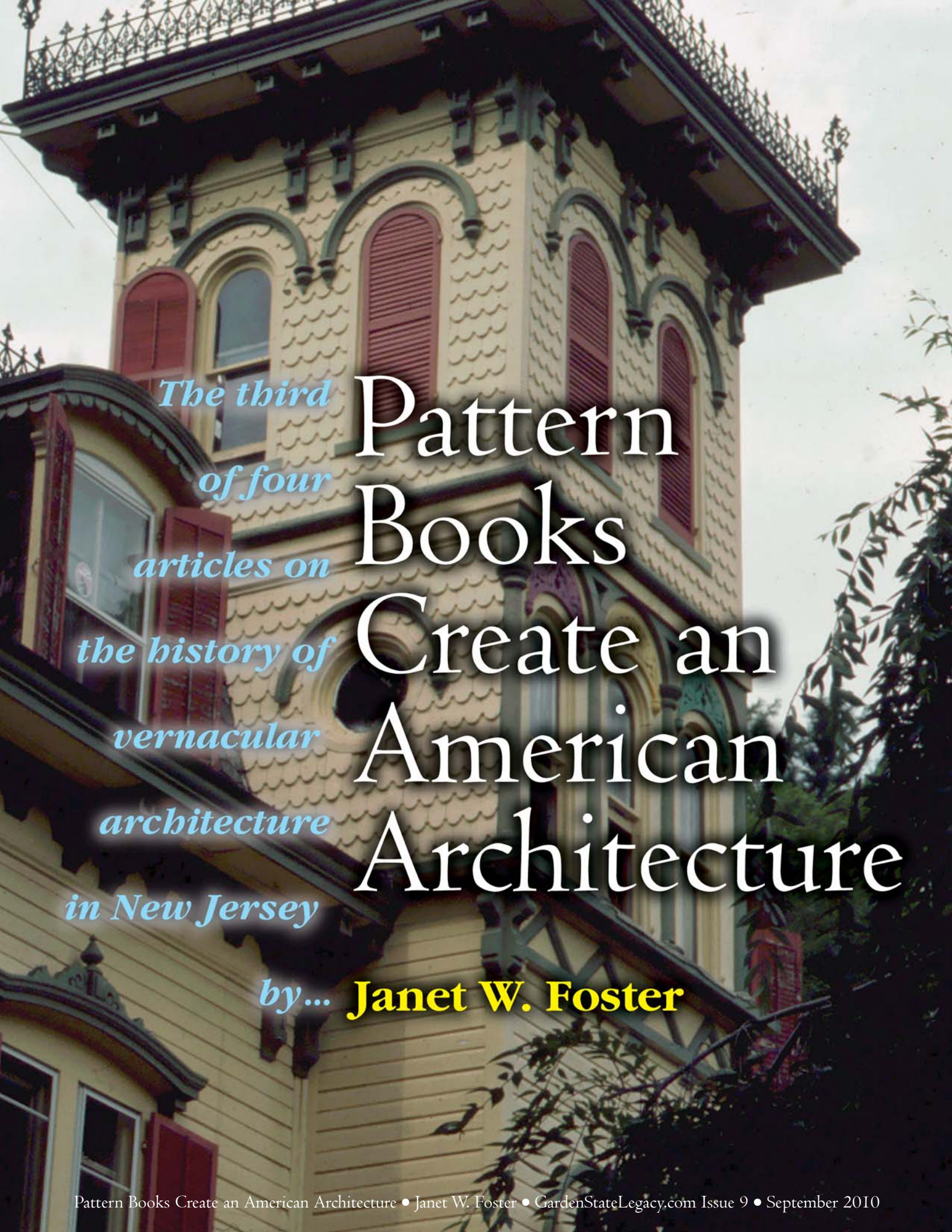


The third of four articles on the history of vernacular architecture in New Jersey

Pattern Books Create an American Architecture

by... **Janet W. Foster**

The vernacular building traditions in 18th and early 19th century New Jersey, and indeed throughout the American colonies, were passed along through masters teaching apprentices, and through the shared vision within communities of what buildings would be made of, and what they would look like. But vernacular architecture, though rooted in traditional craft practice, was not static through time. Rather, vernacular architecture slowly adopted design motifs and details of fashionable architecture. But how did builder and client know about changes in architectural taste absent glossy magazines and design-filled television programs?

Since the 18th century, carpenters and builders learned about what was fashionable in architecture through books. Large, illustrated folios were typically owned by men of means and considerable education; English editions of the famous 16th century Italian architecture treatise by Palladio served as a key element of the library of a self-styled American "gentleman." Other European architects produced folios of their own designs through the 17th and 18th centuries, though always grounded in the classical orders, and often illustrating surviving classical buildings as models of particular details. In order to have the gentlemen's homes as fashionable as possible, these folios would have been shown to the carpenters who created them; they in turn might re-use ideas illustrated there in other works they produced. The illustrations of high-style architecture as shown in architectural books greatly influenced the design and details of buildings great and small, and in the hands of talented craftsman, gave rise to an originality that helped individuals to transcend their builder's training to become, functionally, architects.

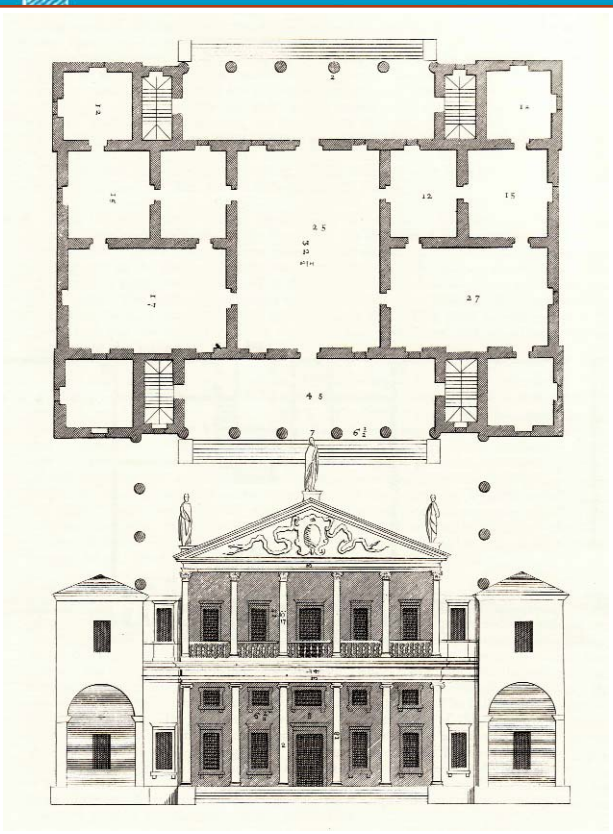


ILLUSTRATION 1: Plate XLII from the second book of Andrea Palladio's *Four Books of Architecture,* published in English, in London, in 1738. *Il Quattro Libri dell' Artchitettura* was first published by the Renaissance architect in 1570. The facades illustrated in architectural folios like Palladio's were influential in the design of formal "Palladian Georgian" houses for the wealthy of the 18th century colonies.

Builders and carpenters also had their own "builder's books"–barely illustrated but dense

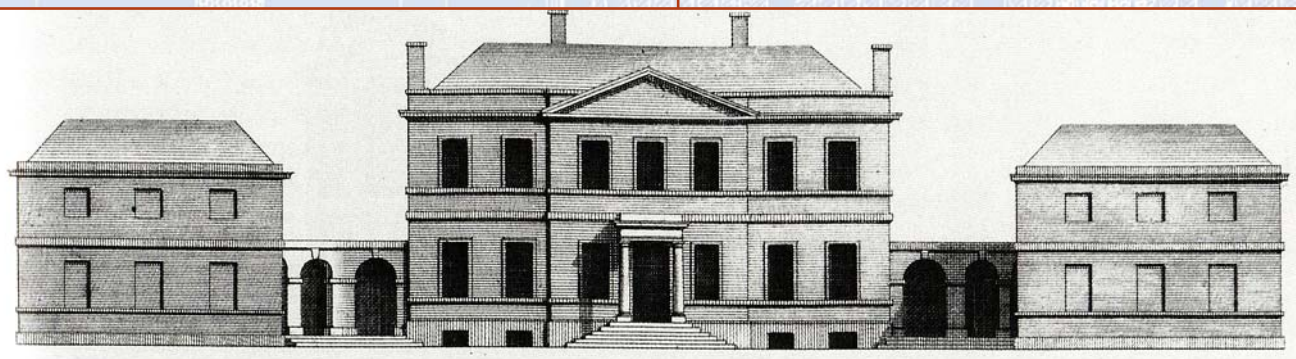


ILLUSTRATION 2: Plate from James Gibbs, *A Book of Architecture,* published in London 1728. Gibbs was an English architect who transformed Palladio's multi-part classically-informed villas into country houses for an English climate. Gibbs' book, a large folio of designs for grand buildings, was known to have been in the American colonies and would have influenced the design of grand houses and civic buildings of the 18th century.

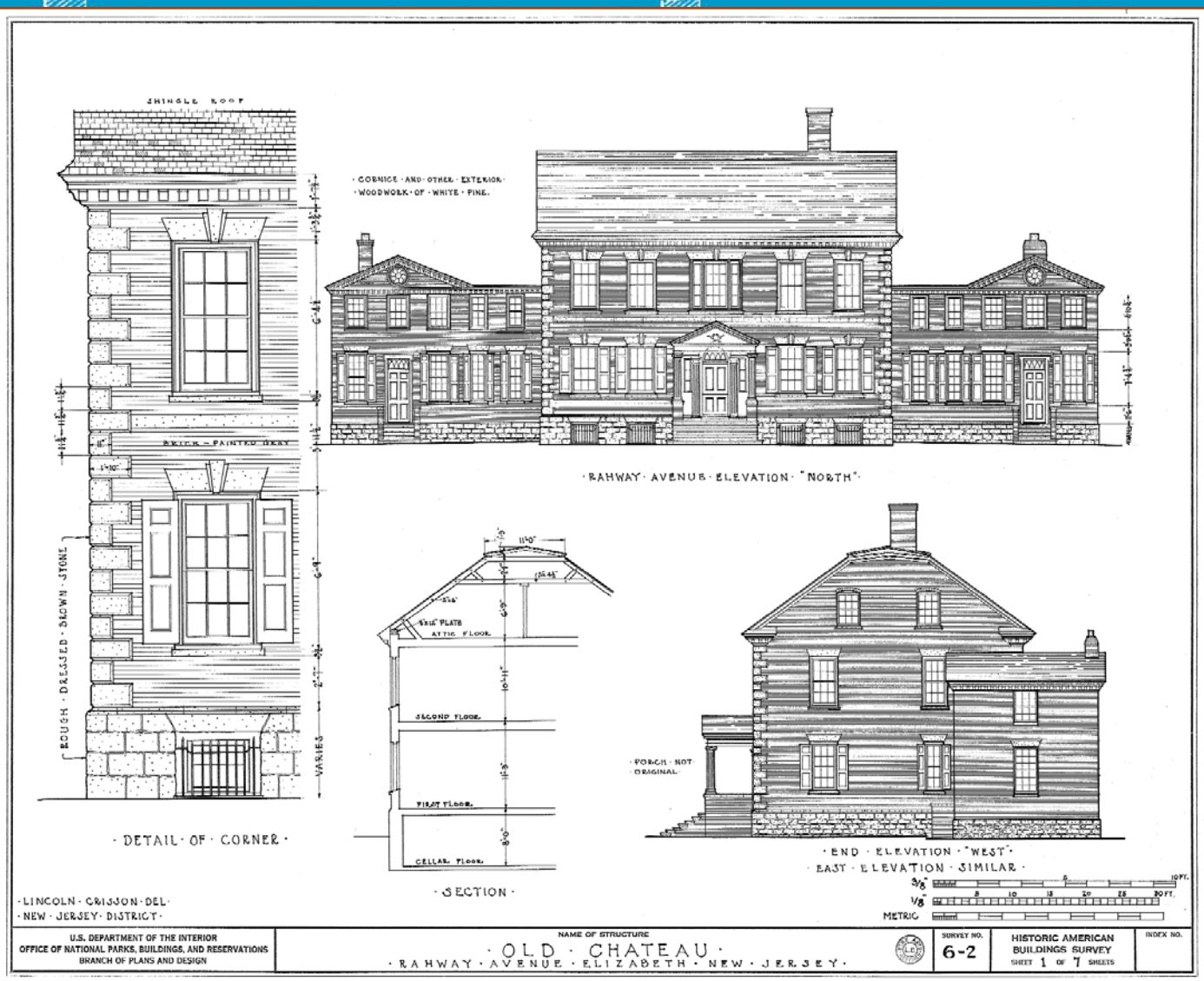


ILLUSTRATION 3: The five-part composition of the impressive house built for Cavalier Jouet in Elizabeth, New Jersey in 1757–60, shows a clear debt to the Palladian compositions rendered in architectural folios. The house is simplified and adapted for construction in colonial America—Palladio's intent would have been for stone or brick stucco-covered to look like cut stone; the Jouet house was brick with stone quoins. But the symmetrical façade, the large center block and symmetrically flanking service wings, and the articulation of a center entry with pediments and other classical motifs from non-domestic architectural sources, shows that the Jouet house was one of many built in colonial America to be informed by the Renaissance master's published designs. Drawing from HABS.

with information on how to calculate the timber needed for a building of a particular size, how to charge for moldings and other decorative trim; and how to calculate the geometry of an arched window opening. Builder's books were "for the trade" and had little or no information on the appearance of buildings. That would be developed out of vernacular tradition, a knowledge of existing buildings and the application of details and design elements found in the architectural folios.

As with so many other things in the arts, the years following American independence were characterized by the pursuit of a new, "American" form–in art, music, literature, and of course, architecture. Much of the "Americanization" of the arts was a response to the different climate and social and economic conditions in the new United States, representing an evolution of European ideas rather than a radical reinvention. So it was in communicating building information. A New England carpenter, Asher Benjamin (1771—1845), put down in book form his

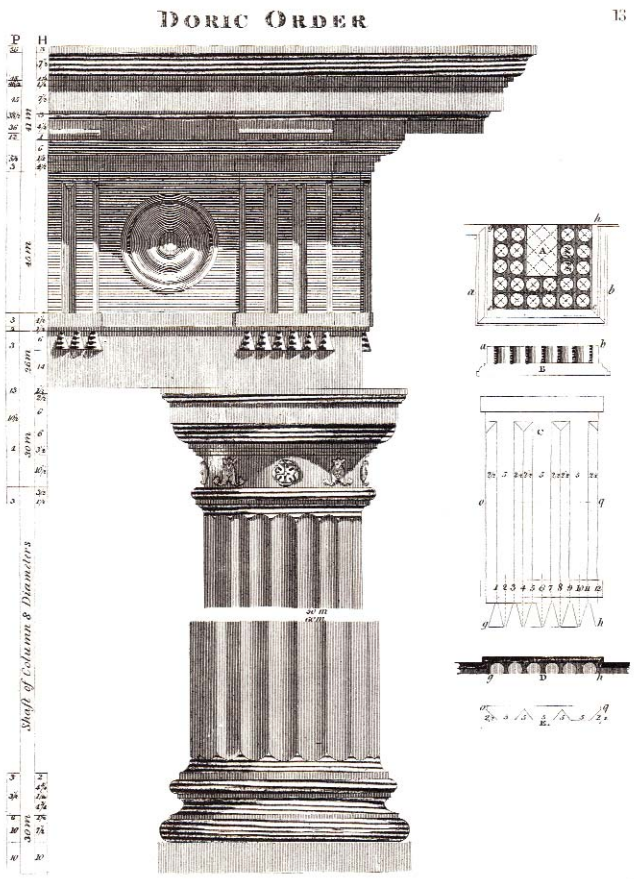


ILLUSTRATION 4: Illustration from Asher Benjamin's *The American Builder's Companion* (1827 edition). The builder's book origins of Benjamin's work is evident is this illustration from his second, and most popular pattern book. It shows how the proportion of a Doric column is related to its height and width, and offers mathematical formulas for keeping those proportions whether the Doric column was used for a front entry or a fireplace surround.

practical experience along with his admiration for the classical orders, and created the first "pattern book" in 1797. It was a combination of the architectural folio and the builder's book; it had plenty of text and mathematical formulas to help the carpenter learn "how to" but it also had more illustrations than any previous book intended for tradesmen. The clear line drawings illustrated how the classical orders could be put together at different scales and in different places on a building to create fashionable fireplace surrounds, and cornices. *The Country Builder's Assistant,* as it was titled, gives a clear idea of who Benjamin imagined his audience to be–builders who did not have the benefit of learning about new architectural styles and techniques in the growing east coast cities like Boston, New York, Philadelphia and Baltimore, where high-style architecture was being created. *The Country Builder's Assistant* illustrated whole townhouses, country houses and churches, with plans and elevations, something that the earlier architectural folios had done. The design influence was Adamesque, or Federal, with an overall elegant simplicity.

The architectural pattern book–usually a modestly-sized book which would be useful to builder and client alike–took hold in the United States and had remarkable influence on the built environment all through the 19th century. Asher Benjamin published two more pattern books in his lifetime, his most famous, *The American Builder's Assistant,* being reissued six times from 1806 to 1827. The last editions of this book introduced its audience to the Greek Revival style, then coming into prominence

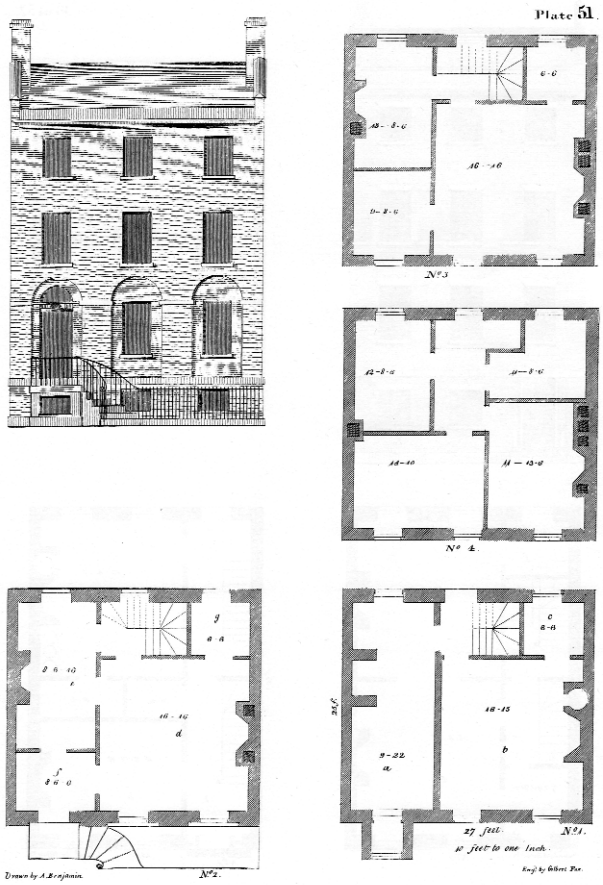


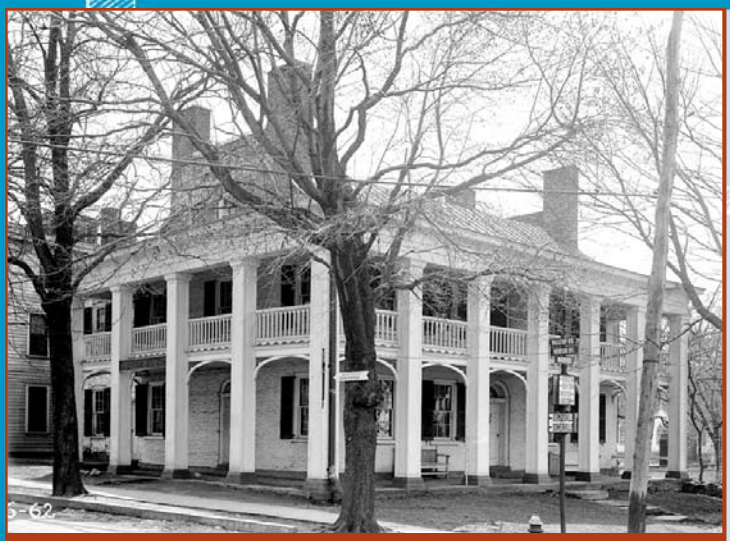
ILLUSTRATION 5: Plate 51 from Asher Benjamin, *The American Builder's Companion* (1806 edition). Benjamin's pattern book combined large, clear illustrations like this of a few building types—this townhouse, a church, a country house—bringing together information found throughout the book into a suggested design for an entire structure.

ILLUSTRATION 6: The Edward Sharp House, Camden, NJ. The Edward Sharp house in Camden, New Jersey, clearly derives it round-arched doorway opening, decorative paneling between the door and fanlight above, and its planar façade with beltcourse from Benjamin's publication.

nationally in urban centers like Philadelphia and New York. The Greek Revival style was typically marked by broader entablatures and bolder, more robustly-proportioned columns than the preceding Federal period had used. Greek Revival buildings are most immediately identifiable by the prominent placement of columns in a front-facing pedimented portico.

For both his built work and his publications, Asher Benjamin was called an architect by the end of his career, although there is no evidence of formal training in that field. His innovation in combining the architectural folio with the builder's book to create the pattern book form allowed many carpenter-builders across America to venture into "design" by using the illustrations and the text within the pattern book to creatively meld vernacular structural systems with fashionable architectural details. Like Benjamin, others came to call themselves "architects" as a mark of their professionalism and mastery of their craft by the end of their career.

Benjamin's works were followed on the



View of the Phoenix House, Mendham, NJ. Aaron Hudson (1801—1888) was a prolific carpenter-builder who resided in Mendham and Chester New Jersey for most of his life. By the time of the 1850 census, he was described as an "architect" and his work is clearly indebted the pattern books of his era. Like Asher Benjamin and many others in the first half of the nineteenth century, he earned the title architect through learning about building construction. A natural interest in design, a keen eye, and the help of books to show him architectural ideas formed the rest of his self-taught architecture degree. Hudson is credited with the portico of the Phoenix House in Mendham, shown here. Built about 1800 as a private school in the Federal style, the brick building was updated to a hotel about 1840 through the addition of a two-story portico in the Greek Revival style such as Hudson may have seen in a pattern book by Asher Benjamin or Minard Lafever. The bold entablature and heavy square pillars present a strong stylistic statement to the street, making the building itself a billboard for the fashionable and clients the hotel no doubt wanted to attract.

national scene by the books of Minard Lafever (1798—1854), born in Morristown, NJ, and apprenticed as a carpenter in Syracuse NY, where he grew up. As a young man, Lafever moved to Brooklyn, one of the fastest-growing cities in the entire country in the 1830s. Lafever learned not only the short-cuts carpenters were developing in the field to handle the overwhelming demand in Brooklyn for new townhouses, new churches, and new commercial blocks, but he also saw and studied the designs being executed in nearby Manhattan by men who really were trained architects, such as Ithiel Town and A.J. Davis. Their new structures in the Greek Revival style, and also the Gothic Revival style, were the most modern buildings around, despite their overt reference to ancient historical precedents in their design details. Lafever, perhaps thinking of his comrades back in Syracuse, and elsewhere in the growing United States, set down illustrations of these new buildings and his own text on how to build in the Greek Revival style in a pattern book entitled *The Young Builder's General Instructor* (1829). A few years later, Lafever published again. *The Modern Builder's Guide* (1833) has more illustrations, and a more assertive and confident tone about the uses of the Greek Revival style as way of creating "modern" buildings. Lafever, too, did several pattern books in his lifetime, and they were very influential in spreading the Greek Revival style across the country.

In the 1830s and'40's, "modern" American architecture could be, unselfconsciously, derived from models hundreds or even thousands of years old and originating in places far from the United States. What was "modern" was the recycling of key elements of historical styles for their visual and emotional impact on people primed by Romanticism to want to be "moved" by the arts. Concepts like "picturesque" emerged as a way of complimenting buildings that appeared visually interesting, and expressive of the emotional ideals associated with Romanticism. Contrasting itself to the rationality and timelessness of Classicism, Romantisicm argued that feelings and emotions were powerful parts of the human condition,

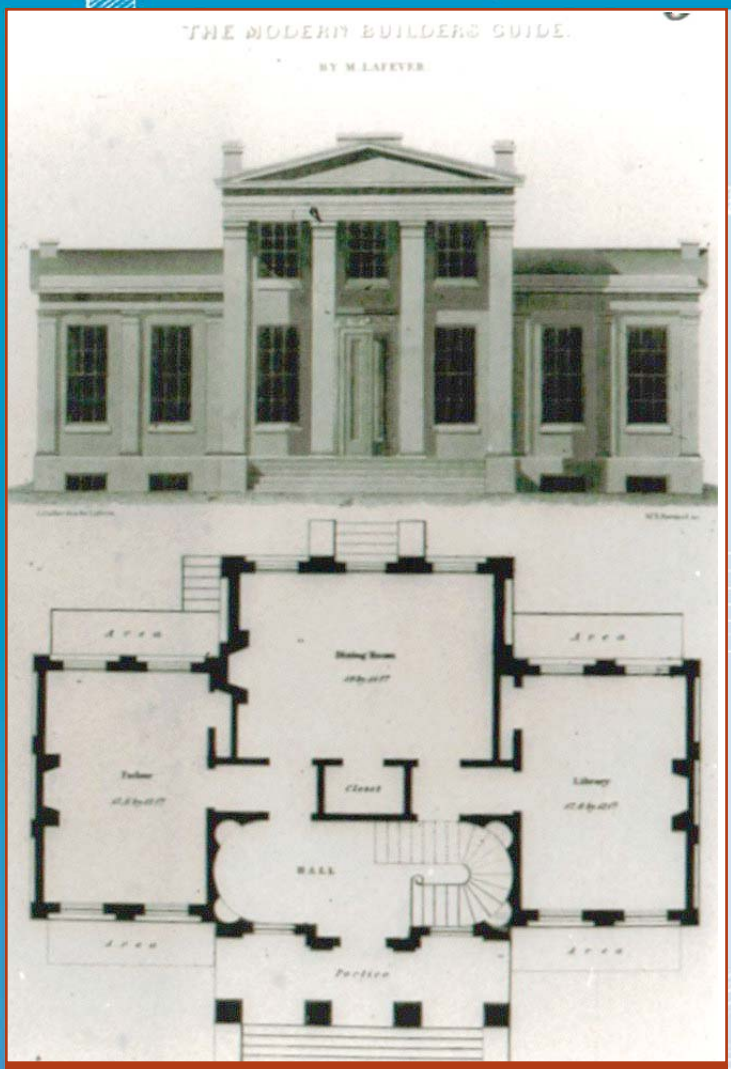


ILLUSTRATION 7: Lafever's "Design for a Country Villa" in *The Modern Builder's Guide* shows a pedimented portico on square pillars (round columns of two-story height being beyond the skill of many country carpenters in America in the first half of the 19th century, and beyond the cost-tolerance of many clients) as a "modern" interpretation of the Greek temple as an American house. Although Aaron Hudson modified this design to be incorporated with a traditional full two-story, five-bay house, the placement and design of the four-pillared portico is very likely from Lafever's published work.

and needed to be cultivated.

Earlier builder's books spent much time on outlining classical proportions as something to be followed in order to create a "good" building; Romanticism espoused the idea that proportion's utility was in helping a viewer understand a building in order to experience its meaning. Different building elements were intended to recall emotions and ideas–hence, the pointed arch of the Gothic Revival came to stand for Christian piety and spiritual development; the pedimented portico of the Greek Revival was meant to convey strength and the ability to last for a long time (hence the style's particular affiliation with banks!); the Italianate style in its many iterations was intended to convey the comfort of life in Mediterranean villa; with classicism tempered and rendered informal by domesticity.

The Romantic Revival styles in architecture, as a group, encompass the post-1830 uses of the Greek Revival, and of the Gothic Revival, the Italianate Revival, the Swiss Chalet, and the Romanesque Revival, all of which were fashionable in American architecture in the mid-19th century. The Romantic Revival ideals of "picturesqueness" was embodied in all these styles through an interest in asymmetrical façade arrangements, colors that blended with surroundings, and connections to nature through porches and larger windows). The popularization of the picturesque ideal with the American home-building public is due in no small measure to the pattern books of Andrew Jackson Downing.

Downing (1815—1852) was trained as a horticulturalist, and landscape design was his first love, but he expanded his scope to include the landscape, the buildings set in the landscape, and the furnishings within the

ILLUSTRATION 8: Aaron Hudson House, ca. 1840, Mendham, New Jersey. The architect-builder Aaron Hudson built this home for himself and his family, incorporating the latest Greek Revival design elements into a small village. Along with Hudson's Phoenix House hotel, which stands just down the block, the two buildings gave the village of Mendham considerable design cachet, and brought Hudson considerable fame (and clients).

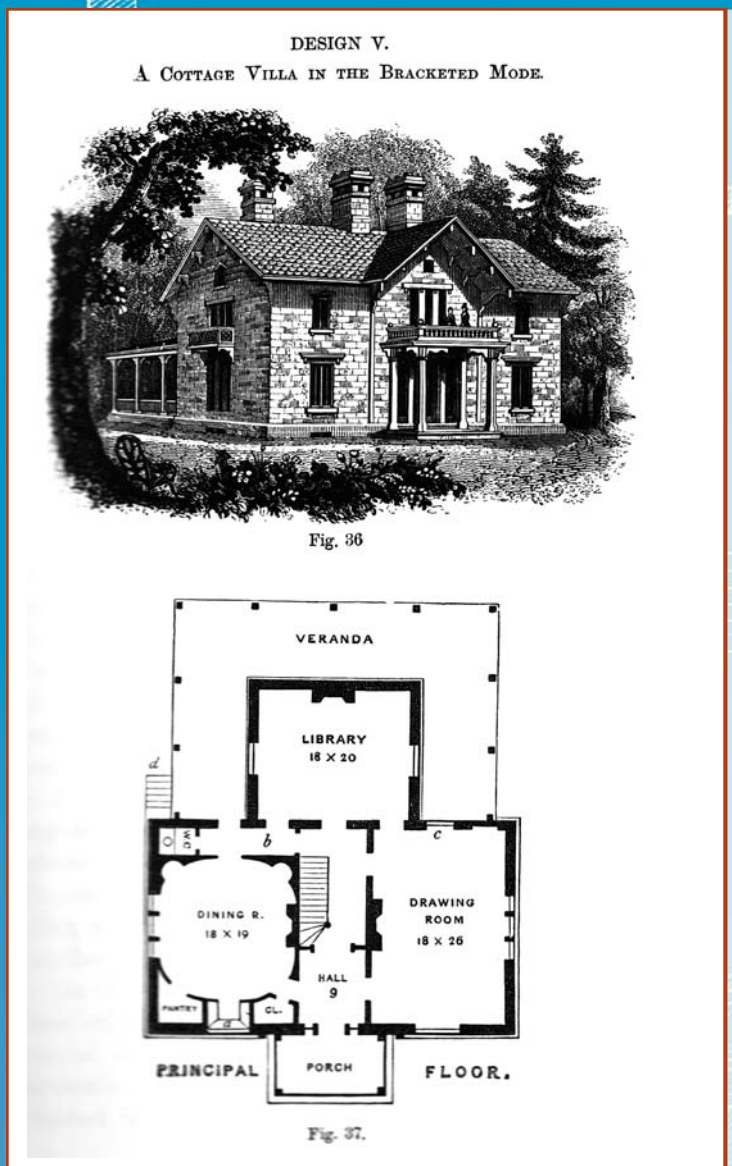


ILLUSTRATION 9: Design V, "A Cottage Villa in the Bracketed Mode," *Cottage Residences,* 1842.

buildings. In short, Downing was the first American "home design" guru, who marketed his taste for the Romantic Revival through his pattern books. The first was most strictly about landscape; but his next, *Cottage Residences* (1842) marked out new territory for the pattern book by focusing its attention on the potential home-builder. No longer a publication for the educated elite, but for the masses, and no longer aimed at carpenters, the pattern book Downing created was pure design information primarily for the public.

The house in Downing's first important pattern book illustrated many features of the Romantic Revival style–the house has a "picturesque" roofline with a center cross-gable; extended roof eaves accented by large brackets; porches to connect the interior of the house with Nature and offer sheltered places from which to enjoy the natural world; and it is to be made of local stone in order to blend with its setting.

The books contain much text, but unlike earlier pattern books by carpenter-builders, the text has very little to do with the mechanics of building. Instead, the books emphasize the merits of home-ownership in a suburban location (away from the filth and unwholesome air of the industrial city); the personal rewards of gardening even a small plot of land; the practicalities of furnishing a house fashionably

ILLUSTRATION 10: Willow Hall, in Morristown, is a nearly line-for-line creation from Downing's pattern book. Willow Hall was constructed in 1848 for George Vail, a manager of the prosperous Speedwell Iron Works, a New Jersey legislator, and two-term member of the US House of Representatives. The house is made of "puddingstone," a local conglomerate rock of purple hue.

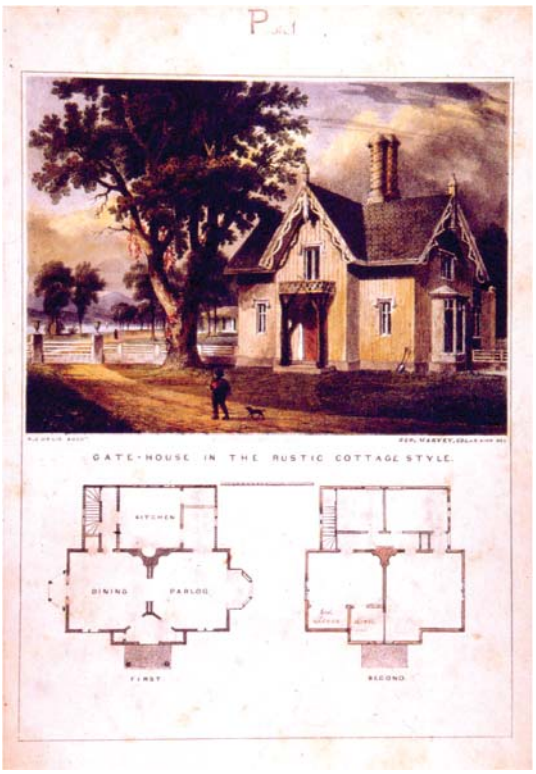


ILLUSTRATION 11: Alexander Jackson Davis, architect of New York, prepared this design for a picturesque cottage in the 1830s. It is clearly the prototype of the cottages Andrew Jackson. Downing popularized through his pattern books in later decades.

but tastefully, and the moral improvement to family life when carried out in an appropriate setting. As he himself was not an architect, Downing enlisted help from acquaintances who happened to include some of the notable architects then practicing in New York. Downing's book used small illustrations of designs by AJ Davis, Calvert Vaux, and others; but only a few of the architect's works are attributed in the pattern books. Thus, the pointed gable cottage has come to us known as a "Downing design" although he was not the designer. But as a shrewd editor and promoter, he brilliantly made Romantic Revival design accessible to and desirable by a large swath of middle-class America in the 1840s and '50s.

Downing himself died an untimely death in a steamboat accident on the Hudson River. At the time of his death he was preparing plans for turning the mall in Washington DC into a Romantic landscape of winding paths, shrubs and flower beds intended to provide a "picturesque" setting for the newly—completed Washington Monument and the Smithsonian Institution. His books continued to be published posthumously until 1872, by which time the designs had become somewhat "old fashioned" but versions of his 1840 cottages continued to be built, particularly in frontier communities in the expanding American west, a generation after their prototype was first published.

Downing's books brought him (and later, his

DESIGN II.

A Cottage in the English or Rural Gothic Style.

Fig. 9.

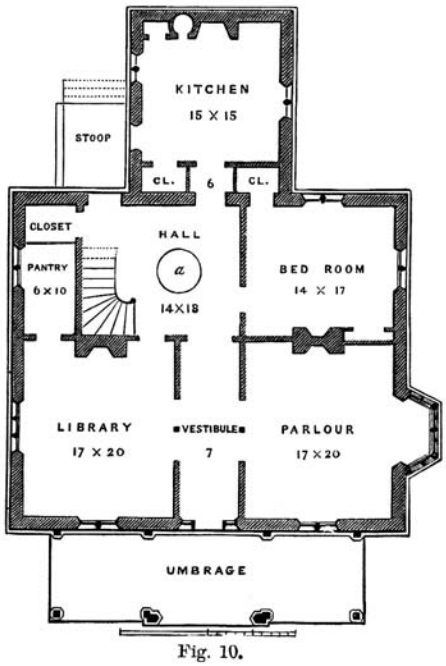


Fig. 10.

ILLUSTRATION 12: "Design II, "A Cottage in the English or Rural Gothic Style" from Downing's Country Houses shows how the designs of practicing architects, like AJ Davis, were used to illustrate pattern books, making high-style architecture known and available to a wide audience.

ILLUSTRATION 13: A Romantic Revival style cottage in New Jersey owes it design to the influence of the Romantic Revival Movement as promoted by AJ. Downing in his pattern books, and to the skill of local carpenter-builders in translating the pattern book designs to real houses.

widow) fortune, so it is hardly surprising that a host of imitators quickly appeared in the 1850s. Samuel Sloan of Philadelphia, Gervase Wheeler of London and then Hartford, Connecticut, Calvert Vaux of New York, and others all put out pattern books promoting the Romantic Revival styles in a format similar to Downing's. The others lacked his moralizing view of the subject, and usually neglected landscape and furnishings. Of this crop of Romantic Revival pattern book authors, most remained architect-builders, and they tended to include information on how to build as well as what to build.

Samuel Sloan's pattern book, *The Model Architect,* of 1851, is important as one of the earliest national publications to illustrate and explain balloon framing, the new system for putting up structures invented in Chicago around 1837. Derived as "balloon" framing because it created a wooden frame from uniformly dimensioned lumber and nails that appeared "as light as a balloon" in contrast to the older, heavy timber framing system that had long been the expected method of construction.

The designs in pattern books by Downing and his contemporaries were informational– that is, like the earlier architectural folios they were held up as design examples, to be emulated to greater or lesser degrees. The fact that there are several astonishingly accurate reproductions of published designs is a testament both to the books' persuasive powers with the public, and to the skill of the carpenter-builders of the mid-19th century who brought them to life. Although the pattern books included a facade elevation, (and sometimes a side view) and a floor plan (sometimes dimensioned), it took considerable skill on the part of the carpenter-builders to take those lithographed images of a building from a pattern

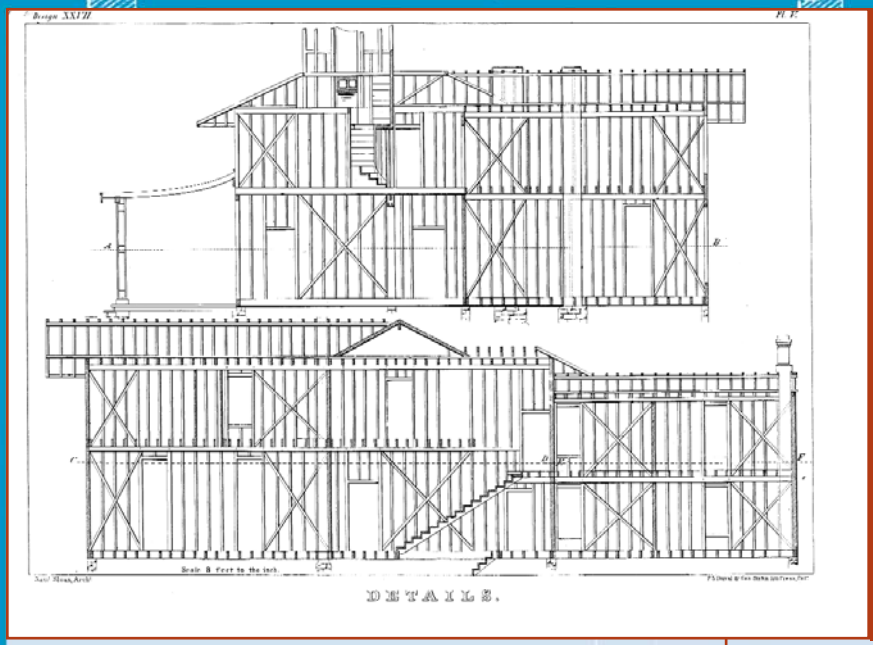


ILLUSTRATION 14: Design XXVII, Plate V, from Samuel Sloan, *The Model Architect,* showing how balloon framing could help a modern house take shape. The framing system allowed for more flexibility of design, making it possible for the Romantic Revival style house to have larger windows, projecting bays, and the irregular profile so beloved in the period as the emblem of "picturesqueness."

book, and transformed it into a life-size, fully occupiable building. They improvised the details of construction, drawing from their practical experience. For the design details, they could turn to a hither-to unavailable source for building materials–the factory.

Romanticism became popular in the arts at the very moment industrialization kicked into high gear in the United States. Coal burned to produce steam; steam under pressure turned the pistons and the rods; and suddenly there were machines to do inexpensively many tasks that had been time-consuming, craft-driven, and expensive. The wooden detailing of bargeboard, finials, porch brackets and turned columns, and window hoods (all of which we collectively lump together and describe today as "gingerbread") was created in wood-working factories, using the images found in the pattern books by Downing and his imitators. The "picturesque" could, in fact, only be pursued in architecture when the decidedly un-picturesque Victorian factories were operating under clouds of coal smoke.

Post Civil War, pattern books played a key role in shaping the appearance of housing developments. While Downing and others had promoted a suburban life as the antidote to the industrializing city, suburbanization as a mass phenomenon was not possible until improvements in railroads and trolleys allowed a significant number of people to the move to out of the city proper. Real Estate promoters followed the railroads, dividing up land into small, house-size lots and extolling the fresh air and ease of commuting to the big cities where commerce and business employed the growing ranks of the middle class. New Jersey–sitting between Philadelphia and New York, and with successful industrial cities of her own in Paterson, Newark, Trenton, and Camden, became the most fertile ground for suburban development anywhere in the country.

The first planned suburb in the United States was Llewellyn Park, New Jersey. Promoted with the help of architect Alexander Jackson Davis, this suburban retreat for the wealthy featured winding roads, instead of the typical grid plan streetscape, to enhance the "picturesque" effects of the wooded, hilly landscape. Several houses built within Llewellyn Park and designed by Davis were illustrated by Downing in his pattern books.

Llewellyn Park was a high-end suburban development from the beginning, and it remains the most expensive section of the Township of West Orange, where it still offers a dramatically different physical setting of natural beauty and apparent seclusion in the midst of metropolitan New York. But other suburban developments also followed the rail and trolley lines across New Jersey, creating densely d street plans with lots of 25' x 100' or 50' x 125'–an urbanized grid but one which allowed land to be cheaply

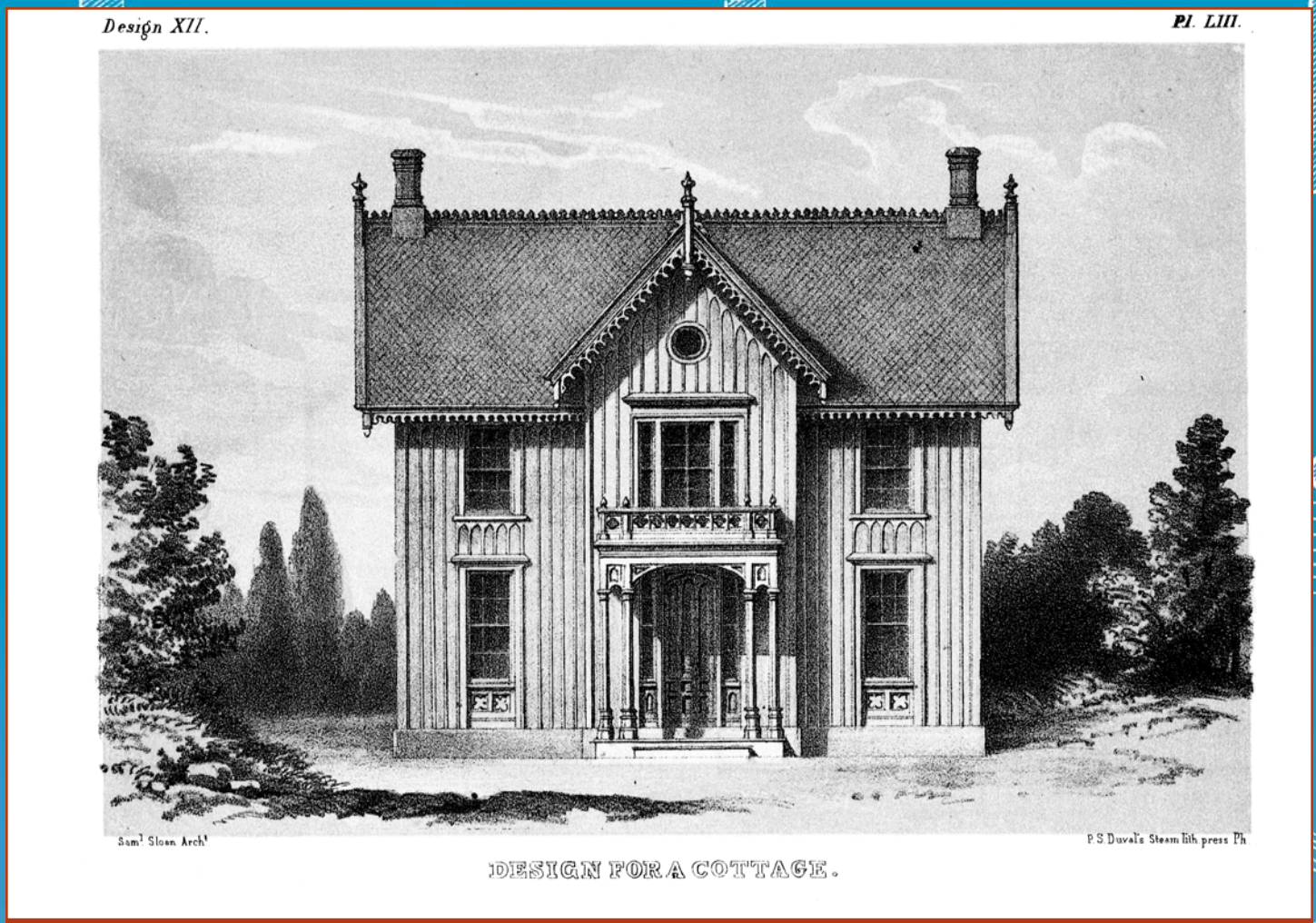


ILLUSTRATION 15: Design XII, Plate LIII, from Samuel Sloan, *The Model Architect,* published in Philadelphia in 1851.

sold with the promise of building a single-family house. Downing and his contemporaries had primed the American middle class with the idea of the importance, even moral imperative, of building and owning a single-family home; after the Civil War it was more possible for more people than ever before.

ILLUSTRATION 16: Campell House, Shrewsbury, New Jersey. Built 1860. (Left) Details of bargeboard at eaves and front entry. (Right) A Romantic Revival style house with direct ties to a plate in Sloan's pattern book. The design was faithfully copied, even to the board and batten siding, in 1860.

It should be no surprise then that there emerged in the state a number of people who were real estate speculators, builders, and pattern book authors all at once, among them George Woodward, Daniel Topping and Elisha Hussey. Men of some architectural or builder training, they saw a chance to make their fortune by buying up land along the railroad lines pushing out to the country, and transforming it into suburbs. In their pattern books, they promoted designs in the popular, Picturesque taste, created by their own hand or those of close associates. This type of pattern book illustrated buildings typically already built, the "show houses" of an emerging neighborhood, in the hope of gaining interest from potential residents to build more like them nearby. The promises of the pattern books that the neighborhoods would be soon built out with similar designs often as not did not come

ILLUSTRATION 17 A rectangular house that fit on the rectangular lots of the growing cities and towns of America would become the most popular vernacular house of the latter 19th century. Individual houses were dressed up with details from pattern books and catalogs. Such houses can be found in every town in New Jersey, illustrating the period of tremendous house-building and urbanization that took place at that time.

true; sometimes decades elapsed before these railroad subdivisions were built out and their architectural vision was rarely completely consistent. But the architectural vision was one of forward-looking design and the pattern books contributed to the mounting visual "education" for the public on what constituted an appropriate modern home.

As pattern books aimed for a broader and more "mass" audience, they became smaller and cheaper in format; going from hardcover books to paperbacks. But advances in printing technology though made it possible to have more illustrations than ever. The printing and reproduction of line drawings improved so much that "illustrated" magazines or periodicals rose in number while decreasing in price and thus making them available to a broad audience. Interest in design and architectural fashion brought articles about these topics to the magazines of the latter 19th century, so that publications as varied as *Godey's Lady's Book* (women's fashion and fiction), *The American Agriculturalist* (farm, livestock, and plant information), and *Scientific American* (innovation and inventions in technology) all produced regular articles on building.

Sometimes they re-published plates and text from existing patternbooks–Downing's last appearance in print in the 19th century was in *The American Agiculturalist* in the 1870s–and other times, they commissioned architects to create designs expressly for their publication. The periodicals were not, it seems, intended to be used as templates for design, but rather to inform their audience of what was fashionable

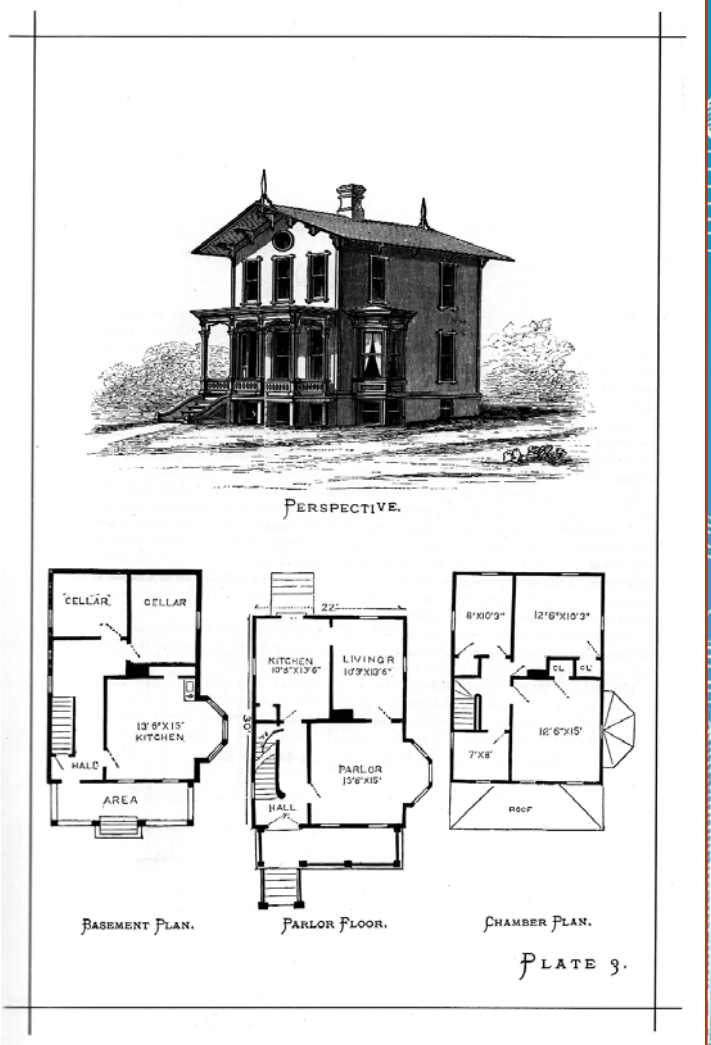


ILLUSTRATION 18: Plate 3 of Elisha Hussey's 1876 pattern book, *Home Building,* illustrated a typical mid-19th century house built in Hackensack, New Jersey as part of a speculative real estate venture. The pattern book documents examples of modern "cottages" along a railroad route that stretched from XX to YY.

The house itself is a classic form developed post Civil War for the narrow lots of middle-class suburbia. The front-facing gable and front porch were the focal points of wooden decorative elements (factory made), which could transform the house from "Gothic" to "Italianate" to "Stick style," such as this one.

and appropriate in architecture.

The success of the pattern book in making Americans aware of current trends in architecture and design may be measured by the fact that the long-standing regional vernacular building systems were largely abandoned by the time of the 1876 Centennial celebration of American Independence, replaced by a uniquely "American" vernacular architecture that was broadcast through pattern books. New houses in New Jersey in 1876 had far more in common, stylistically and structurally, with new houses in Iowa or even California than any of them had with any buildings in Europe or elsewhere in the world.

Through the power of the printed (and illustrated) word, Asher Benjamin's dream of creating a means of promoting true American architecture came true more quickly than he may have dared dream. In the next installment, late 19th and early 20th changes led to the demise of the pattern book and the rise of the catalogue as the means for fulfilling the American dream of home ownership.

This article owes much to the more comprehensive investigation into pattern book architecture presented in *Building By The Book: Pattern Book Architecture in New Jersey,* by Janet W. Foster and Robert P. Guter, Rutgers University Press, 1992. Since the time the book was published, more houses built from pattern books have come to light in New Jersey, and some of them are presented on the next page.

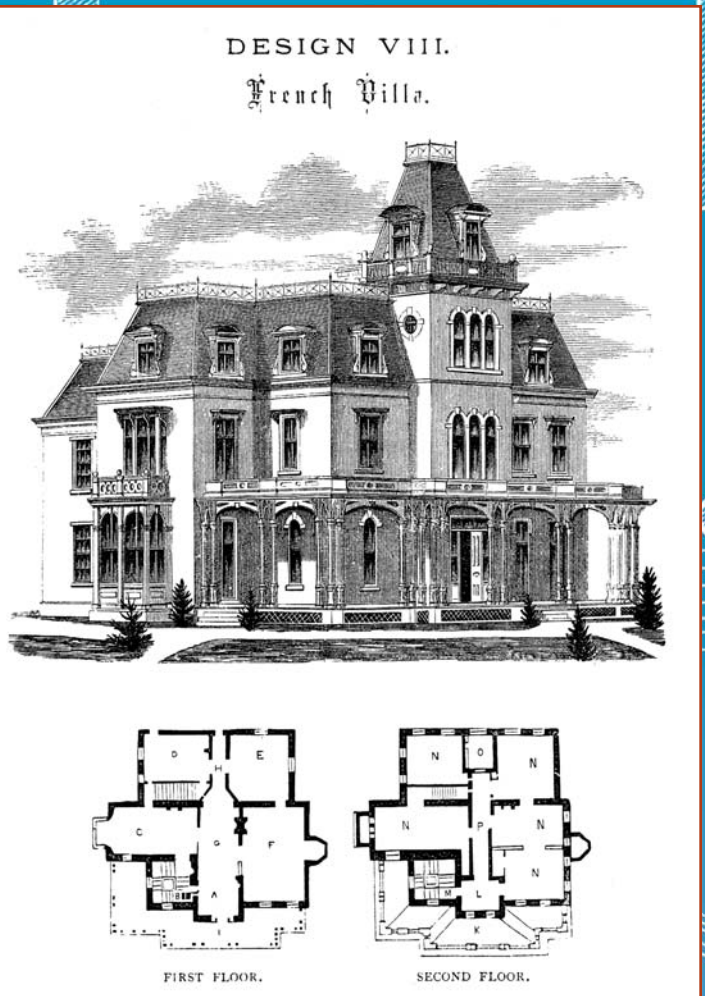


ILLUSTRATION 19: Isaac Hobbs, a Philadelphia-based architect, produced designs published in *Godey's Ladies' Book* in the 1870s. He was particularly fond of the Franco-Italianate, or "French Roof style" and offered many designs in that style. His would not have been the only author to promote the style, but the wide circulation of the magazine undoubtedly influenced taste to accept this unusual roof form.

And here's a stumper...

here is a beautifully restored house in Frenchtown, NJ, along the Delaware River. It sure LOOKS like it should be a pattern book house, but the author has yet to find a good source for it.

Is it a pattern book house?

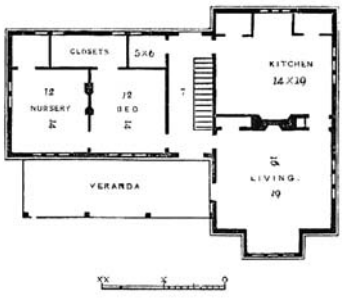
Does any of GSL's readers have any information?

Send an email to gsl@gardenstatelegacy.com

ILLUSTRATION 20: A house in Franklin, New Jersey, one of the mining communities in the northwest part of the state, shows the influence of pattern books in its "L" plan design and decorated eaves. A key part of the picturesque aesthetic was asymmetry of building elevations. Downing and other mid-century pattern book authors introduced and helped popularize the "L" plan, with a projecting front gable—up until this time, houses had straight, flat facades.

The picture window and the additions extending to the left of the photo are not part of the original design.

Fig. 70



PRINCIPAL FLOOR
Fig. 71

ILLUSTRATION 21: The Downing patternbook design from Country Houses, in 1843, that started the interest in irregular facades and the "L" plan in American houses.

DESIGN XI.
A Cottage for a Country Clergyman.

Fig. 81.

Principal Floor.—Fig. 82.

ILLUSTRATION 22: Another Downing pattern book plate with a variation of the "L" plan house.

ILLUSTRATION 23: A typical two-story expression on an "L" plan house, this one in village of Delaware, NJ.