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COVER:

One of many German and Scots-Irish contributions to
American material culture, the log cabin became the most
popular building on the American frontier.

Layout and Special Photography: WILLIAM K. MUNRO

European Antecedents of Seventeenth and Eighteenth Century Germanic and Scots-Irish Architecture in America.

by
K. EDWARD LAY

Of the four major cultural areas in the seventeenth and eighteenth century, Virginia (1607), New England (1620), and the Deep South (1671) were all primarily of English ethnic origin. In 1681, however, William Penn, through his "Holy Experiment" in Pennsylvania, permitted great numbers of Germanic and Scots-Irish groups to immigrate to the Port of Philadelphia. In comparison with English immigration to America, relatively little has been written about this Germanic and Scots-Irish influx, yet these two ethnic groups contributed more to American material culture than any other non-Anglican group. Hopefully, the following discussion will lead to a better understanding of these two cultures and their impact on the American scene.

The so-called "Scotch Irish" Presbyterians were Saxon Scots rather than Celtic Irish who had been placed by James I for colonization on confiscated lands of Irish rebels in Ulster in 1610.¹ Originally of English origin,² they lived for generations in the shires south of Firth of Forth in the Scottish Lowlands; the vast majority came from the upper tier of those shires between Glasgow and Edinburgh.³

After 1625, these "Ulster Scots" or "Scots-Irish" followers of John Knox were persecuted by Charles I and the native Irish, who tried to force them to conform and pay taxes to support the Church of England⁴ (the Anglican or Episcopal Church, now called the Church of Ireland). Actually the term "Scotch-Irish" was not commonly used in America until the mid-nineteenth century, when it was used to distinguish between the older Irish immigrants and those arriving after the Great Potato Famine (1845-1847).⁵

Because of this persecution and for other reasons, the Scots-Irish emigrated to America beginning about 1700; the greatest numbers arrived between 1771 and 1773.⁶ Another reason for emigration was the economic conditions brought on by the Act of Parliament of 1699 which prohibited the exportation of wool from Ulster, thus discriminating against Irish goods in preference for English ones.⁷ Furthermore, the long-term Irish leases had expired on the land on which they had been paying high rents and exorbitant taxes, making the plentiful lands in America with low taxes look favorable.⁸

The first record of Scots-Irish settlement in America was in New Castle County, Delaware.⁹ By 1710, they had located in western Chester County, Pennsylvania,¹⁰ and, in 1715, 500 settled in North Carolina.¹¹ About the same time, a group arrived on the frontier in Donegal Township on the Lancaster County plain, creating a center there for the expansion of the Scots-Irish in America.¹² This plain had been a settlement area for many religious groups: Scottish and Welsh Anglicans, German Dunkards, French Huguenots, and Mennonites.¹³ In other areas east of the Susquehanna River, the Scots-Irish settled in Germanic areas.¹⁴ Prior to 1719, they located in Dauphin County, where the Paxton Presbyterian Church was formed.¹⁵ At this time, too, groups settled in Berks County, Pennsylvania,¹⁶ and founded Londonderry in New Hampshire.¹⁷

In 1718, land west of the Susquehanna was obtained from the Indians, and in 1727 the Western Pennsylvania Emigrant Society was formed to aid immigration to that area.¹⁸ It was not until after the Revolution however, that many Scots-Irish migrated there,¹⁹ mostly locating in Allegheny, Fayette, Greene, Washington, and Westmoreland counties.²⁰ By 1730, they had crossed the Susquehanna River into Adams and York counties and into the Kittochtinney Valley,²¹ now known as the Cumberland Valley.²² So much tension had developed between the Scots-Irish and other ethnic groups in Donegal Township in Lancaster County that the state government in 1743 decided not to sell them any more land east of the Susquehanna River. Instead, they made them an enticing offer of land in the Cumberland Valley, where some had settled earlier and where they could serve as a buffer between the colonists and Indians.²³

The limestone Cumberland Valley flows into the Shenandoah Valley of Virginia and it became a natural migration route. Augusta County in Virginia was formed in 1738 because of the Scots-Irish growth in the valley. About this time, they also formed a settlement further south at Williamsburg, South Carolina.²⁴ In 1768, land was opened west of the Allegheny mountains and large numbers of Scots-Irish settled there.²⁵ Between 1792 and 1820, they settled most of north-western Pennsylvania.²⁶

In their settlements, the Scots-Irish (who were used to a rugged landscape) chose the hillier land near springs for their houses, because they were usually less forested and thus more easily cleared. This appealed to a culture more adapted to mercantile business than to agriculture.²⁷ More politically active than the German immigrants, their aggressive and violent manner did not endear them to the peaceful Quakers. They firmly believed that the old Testament called for the destruction of the heathen; in this case, the American Indian. This belief, coupled with their vigorous and independent nature, caused them to settle on Indian lands without purchase, fighting to settle disputes. They were instigators of the Whiskey Rebellion after the Revolution²⁸ but they were also patriotic, courageous, and intelligent.²⁹

The Germans, on the other hand, were financially frugal, doggedly industrious, dependable, punctual, hardworking, parsimonious, just, slow in making decisions, and had a dislike for fighting. To instill these principles in their children, rules of conduct were established.³⁰ They tended to live together as an ethnic group and to marry within that group. The nineteenth century historian, Sydney George Fisher, felt that this ethnic isolation, in combination with their conservative nature (as witnessed by their public school opposition and retention of native language and customs) had been responsible for checking the advancement of the entire state of Pennsylvania.³¹ The English colonists - even Benjamin Franklin - disliked the German "Palatine boors, the most stupid of their race."³²

Virtually all American Germans were farmers; they exceeded all other ethnic groups in that occupation. Often they were wise enough to purchase land which had already been cultivated, but upon which the owner could not survive. They, in turn, made it into a profitable farm. On uncultivated land, they cut down each tree and used its wood for fire or building. This practice, rather than the English and Scots-Irish method of girdling trees, made the field ready for cultivation in its second year. They often built their barns before their houses, kept their cattle indoors in the winter, and fenced their pastures. They were the first to store and recycle manure, rotate crops, and irrigate.

The Germans had thirty generations of farming knowledge to bring to America. Many had come from the German Pfalz or Palatinate, which during the Middle Ages (c. 400-1500) had been among the most influential of the German states and was known as the garden of Germany. In the seventeenth century, however, the Pfalz was ravaged - as was much of the rest of Europe - by a series of wars lasting nearly one hundred years.³³

During the thirty years' war (1618-48) - a civil war in the Germanic states between Catholics and Protestants - only 50,000 persons in the Pfalz survived out

of a population of one-half million.³⁴ Around 1674, war between France and Holland brought more destruction to the Pfalz, situated between these two countries. At one time, twenty-six cities and villages were burning; the horrors surpassed those of the Thirty Years' War. It took 200 years (until 1849) to restore the land to the same state of agricultural prosperity and to replace the number of houses and people.

At different times during this period of turmoil, the Pfalz was ruled by Lutherans, Reformed, and Catholics, thus encouraging the Germanic sects as well as the Lutherans and Reformed to emigrate to America.³⁵ One effect of this persecution of the Protestants was an increased interest in pietism, a revival of personal reverence for God within the Lutheran Church; and mysticism, the doctrine that God or Truth may be known through spiritual insight. Johann Kelpius (1673-1708) went to Pennsylvania to await the coming of Christ; the Dunkards were formed, and a minister from Heidelberg founded a religious order that **sought** the destruction of the world as a release from misery. The outcome was that the earliest groups to emigrate to America were such special sects, often with their own religious leader accompanying them.³⁶

The first German settlement in America, in fact, was made at Germantown, Pennsylvania in 1683 by a large group of Mennonites led by Francis Daniel Pastorius (1651-1720).³⁷ There was little more Germanic immigration until the arrival of the Swiss Mennonites in 1710,³⁸ but between 1710 and 1727 larger numbers came to Pennsylvania.³⁹ In 1727, the flow of immigrants increased sharply and continued until the Revolution when all immigration ceased.⁴⁰

Up to 1719, the German Sects settled primarily in Lancaster and Montgomery counties, and along the Lehigh, Perkiomen, and Schuylkill valleys, while the German Church people settled mostly in Berks, Lancaster, Lebanon, Lehigh, Northampton, and York counties. Also large areas of Bucks, Carbon, Dauphin, and Snyder counties were settled by Germanic people, and German settlement penetrated northward into Centre, Monroe, Northumberland, and Union counties and westward into Adams, Franklin, Juniata, Mifflin, and Perry.⁴¹

Outside Pennsylvania, original settlement and migration by Germans to several other colonies occurred. In the eighteenth century, German settlements were established in Georgia, Louisiana, Maine, Maryland, New Jersey, New York, North Carolina, South Carolina, Virginia and Nova Scotia.⁴² In New Jersey, the first Germans arrived in 1707 and soon created a region between the Raritan and Passaic Rivers that became predominately German and spread through the counties of Bergen, Essex, Hunterdon, Morris, and Somerset.⁴³

Labadists from the Rhineland under the leadership of Peter Sluyter established a settlement on the Bohemia

River in Maryland in 1684.⁴⁴ Matthias van Bebber, a Dutch Mennonite from Germantown, settled near the Elk River in Bohemia Manor on Maryland's Eastern Shore.⁴⁵ In 1727, Germans from Pennsylvania founded New Mechenburg, now Sheperdstown, West Virginia. The following year, Germans began settling in the Baltimore area and in the western counties of Maryland. In 1745, they founded Frederick and Hagerstown.⁴⁶

In Virginia, although the early 1714 settlement had taken place at Germanna,⁴⁷ east of the Blue Ridge Mountains, the German migration down the Shenandoah Valley came a little later. German settlers, under Joseph Hite from Pennsylvania (via Carlisle and Gettysburg) entered the Valley in 1732, settling primarily in the counties of Frederick, Page, Rockingham, and Shenandoah,⁴⁸ and in the towns of Strasburg, Winchester, Woodstock, and Sheperdstown, now in West Virginia.⁴⁹ In fact, Frederick County was formed in 1738 largely because of the great population increase brought about by this influx of German settlement.⁵⁰

In 1710, Germans under Baron de Graffenreid settled at New Bern in North Carolina.⁵¹ The central and western parts of that state, primarily along the Yadkin and Catawba Rivers,⁵² were settled after 1750 by pioneers from Berks and other Pennsylvania counties.⁵³

In the late 1720s, Governor Johnson of South Carolina established German communities in Orangeburg and Lexington counties, again as a guard against the Indians but also to quell slave uprisings along his frontier.⁵⁴ The towns of Ebenezer, Orangeburg, and Saxe-Gotha became predominately German.⁵⁵ Families from Saxony and Brunswick in Germany settled in Waldoboro, Maine, in 1736, about the same time the Moravians arrived in Savannah, Georgia.⁵⁶

Pennsylvania Germans migrated to Ohio after the French and Indian Wars (1754-1763).⁵⁷ In 1801, Moravians established a settlement at Salem in Tuscarawas County in Ohio.⁵⁸ Early nineteenth century German settlements occurred in Bethlehem, Berlin, Cincinnati, Dresden, Frankfort, Freeburg, Nazareth, Potsdam, and Salem, and in the Scioto River Valley, especially Ross County. In Kentucky, Harrodsburg, Flemingsburg and Frankfort were settled.⁵⁹

After the Revolution, 12,000 Hessian mercenaries remained in America and moved into German settlements.⁶⁰ From the Revolution until 1830, German immigration practically ceased. That year witnessed German immigration to the Mississippi River Valley,⁶¹ while Pennsylvania Germans migrated to the Northwest Territory and to the Province of Ontario in Canada.⁶²

Since it has been said that Germanic architecture of the earliest period of immigration was identical to that of the district from which the settlers came,⁶³ it might be of interest to list these areas of emigration. Although many came from Germanic Switzerland, the great majority, as might be expected, were from Ger-

many proper: the middle Rhineland, Bohemia (now western Czechoslovakia), and Moravia (now central Czechoslovakia).⁶⁴ The largest number came from the southwestern part of Germany, known as the Pfalz or Palatinate, which then included a part of present-day Bavaria as well.⁶⁵ Next, in order of the largest number of immigrants, were Swabians from Wuerttemberg, then Baden, and then Switzerland,⁶⁶ 74 percent of which is German-speaking.⁶⁷ Other areas of origin during the great migrations of 1749 to 1754, include Zweibrucken in Saarland; Hessen; Westphalia; the Westerwald; the Schwarzwald or Black Forest; Saxony, now part of East Germany; Alsace, now in France; Salzburg, now in Austria; and Silesia, now in southwestern Poland.⁶⁸

The culture that came to America, to quote Alan Gowans, "represented not the modern Europe that was emerging in the seventeenth century, but an older, medieval world that lived on in the strata of society which had largely settled the new colonies."⁶⁹ The Georgian period of renewed interest in the Renaissance was capturing Europe, but the less cosmopolitan, rural immigrants to America related better with the medieval styles that were more visually familiar to them on the continent.

Unique examples of first generation Germanic and Scots-Irish architecture occurred prior to 1750 in America, primarily in the southeastern counties of Pennsylvania. Today little or nothing remains of the cave huts or other early Germanic vernacular building types; i.e., combination dwelling-barns, *fachwerk* buildings, continental houses, bank houses over vaulted spring cellars, or the medieval churches and religious steep-roofed, shed-dormered community buildings. More remains of the Scots-Irish single-cell, log or stone houses, the somewhat later large Germanic bank barns, and the Georgianized churches of both ethnic groups. But in Europe, there exists a long tradition of similar examples of all these building types, and even greater similarities can be found in the details themselves: pent roofs and eaves, double attics, vaulted cellars, dry sink outlets, ceiling construction, and in the decoration and furnishings.

As has been mentioned, the Scots-Irish originally came from the lowlands of Scotland, but no buildings pre-dating the eighteenth century survive in Scotland and few extant ones exist prior to 1750. Virtually nothing is even known about medieval (500-1450) peasant houses there.⁷⁰ After leaving Scotland, they remained approximately one hundred years in Ulster before migrating to America, but Irish buildings, too, are difficult to trace, because few can be dated even to the nineteenth century.⁷¹

The Cave Hut

One of the earliest housing types in Scotland, the Hebridean Black House consisted of interconnected



Figure 1

buildings with rounded external corners and hipped roofs.⁷² Its closest analogy is the Beehive Hut, such as at Ring of Kerry in southern Ireland. No such similar examples are known to have existed in the cultures in America, but from early writings, unquestionably many of the earliest members of the Sects lived in America in cave houses or huts that were excavations into the banks of rivers (fig. 1), such as was noted along the Delaware.⁷³ This cave hut tradition can be found in Europe as seen in the day laborer's cabin (fig. 2) from Onstwedde, Holland. The excavation was then enclosed on the exterior with a wooden structure, the entire space encompassing only about twelve by fifteen feet in plan and utilizing greased paper for light.⁷⁴ The roofs were of limbs covered with bark or sod, and chimneys probably were built with river stones using grass and clay for mortar.

Further evidence indicating their existence is the fact that, in 1685, the provincial council ordered all cave dwellers around Philadelphia to appear before them.⁷⁵ And, according to Fisher (writing as late as 1896)



Figure 2

“occasionally one is still to be found in remote parts of the State,” but these “solitary huts” could have been something more than mere cave huts.⁷⁶

It has been shown that even the well-educated German, Pastorius, lived, as did many Quakers, in a half cave and half hut along a bank of the Delaware River, probably near what became the Chestnut Street wharf. Later he built a more substantial stone house in Germantown.⁷⁷ As early as 1700, the mystic Kelpius also resided in such a dwelling (fig. 3) near Germantown,⁷⁸ as did John Seelig, Bony, and Conrad Matthias.⁷⁹ Whittier refers to Kelpius and his cave hut in his poem “Pennsylvania Pilgrim.”⁸⁰ The eccentric Quaker, Benjamin Lay, dwelled in one (fig. 4) at Branchtown near Philadelphia in the early eighteenth century,⁸¹ and Conrad Beissel apparently lived in one along Cocalico Creek in Lancaster County in 1720.⁸² Unfortunately, all extant illustrations show only the earthen cave and not its wooden structure which had long since deteriorated.



Figure 3



Figure 4



Figure 5

Certainly this primitive building type was not restricted to the Germanic groups, for the English Pilgrims in Massachusetts used cave huts as their first shelters; reconstructions (fig. 5) of them can be seen in the Pioneer Village at Salem.⁸³ But few such buildings were constructed in America, and those that were, were built for expediency until a more permanent dwelling could be erected, or were built by mystics for religious seclusion.

Combination Dwelling-Barns

Early American buildings combined the house and barn under one roof in the manner of early Scottish and Irish byre-houses or long houses, a practice still used today in the dairy areas of Holland, Germany, and Switzerland.⁸⁴ In fact, in seventeenth century Lowland Scotland, the combination dwelling-barn (fig. 6) was the predominant building typology.⁸⁵ It resembled those found in Ireland, such as the one (fig. 7) at Ring of Kerry in County Kerry. A box bed or dresser was often used to separate the byre or cow barn portion from the living area.



Figure 7



Figure 6

Although buildings with walls of clay and turf existed until the mid-eighteenth century in the Scottish Highlands, none exist today.⁸⁶ In the Scottish Lowlands even wattle and daub used in tenant houses did not prevail as long as it did in the Highlands. The wood cruck frame (couples) was the standard construction method in the Lowlands, but by the seventeenth century, much of that area's forests were depleted for use as charcoal in the manufacture of iron, and 90 percent of its wood had to be imported from Norway. By the mid-eighteenth century, virtually all forests had vanished.⁸⁷

Through the eighteenth century in Scotland, it was the custom that both people and cows entered these buildings through a common door; later there were two separate ones. Smoke from floor fires escaped through a roof opening placed off-center with the fire in order that it not be extinguished by rain. Eventually a hanging chimney was provided to conduct smoke through the opening. Built-in fireplaces with stone chimneys were not employed prior to the late eighteenth



Figure 8



Figure 9

century.⁸⁸ The roof ridge was rounded to offer the least wind resistance. Stone exterior walls were laid on a slope to direct water away from the building, and the interior was often plastered.⁸⁹

By the late nineteenth century in Ireland, separate buildings were used for animals and people. The old long houses were partitioned for only dwelling use and became a wing along with out-buildings around a courtyard.⁹⁰ This courtyard and plan found no counterpart in America. Even the German courtyard plan (fig. 8) with a cobblestone yard enclosed by dwelling, barn, stables, and a wall often with an arched gate and doorway, was not imitated in America, possibly because there was more space to spread out buildings there.⁹¹ But the America linear plan with barn and house separate, but positioned along the same axis, might derive from the combination dwelling-barn found not only in Scotland and Ireland but also in England, Wales, Holland, Switzerland and Germany.⁹² In fact, the great Dutch (fig. 9),⁹³ Black Forest (fig. 10), Upper Bavarian (fig. 11),⁹⁴ and Swiss (fig. 12)⁹⁵ combination dwelling-



Figure 10

barns were the predominant building types in those areas over the courtyard prototype.⁹⁶ In America, although they were not as grand and elaborate, there is evidence of their existence.

These great mountain houses built on steep slopes by peasants had many similarities: steep roofs, long balconies, carved gables, arched chimneys, casement windows. The lower level was used for stables for cattle, and horses entered usually along the long side. Wagon entrances were along the side or end, often with a bridge or ramp. There were no chimneys; the smoke rose into the loft and left the building through a ventilator or simply through the thatching. The Swiss and Black Forest combination dwelling-barns are more similar to each other than to the upper Bavarian ones. They have higher, hipped roof lines, whereas the upper Bavarian roof is more like its American counterpart.⁹⁷

Levering in his *HISTORY OF BETHLEHEM* suggests that the reason Count von Zinzendorf named the Moravian community, "Bethlehem," on Christmas in



Figure 11



Figure 12



Figure 13

1741 was that the first Moravian structure (fig. 13) there was such a combination dwelling-barn. Other than this reference, the only extant visual evidence is the Charles Lesueur sketch (fig. 14) of one in the Blue Ridge Mountains, discovered by Don Yoder, former editor of *PENNSYLVANIA FOLKLIFE*,⁹⁸ and the Miller House (fig. 15) which was located just south of Harrisonburg in Virginia's Shenandoah Valley. This last example probably had its stable below and a dwelling above off of a broad balcony resembling those (fig. 16) in Bavaria.⁹⁹

There are, however, references in eighteenth century tax lists in America to such buildings. Three are listed in the 1798 Direct Tax Lists for Pennsylvania: one is that of Henry Lepard in Frankford Township, Cumberland County; one was owned by John Shue in Warwick Township, Lancaster County,¹⁰⁰ and another that of Joseph Downing in East Caln and West White-land Townships with a "dwelling house and barn connected." Another is mentioned in the August, 1705,

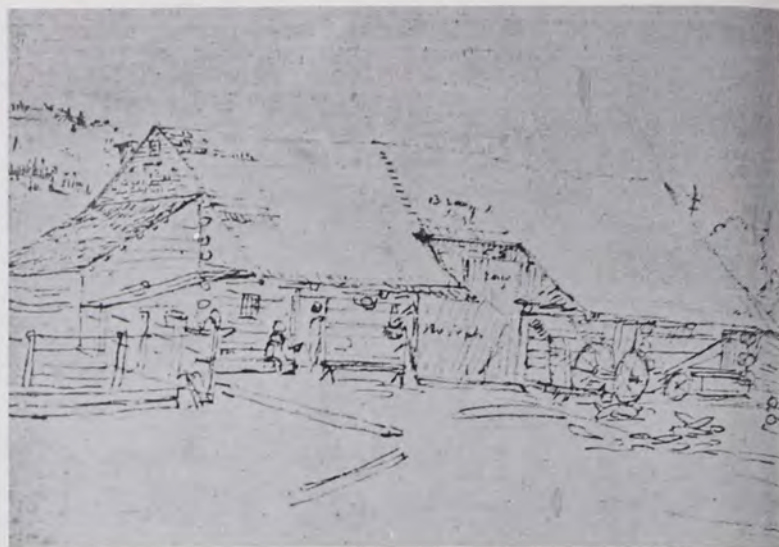


Figure 14

Chester County court records as being lived in by a James Gibbons, and a fifth is listed in the 1799 tax assessment of that same county in Honey Brook Township and lived in by Abraham Curtz.¹⁰¹

No Germanic combination dwelling-barns are known to exist today, but surely there were many in use in the first generation in America, since they were so common at that time on the continent. Besides, the Germans who emigrated to Wisconsin directly from Germany in the nineteenth century built such structures for themselves there,¹⁰² making plausible the fact that their earlier Protestant relatives in Pennsylvania would have done the same. Probably some do exist in Pennsylvania, but now form the nucleus of newer buildings and are thus obscured within these dwelling or barn structures, altered beyond recognition. It even raises the question of whether the approximately eight hundred "cabin barns," referred to in the 1798 Direct Tax List and located mostly west of the Blue Ridge, were



Figure 15



Figure 16



Figure 17



Figure 18

not combination dwelling-barns.¹⁰³

More research needs to be done on the earlier seventeenth century tax lists and other county court records. The purpose would be to identify more such buildings in order to pinpoint them on present-day topographic maps and to conduct visual or archeological surveys of physical evidence of their existence.

Fachwerk Houses

Prior to the first Germans and Scots-Irish coming to America, architectural acculturation had already taken place in Europe. Not only can this be seen in the wide disposition of the combination dwelling-barn in Europe,¹⁰⁴ but also in the extent of *fachwerk* or half-timber buildings throughout Europe. In York (fig. 17), Tewkesbury, Stratford-Upon-Avon (fig. 18), Ledbury, Chester (fig. 19), and elsewhere in England (fig. 20), medieval *fachwerk* buildings abound that are virtually identical with those in Germany (fig. 21-23).¹⁰⁵ It was the primary mode of construction in England before the Great Fire in London in 1666.



Figure 19



Figure 20



Figure 21



Figure 22



Figure 23



Figure 24



Figure 25

In America, the timber structural system for such buildings was secured by pegged mortise and tenon joints with the spaces between infilled with brick nogging or wattle and daub, which consisted of inter-woven twigs covered with a mixture of dung, mud, straw, or hair.¹⁰⁶ Hewn oak was used for the largest timbers, with spruce or pine for smaller ones. Pegs were of oak, hickory, maple or ash.¹⁰⁷

There were a number of such buildings in New England in the late seventeenth century, and in Lancaster and York in Pennsylvania, *fachwerk* was commonplace.¹⁰⁸ In fact, it was still strongly evident in Lancaster (fig. 24) in the late nineteenth century, although some were erected by English workmen. The Powell House (fig. 25) in Lancaster¹⁰⁹ no longer exists, but in York, the 1745 Golden Plough Tavern (fig. 26) is a recently uncovered and restored example.¹¹⁰ Early drawings also recall *fachwerk* houses (fig. 27) in York¹¹¹, and other examples no longer extant include this Landis Valley one (fig. 28), and the 1742 Moravian



Figure 26



Figure 27



Figure 28



Figure 29

School (fig. 29) in the Oley Valley of Berks County, which had a pent roof to protect its stucco infill.¹¹² There are 1760s *fachwerk* houses in Salem, North Carolina, as well as later Germanic examples in Ohio¹¹³ and Wisconsin.¹¹⁴ In addition, it has been suggested that many *fachwerk* buildings existed in Pennsylvania in the early generations and are extant, but undiscovered, today.¹¹⁵

Small Houses

Single-cell yeomen houses with gable and chimneys existed in England prior to 1640 and resemble Scots-Irish American ones. Moreover, some yeomen and husbandmen houses of about 1636 in rural England had central chimneys¹¹⁶ like those of the Pennsylvania Germans.



Figure 30

Although such examples can be found in England, Wales, Scotland, and southern Ireland, it was known in northern and western Ireland. The single-cell, cottier's house (fig. 30) constituted up to one third of all rural Irish buildings prior to the Great Famine (1846-48).¹¹⁷ A cottier differed from a yeoman in that he was a peasant who worked for a farmer and was permitted to use one of his cottages, whereas a yeoman farmed his own land and ranked as a commoner or freeholder. Most of these cottier's houses were one story with sleeping lofts¹¹⁸ and often with a bed outshot near the fire (fig. 31). There is little evidence of cruck framing other than in English settlers' houses in the seventeenth century in Ireland.¹¹⁹ The Duncan Cottier's House (fig. 32) of about 1750 is an exception. It contains a cruck frame, outshot bed, and earthen floor.



Figure 31



Figure 32



Figure 33

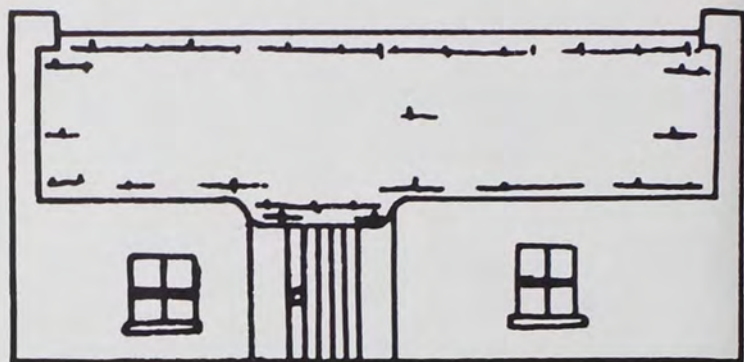


Figure 34



Figure 35

A Scottish single-cell example is that of Bel Pol (fig. 33).

A two-room, Scots-Irish house also existed in America but had more Irish origins (fig. 34) than Scottish, although many Scottish crofters' cottages resembled them.¹²⁰ This small house usually contained internal gable end chimneys and opposite front and rear doors, obviously a survival from combination dwelling-barn times when they were used for moving the cow, and for a draft when threshing.¹²¹ Another example is that of the typical weaver's house that was common from about 1670, although this example (fig. 35) dates only to the mid-nineteenth century. Many had the typical window in the interior fireplace screen wall between the exterior door and the hearth to permit the housewife to sit by the fire, yet have visual control of the entrance.

The Scots-Irish in America preferred this long, low, single pile building at first but later built two-story houses (fig. 36)¹²² recalling those common in the Scottish Lowlands¹²³ and in Ireland (fig. 37) in the eight-



Figure 36



Figure 37



Figure 38



Figure 39

eenth century. Other Irish examples include: Lismacloskey House (fig. 38) of 1717 which has a massive stepped chimney in the attic which is received on the huge fireplace beam below and has a corner chimney from the nineteenth century; Corradreenan West Farm house (fig. 39) of about 1750 which has a hipped roof, fireplace screen window, and half-loft for storage; and Coshkibhill Farm (fig. 40) of about 1850 which has an outside stair to a granary loft over the byre. Granary loft houses (fig. 41-42) often contain a shelter under the stair for a dog or goose as rodent protection for the grain in the loft above.

Peculiarities of style also exist between small Germanic houses in America and in the Pfalz as noted in 1936, in the *AMERICAN JOURNAL OF ARCHAEOLOGY*.¹²⁴ The earlier buildings were log or stone (depending upon the construction material available) with brick construction being employed much later.¹²⁵ Evidence that stone houses probably come somewhat



Figure 40



Figure 41



Figure 42



Figure 43



Figure 45



Figure 46



Figure 44

later than log ones is the suggestion that the first stone house in the limestone Cumberland Valley was not built until after 1772.¹²⁶ But by 1840, of York County's 2,500 houses, almost six hundred were stone along with about one hundred brick ones.¹²⁷ Almost every farm had a stone limekiln built into a bank for making slaked lime for mortar for such buildings. In addition, many stone building walls were waterproofed with a lime plaster or stucco,¹²⁸ and date stones or inscriptions were often placed high on gable end walls.¹²⁹

The tile-roofed Conrad Weiser House (fig. 43) of 1729 in Berks County, the stone house east of the seminary at Bethlehem, and the c. 1730 Fisher House in the Oley Valley in Berks County¹³⁰ are all examples of these small stone houses. The French Huguenot John DeTurck House (fig. 44) of 1767, also in the Oley Valley, is a small stone bank house with a chimney on one gable end and an entrance on the other.¹³¹ A similar house (fig. 45) is that of William Joseph of the late eighteenth century in Mossy Creek, northwestern Augusta County, Virginia.¹³² The first stone Kauffman House (fig. 46) in the Oley Valley was a two-story, central chimney one. In 1766, a larger stone house was built nearby which had a double attic and vaulted cellar.¹³³ The stone General Horatio Gates House (fig. 47) of about 1751 in York includes another Germanic feature, the *stoep*, consisting of benches on either side of the entrance doorway.¹³⁴



Figure 47

Log Buildings

In 1803, Thaddeus M. Harris differentiated between a "Log cabin" (fig. 48) — basically a rounded log, temporary dwelling — and a "log house" (fig. 49) of hewn logs.¹³⁵ Although the Finns and Swedes probably built the first log buildings in America, the Germanic groups were familiar with log construction and promoted its widespread use in the early period, especially in Pennsylvania.¹³⁶ Dove-tailed log construction known in America was popular in log buildings in southern Germany as well as in Switzerland and northwestern Czechoslovakia.¹³⁷ Further, the English and Scots-Irish were not familiar with log construction, although Sir Edmund Plowden, in 1648, noted that the English colonists at New Albion, New Jersey, commonly constructed "a log house of young trees, thirty foot square notched in at corners."¹³⁸ Nevertheless, the pioneering Scots-Irish adopted the Germanic construction and made it the dominant frontier building methodology in more primitive areas throughout the colonies by the time of the Revolution.¹³⁹

In addition to the log building, the Germans made several other unique contributions to American history: the bank barn, which will be discussed later; the cones-

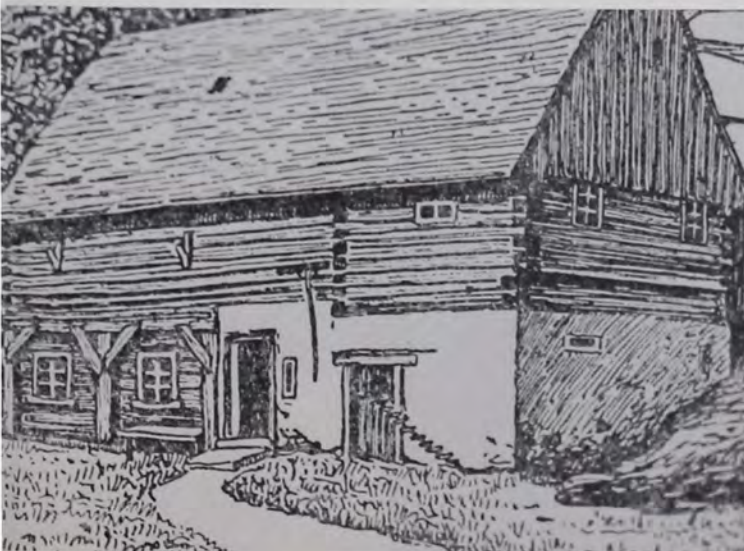


Figure 49



THORNHILL'S CABIN.

Figure 48

toga wagon, which was the principle means of transportation for wheat in Pennsylvania prior to the railroad and for transporting immigrants to the west; the "Kentucky" rifle, which helped settle the frontier; and the broad axe for felling trees for log buildings.¹⁴⁰

The square-hewn logs for building came from trees on the settler's land itself; the most popular choices were white pine and white oak.¹⁴¹ The resultant one and a half and two story buildings were usually limited to twenty-four or thirty feet, because over that length they became too unwieldy in weight, and the taper varied too greatly. Actually, the buildings rarely were greater than eighteen by twenty-four feet in plan;¹⁴² the more usual were sixteen feet square.¹⁴³ Logs were laid horizontally, notched at the corners, and with chinking between of wood wedges, stones, or supplemental logs and then plastered with clay or lime mortar.¹⁴⁴

The units usually consisted of a single room with an external chimney in one gable end as in English houses, but has been noted in some Swiss examples¹⁴⁵ and was common in Scottish houses in Ulster.¹⁴⁶ Early examples, like the Germanic and Swiss combination dwelling-barns, had no chimneys but relied upon a fire on the earthen floor with smoke escaping through a hole in the roof (fig. 50).¹⁴⁷ Many external gable-end chimneys



Figure 50



Figure 51

were built of stone, but above the fireplace opening, brick was often used. Also at this point, the brick portion maintained a space between it and the gable end for fire protection and to eliminate flashing problems at the roof peak (fig. 51).

Bake houses in Germany (fig. 52) resembled those in America (fig. 53) but there was no built-in bake oven in Irish culture, where bread was baked on a griddle in the fireplace.¹⁴⁸ A shallow fireplace depth was often used to deflect heat better into the room.¹⁴⁹ As a result of this design, most fireplaces smoked badly until after the Revolution, when Count Rumford developed his stove that had a throat smaller than the flue, thus creating a better draft.¹⁵⁰

The house interior often had mud and lime plaster over oak laths which was then whitewashed¹⁵¹ to create a lighter interior for better visibility. Because glass was expensive and buildings were often taxed depending upon the number of panes, early houses had no windows. Natural light came from the open door. Windows, when used, were small with oiled paper or animal skins used in place of glass.¹⁵² Later, four- to six-pane sash became commonplace.¹⁵³ A battened Dutch door on wooden hinges prohibited the entering of dogs, pigs, and chickens while the open top half admitted light and air,¹⁵⁴ as seen (fig. 54) throughout Germany in the same period.¹⁵⁵ Sometimes doors were nothing more than slabs of wood,¹⁵⁶ but usually they were diagonally battened, as they were in Germany (fig. 55).¹⁵⁷

The loft area under the roof served as a sleeping area for children¹⁵⁸ with a vertical ladder access,¹⁵⁹ or more often, especially in extant examples, had an enclosed corner stair along the wall opposite the fireplace with a closet under it.¹⁶⁰ Usually the log loft floor joists were framed several logs below the top plate, allowing greater head room there; evidenced in German construction but not in Ireland or Scotland.

Germanic floors in America were split logs (punch-ions) or sawn boards.¹⁶¹ Earthen floors, common in

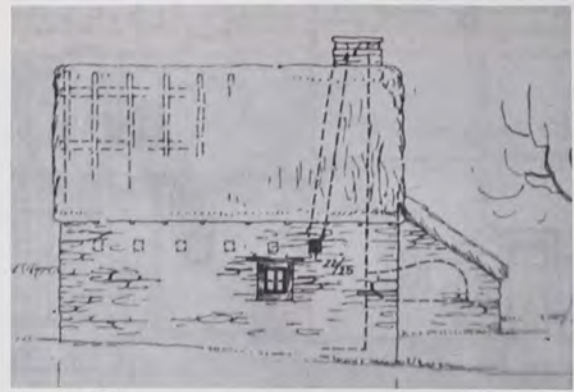


Figure 52



Figure 53



Figure 54

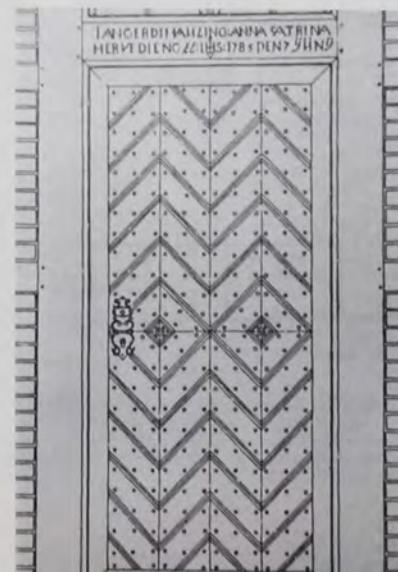


Figure 55



Figure 56

England, Scotland, and Ireland, occur in only a few extant log houses,¹⁶² but then floors in American examples were sometimes added over the years.

In time in America, shed additions were added to single-cell houses in the form of porches along the entrance facade for cooling the air and the rear or gable end kitchens. The horizontal logs generally did not extend beyond the roof line in the gable. At this point sheathing was used, the Germans preferring vertical boards.¹⁶³ If dormers were used, they usually had shed roofs (fig. 56) sided with weatherboards laid parallel to the roof slope.¹⁶⁴ Early such dormers are found throughout Germany (fig. 57).¹⁶⁵ Roofs were often of limbs that-



Figure 57

ched with bark, rye straw, or wooden shingles.¹⁶⁶ When oak shakes were used, such as on the Saal, at Ephrata, they were overlapped both horizontally and vertically as they were along the Rhine and in Bavaria.¹⁶⁷

The overhanging Germanic pent roof and eave (fig. 58) was adopted by the English and Scots-Irish; it was a motif used along Philadelphia streets. As in Postelwaite's Tavern of 1729 near Lancaster, or the house near Landis' store (fig. 59), the pent roof was first used between the first and second stories of log houses to protect the chinking from rain;¹⁶⁸ in urban areas, it could provide protection for sidewalk strollers.¹⁶⁹



Figure 58



Figure 59



Figure 60

The house door hood (fig. 60) and the hooded double-door barn entrance were once commonplace in Germanic areas in America.¹⁷⁰ Although the door hood is rare in Germany, the pent roof was found throughout (fig. 61) to protect the spaces between *fachwerk* or log walls.¹⁷¹ Both were known in England, where the pent roof became very popular in restored London after the 1666 fire.¹⁷² Where pent roofs occur on English houses in America, however, they are most likely derived from local Germanic customs.¹⁷³

Although a nail machine was invented in 1796, before that time nails were at a premium which promoted the practice of burning abandoned buildings in order to recover these precious items. It was recorded that while Benjamin Chambers was visiting elsewhere, his house at Falling Springs in Franklin County was burned "for the sake of the nails."¹⁷⁴

By 1752, Reading, on the upper Schuylkill River, contained 130 log dwellings,¹⁷⁵ and, just prior to the Revolution, a traveler noted that all the houses of Abbottstown in Adams County, Pennsylvania, were built of logs, and in Hagerstown, Maryland, the majority of its two hundred houses were of hewn logs. A few years later, it was observed that virtually all the houses in Womelsdorf, Berks County, were of hewn logs as were all those in Myerstown, Lebanon County.¹⁷⁶ The Clarke-Hite Survey noted in 1786 that of the 140 houses in Shenandoah and Warren Counties, Virginia, one was frame, one stone, and the remainder were log.¹⁷⁷

In 1795, Theophile Cazenove recorded that the houses of Kutztown, in Berks County, were log, the better ones having their mortar chinking pointed to resemble bricks. He noted that Hummelstown had about fifty small log houses; Easton had limestone houses; Reading had about fifty brick houses out of its approximately 450 ones; Womelsdorf had about fifty houses of which some were stone and brick; and Lancaster had a



Figure 61

few brick houses among many log ones.¹⁷⁸ But that same year, the Duke de La Rochefoucault Liancourt stated that "scarcely any but log houses" existed in Pennsylvania from Lancaster west.¹⁷⁹

The Scots-Irish usually did not build large stone houses like the Germans did. Their houses were small and usually log ones,¹⁸⁰ better adapted to their constant moving with the expanding frontier. They preferred the single-cell or the hall-parlour plan, but unlike the English version, it had enclosed stairs, single board partitions, exposed joints, and a stone chimney. Sometimes they employed German builders.¹⁸¹ The Scots-Irish log and later frame small house persisted on the frontier even after the single pile stone house (fig. 62) and Germanic bank house became acculturated during the Georgian period in America.¹⁸²



Figure 62



Figure 63

The Continental House

According to Hugh Morrison, in 1684, Penn adopted the Swedish three-room house plan and suggested that new immigrants “build then, a house thirty feet long and eighteen broad, with a partition near the middle, and another to divide one end of the house into two small rooms.¹⁸³ The similar Germanic three-room plan in Pennsylvania with slightly off-center chimney resembles not only this plan, but also the peasant houses along the Rhine Valley and in Switzerland.¹⁸⁴ The huge central chimney was an earmark of the Germanic house.¹⁸⁵ Further, it can be demonstrated that a proportional system using the Golden Mean was used to lay out such houses.¹⁸⁶

Additional refinement in the types of Germanic Continental house plans was made by John D. Milner:¹⁸⁷

1. *Flur Kuchenhaus*

This hall-kitchen house is centered around a massive chimney and contains three rooms: *kuche* (kitchen), *stube* (parlour or



Figure 65



Figure 64

great room), and *kammer* (chamber or bedroom).¹⁸⁸ The Bertolet-Herbein log house (fig. 63) of 1738 in Berks County, Pennsylvania,¹⁸⁹ is an example, as is the Keyser House in Page County, along with others in Rockingham and Franklin County, all in Virginia.¹⁹⁰ This plan was the model for Germanic houses in America and persisted in those ethnic areas of Pennsylvania and western New Jersey until about 1770.¹⁹¹

2. *Kreuzhaus*

The cross house is also centered around an off-center chimney but contains a fourth room used as a kitchen pantry. The Hans or Christian Herr House (fig. 64) of 1719 in Lancaster County, Pennsylvania,¹⁹² and the 1758 Fort Egypt (fig. 65) in Page County, Virginia,¹⁹³ are examples.

The Hans Herr House form resembles a 1739 house (fig. 66) at Tursturz, near Trier, in the

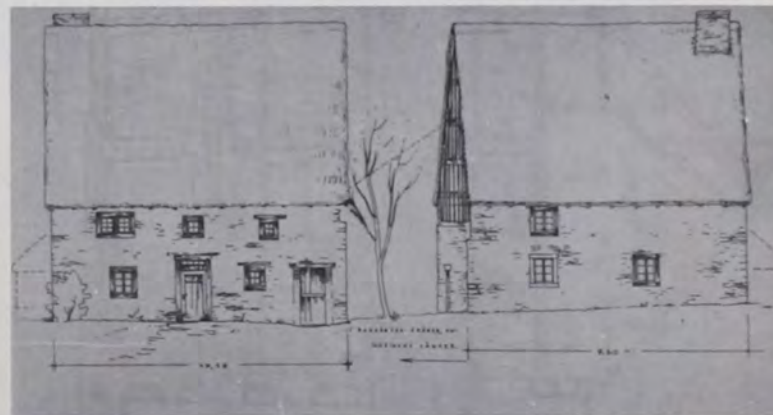


Figure 66

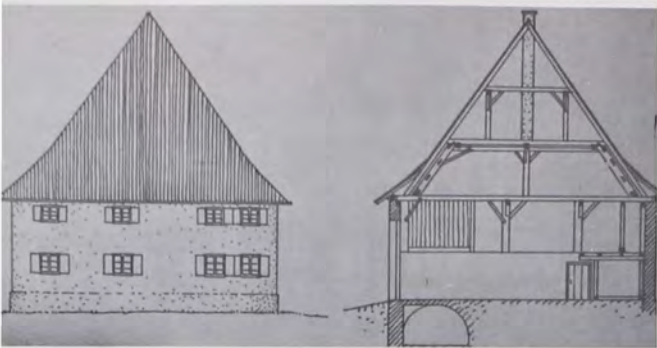


Figure 67



Figure 68

Rhineland,¹⁹⁴ one (fig. 67) in Memmingen, and another (fig. 68) in Nordlingen, both in Bavaria and both with double attics.¹⁹⁵ The Herr House stone exterior walls were once plastered and white-washed. Its small casement windows have wooden shutters attached to wood frames as well as to stone frames on the gable ends. Casement windows were used long after the introduction of double hung ones around 1700, but the only extant original casement window in Pennsylvania had single sash above a pair of casements. It was used as a model for this restoration. Similar ones can be found in Germany.¹⁹⁶ A steep-pitched roof with double attic is served by log steps (fig. 69). Similar primitive thick stair treads attached to side stringers with no risers can be seen in the 1745 Fort Zeller house (which will be discussed later) and the Jerg Mueller House of 1752 at Milbach, in Lebanon County. The Mueller interior (fig. 70) is now in the Philadelphia Museum of Art and exhibits a



Figure 69

medieval newel post extending from floor to ceiling at the turn of the stair.¹⁹⁷ Further comparisons can be made between the Mueller House and the Wirtshaus Zumstern in Rheinzabern in the Pfalz.¹⁹⁸

The Hans Herr House's ten-foot wide rectangular chimney reduces to a square in the attic. Its log ceiling joists were grooved along the sides and fitted with narrow boards to permit straw to be woven through them; then clay was applied over the straw to complete the "bisquit" ceiling (fig. 71).¹⁹⁹ This process was also employed in Germany (fig. 72). Other Germanic features found in the Herr House, as well as in other Pennsylvania buildings, include a dry sink, warming oven in the *stube*, L-shaped bench and religious corner cupboard (fig. 73), Bible box (fig. 74), *schränk* (wardrobe) (fig. 75), dower chest (fig. 76), attic trusses (fig. 77), vaulted cellar (fig. 78), and date stone over the batten doorway (fig. 79).²⁰⁰



Figure 70



Figure 71



Figure 72



Figure 73



Figure 74



Figure 75



Figure 76



Figure 77



Figure 78



Figure 79



Figure 80

All of these features can be seen in Germany (fig. 80-83).²⁰¹

It is difficult to determine the Herr House's original roofing. Roofing tile (fig. 84) was once as common on Pennsylvania German buildings as it is to this day in Germany. Certainly tiles were used in Berks and Montgomery counties as it is today on roofs of entire German cities, such as Heidelberg, Rothenburg, and Dinkelsbuhl.²⁰² A lug on the back of the tiles hooked over wood laths creating continuous horizontal and vertical joints, and each tile had a molded groove to carry the rain water away from the vertical joint.²⁰³ Also used were wood shingles that overlapped both horizontally and vertically as they did on the Miller House near Harrisonburg, Virginia. This construction method was still being used in 1938 in Germany.²⁰⁴ And thatching with rye straw was used in earlier times.



Figure 81

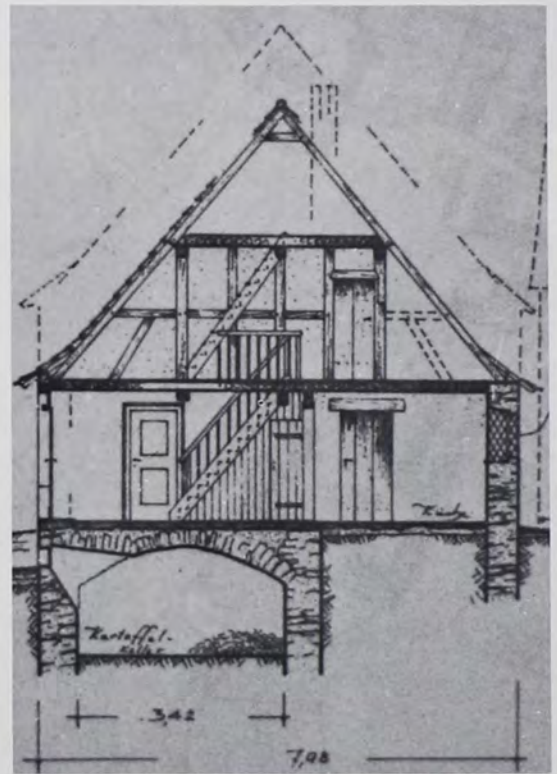


Figure 82

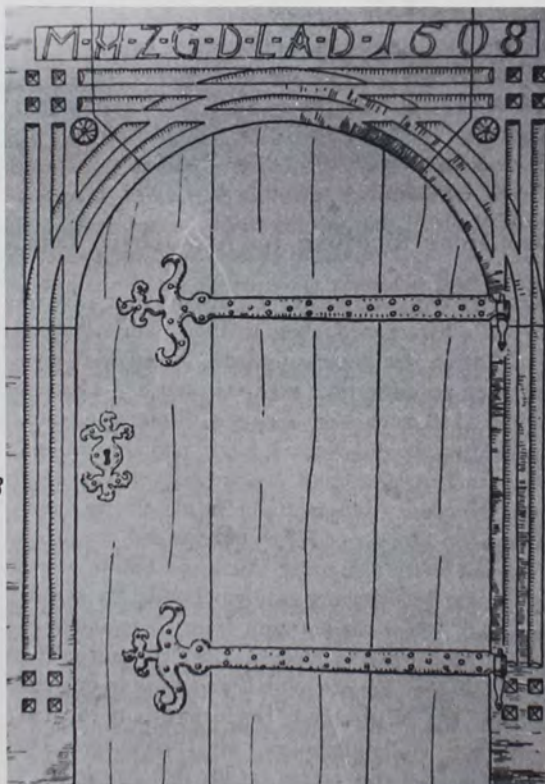


Figure 83



Figure 84



Figure 85



Figure 86



Figure 87

3. *Durchgangigen Haus*

This center passage house has a narrow entry passage that separates the chamber from the kitchen. Fireplace openings occur in the passage to feed Germanic five-plate, cast iron stoves (fig. 85) projecting into the rooms beyond. This results in the chimneys vaulting over the passage at the second floor level to form a single central stack on the roof. In 1744, Benjamin Franklin of Philadelphia invented the Franklin Stove, but the Pennsylvania Germans already were using the cast iron stoves brought with them, and continued to use them throughout the eighteenth century. In 1758, Baron Stiegel, of glasswork fame, established the first iron foundry to make such stoves in America at Manheim, in Lancaster County. After 1830, cast iron stoves became readily available to the public, and canals made their transportation cheaper, resulting in the enclosing of fireplace openings to substitute these stoves for cooking and heating. Central furnace heating did not become popular until after 1875.²⁰⁵ Five-plate stoves and other cast iron ones (fig. 86) can be seen throughout Germany.²⁰⁶

American examples of the center passage house are Schifferstadt (fig. 87) of about 1736 in Frederick, Maryland, the 1742 Moravian School in the Oley Valley of Berks County, and the 1768 Widow's House in Bethlehem.²⁰⁷



Figure 88

The Germanic Continental house built of logs or stone was common in Pennsylvania and can be seen along the migration path through the Shenandoah Valley and into North Carolina.²⁰⁸ Other such central chimney houses include: the approximately 1710 Sproegell House in Germantown; the Hannes Immel House of 1757 in Lebanon County;²⁰⁹ the Kauffman House in the Oley Valley;²¹⁰ the Dietz House in York County;²¹¹ the eighteenth century log Snively House near Keedysville, and the stone Rockland House of 1773 at Hagerstown, both in Maryland;²¹² and the Johannes Hardenbergh House and the Dumond House (fig. 88), both built about mid-eighteenth century and both in Ulster County, New York.²¹³



Figure 89

Bank Houses over Springs

Many of the early small stone houses were built into a bank or hillside over a spring, which served as a cold cellar and water supply. The spring was enclosed in a stone vaulted cellar (*wehrspeicher*) (fig. 89) containing slits for air and light, causing many to conclude that they served as shelters or “forts” against Indian attack.²¹⁴ These vertical openings, similar to those found in barn loft areas, were undoubtedly narrow to prevent rain and larger birds and other animals from entering. The interior of the slit usually was splayed to allow more light into the space as the sun moved about the sky, rather than to pivot a rifle in order to get a better bead on an Indian. Besides, most of these vaulted cellars only had outside entrances as they did in houses in Germany.²¹⁵ Further, Pennsylvania houses of this type have been compared with the *weinbauren* houses used for producing pot-still whiskey in the Canton Schwyz of Switzerland, where the water was used



Figure 90

to cool the applejack whiskey.²¹⁶

In some cases, these cellar spring houses included a summer kitchen²¹⁷ as in the Christopher Lei (Ley) House (fig. 90) of 1732, and the Michael Spangler House of 1729, both in Myerstown, Lebanon County.²¹⁸ The upper floor of the Lei House is a later addition. The French Huguenot Bertolet Stone House also contains a combination kitchen and spring house with outside entrance only. Another interesting feature of this house is the tile paving in the kitchen, which resembles ones at Bethlehem and Ephrata.²¹⁹

Another Huguenot, Heinrich Zeller, built “Fort” Zeller (fig. 91) in 1745 near Womelsdorf in Lebanon County; it too is entered only from the exterior. Its small, stone-framed casement windows, stone-framed Dutch doorway with date and inscription stone nearby (fig. 92), central chimney and double attic are some of its many medieval Germanic features. It once had a vertically-clapboarded roof similar to one on the Mora-



Figure 91



Figure 92



Figure 93



Figure 94



Figure 95



Figure 96

vian water works at Bethlehem. Its stone dry sink outlet (fig. 93) in the exterior wall is similar to one at Schifferstadt (fig. 94), and is also found in Germany (fig. 95.)²²⁰

Other examples of bank houses over springs include: the 1730s Boone House in Berks County; the Hager House (fig. 96) in Hagerstown and the Ludwick Kameron House (fig. 97) of 1774, in Washington County, both in Maryland; and the log Fort Rhodes of 1764 in Page County, Virginia, which does contain an interior stair to the main floor. Other vaulted cellar houses, but without springs, are: the Herr House of 1719 in Lancaster County; Schifferstadt of c. 1736 in Frederick, Maryland; and Fort Egypt of 1758, the White House of 1760, Fort Stover (fig. 98) of about 1790, and others in Page County in the Shenandoah Valley.²²¹ Of interest in the Shenandoah Valley Germanic houses are joists either resting entirely on top of summer beams (fig. 99) or partially set into them (fig. 100),²²² as opposed



Figure 97



Figure 100



Figure 99



Figure 98



Figure 101

to the English method of dovetailing joists into the side of the summer beam. This system can be seen in Germany (fig. 101).

Other Farm Buildings

In addition to the log house, possibly the most significant contribution of the Pennsylvania Germans to eighteenth century American vernacular architecture was the "Swiss" bank barn.²²³ Typically, it was built into a bank or hillside with the lower level containing the stables and barnyard, while the upper level, often reached by means of a wagon ramp or bridge, contained the threshing floor with side hay mows and projecting forebay (*vorbau*).²²⁴ But before discussing these large barns, a review of the farm buildings preceding them is necessary.

Farmstead site planning varies from the grouping of dwelling, barn, and other outbuildings around an open square, such as found in southern New Jersey, to a linear grouping with all gables aligned.²²⁵ Usually the stable and barnyard were oriented toward the sunny southern or eastern quarter, but some have been sited facing any compass direction, with more concern for hillside, road, or house location.²²⁶ In Glass' study of 530 barns, the majority faced between east and west with 159 facing southeast and 161 south.²²⁷

In a letter dated 1684, Pastorius mentioned that Swedes, Dutch, and Scots-Irish had no barns but allowed cattle to roam and stacked grain in the field, whereas the Germanic groups in America maintained barns to house their cattle and store their hay.²²⁸ Even forty years later, Christopher Sauer noted that cattle were out-of-doors the year round, because there were few barns in Pennsylvania.²²⁹ In fact, the stacking of hay and grain in the field continued until the nineteenth century.

The barrack, a shed for sheltering cattle and grain was used in the middle ages throughout Holland (fig. 102), Germany, France, and Italy and was introduced in



Figure 102

America by the Dutch and Germans. In the eighteenth and nineteenth century, it was commonly used throughout New York, New Jersey, and Pennsylvania,²³⁰ where it was adopted by the English.²³¹ Barracks consisted of four upright posts with holes for pegging to support a movable roof. Its hay floors were often raised six to twelve feet from the ground with sides to serve as a cattle shelter.²³² In 1749, Peter Kalm observed barracks around Philadelphia, while the earliest known painting of Bethlehem in 1753 shows one.²³³ Although the Berks County records are missing, the 1798 Direct Tax List for Pennsylvania identified approximately 16,000 barns of which 43 percent were solely of log construction, comprising the majority construction type. Further, 11 percent were stone barns, which were located primarily in the eastern part, with half in Montgomery County alone. Although today, most extant barns are frame, in 1798, only 700 were of that construction material, mostly in Delaware County. Sixty-nine barns were listed as being more than 100 feet in length; the majority located in Lancaster County. Two were listed as greater than 150 feet.²³⁴ In the earlier 1786 Clarke-Hite Survey of 113 Shenandoah Valley barns, 92 percent were log, 52 percent were thatched with straw, and 35 percent had clapboard roofing.²³⁵ straw, and finally wood shingles. In 1789, Jedidiah Morse, stated that barns were "commonly thatched with rye straw," and in Lancaster County its use persisted until the mid-nineteenth century. Straw thatching was used on barns even after its use was discontinued on house roofs. Because of its insulation value, they were warm in winter and cool in summer, but fire was a problem.²³⁶ Rye or wheat straw roofing was used in seventeenth century lowland Scotland,²³⁷ but the thatched hip roof was even more common in Ireland where the ridge was rounded by securing the cruck frames with a collar brace at the top.²³⁸ The paintings and drawings of Pieter Brueghel, the Elder (1525-1569), Hieronymus Bosch (1450-1516), and Albrecht Durer (1471-1528) show many thatched roofs in Holland and



Figure 103

other Germanic parts of Europe.²³⁹

The vast grazing land and mild climate of England had made enclosed barns unnecessary there. The winters of Pennsylvania, however, were more severe, more like those in Germany,²⁴⁰ giving rise to the building of large bank barns starting about mid-eighteenth century. Prior to that time, in addition to the barracks, grain was stored in house attics, as it was in the Freer House of 1720 in New Paltz, Ulster County, New York.²⁴¹ In 1753, Lewis Evans noted that barns were "large as palaces" while the people "live in log huts," and in 1789, Thomas Anburey mentioned that people "pay more attention to the construction of their barns than to their dwelling houses."²⁴²

The predecessor of the American bank barn is said to be the single-level, double crib log barn,²⁴³ although it is more likely that this small barn has more in common with the stone barns on level ground in Bucks and Chester counties and with those around Philadelphia, which have medieval English precedents.²⁴⁴ It has often been said, too, that the bank barn had no exact similarities either in Britain or on the European continent,²⁴⁵ but Brunskill's English Lake District studies have led Glassie to conclude that the antecedent of the American bank barn came from that area (fig. 103-04).²⁴⁶ Similar British Isles bank building examples also can be found in Wales,²⁴⁷ Ireland (fig. 105), Scotland, Devonshire, and the north Yorkshire moors. Brunskill identified at least four hundred examples in the Lake District alone with over two times more unidentified there. They date from about 1730 on and sometimes have projecting wings on each side of the wagon entrance doors or ramp as many continental examples do (fig. 106).²⁴⁸

Elsewhere Glassie concluded that this barn type



Figure 104

resulted from the amalgamation of ones from both the Continent and Britain. Further, in noting the stone base and wood frame top of the great combination dwelling-barns of continental Europe, he suggested that their balconies might have evolved into the American forebay.²⁴⁹ On the other hand, in 1908, S.F. Gladfelter had indicated that the "holstein barn" derived from northern Germany.²⁵⁰

But it is exceedingly curious that these large Pennsylvania bank barns of the Germanic groups were historically known as "Swiss" or "Swisser" barns, indicating their builders emigrated from Switzerland.²⁵¹ In 1913, the early Germanic barn scholar, Marion D. Learned of the faculty at the University of Pennsylvania, made such comparisons with the Swiss combination dwelling-barn. He felt that the American forebay derived from the Swiss projecting roof and balcony; the ramp to the threshing floor survived from those to the Swiss loft; the ventilators, the memory of the Swiss chimney; and the slit gable vents, similar to those in Switzerland.²⁵²

In 1938, Wertenbaker, too, compared the Pennsylvania bank barns with Bavarian and Swiss models.²⁵³ Two years later, Dornbusch noted the use of earthen ramps and bridges in medieval times in Britain, France, Germany, and Switzerland in military, as well as domestic buildings. He compared the stone masonry barns on level terrain with medieval English ones and contrasted those with continental Germanic types similar to the American bank barn. He observed that the wall and truss framing systems of the bank barns were comparable to that used in Europe through the seventeenth century. He further compared the masonry vent aperture in the barns to the loop holes in stone walls in Europe that were used for defense.²⁵⁴

Figure 105



Figure 106





Figure 107

Recently, some researchers have noted the lack of Pennsylvania bank barn antecedents in the Pfalz. Robert F. Ensminger of the faculty at Kutztown State College, instead found its prototype in central and eastern Switzerland from Canton Bern to Canton Graubunden.²⁵⁵ And Terry G. Jordan of the faculty at North Texas State University revealed from field research in 1978 that the bank barn with forebay seemed to be confined to the eastern Alpine area of Switzerland and several districts in the Austrian province of Salzburg, the most prevalent being in the Pratigau and Vorderrheintal in Canton Graubunden in Switzerland, and in the Zillertal Valley of Austria.²⁵⁶ Henry Glassie had earlier noted one near New Johann, Switzerland.²⁵⁷ Both Ensminger and Jordan promote the earlier concept that the Swiss bank barn did not evolve in America, but has a precedent in continental Europe. More field research of this kind is sorely needed.



Figure 108



Figure 109

Bank buildings have been noted from the late thirteenth century and have been found, in addition to those countries already mentioned, in the Scandinavian countries, Spain, and Macedonia.²⁵⁸ But, most importantly, banked buildings of all types have been found in the Pfalz and Black Forest and in Switzerland;²⁵⁹ in particular, bank barns (fig. 107-08) and bridge barns (fig. 109-10).

In America, variously called Sweitzer, Swisser, Mennonite, Pennsylvania Dutch, forbay, overshot, ramped, and hex barns, the large Swiss bank barns (fig. 111-12) of Pennsylvania were built by Mennonite and Amish farmers of Swiss origin in Lancaster County. These influential settlers' barns were thereafter built by various Germanic groups²⁶⁰ and were adopted by the English and Scots-Irish.²⁶¹

The 1798 Direct Tax List showed that the size of barns varied little between different ethnic groups, indicating that the larger Swiss bank barns of the Pennsylvania Germans had clearly been adopted by other ethnic groups.²⁶² These larger barns had replaced the smaller English ones and the combination dwelling-barns.²⁶³ By the mid-nineteenth century, the Swiss bank barn was found generally throughout southeastern Pennsylvania, especially in the counties of Berks, Lancaster, Lebanon, Lehigh, and Northampton, and in a portion of western New Jersey, central Maryland, and the Shenandoah Valley.²⁶⁴ They were even found west of Pennsylvania, such as in Cass County, Indiana.²⁶⁵ But barns of those groups migrating further south became smaller because of the reduction of grain crops, and because of the warmer climate, which meant that hogs and cattle were left unsheltered, while mules and horses were kept only in sheds. Thus the barn became simply a corn crib and the threshing floor was not needed, resulting in smaller barns.²⁶⁶



Figure 110



Figure 111



Figure 112



Figure 113



Figure 114

Bank barns were first built of logs, then stone, and lastly of wood frame covered with vertical siding with a base of stone or sometimes brick.²⁶⁷ Usually the long side of the lower level was placed parallel to the contours of a hill with southern exposure so that livestock (cattle, horses, sheep, swine) were sheltered from the winter winds in a barnyard. This is where they were watered and could exercise and where dung was piled to be used as crop fertilizer.

Of the 530 barns in Glass' study, 94 percent were bank-type, of which all but twenty-five had forebays to shelter the stable entries and wagons and farm implements below. This five- to ten-foot shelter was either recessed into the barn or took the form of a wooden cantilevered projection, which permitted the outward swinging doors below to be unencumbered with snow or straw accumulation. These large barns varied from forty to 150 feet in length by fifty to sixty feet in width and up to forty-five feet to the roof ridge.

Ventilators for light and air in the hay loft consisted of tapered slits, brick patterns, rectangular wooden louvers, and later, spires and cupolas. Other variations were initiated in the nineteenth century: a granary was contained on the upper level, a cellar placed under the ramp, and a wagon shed with corn crib attached.²⁶⁸

Brick-end barns were introduced in the nineteenth century laid in six-course American bond or in Flemish bond and containing glazed brick headers in elaborate

patterns, dates, and initials (fig. 113).²⁶⁹ Although patterned brick was common in Tudor England (1485-1603) and is found in America primarily in southeastern Pennsylvania, it exists in southern New Jersey in Burlington, Camden, Cumberland, and Salem counties as well (fig. 114).²⁷⁰ But, at this period, frame barns greatly outnumbered barns of other materials. By 1845, of York County's 2,500 barns, only 350 were stone with but eighteen brick ones.²⁷¹

By the middle of the nineteenth century, too, painted barn signs (fig. 115) later referred to as "hex signs," began to appear, particularly in Berks, Bucks, Lehigh, and Montgomery counties. These decorations are similar to those found in upper Bavaria, lower Saxony, and Berne, Switzerland; they also occur on American dower chests, *schranks*, pottery, book *fraktur* painting, coverlets, stoves, cupboards, clock dials, and other Germanic items.²⁷² Other decorations in the form of advertisements (fig. 116) became the vernacular barn ornament of the twentieth century.

Other farm buildings include: spring houses for keeping milk, butter, and cheese; summer kitchens; smokehouses; icehouses; dry houses; bake ovens; ground cellars; privies; woodsheds; wagonsheds; corn cribs; pigpens; chicken houses; pump houses; wash houses; butcher houses; toolsheds; milk houses; malt houses for brewing beer; and still houses for distilling whiskey.²⁷³

Figure 115

Figure 116



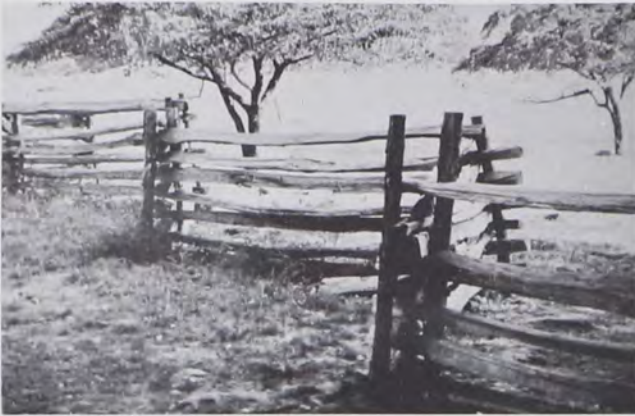


Figure 119



Figure 120



Figure 121



Figure 122



Figure 117



Figure 118

Small outbuildings satisfying a number of the above activities and containing a projecting entrance roof were found throughout America (fig. 117),²⁷⁴ as well as in Europe (fig. 118).²⁷⁵ American rail fences (fig. 119-20), too, can be found in Germany (fig. 121-22).²⁷⁶

The Community Buildings

As previously noted, Germantown near Philadelphia was the first German settlement in Pennsylvania. Its houses were usually of stone with pent roofs and eaves. Some were two stories high while others were a story and a half with gable ends to the street.²⁷⁷ The German house, Wyck (fig. 123), of about 1690, there, was the forerunner of what became known as the colonial Pennsylvania farmhouse. The peak of this stone and brick rural architecture emerged between 1740 and 1840.²⁷⁸

But even more ethnically-distinct than Germantown were the religious communities founded by the Moravians and other sects. Johann Conrad Beissel founded his Seventy-Day German Baptist monastic cloisters at Ephrata.²⁷⁹ using medieval architectural models. This style, manifested by its steep roofs and double rows of

Figure 123





Figure 124

shed attic dormers,²⁸⁰ still prevailed over the newer Renaissance in many German towns: Bamberg, Mannheim, Nurnberg, Rothenburg (fig. 124).²⁸¹ The basilica-like Brothers' House (fig. 125) in Ephrata,²⁸² which has been razed, strongly resembled those in Romanesque Germany (fig. 126).²⁸³ But the Saal, or House of Prayer, of 1740, the oldest extant religious building in America, and the adjoining Saron (fig. 127), of 1743, for the Sisterhood (284) have been restored. The Saal contains a *fachwerk* wall frame of six-inch mortised and tenoned oak frames with stone and clay infill. Its attic floor once contained clay which served as insulation and possibly as fireproofing below the once-thatched roof. The doors were constructed of vertical boards with tapered and chamfered battens, common in Pennsylvania. In the Saron, a kitchen dry sink has its stone scupper (fig. 128) extend through the exterior wall to serve as a drain, as at Schifferstadt and Fort Zeller.²⁸⁵ Other medieval Germanic features include exterior protruding ovens, casement windows, double attics, and door hoods (fig. 129).²⁸⁶

The Moravian communities of Nazareth and Lititz in Pennsylvania, contain several Georgian-influenced Germanic buildings, whereas the Moravian towns of Bethlehem, PA and Winston-Salem, NC are more medieval in character. Nazareth Hall (fig. 130) of 1755 contains the Georgian features of gambrel roof, rounded dormers, roof balcony, and cupola, while the White-



Figure 125



Figure 126



Figure 127
Figure 130



Figure 128



Figure 129





Figure 131



Figure 133



Figure 134



Figure 135



Figure 132

field House (fig. 131) of 1744, also in Nazareth, has a gambrel roof and belt course.²⁸⁷ On the other hand, the 1739 Gray House (fig. 132) there, the oldest Moravian building in Pennsylvania, is a central chimney log building with a steep roof and shed dormer,²⁸⁸ and the Winston-Salem community has both medieval Brothers' (fig. 133) and Sisters' Houses.²⁸⁹ In Bethlehem, as mentioned previously, the first house was the log combination dwelling-barn of 1741.²⁹⁰ Its *Gemeinhaus* or Community House, of 1742, was also of log construction but with stucco over oak laths. Its roof was bellcast (kick, easing) at the eaves, and it contained central chimneys and diagonal, molded board doors. Since 1868, it has been sheathed with weatherboards.²⁹¹ Medieval buildings in Bethlehem resemble community ones in Herrnhut in Saxony (now East Germany) southeast of Berlin.²⁹²

Also distinctive of Germanic architecture is the clipped gable jerkin head, (truncated), probably a carry over of the thatched roof, and the gambrel roof,²⁹³ often bellcast with overlapping eaves between the slopes (fig. 134).²⁹⁴ Swedish origins have also been suggested.²⁹⁵ In addition to Nazareth Hall and Whitefield Hall, gambrel roofs are found on the Bell House of 1761 in Bethlehem, Jerg Mueller's (fig. 135) of 1752 in Lebanon County, and the Moravian School at Lititz. Both Nazareth Hall and the Lititz example have the additional feature of clipped gables.²⁹⁶

Religious Buildings

The earliest churches generally were log buildings, but those early ones of the Germans, Scots-Irish, and Quakers that do survive are of stone and resemble houses (fig. 136),²⁹⁷ whereas most new non-Sect churches of the eighteenth century were in the Georgian mode. The original Christ Lutheran church of 1744 in

Figure 136





Figure 137



Figure 138



Figure 139



Figure 140



Figure 141

York was log as is the extant 1742 Mennonite Church (fig. 137) in Landisville, Lancaster County.²⁹⁸ The latter has dovetail jointing and a pent roof, which contrasts with the stone Mennonite church (fig. 138) built in 1770, in Germantown.²⁹⁹ (Mennonite churches resembled Quaker meeting houses).³⁰⁰ Built the same year, the oldest Dunkard church, the First Church of the Brethren, is also located in Germantown.³⁰¹ In 1760, the log Christ Lutheran Church was replaced with a brick Georgian paradigm (fig. 139). Other Germanic religious buildings had such unique features as the Moravian Bell House belfry's platform or gallery where trombone players could sound news in all directions.³⁰² The Chapel (fig. 140) attached to the north, with its stone buttresses, dates from 1751.³⁰³

The most obviously Germanic church extant is Augustus Lutheran church (fig. 141) of 1743 at Trappe in Montgomery County, PA.³⁰⁴ It recalls small country chapels (fig. 142) throughout Germanic Continental Europe.³⁰⁵ Its interior Germanic features are exemplified by its columns (fig. 143) and flat, cut-out panels for balcony railings. Such flat boards for railings can also be seen in the Mueller House stair rail from Milbach, in Pennsylvania, as well as throughout Germany (fig. 144) and Switzerland.³⁰⁶

Figure 144



Figure 142



Figure 143





Figure 145



Figure 146



Figure 147



Figure 148



Figure 149



Figure 150

Augustus Church's exterior semi-octagonal end and gambrel roof recall the Sleepy Hollow Dutch Reformed Church (fig. 145) of the late seventeenth century in Tarrytown, New York.³⁰⁷ But the first Dutch Reformed Church in America was located at Fort Amsterdam in New York in what is now Manhattan, while one of the oldest extant ones is in Fishkill, Dutchess County, New York. Early German Reformed examples are: the Trinity Chapel in Frederick, Maryland, the tower of which dates from 1763; the Zion Reformed Church of 1774 in Hagerstown;³⁰⁸ and Peace Reformed-Lutheran Church of 1798 in Cumberland County. Reformed churches often resembled Presbyterian ones.³⁰⁹

The oldest extant Lutheran church in America is the Lutheran Church of St. Peter the Apostle of 1730 in Red Hook, in Dutchess County.³¹⁰ The frame Hebron Lutheran Church (fig. 146) of 1747 in Madison County, Virginia, is the oldest one in the South, and it has a unique truss system in its attic that was once exposed and Germanic columns (fig. 147).³¹¹ The first Lutheran congregation in America was founded in 1700, as New Hanover Lutheran Church in Montgomery County, Pennsylvania, and is presently located in its 1767 building there. Another old Lutheran church is St. Peters, also of 1767, in Middletown, Dauphin County, Pennsylvania,³¹² while the 1761, handsome Trinity Lutheran Church (fig. 148) in Lancaster exhibits the brick Georgian manner. Many Lutheran churches resembled Anglican ones.³¹³

All of the extant Scots-Irish Presbyterian churches have been influenced by the Renaissance revival of the Georgian Period in America. The oldest (1698) was established by the Dutch as Norriton Presbyterian Meeting House in Montgomery County,³¹⁴ but the oldest (1706) one of Scots-Irish descent is Rehoboh or Makemie's Church (fig. 149) in Maryland,³¹⁵ with the Presbyterian one (fig. 150) of 1707 in New Castle forming the mother church for others.³¹⁶ Other early Scots-Irish churches are: Donegal Presbyterian in Lancaster County,³¹⁷ and Paxton Church in Dauphin County, both built about 1740; Neshaminy Church of 1743 in Bucks County near the log college that became Prince-



Figure 151

ton University; Augusta Church of 1747 in Augusta County, Virginia;³¹⁸ and Timber Ridge Church of 1756 in Rockbridge County there.³¹⁹ Another early limestone one is on the square in Carlisle, Cumberland County, the 1757 First Presbyterian Church (fig. 151), while the 1769 Newtown Presbyterian Church (fig. 152) in Bucks County is of brownstone. Two other eighteenth century examples are Silver Springs Presbyterian Church of 1783 in Cumberland County, and Lower Marsh Creek Presbyterian of the 1790s in Adams County.

The Georgian Period (1700-1780)

The Georgian Period was named for the reign (1714-1820) of the first three King Georges of England and was derived from the work of Andrea Palladio (1508-1580) during the Italian Renaissance (1300s through 1500s). It spread throughout the Continent and was further disseminated through trade between the Rhine and Thames Rivers, resulting in the Renaissance of the late seventeenth and early eighteenth centuries in Germany having similarities to the Georgian Period in England.³²⁰ There it was popularized by such architects as Christopher Wren (1632-1723) and James Gibbs (1682-1754). Its earmarks were its symmetry, odd numbers of bays, and gable-end chimneys.³²¹

The English Georgian was promoted in America through English pattern handbooks like William Salmon's *PALLADIO LONDINENSIS*; it resulted in effectively stripping all American architecture of its ethnic and regional peculiarities and giving it an English appearance.³²² Then, in 1806, the first pattern book was printed in America: Asher Benjamin's *THE AMERICAN BUILDERS COMPANION*.³²³

In addition to the influence of these handbooks, another reason for the adoption of the Georgian by the Germans and Scots-Irish in America was the proximity of the English and the work of the Carpenter's Company in Philadelphia.³²⁴ Alan Gowans, too, has surmised that the Germanic and Scots-Irish cultures succumbed to the English culture, because they did not have "the same close ties to...their homeland that influenced...Virginians or...Puritans," and that they "had mostly bitter memories of their homeland" and



Figure 152

"set all their hopes...into building a truly new society."³²⁵ As an example, even in the frontier area of the Shenandoah Valley where pioneers would normally cling to tradition longer, the Germanic culture was completely acculturated by the English by 1800.³²⁶

It is believed that the I-house preceded the Georgian house in America and was built throughout the English colonies north of South Carolina in the early eighteenth century. Both are symmetrical, two-story, five-bay, and central passage, but the I-house is a single rather than double pile building. The vernacular I-house was soon adopted on the frontier by most ethnic groups, such as the Scots-Irish, creating an easy transition to the Georgian house by making it two rooms deep.

It has been noted that the Germanic response to the Georgian was to adopt their traditional asymmetrical *flurkuchenhaus* plan to a symmetrical model that was but four bays wide. The two center bays became doors into the hall and parlour to create a symmetrical



Figure 153

appearance without a center passage.³²⁷ This four-bay German Georgian model (fig. 153) with two front doors persisted throughout the nineteenth century.³²⁸ But surely there was a more pragmatic reason for the two doors than mere fashion. And some Germanic houses of the eighteenth century in Berks and Lebanon Counties were more sophisticated with quions of red sandstone on the corners of grey limestone walls, resembling the Renaissance ones of the same period in Germany.³²⁹

By 1815, brick production could compete with stone, making it the more popular material throughout the century.³³⁰ Another peculiarity in Pennsylvania was that Georgian houses had paneled, white exterior solid shutters on the first floor with green louvered shutters (blinds) above.³³¹ It has been suggested that the American origin of solid shutters is German, since they rarely appeared in England.³³²

Conclusion

It has often been said that the Pennsylvania building forms of the Germans and Scots-Irish only slightly resembled those in Europe, because conditions were different in Pennsylvania. The vast amount of available land and the plentiful new materials at their disposal changed their manner of living and ways of construction emanating in new building prototypes more suitable to the American scene.³³³ The lack of combination dwelling-barns in Germanic America has been sighted as evidence that this great availability of land caused settlers to detach and spread out their buildings.³³⁴ But why then did New Englanders cling to such structures? To allow an all-weather passage between functions because of the cold climate? Certainly Pennsylvania weather can be as severe as that of Connecticut or Massachusetts.

It is difficult to locate building types exactly like those in America in the areas of Europe from which the settlers came; i.e., Ulster and the Pfalz. However, similar types have been found in the fringe areas, such as Switzerland and Austria. This raises the question of whether practically all of the small farm buildings of the seventeenth century in Ulster and the Pfalz were not completely destroyed by the multitude of devastating wars that occurred in these areas during this period.

It has been even decidedly more difficult to define the arrangement, form, and construction characteristic of Scots-Irish buildings in America. As has been suggested, since builders often were Germans and since they followed the Scots-Irish migration, many Scots-Irish buildings exhibit Germanic features. Even in the early nineteenth century, the German Baptists, in particular, were well-known as building construction workers. But the earliest Scots-Irish settlers contained skilled masons.³³⁵

Another way of looking at the lack of exact antecedents is Glass' explanation that "when people with diverse cultural backgrounds migrate to a previously uninhabited place,...(the) assimilation of diverse elements into a different way of life does not reproduce any of its antecedents faithfully." This reasoning has caused many scholars, such as Wertenbaker, Sauer, Dornbusch and Heyl, and Glassie, to conclude that although farmers from Europe made contributions to American building, no European replica was built, and thus a purely American style emerged.³³⁶ In writing, in 1936, about the European origin of early Pennsylvania architecture, it was noted the Pennsylvania German traditions of

building varied enough that to treat all "manifestations of German influence as a single, coherent tendency is quite inexact."³³⁷ Certainly with the limited number of extant examples, it is difficult to evince consistent repetitious elements common to all examples. Nevertheless, upon investigation there seems to emerge enough consistent detail to establish a trait that one can perceive in extant examples of the same period in Germanic areas of Europe.

Moreover, much acculturation already had occurred throughout Europe prior to settlement in America. The extent of *fachwerk* houses and long houses throughout Europe and the use of building elements like the pent roof in both Germany and England show that material culture assimilation had taken place prior to 1680 in Europe. Much more scholarly research is needed in the form of dated surveys of ethnic vernacular building types found in central Europe, northern Ireland, and the Lowlands of Scotland in the seventeenth century and early eighteenth century. In order to conduct this research in a meaningful way, an investigation and cataloging of late seventeenth and early eighteenth century buildings of the Germans and Scots-Irish in America needs to be made by referring to tax lists, minute books, and other county records prior to 1800, and through archeological investigation. Undoubtedly, this research would reveal many combination dwelling-barns and *fachwerk* buildings, not to count the multitude of continental houses, bank houses, and single-cell Scots-Irish log houses. Additionally, genealogical research needs to be done in order to determine the original builders of these early buildings and the villages in Europe from which they emigrated. A review of buildings there in the same period or before should reveal building characteristics similar to those used in America.

And lastly, but perhaps most importantly, one needs to make a thorough visual search of prototypes in Ulster and in the outlying areas of Europe: Austria; the Communist countries of East Germany (Saxony), Poland (Silesia), Czechoslovakia (Moravia and Bohemia), Hungary, Bulgaria, and Yugoslavia; and the more remote areas of Switzerland and the Alsace of France as well.

Illustrations (Figures)

All photographs by the author unless otherwise noted.

1. Cave Huts along the Delaware River, Philadelphia. (John F. Watson, *Annals of Philadelphia and Pennsylvania in the Olden Time* (1844; rpt. Philadelphia: E.S. Stuart, 1900), 1:171).
2. Day Laborer's Cabin from Onstwedde in Netherlands Open Air Museum, Arnheim, Holland.
3. Johannes Kelpius' Cave Hut along Wissahickon River, Philadelphia. (Robert C. Bucher, "The First Shelters of our Pioneer Ancestors," *Courtesy of Pioneer America*, 1, No. 2 (July 1969):8).
4. Benjamin Lay at his Cave Hut, Philadelphia. 18C. (Robert C. Bucher, "The First Shelters of our Pioneer Ancestors," *Courtesy of Pioneer America*, 1, No. 2 (July 1969):9).

5. Reconstructions of Cave Huts of English Pilgrims in Pioneer Village, Salem, MA.
6. Combination Dwelling-Barn in Auchindrain Folk Museum, Scotland.
7. Combination Dwelling-Barn, Ring of Kerry, County Kerry, S. Ireland.
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9. Acterhoek Combination Dwelling-Barn from Harreveld in Netherlands Open Air Museum, Arnheim, Holland. 1771.
10. Lorenzenhof Combination Dwelling-Barn, Black Forest Open Air Museum, Gutach, W. Germany. 1502.
11. Hodererhof Combination Dwelling-Barn from Kochel near Bad Tolz in Bavarian Open Air Museum, Grossweil, W. Germany. 1775.
12. Combination Dwelling-barns, Berner Oberland Open Air Museum, Brienz, Switzerland.
13. Combination Dwelling-Barn, Bethlehem, PA. 1741. (From J. Carroll Tobias in Henry J. Kauffman, *The American Farmhouse* (New York: Hawthorn Books, 1975), p. 73. Courtesy of Henry J. Kauffman).
14. Charles Lesueur sketch of Combination Dwelling-Barn in the Blue Ridge Mountains, PA. c. 1825. (Don Yoder, "The Pennsylvania Sketchbooks of Charles Lesueur," *Courtesy of Pennsylvania Folklife*, 16, No. 2 (Winter 1966-67): 34).
15. Miller Combination Dwelling-Barn, south of Harrisonburg, Shenandoah Valley, VA. (Thomas Jefferson Wertenbaker, *The Founding of American Civilization: The Middle Colonies* (Copyright (c) 1938 by Charles Scribner's Sons; copyright renewed, plate 38). Reprinted with the permission of Charles Scribner's Sons).
16. Combination Dwelling-Barn from Oberhausen, Bavaria, W. Germany. 1614. (Courtesy of *Freundeskreis Freilichtmuseum Sudbayern*, 1 (Nov. 1974): 37).
17. Guildhall, York, England. 1447-53.
18. Anne Hathaways Cottage, Stratford-Upon-Avon, England.
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21. From Binzenbach in Rhineland Open Air Museum, Kommern, W. Germany.
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24. *Fachwerk* Houses, east side of Middle Street, Lancaster, PA. (Alfred Lawrence Kocher, "Early Architecture of Pennsylvania," *Courtesy of Architectural Record*, 49, No. 1 (Jan. 1921): 35).
25. Powell House, Lancaster, PA. (Alfred Lawrence Kocher, "Early Architecture of Pennsylvania," *Courtesy of Architectural Record*, 49, No. 1 (Jan. 1921): 33).
26. Golden Plough Tavern, York, PA. 1745.
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28. Sawbuck House, Landis Valley, Lancaster Co., PA. (Alfred Lawrence Kocher, "Early Architecture of Pennsylvania," *Courtesy of Architectural Record*, 49, No. 1 (Jan. 1921): 34).
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34. Two-room Ulster House (Courtesy of Alan Gaily, *Rural Housing in Ulster in the Mid-Nineteenth Century* (Belfast, N. Ireland: Her Majesty's Stationery Office, 1974), p. 5).
35. Weaver's House from Ballydugan, County Down, in Ulster Folk Museum, Holywood, County Down, N. Ireland. Mid 19C.
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45. William Joseph House, Mossy Creek, Augusta Co., VA.
46. Original Kauffman House, near Pleasantville, Oley Valley, Berks Co., PA. Early 18C. (Dean Kennedy, "Century Old Farmhouses, Oley Valley, Berks County, Pennsylvania," *Pencil Points*, 13, No. 8 (Aug. 1932): 554).
47. General Horatio Gates House, York, PA. c. 1751.
48. Log Cabin. (Drawing by "Porte Crayon," *Virginia Illustrated*, (1857), courtesy of picture collection of Virginia State Library).
49. Log House near Groszschonan, PA. (Thomas Jefferson Wertenbaker, *The Founding of American Civilization: The Middle Colonies* (Copyright (c) 1938 by Charles Scribner's Sons; copyright renewed, p. 299). Reprinted with the permission of Charles Scribner's Sons).
50. Log Cabin with smoke hole in roof. 19C. (Courtesy of New York Public Library in Alex W. Bealer and John O. Ellis. *The Log Cabin: Homes of the North American Wilderness* (Barre, MA: Barre Pub., 1978), p. 23).
51. Log House, Albemarle Co., VA.
52. Bakeoven, W. Germany. (Courtesy of Dr. Rolf Robischon in *Arbeitskreis fur Deutsche Hausforschung: Trier* (Munster: Erscheinungsort, 1966), p. 136).
53. Bakeoven, Ephrata Cloister, Lancaster Co., PA.
54. Dutch Door from Bodenbach in Rhineland and Open Air Museum, Kommern, W. Germany.
55. Dated Batten Doorway, Germany. 1785. (Josef Schepers, *Haus und Hof Westfalischer Bauern* (Munster in Wesfalen: Courtesy of Aschendorffsche Verlagsbuchhandlung: 1960), p. 219).
56. Shed Dormer, York, PA. (Alfred Lawrence Kocher, "Early Architecture of Pennsylvania," *Courtesy of Architectural Record*, 49, No. 1 (Jan. 1921): 43).
57. Shed Dormers, in "View in the Konigstrasse" by Johann Ulrich Krauss. 1701. (F.W.H. Hollstein, *German Engravings, Etchings, and Woodcuts: 1400-1700* (Amsterdam: Courtesy of van Gendt & Co., 1976), 19:118).
58. Green Tree Tavern, Germantown, PA. 1748.
59. Log House with Pent Roof near Landis' Store, PA. (Thomas Jefferson Wertenbaker, *The Founding of American Civilization: The Middle Colonies* (Copyright (c) 1938 by Charles Scribner's Sons; copyright renewed, p. 299). Reprinted with the permission of Charles Scribner's Sons).
60. Johnson House, Germantown, PA. 1765.
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67. House, Memmingen, W. Germany. (Heinrich Gotzger and Helmut Prechter, *Das Bauernhaus in Bayern* (Munich: Courtesy of Geog D. W. Callwey, 1960), p. 131).
68. House, Norlingen, W. Germany. (Heinrich Gotzger and Helmut Prechter, *Das Bauernhaus in Bayern* (Munich: Courtesy of Geog D. W. Callwey, 1960), p. 19).
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70. Jerg Mueller Interior, Milbach, Lebanon Co., PA., now in Philadelphia Museum of Art. 1752. (Courtesy of the Philadelphia Museum of Art).
71. Ceiling Construction, Hans Herr House, Lancaster, PA. 1719.

72. Ceiling Construction, Pfalz, in Open Air Museum, Sobernheim, Rhineland, W. Germany.
73. L-shaped Bench and Religious Corner Cupboard, Hans Herr House, Lancaster, PA. 1719.
74. Bible Box, Boone House, Berks Co., PA. 18C.
75. *Schrank*, Rockford Museum, Lancaster Co., PA.
76. Dower Chest, Rockford Museum, Lancaster Co., PA. 1797.
77. Roof Truss, Hans Herr House, Lancaster Co., PA. 1719.
78. Vaulted Cellar, Schifferstadt, Frederick, MD. c. 1736.
79. Date Stone over Batten Door, Hans Herr House, Lancaster Co. PA. 1719.
80. L-shaped Bench and Bible Box, Mesnerhof "Zum Kramer" from Stegertsbrunn near Munich in Bavarian Open Air Museum, Grossweil, W. Germany. 18C.
81. *Schrank*, Black Forest, W. Germany. 1814. (Hermann Schilli, *Der Vogtsbauernhof* (Lahr, W. Ger.: reproduced with the permission of Moritz Schauenburg, 1975), p. 20).
82. Vaulted Cellar, Double Attic, and Bell Cast Roof, Teschenmoschel, W. Germany. (Courtesy of Dr. Rolf Robischon in *Arbeitskreis für Hausforschung: Pfalz* (Munster: Erscheinungsort, 1974), p. 206).
83. Dated Doorway, W. Germany. 1608. (Josef Schepers, *Hans und Hof Westfälischer Bauern* (Munster in Westfalen; Courtesy of Aschendorffsche Verlagsbuchhandlung: 1960), p. 89).
84. Tile Roof on Bertolet-Herbein Outbuilding, Berks Co., PA.
85. Five-Plate Cast Iron Stove, Schifferstadt, Frederick, MD. 1756.
86. Cast Iron Stove, Black Forest, W. Germany. (Hermann Schilli, *Der Vogtsbauernhof* (Lahr, W. Ger.: reproduced with the permission of Moritz Schauenburg, 1975), p. 75).
87. Vaulted Center Passage, Schifferstadt, Frederick, MD. c. 1736.
88. Dumond House, Hurley, Ulster Co., NY. c. 1750.
89. Vaulted Cellar, Hans Herr House, Lancaster Co., PA. 1719.
90. Christopher Lei House, Myerstown, Lebanon Co., PA. 1732.
91. Fort Zeller near Womelsdorf, Lebanon Co., PA. 1745.
92. Batten Door with Stone Frame and Date Stone, Fort Zeller, Lebanon Co., PA. 1745.
93. Stone Dry Sink Outlet, Fort Zeller, Lebanon Co., PA. 1745.
94. Stone Dry Sink Outlet, Schifferstadt, Frederick, MD. c. 1736.
95. Stone Dry Sink Outlet, Pfalz, in Open Air Museum, Sobernheim, Rhineland, W. Germany.
96. Hager House, Hagerstown, MD. 1774.
97. Ludwick Kameron House, Middleburg, Washington Co., MD. 1774.
- 98-99. Fort Stover, Page Co., VA. c. 1790.
100. Fort Rhodes, Page Co., VA. 1764.
101. Joists resting on top of summer beam in Rhineland Open Air Museum, Kommern, W. Germany.
102. Barracks from Vierhouten in Netherlands Open Air Museum, Arnheim, Holland Before 1850.
- 103-04. Bank Barn, Lake District, England.
105. Ramped Bank Mill, Dunloe, County Donegal, S. Ireland.
106. Projecting Wings at Wagon Entrance near Zug, Switzerland.
107. Stone Bank Barn near Kaulbach, Pfalz, W. Germany.
108. Frame Bank Barn with Forebay near Sattel, Switzerland.
109. Bank Barn with Bridge Wagon Entry near Leutkirch, Bavaria, W. Germany.
110. Bank Barn with Bridge Wagon Entry, Aichstetten, Bavaria, W. Germany.
111. Stone Swiss Barn, Cumberland Co., PA.
112. Stone Swiss Barn, Cumberland Co., PA.
113. Patterned Brick-End Barn, Upper Allen Twp., Cumberland Co., PA. 1840s.
114. John Dickinson House with Glazed Brick Patterns, Date, and Initials, Alloway Twp., Salem Co., NJ. 1754. (Thomas Jefferson Wertenbaker, *The Founding of American Civilization: The Middle Colonies* (Copyright (c) 1938 by Charles Scribner's Sons; copyright renewed, plate 20). Reprinted with the permission of Charles Scribner's Sons).
115. Oakwood Acres Decorated Barn, Lehigh Co., PA.
116. Barn Advertisement, Franklin Co., PA.
117. Typical Outbuilding with Projecting Roof, Highland Co., VA.
118. Outbuilding with Projecting Roof, Hafenberg, W. Germany. (Oskar Moser, *Das Bauernhaus und seine Landschaftliche und Historische Entwicklung in Karnten* (Klagenfurt: Courtesy of Karntner Druckerei, 1974), p. 145).
- 119-20. Rail Fences, Mountain Farm, Blue Ridge Parkway, VA.
- 121-22. Rail Fences, Germany. (Oskar Moser, *Das Bauernhaus und seine Landschaftliche und Historische Entwicklung in Karnten* (Klagenfurt: Courtesy of Karntner Druckerei, 1974), pp. 152-53)
123. Wyck, Germantown, PA. c. 1690.
124. Altes Hofhaltung, Bamberg, Bavaria, W. Germany.
125. Brothers' House, Ephrata Cloister, PA. (Alfred Lawrence Koehler, "Early Architecture of Pennsylvania," *Courtesy of Architectural Record*, 49, No. 1 (Jan. 1921): 40).
126. Basilica Roof, Church of Apostles, Cologne, W. Germany. (Banister Fletcher. *A History of Architecture on the Comparative Method*, 17th edition, revised by R.A. Cordingley. Copyright (c) 1961 by the Royal Institute of British Architects and the University of London (New York: Charles Scribner's Sons, 1961). Reprinted with permission of Charles Scribner's Sons).
127. Saal and Saron, Ephrata Cloister, PA. 1740-43.
128. Stone Sink Outlet at the Saron, Ephrata Cloister, PA. 1743.
129. Door Hoods, Ephrata Cloister, PA. 1740-43.
130. Nazareth Hall, Nazareth, Northampton Co., PA. 1755.
131. Whitefield House, Nazareth, Northampton Co., PA. 1744.
132. Gray House, Nazareth, Northampton Co., PA. 1740.
133. Single Brothers' House, Salem, NC. 1769, 1786. (Frances Griffin, *Old Salem*, (Winston-Salem, NC: Old Salem, Inc., 1970), p. 51. Courtesy of Old Salem, Inc.).
134. Bellecast Gambrel Roof with Clipped Gable, Beilstein, Mosel River Valley, W. Germany.
135. Jerg Mueller House, Milbach, Lebanon Co., PA. 1752.
136. Quaker Meeting House, Exeter, PA. 1737.
137. Log Mennonite Church, Landisville, Lancaster Co., PA. 1742.
138. Stone Mennonite Church, Germantown, PA. 1770.
139. Christ Lutheran Church, York, PA. 1812.
140. Moravian Chapel, Bethlehem, PA. 1751.
141. Augustus Lutheran Church, Trappe, Montgomery Co., PA. 1743
142. Chapel from Schutzensdorf in the Rhineland Open Air Museum, Kommern, W. Germany.
143. Interior, Augustus Lutheran Church, Trappe, Montgomery Co., PA. 1743.
144. *Vogtsbauernhof* in Black Forest Open Air Museum, Gutach, W. Germany. 1570.
145. Sleepy Hollow Dutch Reformed Church, Tarrytown, NY. Late 17C.
- 146-47. Hebron Lutheran Church, Madison Co., VA. 1747.
148. Trinity Lutheran Church, Lancaster, PA. 1761.
149. Makemie's Presbyterian Church, MD. 1706. (Harold Wickliffe Rose, *The Colonial Houses of Worship in America* (New York: Hastings House, Publishers, copyright (c) 1963), p. 199. Permission by Hastings House, Publishers).
150. Presbyterian Church, New Castle, DE. 1707. (Harold Wickliffe Rose, *The Colonial Houses of Worship in America* (New York: Hastings House Publishers, copyright (c) 1963), p. 136. Permission by Hastings House, Publishers).
151. First Presbyterian Church, Carlisle, Cumberland Co., PA. 1757.
152. Presbyterian Church, Newtown, Bucks Co., PA. 1769.
153. Andrew B. Kauffman House with two front doors, Landisville, Lancaster Co., PA. 1830.

ENDNOTES

¹Stevenson Whitcomb Fletcher, *Pennsylvania Agriculture and Country Life* (1951; rpt. Harrisburg, PA: Pa. Historical and Museum Comm., 1971), 1:51 and Estyn Evans, "The Scotch-Irish in the New World: An Atlantic Heritage," *Jour. of Royal Soc. of Antiquaries of Ireland*, 95 (1965): 39.

²George Dallas Albert, *History of County of Westmoreland, Pennsylvania* (Philadelphia: L.H. Everts & Co., 1882), p. 45; Sydney George Fisher, *The Making of Pennsylvania* (1896; rpt. Philadelphia: J.B. Lippincott Co., 1932), p. 162; and H.H. Hain, *History of Perry County, Pennsylvania* (Harrisburg, PA: Hain-Moore Co., 1922), p. 149.

³Henry J. Ford, *The Scotch-Irish in America* (1915; rpt. New York: P. Smith, 1941), p. 90.

⁴Fisher, pp. 161-62; and Fletcher, 1:51.

⁵Evans, p. 40.

⁶Fisher, p. 162; and Fletcher, 1:51.

⁷Charles A. Hanna, *The Scotch-Irish* (New York: G.P. Putnam's

- Sons, 1902), 2:15; Alfred Lawrence Kocher, "Early Architecture of Pennsylvania," *Architectural Record*, 49, No. 3 (Mar. 1921): 233, 235; and Fletcher, 1:51.
- ¹Albert, p. 45; and Fletcher, 1:51.
- ²James T. Lemon, *The Best Poor Man's Country: A Geographical Study of Early Southeastern Pennsylvania* (Baltimore: Johns Hopkins Press, 1972), p. 46.
- ³Mark Allen Hornberger, "A Special Distribution of Ethnic Groups in Selected Counties of Pennsylvania, 1800-1880: A Geographic Interpretation" (Ph.D. diss., Penn. State, 1974), p. 201.
- ⁴Albert, p. 45.
- ⁵Fletcher, p. 47 and John Florin, "Advance of Frontier Settlement in Pennsylvania: 1638-1850" in *Papers in Geography: No. 14* (University Park, PA: Penn State Department of Geography, May 1977), p. 47.
- ⁶Lemon, p. 47.
- ⁷Fletcher, 1:52.
- ⁸I. Daniel Rupp, *History of Dauphin, Cumberland, Franklin, Bedford, Adams, and Perry Counties* (Lancaster, PA: Gilbert Hills, 1846), p. 223.
- ⁹Hornberger, p. 201.
- ¹⁰Albert, p. 45.
- ¹¹Karl Frederick Geiser, *Redemptioners and Indentured Servants in Colony and Commonwealth of Pennsylvania* (New Haven, CT: Tuttle, Morehouse & Taylor Co., 1901), p. 15; and Florin, p. 47.
- ¹²Albert, p. 47; and Fletcher, 1:52.
- ¹³Ronald V. Jackson and Milton Rubincam, *Pennsylvania 1850 Census Index* (Bountiful, UT: Accelerated Indexing Systems, 1976), 1:ix.
- ¹⁴Fisher, p. 164.
- ¹⁵Fletcher, 1:52.
- ¹⁶Fletcher, 1:52; Lemon, p. 59; and Hornberger, p. 201.
- ¹⁷Evarts Boutell Greene, *The American Nation: Provincial America, 1690-1740* (New York: Harper & Bros., 1905), 6:236, 247.
- ¹⁸Fisher, p. 163.
- ¹⁹Fletcher, 1:52.
- ²⁰Alfred Lawrence Kocher, "The Early Architecture of Lancaster County, Pennsylvania," *Lancaster County Historical Society Papers*, 24 (1920): 92-93.
- ²¹Albert, p. 45; Fisher, pp. 162-65; Greene, 6:233-34; and Hain, p. 149.
- ²²Rupp, p. 541.
- ²³Christopher Dock, "100 Necessary Rules of Conduct for Children," *Pennsylvania German Society Proceedings*, 1764; rpt. 10 (1900): 87-97; Benjamin Rush, "Account of Manners of German Inhabitants of Pennsylvania," *Pennsylvania German Society Proceedings*, 1789; rpt. 19 (1910): 40-121; Albert Bernhardt Faust, *The German Element in the United States* (New York: Houghton Mifflin Co., 1909), p. 139; and Russell Wieder Gilbert, *A Picture of the Pennsylvania Germans* (1962; rpt. Gettysburg, PA: Pa. Historical Assn., 1971), pp. 55-61.
- ²⁴Fisher, p. 71.
- ²⁵Fisher, p. 126.
- ²⁶Oscar Kuhns, *The German and Swiss Settlements of Colonial Pennsylvania: A Study of the So-called Pennsylvania Dutch* (1901; rpt. New York: Henry Holt & Co., 1914), p. 19.
- ²⁷LaVern J. Rippley, *The German-Americans* (Boston: Twayne Pub., 1976), p. 19.
- ²⁸Fisher, pp. 90-91.
- ²⁹Kuhns, pp. 75-76.
- ³⁰Ralph B. Strassburger and William J. Hinke, "Pennsylvania German Pioneers," *Pennsylvania German Society Proceedings*, 42 (1934): p. xiv-xv; and John Joseph Stouder, *Sunbonnets and Shoofly Pies* (S. Brunswick: A.S. Barnes, 1973), p. 26.
- ³¹Kuhns, pp. 36-37.
- ³²Kuhns, p. 31.
- ³³Kuhns, p. 31.
- ³⁴Fisher, pp. 92-93; Kuhns, pp. 59-60; Faust, p. 129; A. R. Wentz, "Beginnings of German Element in York County, Pennsylvania," *Pennsylvania German Society Proceedings*, 24 (1916): 90-95; Fletcher, 1:47-48; Russell Wieder Gilbert, *A Picture of the Pennsylvania Germans* (1962; rpt. Gettysburg, PA: Pa. Historical Assn., 1971), pp. 12-13; Lemon, p. 43; Jackson, 1:ix; and Daniel R. Gilbert, "Lehigh County: The Land and its People," *Pennsylvania Heritage*, 4, No. 3 (June 1978): 3.
- ³⁵Kuhns, p. 30.
- ³⁶Faust, p. 149; *Surnames in U.S. Census, 1790* (1931; rpt. Baltimore: Genealogical Pub. Co., 1971), p. 271; and Furer, p. 2.
- ³⁷Howard B. Furer, *The Germans in America: 1607-1970* (Dobbs Ferry, NY: Oceana Pub., 1973), p. 2.
- ³⁸Fisher, p. 91.
- ³⁹Furer, pp. 5, 8.
- ⁴⁰Furer, p. 4.
- ⁴¹Fisher, p. 92; Kuhns, p. 60; Faust, p. 129; and *Surnames in Census, 1790*, p. 271.
- ⁴²William Rotchware, *The Georgian Period* (1898; rpt. Boston: American Architect and Building News Co., 1923), 1:167.
- ⁴³Greene, 6:247.
- ⁴⁴Furer, p. 3.
- ⁴⁵*Surnames in U.S. Census, 1790*, p. 271.
- ⁴⁶Kuhns, p. 60.
- ⁴⁷Furer, p. 5.
- ⁴⁸Ware, 1:167.
- ⁴⁹*Surnames in U.S. Census, 1790*, p. 271; and Furer, p. 7.
- ⁵⁰Kuhns, p. 60.
- ⁵¹Furer, p. 20.
- ⁵²Rippley, p. 42; and Larry O. Jensen, *A Genealogical Handbook of German Research* (Pleasant Grove, UT: Larry O. Jensen, 1978), p. 20.
- ⁵³Furer, p. 15.
- ⁵⁴Fletcher, 1:48.
- ⁵⁵Charles H. Dornbusch, "Pennsylvania German Barns," *Pennsylvania German Folklore Society*, 21 (1940): xvi.
- ⁵⁶Dornbusch, x.
- ⁵⁷Fisher, pp. 88-90; and John D. Milner, "Germanic Architecture in the New World," *Journal of Society of Architectural Historians*, 34, No. 4 (Dec. 1975): 299.
- ⁵⁸A series of Germanic immigrant lists to America by Don Yoder, trans. *Pennsylvania Folklife*, 22, No. 1 (Autumn 1972): 46-48; 22, No. 2 (Winter 1972-73): 46-48; No. 3 (Spring 1973): 41-46; 22, No. 4 (Summer 1973): 43-48; 23, No. 2 (Winter 1973-74): 40-48; 24, No. 4 (Summer 1975): 15-44; and Lee C. Hoppole, "European Religious and Spacial Origins of the Pennsylvania Dutch," *Pennsylvania Folklife*, 28, No. 4 (Summer 1979): 2-27.
- ⁵⁹Faust, p. 53.
- ⁶⁰Rippley, p. 18.
- ⁶¹Fisher, p. 86; and Strassburger, p. xvi.
- ⁶²Alan Gowans, *Images of American Living* (1964; rpt. New York: Harper & Row, 1976), p. 3.
- ⁶³J.G. Dunbar, "The Peasant House," in *Deserted Medieval Villages* by Maurice Beresford and John G. Hurst, eds. (London: Lutterworth Press, 1971), p. 236; and Ian D. Whyte, "Rural Housing in Lowland Scotland in the Seventeenth Century," *Scottish Studies*, 19 (1975): 55.
- ⁶⁴Caoimhin O'Danachair, "Traditional Forms of the Dwelling House in Ireland," *Journal of Royal Society of Antiquaries of Ireland*, 102, Part 1 (1972): 93.
- ⁶⁵Dunbar, pp. 238, 243; and Richard Reid, *The Shell Book of Cottages* (London: Michael Joseph, 1977), p. 203.
- ⁶⁶John F. Watson, *Annals of Philadelphia and Pennsylvania in the Olden Time* (1844; rpt. Philadelphia: E.S. Stuart, 1900), 1:171; and Gowans, p. 3.
- ⁶⁷Stevenson Whitcomb Fletcher, *Pennsylvania Agriculture and Country Life* (1951; rpt. Harrisburg, PA: Pa. Historical and Museum Comm., 1971), 1:372.
- ⁶⁸Watson, 1:171.
- ⁶⁹Fisher, p. 82.
- ⁷⁰Fisher, p. 77.
- ⁷¹Robert C. Bucher, "The First Shelters of our Pioneer Ancestors," *Pioneer America*, 1, No. 2 (July 1969): 7-12.
- ⁷²Watson, 2:20.
- ⁷³Fisher, p. 83.
- ⁷⁴Watson, 2:20, 23; and Bucher, "First Settlers," p. 7-12.
- ⁷⁵Fisher, p. 79.
- ⁷⁶Gowans, p. 3.
- ⁷⁷Dornbusch, p. xv.
- ⁷⁸Whyte, p. 62.
- ⁷⁹Alan Gailey, "The Peasant Houses of the Southwest Highlands of Scotland," *Gwerin*, 3, No. 5 (June 1962): 227; and Beresford, p. 242.
- ⁸⁰Gailey, p. 239; and Whyte, pp. 57-58, 61.
- ⁸¹Beresford, p. 238.

- ⁸⁹James Walton, "Cruck-Framed Buildings in Scotland," *Gwerin*, 1, No. 3 (June 1957): 114, 117, 120.
- ⁹⁰Ake Campbell, "Irish Fields and Houses," *Béaloideas*, 5, No. 1 (1935): 70; and Whyte, p. 65.
- ⁹¹Thomas Jefferson Wertenbaker, *The Founding of American Civilization: The Middle Colonies* (1938; rpt. New York: Cooper Square Pub., 1963), p. 320, plate 35.
- ⁹²Otto Lasius, *Das Friesische Bauernhaus* (1819; rpt. London: Trubner & Co., 1885), pp. 1-34; Rudolf Henning, *Das Deutsche Haus* (London: Trubner & Co., 1882), pp. 1-183; Henry Glassie, "Eighteenth Century Cultural Process in Delaware Valley Folk Housing," *Winterthur Portfolio*, 7 (1972): 55.
- ⁹³Jacques Lavalleye, *Pieter Bruegel the Elder and Lucas van Leyden* (New York: N.H. Abrams, 1967), plate 78.
- ⁹⁴Rudolf Kempf, *Dorfwanderungen: Bauernhaus-Typen Sueddeutschlands* (Frankfurt: H. Keller, 1904), plates 16, 52.
- ⁹⁵Kempf, plates 17, 18.
- ⁹⁶Marion D. Learned, "The German Barn in America," *University of Pennsylvania Lectures*, (1913-14), p. 344.
- ⁹⁷Wertenbaker, pp. 305, 321-23.
- ⁹⁸Dornbusch, p. xv; Don Yoder, *Pennsylvania Folklife*, 9, No. 3 (Sum. 1958): frontispiece; and Don Yoder, "The Pennsylvania Sketchbooks of Charles Lesueur," *Pennsylvania Folklife*, 16, No. 2 (Winter 1966-67): 34; and Henry J. Kauffman, *The American Farmhouse* (New York: Hawthorn Books, 1975), p. 73.
- ⁹⁹Wertenbaker, p. 323, plate 36; and *Freundeskreis Freilichtmuseum Sudbayern*, 1 (Nov. 1974): 37.
- ¹⁰⁰Yoder, *Pennsylvania Folklife*, 9, No. 3 (Sum. 1958): frontispiece.
- ¹⁰¹Margaret Berwind Schiffer, *Survey of Chester County, Pennsylvania, Architecture* (Exton, PA: Schiffer Pub., 1976), p. 256.
- ¹⁰²Glassie, "Eighteenth Century Cultural Process," p. 55.
- ¹⁰³Henry Kauffman, "The Log Barn," in *The Pennsylvania Barn* by Alfred L. Shoemaker, ed. (Lancaster, PA: Pa. Dutch Folklore Center, 1955), pp. 29-30.
- ¹⁰⁴Campbell, pp. 66, 68.
- ¹⁰⁵Richard Weiss, *Hauser und Landschaften der Schweiz* (1959; rpt. Zurich: Eugen Rentsch, 1973), p. 37; and Heinz Ludecke, *Albrecht Durer* (New York: Putnam, 1972), p. 45.
- ¹⁰⁶Alfred Lawrence Kocher, "The Early Architecture of Lancaster County, Pennsylvania," *Lancaster County Historical Society Papers*, 24 (1920): 95; and William J. Murtagh, "Half-Timbering in American Architecture," *Pennsylvania Folklife*, 9, No. 1 (Winter 1957-58): 4.
- ¹⁰⁷Dornbusch, p. xix.
- ¹⁰⁸Murtagh, pp. 4-5, 7, 9.
- ¹⁰⁹Alfred Lawrence Kocher, "Early Architecture of Pennsylvania," *Architectural Record*, 49, No. 1 (Jan. 1921): 33, 35; and Joe K. Kindig, III, *Architecture in York County* (York, PA: Colonial York Tourist Bureau, n. d.), p. 6.
- ¹¹⁰John B. Trussell, Jr., *Pennsylvania Landmarks of the Revolution* (Harrisburg, PA: Bicentennial Comm. of Pa., 1976), pp. 36-37.
- ¹¹¹Wertenbaker, plates 37, 38, 39, 40; and Robert P. Turner, *Lewis Miller Sketches and Chronicles* (York, PA: Historical Soc. of York Co., 1969), pp. 23, 32.
- ¹¹²Kocher, "Early Architecture of Pennsylvania," *Architectural Record*, 49, No. 1 (Jan. 1921): 33-35, 37; and Wertenbaker, plate 39.
- ¹¹³Frances Griffin, *Old Salem* (Winston-Salem, NC: Old Salem, Inc., 1970), p. 31; Hubert G.H. Wilhelm and Michael Miller, "Half-Timber Construction: A Relic Building Method in Ohio," *Pioneer America*, 6, No. 2 (July 1974): 43-51; and Mary Mix Foley, *The American House* (New York: Harper & Row, 1980), p. 40.
- ¹¹⁴William B. Tishler, *Old World Wisconsin: An Outdoor, Ethnic Museum* (Museum pamphlet) (Madison, WI: Univ. of Wisconsin-Madison, 1973).
- ¹¹⁵Murtagh, p. 3; Harley J. McKee, *Recording Historic Buildings* (Washington DC: U.S. Dept. of Interior, 1970), p. 4; and *Early Architecture in Upper Allen Township* (Mechanicsburg, PA: Center Square Press, 1976), p. 10.
- ¹¹⁶M.W. Barley, "Rural Housing in England," in *The Agrarian History of England and Wales* by Herbert P.R. Finberg, ed. (London: Cambridge Univ. Press, 1967), 4: fig. 25, 26, 28a, 28b.
- ¹¹⁷O'Danachair, p. 91; and Reid, p. 243.
- ¹¹⁸E. Estyn Evans, *Irish Folkways* (London: Routledge & Paul, 1957), p. 45.
- ¹¹⁹E. Estyn Evans, "The Ulster Farmhouse," *Ulster Folklife*, 1 (1955): 27.
- ¹²⁰Alan Gailey, *Rural Housing in Ulster in the Mid-Nineteenth Century* (Belfast, N. Ireland: Her Majesty's Stationery Office, 1974), pp. 5, 8; *Early Architecture in Upper Allen Township*, p. 13; and Reid, pp. 206, 228.
- ¹²¹Evans, "The Ulster Farmhouse," p. 29; Evans, *Irish Folkways*, p. 45; and Henry Glassie, "The Types of the Southern Mountain Cabin," in *The Study of American Folklore* by Jan H. Brunvard, ed. (New York: W.W. Norton, 1968), pp. 353, 355, 369.
- ¹²²*Early Architecture in Upper Allen Township*, p. 15.
- ¹²³Reid, pp. 190, 194.
- ¹²⁴George H. Allen, "Some European Origins of Early Pennsylvania Architecture," *American Journal of Archaeology*, 40 (1936): 126.
- ¹²⁵William Rotch Ware, *The Georgian Period* (1898; rpt. Boston: American Architect and Building News, 1923), 1:167; and G. Edwin Brumbaugh, "Colonial Architecture of Pennsylvania Germans," *Pennsylvania German Society Proceedings*, 1931; rpt. 41 (1933): 30.
- ¹²⁶Conway P. Wing, *History of Cumberland County, Pennsylvania* (Philadelphia: J.D. Scott, 1879), p. 26.
- ¹²⁷I. Daniel Rupp, *History of York County From 1719 to the Present* (Lancaster, PA: Gilbert Hills, 1845), p. 714.
- ¹²⁸Aymar Embury, II, "Pennsylvania Farm Houses," *Architectural Record*, 30 (Nov. 1911), pp. 476-77; Dornbusch, p. xx; Amos Long, Jr., *The Pennsylvania German Family Farm* (Breinigsville, PA: Pa. German Society, 1972), 6: 469-87; and Amos Long, Jr., *Farmsteads and their Buildings* (1972; rpt. Lebanon, PA: Applied Art, 1976), pp. 38-40.
- ¹²⁹Kuhns, pp. 95-97.
- ¹³⁰Dean Kennedy, "Century Old Farmhouses, Oley Valley, Berks County, Pennsylvania," *Pencil Points*, 13, No. 8 (Aug. 1932): 216, 223.
- ¹³¹Kocher, "Early Architecture of Pennsylvania," *Architectural Record*, 49, No. 1 (Jan. 1921): 38; and 49, No. 6 (June 1921): 524; Brumbaugh, "Colonial Architecture," pp. 34-36, 41-42; and Foley, p. 61.
- ¹³²Edward A. Chappell, "Cultural Change in Shenandoah Valley: North Augusta County Houses before 1861" (M. AR. H. thesis, University of Virginia, 1977), pp. 39-40.
- ¹³³Kennedy, 554; and Brumbaugh, "Colonial Architecture," pp. 44-46.
- ¹³⁴Kocher, "Early Architecture of Pennsylvania," *Architectural Record*, 49, No. 1 (Jan. 1921): 31, 33.
- ¹³⁵Wertenbaker, p. 299; Martin Wright, "The Antecedents of the Double-Pen House Type," *Annals of Assoc. of American Geographers*, 48, No. 2 (June 1958): 111; Glassie, "Types of Southern Mountain Cabin," p. 364; Long, *Pennsylvania German Family Farm*, 6:77; Stanley Willis "Log Houses in Southwest Virginia," *Virginia Cavalcade*, 21, No. 4 (Sp. 1972): 36; and Foley, p. 51.
- ¹³⁶Wertenbaker, p. 303.
- ¹³⁷Brumbaugh, "Colonial Architecture," p. 25; Glassie, "Types of Southern Mountain Cabin," p. 345; and Ottmar Schuberth, *Freilichtmuseum Oberbayern* (Grossweil: Bei Murnau, 1978), p. 118.
- ¹³⁸Charles E. Peterson, "American Notes," *Journal of Society of Architectural Historians*, 15, No. 3 (Oct. 1956): 2.
- ¹³⁹Wright, p. 111; Robert C. Bucher, "The Continental Log House," *Pennsylvania Folklife*, 12, No. 4 (Sum. 1962): 14; Gowans, p. 4; and Fred Kniffen, "Folk Housing: Key to Diffusion," *Annals of the Association of American Geographers*, 55, No. 4 (Dec. 1965): 558.
- ¹⁴⁰Rush, pp. 40-121; Kuhns, pp. 98-99; Faust, pp. 135-36; Gilbert, pp. 39-41; and Stoudt, p. 115.
- ¹⁴¹Long, *Pennsylvania German Family Farm*, 6: 79.
- ¹⁴²Fletcher, 1: 375, 380; and Kniffen, "Folk Housing," p. 561.
- ¹⁴³Glassie, "Types of Southern Mountain Cabin," p. 351.
- ¹⁴⁴Brumbaugh, "Colonial Architecture," p. 25.
- ¹⁴⁵Glassie, "Types of Southern Mountain Cabin," p. 343.
- ¹⁴⁶E. Estyn Evans, "The Scotch-Irish in the New World: An Atlantic Heritage," *Journal of Royal Society of Antiquaries of Ireland*, 95 (1965): 47.
- ¹⁴⁷Walter Allen Knittle, *Early Eighteenth Century Palatine Emigration* (Philadelphia: Dorrance & Co., 1937), p. 198; and Fletcher, 1: 373; Alex W. Bealer and John O. Ellis, *The Log Cabin: Homes of the North American Wilderness* (Barre, MA: Barre Pub., 1978), p. 23.
- ¹⁴⁸Photo of a Pennsylvania German bake oven, *Pennsylvania German Society Proceedings* 10, Part 7 (1900): 120; Campbell, p. 70; and *Arbeitskreis fur Deutsche Hausforschung: Trier* (Munster: Ersch-

- einungsort, 1966), p. 136.
- ¹⁴⁹Glassie, "Types of Southern Mountain Cabin," p. 343.
- ¹⁵⁰Fletcher, 1: 373.
- ¹⁵¹Brumbaugh, "Colonial Architecture," p. 28; and Fletcher, 1: 375.
- ¹⁵²Kocher, "Early Architecture of Lancaster County," p. 93.
- ¹⁵³Fletcher, 1: 375.
- ¹⁵⁴Kocher, "Early Architecture of Lancaster County," p. 104; and Fletcher, 1: 374.
- ¹⁵⁵Kempf, pp. 77, 97; Josef Schepers, *Haus und Hof Westfälischer Bauern* (Münster: Aschendorff, 1960), pp. 142-143, 150, 160-63, 166-67, 175, 219, 291; Hans-Jürgen Rach, *Bauernhaus, Landarbeiterkaten und Schnitterkaserne* (Berlin: Akademie-Verlag, 1974), p. 133; and Gunther Binding, Udo Mainzer, and Anita Wiedenau, *Kleine Kunstgeschichte des Deutschen Fachwerkbbaus* (Darmstadt: Wissenschaftliche Buchgesellschaft, 1975), p. 183.
- ¹⁵⁶Kocher, "Early Architecture of Lancaster County," p. 93.
- ¹⁵⁷Brumbaugh, "Colonial Architecture," p. 28; Wertebaker, p. 311; and Schepers, p. 219.
- ¹⁵⁸Glassie, "Types of Southern Mountain Cabin," p. 341.
- ¹⁵⁹Kocher, "Early Architecture of Lancaster County," p. 93.
- ¹⁶⁰Glassie, "Types of Southern Mountain Cabin," p. 342.
- ¹⁶¹Kocher, "Early Architecture of Lancaster County," p. 93; and Fletcher, 1: 374-75.
- ¹⁶²Glassie, "Types of Southern Mountain Cabin," p. 342.
- ¹⁶³Brumbaugh, "Colonial Architecture," pp. 22-23; and Wertebaker, pp. 300-1.
- ¹⁶⁴Kocher, "Early Architecture of Pennsylvania," 49, No. 1 (Jan. 1921), pp. 39, 43.
- ¹⁶⁵F.W.H. Hollstein, *German Engravings, Etchings, and Woodcuts: 1400-1700* (Amsterdam: Van Gendt & Co., 1976), 19:115-121; Klaus Thiede, *Alte Deutsche Bauernhäuser* (Königstein im Taunus: Hans Koster, 1963), p. 51; Karl Erdmannsdorffer, "Das Bürgerhaus in München," in *Das Deutsche Bürgerhaus* by Adolf Bernt and Gunther Binding (Tübingen: Ernst Wasmuth, 1972), 17:T8-T9, T59; and Robert Pfau, "Das Bürgerhaus in Augsburg," in *Das Deutsche Bürgerhaus* by Adolf Bernt and Gunther Binding (Tübingen: Ernst Wasmuth, 1976), 24: T16-T17.
- ¹⁶⁶Fletcher, 1:374.
- ¹⁶⁷Hugh Morrison, *Early American Architecture from the First Colonial Settlements to the National Period* (New York: Oxford Univ. Press, 1952), p. 547.
- ¹⁶⁸Photos of pent-roofed buildings, *Pennsylvania German Society Proceedings*, 10, Part 8 (1900): 58, 74, 109-10; Kocher, "Early Architecture of Lancaster County," p. 93; Kocher, "Early Architecture of Pennsylvania," *Architectural Record*, 48, No. 6 (Dec. 1920): 516; Raymond, plates B, C, 14, 26, 28, 34, 39, 57, 60, 74, 150; "Pennsylvania Barns," *American Architect and Architecture*, 151, No. 2661 (Sept. 1937): 48; Wertebaker, p. 234-299; Morrison, p. 518; Harold L. Myers, *Windows on Our Past* (Harrisburg, PA: Pa. Historical and Museum Comm., 1965), pp. 17-19, 22-23; Irvin Richman, *Pennsylvania's Architecture* (University Park, PA: Pa. Historical Assn., 1969), p. 11; John Francis Marion, *Bicentennial City* (Princeton, NJ: Pyne Press, 1974), pp. 181-82, 191-94; Gowans, p. 84; Trussell, pp. 7, 26, 37; *Rambling Around Old Tulpehockentown, Myerstown, PA* (Myerstown, PA: Bicentennial Historical Publication Comm., 1976), fig. 23; and Foley, p. 64.
- ¹⁶⁹Gowans, p. 84.
- ¹⁷⁰"Pennsylvania Barns," p. 48.
- ¹⁷¹Kempf, plate 83; Morrison, p. 518; Thiede, p. 109; and *Arbeitskreis für Hausforschung: Pfalz* (Münster: Erscheinungsort, 1974), p. 80.
- ¹⁷²Wertebaker, p. 234.
- ¹⁷³Brumbaugh, "Colonial Architecture," p. 44.
- ¹⁷⁴I. Daniel Rupp, *History of Dauphin, Cumberland, Franklin, Bedford, Adams, and Perry Counties* (Lancaster, PA: Gilbert Hills, 1846), pp. 461, 463; and Fletcher, 1:84.
- ¹⁷⁵Greene, 6:246.
- ¹⁷⁶Wertebaker, p. 307.
- ¹⁷⁷*The Clarke-Hite Papers* (Louisville, KY: The Filson Club, 1786); and Barbara H. Church, "Early Architecture of the Lower Valley of Virginia" (M. AR.H. thesis, University of Virginia, 1978), p. 28.
- ¹⁷⁸Stoudt, pp. 103-11.
- ¹⁷⁹Alfred L. Shoemaker, ed., *The Pennsylvania Barn* (Lancaster, PA: Pa. Dutch Folklore Center, 1955), p. 14.
- ¹⁸⁰E. Edwin Brumbaugh, "Architecture in Pennsylvania," *Pennsylvania History*, 17, No. 1 (Jan. 1950): 105.
- ¹⁸¹Church, pp. 12, 74.
- ¹⁸²Glassie, "Eighteenth Century Cultural Process," p. 49.
- ¹⁸³Morrison, p. 505.
- ¹⁸⁴Glassie, "Eighteenth Century Cultural Process," p. 41.
- ¹⁸⁵Franklin Ellis and Samuel Evans, *History of Lancaster County, Pennsylvania, with Biographical Sketches of many of its Pioneers and Prominent Men* (Philadelphia: Everts & Peck, 1883), p. 349; Photo of a central chimney house, *Pennsylvania German Society Proceedings*, 10, Part 8 (1900): 68; Kocher, "Early Architecture of Lancaster County," p. 96; Kocher, "Early Architecture of Pennsylvania," *Architectural Record*, 49, No. 1 (Jan. 1921): 39; Fletcher, 1:378; Kuhns, p. 96; and *Early Architecture in Upper Allen Township*, p. 25.
- ¹⁸⁶Arthur J. Lawton, "The Ground Rules of Folk Architecture," *Pennsylvania Folklife*, 23, No. 1 (Autumn 1973): 13-19.
- ¹⁸⁷John D. Milner, "Germanic Architecture in the New World," *Journal of Society of Architectural Historians*, 34, No. 4 (Dec. 1975): 299.
- ¹⁸⁸Edward A. Chappell, "Acculturation in the Shenandoah Valley: Rhenish Houses of the Massanutten Settlement," *Proceedings of American Philosophical Society*, 124, No. 1 (Feb. 1980): 56-57; and Bucher, "Continental Log House," pp. 14-19.
- ¹⁸⁹Richman, p. 3; and illustrations of Bertolet-Herbein log house, Berks Co., PA: Kauffman, *American Farmhouse*, p. 74; and Foley, p. 54.
- ¹⁹⁰Chappell, "Cultural Change in Shenandoah Valley," pp. 22, 29; and Chappell, "Acculturation in the Shenandoah Valley," pp. 75-76.
- ¹⁹¹Glassie, "Eighteenth Century Cultural Process," p. 41; and Chappell, "Acculturation in the Shenandoah Valley," p. 62.
- ¹⁹²Kocher, "Early Architecture of Pennsylvania," *Architectural Record*, 49, No. 1 (Jan. 1921): 36; Richman, p. 6; Long, *Pennsylvania German Family Farm*, 6:83; William Woys Weaver, "Weizenhal and Early Architecture of Neu-Strasburge: Swiss Plantations in the Province of Pennsylvania" (M. AR.H. thesis, University of Virginia, 1973), figs. 58, 59; Kauffman, *American Farmhouse*, pp. 78-79, 81; Schiffer, pp. 42, 376; and Foley, p. 60.
- ¹⁹³Thomas T. Waterman, *The Dwellings of Colonial America* (Chapel Hill, NC: Univ. of NC Press, 1950), pp. 44-46; Chappell, "Cultural Change in Shenandoah Valley," p. 25; and Chappell, "Acculturation in the Shenandoah Valley," pp. 63-66.
- ¹⁹⁴*Arbeitskreis für Deutsche Hausforschung: Trier*, pp. 124-27.
- ¹⁹⁵Heinrich Gotzger and Helmut Prechter, *Das Bauernhaus in Bayern* (Munich: Georg D. Callwey, 1960), pp. 60-1; Schepers, pp. 404-5; and Torsten Gebhard, *Alte Bauernhäuser von den Halligen bis zu den Alpen* (Munich: Georg D. W. Callwey, 1977), p. 174.
- ¹⁹⁶Brumbaugh, "Colonial Architecture," pp. 37-38; Milner, p. 299; and Erdmannsdorffer, 17: 98-99.
- ¹⁹⁷Brumbaugh, "Colonial Architecture," p. 54; Waterman, pp. 152-56; Long, *Pennsylvania German Family Farm*, p. 91; and Foley, pp. 63, 65.
- ¹⁹⁸Wertebaker, p. 315.
- ¹⁹⁹Chappell, "Acculturation in Shenandoah Valley," p. 60.
- ²⁰⁰Esther S. Fraser, "Pennsylvania German Dower Chests," *Antiques*, 11, No. 2 (Feb. 1927): 119-123; No. 4 (Apr. 1927): 280-83; No. 6 (June 1927): 474-76; Kocher, "Early Architecture of Lancaster County," pp. 95-97; Raymond, plates 51, 157; and Monroe H. Fabian, "The Pennsylvania-German Decorated Chest," *Pennsylvania German Society*, 12 (1978).
- ²⁰¹Kuhns, pp. 96-97; *Arbeitskreis für Hausforschung: Pfalz*, p. 206; Margarete Baur-Heinhold, *Deutsche Bauernstuben* (Königstein im Taunus: Hans Koster, 1975), pp. 21, 105; Hermann Schilli, *Der Vogtsbauernhof* (Lahr, W. Ger.: Moritz Schauenburg, 1975), p. 20; Schepers, pp. 57-58, 88-89, 150; Gebhard, p. 119; and Wolfram von Erffa, "Das Bürgerhaus im Westlichen Oberfranken," in *Das Deutsche Bürgerhaus* by Adolf Bernt and Gunther Binding (Tübingen: Ernst Wasmuth, 1977), 27: 134-35.
- ²⁰²Photo of Johannes Mack log house with tile roof, *Pennsylvania German Society Proceedings*, 10, Part 8 (1900): 130; Dornbusch, p. xxi; and Hans-Gunther Griep, "Das Bürgerhaus der Oberharzer Bergstädte," in *Das Deutsche Bürgerhaus* by Adolf Bernt and Gunther Binding (Tübingen: Ernst Wasmuth, 1975), 19: T1-T24.
- ²⁰³Brumbaugh, "Colonial Architecture," p. 36; and Wertebaker, p. 301.

- ²⁰⁴Wertenbaker, pp. 310-311; and Gilbert, p. 62.
- ²⁰⁵Faust, pp. 140-41; Brumbaugh, "Colonial Architecture," pp. 28-29; and Fletcher, 1:386-88.
- ²⁰⁶Gotzger and Prechter, p. 237; Griep, 19: T78; Schilli, p. 75; and Pfaud, 24: T78-T80, T99.
- ²⁰⁷Murtagh, p. 9.
- ²⁰⁸Morrison, p. 505.
- ²⁰⁹Rambling Around, fig. 16.
- ²¹⁰Eleanor Raymond, *Early Domestic Architecture of Pennsylvania* (1931; rpt. Princeton, NJ: Pyne Press, 1973), plate 53.
- ²¹¹Kindig, p. 20.
- ²¹²Kindig, pp. 4, 15-16, 18-19; Morrison, p. 543; Henry Glassie, "Central Chimney Continental Log House," *Pennsylvania Folklife*, 18, No. 2 (Winter 1968-69): 32-39; Lawton, pp. 13-19; and Henry C. Mercer, *The Origin of Log Houses in United States* (Doylestown, PA: Bucks County Historical Soc., 1976), fig. 19.
- ²¹³David G. DeLong, *Historic American Buildings: New York* (New York: Gerland Pub., 1979), 2: 213, 222.
- ²¹⁴Brumbaugh, "Colonial Architecture," pp. 30-31.
- ²¹⁵Wertenbaker, p. 309.
- ²¹⁶Robert C. Bucher, "The Swiss Bank House in Pennsylvania," 18, No. 2 (Winter 1968-69): 2-11; and Bryan J. Stevens, "The Swiss Bank House Revisited: The Messerschmidt-Dietz Cabin," *Pennsylvania Folklife*, 30, No. 2 (Winter 1980-81): 78-86.
- ²¹⁷Kennedy, p. 216.
- ²¹⁸Photo of Christopher Lei house, Myerstown, PA, *Pennsylvania German Society Proceedings*, 10, Part 6 (1900): 82; Viola K. Mohn, *Myerstown Bicentennial, 1768-1968* (Myerstown, PA: Church Center Press, 1968), pp. 48-51; Bucher, "Swiss Bank House," p. 6; and *Rambling Around*, figs. 19, 21.
- ²¹⁹Brumbaugh, "Colonial Architecture," p. 37.
- ²²⁰Raymond, plates 22-25; Brumbaugh, "Colonial Architecture," pp. 31-33, 53; Long, *Pennsylvania German Family Farm*, 6:82; *Arbeitskreis für Hausforschung: Pfalz*, p. 91; and Foley, p. 64.
- ²²¹Kennedy, p. 217; and Chappell, "Acculturation in Shenandoah Valley," pp. 63-87.
- ²²²Church, p. 74; and Chappell, "Acculturation in Shenandoah Valley," p. 58.
- ²²³Lewis F. Allen, *Rural Architecture* (New York: C.M. Saxton, 1854), p. 290; Long, *Farmsteads*, pp. 5-8; Long, *Pennsylvania German Family Farm*, 6:321-25; Shoemaker, p. 5; and Richard Rawson, *Old Barn Plans* (New York: Mayflower Books, 1979), p. 54-75.
- ²²⁴Rush, pp. 54-55; Ellis and Evans, p. 348; Faust, pp. 137-38; Learned, p. 347; "Pennsylvania Barns," p. 48; and Wertenbaker, p. 324.
- ²²⁵Glassie, "Eighteenth Century Cultural Process," p. 51.
- ²²⁶Dornbusch, pp. xxii-xxiii.
- ²²⁷Joseph William Glass, "The Pennsylvania Cultural Region: A Geographical Interpretation of Barns and Farmhouses" (Ph. D. diss., Penn State, 1971), p. 146.
- ²²⁸S.W. Pennypacker "The Settlement of Germantown, Pennsylvania," *Pennsylvania German Society Proceedings*, 9 (1899): 138; and Kuhns, pp. 84-85.
- ²²⁹Don Yoder, "Through the Traveler's Eye," in *The Pennsylvania Barn* by Alfred L. Shoemaker, ed. (Lancaster, PA: Pa. Dutch Folklore Center, 1955), p. 12.
- ²³⁰Alfred L. Shoemaker, "Barracks," *Pennsylvania Folklife*, 9, No. 2 (Spg. 1958): 3.
- ²³¹Dornbusch, p. xix.
- ²³²Fletcher, 1:81.
- ²³³Shoemaker, "Barracks," pp. 3, 6.
- ²³⁴Kauffman, "Log Barn," p. 29; and Shoemaker, *The Pennsylvania Barn*, pp. 10, 35, 37-38, 91-96.
- ²³⁵Church, pp. 78-79.
- ²³⁶Wertenbaker, p. 310; and Fletcher, 1:83.
- ²³⁷Whyte, p. 59.
- ²³⁸O'Danachair, p. 83.
- ²³⁹Dornbusch, p. xvii; Lavalleye, plates 73, 100; and M. Seidel and Roger H. Marijnissen, *Bruegel* (Stuttgart: Belser, 1971), pp. 90, 298.
- ²⁴⁰Fletcher, 1:81.
- ²⁴¹Robert C. Bucher, "Grain in the Attic," *Pennsylvania Folklife*, 13, No. 2 (Winter 1962-63): 7-15; Glass, p. 53; and De Long, 2: 206.
- ²⁴²Yoder, "Through the Traveler's Eye," pp. 12-13.
- ²⁴³Robert W. Bastian, "Southeast Pennsylvania and Central Wisconsin Barns," *The Professional Geographer*, 37, No. 2 (May 1975): 201.
- ²⁴⁴Dornbusch, pp. xvi-xvii.
- ²⁴⁵Dornbusch, p. x.
- ²⁴⁶Ronald W. Brunskill, *Vernacular Architecture of the Lake Counties* (London: Faber & Faber, 1974), p. 85; and Ronald W. Brunskill, "Pennsylvania Bank Barn in Europe and America," *Journal of Society of Architectural Historians*, 35, No. 4 (Dec. 1976): 294.
- ²⁴⁷Ronald W. Brunskill, *Illustrated Handbook of Vernacular Architecture* (London: Faber & Faber, 1971), pp. 138-39.
- ²⁴⁸Brunskill, *Lake Counties*, pp. 82-86; and Angela Ottino, *The Complete Paintings of Durer* (New York: Harry N. Abrams, 1968), plate 47.
- ²⁴⁹Henry Glassie, *Pattern in the Material Folk Cultural of Eastern United States* (Philadelphia: Univ. of Pa. Press, 1968), p. 62; Henry Glassie, "The Double Crib Barn in South Central Pennsylvania," *Pioneer America*, 2, No. 2 (July 1970): 25; and Glassie, "Eighteenth Century Cultural Process," p. 53.
- ²⁵⁰Fletcher, 1:83.
- ²⁵¹Bucher, "Swiss Bank House," p. 4.
- ²⁵²Learned, pp. 347-48.
- ²⁵³Wertenbaker, pp. 323-24.
- ²⁵⁴Dornbusch, pp. xvi-xviii.
- ²⁵⁵Paper given by Robert F. Ensminger at the annual conference of the Pioneer America Society in Aurora, OH 1 Oct. 1977; and Robert F. Ensminger, "A Search for the Origin of the Pennsylvania Barn," *Pennsylvania Folklife*, 30, No. 2 (Winter 1980-81): 50-71.
- ²⁵⁶Paper given by Terry G. Jordan at the annual conference of the Pioneer America Society in Shakertown, KY, 4 Nov. 1978; and Terry G. Jordan, "Alpine, Alemannic, and American Log Architecture," *Annals of Association of American Geographers*, 70, No. 2 (June 1980): pp. 154-80.
- Interestingly, Robert F. Ensminger had made a field trip to Europe in the Fall of 1975 to study barn prototypes, while this author began extensive American field trips in May 1976 with further field work (2,000 miles) in the Spring of 1977 in England, Scotland, and Wales while serving as Visiting Professor of Architecture at Edinburgh College of Art. Then in the Spring of 1978, approximately 5,500 miles were covered in Holland, Germany, Switzerland, and small portions of Austria and the Alsace of France and approximately 1,900 miles throughout Ireland, including Ulster. These trips resulted in about 2,500 color transparencies (slides) along with several hundred black and white negatives. Coincidentally, during the summer of 1978, both Ensminger and Terry G. Jordan made similar trips on the continent, and as a member of the Board of Directors of the Pioneer America Society, I had heard their papers at its annual meetings.
- ²⁵⁷Glassie, "Double Crib Barn," p. 25.
- ²⁵⁸James Walton, "Upland Houses: The Influence of Mountain Terrain on British Folk Housing," *Antiquity*, 30, No. 119 (Sept. 1956): 142.
- ²⁵⁹Dornbusch, p. xii.
- ²⁶⁰Learned, p. 348; and Glass, p. 46.
- ²⁶¹Fletcher, 1:169; and Shoemaker, p. 5.
- ²⁶²Fletcher, 1:169; and Shoemaker, p. 8.
- ²⁶³Gilbert, p. 48.
- ²⁶⁴Dornbusch, p. xviii; Glass, p. 38; and Bastian, p. 200.
- ²⁶⁵Susanne S. Ridlen, "Bank Barns in Cass County, Indiana," *Pioneer America*, 4, No. 2 (July 1972): 25-43.
- ²⁶⁶Kniffen, p. 563.
- ²⁶⁷Ellis and Evans, p. 348; and Kuhns, p. 94.
- ²⁶⁸Rush, pp. 40-121; Ellis and Evans, p. 348; Kuhns, p. 95; Faust, pp. 137-38; Learned, p. 347; Wertenbaker, pp. 324-25; Dornbusch, p. xviii; and Glass, pp. 63, 87.
- ²⁶⁹J. William Stair, "Brick-end Decorations," in *The Pennsylvania Barn* by Alfred L. Shoemaker, ed. (Lancaster, PA: Pa. Dutch Folklore Center, 1955), pp. 71-72; Glassie, *Pattern in Material Folk Culture*, p. 60; and Long, *Pennsylvania German Family Farm*, pp. 330-332.
- ²⁷⁰Wertenbaker, plates 19-20; Glassie, "Eighteenth Century Cultural Process," p. 45; and Richard Pillsbury, "The Construction Materials of the Rural Folk Housing of the Pennsylvania Culture Region," *Pioneer America*, 8, No. 2 (July 1976): 104-6.
- ²⁷¹Rupp, *History of York County*, p. 714.
- ²⁷²Brumbaugh, "Colonial Architecture," pp. 42-43; Wertenbaker, pp. 326-29; Dornbusch, p. xxi; Fletcher, 1:83; Yoder, "Through the

- Traveler's Eye," p. 18; Shoemaker, pp. 52-59; Frances Lichten, "A Masterpiece of Pennsylvania German Furniture," *Antiques*, 77, No. 2 (Feb. 1960): 176-78; Gilbert, pp. 47-49, 51; *Freundeskreis Freilichtmuseum Sudbayer*, 3 (Dec. 1975): centerfold; Elmer L. Smith, *Hex Signs and Other Barn Decorations* (1965; rpt. Lebanon, PA: Applied Arts Pub., 1976); and Eric Sloane, *Recollections in Black and White* (New York: Ballantine Books, 1974), p. 32.
- ²¹³Frank Ried Diffenderfer, "The Redemptioners," *Pennsylvania German Society Proceedings*, 10, Part 7 (1900): 120; Raymond, plates 88, 93; Long, *Farmsteads*, pp. 12-33; and Long, *Pennsylvania German Family Farm*, 6:106-494.
- ²¹⁴Bealor and Ellis, *The Log Cabin*, pp. 94, 121.
- ²¹⁵Oskar Moser, *Das Bauernhaus und Seine Landschaftliche und Historische Entwicklung in Karnten* (Klagenfurt: Karntner Druckerei, 1974), p. 139.
- ²¹⁶Moser, pp. 152-153.
- ²¹⁷Fisher, p. 84.
- ²¹⁸Photo of Wyck, Germantown, PA, *Pennsylvania German Society Proceedings*, 10, Part 8 (1900): 76; and Fletcher, 1:379.
- ²¹⁹Fisher, p. 80; Kocher, "Early Architecture of Pennsylvania," *Architectural Record*, 49, No. 1 (Jan. 1921): 39-43; Raymond, Plates 1-9; Eugene E. Doll, *The Ephrata Cloister* (Ephrata, PA: Ephrata Cloister Associates, 1958); and John L. Kraft, "Ephrata Cloister, an Eighteenth Century Religious Commune," *Antiques*, 118, No. 4 (Oct. 1980), pp. 724-37.
- ²²⁰Ware, 1:168.
- ²²¹Kocher, "Early Architecture of Pennsylvania," *Architectural Record*, 49, No. 1 (Jan. 1921): 33; Gowans, p. 89; and Wilhelm Schwemmer, *Nurnberg* (Nurnberg: Verkehrsverein, 1975), fig. 8.
- ²²²Kocher, "Early Architecture in Pennsylvania," 49, No. 1 (Jan. 1921): 40.
- ²²³Banister Fletcher, *A History of Architecture on the Comparative Method* (1896; rpt. New York: Charles Scribner's Sons, 1954), p. 315; and Wertenbaker, p. 315.
- ²²⁴Gilbert, p. 6.
- ²²⁵Brumbaugh, "Colonial Architecture," pp. 50-51; and G. Edwin Brumbaugh, "Medieval Construction at Ephrata," *Antiques*, 46, No. 1 (July 1944): 18-20.
- ²²⁶Felix Reichmann and Eugene E. Doll, "Ephrata as seen by Contemporaries," *Pennsylvania German Folklore Society*, 17 (1952): 91.
- ²²⁷Wertenbaker, p. 318.
- ²²⁸Brumbaugh, "Colonial Architecture," p. 22.
- ²²⁹Wertenbaker, p. 318; and Griffin, pp. 1, 42, 51.
- ²³⁰Brumbaugh, "Colonial Architecture," p. 21.
- ²³¹Ware, 1:166; Brumbaugh, "Colonial Architecture," pp. 21-22; and William J. Murtagh, *Moravian Architecture and Town Planning* (Chapel Hill, NC: Univ. of North Carolina Press, 1967), p. 25.
- ²³²Allen, p. 126.
- ²³³Helen Wilkinson Reynolds, *Dutch Houses in the Hudson Valley before 1776* (1929; rpt. New York: Dover, 1965), plates 18, 20, 26-30, 37-39, 46, 49-50, 52, 63-64, 104, 110, 113, 115, 122, 125, 130-31, 137, 147-49; Rosalie Fellows Bailey, *Pre-Revolutionary Dutch Houses* (1936; rpt. New York: Dover, 1968), plates 1, 31, 35, 50, 52, 54-55, 57-61, 63, 65, 67, 71-72, 74-75, 77-79, 81, 83, 86-87, 89, 91, 93-95, 98, 100-102, 104, 106, 108-9, 113-14, 134, 141, 144, 157; Rudolf Stein, "Das Burgerhaus in Bremen," in *Das Deutsche Burgerhaus* by Adolf Bernt and Gunther Binding (Tubingen: Ernst Wasmuth, 1970), 13-23; Erdmannsdorffer, 17:T132-T133; Pfau, 24:79-80; von Erffa, 27:35, 43, 79-80, 84, T13; and Albert F. Jordan, "Some Early Moravian Builders in America," *Pennsylvania Folklife*, 24, No. 1 (Autumn 1974): 2-17.
- ²³⁴Wertenbaker, p. 314; and Stein, 13:90-91, 108, 113.
- ²³⁵Morrison, p. 506.
- ²³⁶Brumbaugh, "Colonial Architecture," p. 53.
- ²³⁷Gowans, p. 90.
- ²³⁸Kocher, "Early Architecture of Pennsylvania," *Architectural Record*, 49, No. 1 (Jan. 1921):38; Raymond, plate 14; and Wertenbaker, p. 311.
- ²³⁹Frank Cousins and Phil M. Riley, *The Colonial Architecture of Philadelphia* (Boston: Little, Brown & Co., 1920), p. 221.
- ²⁴⁰Wertenbaker, pp. 319-20.
- ²⁴¹Photos of Dunkard Church, Germantown, PA: *Pennsylvania German Society Proceedings*, 10, Part 8 (1900): 109; and Harold Wickliffe Rose, *The Colonial Houses of Worship in America* (New York: Hastings House, 1963), p. 351.
- ²⁴²Ware, 1:168; and Karl H. Snyder, "Moravian Architecture of Bethlehem, Pennsylvania," *The Monograph Series*, 13, No. 4 (1927): 75-76.
- ²⁴³Rose, p. 379.
- ²⁴⁴Raymond, plates 10-11; and William O. Fegley, *Augusta Lutheran Church, Trappe, Pennsylvania: The Shrine of Lutheranism* (Trappe, PA: W. O. Fegley, 1939); and Charles H. Glatfelter, "Pastors and People: German Lutheran and Reformed Churches in the Pennsylvania Field, 1717-1793," *Pennsylvania German Society*, 13 (1980): 379-81.
- ²⁴⁵Wertenbaker, p. 319; Ludecke, plate 46; Wolfgang Gericke, Heinrich-Volker Schleiff, and Winfried Wendland, *Brandenburgische Dorfkirchen* (Berlin: Evangelische Verlagsanstalt, 1974), pp. 45, 130, 137, 142, 156-57; *Fachwerkkirchen in Hessen* (Königstein im Taunus, W. Ger.: K.R. Langewiesche, 1978), pp. 23, 26-27, 31, 55, 64, 66, 73-74, 77; and Hermann Schilli, *Vogtsbauernhof Guide* (Offenburg: Ortenaukreis, n.d.), p. 28.
- ²⁴⁶Ware, 1:169; Brumbaugh, "Colonial Architecture," pp. 54, 58-59; Thiede, p. 88; Rose, p. 365; and Yvonne Milspaw, "Plain Walls and Little Angels: Pioneer Churches in Central Pennsylvania," *Pioneer America*, 12, No. 2 (May 1980): 76-96.
- ²⁴⁷Reynolds, p. 297-98, 309.
- ²⁴⁸Rose, p. 182; and Glatfelter, pp. 188-90, 193-94.
- ²⁴⁹Reynolds, p. 309; Wertenbaker, pp. 319-20; Rose, pp. 55, 305; John G. Waite, "Measured Drawing of Dutch Reformed Church, N.Y.," *Historic Preservation*, 25, No. 4 (Oct.-Dec. 1973): 2; and Glatfelter, p. 284.
- ²⁵⁰Rose, p. 313.
- ²⁵¹Douglas Harnsberger, "Hebron Lutheran Church," in *Studies in Vernacular Architecture* by K. Edward Lay, Comp. (Charlottesville, VA: School of Architecture, University of Virginia 1979), 52:20; and Glatfelter, pp. 496-97.
- ²⁵²Rose, p. 398-99; and Glatfelter, pp. 293-94.
- ²⁵³Wertenbaker, pp. 319-20; Rose, pp. 181-82, 313, 398-99, 516-17; and Glatfelter, pp. 316-18.
- ²⁵⁴Rose, p. 364.
- ²⁵⁵Rose, p. 199.
- ²⁵⁶Rose, p. 136.
- ²⁵⁷Rose, p. 389-90.
- ²⁵⁸Rose, p. 521-22.
- ²⁵⁹Ware, 1:171; and Rose, pp. 136, 199, 364, 374-75, 389-90, 396-97, 521-24.
- ²⁶⁰Brumbaugh, "Colonial Architecture," p. 7; and Hollstein, 21:118.
- ²⁶¹*Early Architecture in Upper Allen township*, p. 15.
- ²⁶²Kocher, "Early Architecture of Lancaster County," p. 98.
- ²⁶³Helen Park, "A List of Architectural Books Available in America before the Revolution," *Journal of Society of Architectural Historians*, 20, No. 3 (Oct. 1961): 115-30; and Kocher, "Early Architecture of Lancaster County," p. 19.
- ²⁶⁴Wertenbaker, p. 313.
- ²⁶⁵Gowans, pp. 91-92.
- ²⁶⁶Chappell, "Acculturation in the Shenandoah Valley," p. 55.
- ²⁶⁷Glassie, "Eighteenth Century Cultural Process," pp. 37, 42-44.
- ²⁶⁸Richman, p. 12; and *Early Architecture in Upper Allen Township*, p. 31.
- ²⁶⁹Brumbaugh, "Colonial Architecture," pp. 7-8; and Mohn, p. 47.
- ²⁷⁰*Early Architecture in Upper Allen Township*, p. 26.
- ²⁷¹Embury, p. 479; Glassie, "Eighteenth Century Cultural Process," p. 44; and Morrison, p. 518.
- ²⁷²Kocher, "Early Architecture of Pennsylvania," *Architectural Record*, 48, No. 6 (Dec. 1920): 516.
- ²⁷³Alfred Lawrence Kocher, "Early Architecture of Pennsylvania" *Architectural Record*, 48, No. 6 (Dec. 1920): 516; and Alfred Lawrence Kocher, "The Early Architecture of Lancaster County, Pennsylvania," *Lancaster County Historical Society Papers*, 24, (1920): 91.
- ²⁷⁴Henry Glassie, "Eighteenth Century Cultural Process in Delaware Valley Folk Housing," *Winterthur Portfolio*, 7 (1972): 56.
- ²⁷⁵*Early Architecture in Upper Allen Township* (Mechanicsburg, PA: Center Square Press, 1976), pp. 2, 9-10.
- ²⁷⁶Joseph William Glass, "The Pennsylvania Cultural Region: A Geographical Interpretation of Barns and Farmhouses" (Ph.D. diss., Penn State, 1971), pp. 1-2.
- ²⁷⁷George H. Allen, "Some European Origins of Early Pennsylvania Architecture," *American Journal of Archaeology*, 40 (1936): 126.

Medicine, Music and “Money” Munyon

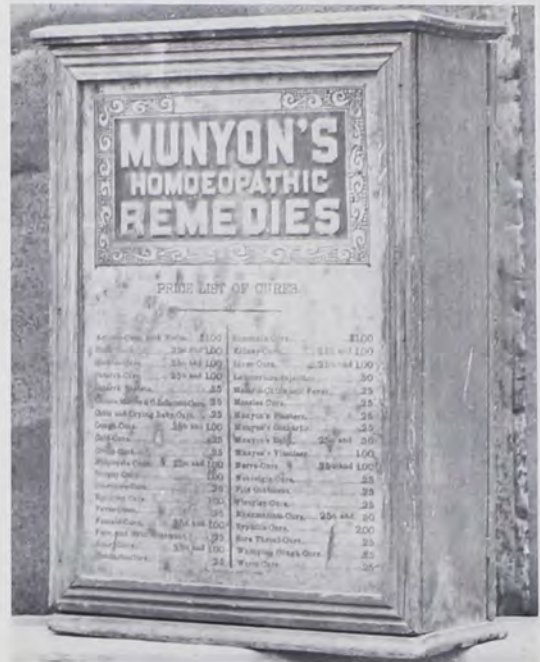
by
NED D. HEINDEL and NATALIE I. FOSTER



Munyon always sported a pompadour and affected an elegant attire. In summer or in the South he dressed in white.

The ailing American has always been on the look out for the sure cure. In the late 19th and early 20th centuries fulfillment of that desire was the object of the bustling business of patent medicine manufacture. The increasing abuses of the public trust and gullibility by some members of that industry culminated in the passage of the Pure Food and Drug Act of 1906. One of the most colorful and well-known of the nostrum peddlars in the period just before and after these first federal regulatory statutes, and an early victim of their legal effects, was Pennsylvania's own James Munroe Munyon. Munyon, often called “Money Munyon” by the press, was one of the most successful proprietary medicine manufacturers whose extensive advertising campaigns for himself and his products made his name a household word in turn-of-the-century America.

The Munyon Homeopathic Home Remedy Co. was located between the 1800s and 1920s at various Philadelphia addresses: on Arch Street, Jefferson Street, Parkside Avenue, 54th Street, and others. Munyon claimed to employ a large corps of expert chemists and physicians making fundamental discoveries whose prac-



Munyon's medicines were sold in general stores in a distinctive wooden case with a metallic cover. They were popular in the gold rush camps of the American West. This case is on display in the District Museum, Cripple Creek, Colorado.

(Courtesy Rupe Welch, Cripple Creek, Colorado)

tical applications were of his own devising. Later analyses of his products by government chemists acting under the Pure Food and Drug Act gave reason to doubt the veracity of his “research” claims. In fact, it was never the true therapeutic quality of his products but rather the extensive public promotion which sold the so-called “cures.”

Most Munyon ads pictured the good “doctor” himself, sporting a pompadour, invariably dressed in solemn black, right arm upraised and index finger pointed to the sky. Munyon always printed a short promotional phrase with each picture, and many of these quotations became the by-word of contemporary popular culture:

It will cure!

Doctor yourself.

There's a Munyon pill for every ill.

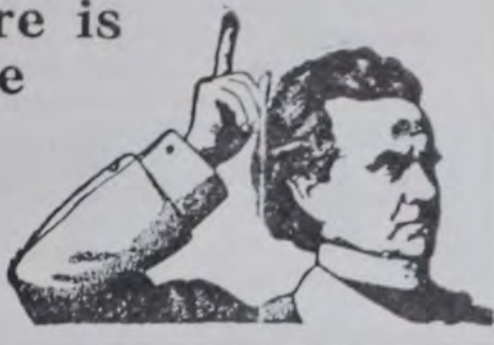
I would rather preserve the health of a nation than be its ruler.

No punishment is too severe for him who deceives the sick.

If the sign of the cross were to be destroyed the next best sign would be the index finger pointed heavenward.

By this sign [the upraised finger] we conquer.

There is Hope



The most famous advertisement of Munyon showed him with index finger raised, high collar, pompadour, and stern expression stating his traditional "There is hope" phrase.

These and many others became the passwords of believers and scoffers alike. People would pass on the street and greet each other jokingly with the index finger pointed upward uttering the most famous Munyon phrase, "There Is Hope."

In 1907, Vincent Bryan and E. Ray Goetz, two top tin-pan alley song writers, put together a tuneful ditty entitled "Dr. Munyon." It became an instant hit. Sheet music showing his stern, black-clad figure with finger elevated was widely sold, and the lyrics which lampooned his mottoes, medicines, and mannerisms were on the lips of many Americans. In 1915 Franz Lehár's hit operetta, "Alone At Last," included a song about bacteria in food entitled "Some Little Bug is Going to Find You Some Day," which further spoofed Dr. Munyon's anti-indigestion remedies with:

Take a slice of nice fried onion
And you're fit for Dr. Munyon,
Apple dumplings kill you quicker than a train
Chew a cheesy midnight "rabbit"
And a grave you'll soon inhabit-
Ah, to eat at all is such a foolish game....

CONSTIPATION



Many of Munyon's medicines were claimed to be of "natural" origin based on plant-derived extracts.

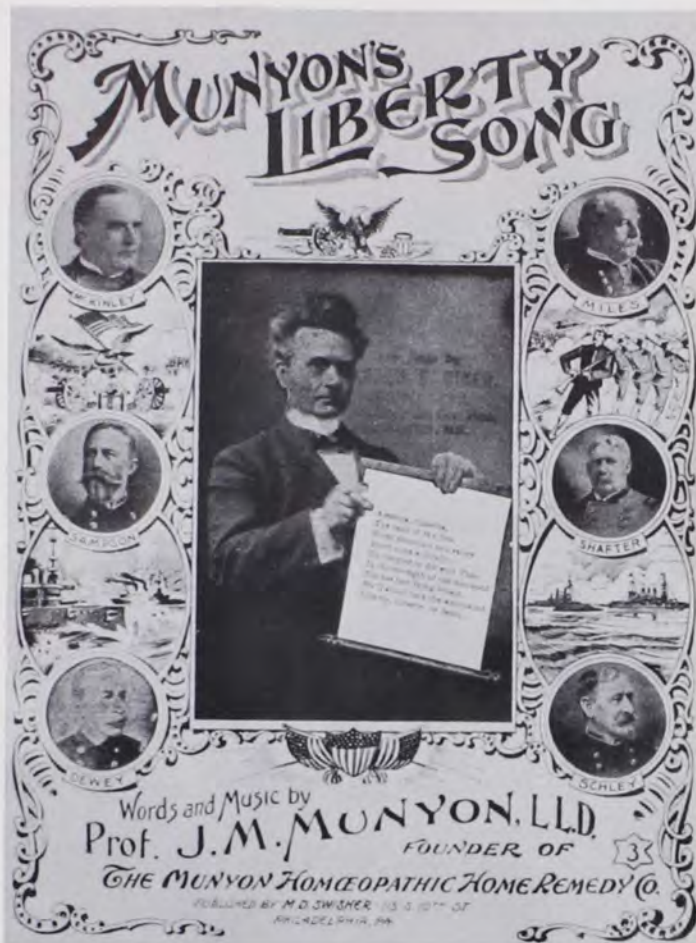
The song was so popular it was sung for many years and was recorded in 1947, almost 30 years after Munyon's death, by Phil Harris on an RCA Victor ten-inch disc.



Munyon associated with artists, actors, authors, and members of the theatrical crafts. One of his songs, apparently an embodiment of his personal philosophy, was dedicated to S. F. Nixon, a local theater manager. The picture is believed to be that of the honoree.

(Courtesy Music Department, Free Library of Philadelphia)

Part of the reason that songs about Munyon were so popular was probably that he was himself known to be a struggling song-writer. Beginning in the 1880s and continuing till at least 1900, Munyon turned out pieces suggesting that possession of wealth can buy transitory claim to social status ("Money is Power"--1883), recommending tolerance for the experimental use of cuss-words by youth ("Don't Whip Little Ben"--1883), promoting patriotic sentiments and martial enthusiasm ("Munyon's Grand March"--1898), and many other spirited works. None of his numbers seem to have elicited popular fervor. In fact, while many of the Munyon songs were published by commercial firms such as White-Smith-Music Publishing Co. and the J.E. Ditson Co., "The Nation's Song" and "Munyon's Liberty Song", which appeared about the time of the Spanish-



The songs written by Munyon often had a martial flavor. One published during the Spanish American War featured military heroes on the cover sheet. Munyon himself was pictured holding the main stanza of the song.

(Courtesy Music Department, Free Library of Philadelphia)

American War, were published, paid for, and distributed by Munyon himself. The cover of "Munyon's Liberty Song" features a central portrait of Munyon surrounded by smaller pictures of political and military figures, e.g. McKinley, Dewey, Schley. Both of these publications contain numerous testimonials for Munyon cures with information on prices and availability of products.

Whether from his medical promotions, his public antics--well-reported by the press -- or the songs about him and by him, Dr. Munyon was well-known to the American public. He seemed to thrive on publicity and the effect on the sale of his products was apparently salutatory.

Patent medicine manufacturing, however, was neither Munyon's first nor his only business. He was a man of many talents, widely traveled, broadly experienced but certainly never the possessor of an earned doctorate. Born on August 3, 1848, in Thompson, Connecticut, he had a natural bent for things musical, began to sing in public at age six, and studied music with a passion which characterized many of his later efforts.

He went to work at age seven as a bobbin boy in the fabric mills in and around Worcester, Massachusetts, but by 16 he was a successful theatrical and booking agent. With his collected savings he took off for Italy to study music. On the ship to Europe, however, he met some congenial young men in whose company he toured the capitals of the continent, returning home at 21 virtually penniless.

Munyon's Inhaler

THE GREATEST DISCOVERY OF THE AGE.

Cures Colds, Coughs, Catarrh, Asthma, Bronchitis and all Throat and Lung Diseases and Prevents Consumption

BY INHALATION.



Clouds of medicated vapor are inhaled through the mouth and emitted from the nostrils, cleansing and vaporizing all the diseased parts. A sense of relief is felt at once. Doctors endorse it. Everybody praises it. It is a common sense cure for Catarrh, Colds, Coughs, Asthma, Bronchitis and all throat and lung troubles.

It permeates every air passage. And at once destroys the disease germs. It cures through medicated and vitalized air. It is an invigorating tonic to the vital forces. A remedy which soothes, heals and invigorates. It positively cures Catarrh and diseases of the nasal organs. It positively cures diseases of the throat and lungs. It enables you to cure yourself at home. It renders unnecessary any cutting, burning or cauterizing. It destroys at once the bacilli of bronchitis and consumption. Its use is followed immediately by a sense of relief. It enables you to save big doctor's fees.

FOR SALE BY ALL DRUGGISTS.
PRICE, WITH EVERYTHING COMPLETE, \$1.00

The Munyon company developed and promoted many medical devices in addition to the pills, potions and ointments which constituted their major business.

He wasn't penniless long and soon earned the sobriquet, "Money" Munyon, which stuck with him for the rest of his life. On a walk down Wabash Street in Chicago, he watched a Chinese laundry-worker using a somewhat different starch preparation from that commonly available in the stores. He bought a large quantity of the material, promoted it heavily as "Imported Chinese Starch," and was well on the way to his first million. He briefly tried his hand at teaching school, practicing law, social work, and editing.

In the early 1880s, using Philadelphia as his base of operations, he first edited and later assumed the complete publication responsibility for several short-lived pro-labor magazines including *Christian Voices* and *The Labor World*. When, in 1884, Munyon began the publication of *Munyon's Illustrated World*, he doubtless hoped to produce something with more appeal than a local labor magazine. It was a slick, handsome quarto



Munyon edited and promoted a number of short-lived magazines. They were characterized by numerous etchings and woodcut illustrations, emotional articles stirring the reader to patriotism, and advertisements for Munyon medicines. A special issue of Munyon's Illustrated World in August 1885 featured articles about the recently deceased Ulysses S. Grant.

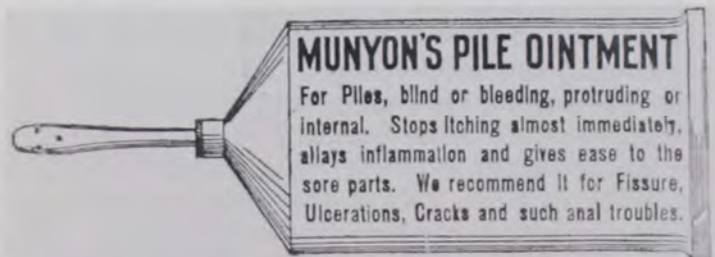
(Courtesy Nimitz Library, U.S. Naval Academy, Annapolis, MD)

which also served as an advertising vehicle for his pills and potions. Some sources have claimed that the redeemable inserts included with ads in Munyon's magazines were the first trading stamps (*Philadelphia Inquirer*, March 11, 1918, page 2).

About 1887 he changed the title to *Munyon's Magazine*, and backed by an extensive advertising campaign, he promoted it as a family-oriented monthly. It reached a circulation of over 100,000 with a \$1.50 annual subscription cost. For many years Munyon maintained editorial offices at 1342 Arch Street in Philadelphia. Under his editorship, the Munyon Homeopathic Home Remedy Co. produced a popular annual almanac which combined times of tides, sunsets, weather forecasts, crop information, and miscellaneous historical facts with an equal blend of testimonials and promotions for his nostrums. One popular Munyon feature was the so-called "Free Advice Service" or "Guide to Health Free."

Munyon would mail an "examination blank" to any sufferer requesting one. If the prospective patient described his/her symptomatology and mailed the completed form to the company, he would receive tailor-made medical advice without cost ("We sweep away all doctor charges, we put the best medical skill at your service absolutely free"). All replies were mailed in plain envelopes, and the company claimed that "Our Medical Mail Department is having great success at curing old obstinate cases." It is to be presumed that the free advice usually contained a suggestion that a particular Munyon remedy be employed.

Munyon faced and surmounted numerous obstacles on the road to fame and fortune. When, about 1885, he began the manufacture of proprietary medicines, he claimed to formulate products from roots and herbs he had encountered near his birthplace in Thompson, Connecticut. He intended to apply the name "specifics" to each of these remedies but was prevented when he learned that the already-existing Humphreys' Pharmacal had a prior claim on the word. Munyon settled for "cure," and that change served him well. Munyon's Kidney Cure, Munyon's Asthma Cure, Munyon's Special Liquid Blood Cure, and Munyon's Catarrh Cure were just a few of the many materials he promoted to the public. Beginning shortly after the passage of the Pure Food and Drug Act (1906) and culminating with his arrest, trial, and conviction in 1910 for selling falsely labeled medicines, Munyon was a target of the federal chemists.



Munyon was quick to adopt new developments in his business. The flexible, "roll-up" tupe applicator was one of the first in medical use and was sold for the dispensing of pile and constipation ointment.



Munyon's medicines were sold in small glass vials within rectangular cartons. His picture appeared on the end flaps.

(Courtesy Ben Bavly, Historical Pharmacy Commission, New Orleans, LA)

The government found Munyon's Kidney Cure ("Cures Bright's disease, gravel, all urinary problems, and pain in the back or groins from kidney diseases") to consist of ordinary white sugar. The Munyon Asthma Cure ("Permanently Cures Asthma") was analyzed and found to be a mixture of sugar and alcohol. The Munyon Special Liquid Blood Cure ("Eradicates Syphilis and Scrofula...cures enlarged tonsils or glands, ulcers, and all forms of sores and eruptions") was mostly potassium iodide and milk sugar. Munyon was charged with lying about his sugar pills and similar nostrums, pleaded guilty, paid a fine of \$600, and went about his business with only slight modifications in the phrasing of his ads.

Gone was the claim that he was "Doctor" Munyon; it was replaced by the title "Professor." Gone was the inclusion of "Cure" in the title of every drug product; it was replaced with "Remedy." Gone were the sweeping uses of "eradicates," "cures," and "removes"; they were replaced by "If administered freely, will never disappoint you," "Recommended for...," and "Specially prepared for...." The impact of the court experience had been negligible for Munyon merely modified the wording on his labels and the public hardly noticed the change. The upraised finger, the oft-repeated slogans, and the multi-hyped claims of by-gone years were still remembered. When faced with another set-back, the total destruction in 1913 by fire of his plant at 54th and Jefferson Streets, Munyon was undaunted. He rebuilt immediately with scarcely any loss of business.

Munyon was as colorful in private life as he was in public. In his ads he wore somber black, but at high-society watering holes in New York, Newport, Atlantic City, and Palm Beach he sported white flannel suits and white hats. Thrice married, he made millions and enjoyed both the use of his fortune and his socially con-

nected wives. His first wife was Cornelia Hudson, a Philadelphia lady whose social stature gave him access to circles unlikely to be opened to the former bobbin boy from Connecticut. Munyon's second wife, Dora Harvey Vromman, was a short story writer, and his third, Pauline Neff, was a popular actress. He married Miss Neff in 1908 when he was 60 and she was about one-third his age. It was not a happy union. Pauline, who was called "the most beautiful stage actress of her day," originated the sheath-style gown and introduced that fashion by long promenades on the Atlantic City boardwalk. Never one to shrink from expressing her own opinion, she and the good "doctor" became engaged in a public exchange witnessed by many and covered with glee by Philadelphia newspapers. While stopped in heated argument in their car at the intersection of Broad and Chestnut, she threw his hat and overcoat from the vehicle and slapped his face. They sued each other for divorce, and in 1913 the marriage was dissolved.

Munyon never again married, although he lived in common-law relationship with a fourth lady. While she did not profit in a divorce settlement, she survived the "doctor" and acquired a sizeable share of his accumulated wealth.

Death came to Money Munyon as he might have wished it on March 10, 1918. Wintering in Florida and dining in the plush surroundings of the Royal Poinciana Hotel in West Palm Beach, he suffered a sudden stroke and collapsed at the luncheon table. Alas, he had no time to lift his index finger heavenward and utter, "There is hope!"

There was little hope for the Munyon Homeopathic Home Remedy Co. either. The homeopathic movement in general was in decline. Munyon's namesake and heir, James Munroe Munyon, Jr., died two months after his father's passing. The firm continued for a short time under the supervision of Money Munyon's second son, Duke Munyon, but it ceased operations entirely in the mid-1920s. One of Pennsylvania's most colorful patent medicine firms had passed from existence, but its contributions to popular culture in the early 20th century live on in history, memory and song.

Bibliography: Informational sources on James M. Munyon can be found in:

- 1) Rear faces of sheet music by Munyon in Music Department of the Free Library of Philadelphia.
- 2) L.S. Levy, *Give Me Yesterday: American History in Song*, University of Oklahoma Press, Norman, OK, 1975, pp 379-382.
- 3) F.L. Mott, *A History of American Magazines: 1885-1905*, Harvard University Press, Cambridge, MASS., 1957, pp. 87-88.
- 4) Philadelphia Inquirer, Monday, March 11, 1918, p. 2 (obit.)
- 5) *Say Ah! Say Ah!*, Carroll Reece Museum, Johnson City, Tenn., 1968, p. 22.
- 6) A.J. Cramp, *Nostrums and Quackery and Pseudo-Medicine*, Vol. III, Am. Med. Assoc. Press, Chicago, 1936, pp. 559-560, 590, 603.

Gibbes Meies

Something New

If you are just an interested onlooker or an avid searcher for new books appearing on the scene that is the Pennsylvania Dutch Country, there are two new books which are likely to be of vital and lasting interest to you. Since we have been following the vagaries of fortune as both passed from inspiration through authors' sweat and tears, to the verge of the final product itself, we feel a kind of vital interest in the final product. We believe that both are tops in their field and commend them to the subscriber on that basis. Once again, we are not in the business of reviewing books, and these are not so intended. If you desire a fine book review, consult one of our fellow-journals which specialize in that form, or look at the Book sections of your favorite publisher or source.

First, we call your attention to an extensive collection of essays, a *Festschrift* for Fritz Braun, by Karl Scherer & Roland Paul, *Pfälzer - Palatines*, Kaiserslautern: Heimatstelle Pfalz, 1981. Composed of sections which match the four chief enthusiasms of Braun during his lifetime (1905-1976), the book is marvelously conceived and beautifully realized. The four sections on Migration History, Palatines at home and abroad, Folk Culture and Folklife in the Pfalz and Pennsylvania, and Dialect and Dialect Poetry present a multi-faceted view of chief concerns of Braun, the Heimatstelle and many students and lovers of matters Pennsylvania German for a half century. Among the Pfälzer contributors are numbered Scherer, Paul, Kuby, Poller, Bischoff and Kelz, while American scholars here included are Yoder, Weaver, Weiser, Waldenrath, Parsons, Braswell and Schelbert. How many of them are also names of contributors of articles to *Pennsylvania Folklife* in previous issues constitutes a matter of satisfaction to us. We

also hope to print items which a number of them will write in the near future.

For the convenience of the readers, a copy of *Pfälzer-Palatines* is available for consultation on request in Room 301 Myrin, our Folklife Archives Center, although we believe many will want to purchase copies for their own use.

Then, our second recommendation, a new learning aid which is the best in our local opinion, since the appearance of the Buffington & Barba *Grammar* in the early 1950's: Earl C. Haag, *A Pennsylvania German Reader and Grammar*, University Park, PA: The Pennsylvania State University Press, 1982. Given all the ongoing debate over form and substance, appearance and spelling, Haag has done a masterly job. Who on this good earth is going to say that he has pleased everyone? Not us, surely! But it has a great deal to commend it and we recommend that you take a long look at it. We plan, for instance, to use it for further oral practice, reciting many of the sample sentences and exercises he provides, particularly when not in an area where many native speakers now live.

Using a good balance of readings and grammar, Haag presents the points of grammar in as nearly non-obtrusive way as can be done. To be sure, his chapters are very long, but they are constructed to be broken into halves, with extensive vocabularies which will thrill the professors but drive students wild. The lifelong interest in the dialect which Haag possesses is obvious in every page of this fine work. Both he and the press deserve credit for their belief in the book's value. It is a gem. The finest tribute our public can offer is to use it extensively. Good work, Earl!!!—WTP



54th Annual

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