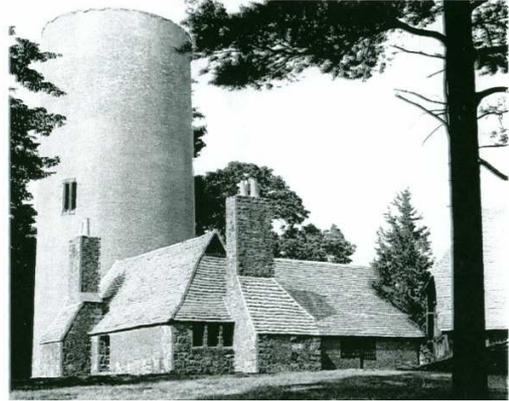




Modern day photograph Photo credit: Historic Buildings of Connecticut website



Historic photograph
by Simeon D. Smith

THE FORGE AT AVON OLD FARMS SCHOOL

One of Avon's most unusual properties is the private young men's preparatory school known as the Avon Old Farms School. This school is located on Scoville Road and the intersection of Old Farms Road in Avon, Connecticut. Theodate Pope Riddle of Farmington (1868-1946), was "one of the first female architects" (Phyllis Fenn Cunningham) of her time. Her most ambitious project was the conception and creation of her crowning glory-Avon Old Farms School. By the early 1920s, Ms. Riddle had selected and purchased 3,000 acres of pristine woodland property for her school to be located in what was formerly known as the Sleepy Hollow section. Besides its' natural beauty, the property contained a quarry and water features. "Soon Theodate began purchasing a large tract of land west of the Farmington River lying between Avon and Farmington. She eventually accumulated a tract of nearly 3,000 acres composed of a number of farms, a third of the territory being in forest, with three lakes and a beautiful stream." (Brooks Emeny) The quarry was instrumental in the design plan as the cut stone formed the walls for most of the buildings including the Forge; "...materials from the area: red sandstone from a 93 foot deep quarry near the site and oak saplings from surrounding woods" (Sandra L. Katz) were used in the construction. Stone masons were employed to hand-chisel the ashlar used as facing stones for the building's walls. Regarding the foundations, Ms. Riddle remarked in her construction notes that "The foundations for the Forge...are of Field

stone, taken from old walls and fields on the property; and laid in the usual manner.” (Emeny, pg.



Quarry men and stone masons working in the Quarry. Photo credit: Theodate Pope Riddle and the Founding of Avon Old Farms by Brooks Emeny, page 15

14)

Ms. Riddle envisioned a private, preparatory school for boys that would appear as though it had been constructed in the 1600s in England. “In addition to the regular academic courses taught in high school, Avon Old Farms included carpentry and printing shops, a forge, a working farm, and other facilities for teaching various trades.” (Cunningham pg. 67) Ms. Riddle modeled the buildings by drawing on what she had observed during a trip to Europe. Her design inspiration gave the buildings a rather medieval appearance resembling the architecture modern viewers see in the movie series ‘Harry Potter’ or the Xbox game ‘Fable’. “A combination of English Cotswold architecture and elements of her own previous work, the design of the twenty five buildings was essentially her own artistic creation with curving and sweeping roofs and walls which, when added to the overall effect, gave the design an individuality of its own.” (Cunningham pg. 67) Ms. Riddle imported about dozen European craftsmen to insure that they would use Old World tools and methods to complete her vision. “To construct the first buildings, Theodate brought over craftsmen from the Cotswold area of England, and she made certain that the American workers employed the craftsmen’s 17th century materials and tools.” (Katz pg. 183)

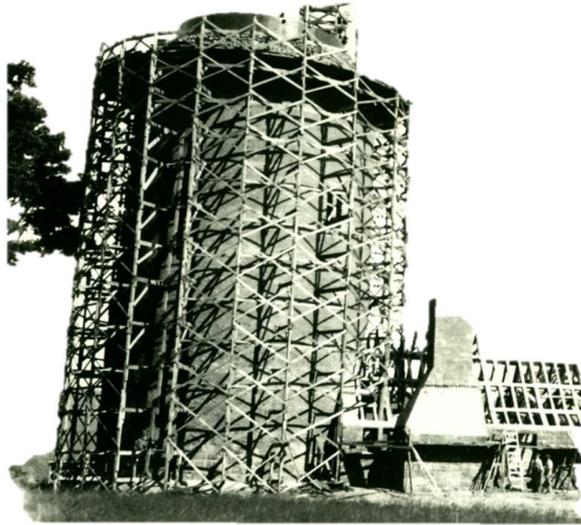
The Forge was where all the metal-working took place. Two large stone hearths, one on the west side and one on the south side of the building were where metal was made molten in very hot fires. Then the hot metal held by tongs could be pounded using hammers on anvils into various shapes by the ‘smithys’. The adjacent water tower provided water in slack tubs to cool the metal rapidly. The Forge made all the components used in the Avon Old Farms School buildings. “The Forge...which was used during further construction of the school...was the one to provide all the metal items such as hinges, doorknobs, stair rails, lanterns, etc.”(Emery, pg. 16) These were “hammered out of hard wrought iron by hand.”(Emery, pg. 19) All of the exterior lanterns on the campus were made at the Forge. “The lanterns, which are beautifully wrought and are to be seen and admired throughout the property, were made from 20 gauge sheet metal. The approximate size pieces of metal for one lantern is placed in the forge and heated to a red heat and then hammered.

It is then cut to the design required – the whole lantern being one piece, and bent to shape.”
(Emery, pg. 19)

The construction of the Forge itself is revealed in these historic photographs:



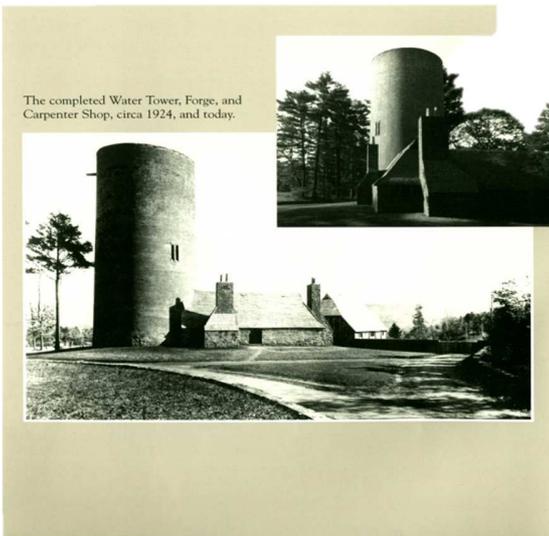
Roof detail of the Forge



Water tower and Forge detail



Assembly of roof support structure; raising up of the timbers into position and interior view of completed roof support.



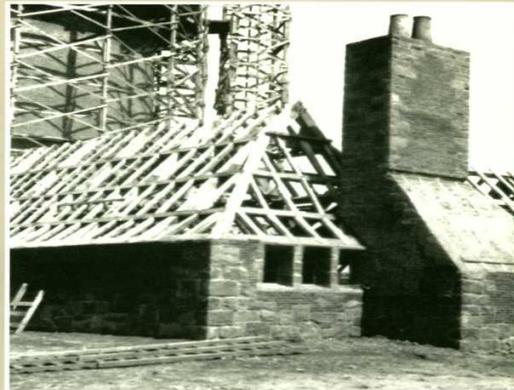
The completed Water Tower, Forge, and Carpenter Shop, circa 1924, and today.

Photograph of the finished product as it appeared in 1924 and a more recent photograph.

As can be seen in the photographs, huge timbers of mountain oak brought in from North Carolina were hewn with a broad axe and used to support the roof. "The roof of the Forge was framed in accordance with methods in use in England during the early 16th century." (Emeny pg. 15) "All roofs were framed with principals and rafters, without ridge timbers, and all of the members pinned together with oak pins." (Emeny pg. 15) "The Forge roof is of rough red slate, laid in cement mortar...The under sides of the roofs...were torched with hair mortar."(Emeny pg. 15)



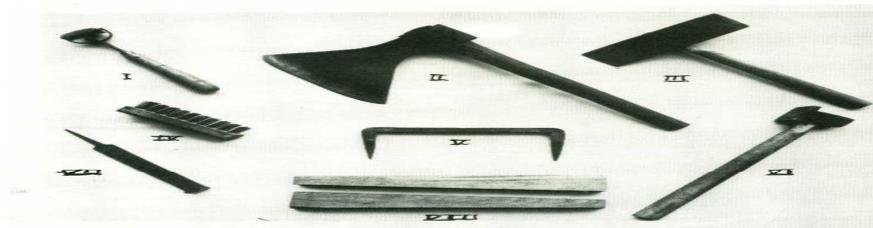
All lumber used for farm work, scaffolding, and temporary buildings, was sawed in the School's mill. The logs were obtained from the School property.



The framing of the Forge nears completion.

Ms. Riddle instructed the craftsmen not to use measuring instruments but to sight the lines by eye to give all the components a natural feel and appearance. They were "not to use carpenter's levels or plumb lines, and directed them to dispense with all mechanical methods and wherever possible, work by rule of thumb and to gauge all verticals by eye; as a natural variation in line and surface was far more desirable...than accuracy."(Emeny pg. 14)

17th Century Tools Used in the Building of Avon Old Farms School



- I. BOX SCRAPER for finishing wood
- II. BROAD AXE for hewing wood
- III. PEEN HAMMER for shaping and finishing stone blocks
- IV. STEEL BRUSH for roughing up wood
- V. and VIII. STAPLE and WEDGES used in laying floors
- VI. METAL FLATTENER - used for iron work, hinges, etc.
- VII. FILE for scratching wood and marking lines

From the Architectural Survey 1997: "The northernmost cluster, facing Old Farms Road includes several low, steep-roofed buildings and a tall cylindrical brick water tower that arises abruptly from the ground like some ancient Norman keep; it originally housed a 'smithy' [Forge] and a carpenter shop and was known as the 'farm group'.

According to the Avon Old Farms School website, the Forge is currently a part of a ten year systematic restoration program of 'core buildings'. The masonry roof on the south end was removed and repaired. Cracked or damaged slates on the roof were removed and replaced. The same quarry, the Vendor Slate Company of New York State, that was originally used as the supplier of roof slate was once again used to supply Vendor Old Red slate to retain the roof's original character and continuity of appearance. Also the roof support structure and the exterior envelope of the Forge were repaired. As this was one of the first buildings constructed in 1922 when its' foundation was laid, the ensuing years have taken their toll. "The construction of Avon Old Farms School commenced in the early spring of 1921 with the clearing of the land at the building site. During the autumn and early winter of 1922, the concrete foundations for the Water Tower, Forge, Wheelwright Shop, and Carpenter Shop were laid." "In April 1923, work was started on the superstructure of these buildings'. (Emeny, pg. 12)

The Forge was not originally designed to be a finished space, but rather a functional building as a working forge during the school's construction. Today it is used as classroom space. "The Forge is a signature building; architecturally unique, it was also essential to the design and construction of the original school campus." (Avon Old Farms School website) During the restoration, once again workmen employed historically accurate repair and restoration techniques and procedures as Ms. Riddle herself no doubt would have wanted. The Avon Old Farms School motto is *Aspirando et Perseverando* which means to aspire and persevere. Ms. Riddle was the epitome of this credo and her magnificent buildings stand today because of her talent and imagination. "The Forge..."is a touchstone of the school's history and its creation." (Avon Old Farms School website)

Sources:

A Guide to the Building of Avon Old Farms School by Gordon Clark Ramsey 1979

Avon Old Farms School Celebrating 75 Years photography by William Mercer

The Forge Restored Avon Old Farms School website

Dearest of Geniuses A Life Of Theodate Pope Riddle by Sandra L. Katz

My Godmother Theodate Pope Riddle A Reminiscence of Creativity by Phyllis Fenn Cunningham 1983

Townwide Historic and Architectural Survey of Avon May 1997 Connecticut Historical Commission
#145 Avon Old Farms School

Theodate Pope Riddle And the Founding of Avon Old Farms by Brooks Emery copyright 1977 by
Brooks Emery copyright Avon Old Farms School 1973

Historic photographs

Facing page of page 1 showing 17th century tools used in the building of Avon Old Farms School - Box scraper for finishing wood, broad axe for hewing wood, peen hammer for shaping and finishing stone blocks, steel brush for roughing up wood, staple and wedges used in laying floors, metal flattener used for iron work, hinges, etc., file for scratching wood and marking lines.

Pg 15 Quarryman smoothing of an ashlar with a peen hammer.

Pg 17 Roof sections were assembled on the ground and then raised into place. Lower right shows a part of the roof structure of the refectory.

Pg 16 shows roof section of the forge hearth. Purlins on which heavy slate roofs were laid were hand cut from oak saplings found on the property. Their uneven shape give a beautiful texture of the roofs, which are not flat but conform to the varied contours of the purlins.

Pg 19 Hand tooling of oak timbers for wall, floors and roofs.

Pg 22 Historic photograph of the water tower, forge and carpentry shop, the first group of buildings constructed.