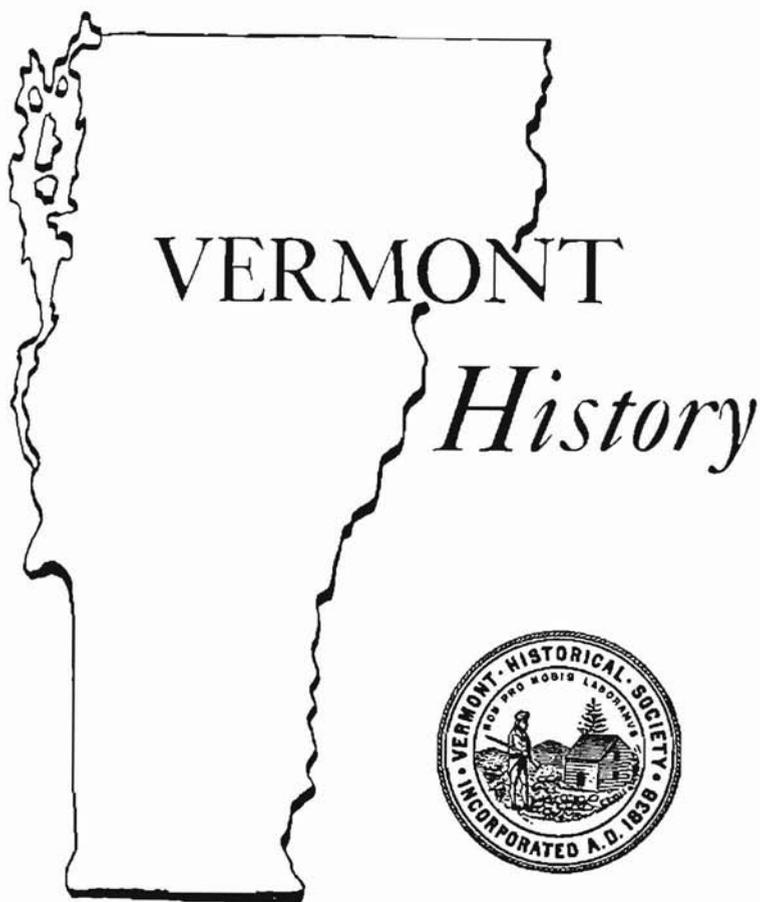


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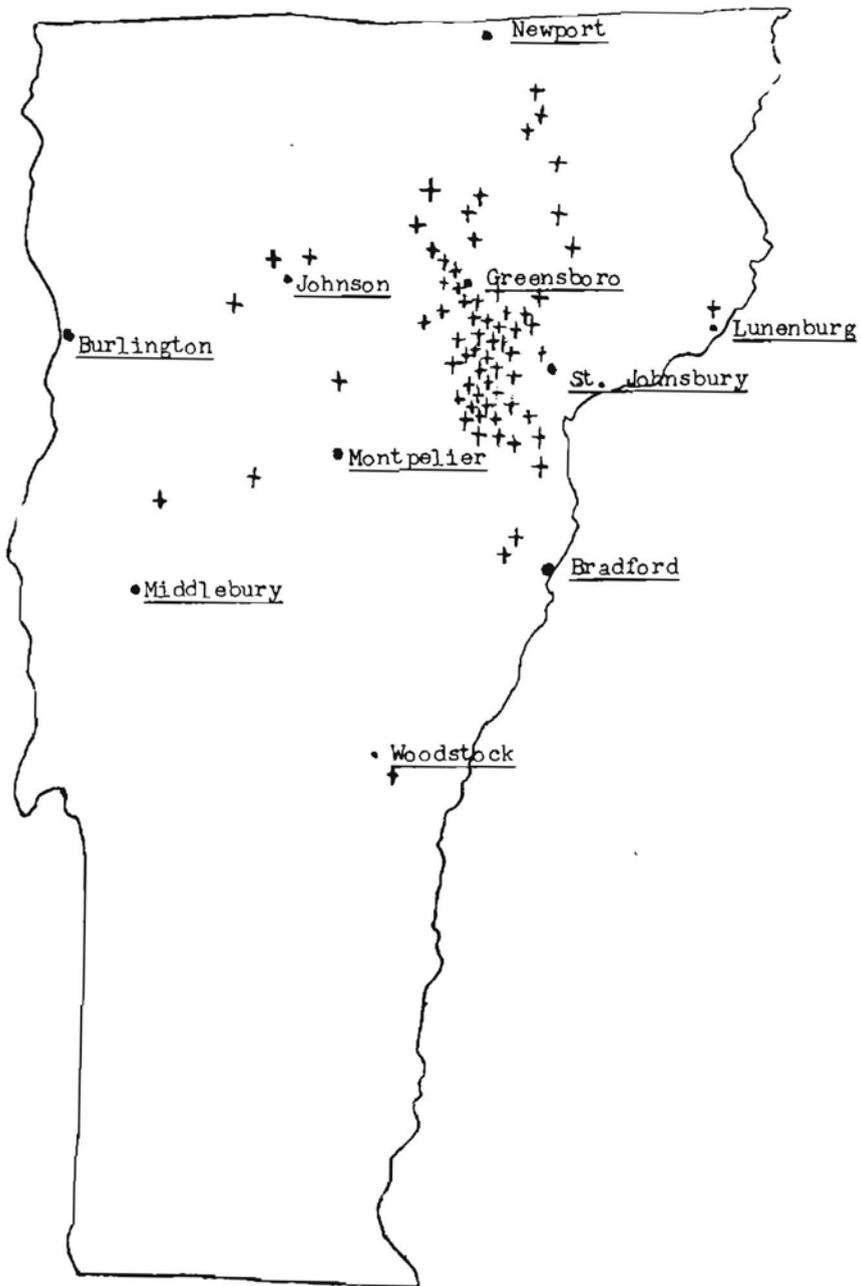
## The Plank Framed House in Northeastern Vermont

By JAN LEO LEWANDOSKI

Plank framing as a method of house construction in North America has received little study or understanding despite the fact that throughout New England and in parts of central New York, Ohio, and adjacent parts of Ontario and Quebec builders practiced it in various forms from at least 1690.<sup>1</sup> In northeastern Vermont as many as one-third of the first period residential frames were plank.

Plank framing refers to a method of building where pieces of sawn timber of uniform thickness (1½ to 4 inches from frame to frame) and variable, but usually substantial width (9-26 inches), stand vertically side to side between sill and plate around an entire building. These planks replace studs and other major elements of a house frame and also serve as exterior sheathing, interior base for plaster lath or paneling, framing for doors and windows, and, intentionally or not, as a form of insulation. In the fully developed form, common in parts of northern New England, the planks replace posts, studs, and diagonals, sometimes in a fashion startling to the builder or architect. The majority of plank frames are found within one or one and one-half story cape or classic cottage type dwellings of rectangular tending to square plan. A number of full two story plank framed houses also exist.<sup>2</sup>

These planked frame houses do not include those early buildings composed solidly of horizontally stacked dimension lumber, usually two by fours, often called plank by their owners and investigators.<sup>3</sup> This clever style shares with plank framing a tendency to use a multiplicity of uniformly reproducible parts, but it relates more closely to log or even brick building than to the tradition of timber framing in which the plank houses participate. Also, unlike houses of horizontally stacked lumber, the substantial width of plank forms a critical element in the success of the plank frame. (See Figure 1.)



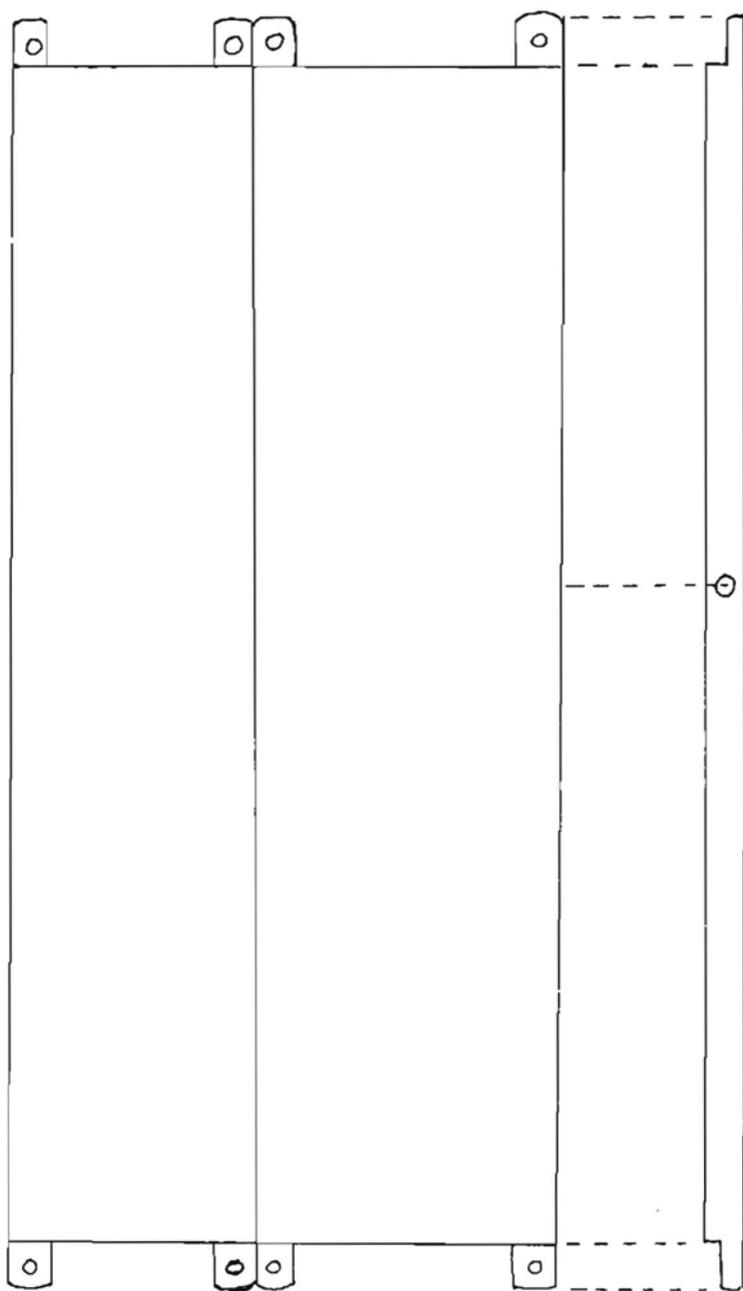
*Locations of plank frames identified or examined for this study.*

A major reason for the poverty of information concerning the plank frame is the extreme difficulty of examination, even in the attic or basement of a house, since the sill, plate, rafters and joists are conventional. Only the demolition of a wall surface, or an unfinished area, will expose the planks.<sup>3a</sup> Originally, builders never used the planks as a finished surface as either board siding or panelling. However, the ultimate burst of popularity this method enjoyed from 1790-1830 related to the growing popularity of a style of interior finish free of all exposed framing members which this method accommodated well.

The distant origins of plank framing come from neolithic, ancient and medieval stave, post or pallsade construction, the predecessors of timber framing.<sup>4</sup> These forms appeared briefly after settlement at Plymouth in 1620 during the very first decades of settlement, but timber framing, or dwellings where sawn plank, as opposed to posts or poles, was applied to the exterior of a free standing braced frame soon superseded them.<sup>5</sup> The fully developed, and most numerically significant style, where planks replace all vertical and diagonal framing members, occurred most commonly in the period 1780-1850. They were constructed by builders well acquainted with elaborate timber framing and extremely remote in experience from any vertical log or timber construction. Plank framing was not an archaic survival withering away, but instead a persistent option within vernacular building, available when needed.

Even in Quebec, where the use of solid vertical timbering between sill and plate persisted well into the nineteenth century, a distinction exists in the old records between the more ancient lineage of "poteaux sur sole," "pieux sur sole," and "bois de colombage," and "madrriers debouts."<sup>6</sup> The first three terms refer to vertical squared timbers 8"x8" or larger standing side by side on a sill with sometimes even larger posts at the corners.<sup>7</sup> "Madrriers debouts" refers to planks considerably wider in one dimension than the other and producing a thinner wall. Such a wall places more emphasis on joinery, cannot depend upon massiveness for strength and rigidity, and is more akin to timber framing than to a pallsade. Once again, the great width of most planks plays a critical role in bracing the frame without vertical timber construction.<sup>8</sup>

Students who have surveyed plank framing in New England provide seventeenth and eighteenth century examples from Massachusetts, Rhode Island, and Connecticut. In these buildings, all dwelling houses, planks generally two inches thick are pinned to the exterior of a frame, spiked into rabbets in sill and plate, or let into a groove in the plate while pinned to the sill. These examples all have frames which can stand independently of, and be erected prior to (with the occasional exception of the plate) the application of planks. The frames usually contain diagonal bracing at the posts.



*Figure 1.*  
*Two Planks*

The planks sheath the house and supplant studding including window and door framing.<sup>9</sup>

In the last quarter of the eighteenth century the plank frame moved with the frontier into Northern New England, and early in the next century it entered New York, Ohio and, probably, Quebec. W.R. Nelson calls these houses plank on frame, similar to the pre-revolutionary versions, but with thicker plank and with diagonal bracing eliminated from the walls. In Vermont the Brewster house (1789) in Woodstock, the Peletiah Corliss Tavern (ca. 1800) in Bradford, and the Blair House (ca. 1805) in Stannard all used the planks and their joints with the frame and each other as a form of bracing.

At some date, difficult to specify, but probably in the last decades of the eighteenth century, the plank frame without posts or studs or diagonal bracing appeared, accompanied in many cases by a move to three and even four inch planking.<sup>10</sup> The thicker planking allows lateral connections between the planks. The style flourished and gradually elaborated, refined, and finally simplified itself until it dissolved into mixed balloon and timber framing in the mid-nineteenth century.

The three counties that compose the Northeast Kingdom of Vermont were virtually unsettled before 1780. By 1810 two of these, Caledonia and Essex, had grown to within a few thousand souls of their 1980 populations. Orleans County reached a comparable level about a decade later.<sup>11</sup> The settlers erected a great number of houses during this first period of development between 1780 and 1830, and perhaps as many as thirty percent of them were plank framed in one fashion or another. This estimate, while not statistically derived from a comprehensive data base, has its origins in a survey of a sample district, an examination of frames by trades persons, realtors, and property owners, and some case studies.

An 1983-84 survey of older homes along thirty miles of the Bayley-Hazen Road, along which settlement moved, explored parts of the towns of Peacham, Cabot, Walden, and Greensboro.<sup>12</sup> At each house standard questions attempted to elicit the age of the building, whether plank framed, and further structural details. Whenever permitted, the survey included an inspection. The sample included eighty houses which informants' evidence, or a knowledge of style, proportion, material, and technique classified as constructed before 1830. Forty per cent of these houses were plank framed. The sample required the confirmation of additional sources for more distribution data and more technical detail.

On site observation of a plank framed house presents special problems. The plank frame house in northeastern Vermont represents an unknown, though large (probably at least 700), corpus in a larger group (perhaps 2500) of unsurveyed early dwellings. The difficulties are exaggerated by the cir-



*Blair House Now Owned by Lewandoski*

cumstance that the frame was probably in part designed to render itself unobtrusive. However, many local tradespeople and many homeowners have demolished wall surfaces and been confronted with planks and the need to alter or remove them. These individuals have provided a wealth of technical detail and some corroboration for numerical estimates based upon their repeated experiences throughout the area.<sup>13</sup>

Further, the on site inspection of thirty-seven plank houses in twenty-one towns scattered across northeastern Vermont provides important information.<sup>14</sup> The examination framing details, and also, where intact, accompanying finish work, floor plans, and other documentation allows the designation of the varieties of plank framing and their positions in the architectural history of a region.

This collection of data since 1975 has uncovered three major types of plank framing. In rough order of appearance (with considerable overlap) they are:

Type 1. Plank and post between sill and plate.

Type 2. Plank without posts between sill and plate.

Type 3. Plank without posts applied to the exterior of sill and plate.

Within each of these categories builders employed a number of different fastening systems, plank thicknesses, means of carrying joists, and solu-

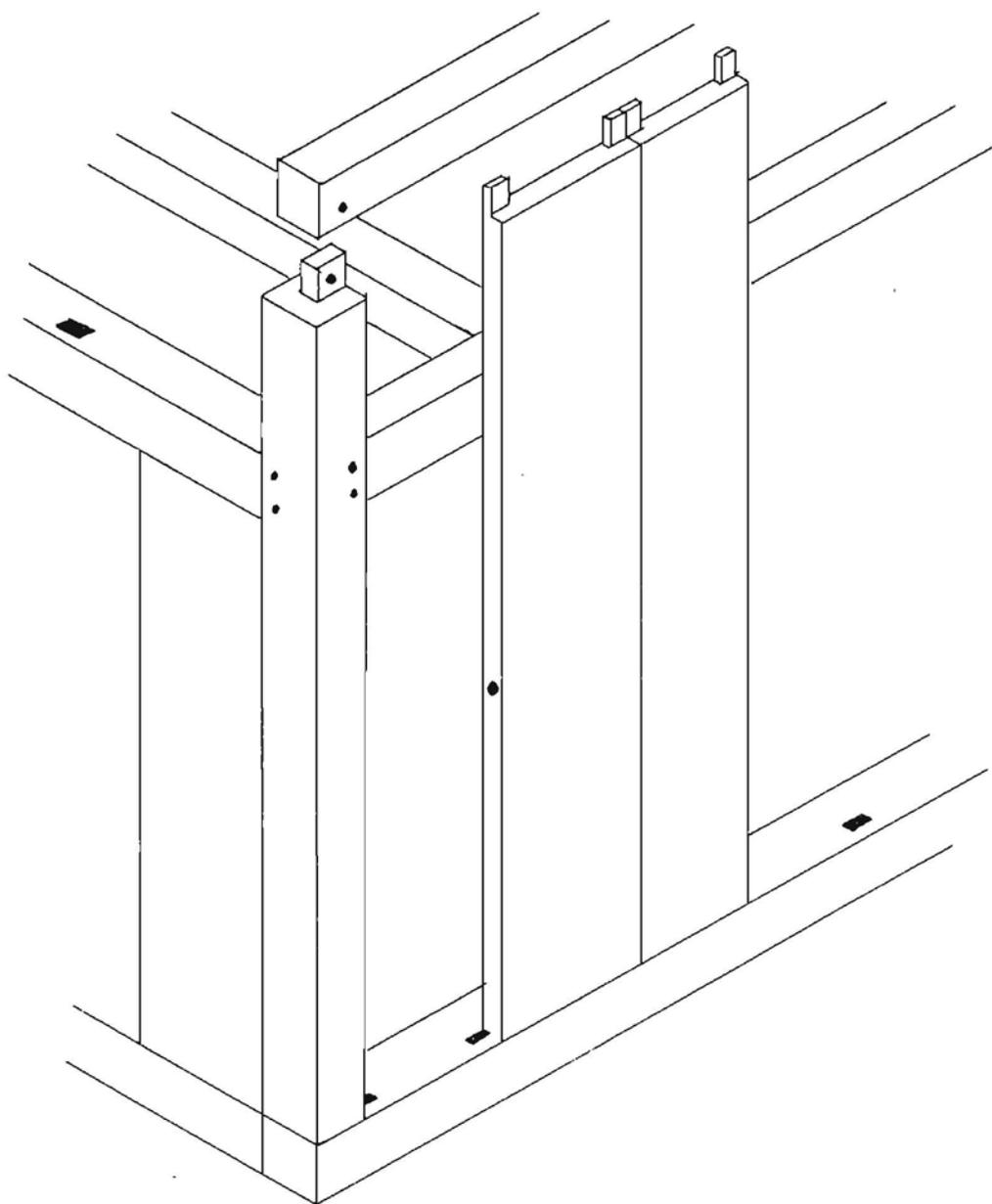
tions to the various conventions and necessities of dwelling house construction. But from the point of view of a framer, each of the above types represents a significantly different way of thinking about vertical load transfer and structural rigidity in a frame, as well as a different procedure of erection.

In three of the five examples of Type 1 examined, a timber frame was erected with the plate left off. Planks were then inserted into mortises or a groove in the sill between the posts. The plate was then dropped upon the tenons of both posts and planks. (See Figure 2.) This construction employs a similar frame to the seventeenth and early eighteenth century examples from southern New England, with the notable exception that Type 1 in Vermont eliminated diagonal bracing, and the planks carry out that function themselves. The planks take the place of all studs, including window and door framing. (Plank walls generally do not affect roof framing.)

In 1983 fire destroyed the Peletiah Corliss Tavern (ca. 1800) in Bradford, a full two story plank building. Along the front wall the builder spiked  $2\frac{1}{4}$  inch planks, 14 feet long, and from 9 to 17 inches in width to a rabbet in the sill running between 8"x8" corner and intermediate posts. These planks were alternately spiked and pinned to the face of a 6"x8" girt that carried the second floor joists, and they ultimately entered a groove in the 9"x16" plate. The rear and gable walls were composed of periodic posts (12 feet on center) with  $2\frac{3}{4}$  inch planks in between. The planks were aligned with each other but not pinned laterally. Diagonal bracing was absent, but the double pinning of the wider planks as they cross the girt (with  $1\frac{1}{4}$  inch ash pins) provided resistance to racking.

The story and one-half, central chimney cape Blair house (1808) in Stannard provides a version of the plank and post style with numerous archaic features. Two and  $\frac{3}{4}$  inch planks, 11 to 22 inches wide, carry double tenons top and bottom which engage mortises in the sill and plate where they are neither pinned or spiked. The second floor joists are lapped into a 6"x8" girt that sits along the inner face of the planks though not attached to them. The only diagonals are on an interior purlin system. The planks are aligned with extreme tightness and joined laterally by an octagonal ash pin at about four feet above the sill. For the building to rack out of shape, a great number of these inch thick pins would have to shear simultaneously within these snug joints. (See Figure 3.) This particular house has exposed interior posts with large chamfers and chamfer stops.

The Type 2 plank frame, plank without posts, is the most numerically significant in northeastern Vermont, and as many as several hundred may exist. It also represents the most significant departure from either the timber or the balloon framing which followed it, in that loads from roof and floors are transferred to the ground with complete uniformity all around the



*Figure 2.*



*Haupt House*

building, rather than being carried by a few posts or a number of studs. While similar to masonry building in this respect, the assembly and erection of a Type 2 plank house remains the work of framers in that all members must be prepared in advance and put in place as a system since none of the members above the sill can stand for even a moment alone.

The Type 2 plank frame house has no posts, studs, or diagonal braces, only planks between sill and plate. Planks no different from any other meet to form corners or frame windows and doors. Builders used a variety of techniques to affix and make the planks rigid. In the Hempt house (1791) in Walden and the Johnston-Unser house (1825) in Hardwick the planks are double tenoned top and bottom and pinned to each other but not to a sill or plate. In the McCoy-Colby house (ca. 1795) in Lunenburg and the Salz house (ca. 1820) in Barnet the planks are double tenoned and pinned both top and bottom, but not to each other. This pinning of wide and rigid planks at four points turns them into a brace not unlike the sheet of plywood placed at the corners of modern houses to serve as structural sheathing. (See Figure 4.) In the Weed-Reynolds house (ca. 1810) in Stannard and another house nearby in Walden the two inch planks are spiked into a rabbet in sill and plate. (See Figure 5.) In the Akin house (ca. 1810) in Greensboro the planks are double tenoned and pinned to the plate, but tenoned without pins into the sill.

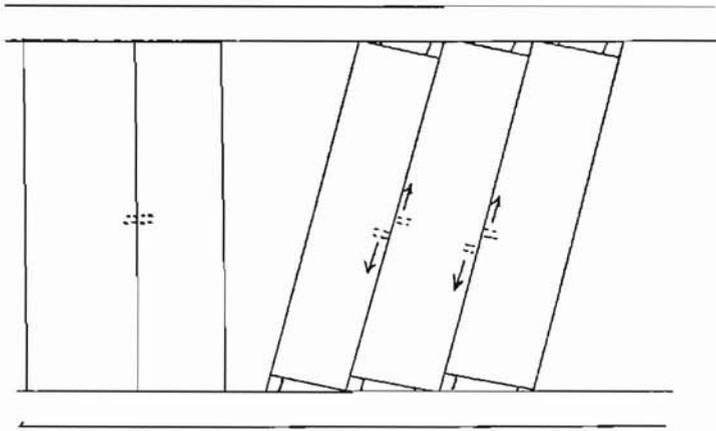


Figure 3.  
Shear pin bracing between planks.

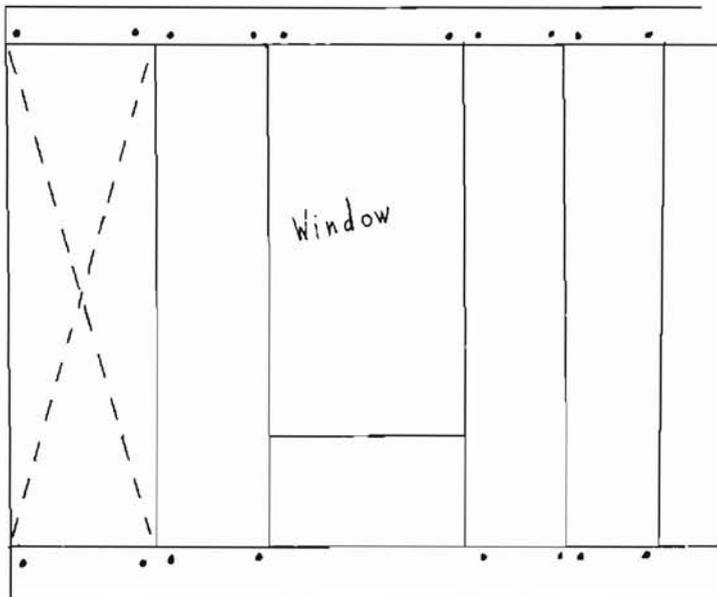


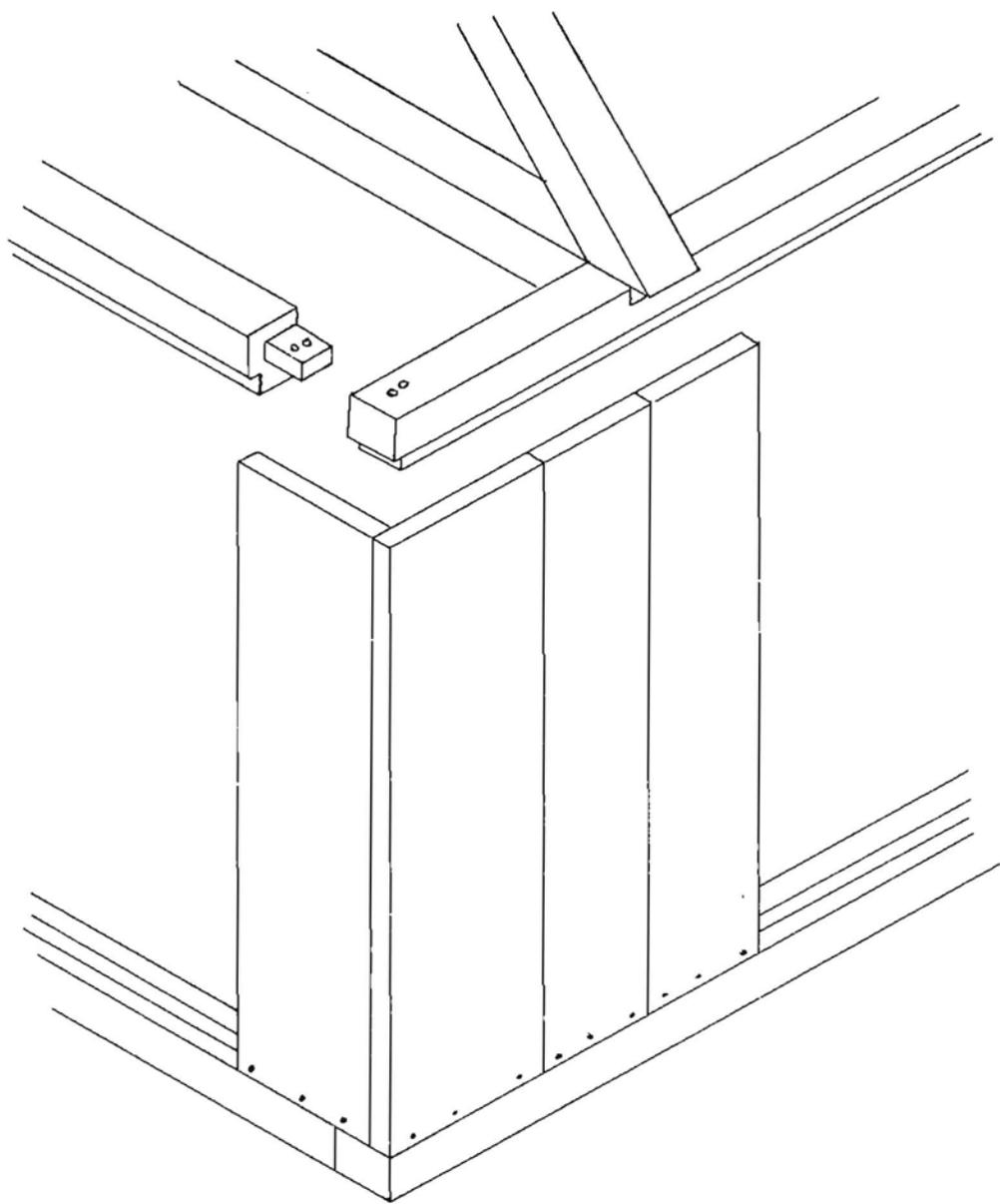
Figure 4.  
A wide plank viewed as two diagonal braces.

In the one story plank house second floor joists are carried by the plate, but those of story and one half and two story use other means. In the Akin house through mortises (5"x6") are cut in the three inch planks to carry the joists. In the Anderson house (ca. 1850) in Duxbury a girt supporting the second floor joists is carried by wooden pins which penetrate the three inch planks.<sup>15</sup>

Students have described a Type 2 house in Deerfield, Massachusetts, dated 1785 and another one in Sutton, Ontario, built 1858-60. In Vermont builders certainly used this technique from 1790-1850 and adapted themselves to changing notions of proportion and style. While most were sided with clapboard or shingle, the Hempt house in Walden was covered in brick either originally or at a very early date. The Akin and Blair houses share with several others nearby the late medieval features of an off center front door, asymmetric window placement, and minimal eaves projection. The Hempt and Johnston-Unser houses have fully developed federal detailing including semi-elliptical fanlights over the entry. The Type 2 houses at Dows Crossing in Walden and across the river from Bradford, in Piermont, New Hampshire, were built as gable entry Greek Revival structures.

The Weed-Reynolds house and another four miles away in Walden provide unusual examples built with batter, walls slanting inward from sill to plate (three inches from the vertical in Weed-Reynolds). Batter is common in stone construction and is known in vertical timbering in Quebec.<sup>16</sup> It prevents top heaviness in massive walls and resists the outward thrusts of roof loads or of wind loading on walls. While it cannot be ruled out, French Canadian influence at the early date of the Weed-Reynolds house is unlikely.

The erection of plank frames does not seem to be covered in any of the builders' guides and companions which proliferated in the Federal period. The principles were probably well known, but even Shaw's *Civil Architecture*, which reiterated the common techniques of timber framing, fails to mention it. Dwyer's *Economic Cottage Builder* (1855) devotes several pages to plank construction, although it was not published until the technique of joinery was on the decline, at least in northeastern Vermont. From examples of timber frame erection and an examination of the sequence of assembly mandated by the joints in the plates in case studies, erection probably occurred in two ways. A builder could erect two entire walls of plank and plate without fully engaging the bottom tenons. The perpendicular walls could then be raised with their plate mortises engaging the tenons of the first plates. Then all the walls could be dropped into their sill mortises (to have done so initially would have deprived the frame of the flexibility needed to join the plate corners). Alternatively, the planks could be temporarily braced upright all around the building and the plates then lifted by persons on scaffolding and dropped on the planks. The first method involves lifting an extraordinarily heavy wall. The second involves



*Figure 5.*  
*Weed-Reynolds house.*

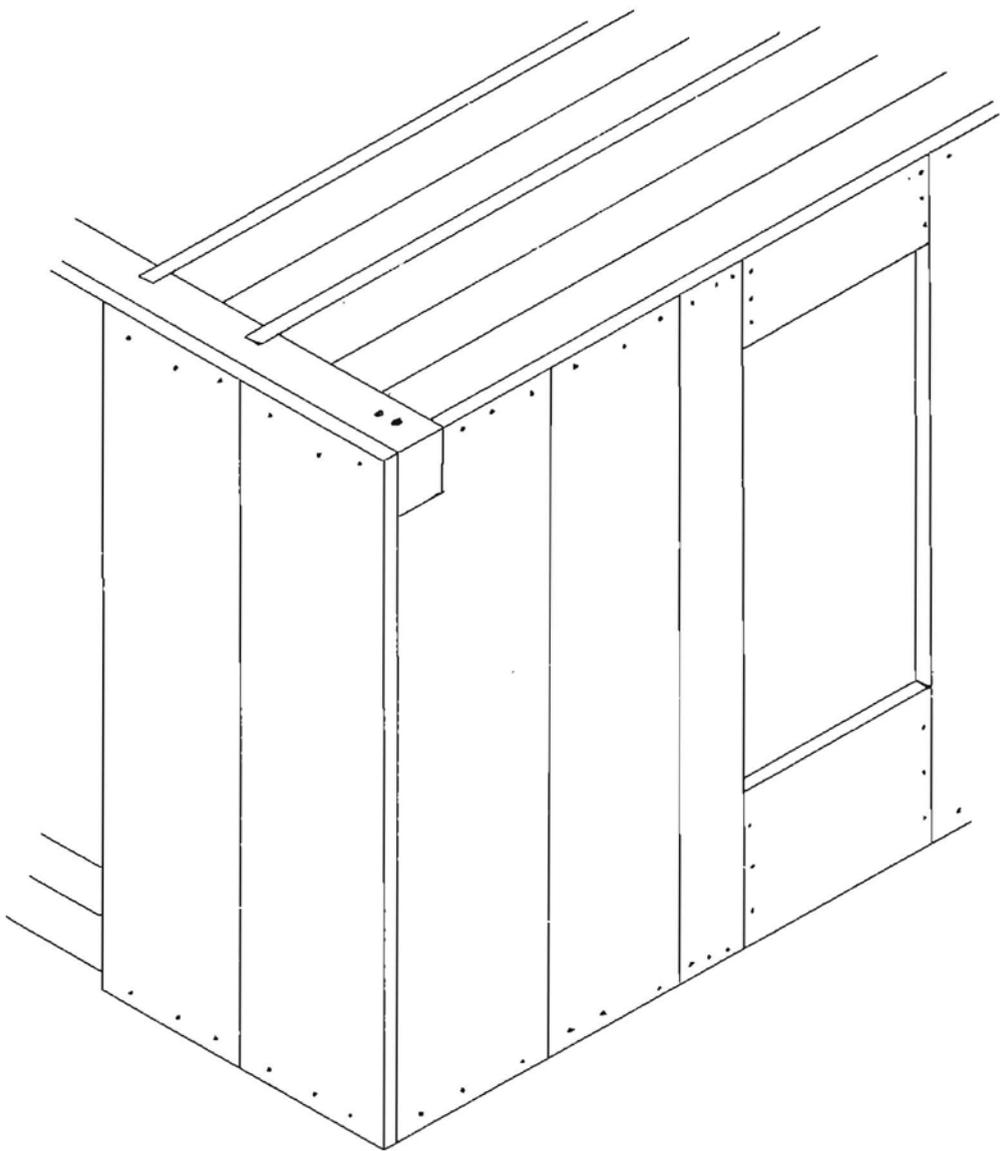


*Johnston-Usher House*

supporting a heavy, solid surface against the possibility of considerable wind pressure.<sup>17</sup>

Fewer Type 3 plank framed houses have emerged in northeastern Vermont. One is identified in a case study, and another has been described. These appear to be buildings held up by sheathing, but in reality they are another sort of plank frames. The sill and plate levels are framed conventionally using 7"x7" and 8"x8" timbers. Planks are found spiked to the outer faces of sill and plate. There are no planks, posts, or studs within the perimeter of the plate, and it appears to hang, with the full weight of roof and second floor, on the spikes.

The Grant-Parker house (ca. 1850) in St. Johnsbury has planks 18-24 inches wide and 1 3/8 inches thick spiked to the face of sill and plate. Strapping of 1"x5" is nailed to the inside of the planks, but it does not contact sill or plate (this strapping carried plaster lath). On close examination four wide planks at the corners carry much of the load due to a particular method of framing the plate. Plate members, 7"x7", across each gable are tenoned into 7"x7"s forming the plate of the long axis. These latter plate members run by the gable plates for a distance of 1 3/8 inches at either end, the thickness of a plank. A plank at each corner has a 7"x7" cutout at the top which receives the protruding plate. Thus this plank acts as a post, its thickness and 24 inch width producing a mass similar to that of a 6"x6" timber. The fact remains though that this plank in turn bears directly on nothing more than



*Figure 6.*  
*Parker house, East St. Johnsbury.*

three spikes driven into the face of the sill. (See Figure 6.) Bracing in this structure is provided by the spiking of the wide planks to the frame.

This Type 3 plank frame probably represents the ultimate in simplification of either plank or timber framing, and it is contemporaneous with the rise of stick and balloon framing. Very few joints are cut; it has no rabbets, probably no more than twelve mortises and tenons, and some laps for the joists. The thin planks, resembling a thick half sheet of plywood, required no joinery. The light frame does not protrude into the rooms, and it requires little labor to assemble once the long plates are placed on the four corner planks.

The fully developed plank frame, where planks have replaced all verticals and braces, initially appears a primitive and almost barbaric technique, related to garrison or blockhouse construction because of the massing of huge pieces of wood in the walls. What appears as a post-Revolutionary throw-back, unengineered and overbuilt, is in fact a refinement of an old technique well adapted to newly settled areas still rich in large dimension timber and a need to build quickly. The technique uses more sawn and less hewn timber and requires less skilled labor. The plank frame also provides the basis for a more elegant finish for the interior of Federal period homes with no evidence presented in the rooms of the massive framing in the walls.

The surge of plank framing on the northern frontier in the late eighteenth and early nineteenth centuries occurred at the same time in buildings of similar value and style as elaborate timber framing. Plank framing did not represent a first, primitive house or an isolated pocket of folk practice, but rather one technique among several available.

Plank framing demanded large dimension timber to provide both speed in planking and, as importantly, resistance to racking. The widest plank in the dwellings surveyed in northeastern Vermont is twenty-six inches in the Grant-Parker house. Reports about a demolished house in Peacham include a forty-two inch plank. All of the planks surveyed are spruce, fir or hemlock.

Simplification of joinery, which Rempel referred to as "Modified American Framing," results from a number of historical forces, but notably a surge of building with a shortage of skilled labor. The advantages of plank frame construction includes replication of identical parts, easy layout, the absence of posts with their myriad girt, nailer and brace mortises, and the lack of troublesome fitting of the diagonal braces. The typical frame construction ca. 1800 in northeastern Vermont employed sawn or hewn posts, sills, plates, joists and rafters accompanied by sawn studs and braces and covered with one or two layers of sawn board. It took no longer to saw a two or three inch plank than it did to saw a one inch sheathing board, and the plank served as post or stud and brace as well.<sup>17</sup>



*Weed-Reynolds House*

The advent of circular sawing in Vermont just prior to the middle of the nineteenth century and the difficulty in obtaining large logs helped end plank framing in two ways. It made available the large quantities of the small dimension stock which made balloon framing economical. Further, circular saws could not saw true across the large logs preferred for wide plank stock. Because the up and down saw was slow, relatively stiff, and fastened at either end, it did not wander in the wood like a circular blade on a central arbor. The old planks were remarkably uniform across their great width, and since they served as the base for so many surfaces in the building, this was important.

The common view of the process of vernacular building conceives of a builder desiring a particular space or number of rooms and erecting a frame to create it. The builder then applied decorative features to the frame according to some traditional or current fashion. This view depicts the early settler as practical, individualistic, and aspiring to simple living.<sup>18</sup> On the other hand, abundant evidence suggests that the first settlers of northern Vermont, after abandoning the temporary shelters of the first years, aspired to participate in national and international movements of interior and exterior design. They adopted neo-classical facade features from numerous pattern books, worked wood to mimic stone surfaces, grained or marbled interior woodwork, and employed plaster, panelling or moulded boarding to cover frame elements wherever possible, all in an effort to pro-

duce an appearance of elegant finish. When this sense of style became popular in a community, even the frames of new dwellings were designed to accommodate it.

The earliest permanent homes in Vermont usually had corner and intermediate posts exposed in the rooms, though normally cased in planed pine or basswood. In between these posts were studs or planks which carried plaster or panelling.<sup>19</sup> The expressed frame had become archaic in New England even before the Revolution, and, even in northeastern Vermont, the desire for a more refined, Federal style interior had become rampant by the late eighteenth century. The concealed frame became so desirable that builders devised several means to achieve it, including 1) removing the inside corner of the corner post; 2) timber framing with the wide dimension of rectangular post (4"x8", 4"x10", 4"x12") in the wall; 3) timber framing with 6"x6" timbers and building the entire wall out to cover them; and 4) planking without posts.

The first of the solutions was widespread from 1790 to at least the Civil War. An "L" shaped timber was produced by removing a 4"x4" from an 8"x8", allowing the interior finish (carried by four inch studs) to meet in the corner. This was rather tedious with the tools available in 1800. In some cases the angle of chisel marks indicates that it was done sometime after the erection of the building, as in the kitchen of the Peletiah Corliss Tavern.

The second approach, sometimes called mixed timber and stick framing, rare before 1840, became the dominant mode for northeastern Vermont dwellings. The Gardner-Wheeler house (1798) in St. Johnsbury (dismantled and moved out of state in 1984) was framed to a uniform four inch wall by builders reluctant to leave the massive joinery or diagonal bracing of timber framing behind. They used 4"x12" timbers which met at the corners and they used numerous 4"x10" intermediate posts, and mortised 3"x5" diagonal braces into the four inch sides of the posts and went both up and down. This house contained elaborate Federal style woodwork.

With no interest in filling a deep cavity with insulation, the post-Revolutionary builder rarely used the 6"x6" timber framing. It was found occasionally in high style federal residences where the depth of wall also allowed elaborate treatment of window surrounds.

Planking became the most common method in northeastern Vermont for builders to achieve the desired styles. In the case of plank framing builders summoned forth all old techniques and altered them to serve a new need, producing an unusual combination of old material used to make possible a more modern, refined structure.

## NOTES

<sup>1</sup> The full geographical range of this technique's application is a matter for research. The distribution mentioned here is assembled from Richard Candee, "Early Wooden Building in Maine and New Hampshire," Ph.D. diss., University of Pennsylvania, 1976; Anthony Garvan, *Architecture and Town Planning in Colonial Connecticut* (New Haven: Yale University Press, 1951); J.F. Kelly, *Early Domestic Architecture in Connecticut* (New York: Dover, 1966); W.R. Nelson, "Puzzle of the Plank Houses," *New Hampshire Profiles* (March 1966); J. Rempel, *Building with Wood* (Toronto: University of Toronto Press, 1976); and the author's field notes.

<sup>2</sup> Nelson, "Puzzle of the Plank Houses," identifies several two story examples in central New Hampshire. Rempel, *Building with Wood*, examines one in southern Ontario. The now demolished Peletiah Corliss Tavern in Bradford, Vermont was another. Other examples exist in Lyndon and Hardwick, Vermont.

<sup>3</sup> Hope Nash, *Royalton, Vermont* (Royalton: Royalton Historical Society, 1976), and Rempel, *Building with Wood*, use this terminology.

<sup>4</sup> Professor Michael Tomlan of Cornell University has been using radiographic technology to inspect plank frames in the Ithaca, New York, area.

<sup>5</sup> F. Kniffen and Henry Glassie, "Building in Wood in the Eastern United States," *Geographical Review*, Vol. 56, 1966; and W.R. Nelson, "Some Examples of Plank House Construction and their Origin," *Pioneer America*, Vol. 1, No. 2 (1969).

<sup>6</sup> Richard Candee describes this process in *Early Wooden Building . . .* and in "A Documentary History of Plymouth Colonial Architecture", *Old Time New England*, LXX, No. 3 (1969). See also Abbott Lowell Cummings, *The Framed Houses of Massachusetts Bay, 1625-1725* (Cambridge: Harvard University Press, 1979), p. 21. Bob Meeson discussed a possible English antecedent in "Plank-Walled Building Techniques and the Church of St. Lawrence, Rushton Spencer," *Vernacular Architecture*, Vol. 14 (1983).

<sup>7</sup> M. Lessard and G. Villandre, *La Maison Traditionnelle Au Quebec* (Montreal: Les Editions De L'Homme, 1974), pp. 108-115.

<sup>8</sup> *Ibid.*, pp. 324-327.

<sup>9</sup> Any notion that French Canadian building practices might have influenced the northern frontier of New England is dispelled by the circumstance of the northern side of the border being settled later than the southern, and then not by the ancient French population but by Scots, Irish and New Englanders.

<sup>10</sup> A. Connally, "The Cape Cod House," *Journal of the Society of Architectural Historians*, vol. 19 (1960), 53, discusses several houses with two-inch planks spiked to the exterior of the frame; where diagonal bracing seems to have been eliminated.

<sup>11</sup> Nelson, "Some Examples of Plank House Construction," examines a four-inch thick plank frame in Bristol, Vermont. Another example is the long abandoned Morse house in Groton, Vermont.

<sup>12</sup> Population figures are from Frederick Schmidt, *Vermont Community Data Bank*, 1980, quoted in H.N. Muller, III, and Samuel E. Hand, *In a State of Nature: Readings in Vermont History*, (Montpelier: Vermont Historical Society, 1982). Caledonia County had 18,730 persons in 1810 and 25,814 in 1980; Essex contained 3087 and 6,300 respectively.

<sup>13</sup> *The Vermont Historic Sites and Structures Survey*, Division of Historic Preservation, State of Vermont, Montpelier, provides help in estimating the age of structures, but construction details are generally outside the scope of this Survey.

<sup>14</sup> The following list, mostly of local tradespeople, have either shown an actual frame to the author or given concrete information about one: John Akin, Townshend Anderson, Dave Hill of The Barn People, Bruce Brooks, Michael Brauregard, Ed Cooney-Moore, Roger Fox, Frederick Hempt, John Hunt, Paul Ide, Ted Ingraham, Judith Kane, Penelope Lewis, Kathryn Unser, John Mackin, Mark Milnes, NETO Insulators, Scudder Parker, May Perry, Torn Porter, Peter Post, John Reynolds, Wade Treadway who has been especially helpful, Ted Tremblay, Allen Yale, and Wayne Young.

<sup>15</sup> Albany, Barnet, Bradford, Brownington, Cabot, Craftsbury, Danville, Derby, Duxbury, Greensboro, Groton, Hardwick, Johnson, Lunenburg, Lyndon, Newark, Peacham, Stannard, Sutton, Walden, Waterville, Woodstock, and Worcester.

<sup>16</sup> Nelson, "Some Examples of Plank House Construction," cites examples of two-story Type 2 dwellings that are platform framed.

<sup>17</sup> M. Lessard, *La Maison Traditionnelle Au Quebec*, pp. 326-328.

<sup>18</sup> Rempel, *Building With Wood*, pp. 183-185, suggests other methods of erection while admitting it remains a puzzle.

<sup>19</sup> Richard Candee's *Early Wooden Building in Maine and New Hampshire* provides a discussion paralleling these points for older (17th and early 18th century) plank on frame structures in Maine and New Hampshire.

<sup>20</sup> Herbert Wheaton Congdon offers this view in *Old Vermont Houses* (Dublin: Bauhan, 1973).

<sup>21</sup> Examples are given by Hope Nash, *Royalton*, pp. 100-109; and W. White and D.D. Johnson, *Early Houses of Norwich, Vt.* (Hanover: Dartmouth College, 1938).