

“TEARING DOWN THE OLDEST HOUSE IN PLYMOUTH” (DOTEN-RIDER HOUSE, CA. 1664)
Watercolor, 1909, courtesy Pilgrim Hall, Plymouth, Massachusetts.

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A Documentary History of Plymouth Colony Architecture, 1620-1700

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Concluded

CONSTRUCTION METHODS

WHILE the study of architectural forms may rest, in part, upon floor-plan descriptions without reference to the manner in which such dwellings were built, the study of construction methods necessitates surviving examples or descriptions of characteristics in now-destroyed buildings. Rarely do sketches or drawings of buildings provide information as to the way in which long-lost buildings were constructed. Only in the case of the watercolor of the demolition of the so-called Doten House in Plymouth (Frontispiece) did an artist provide indications of framing used in the original dwelling.

Of the nearly three dozen buildings for which sufficient data has survived to indicate the construction methods used, the greater number may be described as "plank-frame" houses. A few partially of stone, one of horizontal squared logs, and an occasional "stud-frame" dwelling to-

ward the Massachusetts Bay area are known to have existed simultaneously. This difference in the manner in which exterior walls were constructed, then, is the basis upon which construction differences rest.

Little more need be said of those "garrison" homes of Cape Cod previously discussed in relation to the forms of fortifications. Although there may be some legitimate question of the age of these dwellings, they seem to form a class of stone single-cell first stories with wooden second stories jettied out in a three-foot overhang. No indication is made in the surviving descriptions as to whether these upper stories were of vertical-plank construction or made with nogging between studs.¹

Stud-Frame Dwellings: While this method of construction is almost the only one used in the construction of first-period dwellings in Massachusetts Bay, very few

are known to have been built in Plymouth Colony. In the coastal region toward the Bay Colony, after the 1692 merger and up to *ca.* 1725, a few buildings of this type have survived.² In Plymouth itself none are known. However, the *ca.* 1823 sketch of the Allyn House, traditionally dated *ca.* 1660, suggests stud-framing.

horizontal beams, no such building is known. The many overhang buildings of seventeenth-century New England are all built upon the principle of studs with nogging between the interstices. Indeed, the facade gable and overhang with drop pendants is so stylistically similar to models outside Plymouth Colony, one is

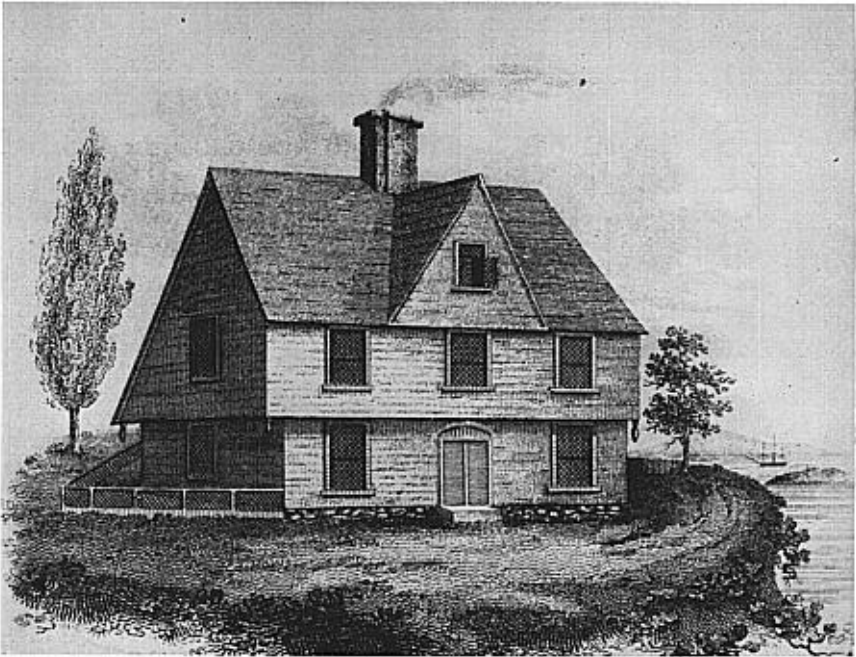


FIG. I. ALLYN HOUSE

From *The Life of James Otis* by William Tudor, published at Boston in 1823.

This large dwelling (Fig. 1) seems to have been sketched near the date of its destruction, possibly from recent memory, and shows an unusual facade gable directly in front of the chimney. It is the overhang which suggests the stud-frame construction of England and the Bay Colony. Although it is not impossible in theory to construct such a framed overhang using vertical planks between the

tempted to suggest that the Allyn House illustrates the diffusion of the same English construction methods used elsewhere in the New England Colonies.

Vertical Post or "Pallisado" Houses: The question of whether any of the dwellings of the colony were constructed of vertical posts has been espoused or minimized by nearly everyone who has tried to document its early architectural

history. When Fiske Kimball wrote his history of early American architecture he took previously cited references to wattle and daubing and the comparatively few later references to frames of buildings to mean:

that this wattle did not form the filling of a frame, but was on stakes or posts driven into the ground, as in the ordinary houses of the medieval period in England, which lingered in remote districts.³

Kimball also argued from what has since been proven to be a misquotation the Dutch manuscripts of Isaack De Rasieres which mentioned "hewn planks" used in houses and fences. However, while the Dutch phrase has subsequently been correctly translated to read "cleft oak boards,"⁴ the argument is corroborated by other references to vertical post construction.

Bradford described the same Aptuxcet trading post, which De Rasieres had called clapboarded, seven years later when a storm:

took off the boarded roof of a house which belonged to this Plantation at Manomet, and floated it to another place, the posts still standing in the ground.⁵

While evidence of posts said to be "standing in the ground" is hardly conclusive evidence of what the French called *poteaux en terre* or *pieux en terre*,⁶ corroborative evidence of a suggestive nature is found in other contemporary sources.

Previous mention has been made of the nine Scituate homes "all w^{ch} [were] small plaine pallizadoe Houses" when Rev. Lothrop arrived in 1627.⁷ Like the house of John Crocker, which was entered by a thief "by putting aside some loose pallizadoes on y^e Lords day,"⁸ these comments have been considered as more likely referring to pallisado fences about the property.⁹ Without the evidence of a

surviving example of such a folk building, few have considered such construction methods when frame building was so common in every other New England colony, except as the earliest temporary shelter.

Nevertheless, a mid-nineteenth-century description of a permanent dwelling built of vertical posts corroborates the few indications found in the court records as late as the 1660's.¹⁰

Some of the pallisado houses built by the first settlers were the most comfortable and durable houses built. Elder John Chipman's I believe was so constructed, Mr. John Crow's of Yarmouth, certainly was, and stood nearly two centuries [i.e., ca. 1840] required but little repair, and, in fact, the recent owners did not know that it was so constructed till it was taken down. This house was built by taking large sticks of timber for sills and plates, boring two parallel rows of holes in each, about six inches apart, excepting where doors or windows were to be placed, and filling between [the vertical logs] with stones and clay.¹¹

According to the author of this description, who either saw the destruction of this home or heard of it firsthand, the walls were plastered and the exterior covered with clapboards which hid the method of construction.¹²

This method of construction using sills and plates has been noted in Anglo-Saxon England,¹³ and it was known as *poteaux sur sole* by the French in the Mississippi Valley, where this "very old and largely vestigial" practice "experienced a brief rejuvenation in timber-rich colonial America."¹⁴ How common this was in early seventeenth-century England has never been determined. Although common to France, it was unknown in Holland.¹⁵

Vertical-Board Plank-Frame Construction: While this method of construction, using vertical closely set boards or planks to cover a frame of widely spaced

timbers, may be one of the most common in America before balloon framing, it is comparatively rare in seventeenth-century New England. Only in Plymouth Colony and the adjacent northern corner of Rhode Island was it the primary building method of the seventeenth and eighteenth centuries. It has already been noted that early Providence Plantation, where Isham discovered this style of construction, was heavily populated with emigrants from Plymouth Colony.¹⁶

To discuss buildings constructed in this manner in quantitative terms, one must consider both the number of structures known to have employed this method in comparison to other methods and the date of such buildings in various areas as an index of diffusion. In Plymouth Colony the number of known vertical-plank dwellings constitute over ninety percent of all buildings where the construction method is known, prior to *ca.* 1725 (see List). This date has been chosen as the terminal date of the first period of building for it allows ample opportunity to include those early buildings built after the political merger with the Bay Colony. Indeed, as has been shown elsewhere, numerous buildings previously considered "seventeenth-century" on stylistic grounds were actually built during the first quarter of the eighteenth century.¹⁷

While ninety percent of known or surviving Plymouth Colony structures of this period were built in this manner, evidence may be gathered to point to the use of vertical plank well before the 1667 date of the Harlow "Fort" House, considered the oldest standing house in Plymouth itself. Amos Otis in his mid-nineteenth-century study of early Cape Cod dwellings describes seventeen homes of the settlers of the Barnstable-Sandwich

area which he had seen or gathered reliable descriptions of shortly after their destruction.¹⁸ Although Otis also mentions incidental building in stone and hewn log, vertical plank was the most common method used on the Cape. This is borne out for a later period (*ca.* 1650-*ca.* 1850) in Ernest Connally's study of the Cape Cod house.¹⁹ The dates from 1639 to 1695 which Otis mentions in relation to the structures with which he was familiar have never been closely analyzed. Although his study of land titles may have indicated buildings of extremely early date, he presents little corroborative evidence that the buildings standing on that property in the nineteenth century were necessarily the same. However, in a few cases where further description is given or where he notes his method of dating buildings on construction evidence it may be said that he showed considerable knowledge of his locality. He tended to group houses built prior to *ca.* 1680 with certain features not met with in dwellings constructed after that date. Although outwardly similar, "Both had heavy cornices, the front roof was shorter and sharper than the rear," yet:

more ancient houses were lower in the walls, especially in the chambers, and the sleepers of the lower floors were laid on the ground, leaving the large sills used in those days, projecting into the room.²⁰

Elsewhere Otis describes the story-and-a-half house of the earlier period as having posts five and one-half feet in the rear (lean-to) with nearly twelve-inch projecting sills adding to the headroom. He also contrasts the lower height of front posts in the houses he considered earlier with those of later buildings.²¹ While certain characteristics such as projecting sills are not necessarily an index of an early seventeenth-century date, this feature

having been found in dwellings built toward the end of the century, Otis' differentiation by ceiling or post heights was

earliest buildings may have actually been built in the third quarter of the century at the latest, and those dated after 1680

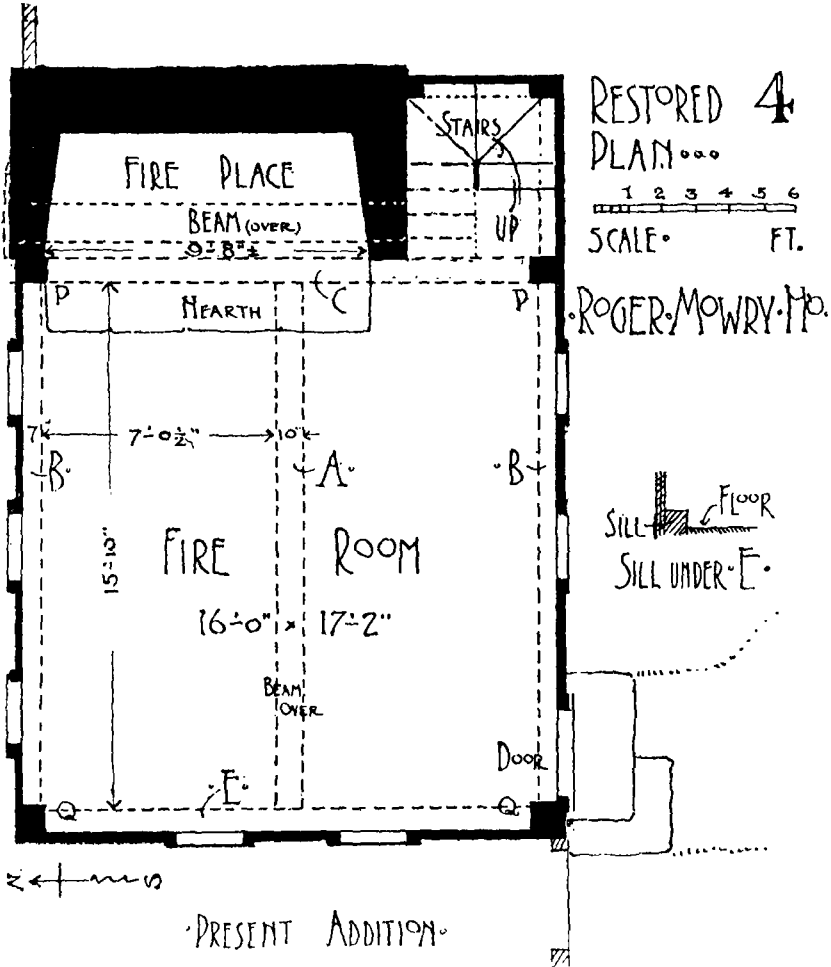


FIG. 2. FLOOR PLAN OF THE ROGER MOWRY HOUSE (CA. 1653), PROVIDENCE, RHODE ISLAND

From Isham and Brown's *Early Rhode Island Houses*, Plate 4.

probably a good comparative index. Without studying either the buildings or the land titles on which Otis based his dating, his internal evidence suggests that his

may actually have been built slightly later. Nevertheless, even after up-dating Otis' earliest structures, one realizes that he recorded some buildings built prob-

ably near the mid-century, which pushes the earliest date of vertical plank-frame building back to the period of early settle-

ment for the Roger Mowry house may be questioned on the basis of his method of dating on form and other imprecise char-

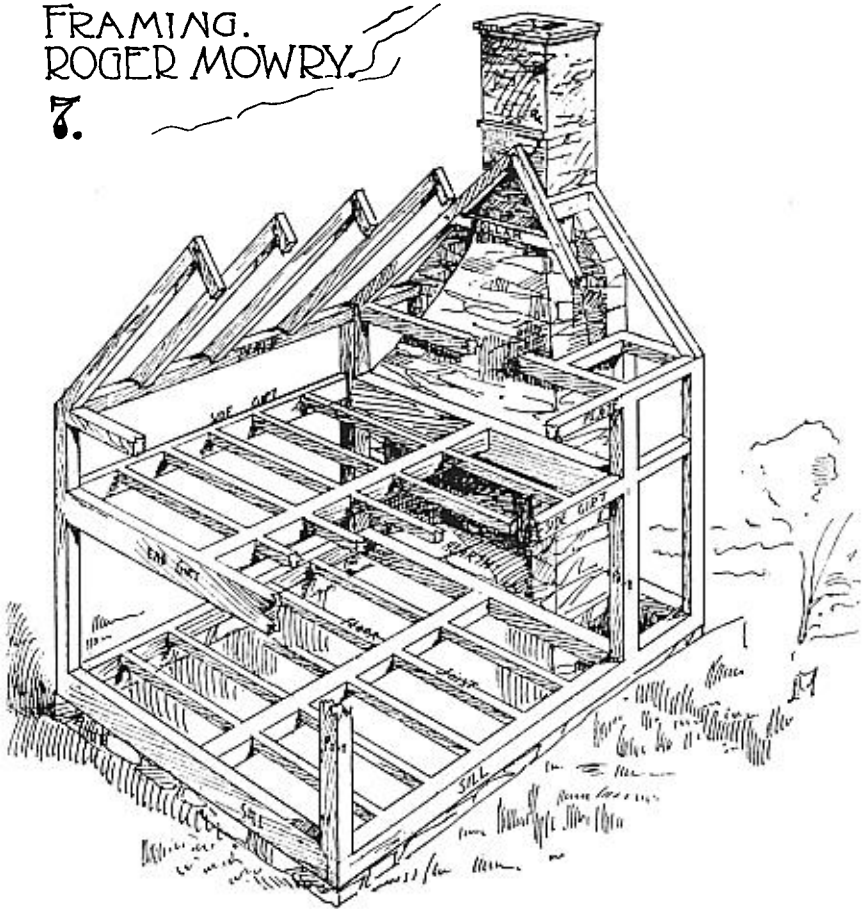


FIG. 3. FRAMING OF THE ROGER MOWRY HOUSE (CA. 1653),
PROVIDENCE, RHODE ISLAND

From Isham and Brown's *Early Rhode Island Houses*, Plate 7.

ment. This corresponds to Isham's date for the earliest house in Providence still standing when he began his published studies near the end of the nineteenth century. Although Isham's date of 1653

characteristics, he does provide a partially measured drawing which indicates the manner in which the single-cell vertical plank-frame story-and-a-half house was built (Figs. 2, 3).

Prior to the mid-century point numerous indications of vertical plank-frame construction may be found in the manuscript sources relating to Plymouth Colony. Governmental records provide information about the public buildings which have been shown to be nearly identical in plan and elevation to private dwellings. In 1675, for example, the building contract between the town of Plymouth and Nathaniel Southworth (previously cited) provided that he should build a watch house "to be walled with board" and including the instruction that he was "to batten the walls."²²

The use of vertical planking on public fortifications, however, has a much earlier history in Plymouth. In 1634/35 when Thomas Boardman contracted to build a fort to replace the first fort-meetinghouse, he was instructed "to inclose y^e whole work wth sawne bords" nine feet high and cut sharp at the top, thus indicating their vertical position.²³ This gives a certain amount of corroboration to De Rasieres' description of the 1622 fort which he saw about 1628.

Upon the hill they have a large square house, with a flat roof, built of thick sawn planks stayed with oak beams. . . .²⁴

Possibly Bradford's memory of this first fort "made with a flat roof and battlements" may be taken to mean sharpened tops to the sawn vertical planks on the 1622 structure as well.²⁵ In any case, there can be little doubt that vertical plank-frame construction was known and used from the earliest years of Plymouth settlement.

This raises the question of frequency of the early methods of construction, which remains an area of conjecture to be considered only on the basis of the sum of the foregoing information. In Septem-

ber, 1623, Emmanuel Altham, a visitor to Plymouth, described the town as "about twenty houses, four or five of which are very fair and pleasant, and the rest (as time will serve) shall be made better."²⁶ Were the majority like the pallsado houses of 1634, Scituate and the "fair" houses constructed like the then-new fort? Quite probably we shall never know for sure, but one is tempted to suspect that this might have been the case.

Having traced the plank-frame method to the earliest years of the colony's history, let us compare Plymouth's architectural tradition with those of other contemporary English colonies. In each of the New England first settlements for which documentary evidence has survived, pallsado-like dwellings for temporary shelter are known.²⁷ Similarly, the "puncheon" building noted in Virginia indicates that one need not search further than a common, if vestigial, English tradition of vertical-post building.²⁸

On the other hand, there seems to be no evidence of vertical plank-frame building outside of Plymouth Colony and the contiguous portion of Rhode Island prior to the last quarter of the seventeenth century. In Massachusetts Bay no surviving structure before *ca.* 1680 indicates plank-frame construction. In fact, only three buildings built in this manner prior to *ca.* 1700 may be found in the dozens of extant seventeenth-century dwellings known of the Bay Colony: the Seth Story House (*ca.* 1680), the rear wall (at least) of the Swett-Ilisley House (pre-1691), and the so-called Claflin-Richards House in Wenham (*ca.* 1700).²⁹ On this evidence and the comparative rarity of the method in the Bay Colony in general, Connally's supposition that vertical plank-frame construction was brought to Cape Cod from the area

around Lynn may be reversed.³⁰ Rather, it would seem that diffusion ran from Plymouth toward the Cape in the 1640's. Whether later introduction of the method into the Bay Colony came directly from England or via Plymouth Colony will be investigated subsequently.

Rhode Island, it may be fairly stated, inherited the plank-frame method from its Plymouth emigrants. The contrast between the northern part of the state and the noncontiguous (to Plymouth Colony) southern lands under domination from Connecticut substantiates this hypothetical diffusion. One author states that Warwick, early combined with Providence Plantation, is the approximate boundary between plank-frame and stud-frame, the former appearing only sporadically in the Newport and Southern Counties up to the mid-nineteenth century.³¹

In Connecticut a variety of plank-frame houses survive, but only the Norton House of Guilford (*ca.* 1690) seems to fall prior to 1700. In the next century and possibly later "a large number" of such buildings existed,³² but with notable difference from those in Plymouth Colony. Whereas in Plymouth all documented seventeenth-century surviving examples consist of planks about one and one-quarter inches thick and their edges halved together, Connecticut examples indicate planks of up to two inches thick often placed two inches apart. The space between planks in Connecticut examples was filled with clay and straw.³³ Only in the eighteenth-century construction or rebuilding in Plymouth Colony is a separation between planks found, and seldom with any filling between boards. Nevertheless, Connecticut shows no evidence for plank-frame houses before the last decade of the seventeenth century.

A brief glance toward the southern

colonies completes the survey of contemporary plank-frame construction in the seventeenth-century English colonies. Forman describes a vertical plank-frame dwelling with battens covering the exterior joints in a Maryland house built by a Quaker from Plymouth Colony, *ca.* 1670. The use of battens is not found on other Plymouth dwellings although the word is mentioned in connection with the 1633 fort. "Ending of Controversie," as Wenlocke Christison called his Maryland home, also shows other differences in construction from the Plymouth prototype in its typical Maryland brick ends.

While no known frame buildings of the seventeenth-century have survived in Virginia, a construction method known as "box construction" persists in the South for inexpensive building. Outbuildings with posts sunk into the ground and boards for plate and sill form a frame for vertical exterior boarding.³⁴ Like other methods of constructing barns and similar utilitarian buildings, it is difficult to determine how early to date such a construction method. Undoubtedly it dates to a time prior to the earliest surviving example, but whether into the first period of settlement cannot be determined.

With the complete lack of evidence for plank-frame building in any other English coastal colony before the second half of the seventeenth century except where Plymouth Colony settlers may be found, one must return to the demographic study of early settlers. Two differences in population origins were noted for the settlers of Plymouth Colony: a substantially higher emigration from Kent, England, and an even higher percentage of first settlers who had dwelt in Holland. Conversely, one may ask where plank-frame construction could have been found in the late sixteenth or early seventeenth century which

the Plymouth settlers could have known?

In England a variant of half logs between sill and plate, tongued and grooved on adjoining edges, may be found in one Anglo-Saxon church in Essex. This church at Greensted *ca.* 1050 is the only example in England of this method, and may be the final culmination of building with vertical posts which spread across Europe by the late Neolithic.³⁵

Somewhat closer in date are a few rare church steeples built between the twelfth and fifteenth centuries.³⁶ Nearly all were built in Essex, with the exception of the steeple at High Holden, Kent, and that at Monk's Horton (destroyed 1846).³⁷ There are many obvious differences between these belfry towers and the use of such a building method for domestic dwellings. Even the latest examples were constructed nearly two centuries prior to American emigration. Furthermore, as far as is presently known, there are no English domestic buildings which used vertical boarding prior to the nineteenth century (and then "much less than horizontal weather boarding").³⁸

It would be impossible to say that vertical "plank construction" was not (even vestigially) used in housebuilding of the late sixteenth or early seventeenth century in England. However, the fact that no other English-American colony (except Plymouth-Providence) adopted this simple method argues that it was relatively unknown to the migrating Englishmen before the later decades of the seventeenth century.

In Holland, on the other hand, the use of vertical "plank construction" for wooden houses was known in the seventeenth century. This fact is suggested by numerous late sixteenth- and early seventeenth-century Dutch prints³⁹ which show gable ends and whole lean-tos as

vertical planks. Two prints by Marten De Cock of the city gates of Amsterdam in 1620 illustrate such boarding on several buildings.⁴⁰ There might, however, be some question whether these illustrations indicated vertical "weatherboarding" or an integral form of wall construction.

In response to my inquiry, an architect of the Rijksdienst voor de Monumentenzorg and author of a study of medieval Netherlandish building methods and materials, has provided some very useful information. Although plank construction was not used in seventeenth-century Holland for front or rear "side walls," it *was* employed in gable end walls of wooden houses. Indeed, Mr. Janse states that, like some examples in Plymouth, no shingles covered these vertical board members.⁴¹ This then corroborates the Dutch prints of the period which show town-scapes of low wooden gable ends of vertical planks interspersed between the better-known brick buildings.⁴²

C. T. Kokke, head of the Documentation Department of the Rijksmuseum Voor Volkskunde, the Open Air Museum at Arnhem, provides further information regarding the use of vertical planking. He states that in Noord-Holland, the area north of Amsterdam, both vertical and horizontal planking has been known, the latter especially in the nineteenth century. He also cites a composite of these methods in a dwelling from Landsmeer, Noord-Holland, now in the Open Air Museum at Arnhem, where the vertical planking has been later replaced by horizontal boarding, although it remains in the upper gable end (Fig. 4).⁴³

Another means of corroborating the common use of this method by seventeenth-century Dutchmen is found in a

brief study of wooden building in Dutch New York of the same period. A view of New Amsterdam (published in Amsterdam in 1651) shows the same one-and-a-half-story gable ends with both vertical plank and clapboard as well as a few small buildings apparently built entirely of vertical boards.⁴⁴ This corresponds to

and Downing, in their study of vertical boarding in Rhode Island, attribute it to Dutch influence without any supporting statements. Isham seems to have been aware that the method was certainly not confined to Holland and suggested that it may have been a Dutch influence upon England and thence to the colo-



FIG. 4. DWELLING HOUSE FROM LANDSMEER, NOORD-HOLLAND,
NOW IN THE OPEN AIR MUSEUM AT ARNHEM
Courtesy of the Rijksmuseum voor Volkskunde, Arnhem.

Father Joques' description of Rensselaer's colony (1646) as twenty-five or thirty houses: "All their houses are merely of boards and thatched, with no mason work except the chimneys. The forest furnishing many large pines, they make boards by means of their mills. . . ."⁴⁵ The information provided about milling pine boards certainly suggests that these homes were similarly constructed.

It is interesting to note that both Isham

nies.⁴⁶ It is to be regretted that no one since 1900 has tried to trace the diffusion of vertical plank construction along the lines Isham suggested. Certainly his educated guess was as accurate as present information will permit. Vertical-plank construction, apparently unused in English house construction was common in wooden building in Holland and may have provided the prototype to both Plymouth Colony and New Amsterdam

prior to mid-century. While New York architecture seems to have primarily moved toward brick building thereafter, that of Plymouth Colony and its cultural dependencies continued the all-vertical-plank method of building. The examples in Connecticut and Massachusetts built at the end of the seventeenth century suggest either a diffusion from the southeastern Massachusetts area or a parallel influence upon the English from similar sources.

Decorative Construction Details: Whether the immediate origin of the use of vertical-plank framing came from the Netherlands directly or by way of Dutch influence upon southeastern England, the regional usage in Plymouth Colony and nearby Rhode Island developed several functional and stylistic features. On the exterior, clapboards seem to have been used from the initial date of settlement, although the question of pallsado or plank-framing in the majority of early Plymouth dwellings may never be settled. Yet some few years after the description of four or five "fair" houses among the twenty homes in Plymouth, De Rasieres' picture of the town has been translated: "The houses are constructed of clapboards [i.e. cleft oak boards], with gardens also enclosed behind and at the sides with clapboards. . . ." ⁴⁷

While the most common exterior cover was provided by clapboards, a few extant buildings suggest that the vertical plank was not always covered over. The Churchill house (*ca.* 1672-1695) on the outskirts of Plymouth evidences weather-worn vertical planking now facing inward since the date of the first change in the rear roof. Between the hand-hewn rafter of the original one-and-one-half-story single-cell house and a sawn rafter of a salt-box alteration, the gable contains

the planking of the first period. This planking (Fig. 5) and some now used as attic flooring, contains a wide semicircular bead or molded edge along the length of the side. The weathered surface indicates that this decorated surface originally faced the exterior and its location dates it as prior to the first roof alteration. Like Dutch gable-end models, this type of exterior covering decoration is possibly similar to Thomas Boardman's contract for the plank-framed fort of 1634, for which the planks were to be cut sharp at the top "& either listed or shote with a plaine. . . ." ⁴⁸

The remaining exterior features of Plymouth Colony dwellings must be summarized from documents, as little or no material evidence has survived the ravages of time and changes of taste and style. Roof construction, like that of other colonies, was first of thatch. After 1627 this material was outlawed on new buildings within the town of Plymouth, although thatching is mentioned in a Yarmouth building contract as late as 1639. ⁴⁹ Undoubtedly, outside of the town of Plymouth thatch was not replaced by wooden boards or shingles until after mid-century and may have continued in use for barns and outbuildings much after that date.

It has previously been suggested that cobbled or wood and clay chimney stacks were the earliest forms built in the colony. Such a chimney was called for in the 1639 Yarmouth building contract, although the earliest reference to bricklayers in colonial records was in 1638. ⁵⁰ By the 1640's brick chimneys began to dot the Plymouth skyline, although it is said that around Barnstable stone fireplaces were topped with brick chimney flues beginning above the first-floor level. ⁵¹ Where stone was available, it was used

for masonry chimneys as in the recently destroyed Waite-Potter house in South Westport (1677).⁵²

Within the Plymouth house, the use of vertical planking allowed an unusual method of wall decoration which could not be used in filled-stud dwellings. It

phenomenon was measured by Isham in the Doten House in Plymouth before its destruction and constituted an elaborate "shadow moulding" along both edges of the vertical joint.⁵⁴ Another example of "shadow moulding" along the jointing of vertical-plank walls may be found in the

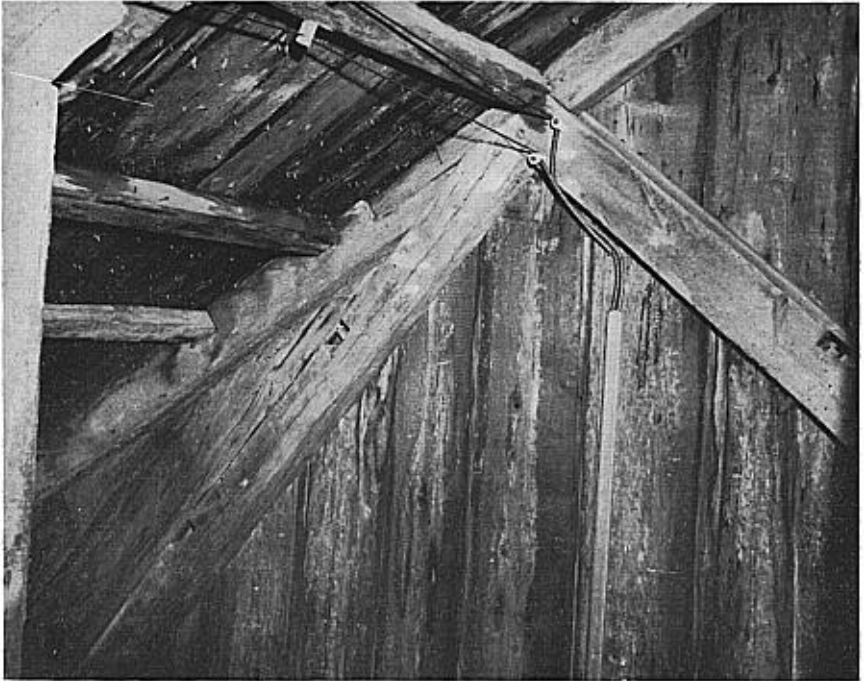


FIG. 5. ATTIC GABLE-END, CHURCHILL HOUSE, PLYMOUTH, MASSACHUSETTS (CA. 1672-1695), SHOWING BEADED VERTICAL EXTERIOR BOARDING
Photo from the Society's collections.

seems evident from those few known examples that plaster was not applied to the interior side of the plank wall, but that the wood was often decorated as "wainscot." Along the edge of the vertical planks a molding was applied by means of a plane, possibly like the "Wenscutt plough" in the inventory of William Carpenter (the elder) made in 1685.⁵³ This

entry of the Churchill house outside Plymouth. Here a similar moulding was used in the rear lean-to room added to the main "hall," although it is not yet clear whether such boards are in their original location or were reused at some slightly later date.

Because such "shadow mouldings" in applied paneling of other New England

buildings seem to indicate a practice of the last quarter of the seventeenth century, Isham's evidence suggests that the Doten house might be dated later than the traditional 1664. Another one-and-a-half-story Rhode Island house constructed of vertical plank toward the end of the century also evidenced no plaster on any of its walls when Isham saw it at the end of the nineteenth century.⁵⁵ This, however, is not always the case. Walls of houses built in the second half of the century also evidence plaster on laths nailed to the vertical planks, although neither the plank nor plaster are necessarily original to the buildings.⁵⁶

Besides the vertical "shadow moulding" of the interior-exterior planking, other forms of "wainscote" are known for the second quarter of the century. The undefined term used in deeds as early as 1645 may be related to other early interior descriptions. In the same year another deed referred to "boards that line the inward room."⁵⁷ More specific is the 1637 building contract for a house to be "clap boarded wthin up to the floore and a partition to be made of clap board."⁵⁸ Such clapboarded interiors are known for other areas of New England, such as the early moulded clapboarding in the Fairbanks House (1637) in Dedham. The major difference, of course, is the stud with wattle and daub construction of the Fairbanks house compared to the conjectured use of such clapboarding over the vertical planking in Plymouth houses.

Windows and other architectural details of Plymouth buildings are primarily known through deeds and other court documents. The earliest reference to leaded casements is 1641, and thereafter such windows are mentioned in the transfer of Plymouth property. It would be of great interest to know how long windows

of oiled paper or other unglazed treatments continued in the colony. The half-dozen references to casements in Plymouth deeds suggest that only a portion of the colony's dwellings were equipped with glass before mid-century.⁵⁹ In Sandwich the houses of ship's carpenter Richard Chadwell not only had "glasse windows" in 1645, but "the wooden shutts to them belonging."⁶⁰ Whether this refers to interior sliding shutters or those separately connected is unknown, but it is worth mentioning that sliding shutters depend upon the width of stud-frame walls and are not known in plank-frame houses.

While the inventories of Plymouth Colony estates list the movable personal property, the deeds of the second quarter of the seventeenth century indicate what semiarchitectural elements of dwellings were considered as part of the property. Most commonly mentioned are "boards," meaning the floor boards of upper rooms, and shelves "in eich roome" as described in 1645.⁶¹ Only slightly later, widow Mary Padduk sold her dwelling on South Street in Plymouth "together with all the shelues and boards both loose and nailed. . ."⁶² On the one hand this suggests such examples as the built-in shelf or cupboard at the Fairbanks House. On the other hand, such deeds as this indicate the removal of unnailed floorboards prior to transfer of properties in Plymouth.⁶³

Besides these quasi-structural features, deeds also record the sale of various other objects with house properties. Most common among these were various forms of bedsteads. In 1645 Edward Winslow sold his house in Plymouth and included a "Wainscot bedstead in the parlor wth the truckle bed" as well as the wall wainscot, doors, locks, and "a chaire in the studdy."⁶⁴ Another interesting reference

is found in the 1642 sale of a Duxbury farm with the use of a house for one year. Among the household objects not to be removed were shelves, the cupboard, and "the cabbin bedstead."⁶⁵ If this refers to

the built-in Dutch bedsteads common to contemporary prints of Netherlandish interiors, perhaps this suggests further influence from the Low Countries upon Plymouth Colony building.

CONCLUSION

Much more could, and should, be learned about first-period architecture of the Plymouth Colony area. This survey has emphasized the major characteristics of form and construction as an index to the early culture of the region. In doing so, many small and individual details of interest have necessarily been sacrificed to an overall space-time perspective.

One who has read the interpretations of three generations of architectural historians is hesitant to make the same assumptions about Plymouth's building history. Certainly little more is likely to be learned about the first few decades of that town's architecture. It is to be hoped that the foregoing study will lead future investigators to view the whole region as an architectural unity.

If one speaks of the New England population *ca.* 1620-1725 as a specific culture, one might also describe this southeastern Massachusetts-northern Rhode Island area as a recognizable subculture. Not only the characteristics of construction differences, but many aspects of material culture act as indices of a

distinct regional culture.

What is needed, then, is a more detailed map of the diffusion of building methods, furniture styles, and other possible material indices. A study of the history of specific buildings, on the other hand, would aid a temporal development of style and building methods. What, for example, were the relative proportions of stud and plank buildings in various areas? Did such differences reflect differences of cultural backgrounds or of local wealth or status?

On the other side of the Atlantic several studies would be useful. One might be the measured drawing of datable vertical-plank buildings. With this comparative material, more definite statements might be made about the differences between Plymouth and Connecticut examples. Did they originate in a common area, or develop from different traditions? Only with answers, even tentative answers, to such questions can the historian of colonial life place this area of settlement into a proper context with its neighboring counterparts.

ADDENDUM

LIST OF FIRST-PERIOD HOUSES IN PLYMOUTH COLONY AND NORTHERN RHODE ISLAND, CA. 1620-CA. 1700

| <i>Trad. Date</i> | <i>House Owner(s)</i> | <i>Town</i> | <i>Source</i> | <i>1st Type</i> | <i>2nd Type</i> |
|-----------------------|-----------------------|-------------|------------------|---------------------|---------------------|
| 1633 | Will Wright | Plymouth | Inv., PCR | I-C | |
| 1634 | Williams House | Scituate | Barber, p. 528 | | II-D |
| 1639 | Rev. Lothrop (1st) | Barnstable | Otis, p. 204 ff. | I-C | I-D |

| | | | | | |
|-------|--------------------|-------------------|---------------------|--------|---------|
| 1639 | Goodspeed House | Barnstable | Otis, p. 202 | II-C | |
| 1639 | John Crow | Yarmouth | Otis, p. 202 | | |
| 1639 | Thos. Pryor | Scituate | Inv., PCR | I-A | |
| 1640 | John Crocker | Barnstable | Otis, p. 204 | | |
| 1641 | Nathaniel Tilden | Scituate | Inv., PCR | II-B | |
| 1642 | Nathaniel Bacon | Barnstable | Otis, p. 210 | II-C | |
| 1643 | Dea. Wm. Crocker | Barnstable | Otis, p. 204 | I-C | |
| 1644 | Rev. Lothrop (2nd) | Barnstable | Otis, p. 209 | II-C | |
| 1644 | John Atwood | Plymouth | Inv., PCR | I-C | |
| 1644 | John Jenneys | Plymouth | Inv., PCR | II-B | |
| 1646 | George Allen | Sandwich | Otis, p. 209 | II-C | |
| 1647 | Andrew Hallet Jr. | Barnstable | Otis, p. 490 | I-C | I-C 1a |
| 1648 | Thos. Lapham | Scituate | Inv., PCR | I-C | |
| 1652 | Henry Andrews | Taunton | Inv., PCR | I-C | |
| 1652 | James Lindale | Duxbury | Inv., PCR | I-A | |
| 1653 | Roger Mowry | Providence, R. I. | Isham, <i>R. I.</i> | I-A | |
| 1654 | William Hog | Taunton | Inv., PCR | I-C | |
| 1655 | John Bursley | Barnstable | Otis, p. 130 | II-C | |
| 1655 | Arthur Fenner | Cranston, R. I. | Isham, <i>R. I.</i> | I-A | I-B |
| 1657 | William Bradford | Plymouth | Inv., PCR | II-C | II-D |
| 1657 | William Hatch Jr. | Taunton | Inv., PCR | I-C | |
| 1658 | "Marshfield" House | Marshfield | I. Mather | I-C | |
| 1658 | William Crocker | Barnstable | Otis, p. 204 | II-A | II-C |
| 1658 | William Allen | Spring Hill | Otis, p. 263 | II-A | II-C 1b |
| 1658 | Ralph Partridge | Plymouth | Inv., PCR | II-D | |
| 1658 | Phillip Greene | Warwick, R. I. | Downing | I-C | I-D |
| 1660 | Allyn House | Plymouth | Tudor | II-D | |
| 1660 | Increase Clap | Barnstable | Otis, p. 290 | II-A | |
| 1660 | Nicholas Davis | Barnstable | Otis, p. 296 | II-C | |
| 1661 | Samuel House | Plymouth | Inv., PCR | I-C | |
| 1662 | William Parker | Taunton | Inv., PCR | I-C | |
| 1663 | Joseph Peck | Bridgewater | Inv., PCR | I-B | |
| 1664 | Doten-Rider House | Plymouth | Isham, <i>Comm.</i> | I-A 1a | I-D |
| 1665 | Thomas Howes | Yarmouth | Inv., PCR | I-C | |
| 1665 | Isaac Fearing | Wareham | HABS | II-D | |
| 1666 | Job Crocker | Barnstable | Otis, p. 214 | II-C | |
| 1666 | John Joyce | Plymouth | Inv., PCR | I-C | |
| 1667 | William Harlow | Plymouth | extant | I-C | I-C 1c |
| 1669 | John Howland | Plymouth | extant | II-A | II-C |
| 1670 | William Hodge | Yarmouth | Inv., PCR | I-C 1a | |
| 1670? | The Leonard House | Raynham | Barber | II-D 3 | |
| 1670? | "Fort Hill" House | Yarmouth | Otis, p. 212 | I-C | |
| 1670 | Henry Howland | Duxbury | Inv., PCR | II-A | II-B |
| 1670 | William Lumpkin | Yarmouth | Inv., PCR | I-C 1a | |
| 1670 | | Scituate | Inv., PCR | II-D | |

| <i>Trad. Date</i> | <i>House Owner(s)</i> | <i>Town</i> | <i>Source</i> | <i>1st Type</i> | <i>2nd Type</i> |
|-----------------------|-----------------------|---------------------|---------------------|---------------------|---------------------|
| 1672-1695 | Joseph Churchill | Plymouth | extant | I-A | I-C 1a |
| 1671 | John Barnes | Plymouth | Inv., PCR | II-D | |
| 1672 | Joseph Biddle | Marshfield | Inv., PCR | II-B | |
| 1673 | Thomas Prence | Plymouth | Inv., PCR | II-C | II-D |
| 1674 | Nathaniel Thomas | Marshfield | Inv., PCR | I-C 1a | |
| 1674 | John Bradford | Kingston | extant | II-C | |
| 1674 | Josiah Winslow | Plymouth | Inv., PCR | I-C 1b | |
| 1676 | Thomas House | Yarmouth | Inv., PCR | I-C | |
| 1676 | Tim. Williamson | Plymouth | Inv., PCR | II-B 2 | |
| 1677 | Waite-Potter | S. Westport | HABS | I-A | |
| 1677 | Thomas Fenner | Cranston, R. I. | Isham, <i>R. I.</i> | II-A | II-C |
| 1678 | Nicholas Baker | Scituate | Inv., PCR | II-B | |
| 1679 | "Sparrow"-Leach | Plymouth | extant | II-A | II-C |
| 1680 | Edward Manton | Manton, R. I. | Isham, <i>R. I.</i> | I-A | I-A 1b |
| 1680's | Samuel Cobb | Barnstable | Otis, p. 214 | II-C | |
| 1680's | Jonathan Crocker | Barnstable | Otis, p. 219 | II-A 1a | |
| 1680's | Thomas Dimmock | Barnstable | Otis, p. 339 | II-A | II-C |
| 1684 | Gyles Richard | Plymouth | Inv., PCR | I-C | |
| 1684 | Thomas Hatch | Scituate | Inv., PCR | II-D | |
| 1685 | Ephraim Tincome | Plymouth | Inv., PCR | I-C | |
| 1686 | Jeremiah Bacon | Barnstable | Otis, p. 28 | II-A 1a | |
| 1690 | Jabez Wilder | Hingham | HABS | I-D | |
| 1694 | Thomas Field | Fields Point, R. I. | Isham, <i>R. I.</i> | I-C | II-C |
| 1694 | Sam. Stetson | Hanover Corner | HABS | I-D | |
| 1700 | Benj. Waterman | Johnston, R. I. | Isham, <i>R. I.</i> | I-C | |
| ? | S. Fuller | Rehoboth | Isham ms. | I-A 2 | |
| ? | Robenson | Seekonk | Isham ms. | II-B | |
| ? | Henry Cobb | Barnstable | Otis, p. 166 | I-C | |
| ? | Dea. Dimmock | Barnstable | Otis, p. 17 | II-C | |

NOTES

¹ Amos Otis, *Genealogical Notes of Barnstable Families*, C. F. Swift, ed. (Barnstable, 1881), pp. 204, 205.

² For example, most early Hingham buildings and the Bryant-Cushing House in Norwell.

³ Fiske Kimball, *Domestic Architecture of the American Colonies and of the Early Republic* (New York, 1927), p. 6.

⁴ Cf. Sydney V. James, *Three Visitors to Early Plymouth* (Plymouth, Mass.).

⁵ William Bradford, *Of Plimoth Plantation*, Morison ed. (New York, 1963), p. 280.

⁶ F. Kniffen and H. Glassie, "Building in Wood in the Eastern U. S. . . .," *Geographical Review*, LVI, no. 1 (1966), p. 47.

⁷ Lothrop MS., *The New England Historical and Genealogical Register*, X.

⁸ *Plymouth Colony Records* (hereafter PCR), Shurtleff and Pulsifer ed. (Boston, 1855-1861), II, 111.

⁹ Otis, *op. cit.*, p. 203.

¹⁰ Norman Isham, MS. history of Massachusetts architecture (untitled), S.P.N.E.A.

¹¹ Otis, *op. cit.*, p. 202.

- ¹² *Ibid.*, p. 202.
- ¹³ Fred H. Crossley, *Timber Building in England* (London, 1951), pp. 12, 13.
- ¹⁴ Kniffen and Glassie, *op. cit.*, pp. 47, 48.
- ¹⁵ H. Janse, correspondence with the author, Feb. 20, 1967.
- ¹⁶ Norman M. Isham and Albert F. Brown, *Early Rhode Island Houses* (Providence, 1895), pp. 13, 14.
- ¹⁷ Abbott Lowell Cummings, "The Parson Barnard House," *OLD-TIME NEW ENGLAND*, XLVII, no. 2 (1956), p. 30.
- ¹⁸ Otis, *op. cit.*
- ¹⁹ Ernest Allen Connally, "The Cape Cod House . . .," *Journal of the Society of Architectural Historians*, XIX, no. 2 (May 1960), pp. 47-56.
- ²⁰ Otis, *op. cit.*, pp. 130, 131.
- ²¹ *Ibid.*, pp. 207, 208.
- ²² Plymouth Town Records, I, 147.
- ²³ PCR, I, 34.
- ²⁴ James, *op. cit.*, p. 76.
- ²⁵ Bradford, *op. cit.*, p. 111.
- ²⁶ James, *op. cit.*, p. 24.
- ²⁷ Cf. Norman Isham, *Early Connecticut Houses* (Providence, R. I., 1900); Kimball, *op. cit.*
- ²⁸ Henry C. Forman, "Virginia Architecture in the Seventeenth Century" (Williamsburg, Va., 1957), pp. 3, 29, 30.
- ²⁹ Seth Story House now dismantled with rooms at Wintthur and the Smithsonian; also "The Ilsley House," *OLD-TIME NEW ENGLAND*, II, no. 2, pp. 10-13; "The Claflin-Richards House," *OLD-TIME NEW ENGLAND*, XVI, no. 4, pp. 153-156.
- ³⁰ Connally, *op. cit.*, p. 53.
- ³¹ A. F. Downing, *Early Homes of Rhode Island* (Richmond, Va., 1936), p. 14.
- ³² J. Frederick Kelly, *The Early Domestic Architecture of Connecticut* (New Haven, 1924), p. 40.
- ³³ *Ibid.*, pp. 41, 139.
- ³⁴ H. C. Forman, *The Architecture of the Old South, The Medieval Style, 1585-1850* (Cambridge, Mass., 1948), p. 128, figs. 157, 168.
- ³⁵ Kniffen and Glassie, *op. cit.*, p. 43.
- ³⁶ Crossley, *op. cit.*, pp. 40, 45.
- ³⁷ J. A. Newman, who is preparing "The Buildings of England" volume for Kent has kindly provided the two examples from this county; correspondence, Feb. 27, 1967.
- ³⁸ Prof. R. W. Brunskill, University of Manchester, has corroborated this commonly held view; correspondence, March 6, 1967.
- ³⁹ Several Rembrandt prints (Hind no. 179, no. 246III, and no. 240); also C. Golmaert (Holstein no. 306), B. A. Bolswert (Holstein nos. 358-361).
- ⁴⁰ Marten De Cock prints (Holstein nos. 1, 2), 1620.
- ⁴¹ Correspondence with author, Feb. 20, 1967.
- ⁴² Marvin D. Schwartz, *The Jan Martense Schenck House* (Brooklyn Museum, 1964), p. 23.
- ⁴³ C. Th. Kokke, correspondence with author, no. 1028, Feb. 27, 1967.
- ⁴⁴ Schwartz, *op. cit.*, p. 20.
- ⁴⁵ *Ibid.*, p. 22, from Isaac Joques, "Novum Belgium" (1646).
- ⁴⁶ Downing, *op. cit.*, p. 14 ff.; Isham (Rhode Island), *op. cit.*, pp. 12-14.
- ⁴⁷ James, *op. cit.*, p. 76.
- ⁴⁸ PCR, I, 34.
- ⁴⁹ PCR, X, 50.
- ⁵⁰ *Ibid.*, I, 110.
- ⁵¹ Otis, *op. cit.*, pp. 212, 213.
- ⁵² H.A.B.S., Massachusetts, 2-65.
- ⁵³ Isham (Connecticut), *op. cit.*, p. 259.
- ⁵⁴ *Ibid.*, pp. 258, 260.
- ⁵⁵ Isham (Rhode Island), *op. cit.*, pp. 37-39.
- ⁵⁶ Cf. Churchill House, Plymouth.
- ⁵⁷ PCR, X, 111, 112.
- ⁵⁸ *Ibid.*, X, 26.
- ⁵⁹ *Ibid.*, X, 118, 129, 130, 181, 187.
- ⁶⁰ *Ibid.*, X, 118.
- ⁶¹ *Ibid.*, X, 86, 87.
- ⁶² *Ibid.*, X, 199.
- ⁶³ Barley, *op. cit.*, pp. 82-84, for identical English practices.
- ⁶⁴ PCR, X, 129.
- ⁶⁵ *Ibid.*, X, 86, 87.