top element of a column or pilaster.
- classical** Pertaining to the architecture of Greece and Rome, or to the styles inspired by this architecture (Georgian, Federal).
- column** A vertical pillar or shaft, usually supporting a member above.
- cornerboard** A narrow or wide wooden vertical board at the corners of a frame building.
- cornice** A projecting molding at the top of a wall surface.
- cupola** A small roof tower, usually rising from the topmost center of the roof ridge. Cupolas often have windows and can have a variety of roof types: gable, flat, hexagonal, etc.
- dentil(s)** Small square blocks running along the underside of a projecting cornice. A *classical* decorative feature often seen on Georgian, Federal, Greek Revival and Georgian Revival buildings.
- dormer** A small window with its own roof projecting from a sloping roof.
- facade** The front face or elevation of a building.
- finial** Projecting ornamental ironwork at top of a gable, spire, or pointed roof.
- frieze** The middle part of the deep flat boards under a *classical* cornice.
- gable roof** A roof with a central ridgepole and one slope at each side. (A gable is the triangular section of wall under the roof edge.)
- gambrel roof** A roof with a central ridgepole and two sloping roof sections at each side.
- hip roof** A roof with uniform slopes on all four sides.
- lintel** A horizontal beam over a wall opening, either decorative or structural.
- mansard roof** A roof with two slopes on all four sides.
- mullion** A vertical divider in a window.
- muntin** The wooden dividing strips between the panes or "lights" in a multi-paned window.
- pediment** The triangular cap over a window or door, or the triangular space formed at the end walls of a gable roof.
- pilaster** A square pillar attached, but projecting from a wall, resembling a classical column.
- portico** An entrance porch.
- quoins** The corner stones of a masonry wall emphasized by size, color, or cutting. In a frame house wooden boards at the corners cut (usually square) and sized to resemble corner stones.
- sash** The frame in which the panes of a window are set.
- sill** The lower horizontal member of a door frame, window frame or wall.
- tracery** Thin curved decorative divider elements between panes of glass in a decorative window. (Most commonly seen in Gothic Revival houses; also seen in the side and transom lights of high-style Federal entrances.)
- transom** A window opening above a door: rectangular, fan-shaped, or elliptical.
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