THE FIRST GLASSHOUSE WEST OF THE ALLEGHENIES

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JAMES O’HARA, gentleman, scholar, capitalist, and quarter-master-general under George Washington, was one of the nation’s pioneer glassmen. His first glassworks was built and began to produce glass in 1795, two years before the Gallatin glasshouse at New Geneva, Pennsylvania, was in production.2

His Pittsburg Glassworks3 was primarily a green glass manufactory producing window panes and beer bottles, but some white glass was made by the same company in the Coal Hill works between 1800 and 1812. Many pieces were wheel-cut in simple flute designs. Thus did James O’Hara become one of the most important figures in the early history of the American glass industry, for he not only established the first glasshouse west of the Alleghenies, he was also the first glass manufacturer in America to use coal as fuel for a glass furnace. Moreover, his was the first glasshouse in Pittsburgh to manufacture white glass and the first to decorate glass by wheel-cutting.

The letters of General O’Hara found among the Denny-O’Hara Papers at the Historical Society of Western Pennsylvania and recordings in deed books of Allegheny County furnish important clues to the location of the first O’Hara glassworks, built in 1795 in what was then the Reserve Tract.

1Dorothy Daniel is the author of Cut and Engraved Glass, 1771-1905 (New York, M. Barrows and Company, June, 1950). Material for this article was assembled during the research for this first definitive book on one of America’s earliest craft arts.—Ed.

2Joseph Dane Weeks, Report on the Manufacture of Glass (1883). Weeks gives the date for the Gallatin production as 1797.

3The spelling of Pittsburgh without the final “h” was preferred by General O’Hara, who continued the firm name of Pittsburg Glassworks until the time of his death.
In a letter to James Morrison, Esq., Lexington, Kentucky, dated June 24, 1805, O'Hara wrote:

I received yours of the 4th—Sanders glass was put up before your's was ordered. There is no doubt of your getting it in the fall.

Your question on the probable expense of erecting Glassworks may be answered correctly. My works you know stand at the Coal pit on the river bank. I was engaged one year before we made glass, the first bottle (a very ordinary one) cost me 10,000 dollars; this bottle was all the blast produced; had the works pulled down, & began in the new location and continued from 1797 till my disbursements exceeded 32,000 dollars. Major Craig gave up his connection in them last year. There is no person concerned with me at present, I have not been able to reduce the balance due me by this manufactury under 30,000 dollars, exclusive of the fee simple property...

My works has not averaged 1,000 dollars worth per month with eight blowers perfectly supported. . . I wish you success in your Snuff manufactory & will furnish you with any quantity of Bottles, pound or half pound at one dollar per dozen, each or either.

In the light of later correspondence both by Isaac Craig and James O'Hara it would appear that Craig was not a partner in the glassworks until the 1797 venture at Coal Hill and that the reason for selecting the later site was because of the proximity of coal for fuel. The first glassworks in the Reserve Tract used wood for fuel.

Students of early American glass will notice the difference between O'Hara's own statement regarding the cost of the first production of glass at the first O'Hara glasshouse (1795) and the familiar "glass-house memorandum" found among O'Hara's papers and later quoted in the "Military Journal of Major Ebenezer Denny." The second notation says: "Today we made the first bottle, at a cost of $30,000." The larger amount refers to the initial investment in the second or the Coal Hill glasshouse.

It was George Thurston who first started the rumor regarding the first Pittsburgh glasshouse from conversations he enjoyed with William McCully, pioneer glassman. And it was the same source who, either misunderstanding or misin-

interpreting Mr. McCully, started a chain of conjecture and guesswork that has perplexed students of Pittsburgh glass for seventy-five years. He wrote:

In 1795 there was a small window glass factory of eight pots established on the west side of the Monongahela river and known as "Scotts," which made three boxes at a blowing, using wood for fuel. This is by some disputed; but it was stated as a historic fact to the writer, thirty years ago, by William McCully, the founder of the present firm of Wm. McCully & Co., who was a practical glassblower and learned his trade in the glass house of General O'Hara. There was no confusion as to the fact or date, Mr. McCully being then a comparative young man, and was very decided in his statement. . . . The location of General O'Hara's glass house was near that of the "Scott" works—of McCully's recollection—which, with the fact that the O'Hara works was an eight pot furnace, and also is on record as producing "three boxes at a blowing," has given the impression that they were identical.5

Thurston, who was Pittsburgh's most prolific historian during the last half of the nineteenth century, was not sure of the location of "Scotts" in 1886 when he wrote the above reference to the Scott's placing it on the "west side of the Monongahela." When he wrote Allegheny County's Hundred Years in 1888, he identified its location in what was then called Manchester, as follows: "Mr. Joseph Eichbaum, of Eichbaum & Co., stationers, a grandson of the Peter Wm. Eichbaum whom Messrs. O'Hara and Craig brought from Philadelphia to manage their glass house business in 1797, says that his grandfather often pointed out to him as the site of the first glass house, a point where the Marine Hospital now stands . . . There was a glass house there commonly mentioned as built by Denny & Beelen in 1802."6

A careful search of the old deed books and early lot plans of Allegheny County reveals the fact that the site of the Ohio Glass Company (1800), sometimes called the Denny and Beelen works, sometimes called "Scotts," was on the next lot

5George H. Thurston, Pittsburgh's Progress, Industries and Resources, 102 (Pittsburgh, 1886).

6Thurston, Allegheny County's Hundred Years, 180 (Pittsburgh, 1888).
to the one owned by James O'Hara and on which he built his first glasshouse in 1795.

Reconstructing the sequence of events from public documents and private letters, the early history of the glass industry in Pittsburgh progressed in the following order.

James O'Hara was engaged in the manufacture of porter in the village of Pittsburgh, which then numbered some fifteen hundred inhabitants. In 1790 O'Hara bought from Alexander Fowler a tract of ten lots in what was then the Reserve Tract along the Ohio River beyond the village of Allegheny.\(^7\)

In 1795 O'Hara erected a wooden structure on one of these lots which ran down to the Ohio River, for the purpose of making window glass but more especially to manufacture bottles for his brewery. The bottle business was unsuccessful, but he continued making window glass for several months. Then he concluded that the trouble with the bottle manufacture was insufficient heat for his furnace, and he took steps, with the help of Isaac Craig, to build a new and better glassworks on the west side of the Monongahela River at the foot of Coal Hill. Craig and O'Hara made overtures to Peter William Eichbaum in Philadelphia in 1796. The new glasshouse began the successful production of both window glass and bottles in 1797 with Eichbaum as manager, and Frederick Wentz (also written Wendt and Wendtz) as superintendent.

In May, 1799, Doctor Hugh Scott bought from one Joseph Tidball a number of lots along the Ohio River adjacent to the first-mentioned O'Hara property.\(^8\) He organized a glassworks which was called the Ohio Glass Company. A number of prominent men were involved in the venture, among them, Brigadier General James Wilkinson, Lieutenant Colonel John Francis Hamtranck, John Lewis De Razilly, and John Wilkins, Jr. Denny and Beelen, merchants, acted as agents for the

\(^7\)Allegheny County Archives, Deed Book 2, p. 127.
\(^8\)Allegheny County Archives, Deed Book 9, p. 27.
company and advanced money on several occasions, at one time the not inconsiderable sum for those days of $2,077.58."

The Ohio Glass Company began producing glass in 1800 on property adjacent to the lot on which the first O'Hara glassworks stood. Hence the confusion regarding William McCully's statement. McCully always said that the O'Hara glassworks was first in Pittsburgh; he was emphatic about the date, 1795; and he referred to the location as being "near that of Scott's." He was an eyewitness to these facts and may have been apprenticed at the first glassworks in 1795.

In a footnote to his report, Weeks says: "Mr. Mark Watson, Mr. McCully's son-in-law and his successor in business, authorizes the statement that in their many conversations on the subject Mr. McCully always spoke of the Craig-O'Hara house as the first. Mr. Isaac Craig also states that, as early as 1845, Mr. McCully told him that the Craig and O'Hara works was the first." It was obviously never McCully's intention to imply that there was a glasshouse before the O'Hara glassworks but rather to stress the fact that O'Hara's first venture was begun in 1795 at the location next to Scott's on the Ohio River.

Eichbaum came to Pittsburgh in 1797 to establish residence, but he had been a guest of the Pittsburg Glassworks partners prior to his moving his family west. His testimony is again that the O'Hara glassworks was the first west of the Allegheny Mountains, and he pointed out the location of the first glasshouse as on the location of the Marine Hospital which, in 1856-1888, stood on the exact site of the O'Hara and Scott river lots at a point just off the tip of Brunot's Island, the name of the location having been first, the Reserve Tract, and later, Manchester.

Craig was probably not associated with O'Hara as a partner in the Pittsburg Glassworks until 1796, at which time he

8Thurston, Allegheny County's Hundred Years, 180.

wrote to Eichbaum, then superintendent of the Schuylkill Glassworks in Philadelphia, in part, as follows:

Neither Col. O'Hara nor myself have altered our minds but are still determined to prosecute the business we proposed to you. We mentioned to you formerly and we are still of the same mind viz. that we wish to enter into an engagement with you on liberal principles—and such generous terms that it might be your interest to become a partner in the business. But as Col. O'Hara is now and will be absent a few days I cannot with precision point out all the conditions of our intended agreement. . . . Should you determine on this journey immediately your most comfortable manner of traveling will be to take a stage from Philadelphia to Shippensburg at which place on your application to Capt. Wm. Rippey and shewing him this letter, he will furnish you with a horse on my account to enable you to proceed on your journey to this place.11

O'Hara was away from Pittsburgh on government business most of the time during the next six years, and Craig tried to keep an eye on the glassworks. Eichbaum, who had been highly recommended as a glassmaker, was in reality a glass cutter by profession. Moreover, he was a Continental gentleman of great refinement who was used to the courts of kings and princes and he found adjustment to the frontier means and methods difficult. Wentz was employed as a practical operating foreman and at length Eichbaum and Wentz leased the glasshouse from Craig and O'Hara to operate on a percentage basis with a minimum rent guarantee to the owners. There is no evidence that O'Hara or Craig ever "fell out" with Eichbaum, but Wentz they mistrusted from the first. He had been recommended to Eichbaum by Frederick Amelung who had brought Wentz to America as one of the first workmen for the New Bremen glassworks. Wentz, however, proved a source of worry and discontent from the first day of his employment. The leasing of the works to Eichbaum and Wentz in December, 1798, was undoubtedly an effort on the part of the owners either to satisfy Wentz or to give Eichbaum a feeling of full authority. Craig's letters to his partner

11This and all other letters of Craig quoted below are to be found among the Craig Papers at the Carnegie Library of Pittsburgh.
during this time indicate that he kept an alert eye on the operation of the glass manufactory, for in August, 1799, he wrote to O'Hara in Washington regarding the difficulty of obtaining clay and adds: "We have lately discovered sandstone of superior quality to that from French Creek within 12 miles of Pittsburgh on the Allegheny but no clay has yet appeared."

In October, 1799, Craig wrote to O'Hara, who was still in Washington, in part, as follows:

I have to observe that I am apprehensive of the Glass Manufactory will not go on well the ensuing year, under the direction of Eichbaum, or any of the people now engaged as his partners—I find that an implacable enmity exists between Eichbaum and Wentz—and that the latter has attached Phillis and Smith to him in such a manner that the former is treated with very little respect—they say that Eichbaum is not capable of superintending that business and they are not disposed to rent the works another year.

It is interesting to note that in the same letter Craig called attention to the fact that Johnston's Glassworks was that year in full operation in Maryland, for he wrote:

Phillis assures me that Lewis Repart who now has the direction of Johnston's Glassworks in Maryland would gladly accept of an invitation to Pittsburg, he was here some time in the summer assisting Phillis and Wentz. I presume you will recollect seeing him, he has two Brothers also Glass blowers who are now at Albany, but who will also come to Pittsburg if wanted, and Phillis assures me that Repart is so much esteemed by the Glass-Blowers generally that he can bring with him any workmen he pleases.

George, Jacob, and Lewis Reppert were originally employed by John Frederick Amelung in Fredericktown, Maryland, where they knew Frederick Wentz. The Johnston works is located by Craig as "near Frederick-town." The fortunes of the Pittsburg Glassworks might have taken a different turn had any of the Repperts located in Pittsburgh, for these men were all skilled, talented, and practical glassmen, but an opportunity presented itself in Maryland that they could not afford to ignore. Frederick Amelung, son of John Frederick
Amelung, Sr., built a glasshouse under the name of Frederick M. Amelung and Company in the year 1799. This company which is sometimes called the Federal Hill Works, was largely financed by Alexander Furnival, Frederick Amelung’s father-in-law. George and Jacob Reppert came back to Maryland from Albany, New York, and Lewis joined his brothers.

In 1800 Eichbaum retired from the Pittsburg Glassworks and opened a public house of entertainment “At the Sign of the Indian Queen,” where he also conducted a small cutting shop. Craig then took over the management with Wentz as superintendent. At this time, in addition to window glass, the manufactory was turning out large bottles and jars as well as drinking glasses. Craig was in correspondence with a Philadelphia broker who had promised to interest one of the proprietors of the Boston glass manufactory in coming west and taking over the Pittsburg Glassworks. But the man would not come. O’Hara meanwhile was busy in Washington and through his quartermaster service secured a contract from the Commissioners of the City of Washington for window glass. The partners were jubilant over the order and arrangements were made to manufacture the glass immediately, but after several false starts Wentz and Phillis blew the glass only to have it warp in annealing and Craig was forced to write his partner that the glass could not be delivered.

In August, 1800, the Pittsburg Glassworks was operating under lease to Wentz and Company, but Craig and O’Hara were still hoping to find a superintendent for their manufactory. Craig wrote to O’Hara:

Some few weeks ago a Mr. William Price, immediately from London, seeing our advertisement in Philadelphia wrote Mr. Smiley that he professed making White glass, and would come to Pittsburg, provided he could be employed. ... Mr. Smiley having communicated the letter to Doctor Scott, who together with Mr. Beelen, wrote pressingly to Mr. Price offering him encouragement to come to the works. He has however, arrived and offered his services to us in preference. He has
offered to show us a specimen of his abilities without any charge. . . .
In consequence of this liberal offer Mrs. O'Hara and I sent for Mr. Wentz and agreed with him for the use of one pot and assistance to make the experiment . . . of the result of which you will be informed. I find that the Doctor and Beelen are greatly mortified that Price has not engaged with them.

With the discovery of what was supposed to be fine glass sand along the Allegheny River, and the employment of William Price, O'Hara saw the beginning of his dreams for making white glass come true. In September, 1800, his son Philip was sent off with a letter to Aaron Aimes, Funk's Tavern on Franklin Road, saying: "Beg of you immediately to prepare about one hundred pound of Pearl Ash and you are to observe that it is to be refined in the best manner, so that it may be perfectly pure as it is to be applied in the composition of Chrystal Glass by a man immediately from London, and who is unable to make his first experiment until he receives a quantity of your Pearl ash."

So it was that the first white glass to be manufactured west of the Allegheny Mountains was made experimentally by William Price at the Pittsburg Glassworks on October 29, 1800. Craig, co-proprietor of the glasshouse, wrote to his partner O'Hara in Washington: "By Sergeant Cook I have sent you a specimen of glass made by Mr. William Price."

For a time Craig seemed as enthusiastic as his partner over the prospects of manufacturing white lead glass in Pittsburgh. He wrote to O'Hara in Washington:

Sir: Mrs. O'Hara has shewn me that part of your letter respecting Mr. Price, the Glass manufacturer who in consequence of the impossibility of employing him to advantage at our present furnace had determined to return to Philadelphia and endeavor to obtain employment in the Brass founding business, which he says he understands. He had agreed to enter into an obligation previous to his departure not to engage in any Glass works until we had determined either to employ him in that business or finally decline it . . . He assures me that he can procure several White Glass blowers—particularly two from the glass works near Woodbury12 and that from Philadelphia he will write for some

12Carpenter and Heston's lead glassworks at Glassboro, New Jersey.
approved workmen to London. He is now making an estimate of articles to be procured in order to carrying on that business he is also to make a draft of the buildings and apparatus necessary I believe it will be prudent still for him to pursue the plan he has proposed.

But the major's interest in white glass cooled quickly when he discovered that an additional investment would be necessary to build a new furnace. On November 17, 1800, he sent Price off to the City of Washington to see O'Hara with the following letter:

Dear Sir: This will be handed you by Mr. William Price, the Glassmaker. . . . He has satisfied me as well as others that his abilities in the White Glass manufactory is equal to his professions. I had entertained some hopes that a part of our present Glass house and furnace might have been appropriated to his business but he says it is impracticable to carry on the White and Green glass founding in the same fire, but says a building and apparatus suitable for his purpose can be erected for 600D. . . . Notwithstanding I have a high opinion of Mr. Price and the success of such a manufactory, yet you will not be surprised that I feel great reluctance to engage in further expensive buildings &. I do not however make this observation to discourage you who have everything in your power.

O'Hara was not discouraged by the reluctance of his partner and he made an agreement with Craig, on April 30, 1801, whereby three-eighths of the business was to belong to Craig, O'Hara retaining the other five-eighths. Craig's minority in the business, including real estate, the glassworks, other buildings, tools, and stock on hand, was valued at $11,539.24. In September, 1804, at the time of the dissolution of the partnership, the balance sheet shows that Craig's interest had grown to a value of $13,034.80, and the company was producing, under lease to F. Wendt and Company, porter and claret bottles, gallon bottles, half gallon bottles, quart bottles, jars, flasks, pint flasks, gallon pitchers, and apothecary jars.

Price obtained glass sand from Connellsville, Pennsylvania, on the lands of Valentine Sieriest on Jacobs Creek, and brought it down to Pitttsburgh in keel boats. White glass was still

13In Denny-O'Hara Papers, Historical Society of Western Pennsylvania.
14In Craig Papers, Carnegie Library of Pittsburgh.
pretty much in the experimental stage, but Pittsburgh's first industry, the glass business, was booming and competition was keen. The Frenchman named La Fleur (sometimes written Falure) was employed by Doctor Scott (Denny and Beelen) at the Ohio Glass Works, and glassware was going down the river by the boat load, when Edward Ensell arrived on the scene.

Inasmuch as Edward Ensell later became one of the most important of our early glass men, the letter which introduces him to the industry is pertinent. In March, 1801, Craig wrote to O'Hara:

Dear Sir: Mr. John Wrenshall some time ago, shewed me a letter from a Mr. Edward Ensell [Ensell] then in New York and just arrived from England with his family. This man, Mr. Wrenshall says, he has long been acquainted with, and knows him to be a compleat glass manufacturer—and that he had been owner of a Glass House near Birmingham at which he had carried on the manufacture both in window and white glass—but that wishing to make a better establishment for his family he had disposed of his property in England with a view of entering into his former business in this country. Mr. Wrenshall also says that he may be depended on of good morals and would be an acquisition to our works. I told Mr. Wrenshall that unless this friend Ensall understood the German manner of making window glass, I was apprehensive he could not be useful, and order to obtain the necessary information I directed Mr. Wrenshall in his letter to Ensall to send several queries with respect to his knowledge in his profession to all of which he has returned satisfactory answer and in particular, that when a young man, he wrought at the only glassworks in England, that manufacture window glass in the German way viz—blowing cylinders and flatting.

Upon the whole I am satisfied the man could be found useful at our works, at the expiration of Wentz and Company time which will shortly expire.—I.

P.S. The Ohio Glassworks have stopped and it is said have dismissed all their hands.

Upon receipt of Craig's letter Edward Ensell, later a partner with Benjamin Bakewell (1807), wrote to the partners in the Pittsburg Glassworks:

As to flint glass I can make blue, black, white, and amber and many other colors. If needful as to English workmen many of them promised me to come when I should send for them to constant employ and good
wages. The gentlemen wish to know the expence of a furnace. I should expect their furnace might do for the present if it be in good condition, that would want some other conveniences which would not be very costly if fire clay and bricks are handy or stone. I should expect that a general trade would do very well such as you mention, bottles, window glass, tumblers, decanters, and many other sorts of the flint glass line—if the gentlemen wish to extend the business the situation seems a good one. I would have no objection to superintend the work or anything that lies in my power if we agree, the sooner the gentlemen make up their minds the better as I have others and wish to be settled.

Please say... what price... pint, one half pint, one quarter pint and punch tumblers sell retail and two pint and one pint decanter and wine glasses—but I fear you will think me troublesome—with every sentiment of respect I remain your most humble servant. Please to wright as soon conveniant and direct for Edward Ensell.15

Ensell came to Pittsburgh at the request of O'Hara, but how long he was associated with the Pittsburg Glassworks is not certain. He had already taken steps to build a glassworks with the two Thomas Coopers in 1806 and O'Hara does not mention Ensell in his own correspondence after 1805. By this time Craig had sold out to O'Hara, and that doughty Irishman had assumed complete control of his glass business. He was now fifty-one years old, a retired general in the United States Army, a friend and confidant of the late George Washington, a frequent visitor at Monticello and a nationally known public figure. His glassworks not only occupied most of his time, it tried his patience. Writing again to James Morrison, Esq., Lexington, Kentucky, on April 19, 1805, he explained: “Your suspicion respecting your glass was wrong. It was duly ordered & reported to be on hand, but find that owing to the perfidy of Price, my Superintendent & Wendt the foreman-maker in plotting to abandon the works, the large size glass is not made, nor do I expect it can be made before Septembr.”

Meanwhile Frederick M. Amelung's glassworks had failed in Maryland and he had assigned what was left of it to the Reppert brothers to salvage. O'Hara was pleased to believe

15In Craig Papers, Carnegie Library of Pittsburgh.
that Amelung, son of the distinguished old glassmaker of Fredericktown, might come to superintend the Pittsburg Glassworks, and on April 19, 1805, he addressed Amelung at Baltimore, in part, as follows:

Dear Sir: Presuming that your situation at Baltimore is such as would not justify your coming to settle in this country for any present prospect, I take this method to consult you on the mode that would be best for having a few good sober Glass blowers employed for my work, at this place, being tired & disgusted with some of those I have been pestered with for years past. Fred K. Wendt, ignorant, obstinate & seditious is gone off down this river. I do not know where and has taken three others with him, still more ignorant than himself. My works are now clear of all incumbrances in that way, & ready to commence in the new.

Now I wish to know candidly your mind on this subject, whether you have any desire of your own to see this place with a few good hands, or whether you will engage to send me on four or five such as you can recommend, for which you shall have ample compensation for your trouble.

I wish to hear from you soon to know your proposals in either of these Cases.

P.S. The Glassworks are now in my own hands.

Amelung flirted with the idea of coming to Pittsburgh, and on May 26 O'Hara wrote to him again:

There is no person concerned with me in any respect. I have a large stock of materials on hand, and the tools complete; a Horse mill for pounding. Potash Works and Smith's Shop, all on the ground belonging to the works in operation. Coal & Wood are now laying in for the winter. The pots are in hand, fifty will be finished by Falleur in a few days.

The last fire continued very good eight months, the benches of our sandstone remained unimpaired, but the perfidy and sullen ignorance of Wendt, who always had a mutiny on the fire's going out, rendered it necessary to stop. I have been often compelled to dismiss Wendt on account of his mutinous natural disposition, and was induced to employ him by intercessions of connections that did not know him. He wishes to lease the works, or have a salary by the year: my knowledge of his dishonesty and ignorance forbade either. I have continued old Filius out of charity. Two White Glassmakers will be acceptable. We

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16 This was La Fleur, the former superintendent of the Ohio Glassworks, who was drowned soon after this letter was written while fording the river in front of the O'Hara glassworks—John E. Parke, Recollections of Seventy Years, 199 (Boston, 1886).

17 The same Phillis mentioned in the Craig letter of October, 1799.
have tried this in the same furnace with the Window Glass with perfect success; the blowers were both Englishmen so dissipated, that they became a great nuisance.

So Amelung moved to Pittsburgh and became a leader in Pittsburgh society. He belonged to the musical clubs and entertained with a lavish hand at his lodgings, but he was a great disappointment to O'Hara, who discovered that the young man had all of his father's charm and none of the old gentleman's ability as a glassmaker. Amelung stayed in Pittsburgh for several years, making extended trips back to Baltimore, during which times O'Hara would write to him in exasperation, as on January 18, 1806, when he wrote:

Charles Haines having forfeited all claim to indulgence, by his constant practice of getting drunk, and neglecting his business to the great loss and disgrace of the works he is discharged from my employ, and Joseph Felius will take his pot, till further orders. Boehl has also, after many repeated abuses of his duty in being drunk in the composition room, become unworthy of any confidence, and is to be immediately discharged from this employ.

Although O'Hara's relations with Amelung were not too happy it was during the Amelung period of supervision at the Pittsburg Glassworks that white glass was made commercially. In a letter to Terence Campbell, tavern keeper at Bedford, Pennsylvania, O'Hara wrote on March 14, 1806:

Your Hollow Ware could not be sent, orders in this way require a little time. I do not make white glass yet in quantity. I will send you a package of small articles by first opportunity, the ware is better than the imported, the colour & quality is the same as the window glass. I shall make whiter in the course of the summer. I am pleased with your giving my glass a trial at Chambersburgh & wish you to inform your brother of the optional prices, they will be the same at his House only adding the difference of carriage from Bedford to Chambersburgh which will be a trifle.

I am prepared to furnish you with any quantity you will please to order on a few days notice for packing.

Following is the invoice, dated April 1, for Campbell's subsequent order:
It was during this period, 1800-1812, that such white glass as is traceable to the O'Hara works was manufactured. The two champagne glasses in the Denny collection are probably from the first or experimental years, 1800-1806. The chandelier, which is either the original or a duplicate of the six-branch chandelier from Kerr's Tavern (1804), was cut by Eichbaum from O'Hara glass and assembled by him on a frame made by William Price.

The celery vase in the Denny collection may be one of the experimental pieces made by Price in 1800. It is cut in flutes but the most unusual characteristic of this piece is the fact that the top has been cut from the over-blow after annealing. Thus the top rim is a rough and unfinished cutting showing chipping. The color of the three Denny pieces grays down in the thick portions.

On April 29, 1810, O'Hara wrote to his brother-in-law, Joseph Carson in Philadelphia:

Enclosed you will have Fredk M. Amelungs note, due on the 28th of Octr 1804, for $100. . . . Amelung manages the glass works down the Delaware, he is employed in endeavors to get my glass blowers to desert my works. I wish you could get me two or three of his best, mine receive commonly one hundred $ pr month for their work. . . . You mention the probability of a person coming out here—who is capable of improving the method of Glass-making, it would afford me great pleasure to see such a person here, I intend to finish a large white work, which has been suspended for the want of hands.

This white glassworks did go into operation in August, 1810, O'Hara having written again to his brother-in-law, on
the twentieth, directing him to advance the following persons thirty dollars each for traveling money: Francis Wolf of Port Elizabeth, with a wife and one child; Jacob and Frederick Stanger, cousins; Randolph Button, with a wife and one child; John Bolton of "Kingsington"; and Lewis Ferdinand, with a wife and one child. "It will not suit," wrote O'Hara, "to engage any with large families, having upwards of one hundred at the works, and they breed like minks."

At last O'Hara was to find the completion of his dream to make fine lead glass of good quality. He was in production during the winter of 1810-1811 and perhaps until the following year. But he had waited too long: Edward Ensell and the Coopers were producing white glass of good quality in 1807; George Robinson was making good white glass at his glasshouse on Water Street in Pittsburgh; and Benjamin Bakewell had just built a new and extensive cone-type furnace for making white lead glass. Moreover, O'Hara's health began to fail in 1812 and he was forced to turn over much of the business to younger associates. Among his apprentices was young Charles Imson (later spelled Ihmsen), in whom O'Hara had great confidence and faith, and who eventually became one of Pittsburgh's most distinguished glass men. That the latter admired the old glass pioneer is reflected in his letter of July 31, 1812, to Adolph Everhart, glassblower, Baltimore:

You will receive the One fifth of every article you make, besides Two hundred Dollars a year, a house furnished you and fuel on your agreeing for One Year. The One fifth of what I make a month amounts to on an average to One hundred and forty Dollars, if the above terms will suit you I shall be very happy to see you in this place, from my knowledge of Mr. O'Hara's disposition I am certain you will continue to agree a long time. 18

By 1816 the second white glass furnace was turned back to green under an agreement with Benjamin Page of Bakewell, Page and Bakewell Company. Page was out on selling

18Denny-O'Hara Papers.
trips through the west and O'Hara agreed to withdraw entirely from the white glass business—that is the manufacture of tumblers, decanters, jars, or other glassware made of glass containing lead—in return for which Page would attend to the sale of O'Hara bottles and window glass down the Ohio River in the western territory. Page also made collections for O'Hara.

But the general's health was failing fast. During the summer of 1818 he turned the management of the business over to Dennis S. Scully and to Harmar Denny, a son-in-law. On November 10, 1819, he gave Denny a power of attorney to facilitate the operation of the glasshouse and other industrial operations.¹⁹

General O'Hara died on December 21, 1819, at his home on the bank of the Monongahela River. There is no evidence that he was ever under obligation to any other man, specifically James Ross, as is sometimes stated. O'Hara owned large tracts of land in the western territory and in Pittsburgh; he was one of the first bankers of the west, a capitalist, and an industrialist, but his first love, after his love of his adopted country, was his Pittsburg Glassworks.

Neither Scully nor Denny had any knowledge of the glass business, and soon after O'Hara's death the pioneer glassworks was leased and finally sold to Frederick Lorenz, who continued making window glass and bottles at the old works for many years.

¹⁹Allegheny County Archives, Deed Book 27, p. 96.