

RINGWOOD MANOR IRON COMPLEX 1740-1931

A NATIONAL HISTORIC
MECHANICAL ENGINEERING LANDMARK



RINGWOOD STATE PARK
THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS



Ringwood, New Jersey
September 30, 1978



HISTORY OF RINGWOOD

According to existing records, the Boards and Ogdens were the first to mine ore and produce iron at Ringwood. Corneluis Board, while prospecting for copper and other precious metals, discovered many outcroppings of iron. He built a forge at what is now Sterling Lake in Orange County, New York; later he bought several tracts along the Ringwood River and in 1740 built a forge here.

At about the same time the Ogdens of Newark purchased several tracts from the Boards and formed the Ringwood Company. Evidence is mounting that the Ogdens named Ringwood and that they were acquainted with Ringwood in Hampshire, England. In 1742 they built a blast furnace, thus becoming the first volume producers of iron in this area. The Ringwood Company continued under the Ogdens until 1765 when they sold their properties to the American Iron Company.

About one year prior to his arrival here, Peter Hasenclever had formed a large stockholding company with headquarters in London. The American Iron Company had subscribers among nobility as well as members of the royal family in England and raised at least 40,000 pounds sterling. Upon arriving here in 1765, Hasenclever purchased the Ringwood Company from the Ogdens. Being an aggressive businessman, he acquired several other ironworks in New Jersey: Long Pond (now Hewitt) and Charlotteburg, named for Queen Charlotte. In all, his holdings in New Jersey numbered about 22,000 acres of land.

At this time he purchased the Cortlandt Furnace near Cortlandt, New York. He obtained some 33,000 acres in Crown Point; 20,000 acres near the Mohawk Flatts; and almost 100,000 acres in Nova Scotia. Under Hasenclever the American Iron Company, controlled from Ringwood, was the first to produce iron in the Adirondacks at Crown Point, New York. He was in close contact with Sir William Johnson and other colonial greats.

While Hasenclever was engineering the largest colonial business empire and probably the first conglomerate in America, things were not going well in England. Disheartened with the lack of returns from America, some of the company's directors began to spend money in England. This, along with Hasenclever's 40,000 pounds expenditure here, almost brought about the collapse of the company. It was enough to raise much distrust about Hasenclever's integrity. Thus one of the most colorful and brilliant ironmasters associated with Ringwood was recalled to England to face charges of mismanagement of company funds. In his defense he petitioned New Jersey's Royal Governor Franklin (Benjamin Franklin's son) to inspect the American Iron Company's holdings in the province of New Jersey. In 1768 the Franklin Committee listed the innovative achievements of Peter Hasenclever:

He is also the first we know of, who has rendered the old cinder-beds of the furnaces useful and profitable; for, at Ringwood, he has erected a stamping-mill to separate the waste iron from the cinders...which is as good as the best pig iron. He has also made a great improvement in the construction of the furnaces, by building the in-

walls of slate; which, ...will, in all probability, last many years; whereas the stones commonly made use of for that purpose, seldom stood longer than a year or two, and would often fail in the middle of a blast.

(Ransom, J.M. 1966. *Vanishing Ironworks of the Ramapos*. Rutgers University Press, New Brunswick, New Jersey. p. 23.)

Also included in his achievements is the construction of an 860' long dam across the northern outlet of Tuxedo Lake (New York) in 1765. This forced the water to flow south to Ringwood along what is believed to be the first canal in America. Thus a constant supply of water was guaranteed to power the waterwheels of Ringwood.

Peter Hasenclever, in his defense, published *The Remarkable Case of Peter Hasenclever, Merchant in London* in 1773. In 1771 he was replaced by Robert Erskine who arrived at Ringwood in July of that year. The writer hastens to inform his readers that Peter Hasenclever was exonerated of all charges after his death in Germany.

After their experience with Hasenclever, the Ringwood Company was reluctant to advance any credit to Robert Erskine; however, he was given freedom to raise capital and sell the holdings here. Following several unsuccessful attempts at selling the properties, Erskine decided to try things on his own. He demonstrated his ability to be equal to the task, for once again he had the ironworks producing, although not on the scale envisioned by Hasenclever.

In 1774 the colonies were beginning to react to the attempts by England to raise money through oppressive taxation

to pay for the French and Indian War which had ended in 1765. Erskine, correctly reading the trends, began to warn the company in England that the government should reconsider her policy. The crisis worsened; and in April 1775 hostilities were opened between the mother country and her colonies. Records show that Robert Erskine, rightly anticipating this, took steps to be ready in any eventuality. He raised an Independent Company of Militia to protect the ironworks against anyone.

Although Erskine outwardly sided with the colonists, believing their cause to be just, he nevertheless immediately informed the company that he would do everything to maintain the integrity of their vast American holdings for them.

During these times of armed conflict Erskine's mechanical talents were demonstrated, for prior to being hired by the Ringwood Company, Erskine had experience in England as a hydraulic engineer and a surveyor. On 18 July 1776 he proposed a marine "Chevaux de Frise", which is believed to be one of the first serious proposals to permanently stop the Hudson River to all British navigation. Although Erskine's design was not used, a Chevaux de Frise was placed at Fort Washington, Jeffrey's Hook, and between Polopel's Island and the west shore of the Hudson north of Cornwall. The Chevaux de Frise was also proposed to Benjamin Franklin in Philadelphia, who was instrumental in having it placed in the Delaware River. Erskine was well known to Franklin, because six years earlier, while in England, Franklin was a signatory on the petition endorsing

Erskine to membership in the Royal Society:

After Washington personally had recommended him to the Continental Congress, Robert Erskine was appointed to the post of Geographer and Surveyor General by General Washington in 1777. Simeon De Witt was his assistant. Following his appointment, Erskine drew upwards of 275 maps covering the northern sector of the war. Also, at this time he kept the Ringwood furnaces producing much needed iron products for the army. As a result of catching a fever in the field, Erskine contracted pneumonia and died at Ringwood 2 October 1780. Robert Erskine, son of the Rev. Ralph Erskine, lies buried under a table tomb in the cemetery here at Ringwood Manor. What Erskine did here during the tempestuous times of the American Revolution preserved the properties of the American Iron Company intact.

Mrs. Erskine married Robert Lettis Hooper and later removed to the Trenton area after gaining agency rights from the New Jersey legislature to administer the affairs of the iron-works. The writer believes the American Iron Company still retained title until 1806.

In 1807, a little over 25 years past Erskine's death, the properties in Ringwood were sold to Martin J. Ryerson; and in the 1830's, some 50 years after 1780, the American Iron Company's lands at Crown Point on Lake Champlain were sold. Presently the properties are known as Ironville in Crown Point and are run by the Penfield Foundation.

Martin Ryerson having purchased the property in 1807, began the construction of the present house. What happened to

the original dwelling is presently an unanswered question.

Like his predecessor, Erskine, Ryerson also produced iron for a war-he made round shot for the U.S. armed services during the War of 1812. Martin Ryerson owned the Pompton Furnace as well. After his death in 1832, his sons took over the iron production; however, hard times and poor business acumen forced them to sell the properties at Ringwood in 1854.

The vast Ringwood property and Long Pond, by this time a celebrated ironworks, were sold to the firm of Cooper Hewitt and Company, whose principal shareholder was Peter Cooper of New York. It was Abram S. Hewitt who negotiated for Peter Cooper to buy the properties from the Ryersons.

In 1855 (6 April) Abram S. Hewitt married Sarah Amelia Cooper, after which they moved to Trenton, New Jersey, where their first daughter, Amelia, was born in February 1856. The following spring they moved to Ringwood, making it their permanent address.

Cooper Hewitt and Company continued to grow until it became the fifth largest corporation in the United States. It produced iron beams (the first for buildings), the U.S. Capitol dome, very many war products for the Union Armies during the Civil War (including mortar beds and special steel for rifles and muskets), steel-covered iron railroad rails, and wire used in the manufacture of cables for great suspension bridges. Mr. Hewitt was the foremost ironmaster of the 19th century in America. Cooper Hewitt was never faced with a successful strike by their labor force.

Restrained by Peter Cooper from going west where the industry was moving, Abram S. Hewitt went into politics. He was a one-term mayor of New York City (1887-1888), was twelve years a Congressman from New York (1875-1887), and in the famous election of 1876 was the Democratic National Chairman. Grover Cleveland once remarked: "If I knew half as much as Abram S. Hewitt, I might amount to something." This trusted adviser to President Grover Cleveland—this last ironmaster at Ringwood—Abram S. Hewitt, died in New York in January 1903 at the age of 81.

The properties went to Mrs. Hewitt, who at her death in 1912, willed them to the two unmarried daughters, Sarah C. and Eleanor G. Hewitt. After the daughters' deaths, The Forges and Manor of Ringwood was willed to Erskine Hewitt who, in turn, deeded the properties amounting to several hundred acres to the State of New Jersey in 1936. It is since that time that one of America's most colorful and historical estates has been maintained as an historic site and state park.

SOCIAL HISTORY OF THE FORGES AND MANOR OF RINGWOOD

It was under the Hewitt's that Ringwood changed from a celebrated ironworks to one of this country's foremost family seats. Shortly after his marriage to Peter Cooper's daughter, Sarah Amelia, Abram listed his net worth at around \$300,000. This figure was quite comfortable for the 1850's and is substantial for a young man in his early thirties. Attendant with wealth can be the great social responsibility of frequent entertaining. And since the Hewitt's loved to entertain, it was done on a grand scale. Thus they acquired many friends and acquaintances; and word quickly spread about their wonderful hospitality. In later years Mr. Hewitt engaged in politics; and so, of course, they were entertaining a large number of politically influential people. Because of this, the Forges and Manor of Ringwood became known as the second White House.

Beginning in 1876 the Hewitt's kept a guest book in the Great Hall for their friends and acquaintances to sign. These pages reveal the fact that life at Ringwood was indeed good. One sees an evolution from just plain signatures to elaborate watercolors and great poetry. The books contain the signatures of many important people from all walks of life. Included are Hiram Maxim, the inventor of the machine gun, and Bill Cody, who wrote in 1894:

Gentlemen & Ladies,

This looks dreadful easy
but it's terrible hard

Col. W. F. Cody
(Buffalo Bill)

The books also document when family members were at Ringwood: Peter Cooper - July 4, 1878; S. C. Hewitt, Amy B. Hewitt, Sarah A. Hewitt, and Nellie Hewitt were all here on March 9, 1878.

Some guests wrote poetry:

Ringwood, it was a happy day
When to thy vale I came,
And tho' I needs must pass away
I still will leave my name.

He smiles not, who in solemn mood
Has read a gravestone's tale
Although the words be queer and rude,
His sorrow must prevail.

And ye who scan these senseless rhymes
Restrain your rising laugh.
Nay, rather weep. Of happy times
They are the epitaph.

Ernest H. Crosby
Ringwood Oct. 6, 1877

Guests were also encouraged to try their hands at painting or drawing. Thus the guest books are a collection of signatures, photos, drawings and poetry, which are an ample testimony to a life of love, leisure and good times.

Edward Ringwood Hewitt recounts many experiences here in his books. Samuel Tilden, Democratic candidate for President in 1876, was a guest of Mr. Hewitt, who was Democratic National Chairman at the time. The boys had made a fast slide on the dry grass down the steep hill behind the Manor and offered Mr. Tilden a ride, which he accepted. He was badly tumbled when the slide stopped suddenly at the bottom. Though roughed up a bit, Mr. Tilden was otherwise unhurt. For this the boys were scolded.

A typical guest arriving at Ringwood probably would have been shown into the guest entrance where a servant would hang his coat in the cloakroom. Then he would be shown into the Great Hall where the butler offered him a carton of cigarettes or cigars boxed in mahogany. Undoubtedly he then would be greeted by Mrs. Hewitt and be given tea. Time would be passed in complete relaxation, conversation and afternoon teas over which topics such as politics or a new play might be discussed.

Victorian Period amusements were walking, riding, driving (Mr. Hewitt had over 40 miles of private drives), boating on Sally's Pond, tennis, croquet, fishing and shooting in season.

Notable Americans and foreigners could be found chatting on the lawn flanked by the chain and mortar, and the place provided a combination of gaiety and intellectual interests more characteristic of English country places than American. (Nevins, A. 1977. *Abram S. Hewitt*. p. 547.)

During the 1870's and 1880's guests often included suitors for the Hewitt daughters, as is evidenced by several incidents recounted by E. R. Hewitt. However, the only Hewitt daughter to marry was Amy (Amelia), who married Dr. James O. Green of Kentucky. Both sons, Edward Ringwood and Peter Cooper, married.

Driving was a favorite Victorian pastime. The stable and carriage house being very well appointed and very formal, were almost as impressive as the big house. In later years Miss Sally would call for her carriage by using a horn; and the tune played indicated which vehicle and horses she wished. She was also a very accomplished horsewoman.

Since the Manor was close to Tuxedo Park—a famous club

community formed by the Lorillard family—many of these people were entertained here.

Occasionally around Christmas the Hewitt's would arrange a party at Ringwood when the time would be passed in the winter sports. However, the house remained a summer home; and the season here usually ended in October.

Thus as one peruses the history and evolution of Ringwood, one is impressed with the intriguing mechanical developments and important inventions which worked to secure Ringwood an important place in the successful industrial revolution in the United States.

We are indeed grateful to the A.S.M.E. for recognizing Historic Ringwood Manor.

ROBERT ERSKINE: A SHORT HISTORY

In 1770 Robert Erskine was engaged by the American Iron Company to manage their vast holdings at Ringwood and other areas. He was a trained engineer and surveyor, fully experienced in hydraulics, being a builder of pumps.

Not being experienced with the manufacture of iron and other activities related to it, he received a crash course by visiting the major ironworks of England and Wales. This being a learning experience, Erskine took many notes and wrote letters to the "home office" outlining the many steps in iron production from iron ore to finished products. He requested that these letters be saved for future reference. The letters are a complete commentary of 18th century iron production and, as such, are very important. They also demonstrate that Erskine took his job seriously and was given to meticulous detail.

On 18 October 1770 Robert Erskine wrote from Chester, England, near the Welsh border, after observing the ironworks of Mr. Wilkinson near Wrexham, Wales. A study of this letter reveals that Mr. Erskine compliments and takes note of good and efficient operations as well as comments about inefficient ones. However, when he sees a problem, he actively proposes a remedy for it so that he does not make the same mistake. Thus one sees in Erskine a man who is not content to just complain about a problem, but also to remedy the situation. This characteristic, frequently evident in Erskine's letters, is

the mark of a leader. In his letter from Chester Erskine documents the operations of several furnaces and indicates an operation he felt was unique to each one. Evidence of his surveying interest is also revealed when he writes: "I have got acquainted with one Mr. Perry of Liverpool, a Surveyor, who has likewise some iron works in this Country..."

Also in the same letter he describes the casting of cannon for the Emperor of Morocco who had ordered fifty eighteen pounders, one of which Erskine witnessed being cast.

The entire letter is as follows:

Dear Sir

Chester October 18th 1770

In my last I omitted to mention, that the third furnace at the Iron Works at Brosely, was supplied with air from a Bellows Consisting of three Cylinders, worked which must give a Constant and equal blast by a Water wheel with a triple Crank on the Axis: The hearth or stone work was taken out at one of the furnaces, and the Brick work was a square of about 10 feet Square from whence it and as much in height, ~~as~~ taper'd to the Top, to an aperture of about 2 feet

I have got acquainted with one M^r Perry of Liverpool a Surveyor, who has likewise some Iron works in this Country: he informs me that at Colebrook Dale they make Good Malleable Iron with Coke, from Coke pig Iron, at one of the furnaces there; for which they have a patent, ^oabout three years standing. The Iron is melted in a wind furnace upon a Test, under which is a Run of Water; to regulate the heat; the water does not touch the test, by several Inches; when the Iron is melted and got to the Consistance of Pap, it is stirred about and Crumbled and then Cooled, and melted over again into a Mass for the hammer: the worst sort of Iron, such as cannot be made malleable with Charcoal it is said they make into good Iron: a Copy of the specification of this and M^r Woods Patent, therefore, I think absolutely necessary, for tho' the process is certainly differ from that with Charcoal, yet D^r Fordyce will, from this be able to make improve=ments on both methods, and perhaps establish a Theory for making good Malleable Iron, upon Certain principles. had there not been a patent for the Above, I should have returned back on purpose to have seen the process; but, as in patents, the principle must be minutely described, it renders inspection less necessary, tho the not seeing it vexes me not a little. In the second melting the dross is let out as at a Common forge. M^r Wood is said to make good Iron of any kind, only in the bad there is more waste.

In my way across the Country I saw seven Iron mines; those I looked into were not above 30 feet deep, though I find the depths are various. the Iron stone is found in nodules, lying in a bluish kind of loom; which tho pritty hard when dug; crumbles in the air. From the appearance of the Ore in general, all over the Country, it seems to be of the Nodulous kind, very little or ~~any~~ ^{none} of it lying in Strata.

I saw an Iron work at Ketley about 12 miles from Shrewsbury where there were three furnaces. the Construction of the bellows, seemed simple and very good; the Bellows Consisted of two Cylinders 7 feet Diam^r. the Stroke of ^{was} the piston ^{worked by a water wheel} 2 1/2 feet; they each the air, before it reached the furnace, into what they Called a regat a Close Iron Box, the Contents of which might be about 6 Cubic feet. the worked dry, and little or no Air Escaped at the pistons, which had a perpendicular motion the radius of which was... 20 feet, the Center of Motion

Motion of which appears to be Improveable. at these works the water was returned by two large fire Engines, which produced a very Considerable Constant stream. the reason of not applying the fire Engines directly to the Blast, I suppose, is owing to the difficulty of Communicating the power to the Different furnaces; In looking into the Blast holes of all the furnaces worked by Coke, I observed that very little of the fire was visible, the air making the Cinders next to it black, whereas in Charcoal the heat is very vivid and White within a few inches of the nozel of the bellows.

At M^r Wilkinsons Iron work near Wrexham, there are a pair of Bellows quite Philosophical, and very simple; to conceive the principles of which, suppose a Tube inserted into a Close Vessel, ^{the} reaching almost to the Bottom; if water is poured in, it will Condence the Air in the vessel, and if the air has any way of escape, will force it out; let a way of escape then be provided, and the vessel will be filled with water and the air in forcing out, will have made a Blast: ^{being now} ~~now-that~~ the vessel ^{is} full of water, ^{to repeat the blas:} ~~in-order-to-empti~~ it must be emptied again; for this purpose ~~it~~ ^Λ ~~again~~, let a Siphon be likewise inserted, which when the vessel is full, shall divert(?) ^Λ ^Λ ^{however} the water; but to allow the Siphon to operate, there must be a Valve opening Inwards to admit the air again into the vessel; and then by pouring in water, the blast will be repeated a second time, and so on. Upon these principles the Bellows are Constructed. to make the Blast Continual, there are two Close Vessels (designed to work alternately) 12 feet square and 8 feet high. the water enters the(?) vessels through a Tube about a foot Diam^r and 8 or 9 feet higher than the upper part of the Vessel. a sluice is opened to lett the water run in, and when the vessel is full, and the Siphon begins to operate, the water running from the Siphon acts upon a Board connected by rods to the end of a lever, which shuts the Sluice, and prevent the water from running in; when the siphon has drawn off all the water, the sluice is opened by a Counterpoise at the other end of the lever, and so the blast is repeated: it is easy now to conceive that two vessels produce a Constant blast, and provided there is water enough, work Continually without attendance: this however I find was not the case here, the working of the two vessels being sometimes irregular, and required a little looking after, but this inconvenience, it is certainly practicable to get over. From the height of the nicks of the Siphon, above the vessels, there is an unnecessary waste of water there are likewise some other minutie to be attended to: and from the whole Bellows very ~~best~~ and simple may be constructed, where there is water, and fall enough.

From what I saw doing at these works, I have got a pritty good idea of Casting in general. They were executing an order from the Emperor of Morocco, for 50 eighteen pounders, one of which i saw Moulded and Cast^Λ. The inspection of only one half of a spherical body can be made perfect in sand; because, if sand is put round the whole of it the mould cannot be extricated without destroying half the figure, in general therefore all moulds must be so contrived(?) ^{the sand} ^{have}

have their impression intire on which account the Moulds of all bodies not perfectly Conical must be in seperate pieces. The patern for a Great Gun, I believe Consisted
is appropriated

of about 8 or 9 pieces; to each of which pieces a frame of Cast Iron, seperating in two, and key'd together with widges, like the bolt of a Window shutter. The paterns are turned in a leath, and at each joining they are Countersunk into each other. Suppose the patern of the Breach then, set in its frame, and ramm'd round with sand; the frame belonging to the next piese of the patern is put above it, and key'd fast (for each frame not only seperates in half lengthways of the gun; but is likewise keyed to its neighbour so as to make the whole immoveable) and that part of the patern is inclosed in the Iron Case, now all in one mass: it is then seperated, and the different pieces pulled out, and the several parts of the frame (now filled with a Crust of sand $1\frac{1}{2}$ Inch Thick) set to dry in a furnace. the different parts of the frame are then regularly joined and set perpendicularly in a sand pit. (but I should have mentioned, that at the Breach there is a Center for the Core, supported by three Radii of hammered Iron, which remain always in the Gun, the metal running round them) when the frame is put together ~~at the Breach~~ and ramm'd round with sand, the Core (which is an Iron rod surrounded first with straw and then with loom (or moulding sand) to make it nearly the Diam^r of the bore) is by pullies lowered Cautiously into the Mould, ~~at~~ the hole in the end of it, going upon the pivot in the Center, a Candle being let down by a string to guide it properly. A Ring with three radii with screws acting upon the upper frame, is put over the Top of the Core, by (?)

which passes through
it is adjusted in the Center, at top: there is likewise an Iron bolt, going through the Iron rod in the heart of the Core; to prevent its being buoyed up by the liquid metal. I should
there was put

have said, that likewise at the Breach, a plate of Cast Iron to take off the force of the metal, falling at fist above 12 feet: this plate however soon melts with the rest. Everything being prepared, and troughs formed of sand, from the Mould, to three reverberatory furnaces, one of them was opened, and the metal suffered to run in: to people held stoppers to keep back any dross or scum just before it entered the mould, and one by partially stopping the hole of the furnace, regulated its running, there was a director, who order'd the metals running faster or slower, and an other who was looking into the mould all the while; which I likewise did, with great safty and without offence to my eyes from the heat by Cutting a small hole in a letter and looking through it; just before one furnace was out, an other was tap'd, and a third, til the mould was full. A Strong flame ascended up through the Center, and the ignited air past through above a foot thickness of sand, ramm'd hard, and set fire to boards, which encompassed the sand which surrounded the frame. The manner of boring Cylinders and Guns I beg leave to refer to my next, and am
Dr Sir
Warrington Oct 18th Your most obliged hum^l Sert

I hope Exancy to be at your Brothers tuesday or wednesday Rob^t Erskine
next—

GUIDE TO RINGWOOD MANOR GROUNDS

On the grounds around the manor house are a number of interesting objects. These were collected by the Hewitt family and placed as ornaments and reminders of historic events or demonstrations of the ironmonger's art.

Located in an impressive avenue of columnar cedar trees are twelve torcheres from Colonnade Row, Lafayette Place, New York City. The statue in this section came from France. It represents "Europe" and originally stood at the Bishop's Palace in Avignon.

The gates visible on the west side of the parking area were originally from the residence of Charles William Cooper located on Twenty-first Street, New York City.

Proceeding along the path from the parking area, one sees four architectural stone heads. These are sand stone and mark the four corners of the former tennis court. These are believed to also come from New York.

Continuing down the path and looking to the right one sees six marble columns. These columns were taken from the old New York Life Insurance Building when that structure was torn down.

Along the driveway which leads under the porte cochere are superb examples of ornamental wrought iron lamps. These are of special interest in the bicentennial era since they are three of four lamps used to light the statue of King George, the third, in Bowling Green, New York City.

The porte cochere was designed by the eminent architect, Stanford White, who was a personal friend of the Hewitt family. The Adams Style gates opposite the pine tree stood originally in front of the Royal Governor's House on Bowling Green in New York.

In front of the house on top of the slope are many objects depicting eras of Ringwood's history. Starting at the right are a hammer, anvil and cogwheel from Long Pond Iron Works, which were used during the Colonial era. These were obtained from the Wanaque River and placed to represent Ringwood's Revolutionary War iron production (1775-1783). The great chain, while not part of the original, represents the West Point chain. The mortar was used in the attack on Island No. 10 on the Mississippi River which opened the way for the siege at Vicksburg. This represents Ringwood's role during the Civil War (1861-1864). It is one of thirty mortars for which Mr. Hewitt developed and built the supporting beds. President Lincoln in a personal letter had requested the job to be completed in three months. Mr. Hewitt completed the order in twenty-six days. The mortar had a range of two and one-half miles. The small cannon is one of two deck guns from the U.S.S. Constitution (Old Ironsides) when she defeated the British frigate, "Guerriere". This piece represents the role Ringwood played in producing iron for the War of 1812. The other items are parts of machinery used at forges and other aspects of iron manufacture.

The large pond to the west of the house was created in 1895 by Mrs. Hewitt who said that while she could not paint a

picture, she could create one.

The gates seen on the west lawn mark the road bed laid by General Greene, which passed in front of the house and went from West Point to Morristown. The gates originally stood on the former Columbia College campus, then located at Forty-ninth Street and Madison Avenue. Mr. Hewitt, an alumnus and benefactor of Columbia, obtained them for his estate at Ringwood when they moved to their present location in Morning-side Heights.

The fountain in the small pool to the west of the house rests on a grinding millstone and is from Versailles.

At the back entrance is a volute similar to the one at the front entrance (on the Ryerson side). These were hand-carved by De Launitz, father-in-law of Daniel Chester French. The two stone tables on the piazza are millstones from Padua. Also, to the left of the well are a set of tuyers and a lintle (baffle bar) from the Wanaque Furnace. The well was reportedly dug by Robert Erskine and is known as Erskine's well. It reaches a depth of nearly 60' with the last 15' dug into solid rock. The well head is marble (pink veronia) carved in the 15th century and is Venetian. The wrought iron ornament on both sides of the entrance are from Greenwich Street, New York City.

The marble garden benches, neopolitan copies of old pompeian benches, were a wedding anniversary present from Mr. Hewitt to Mrs. Hewitt. Also in the entrances to the formal gardens are sphinxes copied from originals in the Louvre and are like-

nesses of Mme. de Pompadour and Mme. du Barry.

The wrought iron lanterns flanking the sphinxes are two hundred years old and are from Bowling Green in New York City. The yew tree to the left of the large staircase is from seed of trees grown at Bey Ler Bey Palace, Constantinople, Turkey, and were a gift of Sultan Abdul Hamid.

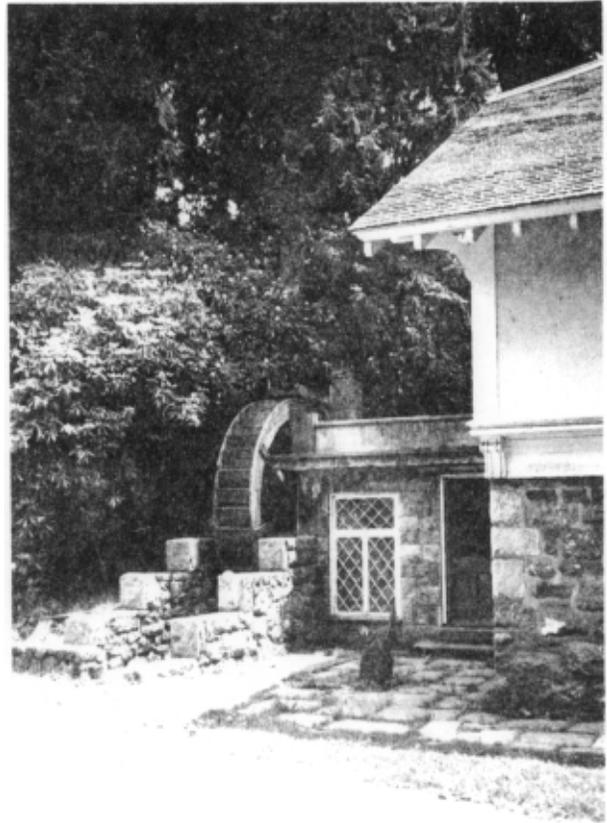
At the center of the retaining wall is a fountain taken from Venice. Carved in the 16th century, the figures represent a procession of Tritons.

Proceeding through the gates, one finds a log cabin. This was used as a play house when the children were young; in later years it was used as a tea house.

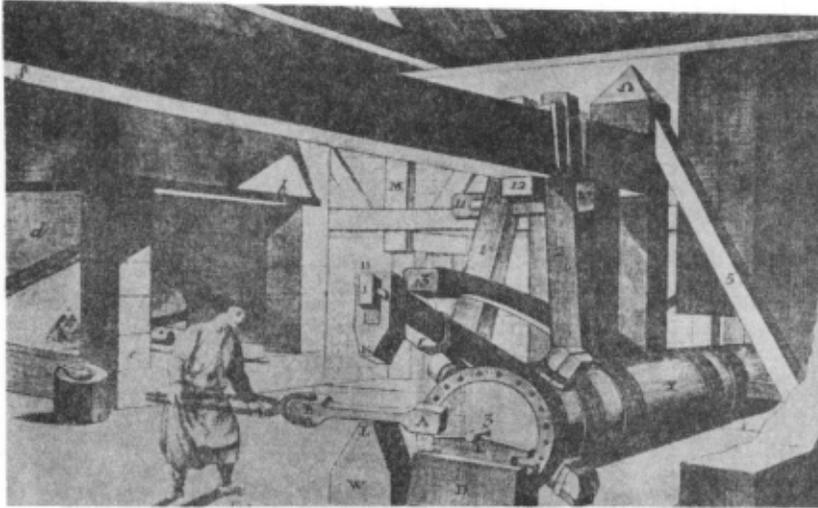
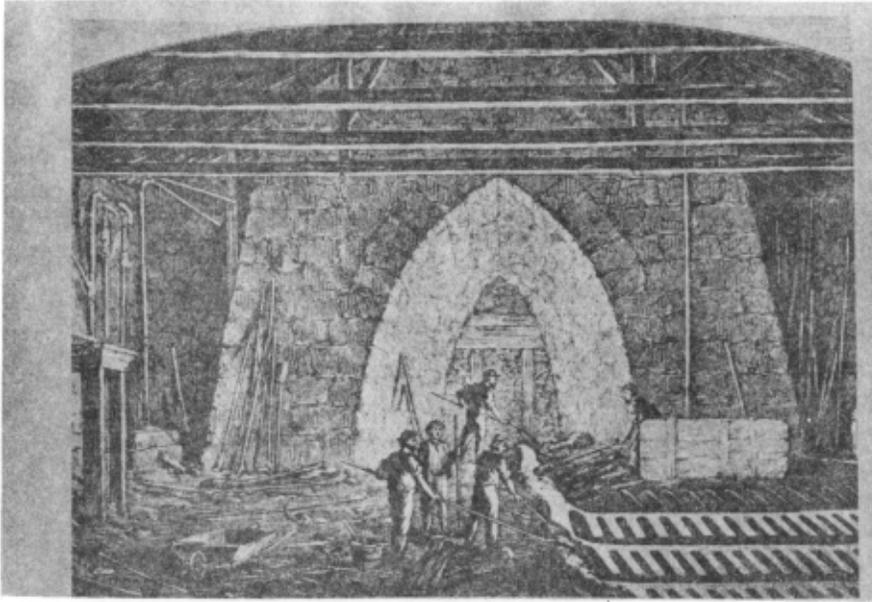
The large terraced area was formerly the formal vegetable garden. The greenhouse formerly had a large variety of plants including vines of muscatel grapes which were a gift of Sir William Cunard who had received cuttings from the Spanish royal family when he opened a shipping route from England to Spain.



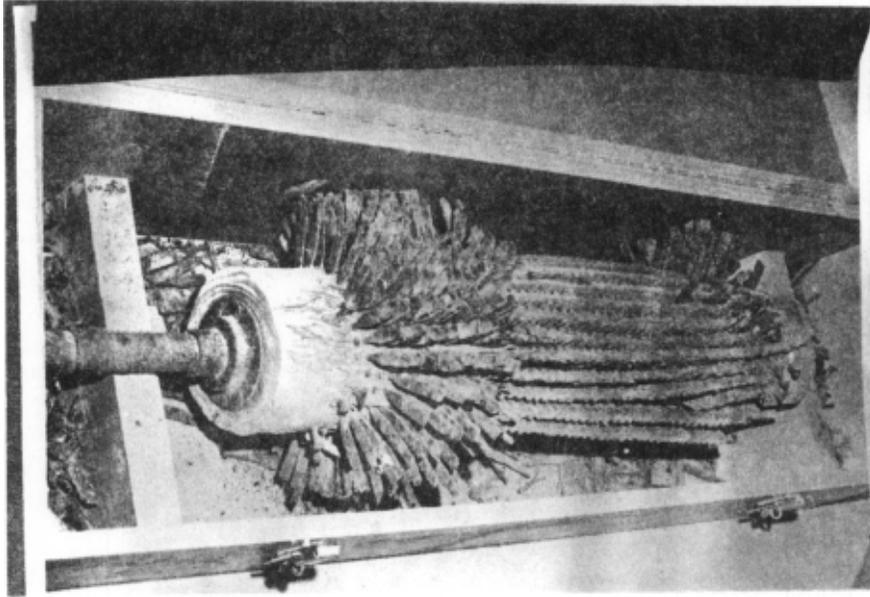
Peter Hasenclever



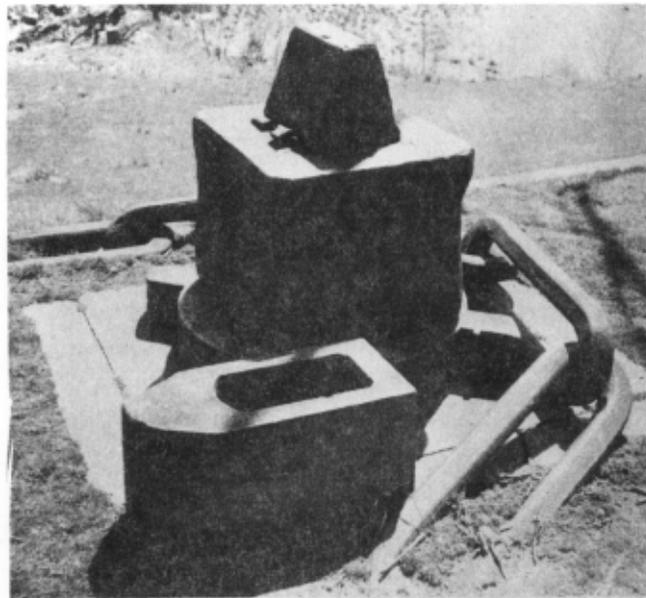
Peter Hasenclever engineered possibly the first conglomerate in America. On the top right, the present water wheel near the site of Hasenclever's Forge. Bottom, the oldest building at Ringwood.



Molten iron flowed from furnace into pig beds (top). Iron being worked at a forge using a trip hammer.



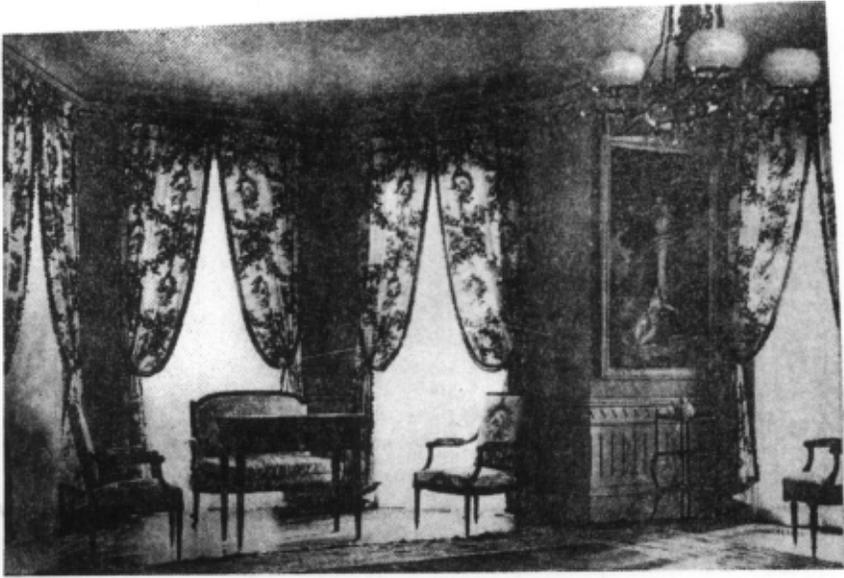
Above, an ore separator which was commonly used. Below, a closeup of the trip hammer and anvil base used in the forges.



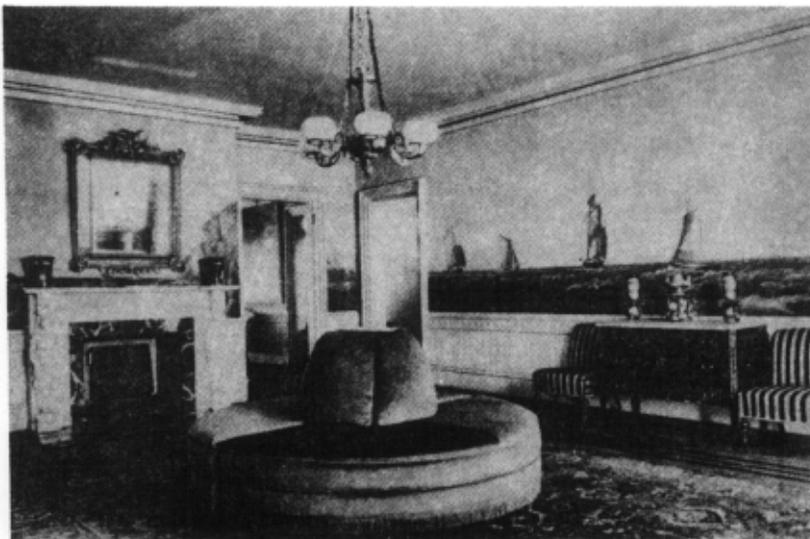
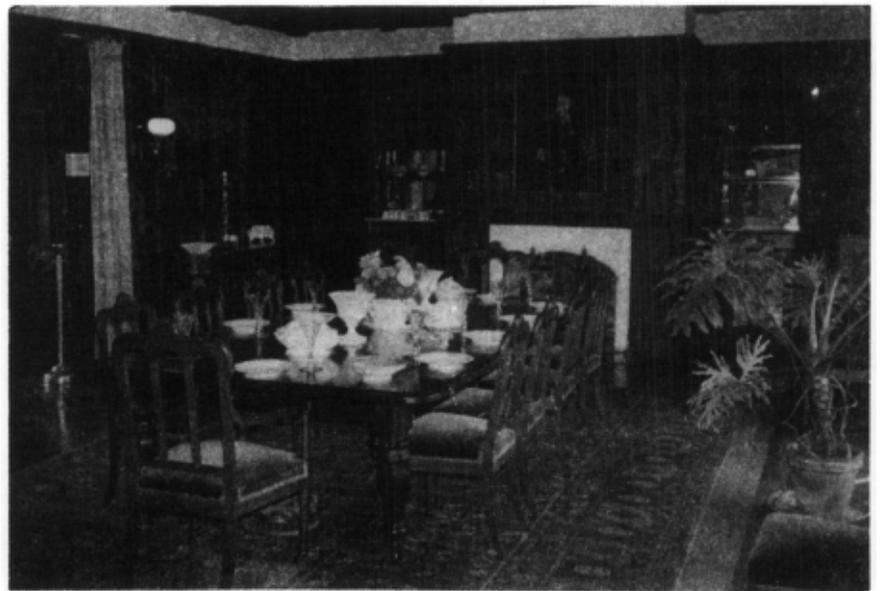


Peter Cooper, right, and Abram S. Hewitt, left, based themselves at Ringwood where they founded and built their large corporation. Below, Ringwood about 1875. It is probably the second of the manor houses built on this site.





Many famous guests were entertained in the drawing room and the dining (right) and music (bottom) rooms.





Ringwood was also conducive to boating, fishing, shooting, and hiking for its owners and guests. Below, one of the old blacksmith shops.