
THE OLD STONE BARN AT THE MICHAEL HELLER HOMESTEAD

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Part 1 of 2 (July 2007)

You are sure to re-call the old saying – “A stitch in time saves nine.” A steadfast application of this admonition would probably have saved the old barn at the Michael Heller homestead just west of Hellertown at the western edge of Saucon Creek at the south side of Friedensville Road in Northampton County. This is the fate of so many old barns in so many places all over North America and, as it is, the Heller barn was no exception. The roof was neglected as this is the part of the barn that is easily the most vulnerable area to rain and other agents of weather that love to wreck havoc on the outer most roof covering – be it wood shingles or slate or almost any other material. Let the roof go and – there is a problem. And if it is not paid attention to in time – it is good bye barn. In only a few years the underlying roof support structure also deteriorated in the Heller barn with a result that only the exterior stone walls were more or less standing. Until February of 1998 all four sides of the original stone barn stood erect. In the aftermath of a severe storm, a portion of the roof collapsed. Deeming it a danger, township officials decided to bring down all but about one-third of the barn, preserving its very unusual arch.

Some Recent History of the Heller Barn

Interest in the Heller barn as a historically important local cultural entity goes back several decades. It should first be said that the Heller barn was actually a complex of two barns – an early all stone bank barn and a considerably later frame bank barn. Charles Dornbusch took two photos of the stone barn section (pages 47 and 49) in the first half of the 1940s that actually appear in the book that he co-authored with John Heyl – *Pennsylvania German Barns* – that was published by The Pennsylvania Folklore Society as Volume Twenty-one in 1956. This book was the first genuine attempt at barn scholarship in all of North America. Eleven categories of barns were recognized by Heyl, who, by the way, is still incredibly not only alive at the very venerable age of 101 but remains very healthy. He lives in Booth Bay Harbor in Maine. The Heller barn was included in the book as Category Type E barn which is described as an all stone masonry two level building. It could appear as either a bank barn or a one level ground barn. The Heller stone barn is of course a true bank barn. The exterior shot is that of the front wall or façade with the intact pent roof extending the full length of the barn. Minus the pent roof, this was the basic appearance of the barn before about 1990. The interior shot includes a view of the basement with a prominent summer beam or that barn length timber that appeared from end wall to end wall that had three supporting posts of very large size. After the barn walls were pulled down in 1998, all these timbers have deteriorated to a great degree as they have been left in the open weather.

Then only a few months ago when Priscilla de Leon was looking at HABS (Historic American Building Survey) files on the internet perhaps miraculously she found a photo that included the companion frame bank barn section to the immediate south of the stone section. She was, as she said, just dazzled by this revelation. As fate turned out the frame section disappeared a number of years ago. The side-by-side nature of the two barns is quite unusual but the sheer size of the two barns and their juxtaposition to each other is very impressive as this over-all appearance and condition is very infrequently seen at other homesteads in the southeast area of the state. Unfortunately, as it is and will seemingly continue to be very little has been revealed about the specific nature of the big frame Heller barn. Stone barns even if much of the structure is destroyed can retain some information as to at least some of its original construction.

What Kind of Barn is the Heller Stone Barn?

Unless specifically noted any reference to the Heller barn signifies the stone section of the Heller homestead barn complex. The Heller stone barn section will be referred to either as – the Heller barn or merely as the barn from this point on. Thus far the Heller barn in any printed sources has not been properly named as far as its type is concerned. The barn may be called an English Lake District barn. Its basic construction mode is very similar to many certain stone bank barns found in the northwest Lake District in England. These barns that appear in a few of the southeast counties of Pennsylvania have English roots. The areas where the great majority of the barns are still to be found are seen in basically strictly English settled areas. However, certain German based settlements do have these English barns on them.

The following is a basic general description of English Lake District barns. This outline of the barn apparently first appeared in Robert F. Ensminger’s classic book – *The Pennsylvania Barn – Its Origins, Evolution and Distribution in North America*. This characterization applies to those barns of the generic type seen in both England and in southeast Pennsylvania and beyond where they may occur. The barns are always two level buildings and are banked

so that an earthen ramp led up to the rear wall main wagon doors. That is – they were built into a natural slope of ground or a pile of earthen material that was created so as to mimic a natural inclined area of earth. It was the ramped area that permitted loaded hay wagons to approach the back wall of the barn. The front wall of the barn is in distinct contrast to most of the stone two level bank barns in southeast Pennsylvania where the front walls are most often of frame. These barns of “fore-bay” type originally had German origins. English banked barns are most often entirely of stone on their façade or front wall – from basement level to the top of the second floor or loft. Recessed stable walls that offer protection that appear below the fore-bay as delineated by Ensminger do not appear in these barns. Rather the stable doors that permitted access to the basement stabling areas in the barn were protected by pent roofs or short projections of about four feet.

Visually the front walls of English barns are in stark contrast to the so-called German “fore-bay” barns. The only exception to this rule is seen in the stone arch “fore-bay” Standard barns. These stone arches may be likened and seen by a very close look at the front wall of the Heller barn closest to the stone house end. The Heller barn was expanded at the rear end wall where at the front wall an arch was inserted into the stone fabric so that wagons could enter the basement of the barn. Later on the area inside of the arch itself was filled with stone making it somewhat difficult to visualize the boundaries of the arch. Nevertheless, stone arch fore-bay barns most often have three or four arches. Only about 15 of these stone arch barns have been seen in southeast Pennsylvania and adjacent states – namely New Jersey and Delaware making the barn type extremely rare. Disregarding the pent roofs in English barns and the arches in the stone arch barns the two barn types actually appear quite similar. They should never be confused as they seemingly have very dissimilar origins.

Numbers of English Lake District Barns

The total number of English Lake District barns in southeast Pennsylvania and nearby counties in other states likely number in the 150 to 250 range or possibly even more. Thus they are certainly not rare but when one is seen especially outside their “natural range” it is rather noteworthy. The “natural range” of these English barns is the following – most of Chester County, the southern half of Bucks County, much of the southern half of Montgomery County, and much if not all of Delaware County. This is the area of the greatest concentration of these English barns. In far fewer numbers the barns occur in the northern half of Bucks and Montgomery Counties, to a fair degree in certain areas of Lancaster County, a few might appear in southern Berks County and only two English barns both of stone are known in all of Lehigh County. Coming home, very few are known to have appeared in any of Northampton County. Thus it can be seen that the stone barn at the Michael Heller homestead is a great rarity. It can be said that the reason an English based barn was constructed and used by German farmers at the Heller farm will never be known with any real certitude. Most probably, only very careful and educated guesswork is the only possibility that will even remotely approach any kind of an answer to this elusive question.

Age of Construction

The earliest known English barn built in southeast Pennsylvania is the very much altered 1767 barn at the Wickersham farm in southeast Newlin near the Pocopson Creek in Chester County. Any later barns built in the 1770 to 1790 era are rare. It is only after about 1790 or so that English barns start to appear with any kind of frequency at all. Barns in the 1810 to 1840 or 1850 era are quite common. As will be seen it appears that the Heller barn was likely built in the 1790 to 1810 time frame with only a very outside chance that the barn was built either before about 1785 or after about 1815. Thus the previously cited time of construction of circa 1750 seen in previous articles needs to be corrected. At this juncture virtually little or nothing from a construction stand-point or likely any cultural piece of information appears to support a date of building before the Revolutionary War. The one element of building mode that might possibly indicate a date of pre 1790 or (remotely) 1780 is the manner in which the principal rafters (German – *liegender Stuhl*) joined to transverse outriggers that sat atop the stone side walls.

To finish the building era of these English barns a few frame bank barns of two levels have been identified to date. They are quite rare. English barns as a general rule were likely not built much after the Civil War era. But exceptions to this may exist. This topic has never been studied in depth.

The foregoing is offered as general information on the English Lake District Barn as a general classification of barn type that appears in southeast Pennsylvania with a fair amount of regularity in English settled areas. The next article in this two part series will focus on specific elements of construction, style and fabric of the Michael Heller stone bank barn. There will also be a basic outline of the steps that were witnessed in the deterioration of the Heller barn over a 5 to 8 year period.

The first article in this two part series of articles focused on the general characteristics of English Lake District barns and their locations in southeast Pennsylvania. The old barn at the Michael Heller homestead just west of Hellertown in Northampton County in Pennsylvania is one example of a Lake District barn. This barn type are two story banked structures and are most often built of stone including the front wall or façade unlike the Standard “fore-bay” barns that are of frame construction on the front wall. Also lacking in Standard barns Lake District barns have short pent roof projections at the front wall at the basement level to protect stable doors.

This second article serves to list certain specific traits of the Heller barn – both the original stone section and the stone addition at the north end. The author never saw the stone barn complex while it was fully intact and information is gleaned from certain sources. Only a few statements will be made on the frame barn section at the south end of the original stone section. The frame part came down several decades ago.

Michael Heller Stone English Lake District Barn and Wood Frame Addition

The Michael Heller barn was a complex that consisted of two principal sections – a two part section at the north end both of stone construction and a frame section at the south end of the complex. Presently very little of the Heller complex is intact. Virtually the entire frame section disappeared a number of years ago. Most of the walls of the two stone sections were taken down and removed by township officials in 1998 after the roof collapsed because the walls were deemed as a physical threat to the safety of visitors and others to the park area where the barns stood.

Both the two part stone section and a small part of the north end of the frame section of the barn were depicted in the work of Charles Dornbusch and John Heyl in their classic book – *Pennsylvania German Barns*. Some information is known about the stone barn sections but very little is known about the frame barn section. The two stone sections will first be described as far as it is possible followed by a brief look at the frame barn section.

Stone Barn Sections

The stone sections of the barn are both two level banked structures. The section at the south end was both the first built and larger part of the two sections. It was this part that was the English Lake District section and was likely built in the 1790 to 1810 time frame. As will be seen, there is more reason to believe that this section was likely built closer to 1790 than to 1810.

Main Stone Section

The original stone section was 51 feet 4 inches in length by 32 feet wide. It was of three-bay construction. A bay is the area between an end stone wall and an adjacent framing unit or bent or the area between two adjacent bents. Since the stone section only had two bents the barn was of three bays. The south bay was 18 feet 6 inches wide and the north bay was 17 feet 2 inches wide. These bays included the thickness of the stone end walls. Thus there was a disparity of about 1½ feet which is not unusual in large bank barns in Pennsylvania. The middle or threshing bay was 15 feet 8 inches wide. It is likely the stone walls were about 18 inches thick and this is the norm for historic stone buildings in the northeast. The side walls were 25 feet high and the roof peak stood about 37 feet high. The original roof covering was likely of wood shakes.

The most unusual interior feature was the early and distinctive Germanic roof structure type called (albeit a tongue-twister) a *liegender Dachstuhl*. Its’ literal translation is – lying chair. This roof arrangement is quite rare and the author has identified 41 of the roofs in barns to date out of thousands of barns that he has examined in Pennsylvania. They occur in a number of barn types and thus far they been seen in eight counties east of the Susquehanna River. Only two other English Lake District barns have this roof structure – a frame barn in Perkiomen in Montgomery County and a stone barn in Moselem Springs in Berks County. Thus a strictly German roof in a strictly English bank barn is very rare. Each German truss typically consists of two truncated principal rafters where each rafter runs from the top of a side wall to about one-half way up each roof slope. These main rafters are tapered - narrow or about 5 to 6 inches wide at their bottoms and about 10 to 12 inches at their top ends. They are wide at their tops to receive the barn length mid roof timbers that are called – purlin plates. Stretching between the tops of main rafters in a pair are transverse horizontal timbers called straining beams. The juncture of the straining beam and the main rafters is strengthened by means of stout end braces. Above each main rafter truss are common rafters which are joined by means of a transverse horizontal collar tie just above the straining beam. This completes the picture of most *liegender Dachstuhl* roof trusses. Variant type trusses exist. German trusses sit atop upper tie beams that in turn sit on top of inner bents. Two such trusses were found in the Heller barn. Other common rafters laid at either of side of both main trusses.

What is absolutely unique about the roof trusses in the Heller barn is that the bottoms of the main rafters join to about three foot long outrigger type beams that sat atop the stone end walls such that a three foot two inch eave or roof overhang was created at each side wall. Such eave overhangs formed by common rafters appear in only one other barn in all of Pennsylvania.

The north inner bent included a built in ladder. The bent also had very long end braces that stretched from the top of one of the basement ceiling joists to far up the side wall posts. This is very Germanic type timbering found to a fair degree in barns in Pennsylvania.

In the basement there were two barn length longitudinal summer beams at the ceiling equally spaced from the side walls. One of the summers is seen in the photo in the **Dornbusch-Heyl** book. The summer was quite large but what was very impressive were the very substantial almost oversized vertical support posts. The floor of the basement to the top of the full barn width transverse ceiling joists was eight feet – more than enough room for farm animals and humans to move about.

Splayed loopholes or *balistratus* that are thin vertical slits in stone walls of barns for ventilation of crops appear on the rear wall of the Heller barn. Both end walls likely also had these slits.

The drawing done in 1995 by John MacFarland of Tohickon Timber Frames reveals that the rear wall main wagon doors were 15 feet 6 inches wide. Other drawings John did provided other measurements cited in this article. Hay wagons of course entered these doors and were then driven onto the main threshing or middle bay floor where the contents of the wagon were deposited into the upper reaches of the barn loft. Remnant threshing floor planks still lying about the barn dirt floor indicates that the floor planks were splined – that is – thin wood strips were inserted between adjacent planks that may have prevented crop “debris” from falling below the floor into the basement. Farm crops were stored in the end bays or mows from floor to or near the roof peak and above longitudinal timbers that stretched between the timber bents about eleven feet or so above the threshing floor. Threshing was also done on the middle bay floor that allowed the seed of grain to be separated from the chaff.

In the basement were stabling areas for farm animals with horses most likely placed nearer the main homestead farm-house and cows placed at the far or south end of the barn. Horses and cows entered the basement through the four or five stable doors at the front of the barn. Various surviving shots of the front wall or façade of the barn show at least two winnowing doors that appeared above the pent roof that protected the stable doors.

It is due to the presence of the early German roof and other evidence of certain possible tool marks left in timbers that indicate that the main stone barn section was likely built before 1800. It is equally unlikely that the barn was built before about 1785 or after 1815.

Stone Addition at the North End

The stone barn addition at the north end of the main stone section was likely built 15 to perhaps as much as 40 years after the main section was constructed. Vertical slits appear at the end wall which is usually indicative of a barn structure built before about 1830 but perhaps as late as about 1840. The addition was 12 feet 4 inches in width and shared the same roof line as the original stone barn section. Stone appeared on both side walls and north end wall. At the front wall there remains an excellent stone arch at the basement level for the admission of carts or wagons into the end shed area. The arch was 9 feet 4 inches in width. This feature is only occasionally included in the fabric of a stone barn structure after 1820 or so. The arch has almost become the icon of the Heller homestead barn. At some later point the stone arch way was filled with stone and a normal type stable door of two halves was inserted that remains. A pent roof was included across the full length of the stone addition section after the stone arch ceased being used as an entryway for carts. Quite prominent corner stones or quoins appear at the front corner of the addition and very likely appeared at the rear corner.

Frame Barn Section

Likely after about 1850 or even later a two level banked barn section was added at the south end of the main barn section. The front wall of the frame section stood several feet in front of the front wall of the two stone barn sections. The height of the roof also exceeded the height of the roof of the stone sections by about three feet or so. Basement walls of the frame section were of stone.

The large frame addition indicates how successful the Heller farm was in the post 1850 era. The tremendous crop storage capacities of the stone and frame sections together attest to this. An archeological dig could perhaps indicate

the placement of the south end wall thus telling us where the frame barn ended. Together the entire barn complex was likely 120 feet in length.

It is very unusual to see two long barn sections stand end to end as was the case at the Heller homestead. As long as the barn stood the shadow cast at the Heller homestead of a magnificent local framing economy was equally as long. All that is required to resurrect the Heller homestead barn is dedicated planning, effort, and a sharing of ideas and enthusiasm through the direction of the Conservancy. From these things a fellowship of concerned preservationists will be created and with it a farming consciousness will continue on that stretches back more than two hundred years on land that was first claimed by the Heller family in the middle of the eighteenth century. The local community and beyond will then be well served for many years to come.

* Note - The photos used in this article are from the Historic American Buildings Survey by the National Park Service. They were taken by **Charles Dornbusch**, AIA in 1941. Dornbusch took the photos for the Pennsylvania German Barn Project, sponsored by American Institute of Architects.

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