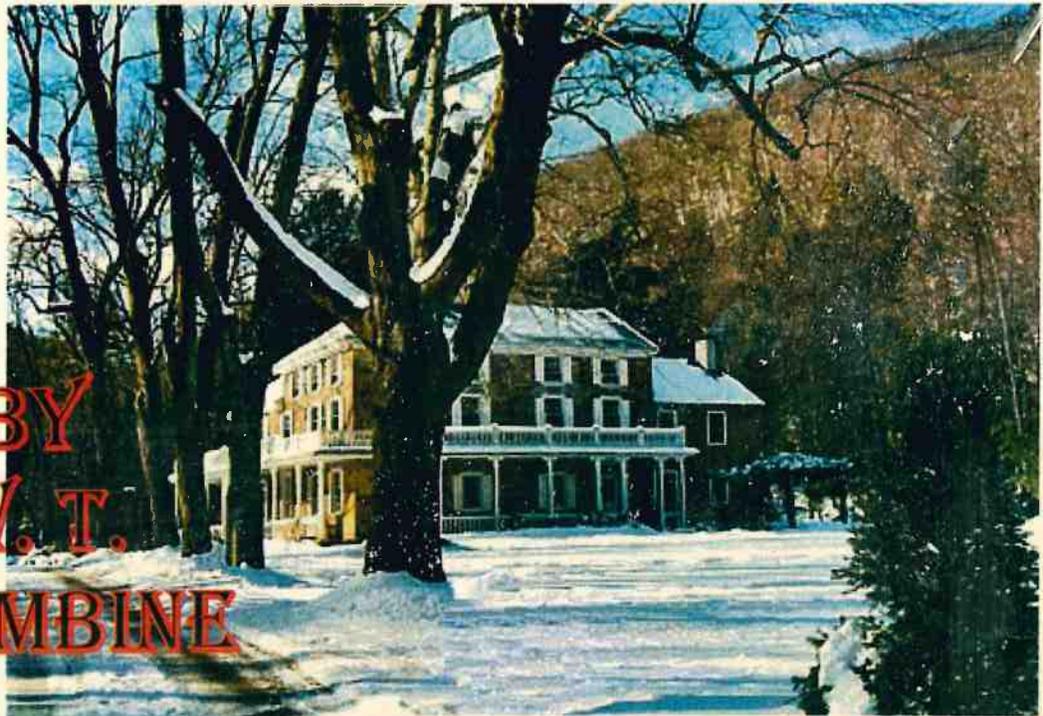


**SWATARA
FURNACE
AND THE
IRONMASTER'S
MANSION**

WITH RELATED DATA



**BY
W. T.
GRUMBINE**

SWATARA FURNACE
and the
IRONMASTER'S MANSION
with
RELATED DATA

By

William T. Grumbine

Tobyhanna, PA

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By W.T. Grumbine
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Introduction

In the following pages I have tried to give an accurate account of what went on in the middle 1800's around the area that is now called "The Forge." My interest in this area goes back many years. My dad, Arthur W. Grumbine started to hike in the "High Bridge" area back in 1918; he also rented the log cabin across the creek from the Swatara Furnace from 1933 until the middle 1950's. My Grandparents, the Williams family, (my Mothers side of the family) rented the "Big House," from 1921 to 1961. I spent eighteen summers there, and lived at the house year round from 1945 to 1950.

I have tried over the last ten years to find a written history of this small corner of Schuylkill County, but none was to be found. I decided at this point to dig out the information myself from any old records I could find.

The names and occupations of the furnace workers I have used in my story are the actual ones of the people who worked at Swatara Furnace in 1850. The set-up, operation and organization of the furnace and the surrounding furnace community were common to all "Iron Plantations" of that time period.

Something surprising usually always turns up when one does research into the past; for us it was finding out from old records that Dr. George N. Eckert (one of the builders of Swatara Furnace and The Big House) was the son of my GGGG-Uncle Peter Eckert. We knew from our genealogical research that one of our GGG-Grandmothers was Katharina Eckert Koppenhefer (Katharina Eckert Koppenhefer was the Great-Great-Grandmother of Arthur W. Grumbine) - we had not been able to find anything more about the Eckert branch of our family until the Swatara Furnace research was started.

There is much more research to be done in connection with "Swatara Furnace" and "The Forge;" I know I have made many errors of omission; also there are probably mistakes in what I have written. Hopefully someone else will read this and start their own research project into this interesting period of time in our history. Well, now let's get on with the story.



Late 19th Century sketch by the artist: RKB

“Old Charcoal Furnace - Ellwood, Schuylkill Co. Penna.”

The wooden “Cast House” is completely gone in this sketch; the cast house foundation can be seen at the left of the furnace stack. Either the Eckert or Boyer family built a shed over the water wheel and the blast machinery to protect it from the elements. The building on the hill behind the furnace would later become the Robert Stager family home.

SWATARA FURNACE



Swatara Furnace stack. For more than one hundred years this stone structure has incorrectly been called “**The Old Forge;**” it never was a forge, and was never used as a forge.

We will begin our journey into the past in Suedberg, PA. at the junction of Route 443 and Old Forge Rd. We head North on Old Forge Rd. for about two miles. On the way we pass the Outwood Lutheran Church which sets on the hill to our left. After we pass the church we continue North until we reach a small State Game Lands parking lot next to a concrete bridge that spans Mill Creek. The road North of the parking lot is dirt and gravel. As soon as we leave the parking lot we look to our right across Mill Creek and through the trees we catch glimpses of a large stone mansion. In the 19th Century this mansion

was known as the “Ironmasters Mansion” or “The Big House.” A little later on we will go into more detail about “The Big House.”

Looking up the road we see a gap in the mountains; this is the gap that Mill Creek flows through and is also the site of the present day City of Lebanon Water Supply Dam at “High Bridge.” Several hundred yards up the road we see a large stone structure that looks like a pyramid with the pointed top cut off. Let’s walk up for a closer look. Nowadays this stone structure is called “The Old Forge.” You will notice

that there are trees, weeds and grass growing out of the top of the forge. This growth, if unchecked will ultimately cause the destruction of the stone work.

Up until 1946 the Boyer family owned the furnace and all of the land on this side of Mill Creek. Mr. George Boyer kept the furnace in excellent condition by keeping the top cleaned off and the grass and weeds away from the base. Twice in the 1930's Mr. Boyer hired a stone mason to repair damaged stone work at the furnace. (1) In 1946 the City of Lebanon purchased nearly all of this land on the West side of Mill Creek for their city water supply. Since



The Ironmaster's Mansion, or Big House as seen from the road leading up to the Swatara Furnace

then very little has been done to keep the furnace in repair.

All is now peaceful and quiet, the air is fresh, you can smell wild flowers, the only noise you hear are the birds singing and the murmur of the creek behind us. Let us now close our eyes and visualize that we are standing on this same spot more than one hundred and forty years in the past. The year is 1850; the month is June. When we open our eyes we see a virtual beehive of activity. This is no longer The Old Forge; this is Swatara Furnace; this is a blast furnace and we are standing in the middle of

a 19th Century industrial complex. The air is dirty with smoke and soot. Men are shouting back and forth at each other; mule skinnners are swearing at their teams. This is a big operation; the furnace employs 103 men and boys and 33 horses, mules and oxen. (2) Around us we see many strange looking buildings. The furnace itself is completely surrounded by a wooden shed type structure; it looks something like a square barn with a huge chimney sticking out of the top. There is a wooden bridge extending from the top of the furnace back to the hillside. On the hill behind the furnace there are several large sheds; one of the sheds is for cooling hot charcoal and one of the others is for storing it. Even the mountains look different. There are bare areas where the timber has been cut in order to supply wood for charcoal. The furnace has been "in blast" for several months now since it last shut down for repairs.

When the furnace is "in blast" all operations are carried out 24 hours a day seven days a week. The only time there is a shut-down is when routine maintenance is necessary or there is a mechanical breakdown. Some furnaces have been known to stay in the "blast" condition for 11 or 12 months. If we look up at the top of the stack we can see fire shooting out; this is not so noticeable in the daylight, but if you were to go and stand on one of the mountainsides at night you would see the entire valley bathed in an eerie orange glow. It would remind one of a small volcano in the valley or perhaps a modern rocket engine going down instead of up.

Listen to the roar coming from the stack, the temperature in there is close to 3000 degrees Fahrenheit. Lets move over by the waterwheel, here we hear the water splashing and the wheel creaking and groaning; stick your head through the doorway and

you can hear the steady swish-swish of the "blowing tubs" that are producing the compressed air for the "tuyeres" that channel the air into the crucible of the furnace. Let's go see where this water comes from. We will follow the elevated wooden sluice back about a hundred feet until we reach the spot where the head race splits; some of this water goes through the sluice, the excess follows a drain race into Mill Creek. In a few years a forge with a water wheel will be constructed on this spot. Tools, chains and other articles will be forged here. Some time in the next hundred years people will start to call Swatara Furnace "The Forge," this is not correct, the structure that is Swatara Furnace never was used as forge. The building that will be erected on this spot will be the actual forge. The forge will be almost completely gone by 1930; (1) only the water wheel pit and some of the stonework will remain.



Remains of "The Forge" water wheel pit and building foundation

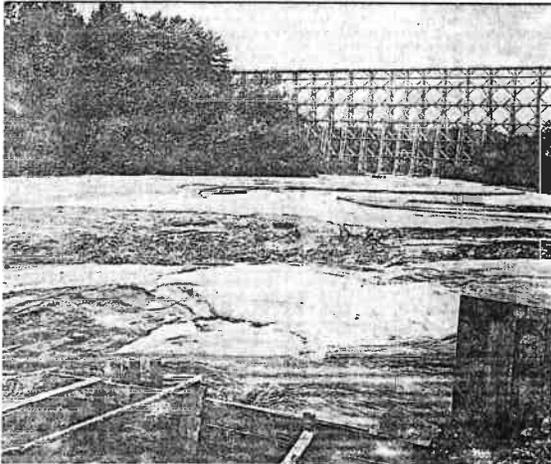
Now lets follow the head race through the woods and see what we run into next. To our right there are three wooden homes complete with children running around in their yards. These homes are workers homes erected by the furnace company. (1) We have now arrived at the South side of Mill Creek and we see the head race crossing the creek on another elevated sluice; the sluice goes directly into a large feeder

dam. A few years from now they will build a more substantial stone dam at right angles to the present dam breast; after that this second sluice won't be needed any longer because the head race will be re-routed to the left side of the new dam breast. There is another furnace workers home just to the right side of the sluice.

Let's cross the creek and sit down by the dam breast; I will then try and tell you how and why all of this came about. Right after the War of 1812 the need for anything made of iron increased greatly. The population was growing and people were on the move. More and more land was being cleared for farming and small towns were springing up everywhere. Almost everything people did required tools made of iron. There were axes, shovels, plows, all kinds of carpentry tools, wagon wheel rims and chains just to mention a few of the needed items. There was a great demand for an enclosed cast iron box style wood burning stove that was made popular by Baron Steigel in the late 1700's; this stove was much more efficient than an open fireplace or Franklin stove.

There were two ways to get iron products for an expanding nation. The first was to buy what was needed overseas at extremely high prices; the second was to make what was needed right here in America. At the beginning of the 19th Century our iron making capacity was not nearly large enough to meet the demand; the only answer was to increase our production. Now you couldn't set up an iron furnace anywhere you wanted to; there were five conditions that had to be met before going into the iron business. 1. The furnace had to be built near a stream that would supply water for the water wheel on a year round basis (steam driven furnaces were many years down the road). 2. There had to be a

large forest near the furnace to supply charcoal for the blast. 3. Iron ore had to be mined in an area that was within a reasonable distance from the furnace. 4. A supply of limestone should also be nearby. 5. The last item was money; someone had to have capital available to buy land, erect a furnace and hire a skilled crew to operate said furnace.



Mid 1850's' photo showing the furnace dam drawn down in order to allow workmen to build the scaffolding or "Falsework" that the "High Bridge" would be constructed on.

The area here in Southwest Schuylkill County met the first two requirements without any problems; however it was over 25 miles to the nearest iron ore and limestone supply in Lebanon County; the road going in that direction was not much better than an improved Indian trail; so to haul iron ore and limestone from Lebanon County by horse and wagon would have been out of the question if you wanted to make a profit. So, up until 1828 erecting a furnace in Southwestern Schuylkill County was not practical. In 1828 things took a turn for the better; help with the transportation problem was on the way in the form of the Union Canal extension. Construction on this extension started in 1828 and would

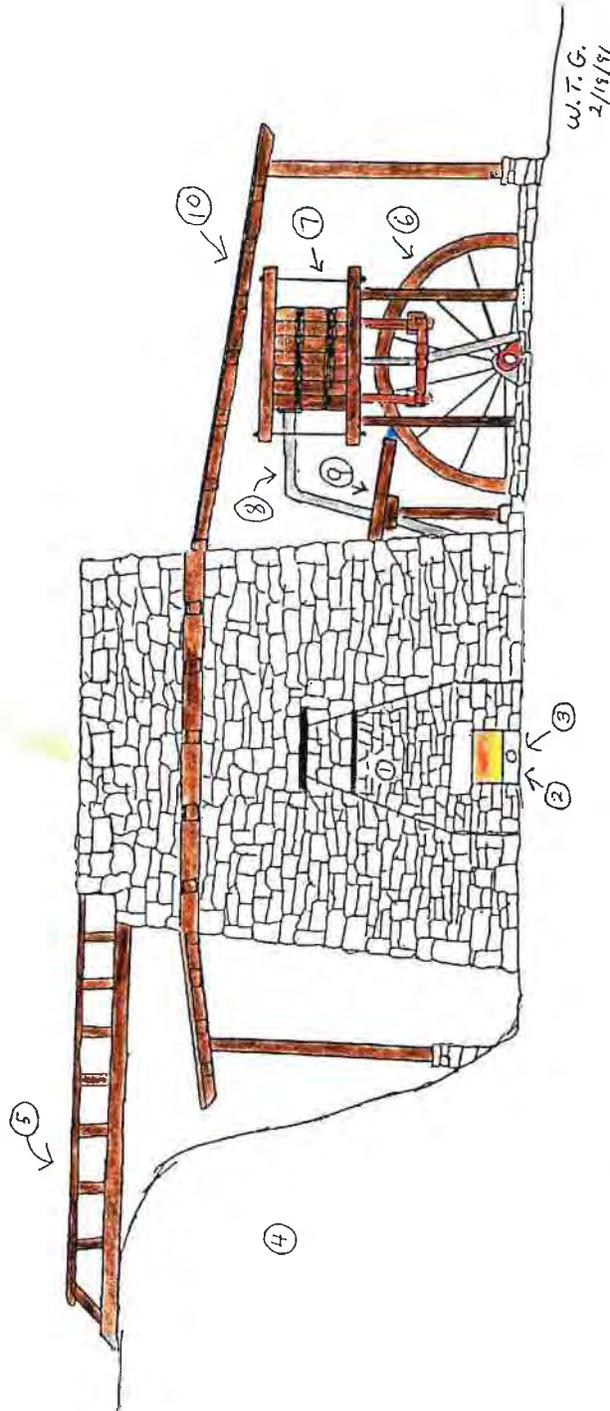
be completed in 1830 (3).

The Northeastern terminus of the canal extension would be Pine Grove. Port Mifflin, (now Suedberg) was to be a small village on the canal Southwest of Pine Grove. Port Mifflin would be an ideal drop-off point for iron ore and limestone from Lebanon County; finished goods from the furnace could also be shipped out from this point.

Well, now the transportation problem has been solved. Now we come to requirement number 5, money; enter Dr. George Eckert and Simeon Guilford; these two men would set up the firm of Eckert and Guilford; they would buy the land, erect the furnace and create the "Iron Plantation," (or community), known as "Swatara Furnace." (4) Whether these two men were equal partners or not is not known; however, on a map by Scott, ca 1863, it is shown as Eckert's Furnace, also on most historical papers the name used is Eckert's Furnace. Local people in the 1900's call the stone structure "Eckert's Forge," (as I have said before this name is not correct). Perhaps the reason most people have referred to this place as Eckert's Furnace or Forge is because George Eckert lived in Pine Grove for a couple of years, (3) and then lived here at the "Big House" for an unknown number of years (5).

George Nickolas Eckert was a native of Womelsdorf, Berks County; he was also a highly respected MD in Berks County having been elected treasurer of the Berks County Medical Faculty in 1824 (6). There are no records that show Dr. Eckert having ever worked in the iron industry prior to this venture; however the Eckert family were not strangers to the iron business. Dr. Eckert's Grandfather, Great-Grandfather and Great-Great-Grandfather were all

REPRESENTATIVE VIEW OF THE SWATARA FURNACE
SCHUYLKILL COUNTY PA - CIRCA 1850



- 1. CAST ARCH
- 2. DAM STONE
- 3. CLAY PLUG
- 4. FURNACE BANK
- 5. BRIDGE
- 6. WATER WHEEL
- 7. BLOWING TUB
- 8. AIR DUCT
- 9. SLUCE FROM HEADRACE
- 10. CUT-AWAY VIEW OF ROOF

Furnace Sketch By William T. Grumbine - February, 1991



The pictures above show the remains of the 1830 dam that supplied water for the water wheel at the Swatara Furnace. In the picture at the left you can see the remains of the earthen base of the dam (# 1 inside the white square); this part of the breast was about four feet high in 1985 when these photos were taken. # 2 was the remaining stone pier (shown in the picture on the right) of the five original piers that carried the elevated sluiceway from the dam to the edge of Mill Creek where the sluice continued across the creek to the main head-race. Numbers 3, 4, 5 and 6 are the locations of the base stones for the other four piers. All of these artifacts were covered over with dirt during the construction of the new City of Lebanon Water Supply Dam in the early 1990's.

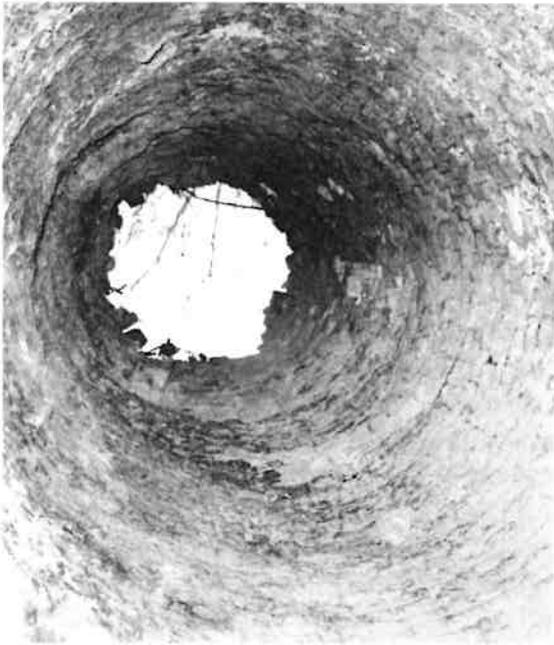
blacksmiths; in addition to this, George's four Great-Uncles were blacksmiths, including Col. Valentine Eckert who was the owner and Ironmaster of the "Sally Ann Furnace at Moselem in Berks County (7).

George Eckert's partner, Simeon Guilford was born in 1801 at Northampton, Mass. Several years of Guilford's early life were spent as a civil engineer on the Erie Canal in New York State; in 1823 he moved to Lebanon County Pa. where he served as assistant engineer with Canvas White in building the Union Canal. Sometime in the 1820's Guilford discovered iron ore deposits on a farm he owned near Columbia, Pa.; he also found deposits of hematite ore in Lebanon County (4).

We are not sure when Eckert and Guilford formed their partnership; the best guess we can make is the decision of the two men to build the furnace took place in early 1828, for it was in 1828 that Dr. Eckert left Berks County and set up a medical practice in Pine Grove (3).

There was a tremendous amount of work to be done once the partnership was formed; land had to be purchased and a road had to be built from Port Mifflin that was capable of carrying heavy loads of building materials to the furnace site. When the road was completed, about twenty acres of timber had to be cut down to make space for the furnace, the area that was to be the water supply dam needed to be cleared, space

had to be made for the Ironmaster's home and the homes of the future furnace workers. The mountain needed to be leveled out just behind the spot where the furnace was to be built. The leveled area would be about eighty by three hundred feet; this flat spot would contain the charcoal cooling house, the charcoal house and a place to pile the iron ore and limestone. A wooden bridge will be built from the leveled spot to the top of the furnace; it is over this bridge that the furnace "Filler" will push his carts loaded with ore, charcoal and limestone that are to be dumped into the furnace stack.



View looking up through the interior of the furnace stack. The stack is 32 feet in height. A firebrick lining covers the inside of the stack from ground level to the top.

The first of the furnace crew to be hired will be the Ironmaster, he will supervise the stonemasons, carpenters and other workmen that will build the furnace, the "Big House" and all of the other buildings that will make up the village of "Swatara Furnace."

As soon as the Ironmaster is satisfied that the construction is proceeding on schedule he will head for Berks, Lebanon and who knows how many other counties to hire the rest of the furnace crew. I guess you are wondering why the Ironmaster has to go so far afield to hire a furnace crew—why not hire local people? The fact is, iron smelting was what would be considered a high-tech industry in the Eighteenth and Nineteenth Centuries. One could not go to Port Mifflin or Pine Grove and hire a "Moulder," a "Founder," a "Furnace Keeper" or any of the other skilled personnel needed to operate a furnace; all of these jobs required a lengthy apprenticeship before a worker could go out on his own. Yes, there will be local people hired; they will fill the jobs of "Teamster," "Woodcutter," "Farmer," "Blacksmith," "Carpenter," "Servant" and "Laborer." After the furnace is in operation there will no doubt be openings at the apprentice level for local boys who would like to learn the iron trade.

Why don't we walk back towards the furnace now, it's almost six p.m. and there will be quite a bit of activity there at six. Twice a day, at six a.m. and six p.m. they tap the furnace and cast whatever is on the days schedule. Watch out now, there is a wagon load of hot charcoal coming along right behind us. That's Cyrus Simmes on the wagon driving his team of mules (8). Cyrus is one of the teamsters employed here at the furnace; he and his wife Angelina and their five children live in the first house on the other side of the "Big House." Amos Hershberger is another Teamster here at the furnace; (8) I think he and his wife Polly live in that house we saw over by the dam; Amos and Polly have a one year old son named John.

Now back to Cyrus and his load of charcoal; Cyrus picked up his load at one of the

charcoal flats on the mountainside; he will take this charcoal and unload it in the charcoal cooling shed on the hill just behind the furnace. When the charcoal has cooled to the point where it will no longer ignite, one of the laborers will transfer it to the charcoal house. Cyrus is kept busy all day. His next trip will probably be to Port Mifflin to deliver some of the pig iron that was cast this morning; the pig iron will be put on a canal boat and shipped to one of the numerous forges in Lebanon or Berks Counties. On the trip from Port Mifflin back to the furnace, Cyrus could haul any number of things, iron ore, limestone or merchandise for the Company Store. The Company Store is located in the yard right next to the "Big House."



Company Store in ca 1900 photo.

Before we get too close to the furnace look up towards the bridge; see that man up there pushing that big cart? His name is John Meak, (8) he is what is called a "Furnace Filler." John's job is to dump charcoal, limestone and iron ore down into the stack of the furnace when the "Founder" calls for it. This is not what you would call a safe occupation - many men have been badly burned while emptying their carts into the stack. Every half hour the founder will tell John to dump about 500 pounds of iron ore, 40 to 50 pounds of limestone and 15 bushels of charcoal into

the stack. For John's 12 hour shift, this amounts to 6 tons of ore, 360 bushels of charcoal and almost 1,000 pounds of limestone; being a filler is not an easy job. As we said earlier the furnace operates 24 hours a day, so, John's counterpart on the night shift, John Conrad, (8) will handle the same amount of material. Last year, 1849, Swatara Furnace produced 1,300 tons of iron (2), that's 3.5 tons a day, isn't that something? To produce this much iron nearly 4,500 tons of ore and 365 tons of limestone had to be hauled up from the docks in Port Mifflin. Now, if you think these were large figures, just wait until you see the next number; to produce 1,300 tons of iron the fillers had to dump slightly more than one quarter of a million bushels of charcoal into the furnace. I will explain how they get all of this charcoal before we go over and watch the casting process.

Supplying charcoal for the furnace is the most time consuming activity that exists here. First, a small army of woodcutters have to go into the mountains and start chopping down suitable trees. Most of the woodcutting is done in the winter months; most of the woodcutters are local farmers and other area workmen who are not as busy in the winter as other times of the year; these men come to work part-time for the furnace in order to make a little extra money. The Furnace Company pays each woodcutter a certain amount for each cord of wood he cuts and stacks, (a cord of wood is a pile 4 ft. by 4 ft. by 8 ft.). Here are a few more figures for you to think about: it takes one cord of wood to make thirty five to forty bushels of charcoal; and we said earlier that the furnace consumed about 250,000 bushels of charcoal last year; that translates into about 7,000 cords of wood cut up for the 1849 season. Now, one acre of timber will yield 30 or 40 cords of wood depending on the type and quality

of the trees available; so, we are looking at about 190 acres of woods that were cut down last year, if you multiply 190 times the 20 years the furnace has been in operation you come up with 3,800 acres of land cleared since iron was first smelted here in 1830; this is why the mountainsides around here are bare in so many places. It takes about 30 years of re-growth before an area can be timbered again.

After the wood is cut and split it is hauled to the coaling areas that are scattered around the mountains. Now it is time for the "Colliers" to take over. The "Colliers" are highly paid skilled workers. A Collier who really knows his job can make 35 to 40 bushels of charcoal from one cord of wood.

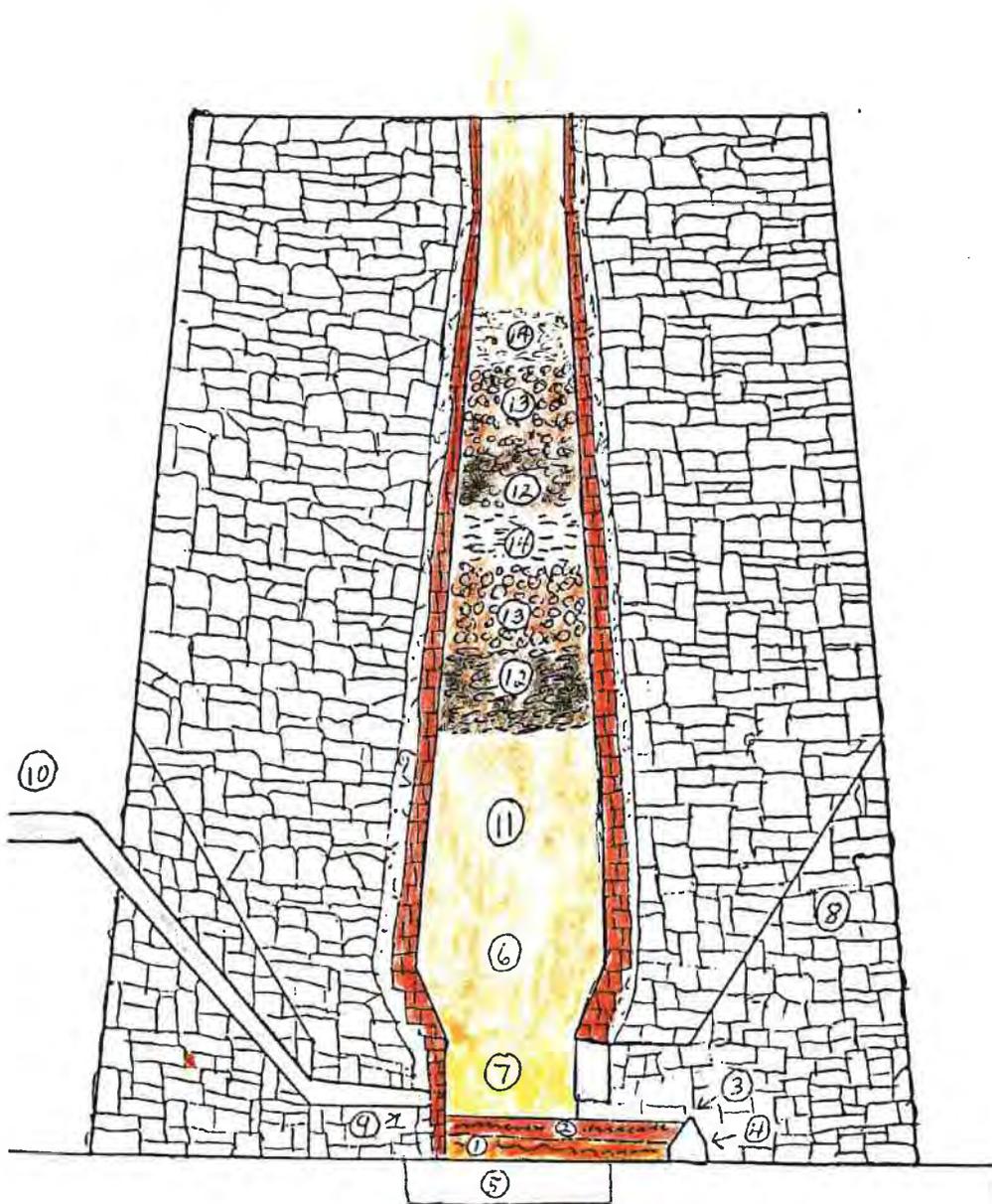
Three of the Colliers here at Swatara Furnace belong to the Deisher family (8); there is John Deisher, the father, and his two sons, William and John. John and his wife, Atisha, have eight children. The name Deisher sounds German to me, but John told the U. S. Census taker this year that he and his wife were born in Ireland; maybe Deisher is a descendent of some of the Germans who fled their country during the 1600's because of religious persecution? Well, we better get back to charcoal making. The Colliers work is done out in the mountains close to where the trees have been cut down. A circular pit measuring 30 to 40 feet in diameter is laid out on a flat spot on the ground, then a long pole of green wood is driven into the ground in the center of the clearing; the collier then erects a crib like wooden chimney around the pole; after this is done the 4 foot pieces of wood are stacked on end around the chimney; anywhere from 25 to 50 cords of wood are used at one "coaling". After all the wood is in place the entire mound is covered with leaves and dirt; when every-

thing is set the Collier will light a fire at the center of the mound. The trick to making charcoal is to only "char" the wood - you don't want it to blaze up and burn. The smoldering wood must be tended 24 hours a day for 10 to 14 days. Each Collier builds himself a small hut made of logs and dirt, this will be his home for the next two weeks. When the Collier is satisfied that the wood is properly charred he will send for one of the teamsters to haul the charcoal to the charcoal cooling shed on the hill behind the furnace.



This arch that faces the road and Mill Creek is called the "Tuyere Arch." Air ducts that feed the "Tuyeres" (copper nozzles) enter the furnace at this opening in the stack.

You can come back to one of the charcoal flats one hundred and fifty years from now, dig down through five or six inches of dead leaves, and find charcoal. There, hear that bell ringing? That's the bell at the casting house - they are ready to tap the furnace - let's go over there before we miss something.



- | | |
|-----------------|-----------------------------------|
| 1. IRON | 8. CAST ARCH |
| 2. SLAG | 9. TUYERE |
| 3. CINDER NOCH | 10. AIR DUCT FROM BLAST MACHINERY |
| 4. DAM STONE | 11. MOLTEN IRON - SLAG |
| 5. HEARTH STONE | 12. CHARCOAL |
| 6. BOSH | 13. IRON ORE |
| 7. CRUCIBLE | 14. LIMESTONE |

Cutaway View of a 19th Century Charcoal Blast Furnace Stack
 Sketch By William T. Grumbine - February 1991

W.T.G.
 2/12/91

There are men all over the place now - there is Henry Doyle the "Moulder" (8) and several of his helpers; Doyle is one of the long time employees at the furnace; he worked here in 1840 when George Eckert lived in The Big House (5). There are "Guttermen" standing by to wait for the iron to flow. Also you see a group of teenage boys, and even a few girls. Some of the boys will assist the guttermen, others will haul "slag" to the slag pile when it has cooled enough to handle; the remaining boys and girls will brush the sand off of the stove plates when they have cooled down, after that they will take files and remove any rough edges from the newly cast stove plates - when all of this is done the Moulder or Furnace Clerk will inspect the castings to see if they are up to standards; if so the plates will be packed in straw, crated, and shipped to a buyer for assembly.



"Cast Arch" section of the furnace. The smaller opening at the bottom is where "Dam Stone" and "Tapping Hole" are located.

I don't see the "Founder" anywhere, but, there is James Black (8). He is the furnace "Keeper." The Keeper is the Founder's assistant and can do any job the Founder can do.

The furnace Keeper usually runs the furnace on the night shift. The Founder and Keeper have the most important jobs here at the furnace; they monitor the conditions inside of the stack, they adjust the air flow going into the tuyeres from the blowing tubs, they instruct the Fillers as to how much ore, limestone and charcoal are to be dumped into the stack, also at what times the materials are to be dumped. The Founder or Keeper also make the decision as to what time the furnace will be tapped.

We are not the only ones watching the operation here today; see the well dressed men standing just to the left of the casting arch? One is the Ironmaster Nathaniel Ferguson (8), I don't know who the other two are; perhaps they are salesmen or potential customers. The Ironmaster is proud of his operation here and is always bringing buyers, salesmen and guests over from the Big House to watch when the furnace is being tapped. Nathaniel Ferguson was the Ironmaster at the Elizabeth Furnace in Lancaster County for seven years before coming here to Swatara in the middle of 1848 (9).

It looks like Mr. Black is about ready to "tap;" the slag coming out of the "cinder notch" has slowed to a trickle now - Black will pull that clay plug out of the "tapping hole" in the "dam stone" and the iron will flow. The temperature here in the shed will go up about 30 or 40 degrees once the molten iron comes out. The Moulder and his helpers are ready with their empty ladles - once the iron starts to flow the ladles will be filled and poured into the "flasks" that contain sand moulds of different stove plates. The Moulders have been busy for quite a while getting their sand flasks ready for the furnace tapping. There, the plug is out, and here comes the iron; feel that heat already? The iron that the Moulders don't get with their ladles will flow down the



Hand forged roof supports are still visible on the back and both sides of the stack. These bars held up the roof of the Cast House and the Blast Machinery enclosure.

“gutters” in the floor and into the moulds for “pig iron.”

The slag that came out of the cinder notch just before the clay plug was pulled is a combination of limestone and the impurities from the iron ore. The slag is lighter in weight than the molten iron and floats on top of the iron. One of the “Slag Boys” is already hauling a cart of slag over to the slag pile. Slag is something else you



Furnace cast 8 inch pipe used as a drain for the rainspout at the rear of the wooden part of The Big House. The “mould” seam can be seen running the length of the pipe.

will find laying around on the ground and in the creek bed hundreds of years from now. Some of this slag is really nice looking; it looks like glass with colors running from light green to black. You have to be careful, the slag is also as sharp as glass. Why don't we get out of this hot shed and walk across the bridge to the Iron Masters Mansion? There will be a lot to talk about over there.

THE IRONMASTER'S MANSION



A 1981 sketch of "The Ironmaster's Mansion" by Arthur W. Grumbine. This sketch was given to Richard "Dick" Boyer as a gift.

Let's stop for a minute here on the bridge. As we look up the creek, we can see the gap in the Second Mountain; in a few years, 1854 to be exact, a huge covered railroad bridge will be built across the gap. This bridge will be called "The High Bridge." Trains will run over the bridge instead of through it as is common with most covered bridges.

Construction of the railroad from Dauphin on the Susquehanna River to Rausch Gap in Lebanon County will be completed this year; however, it will be 1854 before the line is completed into Auburn in Schuylkill County. The first two parts of the railroad are being built by the Dauphin and Susquehanna Coal Company. The Western end of the line connects with the

Pennsylvania Railroad at Rockville in Dauphin County. When finished, the Eastern end of the line at Auburn will connect with the Philadelphia and Reading Railroad. Some years from now this entire line will be known as the Schuylkill and Susquehanna Branch of the Reading Railroad. The stations in operation on the line this year are Dauphin, The Forge and Rattling Run, these three are in Dauphin County. Yellow Spring, Cold Spring and Rausch Gap are the Lebanon County stations; Gold Mine will be added to the Lebanon County list when the line is expanded in 1854. 1854 will also bring Schuylkill County its stations on the line. These will be: Swatara Furnace, Pine Grove, Stanhope Furnace, White Horse, Hummel's and Auburn (10). The Swatara Furnace stop will be just up

the mountain from the Ironmaster's Mansion; there won't be a siding or spur track at the Swatara Furnace stop; the train will just stop to unload its cargo, any iron products being shipped out will be picked up at this time (1).

Another bridge across Mill Creek will be built several hundred yards up the creek from where we are standing. This bridge will connect with a road that leads up the mountain to the Swatara Furnace railroad stop. Let's move over to the North side of the creek now. The building you see on your left is the furnace blacksmith shop (11). The blacksmith here can make or fix just about anything needed by the furnace. Much of the blacksmith's time is spent putting shoes on the horses and mules. On your right is a large sunken stone-walled pond with a fountain in the middle. This is probably the only fountain in Schuylkill County. The pond is bigger than most 20th Century backyard swimming pools. Water is supplied to the pond and fountain by pipes that were cast here at the furnace (4).



Front yard pond and fountain

Well, here we are in front of the Ironmaster's Mansion. The term Ironmaster's Mansion is more or less the formal name of the house. The house has also been called the Superintendent's House, The Man-

ager's House and the Big House. From now on we will call it the Big House; this is the name all of the workers and local residents use. The Big House is the center of all the activities here at Swatara Furnace. All of the decisions that affect the furnace are made here; people are hired and fired here. The house is the Ironmaster's home; it is also a boarding house for single furnace workers; there are also several guest rooms for traveling businessmen and



The two story right side of the house was constructed in 1830 or shortly thereafter.

family friends.

The Big House was not always as big as it is now. The West side of the house was built first; there were only three rooms in the stone part of this first construction; one big room downstairs with a fireplace and two smaller rooms on the second floor; there is an attic over the two second floor rooms. If we go up the main staircase to the first landing, take the left side steps to the second floor, turn left again and go up the next flight of steps to the attic we will see something unusual; half way up to the attic you will see a window that looks into the attic; this window was an outside window when the original stone building only contained three rooms. It is quite possible that there was a wooden, East section to the original three room stone house. There had to be a way to get up to the two rooms on the second floor; either by an outside staircase, or by an inside staircase in an earlier

wooden section.

Now, let's get to the people who live in the Big House. I guess the best way to describe the residents would be to take the 1850 United States Census and read down the list. There are fourteen unrelated people



View from the second floor balcony

living here in the house at this time. I think we can safely say that the house is being used as a boarding house. First on the list is Nathaniel Ferguson, age 33, and single. We mentioned before that Ferguson is the Ironmaster. Needless to say, the Ironmaster is the "head man" at any Iron Plantation. The Ironmaster hires and fires the furnace personnel, he knows every job connected with running a furnace, he decides work schedules, he is a salesman, he arbitrates disputes between furnace workers and he hosts traveling businessmen who may be interested in purchasing furnace products. Ferguson will go on to bigger things when he leaves Swatara Furnace; in 1857 he will become the Ironmaster at Robesonias Furnace in Berks County.

Upon the death of Henry Robeson in 1860, Ferguson will become part owner of the Robesonias Furnace and continue in this capacity until his retirement in 1885 (12). Next on the list is Catherine Davenport. She is 46 and single. Since occupations are not listed for females on the census, we are going to make a guess that Catherine Davenport runs the house, gives orders to the maids, servants and other domestic help. The name Davenport will become very important to Nathaniel Ferguson in a few years; in 1856 he will marry Miss Amanda Davenport, daughter of Dr. John Davenport of Connecticut, and Grand-daughter of Judge William Adams, a member of Congress in the early 19th Century (9).

The third name on the list is John Deter, age 33, occupation, Furnace Clerk. The Furnace Clerk is the second most important person at an iron furnace. The clerk keeps the account books and ledgers; he pays the furnace help and manages the furnace when the Ironmaster is away. Many clerks work their way up to becoming an Ironmaster; this is the way Nathaniel Ferguson became an Ironmaster.



Living room in the 1830 section

One job the clerk does at most furnaces is manage the Company Store - this is not the case at Swatara; for Swatara Furnace has its own storekeeper; his name is Jeremiah Persell, age 26, occupation Merchant. Jeremiah sells just about everything



Nathaniel Ferguson
Ironmaster at Swatara Furnace - 1848 to 1855

in his store a family could want; fabric, buttons, needles and cooking utensils for the housewife; tobacco, powder, shot and any number of other items for the men. Large quantities of food are also stocked in the company store. The furnace help is allowed to purchase anything on credit, with the charges being deducted from wages at a later date. The next two names on our list are two single females, Kate Mease, age 21, and Justine Klinger, age 20. I think we can say these two girls are part of the domestic help at the house. The next name is George Bower, age 9, listed as a Mulatto. In 1844 there was a J B Bower listed as a resident of Swatara Furnace, (13) this man might have been young George's father. The last seven residents of the Big House are all listed as laborers on the census. These are the men who are the helpers for the moulders, guttermen, and fillers. Owen

Daley, age 25, a native of Ireland, Samuel Reed, age 30, Franklin (no last name), age 20, Fredrick Hess, age 45, from Germany, John Beasome, age 30, John Conrad, age 21 and Samuel Casey, age 25.

It is impossible to determine how many domestics worked at the Big House without being able to look at the furnace records. It takes quite a large staff to run a house of this size. You need cooks, bakers, maids and dishwashers. Food alone keeps much of the help busy. You have to figure there are fourteen people living at the house on a permanent basis; there are guests that have to be cared for; add to that all of the mid-day meals taken at the house by some of the workers from the furnace and you have work for a sizable group of house personnel. One thing is sure, the two girls and young George Bower don't do all of this

work by themselves. The extra domestic workers at the house have to come from the families of the furnace workers who live nearby.



Second floor bedroom - 1830 section

The census lists the property here as "Furnace & Farm," with a value of \$25,000; this is a tidy sum of money for the year of 1850. The farm, or farms, grow all of the food necessary to keep the iron community functioning ; feed and bedding are grown to keep the horses, mules and oxen that are employed here happy. Most of the furnace workers that live in company homes have their own small vegetable gardens. These small gardens produce some of the food needed for meal time; however, it is not nearly enough to supply a large family year round. An iron worker, who spends twelve hours a day at the furnace, does not have the time to grow a years food supply for his family. The needed produce and meat are sold at the company store, and as with other merchandise, the cost of the food is deducted from the workers wages.

One of our company farmers is Joseph Mosher, age 60, his wife Eliza age 54, they have three children at home, William age 14, Jeremiah age 13, and Mary age 7. There are boarders living here as there are at the Big House; Alice Howe is 19 and single, William Warner is 26, and is listed

as a druggist, Thomas Pearce is age 25 and black. There are three members of the Mease family here on the farm, Elizabeth is 20 and single, Joseph is 18 and a "Filler" at the furnace, George is 14 and attends school. Most of these boarders no doubt work at the farm, furnace or Big House; where the druggist works is anybody's guess. John Stahl and Peter Barr are also two other farmers who live nearby; these two men could also be employed by the Furnace Company on a full or part-time basis.

Well, things have quieted down a bit, it's starting to get dark now, you can see the moon coming up over the trees. Someone in the Big House is playing a tune, it



Mill Creek and the Big House

sounds like an Irish tune, quite a few Irishmen live around here now. I guess the Ironmaster is entertaining the two visitors we saw earlier today. Look over towards the furnace, the flame coming out of the stack is starting to light up the area now. There won't be too much activity here at the furnace for awhile; James Black will spend most of night checking on conditions inside



Evening at "The Big House"

of the stack; he will adjust the airflow to the tuyeres and give John Conrad instructions as to how much ore, limestone and charcoal to dump into the stack every half hour. In a few hours the moulder and his crew will start to get their sand flasks ready for the 6 a.m. casting.

I guess we better be getting back down the road now. Let's stop here where we stopped this morning - once again we close our eyes; this time we visualize we are back in 1990. Now open your eyes, things are really quiet, somehow the creek seems to be a lot noisier than it did before, you can barely see the outline of the furnace in the moonlight. If you listen you can hear a screech owl somewhere up the side of the mountain; there are also a couple of Whip-poorwills calling back and forth to each other. As we walk back to the car, look through the trees again at the "Big House," electricity lights the house now. The "Big

House" is now called "The Forge Bed and Breakfast Inn." I wonder if the guests over there have any idea of the thousands of people who visited, lived, worked and died in this area around the furnace over the last 160 years; the names would probably fill a small telephone book. There were also hundreds of non-humans that lived here in the furnace community, there were the horses, mules and oxen who were employed at the furnace, there were also the cows, pigs, chickens and sheep at the farm, and dogs and cats at every household - all of these animals had names that have been long forgotten.

Well, I have said enough for one day; we have only touched on one small time period in the last 160 years - maybe tomorrow I'll search out a few more records and add to this story. For now, let's get back to the car.

SUMMARY

I will now try and bring together many of the bits and pieces of history I have collected over the last nine months. Hopefully, we will have a partial "picture" of what happened, and when it happened. While doing this research I came across quite a bit of conflicting information concerning the Swatara Furnace area. I will try and clear up as much as possible. Let's start with the furnace. The stone structure that has been called "The Forge" never was used as a forge or foundry; this structure was built in 1830 as a charcoal burning blast furnace and was used as such. A forge is a completely different setup. Secondly, the Swatara Furnace never used anthracite coal to melt iron ore, an anthracite burning furnace is of a different construction; Swatara would have to have been torn down and completely rebuilt to burn coal.

In 1855 (12), (another account says 1853 (15)) the partnership of Eckert and Guilford was dissolved, and the "works" (Swatara Furnace) abandoned. A third account states operations ceased as the use of anthracite coal superseded charcoal (9). After the shutdown of Swatara, Guilford went to Lebanon and with the investment help of others erected an anthracite burning furnace known as the Dudley Furnace. Eckert went to Reading when Swatara shut down. In Reading, Eckert was already a partner with his brother Isaac in the iron business; together they added a second stack to their Henry Clay Furnace, which was one of the largest anthracite furnaces in the country (16).

Nowhere in any of the material I read (Eckert, Guilford or Ferguson) did I find mention of a forge or foundry at Swatara. Of course this is only up until 1855. So, it looks as though Swatara Furnace shut

down and was abandoned about 1855. Eckert was in business with his brother in Reading, Guilford and others set up in Lebanon, and Ferguson was the Ironmaster in Robesonia.

Now we get to Swatara Forge. From the research I have done it seems that "The Forge" was constructed sometime after 1855. The Forge was built about one hundred feet from the Swatara Furnace stack; this is at the point where the "Head Race" ends and a sluice carries the water from the race into Mill Creek. The Forge's water wheel pit is still intact. The Forge was constructed of wood, brick and stone; the windows had metal frames, the doors of The Forge were high and rounded at the top. The area occupied by The Forge was about fifty by fifty feet. In the late 1920's The Forge roof had caved in but the walls were still standing (1). Who built The Forge? As of now we don't know, how long did it operate? We are not sure of that either. There are about five different dates that The Forge was supposed to have shut down. We do have one clue though; on an 1875 map by Beers, The Forge and all the nearby homes are owned or leased by J.B. Seidel. The Seidel family was in the iron business in Berks and Lebanon Counties for many years (16).

One publication states that The Forge had to cease operations in 1861 because a flood washed out the dam that supplied water for the water wheel (17), another says The Forge did operate until 1880, for by this time in the 1800's air blast machinery could be operated by coal burning steam engines. There was plenty of coal in the area to run a steam engine.

Other publications held that operations

were ceased at Swatara because the "Great Flood" washed out the Union Canal and caused a lack of transportation in and out of the area. These statements are also in error. From 1854 on transportation in and out of Swatara was by railroad. A bridge spanned Mill Creek directly across from The Forge. A road led up the mountain

from the bridge to the railroad where pig iron was brought in to The Forge - finished products were shipped out the same way (1). We now know a little more about The Forge, however a lot more research has to be done to clear up the remaining Forge mysteries.



The word "Forge" and "J.B. Seidel" appear on a n 1875 map of the Swatara Furnace/Forge area. Mr. Seidel never did own this property at the far West end of Schuylkill County. This land passed directly from the Eckert family to Mahlon H. Boyer on December 3, 1889.

ODDS AND ENDS

If you look at the sketch of Swatara Furnace on page ii, you will note that there is a wooden shed that protects the air-blast machinery. It is believed this sketch was done ca 1900 by the artist R. K. B. Note that the artist gives the location of the furnace as Ellwood, and not Outwood as the small village was later named. Also, in the sketch you can see the remains of the "Cast House" foundation just to the left of the furnace stack.

When The City of Lebanon water supply dam was built (1946 - 1948) the surveyors planned to have the pipeline run directly under the middle of the furnace; this would have meant the furnace would have been completely destroyed. It was only because of the outcry of local citizens that the furnace was saved. The pipeline crew rerouted their ditch just to the rear of the furnace stack in order to protect the stonework. If you go around to the rear of the stack you will see that the furnace did not completely escape damage - there are large gaps between some of the stones; these gaps were caused over a period of years as dirt in the pipeline ditch settled.

The log cabin directly across Mill Creek from the furnace was not part of the "Iron Plantation" as some people believe. Construction of the cabin started on March 5, 1932, and was completed on July 4, 1933, (18). The builders of the cabin were, Richard Boyer, Bill Williams, Lloyd Williams and members of the Stager family. George Boyer donated the chestnut logs and hired a stonemason to build the fireplace. As soon as the cabin shell was complete, my dad, Arthur W. Grumbine, built in upper and lower bunk beds, installed an attic shelf over the big window, built book shelves and finished the interior trim. In

1946 my uncle, Bill Williams, and I installed the two windows next to the fireplace. My dad, Arthur, rented the cabin yearly for our pleasure from its completion in 1933 until the mid 1950's; he also furnished it.



The Cabin

There have been structural changes in "The Big House" since 1961. On the 3rd floor of the East section of the house there are two large bedrooms; these two rooms had a connecting doorway between them before the house was modified. Also on the 3rd floor a small room that used to be known as the "Trunk room" has been converted into a bathroom. On the 2nd floor of the East side there are two more large bedrooms; these two rooms were also connected by a doorway before 1961. On the 2nd floor, directly over the front door of the house is a double bathroom; this space used to be taken up by a small bedroom that had a door in each end - one door led to the West, or "old" side of the house, the other door let out on the interior balcony of the East or, "new" side of the house.

The most noticeable changes in the house have been made on the 1st floor,

East side. The kitchen used to have two additional doors, one door led to the wooden back part of the house and the other led West into a narrow kitchen that was used by Miss Margaret A. Boyer. The large fireplace between the kitchen and the dining room is also a new addition; these two rooms were at one time connected by a single doorway. There was also a closet in the kitchen and one in the dining room that have been removed.



Wall with closet behind the stove and the wall to the left of the open doorway removed to make way for the 1960's "See Through" fireplace.

A new room has been added to the outside of the house; this room is in the angle between the "old" and "new" sections of the house. The two closets on either side of the main entrance are also new additions. Prior to 1961 there was no central heating system in the house. Each room that was lived in was heated either by a coal stove or a kerosene heater.

Directly behind "The Big House" there is a small stone building; this building is not a tool or wood shed; it is a genuine three hole outhouse. A person in 1991 would have to go a long way to find any outhouse, let alone one made of stone that can still be used if necessary.

There are two more stone houses just

East of "The Big House" on the road to Outwood. These two houses were also part of the Swatara Furnace Iron Plantation (19). When these homes were built is not known. Well built stone homes like these were usually reserved for use by "higher-ups" in the furnace community (Moulders, Founders, etc.).

The middle stone house was originally constructed as a double house. In 1932 the David and Sylvia Boltz family lived in the West side of the house; the George and Eva Gibson family lived in the East side (1). On Dec. 12, 1932 (18), young Violet Boltz was stirring a pan of hot lard on the cookstove; somehow the lard ignited; the resulting fire gutted the entire stone home, only the four stonewalls were left standing. George Boyer rebuilt the house shortly after the fire; however, it was rebuilt as a single home this time. My dad, Arthur Grumbine, rented the house as soon as the reconstruction was complete; he planned to use the house for a photography business; this did not materialize though and he gave up the house after about a year.



The "Three Hole" outhouse



This photo was taken by A.W. Grumbine shortly after the house was rebuilt. Notice the new "pointing" over the second story windows. The fire had burnt out the windows which resulted in some of the original stonework falling into the interior of the home. Wooden covered water well at right.

I will finish this section with a personal note. While living at "The Big House" year round from December 1945 to November 1950, I spent quite a bit of time sledding down the hill right next to the furnace stack. I did not know at the time I was sledding right past the Swatara Furnace - everyone called it The Forge; I also did not know that the proper name for this hill was the "Furnace Bank."



Sled run at right of furnace

The Robert Stager family, with whom we were good friends, lived in the house just behind the furnace. The Stager dog also enjoyed my sledding trips - he would run along beside me on his dog line that ran from the top to the bottom of the hill.



Rebuilt living room and fireplace from above home

Ghosts, Noises and Hauntings

No story about a house as old as "The Big House" would be complete without a few lines devoted to the supernatural. I will relate a few of the things I remember.



Main Staircase

A fine white line appears to float between the banister rungs and the wall of the stairs that come from the left.

When I was quite young I remember my grandmother, Georgia Williams, telling visitors about a young girl who was employed at the house to do some housecleaning. It seems that one day the girl was working in the hall at the bottom of the main staircase, the girl happened to look up towards the top of the stairs and saw a young woman in a floor length gown or dress standing on the second or third step from the top; the cleaning girl said the woman at the top of the stairs looked normal enough to start with; however, after a few seconds this person started to fade to the point where you could see the wall through her. The cleaning girl then

screamed and ran into the kitchen where my grandmother was working; the girl even refused to go back to the hall with my grandmother to see if there was anyone there. My grandmother said there was nobody else in the house at this time except the cleaning girl and herself. As for the cleaning girl, she quit her job on the spot, and never returned.

Sometime around 1940 (I am not sure of the exact year.), some people from Pine Grove came out to visit. Everyone was sitting on the side porch facing the barn. My grandmother and Miss Margaret A. Boyer (Miss Boyer was one of the owners of the house and spent her summers in the West side of the house.) were talking to these visitors. The conversation got around to ghosts, footsteps in the night and other noises. My grandmother and Miss Boyer both said, while they had never seen anything, they always heard footsteps in the hall and on the balcony after they had gone to bed at night. Neither of them said they were ever afraid to stay in the house alone. My grandmother always locked her bedroom door at night; she always kept a loaded .38 semi-automatic pistol in her bedside stand.

One of the men from Pine Grove said he wanted to spend a night in the house sometime to see if it was haunted (at that time I did not know who the man was). Several years later, I heard Grandmother tell someone that Conrad Richter, the author from Pine Grove, was the man who wanted to spend the night in the house. I never thought much about the matter after that. Last summer (1990) I was talking to my Cousin Brenda Brogan Snell; she told me that sometime in the middle 1950's she

was visiting Grandmother at "The Big House." While she was there Conrad Richter spent a night in the West side of the house. Brenda said Mr. Richter was disappointed with his overnight stay; the reason being that the ghost did not appear and there were no unusual noises.

In 1946 Grandmother had a collie named Laddie. There were times when Laddie would come up to the second floor and nose around in the bedrooms; almost every time Lad entered Grandmother's bedroom (bedroom on the Southeast corner of the house) we would hear a bark or growl. One day I happened to be in the bedroom when Lad came in; he stopped, looked into the corner of the room, growled a little and walked back out. I asked Grandmother what she thought of Lad's strange behavior; she said Grandfather Williams had died in his bed in that corner in 1932, and perhaps Lad was sensing something from that time period.

In all the years I spent at "The Big House," I never saw or heard anything out of the ordinary; however, there was one night in the Summer of 1953 that something very strange happened to me. My parents and I were living in Parlin, New Jersey at this time - my dad drove my mother and myself up to "The Big House" for a visit - this was around the 4th of July. The house was nearly full; my Uncles and Aunts from Philadelphia, Boston and New York were all there for the 4th. All of the bedrooms on my grandmother's side of the house were filled; Miss Boyer always let us use her vacant bedrooms whenever there was an overflow crowd on our side of the house.

I got to sleep in a room I had never slept in before - this was the connecting room on the second floor directly over the front door of the house. This was a small room that had space for only one single bed. There was a door at each end of the room; one door led to the West side of the house (the oldest part of the house), the other door opened out on the interior balcony of the East side of the house.

Everyone watched TV until about 11 p.m.; then they went to their various rooms for the night. I was very tired and went to sleep as soon as my head hit the pillow. I did not dream at all that night - the next thing I remember was that I was wide awake and sitting up in bed. I cannot find words to accurately describe my feelings at the time I woke up. The best I can say is that I had feelings of utter despair or depression, and that I had better get out of the room as soon as possible; there was no sound or apparition in the room, just absolute darkness with no noise of any kind. I gathered up my clothing and ran downstairs to the dining room where there was a couch. As soon as I left the bedroom the strange feelings I had cleared up. Just after I lay down on the couch I heard the wall clock strike 2 a.m. The next morning I was asked why I slept downstairs; I just said the bed upstairs was uncomfortable, so I came down here to sleep. Never before or since have I had an experience like the one of the Summer of 1953.

The room over the front door of the house will never be slept in again, for sometime after 1961 this room was partitioned off and made into two small bathrooms.



On the road from Swatara Furnace to Outwood. The stone house at the right was one of the homes occupied by upper echelon furnace workers; the stone house to the left was the one that burnt in 1932 and was later rebuilt.



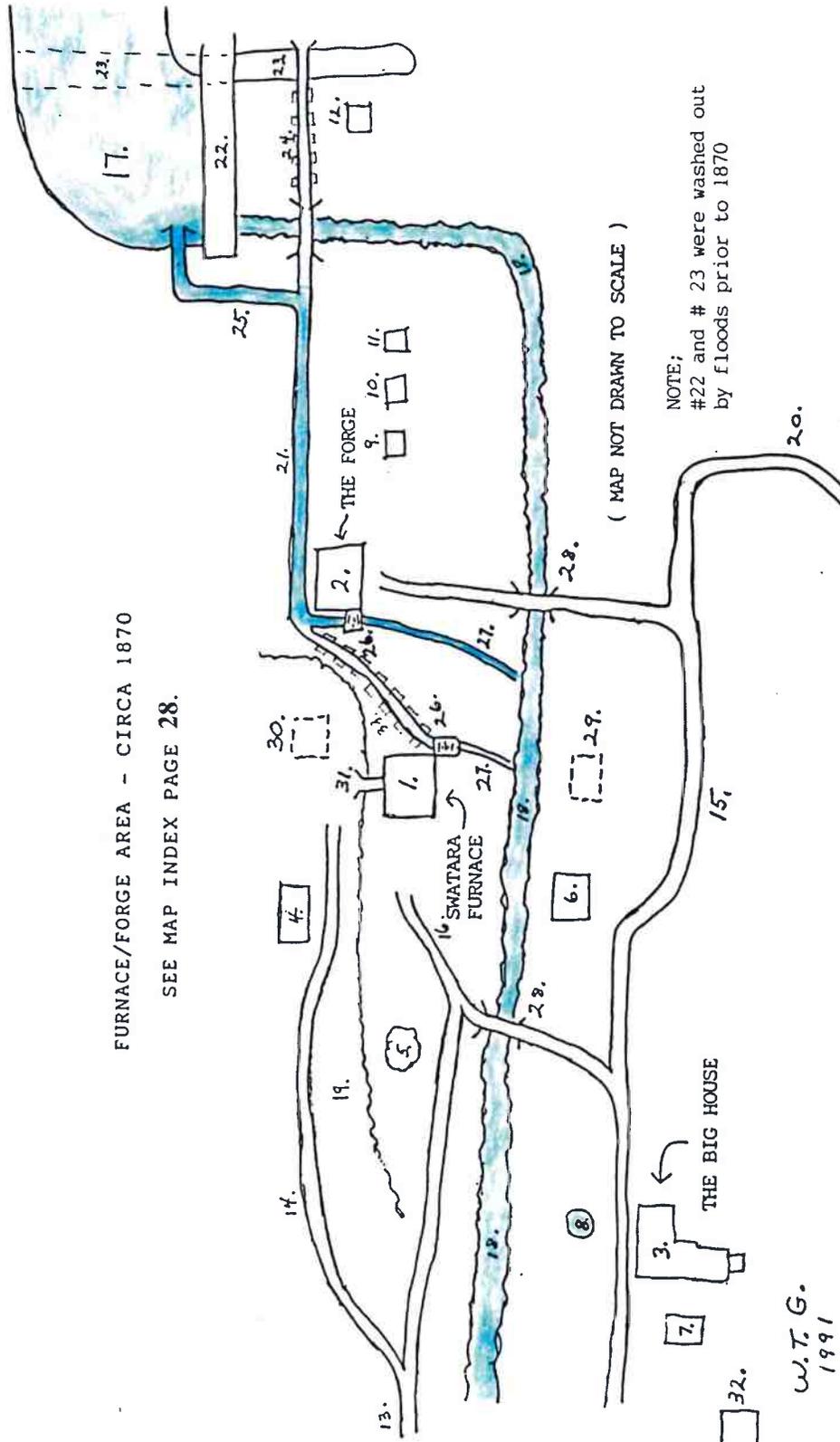
The road to Outwood.



Residents of "The Big House," Margaret A. Boyer left, Georgia Britton Williams at right.

FURNACE/FORGE AREA - CIRCA 1870

SEE MAP INDEX PAGE 28.



NOTE:
#22 and # 23 were washed out
by floods prior to 1870

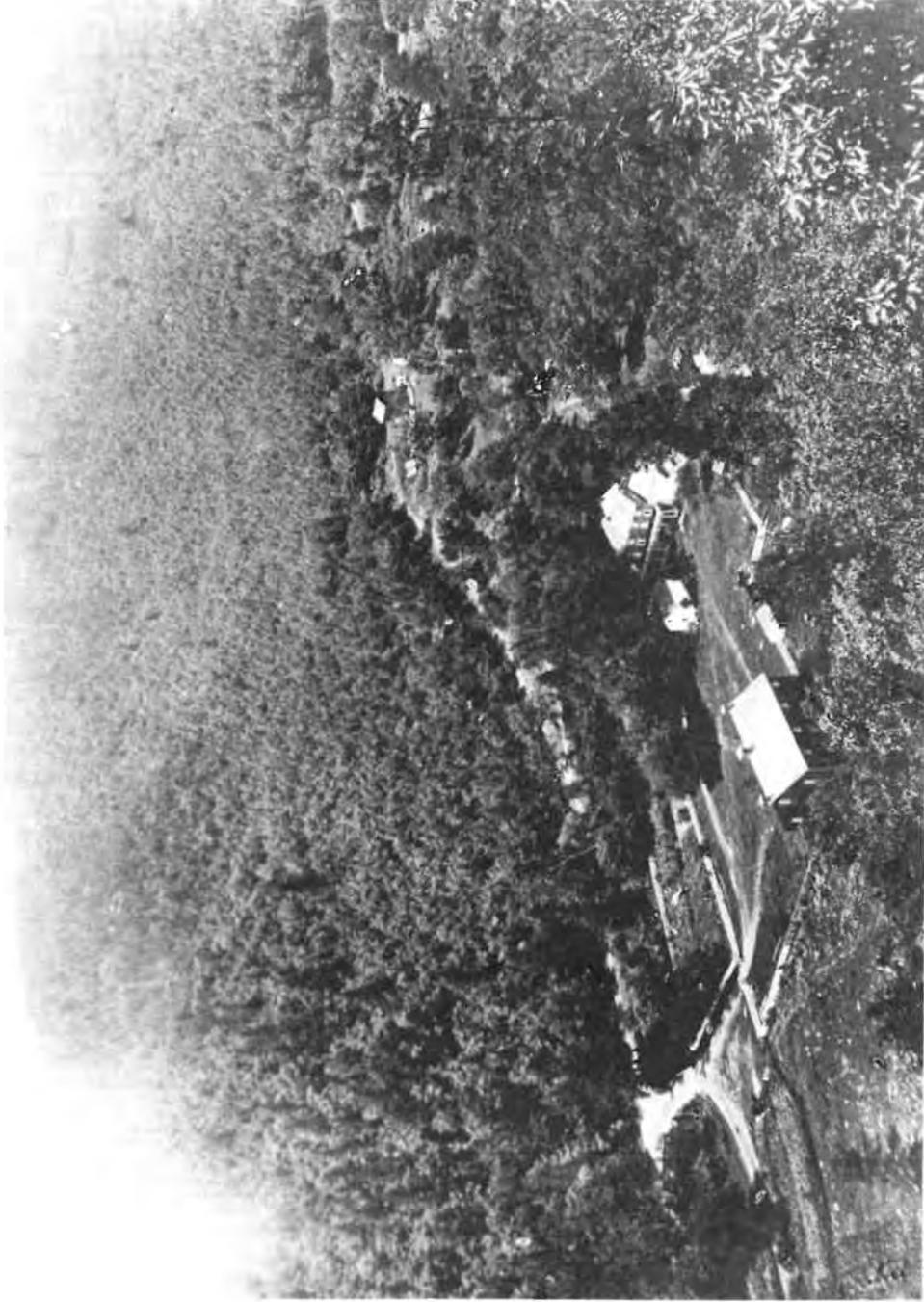
(MAP NOT DRAWN TO SCALE)

W.T.G.
1991

MAP KEY - FURNACE/FORGE AREA

1. Swatara Furnace.
2. The Forge.
3. The Big House.
4. Charcoal storage.
5. Slag pile.
6. Blacksmith shop.
7. Company store.
8. Fountain and pond.
9. Workers' home.
10. Workers' home.
11. Workers' home.
12. Workers' home.
13. Road to Port Mifflin.
14. Road to top of furnace bank.
15. Road from Big House to Forge and railroad.
16. Road to furnace from Big House.
17. Water storage dam.
18. Mill Creek.
19. Furnace bank.
20. Road up the mountainside to railroad.
21. Headrace.
22. Stone dam-breast (later dam).
23. Earth dam-breast (early dam).
24. Elevated sluice to headrace.
25. Headrace to supply dam.
26. Waterwheel.
27. Drain sluice from waterwheel to creek.
28. Bridge across Mill Creek.
29. Site of log cabin to be built 1932 /1933.
30. Stager family home.
31. Bridge from furnace bank to furnace.
32. Barn.
33. Elevated sluice from headrace to furnace waterwheel.

Swatara Furnace Iron Plantation



The above photo was taken in the late 19th Century by an unknown photographer from the top of the mountain. The Ironmaster's Mansion or "Big House" can be seen in the lower right center; the Swatara Furnace stack is visible a little right and below the wooden house at the upper right center of the picture.

SWATARA FURNACE AND NEARBY AREA RESIDENTS IN THE YEAR OF 1840

FAMILY/ HOUSEHOLD	# MALES	BETWEEN AGES	# FEMALES	BETWEEN AGES
George Betz	1	Under 5 years	2	Under 5 years
	1	5 - 10 years	2	5 - 10 years
	1	30 - 40 years	1	30 - 40 years
Henry Bohr	1	20 - 30 years	1	10 - 15 years
	1	60 - 70 years	1	15 - 20 years
			1	30 - 40 years
			1	50 - 60 years
Henry Doil	1	5 - 10 years	2	Under 5 years
	1	30 - 40 years	1	5 - 10 years
			1	20 - 30 years
George N. Eckert	1	15 - 20 years	2	15 - 20 years
	2	30 - 40 years	1	40 - 50 years
John German	1	50 - 60 years	1	Under 5 years
			1	20 - 30 years
William Hatt	1	5 - 10 years	1	Under 5 years
	1	15 - 20 years	1	20 - 30 years
	1	20 - 30 years		
Christopher Kantner	1	40 - 50 years		
John Keek	2	Under 5 years	1	5 - 10 years
	1	10 - 15 years	1	10 - 15 years
	1	50 - 60 years	1	40 - 50 years
William McDugal	1	Under 5 years	2	Under 5 years
	1	10 - 15 years	1	5 - 10 years
	1	20 - 30 years	1	20 - 30 years
Henry Meek	1	Under 5 years	1	Under 5 years
	1	30 - 40 years	1	10 - 15 years
			1	20 - 30 years
			1	60 - 70 years

SWATARA FURNACE AND NEARBY AREA RESIDENTS IN THE YEAR OF 1840

FAMILY/	# MALES	BETWEEN	# FEMALES	BETWEEN
Casper Miller	1	5 - 10 years	2	Under 5 years
	1	30 - 40 years	1	5 - 10 years
			1	10 - 15 years
			1	15 - 20 years
			1	30 - 40 years
John Miller	1	30 - 40 years	2	Under 5 years
			1	30 - 40 years
Widow Ney	1	5 - 10 years	1	30 - 40 years
William Percy	1	5 - 10 years	2	5 - 10 years
	1	10 - 15 years	1	10 - 15 years
	1	40 - 50 years	1	30 - 40 years
George Radford	1	20 - 30 years	1	30 - 40 years
Thomas Ramsey	1	20 - 30 years	1	Under 5 years
			1	20 - 30 years
Samuel Ratinger	2	Under 5 years	1	20 - 30 years
	1	5 - 10 years		
	1	20 - 30 years		
Absolem Reger	1	Under 5 years	1	20 - 30 years
	1	20 - 30 years		
Michael Stimber	1	10 - 15 years	1	40 - 50 years
	1	30 - 40 years		
Henry Zimmerman	1	15 - 20 years	1	50 - 60 years
	1	50 - 60 years		

Above information from U.S. Census, 1840, Schuylkill County, Pa.,
Pine Grove Township, page 72.

Note: There are surnames on page 72 of the 1840 census that are illegible;
I have not included these families on this page.

The Year of 1845: Residence — Swatara Furnace

NAME	PLACE OF NATIVITY
George Betz	Newmanstown Berks County
Solomon A. Phillips	Lancaster County
Philip Umberger	Dauphin County
George Herman	Luzerne County
J.B. Bower	Berks County
Wm. B. Walton	Do.
Jacob Focht	Do.
John Kline	Spickern Erance (France ?)
Daniel Nogle	York County

The above names are from the Subscriber List, (Page 534) of the History of Northampton, Lehigh, Monroe, Carbon and Schuylkill Counties Pa., by Daniel I. Rupp; Published 1845, Harrisburg, Pennsylvania.

Many of the surnames are the names of families that were active in the iron business in other Pennsylvania Counties.

The Year of 1850

Dwelling #	Name	Age	Sex	Occupation	Land Value	Born	Other Residents Names	Age	Sex
64	John Stahl	30	M	Farmer	\$2000	Penna.	Polly	28	F
						Penna.	George	7	M
						Penna.	Sarah	5	F
						Penna.	Thomas	3	M
						Penna.	Kitty	1	F
						Penna.	Susan Stahl	50	F
						Penna.	Catherine	47	F
65	Peter Barr	39	M	Farmer	\$3500	Penna.	Eve	37	F
						Penna.	Kate	9	F
						Penna.	John	7	M
							David	5	M
							Thomas	3	M
							Peter	1	M
							Elizabeth Barr	40	F
							John Holtzman	5	M

Dwell- ing #	Name	Age	Sex	Occupation	Land Value	Born	Other Resi- dents Names	Age	Sex	Occupation
66	James Black	38	M	Furnace Keeper		Virginia	Julia	34	F	
						Penna.	Cassie	7	F	
						Penna.	Hannah	4	F	
67	Amos Horsberger	28	M	Teamster		Penna.	Polly	26	F	
						Penna.	John	1	M	
68	John Deisher	50	M	Collier		Ireland	Atisha	40	F	
						Ireland	William	22	M	Collier
						Ireland	John	20	M	Collier
						Ireland	Ann	16	F	
						Ireland	Margaret	10	F	
						Ireland	Sarah	11	F	
						Ireland	Michael	5	M	
						Ireland	George	2	M	
						Ireland	James	4/12	M	
69	John Meak	53	M	Filler		Penna.	Leah	50	F	
70	Joseph Mosher	60	M	Farmer	\$4000	Penna.	Eliza	54	F	
						Penna.	William J.	14	M	
						Penna.	Jerimiah	13	M	
						Penna.	Mary J.	7	F	
						Penna.	Alice Howe	19	F	
						Penna.	William Warner	26	M	Druggist
						Penna.	Thomas Pearce (black)	25	M	
						Penna.	Elizabeth Mease	20	F	
						Penna.	Joseph Mease	18	M	Filler
						Penna.	George	14	M	
71	Cyrus Simms	25	M	Teamster		Penna.	Angelina	24	F	
						Penna.	Luvina	10	F	
						Penna.	Sarah	8	F	
						Penna.	William	6	M	
						Penna.	Catherine	4	F	
						Penna.	Susan	6/12	F	

Dwell- ing #	Name	Age	Sex	Occu- pation	Land Value	Born	Other Resi- dents Names	Age	Sex	Occupation
72	Nathaniel Ferguson	33	M	Furnace & Farm	\$25000	Penna.	Catherine Davenport	46	F	
						Penna.	John Deeter	25	M	Clerk
						Penna.	Jeremiah Persell	26	M	Mer- chant
						Penna.	Kate Mease	21	F	
						Penna.	Justine Klinger	20	F	
						Penna.	George Bower (Mulatto)	9	M	
						Ireland	Owen Daley	25	M	Laborer
						Penna.	Samuel Reed	50	M	Laborer
						Penna.	Franklin	20	M	Laborer
						Germany	Frederick Hess	45	M	Laborer
						Penna.	John Beasome	31	M	Laborer
						Penna.	John Conrad	21	M	Laborer
						Penna.	Samuel Casey	25	M	Laborer
NOTE: Dwelling Number 72 (Above) is "The Big House" or "Ironmaster's Mansion." There were fourteen unrelated people living in the house when the 1850 census was taken.										
73	Henry Doyle	45	M	Moulder		Penna.	Maryanne	34	F	
						Penna.	Hennetta	17	F	
						Penna.	Isaac	16	M	
						Penna.	Mary	12	F	
						Penna.	John	6	M	
						Penna.	Susan	10	F	
						Penna.	Thomas	6	M	
						Penna.	Maryanne	5	F	
						Penna.	Anderson ???	3	M	
						Penna.	???	11/12	F	

The Year of 1875

On an 1875 map by J.H. Beers all of the area surrounding the Furnace/Forge is shown as being leased by J.B. Seidel. There are nine dwellings on this map bearing the Seidel name. These nine houses include one house that is marked J.B. Seidel "Res"; this particular house was located between "The Big House" and the second stone house on the way to Outwood. The house marked J.B. Seidel "Res" no longer exists.

The Year of 1889

From 1889 we will list only the names of the known residents of "The Big House."

On December 3, 1889, the Furnace/Forge property and thousands of surrounding acres were purchased by Mahlon H. Boyer from the Eckert family. Mr. Boyer and his wife, the former Miss Leininger spent their summers at The Big House for a number of years after the property was purchased. The Boyer children, George, Charles, Frank, Mary, Anna, Margaret, Ella and Gertrude also enjoyed summers at "The Big House."

After a period of years the Boyer family stopped using the house for vacations; at this time it was put up for rent. We know the names of two families who lived in the house before 1920. The Myers family lived in the house before 1907. Before 1920 the Bohr family were renters.

The Year of 1921

While on a fishing trip in early 1921, William T. and Georgia Williams (both were fishermen), walked into the yard of "The Big House." The house was vacant at the time. My Grandmother Georgia said, "The grass in the yard was knee deep, when we walked onto the porch we saw that the kitchen door was off of its hinges - a cow walked out of the kitchen to greet us." Georgia and William decided that they would like to rent the house for the summer if possible. Well, that one summer turned into forty years. In June 1921 William, Georgia, daughter Dorothy, and sons Lloyd and Aaron (Bill) moved in. Daughter Ruth was employed in Lebanon and had an apartment there. Daughter Helen was in nurses training in Philadelphia.

Over the next forty years the following family members lived in the house year round, spent weekends or vacations, or lived in the house for varying lengths of time: William T. Williams, Georgia Britton Williams, Ruth Williams Grumbine, Arthur W. Grumbine, (also rented the cabin when it was completed), Dorothy Williams Gilmore, James R. Gilmore, Aaron Bill Williams, Catherine Cady Williams, Lloyd L. Williams, Ruth Miller Williams, Helen Williams Brogan (then Kimmey), Brenda Brogan Snell, William T. Grumbine Sr., Mary Luvern Allman Grumbine, William T. Grumbine Jr. and John Leonard Grumbine.

The Williams family rented the whole house (both East and West sides) from 1921 until 1939. In March of 1939 Miss Margaret A. Boyer moved into the West side of the house. Miss Margaret spent Spring, Summer and Fall at the house from 1939 until the early 1950's. The Williams's continued to rent the East side of the house.

The Year of 1961

In the Summer of 1961 Richard Boyer said he was going to remodel the house so that he and his family could retire there.

November 16, 1961 - Williams's last day at "The Big House."

After the house was completely remodeled (central heat, plumbing, new electrical service) the Boyer family move in to enjoy their retirement.

The Year of 1983

November 4, 1983 - Dorothy Chadwick Boyer passes away.

The Year of 1984

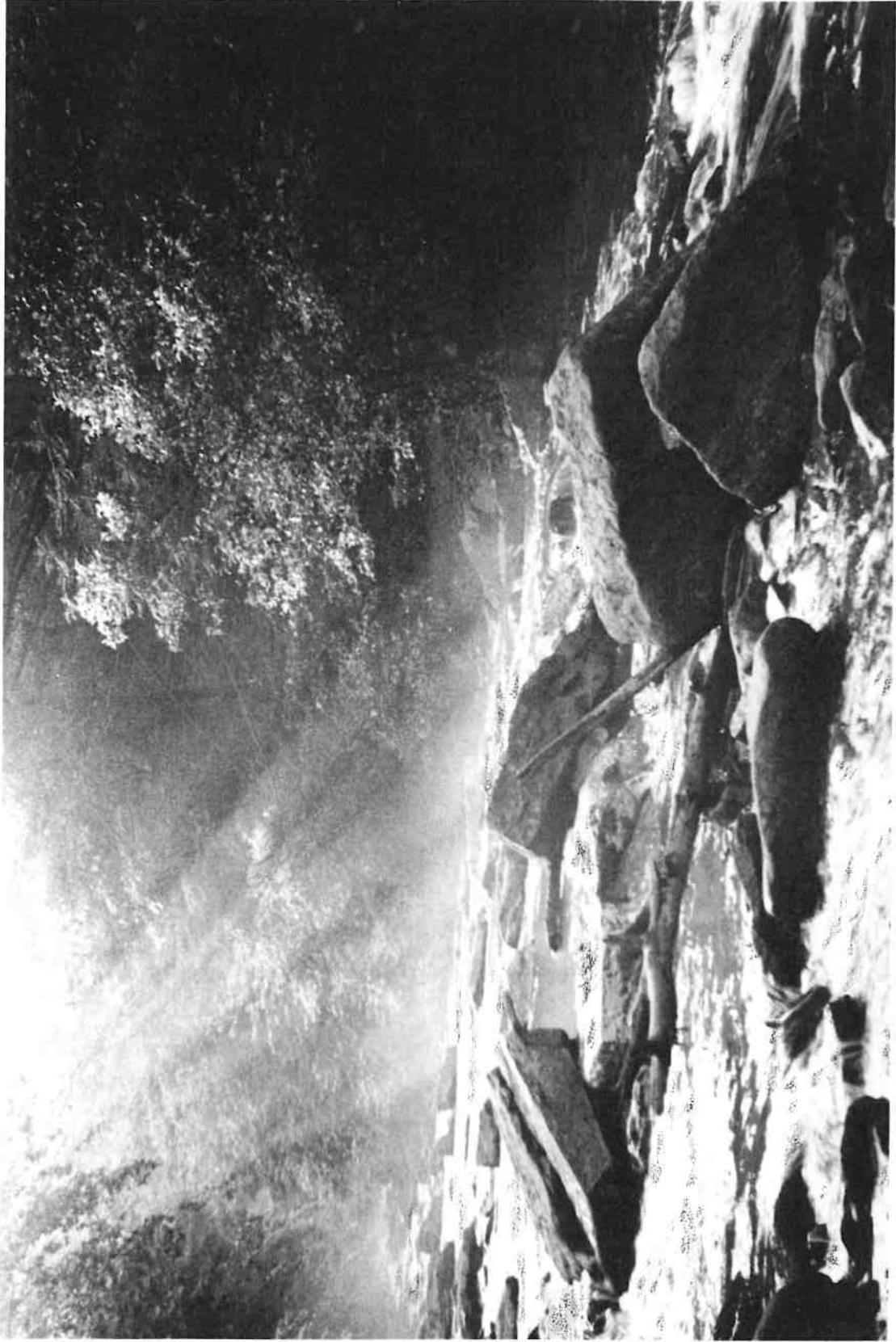
January 1984 - Daniel and Lucille Sarge Valibus move in to assist Richard Boyer with house operations. Lucille Valibus is Richard Boyer's 2nd Cousin.

January 29, 1984 - Mahlon Richard Boyer passes away.

Daniel and Lucille Valibus stay at the house as caretakers for Margo Ward Boyer and family.

The Year of 1989

Margo Boyer Ward remodels the house. In August 1989 the house is opened to the public as "The Forge Bed and Breakfast Inn." Lucille Valibus is the resident manager.



“Woodland Symphony” - Mill Creek at a point directly in front of the Swatara Furnace.

Photo taken before the 1946/48 City of Lebanon Water Supply Dam restricted the creek water supply.

ECKERT- GENEALOGY and HISTORY

1.

First known ancestors: Peter Eckert and wife Anna.
 Home: Streiberg, County Gelhausen, Hesse Nasse Nassau, Germany.
 Children: John, b 1707.

2.

John Eckert and wife Angelica, (daughter of Valentine Hixt).
 Home: Langensebold, Germany.
 Occupation: Blacksmith.
 Children: Johanna Magdalena Elizabeth, John Valentine, Jonas, John Conrad, b 1741, (these first four children were born in Langensbold, Germany). In 1741 the family emigrated to Berks County, Pa. The following children were born in Berks County: Maria Christina, John Nicholas, John and Anna Maria.

3.

John Conrad Eckert and wife Elizabeth Hain.
 Home: Berks County, Pa.
 Occupation: Blacksmith, Farmer.
 Children: John, b 13 Oct., 1766, Katharina, b 11 Dec 1769, (Katharina was the G-G-G-Grandmother of W.T. Grumbine Sr.), Peter, b 12 Nov., 1771, John George, b 10 Feb, 1774, Barbara, b 10, Apr., 1776, David, b 19 Nov, 1778, Daniel, b 11 Apr., 1781, Solomon, b 12 Aug., 1783, Conrad, b 25 Feb., 1787, Catherine, b 22 Dec., 1789.

4.

Peter Eckert and wife Susanna Brown.
 Home: Womelsdorf, Berks County.
 Occupation: Merchant, Businessman, Coal land owner.
 Children: David, b18 Mar., 1795, William, Isaac, b 26 Jan., 1800, George Nicholas, b 4 Jul., 1802, Peter, b 16 Sept., 1805, Mary Eliza Susan.

5.

George Nicholas Eckert and wife Emily Trevor.
 Home: Womelsdorf, Reading, Pine Grove, Swatara Furnace, Philadelphia, Pa.
 Occupation: Medical Doctor, Businessman, Furnace Builder, Ironmaster, Congressman, Director of the U.S. Mint in Philadelphia, Pa.
 Children: Charles, Trevor, Fanny (or Tammy).

The name Eckert was well known in the Pine Grove area long before the advent of the 19th Century. Col. Valentine Eckert (the Great Uncle of George N. Eckert) of the Revolutionary War period was one of the soldiers responsible for the Pine Grove area defense against marauding Indians during the war (3). Capt. Conrad Eckert (the grandfather of George and the brother of Valentine is also mentioned in local history) (3).

Peter Eckert (father of George N. Eckert) owned coal land North of Pine Grove. There is little doubt that George's father, Peter, is the man who owned Eckert's grist mill in Pine Grove (3). George N. Eckert's Uncle George and his family also lived in Pine Grove (5). What Uncle George did for a living is not known - we do know that he had seven children and that he died in Pine Grove (7).

Now we get to our subject, George Nicholas Eckert was born in Womelsdorf, Pa., July 4th, 1802. George attended the local schools and helped his father, Peter, in the family store (22). George then went on to medical school at the University of Pennsylvania - he graduated from the University of Pennsylvania in 1824 and started a medical practice in Reading, Pa (23). Dr. Eckert was also one of the organizers of the Berks County Medical Society in 1824.

On some unknown date George married Emily Trevor of Northumberland County. The town of Trevorton was named after Miss Trevor's family. In 1826 George and his family moved to Pine Grove to practice medicine and look after his father Peter's coal mining and business interests. Sometime around 1830 Eckert joined with Simeon Guilford to build the Swatara Furnace Iron Plantation.

George N. Eckert was elected as a Whig to the 30th Congress (March 4, 1847 to March 3, 1849). In 1851 President Millard Fillmore appointed Eckert Director of The U.S. Mint in Philadelphia. This term lasted from June 1851 to June 6, 1853 (23).

In 1855 George was in Reading again; he and his brother, Isaac, erected a second stack at their Henry Clay Furnace along the Schuylkill River. George N. Eckert passed away June 28, 1865 in Philadelphia, Pa.

GUILFORD - GENEALOGY and HISTORY

1.

First known ancestor: Paul Guilford.

Home: England, ca 1650

Paul emigrated to America about 1650 and settled near Boston, Mass.

2.

Simeon Guilford and wife, Ruhanna Hayden Guilford.

Home: Northampton, Hampshire County, Mass.

Children: Simeon, b 10 May, 1801.

Simeon Guilford, Jr. and wife, Catherine Doll Guilford.

Home: Lebanon, Pa.

Occupation: Civil Engineer, Furnace builder.

Simeon Guilford's early working years were spent as a civil engineer on the Erie Canal. In 1923 Guilford moved to Lebanon County, Pa. and served as assistant engineer with Canvas White in building the Union Canal. In 1827 Simeon was appointed principal engineer in the service of The State of Pennsylvania by the Board of Canal Commissioners. While in Lebanon County, Guilford discovered three deposits of hematite ore; he also discovered the Chestnut Hill iron ore deposit on the Greider farm he owned near Columbia, Pa.

In 1830 Guilford was married to Catherine Doll, a niece of Judge Andrew Graff of Lancaster. 1830 was also the year Guilford formed a partnership with Dr. George Eckert to build the Swatara Furnace in Schuylkill County. This partnership lasted until 1855 when Swatara Furnace was abandoned. In 1855 Guilford and others built an anthracite coal burning furnace in Lebanon known as the Dudley Furnace. Simeon Guilford died in 1894 at the age of 93.

FERGUSON - GENEALOGY and HISTORY

1.

First known ancestors: John Ferguson and wife Elizabeth.

Home: Dublin, Ireland.

The Ferguson's emigrated to America about 1800.

Children: Nathaniel, b 20 Nov., 1817. Nathaniel was the youngest son in a family of 12 children.

2.

Nathaniel Ferguson and wife, Amanda Davenport Ferguson.

Home: Lancaster County, Swatara Furnace, Robesonia and Reading, Pa.

Occupation: Furnace Clerk, Ironmaster, Furnace Owner.

Children: Elizabeth, Laura, Nathaniel, Wilson and Grace. There were five other children that were not listed.

Nathaniel Ferguson left home at the age of eighteen to attend the Moscow Academy in Lancaster. After graduating from the Academy in 1839 Nathaniel became the clerk at Elizabeth Furnace in Lancaster County. After two and a half years as clerk he rose to the top management position (Ironmaster) at the furnace; he held this position for seven years.

In mid 1848 Ferguson took the position with Eckert and Guilford as Ironmaster at the Swatara Furnace in Schuylkill County. He served as Ironmaster at Swatara until 1855. By 1855 anthracite coal had superseded charcoal in most iron smelting operations; as a result Swatara Furnace was shut down and the partnership of Eckert and Guilford dissolved.

In 1856 Nathaniel married Miss Amanda Davenport, a granddaughter of Judge William Adams, a member of Congress in the early 1800's.

In 1857 Nathaniel became Ironmaster at the Robesonia Furnace in Berks County. In 1860, at the death of Henry Robeson, Nathaniel purchased a part interest in the Robesonia Furnace; he retained the position of Ironmaster and part-owner of the Robesonia Furnace until his retirement in 1885. Nathaniel Ferguson died in Reading, Pa. in 1891 (9).



First floor of the rear wooden part of the house.



Barn and "Carriage House" at the East end of the yard.

**DOCUMENTS RELATING TO THE MANUFACTURE OF IRON IN
PENNA.**

Published by The General Committee - 1850

SWATARA FURNACE - 1850

County - Schuylkill

Date of construction - 1830

Name of works - Swatara

Post Office - Pine Grove

Owners - Eckert & Guilford

Kind of ore used - M (Magnetite)

Largest product - 1,880 tons

Actual made in 1849 - 1,300 tons

No. of men and boys employed - 103

No. of oxen, horses and mules employed - 33

Blast - cold

Tuyeres - 2 - 2 1/4 DMM

Stack - Bosh 9 ft. - Height, 32 ft.

Kind of power - water

Kind of metal made - 1, 2

Blast now running cold, have a hot

Notes on the above data

Kind of metal made: 1- signifies coarse grey of best foundry iron.
2- signifies close grey iron. (14)

One of the members of The General Committee who organized the above study was Issac Eckert, the older brother of Dr. George Eckert (2).

FURNACE TERMINOLOGY

AIR DUCT - Pipes between the bellows or blowing tubs and the tuyeres.

BELLOWS - Early device used for producing compressed air.

BLOWING TUB - A cylinder and piston device that replaced bellows as a method for producing compressed air.

BOSH - Widest point inside of a blast furnace.

BRIDGE - The bridge (usually wooden) goes from the "furnace bank" to the top of the furnace.

CAST ARCH - Archway in the furnace stonework above the point where the furnace is "tapped".

CAST IRON - End product of molten iron from a blast furnace: pig iron, pots, pans, stove plates, window weights, etc.

CAST HOUSE - Building connected to the furnace stack; iron is cast here.

CHARCOAL - Made by "Colliers" from forest hardwood; used to smelt iron ore in a furnace.

CHARGING - The act of dumping iron ore, limestone and charcoal into the furnace stack.

CLAY PLUG - Clay that is packed into the "Tapping Hole" of the "Dam Stone."

CLERK - Second in charge at an iron plantation; keeps company books and ledgers; manager of the furnace when the Ironmaster is away.

CINDER NOTCH - Notch at the top of the "Dam Stone;" slag, which is lighter in weight than molten iron, flows out through the cinder notch just before the furnace is "tapped."

COAL - Short name for charcoal.

COLLIER - Person who makes charcoal.

CORD - Measure of cut and split wood by which woodcutters are paid; 4 ft. by 4 ft. by 8 ft.

CRUCIBLE - Area at the bottom of the furnace between the "Bosh" and the "Hearth Stone."

DAM STONE - Stone that keeps the molten iron from flowing out of the "crucible" until the "clay plug" is pulled.

FILLER - Person who "charges" the furnace with iron ore, charcoal and limestone.

FLASK - A two piece wooden box filled with sand into which a mould of a stove plate or other utensil has been impressed: molten iron is poured through a hole in the flask and allowed to cool.

FOUNDER - Person in charge of the smelting process at the furnace; third in charge under the Ironmaster and Clerk.

FURNACE BANK - A natural or man-made bank directly behind the furnace stack; iron ore, limestone and charcoal are stored on the "furnace bank" and later dumped into the stack by the "Filler".

GUTTERMAN - Person who prepares the sand bed on the floor of the "Cast House"; digs channels in the sand for the molten iron to flow through into "Pig Iron" moulds.

HEAD RACE - Man-made channel to transport water from the supply dam to the furnace "Water Wheel".

HEARTH STONE - Bottom stone directly under the "crucible".

IRONMASTER - The "Headman" and sometimes the owner at an "Iron Plantation;" knows the iron business from top to bottom.

IRON ORE - Mined at open pit mines and shipped to iron furnaces to be smelted into useable products.

IRON PLANTATION - Iron Furnace, Ironmasters Home, Company Store, workers, homes and all the other buildings that make up an Iron Community.

KEEPER - Person who usually runs the furnace on the night shift; performs the same duties as the "Founder."

LADLE - Used by "Moulders" to pour molten iron into casting "Flasks."

LIMESTONE - Added to the iron ore and charcoal in the furnace; limestone acted as a flux to separate impurities from the iron ore.

MOULDER - Person in charge of the casting of iron at an iron furnace.

PIG IRON - Iron cast in sand moulds on the "Cast House" floor; the placement of the moulds resemble piglets nursing at their mothers belly.

SLAG - Combination of limestone and impurities that are melted out of the iron ore; black to green in color; looks somewhat like glass.

SLUICE - A wooden trough, usually elevated, to transport water from the "Headrace" to the "Water Wheel."

TAPPING HOLE - Hole in the "Dam Stone" that molten iron flows from when the "Clay Plug" is pulled.

TEAMSTER - Person who with his team of horses, oxen or mules hauls wagon loads of charcoal, iron ore, limestone, etc. for the furnace company.

TUYERE - Copper nozzle that directs compressed air from the "Bellows" or "Blowing Tubs" into the "Crucible."

WATER WHEEL - Large wooden wheel operated by water power; used to operate "Bellows" or "Blowing Tubs."

WOODCUTTER - Person who cuts down trees, chops trees into 4 foot lengths, and splits these lengths of wood to be used for the charcoal making.

534 SUBSCRIBERS' NAMES.

Residence—Pine Grove.	Place of Nativity.
John Houch	Lebanon co
Joseph Horn	Berks co
George Trostle	Lebanon co
John Gwyder	Chester co
Mount Pera Furnace.	
James Betz	Berks co
Wm Russel	Chester co
Isaac Trion	Newmanstown Lebanon co
Wm Posey	New Jersey
Wm Maybury	Montgomery co
Swatara Furnace.	
George Betz	Newmanstown Berks co
Solomon A Philips	Lancaster co
Philip Umberger	Dauphin co
George Herman	Luzerne co
J B Brower	Berks co
Wm E Walton	Do
Jacob Focht	Do
John Kline	Spickens Erance
Daniel Nogie	York co
Trenton.	
John Benwitz	Womelsdorf Berks co
Mahlon McLaughland	Danville Columbia co
Samuel Hipple	Lonsburg Perry co
Wm Foust	Montgomery co
Donaldson.	
Henry Lomison	Columbia co
James M Clark	Ontario co N Y
Joseph Bodensine	Halifax Dauphin co
Letchery Mines.	
Boric Meck	Chester co
Samuel Foust	Montgomery co
Wm Netherwood	Mirfield England
Morgan Lewis	Northumberland co Eng
Wm Wigham	Cork co Ireland
Timothy Murnay	Radnorshire S Wales
Joscp. Powell	Northampton co Eng
Samuel Warren	Lancaster co
Edward Neal	New York city
Michael Duffy	New York city

7	William Winters	26 20	Wingspot
8	Thomas Potts	25 20 13	
9	Abraham Potts	22 20	
10	Adolph	18 20	Silva
11	Geary	16 20	
12	11 11 Emanuel	22 20	Swatara
13	Joseph	20 20	
14	Leopold	19 20	
15	Joseph	1 20	
16	William	6 20	
17	Colburn	12 20	
18	John	16 20	
19	20 20 Nathaniel	23 20	Swatara & Swatara
20	Colburn	16 20	
21	John	23 20	Blatt
22	Thomas	26 20	Swatara
23	John	21 20	
24	John	20 20	
25	John	9 20 20	
26	John	22 20	Silva
27	John	18 20	
28	John	20 20	
29	John	14 20	
30	John	21 20	
31	John	21 20	
32	John	21 20	
33	20 20 John	23 20	Swatara
34	John	20 20	
35	John	14 20	

Above are scans of subscriber's names, page 534 of Rupp's 1844 *History of Schuylkill County* and a section of the U. S. Census, 1850, Pine Grove Township, Schuylkill County, Pa.

The good citizens of Swatara Furnace dug deep in their pockets to help pay for the publication of Mr. Rupp's book, unfortunately the name "Swatara Furnace" was not mentioned anywhere in the book except in the subscriber's list on page 534. Also, of interest is the fact that not one person listed on page 534 was a native of Schuylkill County; it seems the local people of that time did not wish to help pay for a history book.

Dwelling #72 on the Census is "The Big House" or "Ironmasters Mansion."

REFERENCES

SWATARA FURNACE/THE IRONMASTERS MANSION

- 1 - Information from Lloyd Stager, Aug 18, 1990.
- 2 - Documents Relating to the Manufacture of Iron in Pennsylvania, Published by the General Committee 1850.
- 3 - *History of Pine Grove, Schuylkill County, Pa.*, by Judge George B. Haas.
- 4 - *Biographical Annals of Lebanon County Pennsylvania*, by J. H. Beers.
- 5 - *U.S. Census, 1840*, Schuylkill County, Pa., Pine Grove Township, p72.
- 6 - *History of Berks County, Pennsylvania*, by Morton L. Montgomery, 1866.
- 7 - *Eckert Genealogy* by M.A. Gruber; also newspaper clippings and photos in collection 19, box 2, at the Berks County Historical Society, Reading, Pa.
- 8 - *U.S. Census, 1850*, Schuylkill County, Pennsylvania, Pine Grove Township, pages 877, 878 and 879.
- 9 - *History of Berks County, Pennsylvania* by Montgomery.
- 10 - *Cold Spring Township and Gold Mine Trail* by Harry D. Lentz, Lebanon, Pa., 1945.
- 11 - Information from Stell Stager, 1946 or 1947.
- 12 - *History of Berks County, Pennsylvania*.
- 13 - Rupp's *1844 History of Schuylkill County, Pennsylvania*
- 14 - *The Manufacture of Iron in All its Various Branches*, by Fredrick Overman, Pub. 1854.
- 15 - *Biographical Annals of Lebanon County, Pa.* by J.H. Beers, 1904.
- 16 - *Biographical Sketches of Leading Citizens of Berks County, Pa.*
- 17 - *Focus Magazine* - Lebanon Pa., Aug 4, 1985.
- 18 - *Diary* - Bill Williams; 1933.
- 19 - *Pennsylvania Industrial Research Survey on Swatara Furnace* by Diane Kallmann, Feb. 2, 1990.
- 20 - Letter from Mahlon Richard Boyer, Nov 16, 1983.
- 21 - Conversation with Dave Kreichbaum, July 1985.
- 22 - *The Hub of the Tulpehocken* by Earl Ibach.
- 23 - *Biographical Directory of The U.S. Congress, 1774 to 1989*.

Note: There were four different Berks County Histories researched.

Additional Reading

- National Park Service. *Hopewell Furnace*. Washington, DC.: U.S. Dept. of the Interior, 1983.
- Lewis, W. David. *Iron And Steel In America*. The Hagley Museum.

CREDITS FOR PHOTOS AND ILLUSTRATIONS

AWG – Arthur W. Grumbine; WTG - William T. Grumbine; BW - Bill Williams
UNK - Unknown

Pii - Artist R.K.B	P15 - Both by WTG
P1 - AWG	P16 - UNK
P2 - WTG	P17 - WTG Left; AWG Right
P3 - WTG	P18 - AWG
P4 - UNK	P20 - Beers
P5 - WTG	P21 - AWG
P6 - Both by WTG	P22 - Both by WTG
P7 - WTG	P23 - AWG Top; WTG Left; AWG Right
P8 - UNK	P24 - WTG
P9 - WTG	P26 - AWG Top; AWG Left; BW Right
P10 - WTG	P27 - WTG
P11 - WTG	P29 - UNK
P12 - Both by WTG	P37 - AWG
P13 - AWG	P41 - Both by WTG
P14 - WTG Left; BW Right	

Note: The photo on top of page 37 titled “Woodland Symphony” was taken by Arthur W. Grumbine in 1936; it won “Honorable Mention” in a “Wood, Field and Stream” photo contest sponsored by The New York Times, Feb. 17, 1937. 2500 pictures from across the United States were entered in this contest.

GPS COORDINATES

Below are a number of GPS Coordinates for those interested in finding the locations of structures and former structures at the Furnace/Forge site. The numbers match those on the Map,

- | | |
|---|--|
| <p>1. - Swatara Furnace stack.
N40 32.582 W76 29.439</p> <p>2. - The Forge waterwheel pit.
N40 32.570 W76 29.484</p> <p>4. - Charcoal storage house.
N40 32.547 W76 29.438</p> <p>5. - Slag pile.
N40 32.587 W76 29.420
(A good bit of slag still under the grass)</p> <p>22. - Stone dam breast (ca 1860's)
N40 32.554 W76 29.601
(Only about 2 feet visible - the rest was buried in 1992.)</p> | <p>23. - Site of the 1830 earth dam breast.
N40 32.568 W76 29.636
(The remains of this dam completely covered in 1992; this breast ran at a 90 degree angle to the 1860's dam).</p> <p>25. - Headrace. (Creek end)
N40 32.548 W76 29.576</p> <p>28. - Bridge abutment.
N40 32.610 W76 29.483
(Road from Furnace/Forge to S&S RR)</p> <p>30. - Stager Home site.
N40 32.557 W76 29.455
(Behind furnace stack; this home was torn down in the 1970's).</p> |
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