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THE FLINT GLASS INDUSTRY IN WHEELING, WEST VIRGINIA: 1829-1865

University of Delaware (Winterthur Program)

M.A. 1986

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THE FLINT GLASS INDUSTRY IN
WHEELING, WEST VIRGINIA: 1829-1865

by

Gary Everett Baker

A thesis submitted to the Faculty of the University of Delaware
in partial fulfillment of the requirements for the degree of Master
of Arts in Early American Culture.

June, 1986

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THE FLINT GLASS INDUSTRY IN
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by

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PREFACE

My interest in the Wheeling flint glass industry gradually developed while I served as Curator of Oglebay Institute's Mansion Museum in Wheeling, West Virginia, between 1976 and 1980. That museum appropriately houses the nation's largest collection of Wheeling-made glassware. Although I soon realized that the Wheeling factory histories represented a major gap in American glass scholarship, my busy schedule at Oglebay Institute precluded serious investigation of them. Upon entering the Winterthur Program in Early American Culture, my choice of a thesis topic was inevitable. Although work on this thesis began in 1981, my research and writing progressed slowly, so that my original advisor, Phillip H. Curtis, did not receive a draft until shortly before his dismissal from Winterthur Museum in November 1985. I am deeply grateful to Dr. Barbara McLean Ward for becoming my advisor during the final months of writing. I also want to thank Arlene Palmer Schwind for reading and discussing the manuscript with me in December 1985. The quality of my writing has benefitted from their skillful editing.

Many institutions and people assisted me during the course of my research. The staffs of the libraries of the Henry Francis du Pont Winterthur Museum, The Hagley Museum, the University of Delaware, The Chrysler Museum, and the Virginia State Library were

always helpful. I also benefited from visits to the National Archives, the Library of Congress, the New York Public Library, the Rakow Library of The Corning Museum of Glass, and the West Virginia Department of Archives and History. The collections of two West Virginia libraries were especially important to this study: the Ohio County Public Library in Wheeling and the West Virginia and Regional History Collection, West Virginia University in Morgantown. I want to personally thank Bruce Farrar and Dorothy Bosley of the Ohio County Public Library, and Dr. George Parkinson and Golda Riggs of the West Virginia and Regional History Collection for giving me ample access to their respective collections. I also wish to thank John Artzberger of Oglebay Institute in Wheeling for giving me continued access to the Wheeling glass collection and permitting the photocopying of local history materials.

I have also been extremely fortunate in my friends; discussions with them have significantly influenced my thinking. The late Benno M. Forman instilled in me the desire "to leave no stone unturned." Nancy O. Merrill, my colleague at The Chrysler Museum, has taught me much about glass. My classmate, Kirk J. Nelson, has always been willing to share his glass research and ideas. And Beverly Fluty, a historic preservationist in Wheeling, has willingly shared her knowledge of Wheeling history over the past ten years. My greatest debt of gratitude, however, is owed to my parents. They have unselfishly put the education of their children above their own interests. This thesis is therefore dedicated to them.

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INTRODUCTION

In 1864 the brilliant glass chemist, William Leighton, Sr., a member of the Wheeling, West Virginia, firm of J. H. Hobbs, Brockunier and Company, perfected an inexpensive soda-lime formula that could be substituted for the costly lead formula glass then used in the production of fine pressed glass tableware. This new formula, developed in Wheeling, was probably the single most important technical innovation in the American flint glass industry since the advent of mechanical pressing in the 1820s. As a result the name "Wheeling" has become inextricably linked with the manufacture of American glass.

Wheeling has long been acknowledged by glass scholars as a major midwestern center of glass manufacture. Yet comparatively little has been written about its factories, and the course of their development has not been well understood. Compounding this problem is the fact that much of what has been written is inaccurate. The first history of Wheeling's glass industry was a three-page account that appeared in the History of the Pan-handle (1879)--a local history dealing with the four northernmost counties of West Virginia. Although its authors made no attempt to be comprehensive, the History of the Pan-handle contains information obtained from the

manufacturers themselves, and so remains a useful source. The account focuses primarily upon the operations of Wheeling's first glass factory in the 1820s and upon the histories of the two major companies in business in 1879: J. H. Hobbs, Brockunier, and Company and The Central Glass Company. Both of those firms had achieved international importance by that time, shipping glass throughout the United States and to other countries in North America, South America, and Europe.¹

The first significant modern writing on the Wheeling glass industry appeared in Stephen Van Rensselaer's Early American Bottles and Flasks (1926) and in Rhea Mansfield Knittle's Early American Glass (1927). Van Rensselaer and Knittle derived nearly all of their information from the History of the Pan-handle, but both unfortunately introduced errors.² Knittle's brief article, "Glassmaking in Wheeling, West Virginia," appeared in Antiques (1933). Although this article did not rest on solid scholarship, it was nonetheless important. Knittle quoted significant passages from the 1851 Wheeling directory and illustrated four local glass company advertisements. Knittle's spirited, if highly romantic, advocacy must have done much to interest her readers in Wheeling. She wrote

All is not Sandwich, Cambridge, or Pittsburgh pressed glass that glitters, or, for that matter, that loops the jewel, or that hails the comet. . . . Hearts and flowers, hearts and stars, fade not, falter not along the old Ohio . . . Not that Wheeling manufactured lacy glass and the latter types of pressed tableware to the exclusion of blown, molded, and cut-flint varieties, or cylinder and bottle glass. All these were made. Almost from the day of its settlement, Wheeling made glass.³

George S. and Helen McKearin's American Glass (1941), which remains the most important general work on its subject, presented yet more bits of documentary evidence and included the names of some Wheeling companies in its "Chronological Chart of American Glass Houses." The McKearins repeatedly acknowledged the impact of William Leighton's soda-lime formula on the glass industry, but understandably, considering the scope of their work, made no attempt to provide the history of even a single Wheeling firm. However, they perceptively noted, "The glass works operated by John and Craig Ritchie and Sweeney & Company in Wheeling could well have made wares which have been attributed to the Bakewells."⁴

The late Josephine Jefferson's Wheeling Glass (1947), by far the most significant pioneering effort, remains the only monograph dealing with the Wheeling factories. In eighty-six short pages Jefferson ambitiously attempted to chronicle the history of glass-making in Wheeling from the first production of window glass in 1820 until the last remaining maker of fine tablewares, the Central Glass Company, went out of business in 1939. Working primarily from the Ohio County, West Virginia, deeds, she succeeded in resurrecting many of the names of the dozens of long-forgotten partnerships that operated the Wheeling factories. Not surprisingly, Wheeling Glass has served as the standard source on its subject for American glass scholars since 1947.⁵

Unfortunately, Wheeling Glass is poorly organized, unfootnoted, and not entirely reliable. Later writers have parroted and

occasionally magnified its errors, but few have corrected them. Many of these errors have marred not only our understanding of individual firms but also our understanding of Wheeling's glass industry as a whole. Jefferson saw the history of glassmaking in Wheeling as a "tragic pattern" of failure:

These early factories were mortgaged, they were leased, they were sold; but they usually survived for a time. The larger ones held on the longest, but the men that operated them changed again and again. Debts piled up, mortgages could not be met, factories put up as security on loans were in turn lost to the holders of those loans and sold again to other men who believed in glass.

She attributed these failures to "Overexpansion in a community that could not absorb their initial product," lack of capital, and "wasteful extravagances in manufacture..."⁶

For this thesis, I have studied virtually every primary source that I believe was known to Jefferson, and I have reexamined her sources in the light of many additional sources that were left largely unexploited by her or were unavailable to her. Instead of attempting a general history of the Wheeling glass industry from 1820 to 1939, I have chosen to focus upon the flint glass industry in Wheeling prior to the introduction of the soda-lime formula.

Flint Glass

Until the 1860s, the term "flint glass" had been exclusively applied to colorless glass with lead content whether it was worked into the finest cut tablewares or simple pharmaceutical vials. Even under ideal conditions a glass pot yielded glass of varying

qualities. The best glass came from the center of the pot, while the glass at the top and bottom was comparatively impure. As long as the glass could be fashioned into a salable product, it was a commodity too valuable for the manufacturer to waste. In 1849 Apsley Pellat, the proprietor of the Falcon Glass Works in London, picturesquely wrote:

The productions of Flint Glass works in their varieties and divisions of labour, are somewhat like that of a well-conducted farm, on the four-course system, yielding its due proportion of cereal and leguminous crops alternately. Flint Glass works, to be profitable, cannot yield the whole of the product of the finest quality, any more than a farmer can grow wheat to the exclusion of every other produce; and whoever makes that attempt, will, in the end, find out his error.⁷

Thus, regardless of aspirations to quality, the nature of the business decreed that even the most celebrated factories made coarse utilitarian wares.

The maker's ideal for fine wares was glass of great clarity without even a hint of color. Ironically, colorless glass that approached this standard of perfect whiteness was called "glass of good color." The phrase "colored glass" referred to glass made in colors. The earliest reference to the manufacture of colored glass in Wheeling occurs in an 1845 newspaper article describing the establishment of Barnes, Hobbs, and Company. After that year Barnes, Hobbs, and Company, its successors, and several small shortlived flint glass manufacturers advertised themselves as makers of glass in "flint and fancy colors." Since American colored glass of that period almost invariably contained lead, this advertising suggests

that the word "flint" continued to be used to connote colorless glass.⁸ The terms, "French flint" and "German flint," used in Wheeling in the mid-1860s by firms other than J. H. Hobbs, Brockunier, and Company, probably referred to the colorless non-lead glass associated with continental European manufacture. When it became possible to press tablewares in a high quality colorless non-lead glass, that was, at a glance, virtually indistinguishable from lead formula, the term flint lost its precision. The trade definition of flint gradually broadened to include objects fashioned from the improved soda-lime formula.⁹

The Rise of the Glass Industry in Wheeling and Its Course of Development

The completion of the National Road from Baltimore to Wheeling in 1818 provided Wheeling with its first great impetus for growth. Prior to the arrival of the National Road, Wheeling, founded in 1769, was little more than a frontier village vying with its neighbors, Wellsburg (sixteen miles to the north) and Elizabethtown (twelve miles to the south), for dominance in what was then the Virginia pan-handle--a narrow strip of land jutting above the Mason-Dixon line, bounded on the west by the western shore of the Ohio River and on the east by Pennsylvania. All three villages lay along the Ohio River--an artery which the recent success of the steamboat had converted into the major thoroughfare of the west. All three possessed the coal so necessary for the development of industry. In the antebellum period the known coal field extended from Brownsville,

Pennsylvania, westward into eastern Ohio and southward to a point about twelve miles south of Wheeling. In this region lay vast quantities of coal that could be cheaply mined by simply tunneling into the hillsides--coal that was less expensive than cordwood. It is hardly surprising that iron and glass manufacture became this region's two most important industries. Both required heat so prolonged and intense that the availability of fuel virtually determined the location of these industries.¹⁰

The arrival of the National Road served as a catalyst to Wheeling's industrial development. The road drew entrepreneurs to Wheeling and the city's major industries were established soon afterward. The first glassworks began production of window glass and green hollow ware in 1820. In his old age, former commission merchant, glass manufacturer and banker, Redick McKee, a participant in that venture recalled its establishment:

Up to 1817 or 1818, Wellsburg . . . was the principal town in the Pan-Handle, but the approaching completion of the "National Road" caused business men from other places to move into Wheeling, and changed the relative position of the two places. However, the immigrants brought, as a general thing, but little active capital, and the former inhabitants, though many of them were wealthy, had their money mainly locked up in lands, town lots, &c. Hence, new enterprises, such as the building of factories, steam mills, &c., were left to newcomers. About 1820 or 1821, Mr. George Carothers, of Brownsville, Pa., came to Wheeling and proposed the building of a window glass factory. Aided by Wheeling capital, he erected the necessary buildings for an eight-pot furnace, annealing ovens, &c. Owing to accidents, the first attempt at glassmaking in this furnace failed, and the works were finally bought by Knox & McKee, who employed Carothers as superintendent, and in the latter part of 1821, or early in 1822, commenced successfully the manufacture of cylinder glass, packing mainly in half boxes

(50 feet), with the brand "Virginia Works, Knox & McKee, Wheeling." We . . . continued the business satisfactorily for several years, turning out, I think, annually some 3,000 or 4,000 boxes of all sizes, from 6 x 8 to 14 x 20, together with large quantities of green hollow ware; gallon and half gallon, and quart bottles; oil and porter bottles, and pint bottles innumerable.¹¹

From September 1820 until November 1829, when Ritchie and Wheat began flint glass manufacture, the green glassworks discussed by Redick McKee was the only glass factory in Wheeling.

The economic boom of the early and mid-thirties saw a proliferation of green and flint glass factories in Wheeling. In 1828, Knox and McKee's green glass factory yielded an annual product valued at \$24,000.¹² By November 1833, five glass factories yielded a combined annual product valued at \$109,000.¹³ By December 1836, glass manufacture in Wheeling was at or near its peak for the decade: six glass factories yielded a combined annual product valued at \$274,000.¹⁴ The Depression of 1837 severely affected the glass industry nationally. Wheeling felt its crippling effects into the mid-forties. In 1840, the United States Census of Manufacturers gathered returns for only three Wheeling glass factories, suggesting that the other factories were either shut down or had not been in operation for a full year. The three operating factories reported a combined annual product valued at only \$134,000.¹⁵ In December 1845, it was estimated that the four glassworks then in operation would yield a combined annual product of \$146,800, if they "continued at the same rate."¹⁶

The late forties saw a general recovery of the glass industry in Wheeling. In December 1846, the three operating glass factories reported a combined annual product valued at \$183,000.¹⁷ In June 1847, the combined annual product was estimated at \$200,000.¹⁸ By the end of the decade, the Wheeling factories finally exceeded the annual product value reported in 1836. For the year from June 1, 1849, to June 1, 1850, the United States Census of Manufacturers reported that five factories had yielded a product valued at \$300,000.¹⁹ The fifties, however, was not a decade of stable, steady growth. For the year from June 1, 1859, to June 1, 1860, the United States Census of Manufacturers collected statistics for only two factories; their combined product value was \$220,000. Both were flint glass manufacturers.²⁰

Flint glass manufacture was profitable in Wheeling, green glass manufacture was not. Green glass manufacture in Wheeling had been successful in the 1820s, and as late as 1833 green glass accounted for slightly more than half the value of Wheeling's annual glass production. Thereafter green glass declined in importance, although it was periodically remunerative enough to entice would-be manufacturers into the business.²¹ None of the small firms involved in green glass manufacture achieved long-term stability; their's was the pattern of failure. In 1830, Knox and McKee rented their green glass factory to the firm of Encell and Plunkett, and within two years, Knox and McKee, in partnership with Jesse Wheat and John

Price, built a flint glass factory next door. Redick McKee later recalled the reason for the shift:

As factories, multiplied, and blowers became more numerous and skillful, prices declined, and finally ceased to pay. We followed them down from \$12 to \$3.50, and then changed the concern into a white flint hollow-ware factory, under the firm of Wheat, Price & Co.²²

The window glass made by Knox and McKee and most of the green glass manufacturers in the Ohio Valley was cylinder, or broad glass--the common, ordinary window glass of the day. The manufacture of cylinder glass entailed blowing a long cylindrical bubble, cutting off the ends, cutting the resulting cylinder lengthwise and flattening it out through heat on a bed to form a large rectangular sheet, from which panes could be cut after the glass had cooled. Cylinder window glass, like agricultural products and pig iron, was a commodity--its price determined by supply and demand. After the decline of window glass prices, in the late twenties and early thirties, the cost of fuel, and finally even sand, were crucial factors in the profitability of cylinder window glass manufacture. In the late twenties the high cost of fuel was probably responsible for driving the window glass industry out of the Cincinnati area, which was then dependent upon Pittsburgh and Wheeling for its coal.²³ Although Wheeling had a cheap and abundant supply of coal, the sand used for its window glass came from western Pennsylvania. An observation, which appeared in the Daily Intelligencer in June 1860, delineates the tenuous position of window glass manufacturers in Wheeling:

Window glass is but little made at Wheeling. Pittsburgh can so under-sell them--having a cheaper sand near that city--

that the competition cannot be sustained. There is but one window glass manufactory here, but at present it is not in operation--as Pittsburgh sells cheaper, and of course it cannot thrive.²⁴

Knox and McKee had switched to flint glass manufacture in the early thirties for good reason. The cost of sand was not a major factor in the profitability of a flint glass factory. Window glass was substantially lower in value for its bulk and weight than flint glass because a much larger portion of the product value of flint glass lay in the labor expended upon its manufacture. For example, in Wheeling in the mid- to late-thirties a standard box of 100 square feet of eight by ten-inch cylinder window glass generally wholesaled between \$3.50 and \$3.75, while at the same time, the most costly cut glass decanter, for which documentation exists, wholesaled at \$7.50 (see Appendix B).²⁵

Although many failures can be found in the history of glass manufacture in Wheeling, I believe that successes also existed and that there is a pattern to those successes. The successful firms were all flint glass manufacturers. This thesis, consisting of a series of business histories on Wheeling's major flint glass manufacturers, documents the scope and achievements of the Wheeling flint glass industry from its inception in 1829 until the introduction of Leighton's improved soda-lime formula--a period when Wheeling was second only to Pittsburgh as a midwestern producer of flint glass.

NOTES

Two groups of records from the Ohio County Court, Wheeling, West Virginia, have been cited so frequently that I have abbreviated references to them as follows:

OCC Papers	Ohio County Case Papers, Ohio County Court Records, West Virginia and Regional History Collection, West Virginia University, Morgantown, West Virginia.
DB	Ohio County Deed Book, Facsimilies in Registry of Deeds, Ohio County Court House, Wheeling, West Virginia.

1. J. H. Newton, G. G. Nichols and A. G. Sprankle, History of the Pan-handle; Being Historical Collections of the Counties of Ohio, Brooke, Marshall and Hancock, West Virginia (Wheeling, West Virginia: J.A. Caldwell, 1879), 238-40 (hereafter cited as Newton, et al., History of the Pan-Handle).
2. Stephen Van Rensselaer, Early American Bottles and Flasks (Peterborough, New Hampshire: Transcript Printing Company, 1926), Part 1, 204-15, 222-3; Rhea Mansfield Knittle, Early American Glass (New York: The Century Co., 1927), 389-400, 404-5.
3. Rhea Mansfield Knittle, "Glassmaking in Wheeling, West Virginia," Antiques, vol. 24 no. 2, (August 1933): 69-70.
4. George S. McKearin and Helen McKearin, American Glass (New York: Crown Publishers, 1941) 137-9, 595, 599-601, 603, 607, 610. (hereafter cited as McKearin, American Glass).

5. Josephine Jefferson, Wheeling Glass (Mount Vernon, Ohio: The Guide Publishing Co., 1947), 7-86. (Hereafter cited as Jefferson, Wheeling Glass). Jefferson devoted seven pages to the firms in which John Ritchie was involved, three pages to the firms in which Francis Plunkett was involved, eight pages to the various Sweeney firms, six and a half pages to Barnes, Hobbs and Company and its successors, and a page and a half to the firms in which the Anderson brothers were involved.
6. Jefferson, Wheeling Glass, 11-2.
7. Apsley Pellat, Curiosities of Glass Making with Details of the Processes of Ancient and Modern Ornamental Glass Manufacture (London: David Bogue, 1849), 87-8.
8. Wheeling Times and Advertiser, June 26, 1845. The short-lived firms that advertised glass in flint and fancy colors were Evans and Co.; Evans and Pryor; Anderson and Co.; and D. H. Southwick and Company, see Chapter 1, notes 54, 55, 58, 60. Since these firms never really succeeded in establishing themselves, their production must have been negligible.
9. Sweeney, Bell, and Co. was described as a maker of "flint and French flint glassware" and Oesterling, Henderson, and Co. as a maker of "all kinds of German flint ware," see "The Manufacture of Glass in Wheeling," The Daily Register, December 31, 1864.
10. Elizabethtown is now called Moundsville. For an excellent discussion of the role that the steamboat played in the growth of cities along the western waterways see Richard C. Wade, The Urban Frontier: Pioneer Life in Early Pittsburgh, Cincinnati, Lexington, Louisville, and St. Louis. (Cambridge, Massachusetts: Harvard University Press, 1959; reprint, Chicago: University of Chicago Press, 1972) 53, 70-1, 190-1 (hereafter cited as Wade, The Urban Frontier).
11. George Carruthers advertisement dated September 16, [1820], Virginia North-Western Gazette, September 30, 1820; Redick McKee letter as quoted in Newton et al, History of the Pan-handle, 238. Redick McKee (1800-1886) was the son of John McKee for whom McKeesport, Pennsylvania was named. Redick came to Wheeling as a commission merchant, and was instrumental in the city's industrial development. He sustained heavy losses in the Depression of 1837, but remained in Wheeling until October 1850, when he set out for California as the newly appointed United States Commissioner and Indian Agent for that state. At the time of his death he resided in Washington, D.C. where he lies buried in Oak Hill Cemetery. I am indebted to George Kackley, Superintendent of Oak Hill Cemetery, for McKee family information. For McKee's appointment as Indian agent and his departure from Wheeling, see The Wheeling

Times and Gazette, October 4, 1850, October 28, 1850, November 14, 1850.

12. Helen McKearin and Kenneth M. Wilson, American Bottles & Flasks: and Their Ancestry (New York: Crown Publishers, 1978), 128, 728. According to McKearin and Wilson, this production figure was reported for Knox and McKee in the New York Commercial Advertiser, January 23, 1828.
13. "A List of the Manufactories of the Town of Wheeling and Its Immediate Vicinity -- November 1833" (hereafter cited as "Manufactories of the Town of Wheeling," November 1833). This broadside list is attached to the pamphlet, "Memorial to the Legislature of Virginia for Establishing a New Bank in the Town of Wheeling" (Richmond, Virginia: T. W. White, 1833), filed with Ohio County Legislative Petitions, Virginia State Library, Richmond, Virginia.
14. "A List of the Manufactories of the City of Wheeling, December 1836." (hereafter cited as "Manufactories of the City of Wheeling, December 1836") This printed list is attached to the manuscript, Memorial to Legislature of Virginia for Establishing a New Bank in the City of Wheeling, December 31, 1836, Ohio County Legislative Petitions, Virginia State Library, Richmond, Virginia.
15. Ohio County, Western District of Virginia, Statistics, 6th Census, Virginia Part 3 vol. 13, 1840, National Archives, Washington, D.C.
16. "Memorial of the Board of Trade of the City of Wheeling to the Legislature of Virginia, Remonstrating Against the Passage of Any Law to Authorize the Construction of a Railroad from the Potomac to any point on the Ohio River South of Wheeling; Either by Extension of the Baltimore and Ohio Railroad or Otherwise" (n.p., December 27, 1845. Filed with Ohio County Legislative Petitions, Virginia State Library, Richmond, Virginia.
17. "Memorial of the Board of Trade of the City of Wheeling, to the Legislature of Virginia, Renewing their Remonstrance Against the Passage of Any Law to Authorize the Construction of a Railroad from the Potomac, to Any Point on the Ohio River South of Wheeling, Either by Extension of the Baltimore and Ohio Railroad or Otherwise" (N. p., December 21, 1846) Filed with Ohio County Legislative Petition, Virginia State Library, Richmond, Virginia.
18. "Wheeling," Wheeling Times and Advertiser, June 5, 1847. This article dealing with Wheeling's advantages gave a number of industrial statistics and claimed its establishments had "as much as they can do, and having a market unsupplied that would be equal to the supply of five more establishments."

19. 1850 United States Census: Products of Industry, Virginia State Library, Richmond, Virginia.
20. 1860 United States Census: Products of Industry, Virginia State Library, Richmond, Virginia.
21. In 1833 the three green glass manufacturers produced a combined annual product valued at \$57,000, the two flint glass manufacturers a combined annual product valued at \$52,000. "A List of the Manufactories of the Town of Wheeling," November 1833. In 1836 the three manufacturers of ordinary green glass produced a combined annual product valued at \$77,000, but this was overshadowed by flint glass production which totaled \$110,000, and by crown glass manufacture with an annual product of \$87,000. In all the trend was towards refined products. "A List of the Manufactories of the City of Wheeling, December 1836."
22. Newton et al., History of the Pan-handle, 238.
23. McKearin, American Glass, 136. In fact Henry Teater, who had been a window glass manufacturer in the Cincinnati area, moved to Wheeling about 1831 and was engaged in that business in Wheeling as late as 1836. "A List of the Manufactories of the City of Wheeling, December 1836."
24. "Letter from Wheeling," Daily Intelligencer, June 11, 1860.
25. For window glass prices see "Wheeling Price Current," Wheeling Tri-Weekly Times, February 1, 1834; "Price Current," Wheeling Tri-Weekly Times and Advertiser, February 14, 1839, April 2, 1839.

I. JOHN RITCHIE, HIS PARTNERS AND THEIR FACTORIES

FLINT GLASS

This elegant article is now manufactured in great perfection in this place. Messrs. Ritchie and Wheat have commenced operations at their works on an extensive scale. The furnace contains eight crucibles, each capable of holding eight hundred pounds of glass. All the materials are prepared by themselves. We ask the attention of the public to their advertisement in this paper, and their enterprises will be liberally rewarded.

Wheeling Compiler, November 11, 1829¹

In 1829 the Wheeling Flint Glass Works became the first factory to produce flint glass in Wheeling. The factory was operated until 1837 by three successive firms: Ritchie and Wheat; J. and C. Ritchie; and Ritchies and Wilson. In 1837 Ritchies and Wilson ceased flint glass manufacture and leased their factory to F. Plunkett and Company and later to its successor, Plunkett and Miller. The partners in the original short-lived firm of Ritchie and Wheat were John Ritchie, Jesse Wheat, and James M. Thompson. John Ritchie, an entrepreneur, possessed a half share in the firm and evidently provided much of the capital needed for the venture.² Ritchie was one of fourteen children born to Scottish immigrant Craig Ritchie, Sr., a successful merchant in Cannonsburg, Pennsylvania.³ John Ritchie had moved to Wheeling by June 1828, because in that month he and his wife were listed as new communicants in Wheeling's First

Presbyterian Church.⁴ Ritchie may well have been drawn to Wheeling by family ties as well as business opportunities because his sister, Eliza, was the wife of Redick McKee.⁵ Nothing is known of James M. Thompson, except that he owned a quarter share in the glassworks. Jesse Wheat, the owner of the remaining quarter share, was an experienced glassmaker. The source of Wheat's experience is uncertain. Before coming to Wheeling, he could easily have worked at the Wellsburg Flint Glass Works in Brooke County, West Virginia; his wife's family lived in rural Brooke County and at West Liberty, located in Ohio County near the Brooke County line.⁶

The partnership lasted from 1829 until November 1831, when Wheat bought Thompson's share in the firm, and Ritchie in turn bought out Wheat. Ritchie did so with what he thought was an understanding that Wheat continue at the works for a year at the annual salary of \$500,

directing and superintending the mixing of all the glass to be made at said works...& of managing and superintending all the operations of said works, and during the continuance of said service would teach and impart to the said John all the art and mystery he possessed in the making of good flint glass, and all his skill and knowledge in the conduct and management of said works.⁷

According to John Ritchie, Jesse Wheat left his service on December 10, 1831, and "unlawfully absented himself interested in a certain other flint glass works", in fact, the newly-formed firm of Wheat, Price, and Company, which would first advertise its glass in August 1832. Ritchie sued Wheat for \$3,000 in damages as a result of the

incident, claiming that his business had suffered due to Wheat's absence. In 1833, a jury decided the case in Wheat's favor.⁸

No production statistics are available for the firm of Ritchie and Wheat, but two travelers have left us their impressions of the factory and its products during its first months of operation. A detailed description of the factory and its operation comes from the manuscript journal of Benjamin L. C. Wailes, a Mississippi planter, who visited the factory on December 15, 1829, little more than a month after it had begun production. Wailes's account indicates that the glass furnace and the steam driven cutting shop were located in separate buildings. From the outside, the structure housing the furnace must have looked much like the factory building depicted on the mold-blown Wheat, Price and Company flasks (McKearin numbers GI-115 and GI-116) -- a square building with a tall central chimney rising from its pyramidal roof. According to Wailes:

The furnace is in the shape of a cone (in the center of a large room) & has a chimney on top. It has eight arches in the side in which the crucibles of composition is placed, and under each is a place for the coal. The arches are closed until the necessary heat is obtained.⁹

During his visit, Wailes observed the blowing of two staple items, tumblers and vials, and the cutting of glassware. Although his account adds little to our knowledge of these crafts, it establishes that from the outset the glass cutting equipment was "driven by a very small & neat steam engine." Wailes's description of the preparation of the batch may be the most detailed description of that

operation that has come down to us from any of the midwestern factories.

This glass is formed from stone brought down the Allegany River.... The stone is ground to powder in a stone channel by a large Iron-bound stone wheel, exactly in the manner that bark is ground for tanning. It is sifted very fine. A certain quantity of Red Lead & Potash being required to be added to the stone, a furnace for preparing the first & a large boiler for the latter is erected in the establishment. The common lead is placed in the furnace & kept at a proper temperature for ten or twelve hours, washed, & c., returned to the furnace & burnt to a handsome red color ...the sand or ground stone is all baked in a furnace prepared for the crucibles.¹⁰

The in-house manufacture of red lead, and the use of steam power in the cutting shop, indicate that the factory was fairly up-to-date. However, the writer's omission of a steam engine in his description of the mill for pulverizing stone into sand suggests that a horse rather than a steam engine provided the motive power for the milling operation. While a horse-drawn mill could hardly be considered outmoded in 1829, it may not have been the most modern either. By 1832, at least one Pittsburgh flint glass manufacturer was using steam-powered equipment to pulverize materials; Wheeling manufacturers apparently did not follow suit until the mid-thirties.¹¹

The other traveler was Frances Trollope, who in March 1830 found Wheeling a flourishing town, visited its four-month-old flint glass factory, and gave her opinion of its products in her Domestic Manners of the Americans:

We were told by the workmen that the articles finished there were equal to any in the world; but my eyes refused their assent. The cutting was very good, though by no means equal to what we see in daily use in London; but the

chief inferiority is in the material, which is never altogether free from colour. I had observed this also in the glass of the Pittsburgh manufactory, the labour bestowed on it always appearing greater than the glass deserved. They told us also, that they were rapidly improving in the art, and I have no doubt that this was true.¹²

After Wheat's departure from the firm, late in 1831, Ritchie ran the factory himself for a time. In the lawsuit mentioned earlier, Ritchie claimed that due to Wheat's absence he had "necessarily been put to great inconvenience[,] loss of time", and materials "in acquiring and procuring the necessary skill & knowledge in the business" and that he had "hitherto been prevented from making glass in the same quantity & of the same quality as he otherwise would."¹³ Ritchie had paid Wheat \$6,000 for his half share in their firm on November 16, 1831. On March 22, 1833, perhaps in need of greater capital, John Ritchie sold his brother, Craig Ritchie, Jr., a half share in the flint glassworks for \$8,500. Craig Ritchie may have become a partner before the date of the actual purchase, because the deed refers to him as a resident of Wheeling.¹⁴ In any event, the resulting firm was called J. and C. Ritchie. In November 1833, that firm's flint glassworks with forty-one hands (six of whom worked in the cutting shop) yielded an annual product valued at \$22,000.¹⁵

At the same time Wheeling's other flint glass manufacturer, Wheat, Price, and Company, little more than a year old, with forty-eight hands (eight of whom worked in the cutting shop) yielded an

annual product valued at \$30,000.¹⁶ Four partners constituted the firm of Wheat, Price, and Company: Jesse Wheat, John H. Price, Redick McKee, and Charles D. Knox. Only Jesse Wheat is known to have been a practical glassman; the others seem to have been investors.¹⁷ Wheat, Price and Company had its origin in the green glassworks owned by the commission merchant firm of Knox and McKee. Knox and McKee had leased their green glassworks to the firm of Encell and Plunkett for the term of three years beginning July 10, 1830, with a clause in their contract reserving the right to build on the adjacent land if they so chose.¹⁸ By August, 1832, Knox and McKee, as members of the new firm of Wheat, Price, and Company, had exercised this privilege by building on that land and putting into "complete operation" a flint glassworks. When Encell and Plunkett's lease expired on July 10, 1833, Wheat, Price, and Company, evidently placed the management of the green glassworks under James M. Wheat, who was in all likelihood related to Jesse Wheat.¹⁹ Apparently, James M. Wheat soon afterwards leased the green glassworks. In November 1833, Wheat, who owned no land in Ohio County, was listed as one of Wheeling's three manufacturers of "Window Glass & Hollow Ware."²⁰

On January 31, 1834, the Ritchies expanded their growing business by buying out Wheat, Price, and Company for \$27,000 to be paid with interest in five equal annual installments, the first due on April 1, 1835, and the last on April 1, 1839. The Ritchies moved their operations to the factory complex formerly owned by Wheat, Price, and Company, which fronted on Sixth Street (present-day Jacob

Street) and was bounded by Zane and Clay Streets (present-day 17th and 18th Streets respectively) in the area known as East Wheeling. This brought together under one ownership, the machinery, tools, and materials of the former rival flint glass manufacturers. The deed specifically stated that "moulds and presses" were included. To be paid for separately "at a fair evaluation" were:

Cullet, boxes for packing glass, boards, sand & sand stone, clay, ashes, salts, salt petre, manganese, arsenic, lead, knobs, spindles, pepper tops, lamp tubes, jar tops, dray, cart and horses.²¹

In addition, John and Craig Ritchie probably drew skilled glass-workers from the former work force of Wheat, Price, and Company, to supplement those from the factory they had closed.

John and Craig Ritchie also called their new flint factory the Wheeling Flint Glass Works. In an advertisement dated March 13, 1835, the Ritchies announced that "having put the above new and extensive works into operation" they were "able to fill all orders to a very large amount of CUT, PRESSED, AND FLINT GLASSWARE."²² The flint factory must have been in operation most of the time between their purchase in January 1834 and March 1835, when the advertisement was issued, so the firm either depended upon its reputation and regular customers during this period, or the advertisement reflects a reopening of the works after a temporary closure for improvements. Evidently the firm needed a larger labor force and planned for the future expansion of its cutting department; in an advertisement dated October 9, 1835, J. and C. Ritchie sought "8 or 10 boys of steady

habits to whom a very favorable opportunity will be given to learn the glass cutting business."²³

James M. Wheat's lease of the green glassworks was either initially unaffected by the change in ownership or the Ritchies temporarily renewed his lease. Wheat continued to manufacture cylinder window glass under the new ownership well into 1835, advertising in June of that year that he had for sale "window glass, of his own manufacture . . . warranted equal to any made in the Western Country" and claiming that the "force employed" would "enable him to fill all orders with the greatest punctuality and dispatch."²⁴

By December 1836, the Ritchies, having taken George W. Wilson as a partner, were operating both factories under the firm of Ritchies and Wilson. Wilson may also have been from Western Pennsylvania, as he was probably the same George Wilson who had represented the nearby village of West Alexander, Pennsylvania, at the General Convention of the Friends of Domestic Industry held at New York in October 1831. In December 1836 the two factories of Ritchies and Wilson yielded a combined annual product valued at \$162,000.²⁵

Ritchies and Wilson converted (or rebuilt) the green glassworks for the manufacture of the more desirable crown window glass -- thus establishing the only such works in the western country. In December 1836 the crown glassworks employed forty-one hands and yielded an annual product valued at \$87,000 -- or \$10,000 more than the combined annual product value of the three green

glassworks then operating in Wheeling.²⁶ In the firm's single surviving price list, a broadside dated April 1839, Ritchies and Wilson noted that:

the manufacturers of this Crown Window Glass, have been at great expense and trouble in erecting one of the most extensive establishments in the United States, and have spared no pains or expense in procuring practical workmen of long experience in the glass business, the public have a guaranty that their first quality Crown Window Glass is equal to any made in this or any other country.²⁷

In the mid-thirties only three other crown glass manufacturers seem to have operated in the United States, the New England Crown Glass Company in East Cambridge, Massachusetts, the New York Crown and Cylinder Glass Company near Bristol, New York, and the Redford Glass Company in Redford, New York.²⁸ From the last named, Ritchies and Wilson had indeed drawn at least three crown glass blowers: John Kline, who served as superintendent at the Wheeling factory, James Travis, and James Kirkwood, who had also worked as a glass blower in the Boston area (ca. 1827-30) and at the Providence Flint Glass Company in Providence, Rhode Island, before going to Redford.²⁹

Before the manufacture of plate glass in America, crown was the finest available American-made window glass. Crown glass was substantially more expensive than cylinder glass because, as in the case of flint glass, a large portion of the value of crown glass lay in the labor expended upon it. To make crown glass, a large bubble was blown and shaped into a crown-like form. The side opposite the

blowpipe was attached to a pontil rod. The blowpipe was then removed and the resultant hole was enlarged. Rotation of the pontil rod expanded the glass by centrifugal force into a disk of window glass, as large as four or five feet in diameter. When the pontil rod was cracked off it left a scar or bull's eye. The subsequent cutting of rectangular and square panes from the cooled and annealed disk required the creation of a variety of sizes, whether or not there were orders for them, and wasted glass around the edge and at the center.

Crown glass was so costly that wholesale prices for the larger sizes were given "per light," i.e. by the pane. The difficulty of cutting and the waste involved greatly added to the cost of the finished panes. In the Ritchies and Wilson price list, uncut sheets of crown glass wholesaled for \$1.50 each. A single twenty-six-by-sixteen inch pane, the largest size carried by the firm, wholesaled for the same price. Crown glass panes in smaller sizes were sold, like cylinder glass, by the box -- 100 square feet to the box. This allows meaningful comparison of cylinder and crown glass prices. In the thirties when the best eight-by-ten inch Wheeling-made cylinder glass panes wholesaled between \$3.50 and \$3.75 per box, Ritchies and Wilson's heavy "First Quality" crown glass wholesaled at \$16.10 per box -- approximately the going national rate. Even "Single" crown glass, the firm's cheapest window glass, sold for \$8.00 per box in that size. Ritchies and Wilson claimed that their single crown glass was "made of the same materials and in the same

manner as their Heavy Crown, differing only in thickness. Its purity--- and brilliancy fully equal the best English."³⁰

As the only western maker of crown glass, Ritchies and Wilson may well have found their crown glass factory more profitable than their flint glass factory. In December 1836, their flint glass factory employed fifty-five workers and yielded an annual product valued at \$75,000 and their crown glass factory employed fourteen fewer workers and yielded an annual product \$12,000 greater.³¹ Ritchies and Wilson produced crown glass until about 1840, but ceased the manufacture of flint glass in 1837. By the fall of 1837, Ritchies and Wilson had evidently leased their flint glassworks to F. Plunkett and Company, because the new firm issued a broadside price list dated October 12, 1837.³² F. Plunkett and Company in turn became the firm Plunkett and Miller, which in April 1838 advertised itself as the "successors of Ritchies & Wilson in the manufacture of Flint Glass." Plunkett and Miller evidently continued to lease the flint glassworks until 1839 when that firm moved to its own newly-constructed factory in Ritchietown (present-day South Wheeling).³³ Thus in 1840, when the Depression of 1837 had its greatest impact on the American economy, the firm of Ritchies and Wilson, without tenants in its flint glassworks, found itself dependent upon the manufacture of high-priced, luxury window glass. The demise of the firm under these circumstances is hardly surprising.

In the latter part of 1838, the annual product value of Ritchies and Wilson's crown glass was reported at \$80,000 -- a substantial sum, but a figure \$7,000 lower than it had been two years earlier.³⁴ As the demand for the firm's product waned during the Depression, debts mounted. The extent and nature of the Ritchies' indebtedness in the context of Wheeling's complex mercantile/industrial community is difficult to determine. Nearly all businesses relied upon borrowed capital. According to the terms of the 1834 mortgage on their factory property, John and Craig Ritchie were to have made their final payment on April 1, 1839, but they failed to meet this obligation. On October 22, 1838, John and Craig Ritchie mortgaged the factory property to John Ritchie's brother-in-law, Francis C. Campbell, a lawyer, to secure the payment of \$15,045.26 which remained due from the original \$27,000 purchase price. Campbell was to be paid \$7,367.72 on October 22, 1839, and the remainder on October 22 of the next year. The terms of the mortgage also secured the payment of a debt owed by Ritchies and Wilson to The Merchants' and Mechanics' Bank, and referred to the possible renewal of the notes involved as well as future notes.³⁵ John Ritchie, in 1838, could expect a certain measure of cooperation from The Merchants' and Mechanics' Bank, because he was a member of its board of directors.³⁶ With their crown glass factory near its height of production and with substantial real estate holdings of their own, John and Craig Ritchie were probably considered good risks by both Francis C. Campbell and The Merchants' and Mechanics' Bank.

At the time the Ritchies mortgaged the glass factory property to Campbell, only John H. Price and Redick McKee retained an interest in the money due the former firm of Wheat, Price, and Company for that property.³⁷ Evidently, Price and McKee had renewed the Ritchies' mortgage because more than half of the amount due them remained outstanding in 1838. Redick McKee, the husband of the Ritchies' sister, Eliza, had probably played a major role in the extension of this credit, but with the onset of the Depression, McKee found himself in financial difficulties. On February 13, 1838, McKee, using his substantial real estate holdings as collateral (and with John Ritchie serving as his surety), had borrowed \$40,000 from The Merchants' and Mechanics' Bank. In the agreement, McKee had assigned to that bank \$6,000 "being part of the purchase money remaining unpaid" on the glass factory property.³⁸

One, or both, of the Ritchies were also indebted to at least two eastern banks, to the estate of their father, Craig Ritchie, Sr., and to several individuals in Wheeling in connection with real estate speculation. A judgment against John Ritchie from February 1835 shows that he then owed \$6,165.55 to the Schuylkill Bank in Philadelphia. And in 1841 the Phoenix Bank in Baltimore obtained a judgment of \$6,702.94 against the former members of Ritchies and Wilson along with others prominent in Wheeling's mercantile/industrial community.³⁹

Craig Ritchie, Sr. died on June 13, 1833, but his estate evidently remained unsettled for years. On June 10, 1841, John Ritchie acknowledged that he owed his late father's estate "a large sum of money the exact amount of which" he had not at that time "the means of ascertaining."⁴⁰ The settlement of the elder Craig Ritchie's estate came at an inopportune time indeed. It had the effect of calling in a family loan when the brothers were already having difficulty meeting their numerous obligations. In April 1842, in order to secure the payment of \$8,000 to their father's estate, John and the younger Craig Ritchie were forced to mortgage the unsold portion of land they had earlier laid out in lots as J. and C. Ritchie's Addition to Middle Wheeling, and John Ritchie's personal property (including his household goods and "1 lot pot shells at Glass-works").⁴¹

John Ritchie's other real estate investments caused additional problems. Ritchie, in conjunction with Samuel Sprigg, a major landholder in Ohio County, established Ritchietown on a tract of more than 450 acres, which was located immediately to the south of the area then known as South Wheeling. In Ritchietown, John Ritchie reserved for himself an entire city square overlooking the Ohio River and on it erected his residence -- a substantial story-and-a-half brick house in the Greek revival style.⁴² As late as January 1839, the grandiose scheme of Ritchietown showed promise of returning Ritchie a handsome profit, but the venture probably suffered soon afterwards through the default of purchasers during the Depression.⁴³

In 1841, John Ritchie mortgaged the square containing his home. Samuel Sprigg's death in 1843 brought further problems when his interest in the project fell to his heirs. In 1846 John Ritchie, having been unable to complete the purchase of his share in Ritchietown, sold his wife's dower right to the remaining land to the Sprigg heirs for a mere \$500.⁴⁴

Perhaps if the Ritchies had not overextended themselves with investment in real estate, their glass factory might have survived hard times. In the end, they actually held on to their real estate investments longer than their glass factory. The Ritchies probably defaulted on the glass factory mortgage in 1840. In October of that year their former partner, George W. Wilson, advertised that he was a member of the New Orleans commission house firm of Wilson, Wright, and Company. The following year, a newspaper advertisement announced that the "extensive and valuable Flint and Crown Glass Works" formerly occupied by Ritchies and Wilson were to be auctioned in a trustee's sale on October 21, 1841.⁴⁵

Francis C. Campbell, the trustee, was probably unable to sell the factory on that day. A few months later he apparently attempted to recoup his investment by reopening the crown glassworks. In January 1842, the firm of Shriver, Motter, and Campbell advertised its American crown window glass, claiming to "have one of the most extensive establishments in the United States." The Wheeling Times and Advertiser called attention to the advertisement appearing in its

pages with a brief article saluting the venture and predicting success:

There is only one other establishment of the kind in the Union, and we are assured that the sales from this will be as heavy in the east as in the west, a consideration of no little importance in manufacturing.⁴⁶

The "other establishment" to which the article referred was almost certainly the Redford Glass Company; nothing is known of the New York Crown and Cylinder Glass Company after 1836 and the New England Crown Glass Company had ceased operations by 1839. The demand for American crown glass was not strong in the East. In March 1842, the firm operating the Redford Glass Company collapsed and that factory closed.⁴⁷ The Wheeling firm of Shriver, Motter, and Campbell does not seem to have lasted the year. As late as 1848, there was talk of reviving crown glass manufacture in Wheeling. In April of that year, with the American economy and the glass industry faring better, the Wheeling Times and Advertiser noted:

We learn that there is a gentleman here with limited capital; but full acquaintance with the Crown Glass business, who is disposed to put our Crown works in operation, if sufficient capital can be raised. We hope it will be done.⁴⁸

It was not. American crown glass manufacture was essentially dead. The Redford factory in New York was revived in the late forties, but operated only a few years.⁴⁹ By the mid-nineteenth century, improvements in cylinder glass manufacture, importation of flat glass, and the stirrings of American plate glass manufacture had made the manufacture of crown glass unprofitable, if not an anachronism.

John and Craig Ritchie left the glass industry by 1841.

While their heavy losses in the Depression have been examined here, no evidence has been found indicating that they were driven to actual bankruptcy. All of their mortgages stated that they were to receive the monies arising from the sale of their lands after their debts and trustees' commission fees had been satisfied. So they probably saved something from their Wheeling ventures. Craig Ritchie, Jr. returned to Cannonsburg, Pennsylvania, where he was successful as a merchant, retiring from business in 1875.⁵⁰ John Ritchie followed George W. Wilson to New Orleans. In March 1844, John Ritchie and John Kline (probably the same John Kline who had superintended the crown glassworks in Wheeling) were partners who advertised themselves as grocers in New Orleans.⁵¹ John Ritchie was listed as a commission merchant in New Orleans directories as late as 1852. He is said to have eventually settled in Texas where he died at the age of seventy.⁵²

The Ritchie factory property was acquired by The Merchants' and Mechanics' Bank, and the flint glassworks was evidently leased to the green vial and bottle manufacturing firm of W. and E. Anderson and Company in the latter part of 1844. In August of that year the Wheeling Times and Advertiser noted "specimens of Vials manufactured ... by the Messrs. Anderson, who have recent commenced their manufacture in this city."⁵³ In an 1849 lease recorded at the Ohio County Court, Alfred Evans and the brothers William, Edward, and Franklin Anderson, partners in W. and E. Anderson and Company, rented the

flint glassworks for the term of five years from The Merchants' and Mechanics' Bank with the stipulation that the partners were to

fit up the same in the best manner for the Manufacture of Glass Vials bottles & c. which business they hereby bind themselves to carry on in the leased premises during the continuance of this lease.⁵⁴

Although Jefferson has erroneously stated that the firm left this factory in 1848 and that the structure was replaced by a school in 1849, it remained standing and black and green glass were manufactured within its walls as late as December 1850.⁵⁵ As a final irony, the adjacent crown glassworks was briefly called back into service to do duty as a flint glassworks and the two factories once again operated side by side their roles completely reversed. Actually, Evans had withdrawn from the firm in April 1848. In September 1849, a fourth brother, John J. Anderson, joined the firm and its name was changed to Anderson and Company. At about this time, the Andersons began flint glass manufacture in the former crown glass factory; on October 3 of that year they advertised themselves as "MANUFACTURERS of Flint and Fancy Colored Glassware ... now in full operation, and prepared to fill orders with promptness and dispatch."⁵⁶

John J. Anderson probably withdrew from Anderson and Company early in 1850. By March of that year he had taken local entrepreneur George W. Johnson as a partner in the operation of the green glass factory. The Daily Wheeling Gazette observed:

A pleasant walk yesterday brought us to the Black & Green Glass manufactory of ANDERSON & JOHNSON, situated on the corner of Zane and Sixth streets, in the Fourth Ward. Here

we found an establishment adjoining the Flint Glass Works of Messrs. Anderson & Co., fitted up with all the contrivances for the manufacture of Black and Green Glass in all its varieties, such as porter, claret and Scotch ale bottles; demijohns, carboys, flasks, & c., & c. Judging from the specimens of workmanship we examined, we think the productions of this establishment can successfully compete with any made elsewhere.⁵⁷

On December 16, 1850, the firm of Anderson and Johnson was dissolved, John J. Anderson announcing that he had "purchased the interest of Mr. George W. Johnson in the manufacture of Black and Green Glass" and that he was "prepared to fill all orders in that line."⁵⁸

Still operating the flint glass factory, on December 10, 1850, the other three Andersons were joined by D.H. Southwick, a New Englander with "years of experience in the business"; the resulting firm was called D.H. Southwick and Company and the factory was renamed the American Flint Glass Works.⁵⁹ Neither of these concerns lasted long, but their demise cannot be documented by Wheeling newspapers for none are known to have survived for 1851 and only several 1852 newspapers exist prior to the first publication of the Wheeling Daily Intelligencer on August 24 of that year.⁶⁰ John J. Anderson did not advertise in the 1851 Wheeling directory, which was probably published early in that year. D.H. Southwick and Company did, and was, in fact, also listed in Elliott & Nye's Virginia Directory, and Business Register, for 1852, but no subsequent references to this firm have been found.⁶¹

The factory buildings probably stood until the mid-sixties and The Merchants' and Mechanics' Bank apparently leased them to a

succession of small short-lived firms. This is suggested by the continued presence of glassworkers in the immediate vicinity of the buildings as late as 1865. (See Appendix A for the names of workers living in East Wheeling.) The Bank sold the factory lots to the School Board in 1866; a school stands on the site today.⁶²

Summary

John Ritchie and his partners established the first flint glassworks in Wheeling. Their factory flourished in the booming economy of the early and mid-thirties. When Jesse Wheat departed from Ritchie's original firm to form the rival firm of Wheat, Price, and Company, Ritchie's business initially suffered, because Ritchie lacked Wheat's practical experience in glass manufacture. Ritchie, however, overcame these difficulties, took his brother Craig into partnership, and in 1834 bought out Wheat, Price, and Company. This purchase consolidated under one ownership the resources of the two firms and made the Ritchies the sole flint glass manufacturers in Wheeling, a status they would enjoy until the establishment of M. and R. H. Sweeney and Company—approximately one year later. The factory complex formerly owned by Wheat, Price, and Company also included a cylinder window glassworks that the Ritchies initially rented out, but eventually refitted as a crown window glassworks. These were the only instances in Wheeling of a flint glass factory and a window glass factory being operated simultaneously by the same firm. George W. Wilson joined the Ritchies about 1836. In December of that year

the combined annual product value of Ritchies and Wilson's flint and crown glassworks was the highest that would be achieved by a Wheeling firm during the antebellum period.

Ironically, crown glass manufacture proved more profitable for Ritchies and Wilson, so in 1837 they ceased flint glass manufacture and rented their flint glassworks, then at its height, to F. Plunkett and Company and later to its successor, Plunkett and Miller. When Plunkett and Miller built their own glassworks in 1839, flint glass manufacture ceased at the Wheeling Flint Glass Works. Ritchies and Wilson continued to manufacture crown glass until about 1840 when their business failed in the Depression. Although the partners lost their factory complex they apparently were not driven to bankruptcy. John Ritchie and his partners proved that flint glass could be successfully manufactured in Wheeling. Crown glass manufacture, however, would not be re-established in Wheeling.

NOTES

1. Wheeling Compiler, November 11, 1829. The advertisement mentioned in the text bore the same date and was probably the firm's first. Allowing for typesetters' differences in capitalization, this advertisement is identical to the well-known Ritchie and Wheat advertisement dated December 19, 1829, that appeared in the Wheeling Gazette and was subsequently transcribed in McKearin, American Glass, 349; and illustrated in Jefferson, Wheeling Glass, 18. The advertisement in the Compiler was followed by instructions (apparently omitted in the Gazette) for its publication in Cincinnati and Louisville. The factory seems to have been located at the upper end of present-day Chapline Street near the foot of Wheeling Hill on land that was evidently leased before it was purchased from Noah Zane. see DB, 16:541.
2. John Ritchie Deposition, Ritchie v. Wheat, February, 1833, OCC Papers, env. 158a (hereafter cited as Ritchie Deposition, 1833).
3. Boyd Crumrine, History of Washington County, Pennsylvania, with Biographical Sketches of Many of Its Pioneers and Prominent Men (Philadelphia: L.H. Everts, 1882), 624-5 (hereafter cited as Crumrine, Washington County).
4. First Presbyterian Church Records transcribed in Audra Wayne, Cemetery Records: Ohio, Brooke and Marshall Counties Records West Virginia, Washington County, Pennsylvania (Wheeling, West Virginia: Wheeling Chapter of the Daughters of the American Revolution, 1974), 129 (hereafter cited as Wayne, Records). In November, 1828, the McKees had their infant son christened William Ritchie McKee at First Presbyterian Church in Wheeling.
5. Crumrine, Washington County, 251, 625; Wayne, Records, 130. John Ritchie's wife, Ellen, also had two brothers who practiced law in Wheeling in the thirties: Francis C. and Parker Campbell, but it is not known if they preceded the Ritchies to Wheeling.
6. Ritchie Deposition, 1833; Newton et al., History of the Panhandle, 357; McKearin, American Glass, 592. The works referred to as Isaac Duval and Co. by the McKearins was actually called the Wellsburg Glass Co. and was apparently operated by John J. Jacob and Co., see Manuscript Returns for Brooke County, Virginia, United States Census of Manufacturers for 1820, Microfilm, University of Delaware.
7. Ritchie Deposition, 1833.

8. Wheat, Price and Co. advertisement dated August 29, 1732 [1832], Wheeling Tri-Weekly Times, February 1, 1834; Ritchie v. Wheat, February 1833 OCC Papers env. 158a.
9. John Hebron Moore, ed., "A Glimpse of Industrial Wheeling in 1829: A Selection from the Journal of B.L.C. Wailes of Natchez," West Virginia History: A Quarterly Magazine, vol. 20, no. 2 (January 1959): 126-7 (hereafter cited as "Journal of B.L.C. Wailes"); McKearin, American Glass, 535.
10. "Journal of B.L.C. Wailes", 128.
11. The Pittsburgh flint glass manufacturer was R.B. Curling and Son who in a government survey taken in 1832 stated, "steam power is used for cutting glass and pulverizing materials," see Documents Relative to the Manufactures in the United States, Collected and Transmitted to the House of Representatives, in Compliance with a Resolution of Jan. 19, 1832, by the Secretary of the Treasury, 2 vols. (Washington: Duff Green, 1833), 2:523. That steam power was used to pulverize materials in Wheeling in 1836 is suggested by industrial statistics gathered in 1833 and 1836 listing all the steam engines present in Wheeling factories. In 1833 steam engines were present only in the cutting shops of the two flint glass factories; in 1836 steam engines were present in all six glass factories. The only use for steam power in the crown glassworks and the three green glassworks would have been for the pulverizing of materials. Presumably the flint glass factories followed suit. "Manufactories of the Town of Wheeling," November 1833; "Manufactories of the City of Wheeling, December 1836."
12. Frances Trollope, Domestic Manners of the Americans, ed. Donald Smalley (1832; reprint, New York: Alfred A. Knopf, 1949), 187.
13. Ritchie Deposition, 1833.
14. DB, 16:514; DB, 18:105-6; Craig Ritchie, Jr. was born 24, 1807, see Crumrine, Washington County, 625.
15. "Manufactories of the Town of Wheeling," November 1833.
16. "Manufactories of the Town of Wheeling," November 1833.
17. John Encell, a glassblower, sued Wheat, Price, and Co. to recover money owed him for wages; the suit named all four partners, Encell v. Wheat, Price and Co., August, 1834, OCC Papers, env. 135; Ritchie Deposition, 1833.
18. DB, 15:389-91.

19. Wheat, Price and Co. advertisement dated August 29, 1732 [1832], Wheeling Tri-Weekly Times, February 1, 1834. This may account for the production of green glass pint flasks, McKearin numbers GI-115 and GI-116, which are marked "WHEAT, PRICE & CO., WHEELING, VA." see McKearin, American Glass, 535.
20. "Manufactories of the Town of Wheeling," November 1833.
21. DB, 22:238.
22. Wheeling Tri-Weekly Gazette, August 1, 1835.
23. Ibid., November 4, 1835.
24. James M. Wheat advertisement dated June 3, 1835, Wheeling Tri-Weekly Gazette, October 14, 1835.
25. "Manufactories of the City of Wheeling, December, 1836"; Friends of Domestic Industry, General Convention of the Friends of Domestic Industry, Assembled at New York, October 26, 1831 (Baltimore: Sands and Nelson, 1832), 43.
26. "Manufactories of the City of Wheeling," December 1836.
27. Ritchies and Wilson, "Prices Current of Crown Window Glass, Manufactured by Ritchies and Wilson, Wheeling, Virginia" (Wheeling, West Virginia: J.E. Wharton, 1839), Copy at West Virginia University, (hereafter cited as Ritchies & Wilson, "Prices Current of Crown Window Glass," 1839.
28. For the rarity of crown glass manufacture in nineteenth-century America, see Pearce Davis, The Development of the American Glass Industry (Cambridge, Massachusetts: Harvard University Press, 1949), 38, 46-7, 67; McKearin, American Glass, 590, 596, 599.
29. See Appendix A; Arlene Palmer Schwind to Gary E. Baker, March 15, 1982; Harold A. Boire, "Redford -- Rare American Glass," Antiques, vol. 68, no. 2 (August 1955): 138-9.
30. Ritchies & Wilson, "Prices Current of Crown Window Glass," 1839; For prices representative of the cylinder window glass market in Wheeling during the thirties, see "Wheeling Price Current", Wheeling Tri-Weekly Times, February 1, 1834; also "Price Current", Wheeling Tri-Weekly Times and Advertiser, February 14, 1839; April 2, 1839.
31. "Manufactories of the City of Wheeling, December, 1836".
32. F. Plunkett & Co., "Wheeling Flint Glass Works. Price Current".

33. Plunkett and Miller advertisement dated April 7, [1838], Wheeling Tri-Weekly Times and Advertiser, January 15, 1839, see Chapter 2 for a discussion of the dating; "Real Estate", Wheeling Tri-Weekly Times and Advertiser, January 22, 1839.
34. "Introduction", Wheeling Directory, 1839, n. p.
35. DB, 22:238; DB, 23:200-1; For a discussion of Campbell's relationship, see note 5.
36. "Introduction", Wheeling Directory, 1839, n. p.
37. In 1835 McKee bought out Charles D. Knox at the dissolution of Knox and McKee, thus acquiring Knox's interest in the factory property. DB, 21:84-5.
38. DB, 22:374-6.
39. Schuylkill Bank v. John Ritchie, February 1835, OCC Papers, env. 138 c-3; Phoenix Bank v. John Ritchie et al., September 1841, OCC Papers, env. 171 c-7.
40. Crumrine, Washington County, 604, 625; DB, 25:158-9.
41. DB, 25:469-70. This property was mortgaged to John Ritchie's brother-in-law, Parker Campbell, see note 5.
42. DB, 23:535-6; DB, 29:130; Ritchie's house no longer stands, but a photograph of this structure has been published as the Samuel Ott House (so named for its second resident) with a caption erroneously stating that it was built by Charles Ritchie, see Charles J. Milton, Landmarks of Old Wheeling and Surrounding Country: A Record of Post-Colonial Wheeling (Wheeling, West Virginia: Stone and Thomas, 1943), 50.
43. At this time Ritchie was said to have sold one-fifth of Ritchietown to Charles D. Knox for \$27,000, an advance of \$12,000 over the purchase price three years earlier, see "Real Estate", Wheeling Tri-Weekly Times and Advertiser, January 22, 1839.
44. DB, 25:158-9; Sprigg died in August, for his obituary see Wheeling Times and Advertiser, August 3, 1843; DB, 29:130.
45. George W. Wilson advertisement dated October 1840, Wheeling Times and Advertiser, April 27, 1841; Wheeling Times and Advertiser, August 21, 1841.
46. Wheeling Times and Advertiser, January 18, 1842.

47. McKearin, American Glass, 181, 590, 596; Bruce Stark, "Reflections: The Story of Redford Glass" (Plattsburgh, New York: Clinton County Historical Association, 1979), 12 (hereafter cited as Stark, "Redford Glass").
48. Wheeling Times and Advertiser, April 17, 1848.
49. Stark, "Redford Glass", 15-6.
50. Crumrine, Washington County, 625.
51. Wheeling Times and Advertiser, March 7, 1844.
52. Beverly Fluty to Gary E. Baker, undated letter probably early 1982; Crumrine, Washington County, 625.
53. Wheeling Times and Advertiser, August 22, 1844.
54. DB, 29:514.
55. Jefferson, Wheeling Glass, 21, 47, 72. Jefferson's belief that the firm left the Ritchie factory property in 1848 is apparently based on the fact that the three Anderson brothers and Alfred Evans bought, on October 4, 1847, a tract of land with coal rights ideally situated for a glass factory in present-day Center Wheeling, see DB, 30:182-3. Although it is possible that a factory was built on this land, I have found no evidence that this firm built it. Indeed, if a factory was built, it would have probably been run by Alfred Evans independent of the Andersons. Evans was a member of two short-lived firms, existing only between April 8 and September 1, 1849, that advertised themselves as flint glass manufacturers: Evans and Co. and its successor, Pryor and Evans, see Wheeling Times and Advertiser, April 9, 1849, July 3, 1849, September 7, 1849. But the two short-lived firms more likely occupied the former Ritchie crown glassworks.
56. W. and E. Anderson and Co. Dissolution Notice, Wheeling Times and Advertiser, May 3, 1848; Anderson and Co. co-partnership notice, Anderson and Co. advertisement, Wheeling Times and Advertiser, October 3, 1849. They may have followed Evans and Pryor in the former crown glassworks, see note 54.
57. "Our Manufacturers--Black and Green Glass", The Daily Wheeling Gazette, March 14, 1850.
58. Anderson and Johnson Dissolution Notice dated December 16, 1850, The Wheeling Times and Gazette, December 28, 1850.

59. D. H. Southwick and Co. co-partnership notice, "Mr. D. H. Southwick", The Wheeling Times and Gazette, December 11, 1850.
60. Delf Norona and Charles Shetler, West Virginia Imprints: 1790-1863 (Moundsville, West Virginia: West Virginia Library Association, 1958), 256-67 (hereafter cited as Norona and Shetler, West Virginia Imprints).
61. Oliver I. Taylor, Directory of the City of Wheeling and Ohio County (Wheeling, West Virginia: Daily Gazette, 1851), advertising section n. p. (hereafter cited as Directory of the City of Wheeling, 1851); W.M. Elliott and W.A.R. Nye, Elliott and Nye's Virginia Directory, and Business Register, for 1852. (Richmond, Virginia: Elliott and Nye, 1852), 161. (hereafter cited as Virginia Directory, for 1852).
62. The Merchants' and Mechanics' Bank sold lot 110 in 1864, lot 109 in 1865, and lots 124 and 125, the actual site of the two factories, in 1866. DB, 48:182; DB, 49:152; DB, 50:11-2.

II. FRANCIS PLUNKETT AND HORATIO MILTON MILLER AND THEIR FACTORIES

In the flint glass manufactory of Messrs. Plunkett & Miller, every variety of fine, cut, pressed, and plain flint glassware, of every pattern and beautiful finish, is manufactured, and of the best materials. The workmanship appears to be executed in the most mechanical style. The forms are beautifully modeled to every fancy, and a brilliancy is produced, which is truly fascinating. The proprietors warrant all the articles manufactured in their establishment, to be equal in every respect, to any manufactured in the United States.¹

The larger of the two flint glass factories in Wheeling, with annual production valued at \$75,000, the Wheeling Flint Glass Works, continued in operation first under the management of F. Plunkett and Company (1837) and later under Plunkett and Miller (1837-39). Encouraged by early success, Plunkett and Miller expanded in 1839, building a new factory in South Wheeling (then called Ritchietown).

Francis Plunkett came to Wheeling from Pittsburgh in 1830, and in partnership with Charles Encell, Sr., had rented Knox and McKee's green glassworks. At the expiration of the lease in 1833, the firm of Encell and Plunkett built a green glassworks on the bank of the Ohio River in the area known as Clinton, just to the north of Wheeling's limits. Plunkett sold his half-share in the Clinton Glass Works in 1836 and thereafter entered the flint glass business.²

Plunkett's partners in F. Plunkett and Company have not been identified.³

F. Plunkett and Company issued a broadside price list, "WHEELING FLINT GLASS WORKS. PRICE CURRENT OF GLASS WARE MANUFACTURED BY F. Plunket & Co. at their Glass Works, WHEELING, VA.," dated October 12, 1837 (see Appendix B). This broadside, apparently the only price list surviving from an antebellum Wheeling flint glass manufacturer, is by far the most elaborate American flint glass price list known from the 1830s. F. Plunkett and Company listed: tablewares ranging from costly fancy cut pitchers to pressed dishes and inexpensive tumblers; lighting equipment including lamp-goods and candlesticks; knobs and curtain pins (now called curtain tiebacks); and apothecary wares ranging from show globes to jars and cupping glasses. Their list is especially useful in the study of flint glass taxonomy and the economics of the trade. Most of the items on the list are spelled out in full and all of the abbreviations are straightforward. Furthermore, comparison of the terms with those of an 1838 English price list suggests that many flint glass terms were in universal use.⁴

The F. Plunkett and Company price list sheds considerable light on the economic factors that governed the creation of flint glass objects. Patron taste must have played a significant role in the production of luxury tablewares, which were offered in a wide range of prices. With the exception of drinking vessels, the most

costly objects were generally sold in pairs. Ordinary wares were sold by the dozen. This price structure is readily seen in the listing of decanters. Fancy cut quart decanters wholesaled for \$6.00 to \$15.00 per pair -- evidently priced according to the elaborateness of the cutting. Quart decanters "Fluted top and bottom" wholesaled for \$3.00 to \$4.00 per pair. Engraved decoration was less expensive than cut. Quart decanters "engraved or lettered" wholesaled for \$6.00 per dozen. Plain blown decanters, evidently with globe- or pear-shaped stoppers, were the cheapest quart decanters wholesaling for \$2.25 per dozen.

Pressed wares were also listed, pressed glass having been first advertised in Wheeling by Ritchie and Wheat in 1829.⁵ Although many collectors of early blown glass think of pressed glass as the cheapest, the listing of plain blown and pressed egg glasses at the same price per dozen suggests that pressing should be viewed merely as an alternate hot working method. Furthermore, the listing of plates and dishes in sizes as large as nine inches -- forms not commonly encountered in American blown glass -- indicates that the new technology allowed American flint glassmakers to offer an alternative to imported ceramics.

The extensive F. Plunkett and Company price list probably represents not only the types of wares made by that company and its successor, but also those of Ritchie and Wilson's predecessors. The lease of the Ritchie factory to both F. Plunkett and Company and

Plunkett and Miller probably included the equipment, tools, and molds of that factory. In all likelihood, most of the Ritchie workmen were retained. The firm of Plunkett and Miller was probably not formed until 1838. A Plunkett and Miller advertisement, dated April 7, but printed without the year, appeared in the Wheeling Tri-Weekly Times and Advertiser in January 1839. Because the F. Plunkett and Company price list is dated October 12, 1837, this Plunkett and Miller advertisement must have first appeared in that newspaper in April 1838.⁶

Little is known about Plunkett's partner, Horatio Milton Miller, although he undoubtedly brought capital to the firm. Circumstantial evidence suggests that Miller may have had some connection with the flint glass industry in Wellsburg, West Virginia. Miller and Samuel Lowther were named as co-defendants in a lawsuit filed in Ohio County. Lowther had been a member of the Wellsburg firm of Miller, Lowther, and Company, which had operated in the mid-thirties as successor to the Wellsburg Glass Company -- the company with which Isaac Taylor Duval had been associated in the teens and twenties. Two men named Miller (Joseph and John) were involved at one time or another in the Wellsburg firm. It is not known if Horatio Milton Miller was related to either, but, in 1840, a mortgage of property belonging to Plunkett and Miller named a "John Miller" as one of the "co-obligors" of a bond.⁷

Plunkett and Miller's 1838 annual product value suggests the firm did well, but they did not remain at the Wheeling Flint Glass

Works more than a year. Perhaps Ritchies and Wilson had planned to take over the flint glassworks in 1838 to expand its thriving crown glassworks, and these plans had forced Plunkett and Miller to look elsewhere. Evidently emboldened by the unpredictably brief period of economic recovery that followed the panic of 1837, Plunkett and Miller moved to the new factory complex they had built on a prime industrial site in Ritchietown. In January 1839, the Wheeling Tri-Weekly Times and Advertiser published an article about the increase in real estate prices in Ritchietown and the building boom there, proudly noting:

Some very extensive improvements are being made in that part of the city. Messrs. Plunkett and Miller are erecting extensive glass works, and we hear that a rolling mill is to be erected in the vicinity of the glass works. Not less than one hundred good dwelling houses are to be erected in that part alone during the next summer.⁸

The tract of land chosen by Plunkett and Miller for the site of their factory consisted of two adjacent city blocks, squares numbered forty-one and thirty-three on the plat map and located between Vine and Walnut Streets (present-day 36th and 37th Streets) and bounded on the west by Sixth and on the east by Eighth Street (present-day Wood and Wetzel Streets). On Square forty-one, adjacent to the coal-rich hillside where they had mining rights, Plunkett and Miller erected the factory complex. On Square thirty-three, facing Sixth Street, Plunkett and Miller evidently built brick housing for their glassworkers -- a necessity as Ritchietown at this point consisted largely of vacant lots. Although the land deeds do not refer to these

structures, they were called the "glass house rows" in an 1879 account of the first nine residences built in Ritchietown, and were at that time said to have been built prior to 1841.⁹

The economic recovery experienced in 1838 was not sustained. Plunkett and Miller had unwittingly built a glass factory complex on the eve of one of America's worst depressions. In 1839, agricultural prices collapsed, foreign investment in the United States declined, and banks and businesses across the nation failed in unprecedented numbers. The American flint glass industry felt the impact of the Depression from 1839 through 1842 -- the years 1840 and 1841 apparently the most devastating.¹⁰ When the bottom fell out of the flint glass market, Plunkett and Miller had difficulty meeting their obligations. On May 18, 1840, Plunkett and Miller mortgaged their newly-built glassworks and its equipment, their coal rights, and two nearby lots (belonging to Plunkett) to a James D. Jackson. The firm owed \$13,000 to The Merchants' and Mechanics' Bank and \$7,500 to the North Western Bank of Virginia. Each of these debts consisted of several bonds or promissory notes that had fallen due on dates ranging from July 1, 1839, to April 30, 1840. The largest single sum was a promissory note in the amount of \$10,000, dated November 5, 1839, and payable sixty days after that date to Ritchies and Wilson at The Merchants' and Mechanics' Bank.¹¹ The unusually large amount owed to Ritchies and Wilson is difficult to explain. This amount must represent an amalgamation of smaller debts, not all necessarily relating to the glass business, but perhaps including: the rental of Ritchies

and Wilson's flint glass factory; the subsequent purchase of that factory's stock, materials, and equipment such as molds and presses; and a portion of the purchase price of the new factory site.

For the Jackson mortgage, this factory equipment was inventoried -- the only such inventory for a Wheeling flint glass factory. In 1838, Plunkett and Miller employed sixty hands in the factory leased from Ritchies and Wilson. The quantities of equipment present in the Ritchietown factory in May of 1840 suggest that Plunkett and Miller employed a similar or a slightly greater number of workmen there.¹² Hence, there was probably no significant increase in production in 1839 or in the opening months of 1840. Of course, the factory may never have operated at full capacity during that period. The inventory included equipment for six or seven chairs of workmen -- only six work chairs and five marvers, but seven "cupboards for tools," seven pontil holders, and seven "rings for making jars." The complement of men and boys at each chair was probably three to four individuals. Thus, eighteen to twenty-four hands would have been required to fully man the six "chairs" at any given time. With the twelve-hour workday then common in the industry, thirty-six to forty-eight hands would have been required to man the chairs for a twenty-four-hour period. The three large glass presses might have each required several additional hands, but they could just as easily have been operated by workmen from the "chairs." The factory also contained "cutters tools for 13 workmen," and one steam engine. Since it would not have been as important to carry on the cutting

operations day and night, these tools probably represent twelve to thirteen hands. The factory would also have required as many as ten additional workers: one or two draymen, carpenters, glass packers, one or more pot makers, a glass mixer, a lead preparer, and several laborers. Thus, on the basis of furniture and equipment, the maximum work force can be estimated at anywhere from fifty-eight to seventy-one hands.¹³

Plunkett and Miller defaulted on the Jackson mortgage in 1841. On October 21 of that year, Sobieski Brady bought all of the mortgaged property, including Plunkett's two lots, at public auction at \$21,000.¹⁴ On the same day Brady paid Francis Plunkett \$200 to "release and confirm" his purchase. Plunkett's involvement in the factory ended with this sale. In July 1842, Plunkett filed for bankruptcy at the United States District Court of Western Virginia held at Staunton, Virginia.¹⁵ Plunkett may well have returned to Pittsburgh and in later years, as a window glass manufacturer, recouped his losses. In the fifties, a Francis Plunkett was a partner in at least two window glass manufacturing firms in that city -- Young, Ihmsen, and Plunkett (1850-55) and Francis and James Plunkett (1856-59, latter Wolfe, Plunkett and Company).¹⁶

Horatio Milton Miller was apparently determined to continue as a flint glass manufacturer in spite of hard times. On November 9, 1841, Miller bought Brady's interest in the factory property for \$35,200. And, on November 11, he bought John Ritchie and Samuel

Sprigg's interest in that land for \$8,150.¹⁷ This would have eventually given Miller complete ownership of the factory property, but he had to use that property as collateral for his staggering debts. The extraordinary size of these loans indicates that Miller's creditors were as determined as he was that the glass factory survive. An empty factory that could not be run profitably was of little use to them. But, if Miller's debts were large, his payment schedule was correspondingly heavy. Under the terms of the two mortgages, the annual payments were to begin on November 11, 1842, and were to fall due on each succeeding November 11 until the debts were cleared. Each year, Miller was to pay \$8,800 towards the settlement of the larger debt and \$1,329.83 (plus interest) on the smaller debt.¹⁸

Miller called the factory in South Wheeling the Old Dominion Flint Glass Works. In an advertisement that first appeared in the Wheeling Tri-Weekly Gazette in March 1842, he wrote:

THE subscriber has the pleasure of informing his friends and all dealers in FLINT GLASS, that his new establishment is now in full operation. Having engaged some of the best workmen in the Eastern cities he is prepared to furnish every article in the line, and many not made before in the West.

Miller followed this statement with a brief list of the products available. In contrast to the majority of surviving advertisements of Wheeling flint glass manufacturers issued during the period covered by this study, Miller began his list with apothecary wares -- "Specie Jars, Tinctures, Salt Mouths." The other manufacturers almost invariably began their advertisements with the high style cut

glass. Miller's emphasis on the utilitarian may reflect the difficulty of selling fine tablewares during a period of economic stagnation. Even the brief list of tableware forms, "Decanters, Tumblers, Wines, Bowls, Celeries, Jellies," was categorized as "Plain, Pressed and Cut" instead of "cut, pressed, and plain" -- the order normally used, and the order which had been used by Plunkett and Miller in that firm's 1838 newspaper advertisements.¹⁹

Miller's Old Dominion Flint Glass Works was not long in operation and produced little glass. In November 1842, Miller was unable to make his first payment on the two factory mortgages. Thus ended Horatio Milton Miller's involvement in Wheeling's flint glass industry. In May 1843, the trustees of the two mortgages separately advertised that the property would be offered for sale at public auction. The sale apparently did not take place that June as scheduled and the factory remained closed until the spring of 1845 when Miller's creditors leased the factory to the new firm of Barnes, Hobbs, and Company.²⁰

Summary

Plunkett and Miller's tenure of the Wheeling Flint Glass Works was brief: only two years elapsed between the time when F. Plunkett and Company leased that factory and 1839 when they moved into their own factory in South Wheeling. Yet Plunkett and Miller were important, because they achieved a level of production equal to that of their predecessors and they represented a continuation of

Ritchies and Wilson's Wheeling Flint Glass Works--the larger of the Wheeling flint glass factories. At Plunkett and Miller's new South Wheeling factory, Horatio Milton Miller manufactured flint glass as late as 1842. Thus Plunkett and Miller linked together a succession of partnerships and factories that produced flint glass from 1829 until 1842, when the Depression forced Miller out of business.

The F. Plunkett and Company price list represents the production of Wheeling's major flint glassworks during the mid-thirties and, in all likelihood, is representative of midwestern flint glass production as a whole. It is important for glass scholars, because it is useful in the study of flint glass taxonomy and the economics of the trade. Another important legacy of Plunkett and Miller is the inventory taken when their factory was mortgaged during the Depression. However, the important legacy that Plunkett and Miller left to the glass industry in their own day was the splendid glassworks they lost to their creditors. With its adjacent coal supply this glassworks was a resource that, in better times, would attract manufacturers from New England who would prove far more successful.

NOTES

1. "Introduction," Wheeling Directory, 1839. n.p.
2. DB, 15:389-91; DB, 18:155. I adopt the spelling of Plunkett with two "t"s, because Plunkett signed legal documents that way. The new factory was in operation by September 1833, see Niles Register; vol. 45 (September 28, 1833): 66-7. I am grateful to Arlene Palmer Schwind for making me aware of the reference in Niles Register; DB, 26-:420-23; DB, 24:245-8; "Introduction," Wheeling Directory, 1839, n. p.
3. Horatio Milton Miller, the Miller of Plunkett and Miller, was probably not involved in F. Plunkett and Company. Ritchies and Wilson may have been involved; a lawsuit named John Ritchie, Craig Ritchie, George Wilson, and Francis Plunkett as co-defendants. When they lost, the four defendants put up "one hundred boxes glassware" as collateral for the money they owed with interest accruing from November 16, 1837. See Louis L. Lee v. John Ritchie et al., August 1838, OCC Papers, env. 166-a.

Several other names in the Ohio County case papers could easily be the names of men involved in F. Plunkett and Company. For example, Plunkett owed a Patrick Mulvaney \$2,000 bearing interest from March 11, 1837. Perhaps this was the same Patrick Mulvaney with whom William O'Leary, in 1832, had founded the Birmingham Flint Glass Company in Pittsburgh. It is not clear whether Mulvaney was an investor in Plunkett's company, or if he had merely sold glassmaking materials to Plunkett. See Patrick Mulvaney v. Francis Plunkett, June 1840, OCC Papers env. 152 C-3; Lowell Innes, Pittsburgh Glass; 1797-1891: A History and Guide for Collectors (Boston: Houghton Mifflin Co., 1976), 36 (hereafter cited as Innes, Pittsburgh Glass). Edwin S. Hoff and Otha W. Heiskell (respectively listed in the 1839 Wheeling directory as a dealer in dry goods and a gentleman) are also possibilities, because on December 1, 1836, they co-signed a promissory note with Plunkett agreeing to pay John Ritchie \$1,875 on March 1, 1840, with interest from March 1, 1837, for the purchase of lots in Ritchietown. See Wheeling Directory, 1839, 44, 46; John List for the Western Bank of Baltimore v. Francis Plunkett et al., June 1841, OCC Papers, env. 169 C-4.

4. See "Apsley Pellatt's Abridged List of Net Cash Prices for the Best Flint Ware" illustrated in Hugh Wakefield, Nineteenth Century British Glass (London: Faber and Faber, 1982), pl. 22.
5. Ritchie and Wheat advertisement dated November 11, 1829, Wheeling Compiler, November 11, 1829. See Chapter I, note 1.

6. Plunkett and Miller advertisement dated April 7, [1838], Wheeling Tri-Weekly Times and Advertiser, January 15, 1839.
7. John Knote and Ira Sanger v. Horace M. Miller et al., January 1843, OCC Papers, env. 176 C-3; Nancy L. Caldwell, A History of Brooke County (Parsons, West Virginia: McClain Printing Co., 1975), 99-101; DB, 24:152.
8. "Real Estate," Wheeling Tri-Weekly Times and Advertiser, January 22, 1839.
9. DB, 24:152-4; DB, 30:313-4; Newton et al., History of the Pan-handle, 194.
10. John M. Blum, ed., The National Experience: A History of the United States (New York: Harcourt Brace Jovanovich, Inc., 1973), 232; M. and T. Sweeney to Andrew Stewart, February 18, 1846, in "The Tariff," Wheeling Times and Advertiser, February 25, 1846.
11. DB, 24:152-4.
12. "Introduction," Wheeling Directory, 1839, n.p.; DB, 24:153-4.
All subsequent references to the inventory are from this citation.
13. McKearin, American Glass, 20.
14. DB, 25:341-4. Brady did not have clear title; John Ritchie and Samuel Sprigg still had a claim to the land.
15. DB, 25:344-5; Wheeling Tri-Weekly Gazette, July 8, 1842; July 20, 1842.
16. Innes, Pittsburgh Glass, 33, 52.
17. DB, 25:341-2, 345-6.
18. DB, 25:335-40.
19. H. Milton Miller advertisement dated March 11, [1842], Wheeling Tri-Weekly Gazette, March 14, 1842; Plunkett and Miller advertisement dated April 7, [1838], Wheeling Tri-Weekly Times and Advertiser, January 15, 1839.
20. J. List and S. Brady, Trustees' sale advertisement dated May 4, 1843, Wheeling Times and Advertiser, May 4, 1843; Daniel Lamb, Trustees' sale advertisement dated May 17, 1843, Wheeling Times and Advertiser, May 26, 1843; Wheeling Times and Advertiser, April 11, 1845.

III. M. AND R. H. SWEENEY AND COMPANY AND ITS SUCCESSORS

The Flint Glass Works of T. Sweeney & Son are very extensive, old established, and famous for their excellent ware. They literally know no East, no West, no North, no South in the distribution of their millions of decanters, tumblers, glasses and other superbly manufactured articles. They are filling orders for every part of the Union.

John S. Cunningham of Washington, D.C.
The Portsmouth Transcript, Virginia 1853¹

The Sweeneys were the most successful of the antebellum Wheeling flint glass manufacturers. Thomas Sweeney, an iron founder by trade, was the leading figure in the family firms which successively operated the North Wheeling Flint Glass Works from 1835 until 1863: M. and R. H. Sweeney and Company (1835-45); M. and T. Sweeney (1845-48); Sweeneys and Bell (1848-52); and T. Sweeney and Son (1852-63). The original firm of M. and R. H. Sweeney and Company began modestly, but by 1838 its annual product value was nearly equal to that of the Wheeling Flint Glass Works. The Sweeney firm survived the Depression, because it did not incur large debts and its members did not overextend themselves. After the Depression, the firm utilized sophisticated marketing techniques in selling a high-quality product nationally.

M. and R. H. Sweeney and Company had its origin in a family-run iron foundry. On September 6, 1830, members of the Pittsburgh

iron founding firm of Cuthbert and Company--Sturley Cuthbert, Thomas Mitchell, and the brothers Thomas and Campbell Sweeney--purchased for \$10,500 "part of a tract of land . . . whereon the brick work shop and foundry is erected" and "also the right use privilege and property of mining coal" in the hillside nearby. The partners paid \$1,000 down and mortgaged the factory property for the remaining \$9,500. This they agreed to repay with 6 percent interest in installments: \$500 due April 1, 1831, \$1,000 due October 1, 1831, and \$2,000 due October of each of the four succeeding years.²

The property concerned was a small portion of a 130-acre tract on the Ohio River at the northern end of Wheeling, which had been purchased by a "company of individuals" in the early twenties "for the purpose of establishing manufactories thereon." In December 1827, this company of individuals had unsuccessfully petitioned the Virginia legislature for an act incorporating them as the Wheeling Manufacturing Company. Their petition had stated that "a large foundry and a shop for the manufactory of steam engines and other articles" were already erected on the land, and noted that the principal advantages of the site were its proximity to the juncture of the National Road and the Ohio River, and the "inexhaustible mines of coal, so near the works, as easily to be carried from the coal pits to the furnaces without costs of transportation."³ Benjamin Wailes, the Mississippi planter quoted earlier, may have visited this foundry in 1829; he wrote:

I was in the two Iron Founderers. They were not moulding, but were preparing the moulds for the purpose. The pigs of Iron, I was informed, were melted in about 1 1/2 hours. The buildings & furnace seemed exceedingly simple, rude & cheap in construction.⁴

The firm of Cuthbert and Company briefly operated foundries in Pittsburgh and Wheeling simultaneously. The American Advertising Directory for 1831 listed Cuthbert and Company, "Manufacturers of all kinds of Iron Castings," as the proprietors of both the Wheeling Foundry and the Union Foundry located at 57 Liberty Street, Pittsburgh. Evidently the firm and its members prospered. Cuthbert and Company operated the well-situated Wheeling Foundry for approximately two-and-one-half years. On March 1, 1833, Thomas and Campbell Sweeney bought the Wheeling Foundry from the other two partners for \$13,000.⁵ The resulting firm of T. and C. Sweeney was short-lived. An advertisement dated May 4 of that year announced that the new firm had been dissolved by the death of the junior partner, Campbell Sweeney. Thomas Sweeney informed "his friends and the public" that he would continue

to carry on the Iron Foundry Business in all its various branches, at the Wheeling Foundry . . . where Castings of all kinds will be made to order without delay . . . [and] to keep a large and general assortment of CASTINGS of every description, both at the Foundry, and at his Warehouse.

Thus in 1833, Thomas Sweeney, who had served an apprenticeship as an iron moulder and had been employed in that trade in Pittsburgh, became the proprietor of an iron foundry.⁶

In November 1833, Thomas Sweeney's foundry employed thirty hands and yielded an annual product valued at \$30,000. Of the other four foundries operating in Wheeling at that time only that of A. M. Phillips employed as many hands and yielded an annual product of equal value. In 1833, Thomas Sweeney's foundry was the only one in Wheeling with a steam engine. Three years later, the Sweeney foundry employed twenty-six hands and yielded an annual product valued at \$35,000.⁷ While these figures suggest stability, modest growth, and perhaps a more efficient use of labor, they represented only part of Thomas Sweeney's manufacturing interests. Using the iron foundry as a source of capital for expansion, Thomas, in the previous year, with his brothers, Michael and Robert Henry, had formed the flint glass manufacturing firm of M. and R. H. Sweeney and Company. The following advertisement announced the opening of the new factory:

North Wheeling Flint Glass Works.

THE GLASS WORKS lately erected by the undersigned adjoining the Wheeling Foundry, are now in full operation and we are prepared to fill all orders that we may be favored with. One of the firm has had fifteen years practical experience in the business. We therefore feel confident in saying that our glass shall be equal in excellence of materials, transparency and beauty of color, in variety of patterns and in cheapness of price, to any manufactured in this place, or else where.

We only ask those disposed to purchase to give us a fair trial to confirm our statements.

All orders in our line of business shall be punctually attended to.

M. & R. H. Sweeney & Co.

Wheeling, Nov. 10, 1835.⁸

Although Thomas Sweeney was not himself a practical glassman, he would remain the central figure in the partnerships operating the

North Wheeling Flint Glass Works for the next twenty-eight years. Thomas and his brothers, Michael and Robert H., were the last surviving of eight sons born to Thomas and Sarah Ann Campbell Sweeney of County Armagh, Ireland. Thomas was born on March 6, 1806. About 1808, the family immigrated to New York state where Michael was born on September 18, 1809, and Robert H. some time in 1814. The family moved west about 1816. Shortly after their arrival in Pittsburgh, the elder Thomas Sweeney died. Apparently as a result of his death several of his sons were apprenticed into trades there. While Thomas and Campbell were apprenticed as iron moulders, Michael was apprenticed as a glass blower at the factory of Pittsburgh's preeminent flint glass manufacturer, Benjamin Bakewell. If the claim that "one of the firm" of M. and R. H. Sweeney and Company "has had fifteen years practical experience in the business" was true, Michael Sweeney must have begun his apprenticeship about 1820 at the age of ten or eleven. According to an 1875 obituary account, however, Sweeney had "commenced to learn his trade (the manufacture of glass-ware)" at the age of sixteen, which would fix the date at about 1825.⁹

In either case, Michael Sweeney was present at the Bakewell factory during the mid-twenties--an important period for that factory and the American flint glass industry as a whole. Sweeney would have witnessed that firm's pioneering efforts in the manufacture of pressed glass. He would also have been aware of the fame which Bakewell had achieved with its luxury glasses through presentations, important commissions, and participation in fairs. Bakewell had

presented a pair of cut decanters to President Monroe in 1817, and a pair of cut and engraved vases to the Marquis de Lafayette in 1825. President Monroe had ordered a table service in 1818, as did President Jackson in 1829. Bakewell received an honorable mention at the first fair of the Franklin Institute of Philadelphia in 1824. Entering again in 1825, in the face of eastern competition, the firm took first prize--a silver medal.¹⁰ The Bakewell factory not only gave Michael Sweeney practical experience, but in its achievements provided a model which he would later emulate.

Michael Sweeney had moved to Wheeling by April 1831, when his name and that of his brother, Thomas, were first entered into the Virginia Personal Property Tax Lists. Although Michael Sweeney may have briefly worked in some kind of laborer's capacity at Cuthbert and Company's Wheeling Foundry, he probably followed his calling as a glass blower at the flint glassworks of Ritchie and Wheat--then in operation for little more than a year. If so, it is likely that he remained in the employ of John Ritchie until the formation of M. and R. H. Sweeney and Company. Indeed, Michael Sweeney's connection with the firm of J. and C. Ritchie, perhaps in a managerial position, is suggested by a lawsuit, settled in March 1835, in which Michael Sweeney and the partners of that firm had been named as co-defendants.¹¹ Thus, Michael Sweeney, who had learned his craft at the most famous flint glassworks in Pittsburgh, had probably gained first-hand knowledge of the operations of a small flint glassworks at the Ritchie factory in Wheeling.

In the Sweeney firm, Thomas and Robert H. Sweeney served as general business managers keeping an eye on the firm's bookkeepers, tending to sales, and overseeing the operation of the firm's glass store. Thomas Sweeney's ownership of the foundry property probably put him in the position of a senior partner even though his first name was not represented in the firm's name. Thomas Sweeney's business practices have made his role difficult to document. In 1869, he would testify under oath:

I have been in the habit almost during my entire business life of transacting my business without written contracts. I do not believe that I have had a dozen such papers in business of forty years.¹²

The payments on the original foundry property mortgage, if made on schedule, were completed in October 1835; however, a deed of release acknowledging full payment was only signed on June 8, 1837. Although the glassworks was in operation by November 10, 1835, and was run under the names of Michael and Robert H., they did not buy shares in the glassworks property until September 4, 1843. They evidently held some sort of claim to the foundry property as a whole, perhaps inherited from their brother Campbell, because on September 4, 1843, Michael and Robert sold Thomas their interest in the foundry and in turn (on the same day) each purchased from Thomas a one-third interest in that portion of the foundry property on which the glassworks stood.¹³ This transaction brought the division of ownership of real property into line with the brothers' shares in the firm--each having a one-third share. Thomas, having provided much of the

necessary capital (and with an iron foundry to manage), probably did so with the understanding that his brothers would devote themselves to the operation of the business, and that a portion of their profits would be used to repay any money they owed him.

M. and R. H. Sweeney and Company prospered. Lasting a decade, the firm was the longest-lived of any glassmaking partnership in Wheeling during the period covered by this study. Although technically dissolved by Robert H. Sweeney's death on March 28, 1845, the firm in a sense continued until 1848, because the survivors carried on the business as M. and T. Sweeney without taking on additional partners.¹⁴ During the first year of production the Sweeneys' glassworks employed fifty-five hands, consumed 110,000 bushels of coal, and yielded a product valued at \$35,000. This is considerably less than Ritchies and Wilson, who, in the same year, produced flint glass worth \$75,000, employing an equal number of hands and consuming an equal amount of coal.¹⁵ The difference no doubt reflects the usual difficulties of operating a new glassworks. Improper furnace construction, for example, could have caused excessive coal consumption. Glass pots could have burst causing the loss of the melt and wasting fuel. Another factor may have been the production ratio of expensive cut wares to plain blown and pressed wares. Both firms advertised cut glass, but one would expect the longer established firm to have built a larger trade in this luxury item. A labor intensive "cold working" process, cutting would have greatly added to the product value without significantly increasing coal

consumption. Conversely, the production of a larger volume of pressed and plain blown wares would have involved a larger volume of hot work for making more batch, for fabrication, and for annealing, significantly increasing the consumption of coal without a corresponding increase in product value.

By the latter part of 1838, when the 1839 Wheeling directory was compiled, M. and R. H. Sweeney and Company reported the same coal consumption that it had in 1836 and employed sixty hands, but yielded an annual product valued at \$70,000. This increase in product value without a corresponding increase in coal consumption suggests a more efficient use of fuel and labor, and perhaps indicates the increased production of cut wares. In the 1839 Wheeling directory, J. B. Bowen wrote:

The flint glass works of Messrs. M. & R. H. Sweeney & Co., with cutting or grinding establishment appended, turn out glassware exceedingly transparent, and manufacture articles of the best materials and workmanship. They are made to every pattern and receive every variety of beautiful finish, cut, pressed, and plain . . .

The cut glass production of Plunkett and Miller, the successors to Ritchies and Wilson, also seems to have increased. At that time Plunkett and Miller employed sixty hands to yield an annual product valued at \$75,000, but used only 60,000 bushels of coal—50,000 bushels less than their predecessors did to produce the same value. Bowen's figures for the two factories represent the peak of flint glass production for the thirties.¹⁶

The revived prosperity of 1838 probably lasted into the opening months of 1839, when both companies shared in the manufacture of a service of glassware for the governor of Virginia. In April 1839, the Ohio County representative to the Virginia House of Delegates, William McConnel, acting on behalf of the citizens of Wheeling, presented Governor David Campbell with "a set of Cut Glass, which is the production of their own manufactories." The presentation was apparently motivated by Whig politics and by the emerging sectionalism in Virginia. The citizens of Wheeling offered the set

as a specimen of the skill and perfection to which the manufactories of their own State may attain, when properly encouraged by a wise and enlightened government . . . and as a testimonial of their attachment to the Government of the Commonwealth under which they live, and of their high respect for the liberal and extended views of the present Chief Magistrate, in his administration of its affairs.¹⁷

Later that year, the economy again took a turn for the worse; the prosperity of 1838 had been but a brief respite from the Depression. Of the Wheeling glass manufacturers, M. and R. H. Sweeney and Company alone survived. To be certain, the Depression and the resulting decline in the demand for flint glass took their toll on the Sweeney firm as well. During 1840-41, their factory seems to have operated only in a diminished capacity and may well have been shut down a portion of that time. Michael and Thomas Sweeney later recalled that they "worked" their "hands but half time" during this period.¹⁸

Why did M. and R. H. Sweeney and Company succeed where Plunkett and Miller failed? It was probably a matter of timing. Plunkett and Miller had built an extensive new factory on the eve of the Depression in 1839; the Sweeneys had built their factory in 1835 near the peak of the country's prosperity. Thus when glass sales fell off, Plunkett and Miller had hardly begun to pay off the debts incurred in the construction of their factory. The Sweeneys, on the other hand, were free of such debts. As far as can be determined, Thomas Sweeney (perhaps in connection with his brothers), by the mid-thirties, held clear title to the land on which the foundry and glassworks stood.¹⁹ No evidence has been found indicating that the factory property was mortgaged thereafter. This is not to say that the Sweeneys had no debts in 1839, but rather that their debts involved neither a mortgage on the factory nor amounts so large that they were unable to service the interest. According to Thomas Young, the firm's bookkeeper in the late thirties:

all the Capital Employed in Carrying on their works was Borrowed from the Two Banks in this City [i.e. the North Western Bank of Virginia and the Merchants' and Mechanics' Bank] the Wheeling Savings Institution and the Bank of Mount Pleasant; these notes which were numerous and amounting in all to over Twenty Thousand Dollars had to be renewed every sixty or ninety days.²⁰

All of these lending institutions survived the Depression, and their stability may have kept the Sweeney's notes from being called in at that time.

Prosperity did not fully return to the glass industry until the mid-forties. In February 1842, M. and R.H. Sweeney and Company

advertised that they had put their glassworks "in complete repair" and that they were "in full operation again." They hoped "that their long and successful experience, (one of the firm having been engaged in the business more than twenty years)" would "be a sufficient guaranty of their capacity to fill all orders on them." This advertisement ran daily until March 15, 1843, when it was replaced by another announcing that the firm had "commenced blowing" and was "now able to fill orders for every description of FLINT GLASS." ²¹ Several days later, the Wheeling Times and Advertiser called attention to the new advertisement with a short article discussing the problems that had beset the flint glass industry and predicting the Sweeney's success in surmounting them:

CUT GLASS--We are much pleased to perceive, as we do by their advertisement, that Messrs. M. & R. H. Sweeney & Co. have again set their Flint Glass establishment in operation, and are now manufacturing on their former extensive scale, cut, pressed and plain glass over every description. The stock of Glass ware, of this kind, purchased by families and merchants in the west, from two to ten years since, was very large, and always beyond demand; but within two years scarcely any purchases have been made, the establishments for its manufacture have been closed or faintly dragging along a weary existence. In the meantime, the stock in consumption has been diminished, and we now flatter ourselves, that the demand must increase, and we shall be surprised, if those establishments that now go into operation do not meet with prompt & steady sales. The establishment we have named, Messrs. Sweeney & Co. as we perceive, is one of those that have adopted the true policy. They have cut close, are determined to manufacture as low as possible and sell at the least possible price; lower than any manufacturers of the same description in the west. Already has this house supplied a number of Western Merchants with fine stock this spring, and we have heard several of them speak in the highest terms, both of the beauty of their articles and price.

For a supply of this article of Western manufacture there cannot be the slightest occasion for any man going beyond Wheeling. If they do they will fare worse.²²

With domestic competition also recovering from the Depression and foreign competition recently curtailed by the passage of the Tariff of 1842, M. and R. H. Sweeney and Company made a bid for a broader market. They sought to publicize their wares by entering them in industrial fairs of national stature and by presenting specimens as gifts to the prominent. At the same time, they attempted to improve their distribution system by establishing warehouses in at least two other cities, Pittsburgh and St. Louis.

During the period from 1842 through 1845, the firm produced large-scale objects of cut glass which were obviously calculated to flaunt the firm's technical virtuosity and win prizes at industrial fairs. In 1842, the firm entered the annual fair of the Franklin Institute in Philadelphia. They won no award so the Institute's published journal made no reference to their entry. However, in the Committee's manuscript notes, lot 144 is described as a

Cut glass bowl, made by M & R H Sweeney, Wheeling, Va., finished in a superior manner, and nearly equal in colour to the best offered.²³

The firm persevered. On September 1, 1843, a journalist from the Wheeling Times and Advertiser visited their glass store and saw what he thought was "the finest specimen of Cut Glass" he had ever seen. He described it as

a FLOAT BOWL, measuring about two feet at the top, and of the purest glass, the richest cutting and finest polish . . . of princely dimensions and appearance²⁴

M. and R. H. Sweeney and Company probably entered this and other objects in the Fair of the Mechanic's Institute at St. Louis, where in November they "took the premium awarded for the purest cut glass."²⁵

Before 1844 and 1845, the firm produced three multiple-section covered urn-shaped vases of cut glass, ranging in size from approximately three feet six inches to five feet one inch in height. In the contemporary press they were called vases or float bowls--the two terms being used interchangeably. The first and smallest of the three had been completed by October 1844, when the Wheeling Times and Advertiser reported that the Sweeneys had manufactured a set of glassware "intended for exhibition at the institute in Philadelphia . . . the most conspicuous article" of which "was a float bowl." The newspaper predicted that the firm would win a premium at the exhibition and pronounced the float bowl "an article that Victoria might covet."²⁶ The judges of the Fourteenth Exhibition of the Franklin Institute held that year awarded the firm a silver medal, the first premium, for its lot of flint glass

comprising one very large and beautiful covered bowl, fruit bowls, celleries, pitchers, decanters, tumblers, and wine and jelly glasses, all richly cut. This glass is of uniform quality throughout, remarkably clear and brilliant, and will compare favorably with the best ever brought to these exhibitions.

The Sweeneys' only competitor, The Boston and Sandwich Glass Company, also received a silver medal. That award was for colored rather than cut glass. Nevertheless, the Sweeneys had achieved a coup and with it a measure of the recognition they had sought. According to the judges,

The samples furnished by the Messrs. Sweeny, prove that the difficulty heretofore experienced in producing good color and brilliance in the article, west of the mountains, has been overcome; and that they are now prepared to furnish the best and purest flint glass.²⁷

In November the Sweeneys triumphantly displayed the "very large and beautiful covered bowl" and other glass from the prize-winning lot in their recently established Pittsburgh warehouse, where the vase created a minor sensation! The Pittsburgh Gazette, which gave the cut glass vase's height as three feet six inches, its diameter as eighteen inches and its weight as ninety-two pounds, lavished praise on it, proclaiming the vase

unequaled by anything of similar description every made in the United States or perhaps the world . . . the wonder not only of all the uninitiated . . . but, of glass-blowers, scores of whom examined it and say it is an astonishing production. The immense difficulty of blowing such an enormous piece of glass as the body of the Vase is almost inconceivable, it being so thick and heavy. The flutes cut in it are deeper than any we remember ever to have seen. The whole is composed of four pieces, cut with the greatest precision, and but one speck is discoverable in it.²⁸

By the end of November, some of Pittsburgh's Whigs had attempted to buy the vase from the Sweeneys so that they could present it to Henry Clay "as a token of their respect, and admiration of

his brilliant services in the cause of Protection." In a letter sent from Wheeling on November 25, 1844, the manufacturers replied:

Sir--We ourselves design on having the honor of presenting the "Vase" to Mr. Clay, and consequently it is not for sale.²⁹

While the spirit of the Pittsburgh Whigs may have suggested this action to the Sweeneys, they may have already decided to take this action themselves. The Sweeneys, who were Whigs, had already given Clay "some beautiful specimens of cut glass" prior to January 1844.³⁰ Giving the vase to Clay was an astute move, because the Sweeneys had every reason to believe that the news of their prize linked with that of their gift to the eminent Whig would be spread across the nation via Whig newspapers. Clay had just lost the 1844 presidential election, and he was not expected to seek that office again. He was given many gifts by his disappointed supporters. For a short time, there was even talk of taking a national subscription to purchase Mount Vernon for him.³¹ Then, too, Clay, as the father of the American System, had received many gifts from American manufacturers in previous years. Descriptions of these goods and the names of their manufacturers frequently appeared in the press.

The Sweeneys sent the vase to Clay's home in Kentucky as a gift. The Wheeling Times and Advertiser on December 27, 1844, carried full transcriptions of both the Sweeneys' November 28 letter of presentation and Henry Clay's December 14 letter of acknowledgement (see Appendix C). These letters were soon afterward copied by the Pittsburgh Gazette and, in all likelihood, a host of other

newspapers.³² Almost as if the presentation of the vase to Clay were not enough to ensure publicity, the firm also presented examples from their winning lot to the editor of the Pittsburgh Gazette who wrote:

We have the pleasure of acknowledging the reception, from the manufactory of Messrs. M. & R. H. Sweeney, & Co. of a pair of splendid cut glass salt sellers, which took the premium at the late national exhibition at Philadelphia, over the Boston competitors. The material is very white, beautiful and clear as chrystal. The enterprizing donors will accept our thanks and best wishes for their prosperity, and that of American Manufacturers.³³

Two vases, yet larger than the one presented to Clay, were made in 1845. The costly production of two vases was probably necessitated that year by the overlapping schedules of the two exhibitions for which they were intended: the Fair of the American Institute in New York ran from October 7 through 23 and the Exhibition of the Franklin Institute in Philadelphia ran from October 21 through November 1.³⁴ One vase was probably completed (or at least begun) before the death of Robert H. Sweeney, on March 28, 1845, and the other probably in the spring or summer. This chronology is suggested by an accounting of the debits and credits existing between the two surviving brothers that in 1867 listed one of the vases as belonging to the firm of M. and R. H. Sweeney and Company and the other as belonging to that firm's successor, M. and T. Sweeney. Even at that point, Thomas Sweeney's share in the vases reflected the partnership division: one-third in the former and one-half in the latter.³⁵

In May 1845, one of the completed vases was shown at the Sweeneys' Wheeling store before being shipped to Pittsburgh "and thence to New York, for exhibition." The Wheeling Times and Advertiser, in an article entitled "Splendid Glass," described the vessel in detail:

It is in the form of a float bowl; the whole of which is of the purest cut glass five feet and a half inch high. It is in four pieces - the stand is conical 25 inches, with flutes four and a half inches at bottom; upon which rests a cylinder one foot eight inches in diameter. On this hangs eighteen brilliant drops. On these rest the bowl, which is sixteen inches high and about eighteen in diameter. The cover is twenty-one inches high and beautiful in the extreme, forming in all the most perfect specimen of glass ever manufactured. The whole weighs 202 pounds.³⁶

The article also identified the glass cutter as Mr. Westwater. This was probably William Westwater (born in Scotland about 1811) who was listed in the 1850 Census as a glass cutter living in the same city ward as the Sweeney factory, and was possibly the same William Westwater listed as a glass cutter in the New York City directories for 1833-34 and 1835-36.³⁷ The presence of a Scottish-trained glass cutter with working experience in New York could help to explain how the Sweeney firm could produce their mammoth vases in a style that would find favor in the East.

And indeed, the vases did find favor in the East that fall. The firm of M. and T. Sweeney was awarded a gold medal at both the American Institute and the Franklin Institute, the latter institute doing so by a special vote as its first premium was normally a silver medal.³⁸ The judges of the Franklin Institute declared the

Sweeneys' entry "to be the best lot of flint glass ever made in this country." Of the great vessel they wrote:

The beautiful vase 5 ft 1 inch high does great honor to the makers. Those only who are familiar with the manufacture of Glass can appreciate the difficulties and hazards encountered in the execution of such a piece of work -- the judges will only say that it is truly a triumph in American art, and from all the information they can gather it does not appear that it has an equal for size and beauty in any country.³⁹

Newspapers in both New York and Philadelphia carried highly favorable descriptions of the Sweeney display at these fairs.⁴⁰ The vase was mounted on top of the display table so that it could be seen from a considerable distance. The most descriptive account of the Sweeneys' exhibit comes from Philadelphia's United States Gazette:

A huge ornamental cut glass bowl--the largest fabric of the kind we ever saw--adorned with heavy prismatic pendants, towers above the collection a mark for universal attention and admiration. Around its base are gathered Decanters of new and beautiful patterns, Goblets, Tumblers, Champaigns, and Wines, of heavy cut glass--the purity and exceeding brilliancy shows to what an advanced perfection the manufacture has been brought. It looks as pure and bright as crystal.⁴¹

The firm was to make ample use of these victories. In January 1846, the Sweeneys exhibited their gold medal-winning glassware along with silk woven in Wheeling, at the Exchange Hotel in Richmond presumably with a two-fold purpose: to demonstrate Wheeling's importance in the Old Dominion and to stimulate sales. The Virginia legislature was then in session with the western route of the Baltimore and Ohio Railroad hanging in the balance--even though the City of Wheeling had earlier subscribed to that company's

stock with the understanding that the railroad would terminate in Wheeling.⁴² Evidently the display of glass and silk had some effect on public opinion. The Richmond Times and Compiler observed that the display afforded "a very strong argument for Wheeling as the terminus of the Baltimore and Ohio railroad."⁴³ The Richmond Enquirer also applauded the display and saw broader political ramifications.

No one can say, after seeing the brilliant articles . . . that there is no industry or skill in Virginia. Seeing what the West can do, we are more than ever anxious that Eastern and Western Virginia should continue in the bonds of friendship and mutual interest--more than ever resolved to contribute our little aid to the cementing indissolubly together the different sections of glorious Old Virginia.⁴⁴

On January 13, 1846, much of the glassware was sold at a public auction held in Richmond. Under the heading of "VIRGINIA PREMIUM CUT GLASS AT AUCTION," auctioneers Inloes and Brother claimed the lot to be "the best specimens of American Cut Glass ever exhibited in this country." Included in the sale were

Richly Cut Bowls, Salts, Decanters, Claret Pitchers, Creams, Celeries, Goblets, Tumblers, Wines, Cordials, Lemonades, Jellies, & C⁴⁵

The Sweeneys apparently used the large cut glass vases to attract attention in displays at trade fairs and shops for a number of years. In 1851, one was said to have "for some time been on exhibition at Washington City." And in 1853, the year the Baltimore and Ohio Railroad finally came to Wheeling, one of the vases displayed with other Sweeney glassware took a gold medal at the annual exhibition of the Maryland Institute in Baltimore.⁴⁶

These awards strengthened the Sweeneys' reputation and served as advertisements. Much of the Sweeneys' business must have been conducted by traveling sales agents and a certain amount of business must have been conducted by mail. Yet the prospective purchasers, both wholesale and retail merchants, could inspect goods displayed at warehouse-stores maintained by the Sweeneys in Wheeling, St. Louis, and Pittsburgh. As the Sweeneys' base of operations, Wheeling was the most important warehouse location. M. and R. H. Sweeney and Company maintained a warehouse in Wheeling as early as 1836 and its successor firms continued this practice until the last of the firms was dissolved in 1863. The first warehouse was on the north side of Monroe Street (present-day Twelfth Street) between Water and Main Streets, a location at the heart of Wheeling's business district and within one block of the public wharf. This warehouse was evidently leased, as no member of the firm owned the land on which it was built. The "wareroom" address was listed in the 1839 Wheeling Directory as 9 Monroe Street--an address the Sweeneys occupied until 1849.⁴⁷

The Monroe Street warehouse served as a store for local retail sales and as a showroom for visiting merchants buying goods wholesale. The store apparently carried glassware only of the Sweeneys' manufacture, but also carried imported ceramics, and later lamps and cutlery.⁴⁸ Although the Sweeneys frequently bought English and French ceramics from wholesalers in the eastern cities, they were among the first to take advantage of Wheeling's status as a port of

entry, importing ceramics directly to Wheeling from England via New Orleans and the Mississippi River system. Thomas Sweeney later recalled:

I made an agreement with W. W. Ridgway a manufacturer of queensware in Staffordshire in England for the importation of a considerable lot of queensware as early as 1835 or 1836. . . which was the first direct importation of queensware made direct to this town, I believe. This importation for account of M. & R. H. Sweeney & Co. . . .49

While advertisements in local newspapers rarely described the glassware available at the store, they frequently described the ceramics in some detail, often giving the origin of the shipment. For example, in July 1842, M. and R. H. Sweeney and Company advertised that they had

just received from Liverpool. . . a large and well selected stock of Queensware, comprising handsome dinner sets, Tea ware & C: all of the latest style and patterns. - Also a very large stock of common ware suitable for country trade50

In July 1843, a shipment of "a large and superior stock of the latest styles FRENCH and ENGLISH CHINA" came from New York which included:

White and Gold Band Breakfast and Tea Setts, White and Blue, Breakfast, Dinner and Tea Setts of various patterns improved granite China.⁵¹

Evidently the glass store prospered. In the spring of 1845, the Sweeneys took "the store adjoining them on Monroe street" and made "both into one, for the sale of China and Glass ware." The expansion and remodeling were not accomplished without a measure of showmanship. In July 1845, The Wheeling Times and Advertiser, praised the appearance of the improved store:

The front of Messrs. Sweeney's Glassware house, on Monroe street, presents as great an attraction as anything we have. The front is all glass and mirrors except the pillars; and the way his splendid glass shows through is no one's business--except his and the purchasers.⁵²

For a comparatively brief period of time, the Sweeneys maintained their warehouses in St. Louis and Pittsburgh, both key shipping points on the inland river system. The establishment of warehouses in those cities was evidently an effort to expand their business with the return of prosperity in the mid-forties. The Wheeling advertising section of Kimball & James' Business Directory for the Mississippi Valley: 1844 listed in addition to M. and R. H. Sweeney and Company's Wheeling address, the address of its St. Louis warehouse (96 Main Street), where that firm kept "a general stock at factory prices adding freight." This flint glass advertisement invited

the attention of Merchants and others wanting the article, to their manufacture and prices; as from the great facilities they possess, they are enabled not only to produce a superior article, but to sell lower, they believe, than any other establishment in the country.

Orders from any part of the Union carefully packed and forwarded.⁵³

Located on the Mississippi River in close proximity to the mouths of the Missouri, the Illinois, and the Ohio Rivers, St. Louis was the commercial center of the upper Mississippi Valley. From St. Louis, glass selected by merchants could easily be shipped to any location on the Mississippi and its navigable tributaries. Glassware made in Wheeling had been offered for sale in St. Louis as early as

1837.⁵⁴ Although Sweeney glass undoubtedly came to St. Louis soon after production began in 1835, the first solid evidence of its presence is the firm's entry in the Fair of the Mechanic's Institute in 1843--the same year that the advertisement in the Mississippi Valley Directory was probably written.⁵⁵ Evidently, M. and R. H. Sweeney and Company had entered the Fair with the idea of calling attention to its St. Louis outlet. The Sweeney firm was not listed in any of the St. Louis directories. No St. Louis directories are known for the years 1843 and 1844, and the 1845 directory was actually published in 1844. Thus, we can assume that the firm maintained a warehouse in St. Louis for only a year or so in 1843 and part of 1844.⁵⁶

The Mississippi Valley Directory did not list the Sweeneys' Pittsburgh warehouse, so perhaps it was not established until after 1843. Wheeling newspaper articles show that the firm's Pittsburgh warehouse was in use as early as November 1844, and the Pittsburgh directory for that year carried a half-page display advertisement, on the page facing Bakewell's full-page advertisement. M. and R. H. Sweeney and Company

Have on hand and are constantly manufacturing every description of Ware embraced in their line and which they warrant unsurpassed in richness and beauty by any in the Union.

The advertisement went on to state that they were not only able "to produce a superior article, but to sell lower . . . than any other establishment in the country." In the advertisement, the firm's

Pittsburgh address (38 Wood Street, between Second and Third Streets) was given prominence.⁵⁷ Although the advertisement noted that the firm also had a warehouse in Wheeling, it made no mention of the fact that the factory was located in Wheeling. Thus, a reader unfamiliar with the firm would have incorrectly assumed that its glassware was made in Pittsburgh. This may well have been an intentional ploy enabling the firm to compete more successfully in Pittsburgh's wholesale market and, at the same time, to capitalize on the reputation enjoyed by Pittsburgh glass. The firm did not remain in its Pittsburgh warehouse for long. On April 10, 1845, Pittsburgh was devastated by a fire that destroyed approximately one-third of its buildings. The Sweeneys were among the wholesale merchants listed by the newspapers as "burnt out."⁵⁸ They did not advertise in subsequent Pittsburgh directories, so the fire must have put an end to their Pittsburgh store. Thereafter, they seem to have turned their glassware over to manufacturers' agents in Pittsburgh, and in all probability did the same in St. Louis.⁵⁹

On January 1, 1848, the firm of M. and T. Sweeney was dissolved by the mutual consent of the partners. Michael Sweeney, the practical glassman and factory manager, retired from the firm apparently with the intention of entering the iron industry. He would not return to the Wheeling glass industry until 1859. The new firm of Sweeneys and Bell was comprised of Thomas Sweeney, Andrew J. Sweeney (his eldest son--then twenty-one years old), and Joseph R. Bell, the late firm's bookkeeper.⁶⁰ Thomas Sweeney, the senior partner, held

a half share in the new firm and the new partners each held a quarter share. Joseph Bell later recalled that Thomas Sweeney

had the general supervision of its business . . . Andrew J. Sweeney was the manager of the factory & the manufacturing business generally, and . . . [I] was the Book Keeper & cashier & had the immediate charge of the warehouse.⁶¹

From what is known of the later lives of the two junior partners, it seems that they must have contributed much to the new firm. Andrew J. Sweeney, as factory manager, was evidently a natural leader with a mechanical bent. In 1855, while still in his twenties, he was appointed to fill an unexpired term as mayor of Wheeling. He would eventually be elected to that post nine times. Andrew J. Sweeney was listed as a master machinist in the 1860 Census, and it was this craft, rather than actual glassworking, which was his area of practical expertise. Famous as a manufacturer of steamboat engines at the time of his death in 1893, Andrew J. Sweeney was then described as

an inventor of no small renown, a number of valuable patents having been granted him, and his intimacy with all forms of machinery and his knowledge of applied mechanics was second to that of no man in this community. A proverbial hard worker, it was almost his invariable custom to close a day of toil as grimy as the humblest man in his employ⁶²

Joseph Bell was well trained for his role in the firm, having begun working in the glass store of M. and R. H. Sweeney and Company as a boy. His responsibilities grew as he did, and in 1844, Bell was the agent who deposited M. and R. H. Sweeneys' glassware in the annual exhibition of the Franklin Institute. In the years after Bell left

Sweeneys and Bell, he became a highly successful industrialist, engaging in the manufacture of nails and iron castings as well as glass.⁶³

Andrew J. Sweeney and Joseph Bell probably did most of the work involved in managing the operations of Sweeneys and Bell. Thomas Sweeney, with his attention divided between other business ventures and public affairs, seems to have made an overall effort to delegate authority in order to expand his enterprises. In 1869, he would recall:

I had a manager at the foundry and a clerk and a business man at the foundry store. These two departments of the foundry business was conducted by their respective managers so that my personal attention was not after required at either point. My private desk was at the office of Sweeneys & Bell where it had been previous to their copartnership and I spent nearly all my time there when at home.⁶⁴

Thomas Sweeney also briefly tried his hand at window glass manufacture when rising prices once again made that business lucrative. In late 1847 and early 1848, Sweeney, as a member of the firm of Sweeney, Baker and Company, built a window glass factory near the North Wheeling Flint Glass Works.⁶⁵ In 1848, that firm reorganized into the Wheeling Glass Manufacturing Company (a joint stock company) with Dr. James Baker as president and James Heburn as factory manager, and operated profitably as late as 1850. However, Sweeney's involvement in the venture seems to have ended by December of that year, when the firm of Tives and Bankerd advertised that they had purchased the factory.⁶⁶ In addition to his entrepreneurial

activities, Thomas Sweeney devoted an ever increasing amount of his time to public affairs, serving as president of both the Northwestern Bank of Virginia and the Wheeling and Belmont Bridge Company which was then constructing the world's longest suspension bridge.⁶⁷

The articles of partnership for Sweeneys and Bell have been preserved in the case papers of the Ohio County Court. The firm was to "continue for and during the term of ten years unless sooner dissolved." Each of the partners had the right to withdraw from the firm "at the end of any year having given at least three months notice of his intention," in which case the firm would be dissolved and its affairs settled. "Sweeneys and Bell were to lease the glass factory from its owners (i.e., Thomas Sweeney, Michael Sweeney and the heirs of the late Robert H. Sweeney), paying "such reasonable rent for the same as shall from time to time be agreed." Sweeneys and Bell took

the stocks of tools, fixtures and implements and materials used at the factory and the stock of manufactured Glass, crockery-ware fixtures &c at the Warehouse and said factory belonging to the late firm of M. and T. Sweeney, the amount of said inventory to be charged to said Sweeneys & Bell in the following proportions viz To Thomas Sweeney the one half To Andrew J. Sweeney the one fourth and to Joseph Bell the one fourth.⁶⁸

These payments were obviously to be made in direct proportion to each partner's share in the firm.

According to the terms of the agreement, Andrew J. Sweeney and Joseph Bell were to pay "out of their respective shares of the profits" interest on the amounts that they respectively owed for

"their shares of the capital stock until . . . fully paid up." Until this indebtedness was cleared, neither Andrew J. Sweeney nor Joseph Bell were to

withdraw from the said firm more than shall be sufficient for his support in no event to exceed . . . the sum of \$1,000 per annum without the consent of the other members of the said firm nor shall either of the firm without the like consent withdraw from the said firm more than his share of the clear profits.

In addition, Andrew J. Sweeney and Joseph Bell were each to devote their "whole time and attention to the business and interests" of the firm and were not to "engage in any other business . . . without the consent of the other members of the firm." No such stipulations applied to Thomas Sweeney.

Sweeneys and Bell prospered. In March 1849, the firm, according to The Wheeling Argus, planned to build a warehouse "four stories high, 23 feet front, 108 feet deep--open front" on Main Street during the "season" and had

contracted for the building of a new flint glassworks, immediately adjoining their present works and of the same size--thus doubling their business.⁶⁹

Thomas Sweeney already owned the lot upon which the warehouse was to be built, having purchased it for \$1,625 in October 1847. In September 1849, The Wheeling Argus noted the progress of the warehouse:

It has reached its third story, the fourth will soon be there, and the whole is to be covered with a slate roof.⁷⁰

On October 10, 1849, Sweeneys and Bell advertised that they wanted to reduce their "present very large stock of Queensware and China, pre-

vious to its removal to our new store on Main Street." The warehouse must have been nearly completed by November, because on November 1, 1849, Andrew J. Sweeney and Joseph Bell purchased their undivided half-share in the property from Thomas Sweeney for \$1,000. However, as late as January 1850, the firm was still advertising goods for sale at the old address.⁷¹ The newspapers were strangely silent on the progress of the construction of the glassworks, but Joseph Bell recalled that the "additional new glasshouse" was built on the property during the first two years of the partnership "thereby doubling the capacity of the works."

It consisted of a separate glass furnace as large or larger than the one carried on by M. & T. Sweeney and the building and other appurtenances suitable for the carrying it on adjoining and connected with the old works for the greater convenience of the business.⁷²

For the year from June 1, 1849, through June 1, 1850, the United States Census of Manufacturers reported that Sweeneys and Bell, with a capital of \$75,000, had employed 131 hands and had produced 28,000 packages of glassware valued at \$100,000. This represented a \$30,000 increase over the high annual product value recorded before the Depression.⁷³

Sweeneys and Bell, however, received a major setback on January 29, 1851, when part of their factory complex was destroyed by fire. Although no 1851 Wheeling newspapers have survived, the news of the fire was carried by telegraph, and brief accounts of the fire appeared in many American newspapers the next day. The version in

The Daily Commercial Journal of Pittsburgh may be regarded as typical:

(By Morse's Line)
FIRE IN WHEELING

WHEELING, JAN 29, 11-P.M.

A portion of the splendid Glass Works of Sweeneys & Bell were this morning consumed by fire including their cutting, grinding and packing rooms; loss forty thousand dollars, no insurance. Before the fire was well subdued, contracts were made for the re-erection of the building, and the blowing continues in the adjoining building as usual.⁷⁴

According to Andrew J. Sweeney, the firm also "lost one week of melting, and from three to four weeks work in the building which was burned."⁷⁵

The fire prevented Sweeneys and Bell from entering their glassware in the Crystal Palace Exhibition of the Industry of All Nations held that year in London. An 1853 account of the Sweeney factory mentioned the fire of "a few years since" which had destroyed "some splendid specimens . . . intended for exhibition at the World's Fair." And as late as 1877, The Wheeling Intelligencer claimed that the Sweeneys had intended to exhibit one of their large cut vases "at the World's Fair, in London." According to the Intelligencer, the vase

was packed up, ready for shipment, when the works of the Messrs. Sweeney were destroyed by fire, and the project of sending it to Europe was abandoned.

Although the two great vases are known to have survived the fire, the loss of wares intended for the exhibition presented an insurmountable obstacle to the firm then hard pressed to make up its losses.⁷⁶

The fire also precipitated the purchase of a two-thirds share in the factory property by Sweeneys and Bell. As a result of the fire, this firm, which had already made substantial improvements in the property in 1849, was now faced with the prospect of investing even more money in land that it did not own. On February 28, 1851, the firm purchased the portion of the factory property not owned by Thomas Sweeney "at the rate of the sum of Ten Thousand Dollars for the whole" -- the same rate at which Michael and Robert H. Sweeney had purchased their shares in 1843. Michael Sweeney received \$3,333.33 for his share. Robert's widow, Julia, received \$911.18 for her dower right, and his infant daughter, Sarah, was to receive the remainder as heir on her majority with interest for her use being paid by the firm to her guardian, Michael Sweeney, and her mother in the interim. At the conclusion of this transaction, Thomas Sweeney held a five-ninths interest in the factory property and Andrew J. Sweeney and Joseph Bell each a two-ninths interest.⁷⁷

In the fall of 1851, Joseph Bell gave notice of his intention to withdraw from Sweeneys and Bell. According to Thomas Sweeney, Bell told him that "he [Bell] could make more money by going into the nail business than he was making in the glass business." Sweeney replied that he would not stand in Bell's way and that they "would arrange matters to suit him [Bell] if possible." Bell became a partner in the nail and spike manufacturing firm of Norton, Acheson, and Company. Sweeneys and Bell was amicably dissolved in accordance with its articles of partnership, but the terms of its dissolution "were

not in writing." In spite of fire losses, Sweeneys and Bell had been profitable and Joseph Bell would later recall that the firm's "aggregate profit exceeded \$35,000."⁷⁸

Notices of the dissolution of Sweeneys and Bell and of the formation of its successor firm were published in The Wheeling Times and Gazette, probably during the first two weeks of January 1852. Although no newspapers survive for that period, a clipping of this advertisement has been preserved in the Ohio County Court Papers:

DISSOLUTION

THE co partnership heretofore existing between the subscribers under the style of Sweeneys & Bell, was this day dissolved by mutual consent.

The outstanding business will be closed by either of the parties. All persons are requested to call and make payments, and those having accounts to present them for payment.

31st December, 1851

THOMAS SWEENEY
ANDREW J. SWEENEY
JOSEPH BELL

THE undersigned will continue the business of the late firm of Sweeneys & Bell under the style of T. Sweeney & Son, and hope to receive a continuation of the patronage enjoyed by the late firm.

31st December, 1851

THOMAS SWEENEY
ANDREW J. SWEENEY

In a third paragraph of the same date, Joseph Bell thanked "the public for their liberal support" and recommended "the new firm to the patronage of the customers" of the old firm.⁷⁹

In September 1852, the books of Sweeneys and Bell were credited with the amounts T. Sweeney and Son owed that firm for the factory property and various chattels. The factory property was

valued at \$13,262.75--the amount it had cost up to January 1, 1852.

The chattels were valued at \$44,072.28; they included:

Manufactured Glass-ware at 9 & 12 months credit	\$18,243.64
Moulds & presses, lathes, tools, Trimmings	
materials & c. & c. at the Factory as Cash	\$18,862.59
Cutlery, Lamps, China, Queensware & c. & c. at the Store as Cash	\$ 6,966.05

However, the adjustment of money matters between the former partners was to take much longer. Thomas Sweeney and Joseph Bell disagreed about Bell's indebtedness to the firm, and Bell as bookkeeper, refused to acknowledge the debt and post it in the books. On July 26, 1854, when Thomas Sweeney "caused the books . . . of Sweeneys & Bell to be finally posted, balanced, and closed, . . . Joseph Bell was indebted to the said firm in the sum of \$4,601.37." In October of that year, Thomas Sweeney filed a bill of complaint against Bell at the Ohio County Court charging Bell with refusing "to make the proper entries in the books," refusing to pay the money owed "on the final settlement of the affairs of said partnership," and with failure "to convey by proper deed or deeds in fee simple" the real estate which T. Sweeney and Son had purchased from Sweeneys and Bell. Sweeney sought a court "order and decree" that an accounting be taken of the "dealings and transactions" of Sweeneys and Bell and that Bell be directed to pay the money Sweeney believed he owed and to confirm the titles of the real estate involved.⁸⁰

On February 16, 1855, Bell confirmed the titles, formally selling his interest in the glass factory property, the glass warehouse, and several other parcels of land, to Thomas and Andrew J.

Sweeney for \$5,985.25. On the same day, Joseph Bell and the two Sweeneys placed in mutual trust another tract of land in which all three had an interest. This secured the payment of any money that might be found due

in the final settlement or adjustment of the late co-partnership subsisting between them, . . . whether the same be ascertained by agreement, award, or decree of any Court of Competent jurisdiction.⁸¹

Resolving the question of Bell's indebtedness, involved the sporadic examination of witnesses over the next sixteen years and finally resulted in the creation of a court-appointed commission. In 1870, the commission decided the case in favor of Thomas Sweeney, ordering Bell to pay \$3,288.35 to Thomas Sweeney and \$100.90 to Andrew J. Sweeney.⁸²

The firm of T. Sweeney and Son, which succeeded Sweeneys and Bell, was as successful as its predecessors. In 1860, the United States Census of Manufacturers reported that T. Sweeney and Son, with a capital of \$70,000, employed 125 hands, and annually produced flint glassware valued at \$100,000.⁸³ In the same year, Andrew J. Sweeney obtained a patent for

a new and useful improvement in the form of mold for making the foot on a goblet or other article which may be made of glass, by the use of which the foot is made ready to finish without having or showing a mark of a mold-joint on its surface.

In Sweeney's process, a pressed glass goblet came from the mold with a cylinder at its base that, while hot, could be opened into a disk to form the foot. Although it is difficult to assess the

significance of this patent in the development of American pressed glass technology, Sweeney's patent was locally important, because it was apparently the first glass patent issued to a Wheeling resident. The second such patent would be issued to Sweeney's uncle, Michael, in January 1866.⁸⁴

The Civil War brought problems for state, family and factory. Wheeling became the first capital of the pro-Union Restored Government of Virginia and then, in 1863, the capital of the newly formed state of West Virginia. Andrew J. Sweeney was serving as mayor of Wheeling at the outbreak of hostilities. Loyal to the Union, he strove to maintain order among a civilian populace of divided loyalties. On April 19, 1861, Mayor Sweeney issued a proclamation

calling upon all good citizens to preserve the public peace and order at all times ... and invoking them to refrain from harshness of speech, and from any act which might lead to violence of any kind to any person or property whatsoever . . . ⁸⁵

At the formation of West Virginia, Andrew J. Sweeney became a colonel in the new state's militia. Though hardly a secessionist, his father, Thomas Sweeney, an old-line Whig, joined the Democratic party -- suggesting that the elder Sweeney may have taken a somewhat milder view of the Southern cause. A cousin, James Washington Sweeney, served as an officer in the Confederate army.⁸⁶

Wartime demand for boilers and machinery made the Sweeney iron foundry very profitable. At the same time, the war posed difficulties for the flint glass factory--much of its former market

lay behind enemy lines. It is, therefore, not surprising that the partners of T. Sweeney and Son, busied by public duties and the operation of a thriving iron foundry, should choose to retire from glass manufacture. In December 1863, Thomas Sweeney stated, in advertising real estate for sale, that he was "desirous of closing up his business, with a view of spending his time in the country."

Among the numerous properties offered for sale was the glass warehouse "now occupied by T. Sweeney & Son." ⁸⁷ On December 24, 1863,

The Daily Register noted

CLOSING UP BUSINESS. - T. Sweeney & Son, having ceased manufacturing flint glass, and being about to close up the business of the firm, offer their entire stock of glassware at cost for cash. This is a rare chance, and our citizens should avail themselves of the opportunity. See the advertisement in another column and if you want china ware, glass or crockery for the hollidays, give them a call.⁸⁸

On November 12, 1863, Thomas and Andrew J. Sweeney had leased their glass factory property to their former partner, Joseph Bell, for a term of five years beginning on November 13; the annual rent of \$720 was payable quarterly. Bell also agreed to pay the taxes, to pay half the cost of a watchman, to keep the property in repair, and to deliver the factory at the end of the lease "in as good repair, as he received the Same natural wear & tear excepted & except the destruction or damage by fire." The factory property was defined in the lease

as the North Wheeling Flint glass works, including the boundaries, formerly owned by Sweeneys & Bell & including the two town lots north of the property across the Street, with the buildings, machinery, & fixtures thereon: also the

privilege of the use of the ground east of & between said property & the Stable, pot room & machine Shop as at present except that all the Sheds on the east adjoining Said Stable, pot room & machine Shop are to be removed, also the privilege of making coke on the ground west of the foundry now occupied & used for that purpose. . . . 89

Bell, by this time a successful iron and nail manufacturer, leased the North Wheeling Flint Glass Works on behalf of the newly-formed Sweeney, Bell, and Company, in which he was a partner.⁹⁰ Thomas Sweeney's brother, Michael, was the Sweeney in Sweeney, Bell, and Company. Michael had retired from the firm of M. and T. Sweeney in 1848 to enter the iron business. In 1850, Michael Sweeney, who had "accumulated a considerable fortune" in the glass business, sank "every dollar of his entire fortune" into Wheeling's budding iron industry--an investment which proved disastrous.⁹¹ In 1856 or 1857, Michael Sweeney "went west to retrieve his fortunes," engaging in the iron "commission business, chiefly stoves and hollow ware." He then briefly tried his hand at real estate in Nebraska.⁹² About 1859, Michael returned to Wheeling and, with James Washington Sweeney (the son of his cousin, James), Michael formed the green glass bottle manufacturing firm of M. and J. W. Sweeney, which briefly operated the Union Glass Works in Center Wheeling. J. W. Sweeney's business ties with Michael probably ended by 1860 and certainly would have been severed in 1861 when the former ironically joined the Confederate army.⁹³

About 1861, Michael Sweeney and a James Phillips formed M. Sweeney and Company, which acquired a vacant glass factory in nearby

Martinsville (present-day Martins Ferry), Ohio. Having erected a new furnace, they engaged in flint glass manufacture, calling their factory the Excelsior Glass Works. By the fall of 1863, James McCluney, formerly the bookkeeper of T. Sweeney and Son, had evidently succeeded Phillips in M. Sweeney and Company. In November of that year Joseph Bell joined Michael Sweeney and James McCluney, and the three formed Sweeney, Bell, and Company. The new arrangement provided the capital necessary for the partners to take advantage of the opportunity posed by the availability of T. Sweeney and Son's North Wheeling Flint Glass Works.⁹⁴

On December 18, 1863, Sweeney, Bell, and Company advertised themselves as "Successors to T. Sweeney & Son and M. Sweeney & Co." offering "Pressed & Cut, Flint & French Flint GLASSWARE." The firm listed its factories as the "WHEELING WORKS" in North Wheeling and the "EXCELSIOR WORKS" in Martinsville, Ohio; its office was located in Wheeling's business district.⁹⁵ Although no statistics are available for the Excelsior Works, the firm's Wheeling Works evidently suffered from the wartime labor shortage. In 1860, T. Sweeney and Son had employed 125 hands at the latter works; in 1864, Sweeney, Bell, and Company employed only "from forty to fifty workmen."⁹⁶

The company survived the difficulties posed by the war and enjoyed a decade of success. About 1867, Joseph Bell retired from the firm, which then became Sweeney, McCluney, and Company. When their lease of the North Wheeling Flint Glass Works expired in

November 1868, glass manufacture in that factory ceased. Sweeney, McCluney, and Company "vacated their Wheeling works and concentrated their energies and capital at Martin's Ferry," where they had built a new factory with three ten-pot furnaces. Thereafter, they advertised their Martin's Ferry factory as the Excelsior and Wheeling Glass Works of Wheeling, West Virginia.⁹⁷ The Panic of 1873 did not immediately affect Sweeney, McCluney, and Company, but by 1875, the firm was in financial trouble. That summer the company was incorporated under the laws of West Virginia, its debts were restructured, and it was brought under the general management of one of its major creditors, Joseph Bell.⁹⁸

Michael Sweeney, sixty-five years old and once again financially ruined, was broken in spirit. The last weeks of his life were largely sleepless. He spent "entire night[s] walking the floor, studying the question as to how he might recover from his embarrassed condition." On December 22, 1875, Michael Sweeney died suddenly, the victim of "disease of the heart and lungs." His funeral, held four days later, was attended by a number of men

who had been in his employ from time to time during the last forty years. When the coffin, containing his remains, was brought from the house the bier was lowered to the sidewalk and the glass plate in the lid was uncovered and all the employees of the Glass Works with many other citizens forming in double column, . . . viewed the remains, then reforming headed the procession and marched . . . to the top Wheeling hill where, again forming in two lines, they stood with uncovered heads, notwithstanding the rain, while the hearse and attending carriages passed between. Thus they paid the last tribute of respect to their old and esteemed friend and employer.⁹⁹

Sweeney was buried in the family plot belonging to his brother, Thomas, in Wheeling's fashionable Greenwood Cemetery, where his grave would be adorned with a vitrine appropriately containing one of the massive urn-shaped cut glass float bowls that had won gold medals for his company three decades earlier.¹⁰⁰

Summary

The Sweeneys were by all standards the most successful of Wheeling's antebellum flint glass manufacturers. Their production was sustained over a long period of time, and the quality of their products received national recognition. The original firm of M. and R. H. Sweeney and Company lasted for a decade without change in its membership, making it the longest lived of any antebellum Wheeling glass partnership. In this firm, Thomas Sweeney, an iron founder, was the entrepreneur and Michael Sweeney, who had served his apprenticeship with Bakewell in Pittsburgh, was the practical glassmaker.

M. and R. H. Sweeney and Company was the only Wheeling glass firm to survive the Depression of 1837. Timing probably played a significant role in the firm's survival. They had built their factory in 1835 when the economy was booming and they had apparently paid for it by 1840 when the Depression had its severest effect. In the early forties, as prosperity returned, the firm made a bid for a broader market, by manufacturing wares calculated to win prizes at industrial fairs of national stature. In 1844 they were awarded a silver medal by the Franklin Insitute, and in 1845 they were awarded

gold medals by both the Franklin Institute and the American Institute. The Sweeneys were the only Wheeling glass manufacturers to win such honors in the antebellum period. They also sought to publicize their wares through presentations--the most notable being their gift of a three-and-one-half foot tall cut glass urn-shaped vase to Henry Clay in 1844.

NOTES

1. John S. Cunningham, The Portsmouth [Virginia] Transcript as quoted in the Wheeling Daily Intelligencer, February 5, 1853.
2. DB, 16:186-8, 198-9.
3. Petition of Archibald Woods et al., to the Virginia Legislature, December 15, 1827, Ohio County Legislative Petitions, Virginia State Library, Richmond, Virginia.
4. Entry for December 15, 1829, "Journal of B.L.C. Wailes", 129.
5. The American Advertising Directory for Manufacturers and Dealers in American Goods, For the Year 1831 (New York: Jocelyn, Darling and Co., 1831), 116, 145; DB, 18:87-9.
6. Thomas Sweeney Notice dated May 4, 1833, Wheeling Tri-Weekly Times, February 1, 1834; History of the Upper Ohio Valley, with Family History and Biographical Sketches, 2 vols. (Madison, Wisconsin: Brant and Fuller, 1890), 1:450 (hereafter cited as History of the Upper Ohio Valley).
7. "Manufactories of the Town of Wheeling," November 1833;
"Manufactories of the City of Wheeling," December 1836.
8. Wheeling Tri-Weekly Times and Advertiser, January 15, 1839.
9. Tom Sweeney, Flight to Erin (New York: The Exposition Press, 1948), 116, 132-9, 197-8; "Thomas Sweeney, The Venerable Manufacturer, Dies Full of Years," Wheeling Daily Register, May 10, 1890; "The Late Michael Sweeney, From the Martin's Ferry News of Yesterday," The Wheeling Daily Intelligencer, December 24, 1875.
10. Innes, Pittsburgh Glass, 24, 41-2, 112-5, 118.
11. Ohio County Virginia Personal Property Tax List, 1831, Virginia State Library, Richmond, Virginia, 71; Moses W. Chapline, use of Mary Robertson v. Michael Sweeney, John Ritchie, and Craig Ritchie, January 1835, OCC Papers, env. 138 a-2. This suit was over the nonpayment of a promissory note in the amount of \$35 due on July 1, 1834, which the defendants had co-signed.
12. Testimony of Thomas Sweeney, April 1869, in case of Thomas Sweeney v. Joseph Bell and Andrew J. Sweeney, 1854-70, OCC Papers, env. 283 b-8 (hereafter cited as Testimony of Thomas Sweeney, April 1869).

13. DB, 16:198-9; DB, 25:96-7; DB, 26:477-9.
14. "Obituary," Wheeling Times and Advertiser, March 29, 1845; M. and T. Sweeney Dissolution Notice, dated January 1, 1848, Wheeling Times and Advertiser, January 12, 1848.
15. "Manufactories of the City of Wheeling, December 1836."
16. "Introduction," Wheeling Directory, 1839, n. p.
17. Richmond Whig, April 9, 1839; Wheeling Tri-Weekly Times and Advertiser, April 16, 1839.
18. M. and T. Sweeney to Andrew Stewart, February 18, 1846, in "The Tariff," Wheeling Times and Advertiser, February 25, 1846.
19. DB, 16:186-8.
20. Deposition of Thomas Young in case of Michael Sweeney, Robert H. Sweeney, and Thomas Sweeney v. Thomas Young, Spring Term 1841, OCC Papers, env. 169 c-14.
21. M. and R. H. Sweeney and Co. advertisement dated February 12, 1842, Wheeling Times and Advertiser, January 4, 1843; M. and R. H. Sweeney and Co. advertisement dated March 15, 1843, Wheeling Times and Advertiser, March 15, 1843.
22. Wheeling Times and Advertiser, March 18, 1843.
23. Committee on Exhibition, Twelfth Exhibition 1842, Franklin Institute Archives, Philadelphia, Pennsylvania; "Glass, China and Earthenware," Journal of the Franklin Institute, Third Series, vol. 4 (1842), 344. Silver medals were awarded to The Boston and Sandwich Glass Co. and the Union Glass Works of Philadelphia for "the best display of cut glass" and "the best specimen of colored glass" respectively.
24. "Fine Glass," Wheeling Times and Advertiser, September 2, 1843. From the contexts in which the term "float bowl" occurs, it was probably a synonym for punch bowl.
25. "Cut Glass," Wheeling Times and Advertiser, January 16, 1844.
26. "Glass," Wheeling Times and Advertiser, October 8, 1844. This float bowl, which was later given to Henry Clay, does not survive.
27. "Report on China, Glass, and Earthenware," Journal of the Franklin Institute, Third Series, vol. 9 (1845), 106. For the judges' manuscript notes, see Committee on Exhibition,

Fourteenth Exhibition 1844, Franklin Institute Archives, Philadelphia, Pennsylvania.

28. "Gorgeous Glass Vase," Pittsburgh Gazette, November 23, 1844. The "speck" may have been an undissolved bubble of gas or particles of unvitified matter caused by uneven heating of the furnace.
29. "Justice to Henry Clay," Pittsburgh Gazette, November 28, 1844.
30. "Random Recollections of Recent Ramblings-No. xxv." Wheeling Times and Advertiser, January 31, 1844.
31. Wheeling Times and Advertiser, November 26, 1844.
32. Wheeling Times and Advertiser, December 27, 1844; "The Glass Vase, Interesting Correspondence," Pittsburgh Gazette, December 30, 1844.
33. "Acknowledgements," Pittsburgh Gazette, December 4, 1844.
34. New York Herald, October 8, 1845, October 24, 1845; W. Bernard Carlson, Assistant Archivist of The Franklin Institute to Gary E. Baker, August 17, 1978.
35. "Obituary," Wheeling Times and Advertiser, March 29, 1845; Michael Sweeney v. Thomas Sweeney, October 1867. OCC Papers, env. 273 b-1.
36. "Splendid Glass," Wheeling Times and Advertiser, May 13, 1845. The description given closely matches the one known surviving vase, which is in the collection of Oglebay Institute in Wheeling, West Virginia, after having spent nearly seventy-five years in a case on top of Michael Sweeney's grave in Greenwood cemetery. For a photograph of this vase, now called the Sweeney punch bowl, see Albert Christian Revi, American Cut and Engraved Glass (New York: Thomas Nelson and Sons, 1965), 366.
37. Nos. 1346, 1397, Wheeling, Ohio County, Virginia, Population Schedules of the Seventh Census of the United States 1850 (Washington: National Archives Microfilm Publications, 1964) Microcopy 432, Roll 966. I am indebted to Arlene Palmer Schwind for information on William Westwater from New York City directories. Arlene Palmer Schwind to Gary E. Baker, January 1, 1982, March 15, 1982.
38. "Fair of the American Institute," New York Herald, October 24, 1845; New York Public Library to Gary E. Baker, November 14, 1978; Committee on Exhibition, Fifteenth Exhibition 1845, Franklin Institute Archives, Philadelphia, Pennsylvania.

39. Ibid; For the printed version, see "Glass, China, & C.," Journal of the Franklin Institute, Third Series, vol. 10 (1845), 389. Flint and colored glass from the Dyottsville Works was awarded the second premium, while a "large cut glass bowl, and decanters, made by P. C. Dummer & Co." received no recognition.
40. New York Herald, October 8, 1845; New York Commercial Advertiser, October 13, 1845; New York Courier and Enquirer as quoted in Wheeling Times and Advertiser, October 11, 1845, October 13, 1845; Excerpts from three Philadelphia newspapers, the North American, the United States Gazette, and the Ledger were reprinted in Wheeling Times and Advertiser, October 28, 1845.
41. United States Gazette as quoted in Wheeling Times and Advertiser, October 28, 1845.
42. Wheeling Times and Advertiser, January 14, 1846.
43. "Glassware and Silks from Wheeling," Richmond Times and Compiler as quoted in Wheeling Times and Advertiser, January 14, 1846.
44. "Virginia Manufactures," Richmond Enquirer, January 9, 1846.
45. Inloes and Brother advertisement dated January 12, Richmond Whig and Public Advertiser, January 13, 1846.
46. Directory of the City of Wheeling, 1851, 13; American and Commercial Daily Advertiser, Baltimore, Maryland, October 13, 1853, November 1, 1853; The Book of the Exhibition, Sixth Annual Exhibition of the Maryland Institute, for the Promotion of the Mechanic Arts. Baltimore, 1853 (Baltimore: Sand and Mills, 1853), 57, 164. I am indebted to Susan Meyers for the last reference. In response to my verbal inquiry about the records of the Maryland Institute, she informed me that they had been destroyed by fire and then promptly provided me with the appropriate photocopies of its published journal.
47. Wheeling Directory 1839, 72.
48. That the Sweeneys carried only glass of their own manufacture is suggested by the wording of every Sweeney advertisement I have read, and was claimed in at least one newspaper article: "Messrs. M. & T. Sweeney import all their china and manufacture all their glass." "Wholesaling," Wheeling Times and Advertiser, September 14, 1847.
49. Testimony of Thomas Sweeney, April 1869.

50. M. and R. H. Sweeney and Co. advertisement dated July 8, 1842, Wheeling Tri-Weekly Gazette, July 11, 1842.
51. M. and R. H. Sweeney and Co. advertisement dated July 21, 1843, Wheeling Times and Advertiser, July 21, 1843.
52. "Improvement," Wheeling Times and Advertiser, April 4, 1845; Wheeling Times and Advertiser, July 8, 1845.
53. Kimball & James' Business Directory, for Mississippi Valley: 1844 (Cincinnati, Ohio: Kendall and Barnard, 1844), 323.
54. Charles Van Ravenswaay, "Glass in Old St. Louis," Antiques, vol. 64 no. 2 (August 1943): 70-1.
55. "Cut Glass," Wheeling Times and Advertiser, January 16, 1844.
56. Dorothea N. Spear, Bibliography of American Directories through 1860 (Worcester, Massachusetts: American Antiquarian Society, 1961), 329-31.
57. "Beautiful Specimen of American Manufacture," November 21, 1844; Isaac Harris, Harris' Business Directory of the Cities of Pittsburgh & Allegheny (Pittsburgh: A.A. Anderson, 1844), advertising section.
58. Leland D. Baldwin, Pittsburgh: The Story of a City: 1750-1865 (Pittsburgh: University of Pittsburgh Press, 1937), 228-30; "The Pittsburgh Fire," Wheeling Times and Advertiser, April 14, 1845. The other glass manufacturers who lost their warehouses were Pittsburgh firms: Bakewell, Pears and Co., Curling, Robertson and Co., S. McKee and Co., and C. Ihmsen.
59. The only Sweeney agent for whom I have found an advertisement was "JAMES W. BOYLE, AGENT FOR THE SALE OF FLINT GLASS MANUFACTURED AT THE WORKS OF T. SWEENEY & SON." Boyle was based in Pittsburgh and also dealt in domestic queensware and salamander safes, Woodward & Rowlands' Pittsburgh Directory for 1852 (Pittsburgh: W.S. Haven, 1852), 81.
60. M. and T. Sweeney Dissolution Notice, dated January 1, 1848, Wheeling Times and Advertiser, January 12, 1848; Sweeneys and Bell co-partnership notice, dated January 1, 1848, Wheeling Times and Advertiser, January 12, 1848; On Christmas Day, 1849, Michael Sweeney with seven other partners formed the iron and nail manufacturing firm of Johnson, Sweeney and Co. which succeeded Norton and Bailey as the proprietors of the Missouri Iron Works at the northern end of the city. Johnson, Sweeney and Co. partnership notice, dated December 25, 1849, The Daily Wheeling Gazette, January 4, 1850.

61. Answer of Joseph Bell, Spring Term 1855, Thomas Sweeney v. Joseph Bell and Andrew J. Sweeney, 1854-70, OCC Papers, env. 283 b-8.
62. "A.J. Sweeney Dead: A Leading Manufacturer and Good Citizen Passes from Among Us," Wheeling Daily Register, February 15, 1893; Nos. 1035, 1047 First Ward, Wheeling, Ohio County, Virginia, Population Schedules of the Eighth Census of the United States 1860 (Washington: National Archives Microfilm Publications, 1967), Microcopy 653, Roll 1368.
63. "Pioneer Iron Man Dies After Long Illness, Joseph R. Bell Passed Away At Home Yesterday Afternoon," The Wheeling Intelligencer, September 1, 1908; Committee on Exhibition, Fourteenth Exhibition 1844, Franklin Institute Archives, Philadelphia, Pennsylvania.
64. Testimony of Thomas Sweeney, April 1869.
65. In 1847, window glass prices had risen 50 percent. See "Window Glass Manufacturing," Wheeling Times and Advertiser, February 15, 1847; DB, 30: 19-20; The progress in the construction of the window glass factory of Sweeney, Baker and Co. was noted in "The First Ward," Wheeling Times and Advertiser, June 19, 1848.
66. DB, 30: 360-2; Testimony of Thomas Sweeney, April 1869; For the year ending June 1, 1850, the Wheeling Window Glass Manufacturing Co. reported material costs totaling \$21,150, labor costs totaling \$24,000, but a product value of \$60,000. See 1850 United States Census: Products of Industry, Virginia State Library, Richmond, Virginia; Tives and Bankerd advertisement, dated December 4, 1850, The Wheeling Times and Gazette, December 14, 1850. In the wake of falling window glass prices, this factory passed through a series of owners in the fifties. By 1851 Tives and Bankerd had been succeeded by Stockton, Bankerd and Co., see advertising section Wheeling Directory, 1851; By October 1852, Stockton, Bankerd and Co. had been succeeded by Stockton, Russell and Co., see Stockton, Russell and Co. advertisement, dated October 4, 1852, Wheeling Daily Intelligencer, February 11, 1854; This firm was succeeded by Russell and McAfee in 1855, see Russell McAfee advertisement, dated July 23, 1855, Wheeling Daily Intelligencer, September 10, 1855. In the late fifties, Russell and McAfee apparently took on other partners, becoming Russell, McAfee, and Co. In 1857 that firm mortgaged the factory to Thomas C. McAfee. Upon their default in about 1859, the trustee sold the works to Samuel G. and George W. Robinson who operated it under the name of Samuel G. Robinson. They were met with some success during the Civil War, as window glass prices again rose. See Deed, William S. McAfee and William H. Russell to Samuel G. and George W.

Robinson, May 1860, OCC papers; S. G. Robinson advertisement, dated July 4, 1859, Wheeling Daily Intelligencer, July 4, 1859.

67. Testimony of Thomas Sweeney, April 1869; The suspension bridge was being built across the Ohio River. It was completed in 1849 and remains in use today. Emory L. Kemp has observed "The completion of the Wheeling Bridge marks the beginning of American ascendancy in suspension-bridge design and construction which was to last more than a century." E.L. Kemp, "Links in a Chain: the Development of Suspension Bridges 1801-70," The Structural Engineer, vol. 67 A no. 8 (August 1979), 255-63.
68. Memo of partnership agreement, dated January 1, 1848, Exhibit 1, Thomas Sweeney v. Joseph Bell and Andrew J. Sweeney, 1854-70, OCC Papers, env. 283 b-8. All subsequent references to the terms of this partnership are from this document.
69. The Wheeling Argus, as quoted in The Daily Wheeling Gazette, March 14, 1849.
70. DB. 30: 167-8; The Wheeling Argus as quoted in The Daily Wheeling Gazette, September 4, 1849.
71. Sweeneys and Bell advertisement, dated October 10, 1849, The Daily Wheeling Gazette, October 10, 1849; DB, 33:413-4; Sweeneys and Bell advertisement, dated January 1, 1850, The Daily Wheeling Gazette, January 3, 1850.
72. Testimony of Joseph Bell, March 1869, Thomas Sweeney v. Joseph Bell and Andrew J. Sweeney, 1854-70, OCC Papers, env. 283 b-8.
73. 1850 United States Census: Products of Industry.
74. The Daily Commercial Journal [Pittsburgh], January 30, 1851. Some of the other newspapers carrying the story were: The Southern Press [Washington D.C.], January 30, 1851; Richmond Enquirer, January 30, 1851; Daily Cincinnati Commercial Journal, January 30, 1851; Pittsburgh Gazette, January 30, 1851; Cleveland Daily Plain Dealer, January 30, 1851.
75. Testimony of Andrew J. Sweeney, December 1863, in case of Thomas Sweeney v. Joseph Bell and Andrew J. Sweeney, 1854-70, OCC Papers, env. 283 b-8.
76. John S. Cunningham, The Portsmouth [Virginia] Transcript as quoted in the Wheeling Daily Intelligencer, February 5, 1853; "A Fitting Monument," The Wheeling Daily Intelligencer, November 1, 1877. For the last reference, I am indebted to the late Joe Hoffman, formerly a writer for the Wheeling News Register, who made me aware of it through his column, "The News That Was."

77. Deed, Michael Sweeney and Julia Sweeney to Thomas Sweeney et al., February 28, 1851, OCC Papers, env. 197 b; DB, 36:125-7; Bill of Complaint of Thomas Sweeney, October 1854, in case of Thomas Sweeney v. Joseph Bell and Andrew J. Sweeney, 1854-70, OCC Papers env. 283 b-8 (hereafter cited as Bill of Complaint of Thomas Sweeney, October 1854).
78. Testimony of Thomas Sweeney, March 1869, Testimony of Joseph Bell, March 1869, in case of Thomas Sweeney v. Joseph Bell and Andrew J. Sweeney 1854-70, OCC Papers 283 b-8.
79. Newspaper clipping from The Wheeling Times and Gazette affixed to Bill of Complaint of Thomas Sweeney, October 1854.
80. Bill of Complaint of Thomas Sweeney, October 1854.
81. DB, 40:211-2, 240-1; Testimony of Thomas Sweeney, April 1869.
82. Decision, July 1870, in case of Thomas Sweeney v. Joseph Bell and Andrew J. Sweeney, 1854-70, OCC Papers, env. 283 b-8.
83. 1860 United States Census: Products of Industry, Virginia State Library, Richmond, Virginia.
84. United States Patent no. 29,017, dated July 3, 1860; Michael Sweeney's was jointly held with James E. Mathews and Thomas Hartley. United State Patent no. 52,338, dated January 30, 1866. The original files of these patents were examined at the National Archives, Washington, D. C.
85. Andrew J. Sweeney, "Mayor's Proclamation," (Wheeling, West Virginia: Mayor's Office, Wheeling, April 19, 1861). An original copy of this broadside is at West Virginia University, Morgantown, West Virginia.
86. Tom Sweeney, Flight to Erin (New York: The Exposition Press, 1948), 116, 182, 197-200. James Washington Sweeney was the son of Thomas Sweeney's cousin James Sweeney, who operated a brickyard in Wheeling.
87. Thomas Sweeney, "Very Valuable Real Estate For Sale," advertisement dated December 29, [1863] The Daily Register, December 29, 1863.
88. The advertisement mentioned in this article listed "PLAIN, PRESSED AND CUT GLASSWARE," china, crockery and cutlery "ALL OF WHICH WILL BE SOLD AT COST FOR CASH," see T. Sweeney and Son, advertisement dated December 24, [1863], The Daily Register, December 24, 1863.

89. DB: 47, 178. Glassmakers made coke from coal and used it as fuel.
90. C. S. Williams, Williams' Wheeling Directory City Guide and Business Mirror for 1864 (Wheeling, West Virginia: Williams & Co., 1864), 47, 171 (hereafter cited as Wheeling Directory for 1864). Wheeling newspapers show that the material for this Directory was gathered from the late September to early October, 1863, and that the directory was ready for distribution on December 23, 1863; see Norona and Shetler, West Virginia Imprints, 73. The Wheeling Directory for 1864, therefore, lists Wheeling partnerships and glassworkers as they were in October 1863. At that point, M. Sweeney and Co. had not been joined by Joseph Bell, and T. Sweeney and Son were still in business.
91. "Excelsior and Wheeling Glass Works," The Crockery Journal, vol. 1, no. 17 (April 29, 1875) 3 (hereafter cited as "Excelsior and Wheeling Glass Works").
92. "The Late Michael Sweeney, From the Martin's Ferry News of Yesterday," The Wheeling Daily Intelligencer, December 24, 1875 (hereafter cited as "The Late Michael Sweeney").
93. George H. Thurston, Directory of the City of Wheeling and Vicinity; Embracing the Adjoining Towns of Benwood, Lagrange, Bellaire, Kirkwood, Bridgeport, Martinsville and Fulton for 1859-60. (Wheeling, West Virginia: Daily Intelligencer Office, 1859), (hereafter cited as Directory of the City of Wheeling for 1859-60); "Death of Michael Sweeney, Esq.," The Wheeling Daily Intelligencer, December 23, 1875; see note 86.
94. "Excelsior and Wheeling Glass Works"; Wheeling Directory for 1864, 47, 171, see note 90.
95. Sweeney, Bell, and Co. advertisement dated December 18, [1863], Daily Intelligencer, December 18, 1863.
96. "The Manufacture of Glass in Wheeling," The Daily Register, December 31, 1864.
97. "Excelsior and Wheeling Glass Works"; Sweeney, McCluney and Co. advertisement, The Crockery Journal, vol. 1 no. 20 (May 20, 1875), 14.
98. "The Wheeling Glass Works," The Crockery and Glass Journal, vol. 2 no. 32 (August 12, 1875), 14.
99. "The Late Michael Sweeney"; "Post Mortem Examination and Funeral of Michael Sweeney," The Wheeling Daily Intelligencer, December 27, 1875. Another newspaper reported that Sweeney's funeral was

attended by over 300 former employees "from the smallest boys in the factory to gray haired men, some of whom had been in his employment for forty years." See "The Funeral of Michael Sweeney, Esq.," The Wheeling Daily Register, December 27, 1875.

100. "A Fitting Monument," The Daily Wheeling Intelligencer, November 1, 1877. This article is the earliest known reference to the presence of the cut glass vase in Michael Sweeney's grave monument. Although the vase has been removed from the cemetery, the granite framework of the vitrine remains. The article referred to this superstructure as "marble." If it was indeed marble, then the granite represents a late nineteenth or early twentieth century restoration of the memorial. See notes 36 and 76.

IV. BARNES, HOBBS, AND COMPANY AND ITS SUCCESSORS

We are pleased to learn that the new Glass Works in Ritchie and Sprigg's addition, have been rented by a gentleman from Boston, and preparations are now being made to put them in full blast for the year.

Wheeling Times and Advertiser, April 11, 1845

James B. Barnes, James F. Barnes and John L. Hobbs rented, revived and eventually purchased the idle glassworks built by Plunkett and Miller in South Wheeling, then called Ritchietown. John L. Hobbs and James F. Barnes were members of firms which successively operated the factory which they named the South Wheeling Glass Works from 1845 until 1863: Barnes, Hobbs, and Company; Hobbs, Barnes, and Company; and Hobbs and Barnes. When James F. Barnes retired from glass manufacturing in 1863, the firm became J. H. Hobbs, Brockunier, and Company.

In April 1845, Barnes, Hobbs, and Company rented the vacant glassworks built by Plunkett and Miller, which was then in the possession of Miller's various creditors. The formation of the new firm was accompanied by some difficulties. The authors of the History of the Pan-handle (1879) claimed "that a few capitalists who had agreed to join them in the event of Clay's election, declined to lend their aid when it was known that the Whig candidate was defeated."¹

Several articles, bemoaning the effect of Polk's election on local industries, which appeared in the Whig Wheeling Times and Advertiser in November 1844, lend credence to this claim. Each stated that the defeat of Henry Clay meant the "Glass Works" would not reopen."²

By June, 1845, the works in Ritchietown had been successfully put into operation. The Wheeling Times and Advertiser noted:

PLAIN, PRESSED AND CUT FLINT GLASS.--The new establishment of Messrs. BARNES, HOBBS & CO., in Ritchietown, deserves attention in this line of business They are of the stamp, just from Boston, with good capital, yet take hold and work themselves. That is the way they do it. We learn that the Pittsburgh manufacturers are trying hard to injure this establishment, by giving out that they have but little capital and are not practical men., They have capital and let the public see them work, and they will soon admit that they are practical in the right way They will do a good business, we prophecy.³

The partners were, indeed, "practical" men "just from Boston." James B. Barnes and John L. Hobbs had both been employed by the New England Glass Company in East Cambridge--probably the largest glass factory then in the United States. Barnes, an English engineer, who is said to have been responsible for the design and construction of the first furnaces and glass pots at the New England Glass Company in 1818, remained with that company as "superintendent of the crucible or pot room" until within a year or two of the time that he moved to Wheeling.⁴ Jefferson's claim, that Barnes's efforts to take over the Plunkett and Miller factory were delayed for a year when Barnes contracted yellow fever at New Orleans, seems plausible and may well have been based on a family tradition.⁵ In the early forties, James B. Barnes would have had good reason to visit New Orleans. His

daughter, Julia A. Barnes Tyler, and her husband, silversmith Edward August Tyler, had moved to New Orleans about 1840, and there presented Barnes with a granddaughter, Julia Kate Tyler, on June 17, 1841.⁶

John L. Hobbs, the son of an English immigrant, was born about 1804 on Sullivan's Island, South Carolina, but was reared in Cambridge, Massachusetts.⁷ Hobbs served as a glass cutter at the New England Glass Company in the early twenties, becoming foreman of that factory's cutting shop in 1825.⁸ The History of the Pan-handle account, probably written with information from Hobbs or his son, John H. Hobbs, described Hobbs's position at the New England Glass Company as "principal salesman, with which he combined the duties of superintendent of the cutting department."⁹ The sales contacts of John L. Hobbs probably served the Wheeling firm well. In the 1856 Wheeling directory, his residence was given as New York City, suggesting that he was handling eastern distribution for the company at that time.¹⁰ James F. Barnes, the son of James B. Barnes, was also a partner in the firm at its inception. The History of the Pan-handle described him only as "an accomplished workman"; the nature of his practical skills is not known.¹¹

The firm began modestly with the production of staple and specialty items. Based on an examination of the firm's records, the authors of the History of the Pan-handle stated that the production during the first year consisted of "solar chimneys, jars, vials,

tumblers, pungents, tinctures, lamps for lard oil, salts, and cologne bottles."¹² The newspaper article of June 1845, quoted earlier, also mentioned

large quantities of druggists' shop furniture, Cologne Bottles, plain, purple, green and blue, of handsome patterns, Confectionery jars, tumblers of every size and pattern, & c. & c.¹³

The three partners did not purchase the factory property until January 1, 1848, and then only that portion of the property on which the glassworks stood (lots nine through sixteen, i.e. the eastern half of square forty-one) along with the coal rights formerly held by Plunkett and Miller. This purchase consisted of only one quarter of the tract of land formerly owned by Plunkett and Miller.¹⁴ On September 4, 1845, while the glassworks was under lease to Barnes, Hobbs, and Company, The Merchants' and Mechanics' Bank, one of Horatio M. Miller's creditors, purchased the shares of the other creditors in the entire property for \$18,000 and "divers other considerations." The sale included "the tools machinery and apparatus now in or about the Glass works . . . commonly used at the same for the manufacture of Glass" Evidently Barnes, Hobbs and Company began the manufacture of glass with equipment previously used by Plunkett and Miller because the latter firm had used its equipment as part of the collateral for the factory property loans on which Miller had eventually defaulted.¹⁵

Barnes, Hobbs and Company purchased the glassworks for \$11,000 of which James B. Barnes and John L. Hobbs each owned a

three-eighths interest and James F. Barnes owned a quarter interest. This division of the property probably reflects the share held by each of the partners of the firm. The partners mortgaged the factory to Daniel Lamb to secure the payment of the purchase money agreeing to pay \$2,000 on February 1, 1848, and to make four consecutive payments of \$2,250 on January 1 of each year from 1849 to 1852.¹⁶ Although the firm apparently prospered, the Census of Manufacturers recording an annual product valued at \$80,000 in 1850, the final deed of release for this mortgage was not signed until July 15, 1863, suggesting that the mortgage may have been renewed in some way during the interim--perhaps to help underwrite expansion.¹⁷

The death of James B. Barnes on January 7, 1849, necessitated the reorganization of the firm. Two notices dated April 18, 1849, appeared in The Daily Wheeling Gazette, the first announcing the dissolution of the old firm, the second the formation of a new firm:

COPARTNERSHIP NOTICE

JOHN L. HOBBS and James F. Barnes have this day associated with them in business, John H. Hobbs, and will continue the business of manufacturing Flint Glass in all its various branches under the firm of Hobbs, Barnes & Co.

John L. Hobbs
James F. Barnes
John H. Hobbs¹⁸

John Henry Hobbs, the son of John L. Hobbs, was born October 17, 1827, in Cambridge, Massachusetts, where he is said to have "learned something of the manufacture of glass." Hobbs came to Wheeling with his father in 1845 and was probably employed at the glassworks in some "practical" capacity prior to joining the firm.¹⁹

Problems with the settlement of the James B. Barnes estate and the division of shares in the partnership led to a dispute between the surviving partners. In 1850, John L. Hobbs sued "James F. Barnes and the widow and heirs of James B. Barnes." The Court decreed that the glassworks be sold at public auction through a commissioner appointed for the purpose, and subsequently decreed that the commissioner grant a deed of conveyance when payment was complete. The glassworks was sold on May 4, 1850, to the partners in the following proportions: John L. Hobbs, one-half; James F. Barnes, three-eighths; and John H. Hobbs, one-eighth. The deed of conveyance was issued in December 1854.²⁰ In 1854, Hobbs, Barnes and Company expanded. On March 1 of that year, the firm bought the remainder of square forty-one, ie. lots one through eight, which fronted on the newly laid tracks of the Baltimore and Ohio Railroad. Upon this land the firm built a large furnace to increase the capacity of the works.²¹

In 1856, J.K. Dunham--perhaps the Jacob K. Dunham who, in 1849, had been associated with the Bay State Glass Works in East Cambridge, Massachusetts,--was taken into the Wheeling firm, and the partnership became Barnes, Hobbs, and Company once again.²² Dunham was probably brought in to increase the firm's capital and perhaps for his marketing experience. While the glassworks was operated under the name of Barnes, Hobbs, and Company, the "wholesale house furnishing establishment" was "conducted under the name and style of J.K. Dunham & Co."²³ The 1856 Wheeling directory reveals that all

four men were partners in both the factory and the store. In the same directory, J.K. Dunham and Company advertised itself as "IMPORTERS AND DEALERS IN CHINA, GLASS, QUEENSWARE, Steamboat, and House Furnishing Goods. No. 28 Monroe Street."²⁴

By August 1857, J.K. Dunham and Company gave its address as 115 Main Street, a location the sales outlet was to occupy for the duration of the period covered by this study. In that year, a correspondent for the Wheeling Intelligencer, who identified himself only as "A.", wrote a lengthy account of the two firms' operations. On his visit to the sales outlet, "A." was lead into the first floor storage room by J.K. Dunham and there

saw boxes of ware marked as follows: New York, Boston, Buffalo, Dubuque, LaFayette, Ind., Memphis, New Orleans, several places in Richmond, Va.²⁵

Although the types of wares sent to these cities is not known, the list suggests the national scope of the business.

In his detailed description of the factory complex, "A." estimated that its buildings, which were of brick, covered over an acre of ground. The main building contained the factory's three glass furnaces, its annealing oven, its large storage room, and a number of other rooms "devoted to various uses; fitting up the iron molds for making pressed ware, cutting the finest qualities [of glassware], & c. & c.". The three glass furnaces were of five, nine, and ten pot capacity. According to "A.", the largest glass furnace was "one of the finest in the country." Its "inside and arch lining"

were "composed of firebrick, brought from Scotland at a cost of \$70 per thousand of which 3,200 were required for the purpose." The annealing oven was approximately fifty feet long, ten feet wide, and two feet deep. In a separate block stood several buildings. One housed "a steam engine for driving the machinery." In another were kettles for refining pearl ash and "furnaces for burning or drying sand and calcining lead and tin"--the last named metal being an opacifier. The third building was "used for assorting and packing ware." In the hillside adjacent to the works the company owned "about 30 acres of 5 1/2 vein of Stone Coal." The entrance to the mine was through one of its buildings. According to "A."

THE COST OF COAL delivered in the works is about two and a half cents per bushel, of which they use 300 bushels per day, worth \$7.50, whereas the same amount costs one of the Eastern establishments only the small sum (!) of forty-five dollars, or just six times what it costs in Wheeling.²⁶

In August 1857, the factory was yielding an annual product valued at \$100,000.²⁷ The Depression of 1857 apparently had but slight effect on its production with the works being shut down for only a short period of time. On April 17, 1858, the Wheeling Intelligencer announced that "The Glass Works of Barnes, Hobbs & Co., in South Wheeling, resumed in full blast yesterday morning."²⁸

In 1858, J. K. Dunham withdrew from the firm and it once again became Hobbs, Barnes, and Company.²⁹ On July 14, 1859, John H. Hobbs sold his one-eighth interest in the glassworks property to James F. Barnes for \$3,750, so the firm became Hobbs and Barnes with

each partner holding a half interest in the business.³⁰ John H. Hobbs, although no longer a partner, was probably employed by the new firm, because the 1859-60 and 1860 Wheeling directories listed him as a clerk living at an address near the factory.³¹ In 1860, the business was stable and thriving. In the Census of Manufacturers taken that year, Hobbs and Barnes reported that with \$70,000 in capital and 115 hands, their factory yielded an annual product valued at \$120,000. This was the highest annual product value reported by any Wheeling flint glass manufacturer before the Civil War, exceeding by \$20,000 the annual product value reported by T. Sweeney and Son.³²

When the Civil War broke out in 1861, the glassworks closed down for six months, and thereafter manpower was a problem. According to the History of the Pan-handle:

Many of the employees enlisted in the Union army, some continuing in the service until the close of the conflict. Boys and the younger men were rapidly promoted to the places made vacant, and some superannuated workmen being picked up the best was made of the situation. It was very difficult to obtain skilled laborers to meet the demands for the manufactured articles, as the large bounties and the excitement of the camp and field were allurements that the impulsive young men could not very well resist.³³

In February 1863, the firm of Hobbs and Barnes was dissolved by the retirement of James F. Barnes. This resulted in the formation of two new firms: J.L. Hobbs, Son and Company and J.H. Hobbs, Brockunier, and Company, with the elder Hobbs heading the former and the younger Hobbs, the latter. J. L. Hobbs, Son and Company was a retail establishment "for the transaction of a Queensware, Glassware and China business, at the store No. 115 Main Street, occupied by the late firm

of Hobbs & Barnes." J. H. Hobbs, Brockunier, and Company, consisting of the two Hobbses and Charles W. Brockunier, was established "for the purpose of manufacturing Flint and Fancy Colored Glassware, in all its branches, at the Works South Wheeling."³⁴

The new partner in the factory, Charles Wesley Brockunier, was the son of a Methodist minister and the maternal grandson of the Wheeling frontier heroine, Betty Zane. Brockunier received his education in Pittsburgh and came to Wheeling with his father in about 1852. By 1856, he was employed as a bookkeeper at Barnes, Hobbs, and Company. In 1862, Brockunier, along with John H. Hobbs and others, formed a company which sought and struck oil at the village of Volcano, located on the line of the Baltimore and Ohio Railroad in Wood County, West Virginia.³⁵ Profits from this venture probably enabled Brockunier and John H. Hobbs to join the elder Hobbs to form J. H. Hobbs, Brockunier, and Company.

In the summer of 1863, the effects of the war related labor shortage were greatly exacerbated by the formation of a new firm for the manufacture of flint glass--Oesterling, Henderson, and Company. Established as a cooperative venture of skilled workmen, this firm had nine partners, most of whom had been employed by Hobbs and Barnes (or its predecessor firms) since the mid-fifties or earlier.³⁶ Glass blowers Roy Combs, Peter Cassell, and William K. Elson seem to have been employed by Barnes, Hobbs, and Company from about 1845--the latter two workmen having begun there as children.³⁷ Of the other

partners, James Leasure had begun work at the factory by 1850, Theodore Schultz by 1856, and Westcomb Attwell by 1859. Daniel McAfee, the only glassworker in the group who does not seem to have been employed at the South Wheeling Glass Works, had resided in North Wheeling which suggests previous employment with either T. Sweeney and Son or the window glass manufacturer, S. G. Robinson.³⁸

John Oesterling, the president of Oesterling, Henderson, and Company, began his career by apprenticing as a machinist in his native Germany. He came to Wheeling in 1853 and was soon after employed by Hobbs, Barnes, and Company as a pattern-mold maker. Working in that capacity, he saved the money that he later invested in the new company. John Henderson (Peter Cassell's father-in-law) had probably served as an engineer at Hobbs and Barnes, because he was listed as an engineer at an address near that factory in the 1860 Wheeling directory.³⁹ How many other former employees joined this venture as employees of Oesterling, Henderson, and Company has not been determined but the number may have been substantial. The Daily Register, in December 1863, reported that the new firm "doing an unprecedented business" employed "from seventy-five to eighty men and boys." The new manufacturers proved successful in establishing themselves and were incorporated as the Central Glass Company in 1867.⁴⁰

By December 1864, when The Daily Register gathered information on all of the Wheeling glass factories and reported the number

of hands employed by each, the work force dwindled to its lowest wartime number. In 1860, Hobbs and Barnes had employed 115 hands; four years later, J.H. Hobbs, Brockunier, and Company employed only thirty-five to forty workmen. The work force of Oesterling, Henderson, and Company was also substantially reduced because the same source reported that firm employed from twenty-five to thirty workmen.⁴¹

In the fall of 1863, glass chemist William Leighton, Sr., another former employee of the New England Glass Company, joined J. H. Hobbs, Brockunier, and Company as "a partner and practical manager." Leighton, the son of English glassmaker, Thomas H. Leighton, was born in Belfast, Ireland, in 1808. He accompanied his father to America when his father came to manage the factory of the New England Glass Company in 1826. William Leighton succeeded his father as superintendent of that factory in about 1850 and continued in that capacity until he retired to take up farming in 1858.⁴² The Leightons, through their connection with the New England Glass Company, would have been acquainted with members of the Barnes and Hobbs families prior to the formation of Barnes, Hobbs, and Company in Wheeling. That a friendship had existed between the Leightons and James B. Barnes is suggested by the fact that Thomas and William Leighton served as witnesses when Barnes made out his will in Cambridge, Massachusetts, in 1832.⁴³ At least one member of the Leighton family preceded William to Wheeling. Peter H. Leighton, a glass blower and specialist in fancy work, had been employed by

Barnes, Hobbs, and Company since the mid-fifties.⁴⁴ William Leighton joined the firm at a crucial time; the Civil War, in addition to creating the labor shortage mentioned earlier, brought inflation and made the shipment of raw materials on the inland river system difficult. However, the war did not impair the demand for glassware. William Leighton's contribution to the continued prosperity of J.H. Hobbs, Brockunier and Company was to be of monumental importance.

Leighton conducted a series of experiments that led, in December 1864, to his perfection of a lime formula substitute for the lead formula traditionally used in the United States in the manufacture of quality pressed glass tableware. Much of our information on Leighton's innovation comes from an account written in 1880 by his Harvard-educated son, William Leighton, Jr., who succeeded him as a member of the firm in 1868.⁴⁵ According to the younger Leighton, lime glass had been used by Pittsburgh manufacturers "at an early period" to make

common tumblers and cheap table ware . . . and some improvement had been made in 1864; but still the lime goods were so much inferior to flint-glass as not to come in competition with it their lack of purity and luster being very conspicuous faults.⁴⁶

A lime formula had indeed been employed by Pittsburgh manufacturers at an earlier date, and in fact industrial historian, William Bining, has claimed that

Credit for the success of the new process was due to the efforts of such men as John Adams of Adams, Macklin and Company; William Phillips of Phillips, Best and Company;

Although the younger Leighton's account contains no reference to efforts being made in Wheeling to produce non-lead tableware prior to the arrival of William Leighton, Sr., in that city, such efforts were probably made and may in fact have served as a stimulus to Leighton's endeavor. At the time of Michael Sweeney's death in 1875, Sweeney was credited with "the substitution in a very great degree of lime for lead, in the manufacture of glass." Michael's firm, Sweeney, Bell, and Company, in the latter part of 1863, advertised itself as a manufacturer "of Pressed & Cut, Flint & French Flint GLASSWARE," suggesting the use of a non-lead formula by that firm.⁴⁸ An article in The Daily Register in December 1864, also described the products of Sweeney, Bell, and Company as "flint and French flint glassware." Curiously enough, it credited Oesterling, Henderson, and Company with making "all kinds of German flint ware, such as lamp chimneys, tumblers, jars, etc." However, J. H. Hobbs, Brockunier, and Company was credited only with making "all kinds of flint glass ware, such as tumblers, lamp-chimneys, glass dishes, etc."⁴⁹ If "French flint" and "German flint" are indeed references to non-lead formula glass, then J.H. Hobbs, Brockunier, and Company may have been forced to move in that direction to meet its competition. According to the History of the Pan-handle, John L. Hobbs had become "convinced that the glass of the future" would be a lime glass without lead, and had unsuccessfully attempted to develop a lime formula substitute prior to William Leighton's admission to the firm in the fall of 1863. The same source recounts that Leighton:

entered readily into the prospect of finding a glass pure in color and durable without lead . . . After numerous experiments, sand (from Berkshire County, Massachusetts) Spanish whiting or chalk, bi-carbonate of soda, with the other usual ingredients, were found to make a brilliant and durable glass.⁵⁰

Writing in 1880, William Leighton, Jr., identified "the most important feature in the composition of this new lime batch" as "the use of bicarbonate of soda in place of soda-ash, until that time universally used in lime glass . . .". Since the new formula (first called bicarbonate glass) cost less than half as much as the traditional lead formula, it was quickly adopted by other American glass factories to the detriment of the few factories that "still clung to the old lead-glass composition, fondly hoping, and perhaps believing, that lime glass would run a brief course" The younger William Leighton summarized the impact of his father's improved lime formula on the industry:

Beside advantage of cheaper material, lime glass has the property of chilling and becoming rigid more quickly than flint-glass, thus enabling, and even compelling, the workmen to finish the ware more rapidly, and hence making a greater production; and as the specific gravity of lime glass is less than that of flint-glass, articles made of the former have the advantage of this lightness of weight. The result of all these advantages, together with improvements in furnaces, tools, and methods of manufacture, has been to reduce the cost of glassware to about one-fourth part of what it was when the invention and introduction of bicarbonate glass took place in 1864. With this reduced cost, and consequent reduced price, the use of glassware has been extended correspondingly. New factories have been built; old factories have increased their capacity; and a sufficient supply of glassware has been produced to meet the demand which the reduced prices created.

No kind of ware, even if composed of the most common materials, can now compete in cheapness with lime glass for drinking vessels and table ware; while for beauty of material, finish, shape, and ornamentation glassware is

No kind of ware, even if composed of the most common materials, can now compete in cheapness with lime glass for drinking vessels and table ware; while for beauty of material, finish, shape, and ornamentation glassware is more than equal to, and for cleanliness far beyond, any other.⁵¹

J. H. Hobbs, Brockunier, and Company proved extremely profitable. All of the firm's members prospered. William Leighton, Sr. retired from the firm in 1868 and returned to Massachusetts. He was succeeded by his son William. At the death of John L. Hobbs in 1881, the firm was dissolved, but the surviving partners continued in business as Hobbs, Brockunier, and Company. On December 31, 1887, this partnership expired and in 1888 the Hobbs Glass Company was organized as a joint stock company.⁵²

Summary

Barnes, Hobbs, and Company revived the idle glassworks built by Plunkett and Miller. The men involved in the new firm had previously been employed by the New England Glass Company. Aided by their practical experience and the improving economic climate of the late forties, they were successful. Although the succession of firms operating the South Wheeling Glass Works did not win national awards for their glass in the antebellum period, their volume of production steadily increased. In 1850, their annual product value was \$20,000 less than that of the Sweeneys; in 1860, it was \$20,000 more. The Civil War created labor problems, but did not lessen the demand for glass. Upon the retirement of James F. Barnes in 1863,

the firm of J. H. Hobbs, Brockunier, and Company was established. They were so successful that, with the exception of the retirement of William Leighton, Sr., and the death of John L. Hobbs, their partnership existed in essentially the same form until 1888. The elder William Leighton's perfection of an improved soda-lime formula in December 1864 revolutionized the American glass industry, and must have been, in large measure, responsible for the firm's continued success after the Civil War.

NOTES

1. Newton, et al., History of the Pan-handle, 239.
2. Wheeling Times and Advertiser, November 14, 1844; November 18, 1844; November 19, 1844.
3. "Plain, Pressed and Cut Flint Glass," Wheeling Times and Advertiser, June 26, 1845.
4. Newton et al., History of the Pan-handle, 238; See also Laura Woodside Watkins, Cambridge Glass: 1818 to 1888: The Story of the New England Glass Company (Boston, Massachusetts: Marshall Jones Company, 1930), 12-3 (hereafter cited as Watkins, Cambridge Glass).
5. Among the descendants of early Wheeling glassmen listed as sources of information by Jefferson was Mrs. B.B. Mallory. Although not identified by Jefferson, Mallory may have been the great grand-daughter of James B. Barnes, because the McKearins mention "a Mrs. Mallory" as the granddaughter of James F. Barnes. Jefferson, Wheeling Glass, 48, 83; McKearin, American Glass, 413.
6. Julia Kate Tyler married Dr. Henry Smith in New Orleans and eventually moved to Norfolk, Virginia, where she died on July 25, 1928. Their daughter, Florence L. Smith, at her death in 1952 bequeathed to the Norfolk Museum of Arts and Sciences (now The Chrysler Museum) a group of family artifacts including the following: glass made by the New England Glass Co., silver spoons made by her grandfather, E.A. Tyler, family portraits and a carte-de-viste album of family photographs. This information is drawn from the Smith Collection file that I assembled for The Chrysler Museum, and from that Museum's accession records.
7. History of the Upper Ohio Valley, With Family History and Biographical Sketches (Madison, Wisconsin: Brant and Fuller, 1890), 1:323 (hereafter cited as History of the Upper Ohio Valley).
8. Watkins, Cambridge Glass, 127,173.
9. Newton, et al., History of the Pan-handle, 238.
10. C.S. Williams, Williams' Wheeling Directory, City Guide, and Business Mirror. Volume I., 1856-57. (Wheeling, West Virginia: John H. Thompson, 1856), 111 (hereafter cited as Wheeling Directory, 1856-57).

11. Newton, et al., History of the Pan-handle, 238. The United States Census listed him as a glass manufacturer, and the Wheeling directories merely as a member of the firm. See Appendix A.
12. Newton, et al., History of the Pan-handle, 239.
13. Wheeling Times and Advertiser, June 26, 1845.
14. DB, 30:313-4; DB, 24:152-4.
15. DB, 28:137-9; DB, 24:153-4.
16. DB, 30:313-4, 318-20, 340-43.
17. 1850 United States Census: Products of Industry; DB, 47:94.
18. Daily Wheeling Times, January 10, 1849; The Daily Wheeling Gazette, May 2, 1849.
19. History of the Upper Ohio Valley, 1:323.
20. DB, 40:120.
21. Newton et al., History of the Pan-handle, 239; DB, 39:290.
22. Newton et al., History of the Pan-handle, 239; Watkins, Cambridge Glass, 190.
23. "Manufacture of Glassware in Wheeling - No. 1. Barnes, Hobbs & Co.", Wheeling Daily Intelligencer, August 20, 1857. (hereafter cited as "Manufacture of Glassware in Wheeling - No. 1.")
24. Wheeling Directory, 1856-57, 19, 64, 69.
25. This change of address could indicate that the store moved, but as Main Street and Monroe [present day 12th] Street intersect, the two addresses may refer to the same location. "Manufacture of Glassware in Wheeling - No. 1."
26. "Manufacture of Glassware in Wheeling -- No. 1."
27. "Manufacture of Glassware in Wheeling -- No. 1."
28. Wheeling Daily Intelligencer, April 17, 1858.
29. Newton, et al., History of the Pan-handle, 239.
30. DB, 44:504-5.

31. Directory of the City of Wheeling for 1859-60, 50; Mears and Snavely, The Wheeling Directory Containing the Names of Inhabitants, a Subscribers' Business Directory, and an Appendix of Much Useful Information (Wheeling, West Virginia: Intelligencer Office, 1860), 48 (hereafter cited as Wheeling Directory, 1860).
32. 1860 United States Census: Products of Industry.
33. Newton, et al., History of the Pan-handle, 239.
34. Hobbs and Barnes Dissolution Notice, J.H. Hobbs, Brockunier and Co. co-partnership notice, J.L. Hobbs, Son and Co. co-partnership notice, Daily Intelligencer, February 17, 1863.
35. History of the Upper Ohio Valley, 1:233-5; Wheeling Directory, 1856-7, 33.
36. The names of the partners were determined from Wheeling directories, see Appendix A; Newton et al., History of the Pan-handle, 239-40.
37. Elson was twelve when he went to work for Barnes, Hobbs and Co., and Cassell fifteen. All three men seem to have left their mark on the industry, but Elson proved the most successful, forming his own company in 1881, the Elson Glass Co. in Martins Ferry, Ohio. History of the Upper Ohio Valley, 1:246, 2:530; Newton et al., History of the Pan-handle, 239.
38. Wheeling Directory, 1860, 61. It seems more likely that McAfee had worked for Robinson, because Robinson was the successor to the firm of McAfee and Russell, whose member William L. McAfee was almost certainly related to Daniel.
39. "Mr. John Oesterling: His Creditable Career, and His Influence on Wheeling", Wheeling Intelligencer, November 16, 1883; "An Old Citizen Gone, Sudden Death of John Oesterling, This Morning", Wheeling Register, November 16, 1883; "Mr. Oesterling's Death", American Pottery & Glassware Reporter, November 29, 1883 as transcribed by J. Stanley Brothers, Brothers Collection, The Corning Museum of Glass, Corning, New York (hereafter cited as Brothers Collection, Corning); History of the Upper Ohio Valley, 1:246; Wheeling Directory, 1860, 47, 74.
40. "South Wheeling," The Daily Register, December 3, 1863; A copy of the Certificate of Incorporation was entered in DB, 51:597; see also Newton et al., History of the Pan-handle, 239-40.
41. "The Manufacture of Glass in Wheeling", The Daily Register, December 31, 1864; 1860 United State Census: Products of Industry.

42. While the History of the Pan-handle states that Thomas Leighton died in 1850, Laura Woodside Watkins claimed that he died in August 1849. Newton et al., History of the Pan-handle, 270; Watkins, Cambridge Glass, 163.
43. For a transcription of this will see Ohio County Book of Wills, 3:374-7.
44. "Manufacture of Glassware in Wheeling - No. 1."; Wheeling Directory, 1856-57, 135. Peter may have been a son or nephew to William Leighton, Sr., but there is little question that the two men were related. In the 1860 Census, Peter's age was given as thirty-six and his birthplace as Scotland; his three eldest children, ages seven through twelve, were born in Massachusetts, while the youngest children, ages two and four, were born in Virginia. The 1868-69 Wheeling directory listed William Leighton, Sr., as a boarder at Peter Leighton's residence. No. 3771 South Wheeling, Ohio County, Virginia, Population Schedules of the Eighth Census of the United States 1860 (Washington: National Archives Microfilm Publications, 1967), Microcopy 653, Roll 1368; Williams and Co., Williams' Wheeling Directory for 1868-9 (Wheeling, West Virginia: A.W. Paul and Co., 1868), 120.
45. Letters of the two William Leightons recently acquired by The Metropolitan Museum of Art establish the date that the elder William Leighton perfected the formula. Communication with Alice Cooney Frelinghuysen, October 1985; Newton et al., History of the Pan-handle, 239, 270; William Leighton, Jr., as quoted in Joseph D. Weeks, Report on the Manufacture of Glass, Including a History of Glassmaking in the United States. 10th Census, 1880 (Washington, D.C.: Government Printing Office, 1883), 78, 79 (hereafter cited as William Leighton, Jr.)
46. William Leighton, Jr.
47. William J. Bining, "The Glass Industry of Western Pennsylvania, 1797-1860" (M.A. thesis, University of Pittsburgh, 1931), 120.
48. "The Late Michael Sweeney," The Wheeling Daily Intelligencer, December 24, 1875; Sweeney, Bell and Co. advertisement dated December 18, 1863, Daily Intelligencer, December 18, 1863.
49. "The Manufacture of Glass in Wheeling," The Daily Register, December 31, 1864.
50. Newton et al., History of the Pan-handle, 239.
51. William Leighton, Jr.

52. Newton, et al. History of the Pan-handle, 239; "Business Changes," American Pottery and Glassware Reporter, November 24, 1881, as transcribed by J. Stanley Brothers, Brothers Collection, Corning; Pottery and Glassware Reporter, August 2, 1888, as transcribed by J. Stanley Brothers, Brothers Collection, Corning.

CONCLUSION

Flint glass manufacturers, in contrast to green glass manufacturers, were generally successful in Wheeling. During most of the period covered by this study there were two flint glassworks operating in Wheeling at any given time. John Ritchie and his various partners established and successfully operated Wheeling's first flint glassworks from 1829 to 1837. A second flint glassworks was established in 1832 by Wheat, Price, and Company, but that firm remained in business only until 1834, when the Ritchies bought them out. Thus the resources of Wheeling's first two flint glass manufacturers were merged. Ritchies and Wilson remained the only flint glass manufacturers in Wheeling until M. and R. H. Sweeney and Company entered that business in the fall of 1835. Statistics gathered in December 1836 show that Ritchies and Wilson had an annual product more than double the value of the Sweeneys.

Ritchies and Wilson at the same time operated the only crown window glassworks in the Ohio Valley. That the manufacture of this luxury window glass should prove profitable is further evidence of the same economic factors that, in Wheeling, favored the production of flint glass over ordinary green glass. The cost of sand was an important factor in the profitability of cylinder window glass

manufacture, but not in crown window glass manufacture. Crown sold for four times the price of cylinder window glass. Like flint glass, crown glass was substantially more valuable for its bulk and weight than cylinder glass. When Ritchies and Wilson found the manufacture of crown glass more profitable than the manufacture of flint glass they rented their flint glassworks to Plunkett and Miller, who continued production at the same level for approximately two years. In the meantime, M. and R. H. Sweeney and Company had grown to such an extent that its annual product value was nearly the same as Plunkett and Miller's.

Initially the Depression of 1837 had little effect on Wheeling's two flint glass manufacturers. In 1839, Plunkett and Miller went deeply into debt to build a new glass factory in South Wheeling. However, the Depression worsened. Ritchies and Wilson's crown glassworks failed--as did all of the other green glass factories in Wheeling. Francis Plunkett went bankrupt, and his former partner, Horatio Milton Miller, briefly attempted to operate their flint glass factory himself. When Miller failed about 1842, he left, in the hands of his creditors, a relatively new factory, which would remain vacant for several years. Ritchies and Wilson and Plunkett and Miller would not have suffered financial difficulties, if they had not overextended themselves; their businesses had previously been profitable.

Only M. and R. H. Sweeney and Company survived the Depression. They were unable to give their hands full-employment during this period, but they were not deeply in debt and managed to renew their notes without difficulty. Perhaps Thomas Sweeney's ownership of an iron foundry added a measure of stability. In the mid-forties, the Sweeneys recovered from the Depression and at the same time established a national reputation by winning gold medals in exhibitions held by the Franklin Institute in Philadelphia and the American Institute in New York. They remained Wheeling's major manufacturers of flint glass throughout the forties and well into the fifties.

The Sweeneys were the only flint glass manufacturers in Wheeling until April 1845, when Barnes, Hobbs, and Company leased the factory which had been built by Plunkett and Miller. As the economy improved in the late forties several other small firms attempted to re-establish flint glass manufacture in the factory complex formerly owned by Ritchies and Wilson. Only Anderson and Company and its successor, D. H. Southwick and Company, lasted long enough to be worthy of mention, but even the last named firm failed in the early fifties. Barnes, Hobbs, and Company, on the other hand, proved eminently successful, purchasing, in 1848, the factory they had previously rented. Their successor firms steadily expanded production, finally exceeding the Sweeney's annual product value in 1860.

The Civil War brought problems for both of Wheeling's flint glass manufacturers. T. Sweeney and Son ceased production in 1863,

and its members leased their factory to the new firm of Sweeney, Bell, and Company, which would continue in business after the War. J. H. Hobbs, Brockunier, and Company suffered from labor shortages--the effects of which must have been worsened by the founding of Oesterling, Henderson, and Company by some of their former employees in 1863. From the competition of Wheeling's three flint glass factories during the remainder of the War, came William Leighton's perfection of a soda-lime formula suitable for making low-priced pressed glass of good quality. This innovation revolutionized the flint glass industry, and began a new era in American glass manufacture.

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APPENDIX A

CHECKLIST OF WHEELING GLASSMEN

This checklist is a compilation of the names and occupations of glass manufacturers, craftsmen, and laborers, appearing in the manuscript schedules of the United States Census for 1850 and 1860, and in Wheeling directories from 1839 through 1865. The original spellings of names have been retained. However, when two or more phonetic spellings of the same name exist in the sources, the more common spelling has been chosen to represent the individual. Census data, if available, is given first. This consists of occupation, age (at the time of the Census), and state or country of birth. Occupational listings, believed to be erroneous in the original sources, are marked with an asterisk. A blank line indicates an unemployed child. Directory data follows in chronological order.

The sections of the city in which most of the individuals lived or worked -- North, East, Center, and South Wheeling -- have been determined from the ward by ward listings in the Census and from the addresses given in directories. These are indicated by bold face letters at the end of lines: **N** for North; **E** for East; **C** for Center; and **S** for South. In addition to these traditional sectional names, the area comprising the Second and Third Wards now commonly called downtown Wheeling, has been designated the business district - **BD**.

Most of the glassmen living in the Business District were either partners in firms or worked at the glass wholesale stores located there. Those glassworkers on the northern and eastern fringes of the business district have been assigned to North and East Wheeling, respectively, because they lived within close proximity to factories located in those sections.

Since most individuals lived near their work place before the establishment of regular omnibus service in Wheeling, and since the nature of the glass industry required glassworkers to live in the immediate vicinity of the factories in which they were employed, the section of the city in which a worker resided suggests the factory or factories with which he was connected. Workers living in North Wheeling were probably employed at either the Sweeney factory or the window glass factory established there in the late 1840s. Workers living in South Wheeling were almost certainly employed at the South Wheeling Glass Works, which was located at least a mile away from any other Wheeling glass factory.

Source Abbreviations

1850 C.	United States Census, 1850.
1860 C.	United States Census, 1860.
1839 D.	<u>Wheeling Directory, 1839.</u>
1851 D.	<u>Directory of the City of Wheeling, 1851.</u>
1852 Va. D.	<u>Virginia Directory, for 1852.</u>
1856 D.	<u>Wheeling Directory, 1856-57.</u>
1859 D.	<u>Directory of the City of Wheeling for 1859-60.</u>
1960 D.	<u>Wheeling Directory, 1860.</u>
1864 D.	<u>Wheeling Directory for 1864.</u>
1865 D.	<u>The Wheeling Directory: 1865-'6.</u>

--For glassworker terminology, see McKearin, American Glass.

WHEELING GLASSMEN

- Adams, John -- glass blower, firm, McNamee & Adams (1839 D.) - C
- Adams, John -- glass blower, age 21, b. N.J. (1850 C.) - N
- Alt, Michael -- firm, Michael Alt & Co. (1859 D.) -N
- Ames, Frank -- glass blower (1860 D.) - N
- Anderson, David -- glass blower, age 25, b. Pa. (1850 C.) - E
- Anderson, Edward -- glass manufacturer, age 28, b. Pa. (1850 C.) - E
-- firm, Southwick & Co. (1851 D.)
- Anderson, Franklin -- glass manufacturer, age 31, b. Pa. (1850 C.) -E
-- firm, Southwick & Co. (1851 D.)
- Anderson, John J. -- glass manufacturer, age 28, b. Pa. (1850 C.) - E
-- glass blower (1851 D.)
- Anderson, Samuel -- glass blower, age 31, b. D.C. (1850 C.) - E
- Anderson, William -- glass manufacturer, age 30, b. Pa. (1850 C.) E
-- firm, D. Southwick & Co. (1851 D.)
- Andrews, William -- glass cutter, age 25, b. N.J. (1850 C.) N
 , W.B. -- glass cutter (1851 D.)
- Apple, Henry -- packer, T. Sweeney & Son (1864 D.) - N
- Arlington, Lewis -- glass blower (1856 D., 1860 D.) - C
- Armstrong, William -- glass blower (1864 D.) -C
- Arthurs, Allen -- glass blower, age 21, b Oh. (1850 C.) - C
- Atwell, Wesley -- glass cutter*, age 26, b. Md. (1860 C.) - S
 , Westcomb -- glass blower (1859 D., 1860 D.)
-- firm, Oesterling, Henderson & Co. (1864 D.,
1865 D.)
- Baggs, Andrew -- glass cutter*, age 24, b. Va. (1860 C.) - S
-- glassmaker (1851 D.)
-- glass blower (1856 D., 1859 D., 1865 D.)
- Baggs, Robert, Jr. -- box maker, M. & J.W. Sweeney (1859 D.) -C

- Bankard, James -- firm, Bankard, Stockton & Co. (1851 D.) - N
- Bankhead, David -- glass blower, age 25, b. Pa. (1850 C.) -N
- Barnes, James F. -- glass manufacturer, age 31, b. Mass. (1850 C.)
 - S
 -- glass manufacturer, age 41, b. Mass. (1860 C.)
 -- firm, Hobbs, Barnes & Co. (1851 D.)
 -- firm, Barnes, Hobbs & Co.; firm, J.K. Dunham
 & Co. (1856 D.)
 -- firm, Hobbs & Barnes (1859 D., 1860 D.)
- Barnes, George B. -- mold maker, age 23, b. Mass. (1860 C.) - S
- Barrett, Thomas -- glass blower, age 30, b. N.J. (1850 C.) - N
- Basch, Theodore -- glass blower (1865 D.) - S
- Batchey, Michael, Sr. -- glass tender (1860 D.) - N
 , M., Sr. -- laborer, S.G. Robinson & Son (1864 D.)
- Batchey, Michael, Jr. -- glass blower, T. Sweeney & Son (1864 D.) - N
- Bates, John -- glass blower (1864 D., 1865 D.) - S 1864, N 1865
- Beam, Charles -- mold maker, T. Sweeney & Son (1864 D.) - N
- Beese, Francis -- glass blower (1859 D.) - N
- Bell, Joseph -- glass manufacturer, age 29, b. Va. (1850 C.) BD
 -- glass manufacturer, age 34, b. Va. (1860 C.) - C
 -- firm, Sweeneys & Bell (1851 D.) - BD
 -- firm, Sweeney, Bell & Co. (1865 D.) - C
- Birch, George -- glass cutter, age 45, b. England (1850 C.) - S
 -- glass cutter, age 53, b. England (1860 C.)
 -- glass cutter (1851 D. - 1865 D.)
- Birch, George, Jr. -- _____, age 6, b. Ill. (1850 C.) S
 -- glass cutter, age 17, b. Ill. (1860 C.)
 -- glass cutter (1860 D.)
- Birch, John -- _____, age 9, b. Ill. (1850 C.) - S
 -- glass cutter, age 21, b. Ill. (1860 C.)
 -- glass cutter (1860 D.)

- Blankensop, Thomas -- _____, age 10, b. Va. (1850 C.) - N
 -- glass presser, age 20, b. Va. (1860 C.)
- Blankensop, William -- glass blower, age 33, b. England (1850 C.) - N
 -- glass presser, age 38, b. England (1860 D.)
 -- glass blower (1851 D. - 1865 D.)
 -- glass presser (1859 D.)
- Blatler, Charles -- glass packer (1851 D.) - N
- Bodine, Joshua -- glass cutter (1864 D.) - N
- Bosenberg, Ernst -- teaser (1864 D.) - S
- Brand, John -- laborer, age 21, b. Va. (1860 C.) - N
 -- glass blower, T. Sweeney & Son (1864 D.)
- Brand, Michael J. -- glass blower, age 16, b. Va. (1850 C.) - N
 -- glass blower (1856 D. - 1865 D.)
- Brand, Samuel -- glass mixer, age 40, b. N.J. (1850 C.) - N
 -- laborer, age 57, b. N.J. (1860 C.)
 -- glass mixer (1851 D., 1856 D., 1864 D.)
 -- flint glass maker (1859 D.)
- Brand, William -- glass blower, age 30, b. Oh. (1850 C.) - N
 -- glass blower (1851 D.)
- Brell, Henry -- glass blower, age 18, b. Germany (1860 C.) - S
- Brescock, Henry -- glass tender, T. Sweeney & Son (1864 D.) - N
 -- glass presser (1865 D.)
- Brime, Jacob -- glass blower, age 23, b. Germany (1860 C.) - N
- Brines, Joseph -- works, T. Sweeney & Co. (1864 D.) - N
- Brockunier, Charles W. -- bookkeeper (1856 D. - 1860 D.)
 S 1856, BD 1859
 -- firm, J. H. Hobbs, Brockunier & Co.
 (1864 D., 1865 D.) - S 1864
- Brophy, Patrick -- glass blower, M. & J.W. Sweeney (1859 D.) - C
- Bryan, Michael -- glass blower (1859 D.) - N
- Brymer, Christian -- glass blower, age 34, b. Germany (1860 C.) - E

- Burchill, George -- glass blower, age 23, b. England (1850 C.) - C
 -- glass blower (1851 D.)
- Burk, Finley -- glass blower, age 34, b. Pa. (1850 C.) - N
 , F.A. -- glass blower (1851 D.)
- Burk, Thomas -- teaser (1864 D.) - S
- Buskey, John -- glass packer (1865 D.) - C
- Butler, Charles M. -- glass blower, age 44, b. Va. (1860 C.) - S
 -- glassmaker (1851 D.)
 -- glass blower (1856 D. - 1865 D.)
- Cambern, Robert -- glass blower, age 25, b. N.J. (1850 C.) - C
 -- glass blower (1851 D.)
- Campbell, Edward -- cylinder glass blower (1839 D.) - C
- Carr, Henry -- glass blower (1865 D.) - S
- Carr, Thomas -- glass blower (1864 D.) - S
- Carribine, John -- glass worker (1859 D.) - N
 -- glass presser (1860 D.)
- Carter, John -- glass blower, age 20, b. Va. (1850 C.) - C
- Cassell, Levi -- blacksmith, age 16, b. N.J. (1850 C.) - S
 -- glass blower, age 24, b. N.J. (1860 C.)
 -- glass blower (1856 D. - 1860 D.)
- Cassell, Peter -- laborer, age 19, b. N.J. (1850 C.) - S
 -- glass blower, age 28, b. N.J. (1860 C.)
 -- glass blower (1856 D. - 1860 D.)
 -- firm Oesterling, Henderson & Co. (1864 D., 1865 D.)
 - C 1865
- Castillo, John -- teaser (1859 D.) - N
- Chalk, Henry -- tender, T. Sweeney & Son (1864 D.) - N
- Chambers, Thomas -- glass cutter, age 16, b. Oh. (1850 C.) - N
 -- glass cutter, age 25, b. Va. (1860 C.)
 -- glass cutter (1856 D. - 1860 D., 1865 D.)
- Charlton, Joseph -- glass blower, age 37, b. England (1850 C.) - N
 -- glass blower (1851 D.)

- Charnock, John H. -- glass blower, age 22, b. Va. (1850 C.) - E
- Clark, James -- glass blower, age 29, b. England (1850 C.) - N
- Clifford, John -- glass cutter (1864 D., 1865 D.) - N
- Cline, Isaac -- glass blower (1856 D.) - N
- Cliss, Jacob -- glass blower, M. & J.W. Sweeney (1859 D.) - C
- Cochran, Michael -- teaser (1865 D.) - C
- Cochran, Owen -- teaser (1865 D.) - C
- Coddiss, Thomas -- crown glass blower (1839 D.) - C
- Collins, John -- mold maker, age 25, b. Pa (1860 C.) - N
 -- mold maker (1856 D. - 1860 D.)
 -- firm, William Collins & Son (brass founders)
 (1865 D.) -BD
- Collins, William -- mold maker, age 40, b. England (1850 C.) - N
 -- brass molder, age 48, b. England (1860 C.)
 -- mold maker (1851 D., 1856 D.)
 -- brass founder (1859 D. - 1864 D.)
 -- firm, William Collins & Son (brass founders)
 (1865 D.) - BD
- Combs, Roy -- glass blower, age 24, b. Va. (1850 C.) - S
 -- glass blower, age 34, b. Va. (1860 C.)
 -- glass maker (1851 D.)
 -- glass blower (1856 D. - 1860 D.)
 -- firm, Oesterling, Henderson & Co. (1864 D., 1865 D.)
- Combs, William -- glass cutter, age 26, b. Va. (1850 C.) - S
 -- glass cutter, age 38, b. Va. (1860 C.)
 -- glass cutter (1851 D. - 1860 D., 1865 D.)
- Cook, James -- glass blower, age 23, b. Va. (1850 C.) - S
- Cook, John -- learsman, T. Sweeney & Son (1864 D.) - N
- Cook, T. C. -- glassmaker (1851 D.) - S
- Cook, Wm. C. -- glass blower (1856 D.) - C
- Cooper, Frederick -- glassmaker, age 23, b. D.C. (1850 C.) - N

- Coulter, John -- flint glass blower (1839 D.) - E
- Cowl, Joseph H. -- glass blower, age 19, b. Va. (1850 C.) - C
 -- glass blower (1856 D.)
 -- firm, Ripley, Cowl & Co. (1865 D.)
- Craig, Alexander -- laborer, age 17, b. Va. (1850 C.) - N
 -- glass blower, age 26, b. Va. (1860 C.)
 -- glass blower (1856 D., 1860 D., 1865 D.)
 -- glass presser (1859 D.)
- Craig, Andrew -- glass blower (1859 D., 1860 D.) - N
- Craig, James -- glass blower, age 20, b. Va. (1860 C.) - N
 -- glass blower (1859 D. - 1865 D.)
- Craig, John -- glass blower, age 22, b. Va. (1860 C.) - N
 -- glassworker (1856 D., 1859 D.)
 -- glass blower (1860 D., 1864 D.)
- Craig, Samuel -- glass blower, age 24, b. Va. (1860 C.) - N
 -- glass blower (1856 D.)
 -- glass presser (1859 D.)
- Craig, Samuel -- glass blower, age 31, b. Scotland (1860 C.) - N
- Craig, William A. -- glass blower, age 22, b. Pa (1860 C.) - N
- Cutter, Thomas -- mold maker, age 47, b. Mass. (1860 C.) - N
 -- molder (1856 D.) - C
 -- pattern maker (1864 D.) - S
- Dale, Robert -- glass blower, age 44, b. Scotland (1850 C.) - E
- Darey, Edward -- flint glass blower (1839 D.) - N ; see Derry
- Davis, William O. -- mold maker, age 40, b. N.H.? (1850 C.) - S
- Dawson, Benoni -- glass blower (1856 D.) - N
 -- glass presser (1859 D.)
- Day, Isaiah -- glass blower (1864 D., 1865 D.) - C
- Dean, John -- glass blower (1851 D.) - N
- Dean, Wesley -- glass blower (1851 D.) - N

- Deax, William -- glass inspector, age 44, b. Germany (1860 C.) - N
 -- glass assorter (1851 D.)
 -- glass inspector (1856 D.)
 -- glass selector (1859 D.)
 -- glass inspector (1865 D.)
- Decker, Adam -- teaser (1864 D.) - S
- Decker, Jacob -- works glasshouse (1864 D.) - S
- Deechan, Francis -- glass blower (1865 D.) - S
- Deechan, William -- glass blower (1865 D.) - S
- Derry, Edward -- glass blower (1865 D.) - N ; see Darey
- Donavon, David -- glass blower, age 20, b. Pa. (1850 C.) - N
 -- glass blower, age 31, b. Pa. (1860 C.)
 -- glass blower (1856 D., 1860 D. - 1865 D.)
 -- glass presser (1859 D.)
- Donavon, John -- _____, age 10, b. Md. (1850 C.) - N
 -- glass blower, age 21, b. Pa. (1860 C.)
 -- glassworker (1859 D.)
 -- glass presser (1860 D.)
- Donavon, Joseph -- laborer, age 15, b. Md. (1850 C.) - N
 -- glass blower, age 24, b. Pa. (1860 C.)
 -- glassworker (1859 D.)
 -- glass presser (1860 D.)
- Donavon, William -- glass blower, age 19, b. Pa. (1850 C.) - N
 -- glass blower, age 30, b. Pa. (1860 C.)
 -- glass blower (1856 D., 1864 D., 1865 D.)
 -- glass presser (1859 D. - 1864 D.)
 -- glass blower, T. Sweeney & Son (1864 D.)
- Dorsey, Benjamin -- glass blower (1860 D.) - N
- Duffy, Timothy -- glass blower (1864 D.) - C
- Dunham, J.K. -- firm, Barnes, Hobbs & Co.; firm, J.K.Dunham & Co.
 (1856 D.) - BD
- Dunning, Thomas -- teaser (1859 D., 1864 D.) - S
- Ebberts, John -- teaser, M. & J.W. Sweeney (1859 D.) - C

- Echols, Marcus W. -- firm, Ripley, Cowl & Co. (1865 D.) - C
- Ellington, Adam -- packer, Wheeling Vial & Bottle Factory (1864 D.)
- C
- Elliott, James -- lead preparer in glass making (1839 D.) - N
- Ellsworth, Charles -- glass blower, age 33, b. Va. (1850 C.) - S
-- flint glass blower (1839 D.) - E
-- glass blower (1864 D.) - S
- Elson, William K. -- _____, age 15, b. Oh. (1850 C.) - S
-- glass blower, age 28, b. Va. (1860 C.)
-- glass blower (1856 D., 1859 D.)
-- firm, Oesterling, Henderson & Co. (1864 D.,
1865 D.) - C 1865
- Encell, Charles, Sr. -- glass blower, age 50, b. England (1850 C.)
- N
- Encell, Charles, Jr. -- glass blower, age 19, b. Va. (1850 C.) - N
- Eoff, Alexander -- glass manufacturer, age 21, b. Va. (1850 C.) - BD
- Evans, Alfred -- glass manufacturer, age 36, b. Pa. (1850 C.) - E
- Evans, Alfred -- glass blower, age 15, b. Va. (1850 C.) - C
- Fagan, James -- glass blower, age 30, b. Ireland (1850 C.) - E
- Fallour, John -- glass blower, age 24, b. N.J. (1850 C.) - E
- Falore, James -- glass blower (1856 D., 1859 D.) - C 1856, E 1859
- Farbell, Henry -- glass blower, age 30, b. Germany (1860 C.) - S
- Faris, Louis -- glass cutter, age 15, b. Va. (1860 C.) - S
- Farley, John -- glass presser (1865 D.) - N
- Farley, Patrick -- glass worker (1859 D.) - N
- Feder, John -- teaser (1851 D.) - N
- Finch, William E. -- glass flattener (1864 D.) - N
- Finney, John -- glass blower (1864 D.) - C

- Fitzgearld, John -- window glass blower (1839 D.) - E
- Fleming, William -- glass blower (1864 D.) - N
- Forbes, Donald -- traveling agent, J.L. Hobbs, Son & Co. (1865 D.)
- N
- Forbes, John -- glass blower, age 30, b. N.J. (1850 C.) - N
 , Mr. -- glasshouse (1851 D.) - E
 , M. -- glasshouse (1852 Va. D.)
- Ford, Thomas -- glass blower, age 20, b. Scotland (1850 C.) - E
 -- glass blower (1851 D.) - C
- Forhet, Henry -- teaser (1859 D.) - N
 -- teaser, T. Sweeney & Son (1864 D.)
- Fox, John W. -- glass blower, age 27, b. Germany (1860 C.) - N
 -- glass blower (1856 D. - 1865 D.)
- Frea, John R. -- glasshouse (1851 D.) - N
 -- glasshouse (1852 Va. D.)
- Frederick, Ferdinand -- glass blower (1859 D.) - S
- French, William -- glass blower, age 23, b. Va. (1860 D.) - C
 -- glass blower (1856 D.)
- Galleher, Daniel -- glass blower (1864 D.) - C
- Gallion, Joseph -- glass packer (1851 D.) - S
- Gamem, George -- glass packer (1851 D.) - S
- Garden, Henry E. -- glass blower, age 15, b. Va. (1850 C.) - N
- Getsinger, John -- glass blower, age 27, b. N.J. (1850 C.) - N
- Getzinger, Renge -- glass blower, age 29, b. N.J. (1850 C.) - N
- Gilkison, John -- glass cutter (1839 D.) - E
- Gill, James -- glass blower, age 25, b. England (1850 C.) - S
 -- glass presser, age 38, b. England (1860 C.)
 -- glass maker (1851 D.)
 -- glass presser (1856 D.)
 -- glass blower (1859 D.)
 -- glass presser (1860 D. - 1865 D.)

- Gill, William G. -- _____, age 9, b. Va. (1860 C.) - S
 -- glass blower (1865 D.)
- Goodwin, John -- glass blower, age 23, b. Pa. (1850 C.) - C
- Gordon, Robert -- glass blower, age 17, b. Pa. (1850 C.) - E
- Gorenflo, Jacob - teaser (1864 D.)
- Gorrell, Theodore -- glass packer, age 23, b. Md. (1850 C.) - C
- Graves, George W. -- glass blower, age 16, b. Oh. (1850 C.) - E
- Graves, William -- laborer, T. Sweeney & Son (1864 D.) - N
- Gray, William -- crown glass blower (1839 D.) - E
- Green, John H. -- clerk, age 44, b. England (1850 C.) - N
 -- clerk, age 56, b. England (1860 C.)
 -- superintendent and occasional clerk, M. & R.H. Sweeney & Co. (1839 D.)
 -- foreman glassworks (1851 D.)
 -- clerk (1856 D. - 1860 D.)
 -- foreman (1864 D.)
 -- bookkeeper (1865 D.)
- Greiner, Frederick -- glass packer (1856 D.) - N
 -- glass blower (1859 D.)
 -- glassworker (1865 D.)
- Grimm, Frederick -- teaser (1864 D.) - C
- Haas, Adam -- pot maker (1864 D.) - C
- Haine, Peter -- glass blower (1839 D.) - E
- Haines, John -- glass blower, age 38, b. Pa. (1850 C.) - N
 -- glass blower, age 47, b. Pa. (1860 C.)
 -- flint glass blower (1839 D.)
 -- glass blower (1851 D. - 1860 D.)
- Haines, John Jr. -- _____, age 7, b. Va. (1850 C.) - N
 -- glass blower, age 18, b. Va. (1860 C.)
 -- glass blower (1856 D.)
 -- glass presser (1859 D.)

- Haines, Peter -- _____, age 13, b. Va. (1850 C.) - N
 -- glass blower, age 23, b. Va. (1860 C.)
 -- glassworker (1859 D.)
 -- glass blower (1860 D., 1865 D.)
- Haines, William -- _____, age 10, b. Va. (1850 C.) - N
 -- glass blower, age 20, b. Va. (1860 C.)
 -- glass blower (1865 D.)
- Haley, Barney -- laborer, T. Sweeney & Son (1864 D.) - N
- Hall, Alexander C. -- mold maker, age 21 (1860 C.) - S
- Hamm, Thomas -- glass blower (1851 D., 1865 D.) - N
- Hamm, William -- glass blower, age 27, b. Germany (1850 C.) - N
 -- glass blower (1851 D.)
- Handle, Paul -- glass blower (1864 D.) - N
- Harding, ____ -- glass blower, M. & J.W. Sweeney (1859 D.) - C
- Harmer, James -- glass blower, age 16, b. Md. (1850 D.) - E
- Hart, Henry D. -- glass cutter (1839 D.) - N
- Hasler, William -- glass blower, M. & J.W. Sweeney (1859 D.) - C
- Hastings, William -- firm, Ripley, Cowl & Co. (1865 D.) - C
- Hawkins, Owen -- at glassworks (1865 D.) - N
- Heburn, James -- glass blower (1859 D., 1864 D., 1865 D.) - C
- Heiner, Charles -- glass blower (1864 D.) - S
- Heinhold, John -- mold maker (1864 D.) - S
- Heinort, Gusdorf -- glass blower (1860 D.) - S
- Heller, Joseph -- glassworker (1865 D.) - N

- Henderson, John -- engineer (1860 D.) - S
 -- firm, Oesterling, Henderson & Co. (1864 D.,
 1865 D.) - C 1865
- Heron, William -- glass tender (1860 D.) - N
- Herron, John -- manager, glass works (1864 D.) - N
- Hindeline, John -- glass mixer (1860 D. - 1865 D.) - S
- Hobbs, James -- overseer, glass manufacture (1865 D.) - S
- Hobbs, John H. -- glass manufacturer, age 23, b. Mass. (1850 C.) - S
 -- glass manufacturer, age 31, b. Mass. (1860 C.)
 -- firm, Hobbs, Barnes, & Co. (1851 D.)
 -- firm, Barnes, Hobbs & Co.; firm, J.K. Dunham & Co.
 (1856 D.)
 -- clerk (1859 D., 1860 D.)
 -- firm, J.H. Hobbs, Brockunier & Co. (1864 D.,
 1865 D.)
- Hobbs, John L. -- glass manufacturer, age 46, b. S.C. (1850 C.) - S
 -- glass manufacturer, age 56, b. Mass. (1860 C.)
 -- firm, Hobbs, Barnes & Co. (1851 D.)
 -- firm, Barnes, Hobbs & Co.; firm, J.K. Dunham & Co.
 (1856 D.) - NEW YORK CITY
 -- firm, Hobbs & Barnes (1859 D., 1860 D.) - S
 -- firm, J.L. Hobbs & Son (1864 D., 1865 D.)
 -- firm, J.H. Hobbs, Brockunier & Co. (1865 D.)
- Hodge, Alexander -- glass mixer (1856 D.) - N
- Hoffman, Michael -- teaser, glasshouse (1839 D.) - N
- Hoffman, Philip -- tender, T. Sweeney & Son (1864 D.) - N
- Hoge, Francis -- glass blower, age 20, b. Pa. (1850 C.) - C
- Hoge, Joseph -- glass blower, age 32, b. Pa. (1850 C.) - C
 -- glass blower (1851 D.)
- Holliday, Henry C. -- glass blower, age 17, b. Oh. (1850 C.) - N
- Holliday, William R. -- glass packer, age 49, b. Pa. (1850 C.) - N
 -- glass packer (1839 D., 1851 D.)

- Homan, Magnus -- glassmaker, age 40, b. Germany (1850 C.) - C
 -- teaser (1851 D.)
 -- mixer (1859 D., 1864 D., 1865 D.)
- Houser, Abraham -- glass blower (1856 D.) - C
- Hunter, Henry -- glass cutter (1839 D.) - N
- Hunter, Thomas, Jr. -- glass cutter (1839 D.) - N
- Hutchens, John -- glass flattener, age 26, b. England (1850 C.) - N
- Hutcheson, William -- glass flattener, age 19, b. Oh. (1850 C.) - N
- James, Benjamin -- glass blower, age 30, b. Pa. (1850 C.) - S
- James, Richard -- glass blower, age 22, b. Pa. (1850 C.) - S
- James, Richard -- glass blower, age 24, b. Va. (1850 C.) - N
- James, Richard -- glass engraver (1839 D.) - E
- Johnson, John -- glass cutter (1856 D., 1859 D.) - N
 Note: listed twice in 1856 D.
- Jones, John -- glass flattener (1864 D., 1865 D.) - N
- Johns, Leonard -- glass blower, age 21, b. N.J. (1850 C.) - N
- Kaltenbach, Michael -- glass inspector (1856 D.) - N
 -- foreman, glasshouse (1865 D.)
- Karr, David -- glass blower, age 16, b. Va. (1850 C.) - S
- Kaufelt, August -- glass blower, Wheeling Vial and Bottle Factory
 (1864 D.) - C
- Keller, Henry -- laborer, age 25, b. Germany (1860 C.) - N
 -- glass blower (1856 D., 1864 D., 1865 D.)
 -- glass presser (1859 D., 1860 D.)
- Kirkwood, James -- crown glass blower (1839 D.) - E
- Kline, John -- crown glass blower and superintendent, Ritchies
 & Wilson (1839 D.) - E
- Knapp, Henry -- glass packer (1860 D.) - BD

- Knott, N.C. -- glass blower (1851 D.) - N
- Knowles, Richard -- glass manufacturer, age 33, b. Pa. (1850 C.) - C
 -- glass blower, age 44, b. England (1860 C.)
 -- glass blower (1851 D. - 1865 D.)
 Note: at Wheeling Vial and Bottle Factory
 (1864 D.)
- Koch, August -- glass packer (1860 D., 1865 D.) - S
- Kryder, William -- machinist (1851 D.) - S
 -- mold maker (1856 D.)
- Lake, Jabez -- glass manufacturer, age 24, b. Oh. (1850 C.) - BD
- Lamby, Marks -- flint glass blower (1839 D.) - N
 -- pot maker (1856 D., 1859 D.)
- Lancanson, William -- glass blower (1851 D.)- N
- Lancaster, Joseph -- glass blower (1856 D., 1865 D.) - N
- Lance, David -- glass blower, M. & J.W. Sweeney (1859 D.) - C
- Lanning, Nelson -- glass blower (1856 D.) - C
- Lantonmear, Christian -- learsman, T. Sweeney & Son (1864 D.) - N
- Leary, Augustus -- pot maker (1860 D.) - S
- Leasure, Henry J. -- glass blower, age 16, b. Va. (1850 C.) - S
- Leasure, James A. -- glass blower, age 18, b. Oh. (1850 C.) - S
 -- glass blower, age 28, b. Va. (1860 C.)
 -- glass blower (1856 D., 1865 D.)
 -- firm, Oesterling, Henderson & Co. (1864 D.,
 1865 D.) - C 1865
- Leasure, William -- laborer, age 47, b. Md. (1850 C.) - S
 -- laborer, age 56, b. Pa. (1860 C.)
 -- mold cleaner (1859 D.)
 -- box maker (1865 D.)
- Leavadock, Bernard -- glass cutter (1856 D.) - S
- Leighton, James E. -- _____, age 12, b. Mass. (1860 C.) - S
 -- glassmaker (1864 D.)
 -- glassworks (1865 D.)

- Leighton, Peter H. -- glass blower, age 36, b. Scotland (1860 C.) - S
 -- glass blower (1856 D., 1860 D., 1865 D.)
 -- glassmaker (1859 D., 1864 D.)
- Leighton, William -- firm, J.H. Hobbs, Brockunier & Co. (1864 D.,
 1865 D.) - S
- Lentz, John -- glass blower, age 37, b. Germany (1850 C.) - C
 -- glass bower (1851 D.)
- Lines, Jacob -- at glassworks (1865 D.) - N
- McAfee, Charles -- glass blower, age 19, b. Va. (1860 C.) - N
 -- glass manufacturer (1864 D.) - C
- McAfee, Daniel -- glass blower, age 45, b. Pa. (1860 C.) - N
 -- glass blower (1860 D., 1865 D.)
 -- firm, Oesterling, Henderson & Co. (1864 D.) -
 C 1864, N 1865
- McAfee, William -- glass blower, age 16, b. Va. (1860 C.) - N
 -- glass manufacturer (1864 D.) - C
- McAfee, W.L. -- firm, Russell & McAfee (1856 D.) - BD
- McCann, Daniel W. -- glass cutter (1864 D.) - N
- McCann, William -- glass packer, M. & J.W. Sweeney (1859 D.) - C
 -- glass presser (1860 D.)
- McClallen, Robert W. -- glass blower, age 17, b. Pa. (1850 C.) - E
- McClallen, Samuel L. -- glass blower, age 19, b. Pa. (1850 C.) - E
- McCluney, James -- bookkeeper, 65 Main (1856 D.) - BD
 -- firm, M. Sweeney & Co. (1864 D.) - E
 -- firm, Sweeney, Bell & Co. (1865 D.)
- McCoy, Benjamin N. -- glass blower, age 30, b. N.Y. (1850 C.) - N
- McCoy, James -- glass blower, age 38, b. N.Y. (1850 C.) - N
 -- glass blower (1851 D., 1856 D.)
- McDonald, Michael -- crown glass blower (1839 D.) - E
- McGill, William -- glass cutter (1860 D.) - N

- McGranahan, Barney -- glass blower, age 23, b. Pa. (1850 C.) - C
 -- glass blower (1851 D., 1856 D.)
- McGranahan, Patrick -- glass blower, age 26, b. Pa. (1850 C.) - C
 -- glass blower, age 38, b. Pa. (1860 C.)
 -- glass blower (1856 D., 1860 D., 1865 D.)
 - E 1865
- McGuire, Michael -- glass blower (1864 D., 1865 D.) - N
- McIntire, J.L. -- glass blower (1864 D.) - N
- McLalland, James -- glass blower, M. & J.W. Sweeney (1859 D.) - C
- McLames, William -- glass blower, age 23, b. Va. (1850 C.) - C
- McLure, Mathew -- glass cutter, age 55, b. Pa. (1850 C.) - N
 -- glass cutter, S.G. Robinson & Son (1864 D.)
- McNamee, Michael -- firm, McNamee & Adams (1839 D.) - C
- McTaig, Patrick -- glass blower (1864 D.) - C
- Madison, Thomas -- glass blower, age 45, b. England (1850 C.) - N
- Malone, Thomas -- glassmaker, age 40, b. Ireland (1850 C.) - N
 -- glass blower, age 45, b. Ireland (1860 C.)
 -- glass blower (1851 D. - 1860 D., 1865 D.)
- Manly, William -- glass blower, M. & J.W. Sweeney (1859 D.) - C
- Manners, Joseph -- glasshouse (1851 D.) - N
- Marten, Robert -- teaser, Wheeling Vial and Bottle Factory (1864 D.)
 - C
- Martin, David -- glass cutter, age 29, b. Pa. (1850 C.) - N
 -- glass cutter, age 39, b. Pa. (1860 C.)
 -- glass cutter (1851 D. - 1859 D., 1865 D.)
- Martin, Robert L. -- glassworks (1864 D.) - E
- Martz, Lawrence -- glass blower (1865 D.) - C
- Mason, William S. -- learsman (1864 D.) - S
- Mathgen, John -- glass blower (1864 D.) - N

- Maxwell, Emanuel -- glass blower, age 30, b. Va. (1850 C.) - S
 -- glass blower, age 38, b. Va. (1860 C.)
 -- glassmaker (1851 D.)
 -- glass blower (1856 D., 1860 D., 1865 D.)
 -- glass blower and pressman (1864 D.)
- Maxwell, William H. -- _____, age 15, b. Va. (1860 C.) - S
 -- glass blower (1864 D., 1865 D.)
- Mergenhegen, Joseph -- teaser (1859 D.) - N
- Merryman, Caleb S. -- glass blower, age 33, b. Va. (1860 C.) - S
 -- glassmaker (1851 D.)
 -- glass blower (1856 D., 1860 D.)
- Merryman, John W. -- _____, age 7, b. Va. (1850 C.) - S
 -- glass blower, age 17, b. Va. (1860 C.)
 -- glass blower (1864 D.)
- Merryman, Nicholas B. -- glass cutter, age 25, b. Pa. (1850 C.) - S
 -- clerk, age 33, b. Va. (1860 C.)
 -- glass blower* (1859 D.)
 -- glass cutter (1864 D.)
- Merryman, Robert -- laborer, age 20, b. Va. (1850 C.) - S
 -- glass packer, age 29, b. Va. (1860 C.)
 -- glass packer (1860 D.)
 -- packer (1864 D.)
- Metzinger, John -- laborer, T. Sweeney & Son (1864 D.) - N
- Michael, Joseph -- glass packer (1856 D.) - N
- Michels, James -- glass blower (1864 D.) - N
- Michels, William -- glass cutter (1864 D.) - N
- Miller, George W. -- glass cutter (1856 D.) - N
 , Washington -- glass cutter (1865 D.)
- Miller, H.M. -- firm, Plunkett & Miller (1839 D.) - E
- Milligan, Phillip -- glass blower, age 16, b. Canada (1850 C.) - N
- Monhall, Thomas -- pot maker, age 27, b. Ireland (1850 C.) - N
 -- potter, age 37, b. Ireland (1860 C.)
 -- glass pot maker (1851 D.)
 -- pot maker (1860 D.)

- Morgan, William -- glass blower, age 40, b. Mass. (1850 C.) - E
 -- glass blower, age 37, b. Wales (1860 C.)
 -- glass blower (1851 D., 1859 D., 1864 D., 1865 D.)
- Murdock, David -- glass blower, age 30, b. Oh. (1850 C.) - N
 -- glass blower (1851 D.)
- Myers, John -- firm, Ripley, Cowl & Co. (1865 D.) - C
- Myers, William -- pot maker (1860 D.) - N
 -- glass blower (1864 D.) - C
- Nelson, William -- glass blower (1860 D.) - S
- North, George T. -- pot maker (1864 D.) - N
- O'Carle, Daniel -- teaser, glass works (1839 D.) - E
- Oesterling, John -- no occupation given (1856 D.) - S
 -- machinist (1860 D.)
 -- firm, Oesterling, Henderson & Co. (1864 D.,
 1865 D.) - C 1865
- Ohle, Charles -- glass blower, age 15, b. Germany (1850 C.) - S
- O'Leary, John -- glass cutter, age 38, b. Ireland (1860 C.) - S
- O'Neil, James -- glass packer (1851 D.) - N
- Orbin, John -- glass blower, age 33, b. Md. (1850 C.) - N
- Orner, Jacob -- window glass blower (1839 D.) - C
- Ott, Morgan -- firm, Quarrier & Ott (1851 D.) - C
- Ottey, Frederick -- glass blower* (1859 D.) - S
 -- glass packer (1860 D.)
- Over, Peter -- laborer, age 44, b. Germany (1850 C.) - S
 -- laborer (1851 D., 1859 D.)
 -- glassworker (1856 D.)
- Owen, Lewis -- glass cutter (1851 D.) - N
- Paul, William -- glass mixer, T. Sweeney & Son (1864 D.) - N
 -- glass mixer (1865 D.) - E

- Pearce, Lewis -- glass mixer, age 45, b. Pa. (1850 C.) - E
 -- glass mixer (1839 D.)
 -- pot maker (1851 D.)
- Permar, William H. -- glass blower (1864 D.) - N
- Piper, Peter -- glass blower (1851 D.) - N
- Plunkett, Francis -- firm, Plunkett & Miller (1839 D.) - E
- Plunkett, John -- cylinder glass blower (1839 D.) - E
- Pool, Jason -- glass blower, age 27, b. Pa. (1850 C.) - E
- Pramar, Henry -- glass blower, age 16, b. Oh. (1850 C.) - N
- Profator, William -- glass blower (1860 D., 1864 D.) - N
- Pugh, Richard -- glassmaker, age 30, b. Ireland (1850 C.) - N
- Purcell, Joseph -- glass cutter, age 23, b. Oh. (1860 C.) - N
 -- glass cutter (1851 D. - 1860 D.)
- Purcell, Thomas -- glass blower (1865 D.) - N
- Quarrier, Archibald -- glass manufacturer, age 40, b. Va. (1850 C.)
 - C
 -- firm, Quarrier, Ott & Co. (1851 D.)
 -- firm, Quarrier & Co. (1856 D.)
- Ranagan, Peter -- glass cutter, age 38, b. N.Y. (1850 C.) - S
- Rantled, John -- glass cutter (1851 D.) - S
- Ranty, John -- teaser, M. & J.W. Sweeney (1859 D.) - C
- Ratcliff, John G. -- glass cutter, age 23, b. Va. (1850 C.) - C
 -- glass cutter (1851 D.) - S
- Redman, Edward -- glass blower (1851 D.) - N
- Reed, Samuel -- mold maker (1856 D.) - N
- Rence, John -- teaser (1859 D.) - C
- Renegan, Bernard -- glass blower, age 42, b. Mass. (1850 C.) - E
 -- glass cutter (1851 D.)

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- Reynolds, Joshua -- glass blower (1856 D.) - C
- Rice, Louis -- packer, age 37, b. Germany (1860 C.) - S
-- glass packer (1851 D., 1856 D.)
- Richard, James, Jr. -- engineer, glassworks (1839 D.) - E ;
see James, Richard
- Riley, B.F. -- glass blower (1864 D.) - N
- Riley, Dennis -- glass blower (1864 D.) - N
- Ripley, John -- glass blower, age 16, b. England (1850 C.) - C
-- glass blower, age 24, b. England (1860 C.)
-- glass blower (1860 D.)
-- firm, Ripley, Cowl & Co. (1865 D.)
- Ritchie, Craig -- firm, Ritchies & Wilson (1839 D.) - E
- Ritchie, John -- firm, Ritchies & Wilson (1839 D.) - E
- Robbins, George W. -- glass cutter, age 38, b. Mass. (1850 C.) - S
-- glass cutter, age 48, b. Mass. (1860 C.)
-- glass cutter (1851 D. - 1859 D., 1864 D.,
1865 D.)
- Robinson, David -- assistant manager, Wheeling Vial and Bottle
Factory (1864 D.) - E
-- firm, Robinson Brothers (1865 D.) - N
- Robinson, George W. -- glassmaker, age 22, b. Va. (1860 C.) - N
-- firm, S.G. Robinson & Son (1864 D.)
-- firm, Robinson Brothers (1865 D.)
- Robinson, John -- glass presser (1851 D.) - E
- Robinson, S.G. -- manufacturer of window glass and dealer in paints
(1859 D., 1860 D.) - BD
-- firm, S.G. Robinson & Son (1864 D.)
- Robinson, William H. -- salesman (1860 C.) - BD
-- firm, Robinson Brothers (1865 D.)
- Roble, Christian -- glass blower (1856 D.) - C
-- master shearer, Wheeling Vial and Bottle Factory
(1864 D.)
- Rodenback, John -- glass presser (1851 D.) - N

- Rogers, Joseph A. -- glass assorter (1851 D.) - E
- Rolf, Charles -- glass blower (1859 D.) - S
- Rose, George W. -- glass cutter (1864 D., 1865 D.) - N
- Rose, Robert -- glass blower, age 43, b. England (1850 C.) - S
 -- glass cutter*, age 55, b. England (1860 C.)
 -- glass blower (1856 D., 1859 D., 1864 D., 1865 D.)
- Russell, James -- flint glass blower (1839 D.) - N
- Russell, William H. -- firm, Russell & McAfee (1856 D.) - N
- Ryan, Thomas -- lid maker (1859 D.) - N
 -- works glasshouse (1864 D.)
 -- pot maker (1865 D.)
- Sanders, Samuel -- glass blower (1864 D.) - N
- Sangston, James -- packer, Wheeling Vial & Bottle Factory (1864 D.)
 - C
- Schaffer, Frederick -- teaser (1865 D.) - N
- Scheck, John -- glass blower (1864 D.) - N
- Schlernitzaur, Peter -- glass blower (1865 D.) - N
- Schniely, Jacob -- glass cutter (1839 D.) - E
- Schultz, Frederick -- glass blower (1864 D.) - S
- Schultz, Henry -- glass blower, age 38, b. Germany (1860 C.) - S
 -- glass blower (1856 D., 1860 D. - 1865 D.)
- Schultz, Theodore -- glass blower, age 22, b. Va. (1860 C.) - S
 -- glass blower (1856 D. - 1860 D.)
 -- firm, Oesterling, Henderson & Co.
 (1864 D., 1865 D.)
- Schwer, William -- glass blower, Wheeling Vial and Bottle Factory
 (1864 D.) -- C
- Scroggins, George -- glass cutter (1864 D.) - N
- Seabright, Charles -- glass blower, age 22, b. Germany (1850 C.) - C
 -- pot maker (1856 D.) - N

- Seakbath, Julius -- glass blower (1859 D.) - N
- Seibold, Conrad -- mold maker, T. Sweeney & Son (1864 D.) - N
- Seller, Theodore -- glass blower, age 21, b. Germany (1850 C.) - N
- Sereig, August -- glass worker (1856 D.) - S
- Seward, Phillip -- glass blower, age 25, b. Germany (1850 C.) - N
- Shawhan, Robert -- window glass blower (1839 D.) - E
- Shelley, John -- glass packer (1856 D.) - N
- Shelly, Thomas -- teaser (1859 D.) - N
- Shepard, Joseph -- glass blower, age 37, b. Scotland (1850 C.) - N
- Shipley, Richard -- glass blower, M. & J.W. Sweeney (1859 D.) - C
- Showman, Peter -- glass blower (1865 D.) - N
- Shurley, Thomas -- glass blower (1839 D.) - E
- Smith, Christian A. -- [glass?] presser (1864 D.)
- Smith, D. -- glass blower, M. & J.W. Sweeney (1859 D.) - C
- Snellsiver, Peter -- glass blower (1856 D.) - N
- Snyder, Andrew -- glass blower (1839 D.) - N
- Southwick, D.H. -- firm, Southwick & Co. (1851 D.) - BD
- Spence, Washington -- glass blower, age 37, b. N.J. (1850 C.) - E
-- glass blower (1851 D.)
- Spies, Francis -- mold cleaner, glasshouse (1864 D.)
- Stanley, John -- glass blower, age 46, b. Md. (1850 C.) - E
-- glass blower, age 54, b. Md. (1860 C.) - N
-- window glass blower (1839 D.) - E
-- laborer (1859 D.)
-- glass blower (1860 D. - 1865 D.)
- Stanley, John -- glass blower, Wheeling Vial & Bottle Factory
(1864 D.) - C

- Stanley, John -- glass cutter (1865 D.) - N
- Stanley, Washington -- glass cutter (1856 D.) - N
- Steel, Alfred -- glass sorter (1864 D.) - S
- Steele, Albert -- glass blower (1860 D.) - S
- Steele, Edward -- glass cutter, age 27, b. England (1850 C.) - N
 -- glass cutter, age 28, b. England (1860 C.) - S
 -- glass cutter (1851 D. - 1865 D.) - N 1851, S 1856
- Steelman, E. -- glass blower (1864 D.) - S ; see Stillman, Edmund
- Steelman, Isaac B. -- glass blower (1864 D., 1865 D.) - N
- Stillman, Edmund -- glass blower (1839 D.) - E ; see Steelman, E.
- Stiver, John -- tender, Glass House (1864 D.)
- Stockton, M.L. -- firm, Stockton, Bankerd & Co. (1851 D.) - N
- Stokely, Frederick -- glass vial blower (1839 D.) - E
- Sweeney, Andrew J. -- glass manufacturer, age 23, b. Pa. (1850 C.)
 - N
 -- master machinist, age 33, b. Pa. (1860 C.)
 -- firm, Sweeneys & Bell (1851 D.)
 -- firm, T. Sweeney & Son (1856 D. - 1864 D.)
 -- manager, foundry and engine works (1864 D.)
- Sweeney, J. W. -- firm, M. & J.W. Sweeney (1859 D.) - C
- Sweeney, Michael -- iron manufacturer, age 39, b. N.Y. (1850 C.) - N
 -- glass blower, age 49, b. N.Y. (1860 C.)
 -- firm, M. & R. H. Sweeney (1839 D.)
 -- firm, M. & J.W. Sweeney (1859 D.) - C
 -- firm, M. Sweeney & Co. (1864 D.) -
 MARTINS FERRY, OHIO
 -- firm, Sweeney, Bell & Co. (1865 D.) - N
- Sweeney, Thomas -- glass manufacturer, age 44, b. Ireland (1850 C.)
 - N
 -- glass manufacturer, age 53, b. Ireland (1860 C.)
 -- firm, M. & R. H. Sweeney (1839 D.)
 -- firm, Sweeneys & Bell (1851 D.)
 -- firm, T. Sweeney & Son (1856 D. - 1864 D.)

- Synar, James -- glass cutter, age 37, b. England (1850 C.) - N
 -- glass blower*, age 47, b. England (1860 C.)
 -- glass cutter (1851 D. - 1864 D.)
- Teator, David -- glass worker (1865 D.) - N
- Tevis, John -- glass blower, age 39, b. Ky. (1850 C.) - N
 -- glass blower (1851 D.)
- Tevis, Joseph -- glass blower (1851 D.) - N
- Thompson, Thornton B. -- teaser (1864 D., 1865 D.) - S
- Thoms, Charles -- glass blower, age 21, b. Pa. (1850 C.) - N
 -- glass blower (1851 D.)
- Thon, William -- glass blower, Wheeling Vial & Bottle Factory
 (1864 D.) - C
- Travis, James -- glass blower, age 43, b. Va. (1850 C.) - S
 -- crown glass blower (1839 D.) - E
 -- glassmaker (1851 D.) - S
- Undersaker, August -- glassmaker (1851 D.) - N
- Urban, John C. -- glassmaker (1856 D.) - N
- Vail, Solomon -- glass blower, age 34, b. Pa. (1860 C.) - S
 -- glass blower (1859 D. - 1864 D.)
- Venney, John W. -- glass blower, age 24, b. Mass. (1860 C.) - S
 -- glass blower (1856 D., 1864 D.) - C 1864
 -- firm, Oesterling, Henderson & Co. (1865 D.)
- Veyneer, William -- glass mixer (1839 D.) - E
- Vogt, Henry -- teaser (1864 D.) - N
- Wagner, Louis -- packer, age 19, b. Va. (1860 C.) - S
 -- glass blower (1860 D.)
 -- mold maker (1864 D., 1865 D.)
- Wallace, James -- glass cutter, age 37, b. Pa. (1850 C.) - N
 -- glass cutter, age 48, b. Pa. (1860 C.)
 -- glass cutter (1839 D. - 1865 D.)

- Wallace, John M. -- _____, age 12, b. Va. (1850 C.) - N
 -- glass cutter, age 22, b. Va. (1860 C.)
 -- glass cutter (1856 D., 1864 D., 1865 D.)
- Wallace, William -- _____, age 6, b. Va. (1850 C.) - N
 -- glass cutter, age 17, b. Va. (1860 C.)
- Wallace, _____ -- glass blower (1856 D.) - S
- Way, George -- glass blower (1864 D.) - S
- Weis, Jacob -- glass packer (1859 D.) - N
- Wenke, Daniel -- glass cutter (1856 D.) - N
- Westwater, John -- crucible maker for glass mixers (1839 D.) - E
- Westwater, William -- glass cutter, age 39, b. Scotland (1850 C.) - N
- Wetherly, William -- laborer, M. & J.W. Sweeney - C
- Wheeler, George -- glass blower (1856 D.) - N
- Wheeler, Rodney -- glass blower and plough maker (1839 D.) - N
- White, Thomas -- glass blower (1851 D., 1865 D.) - N
 -- teaser (1851 D.)
- White, William -- glassmaker, age 48, b. Ireland (1850 C.) - N
- Wilbert, Matthew -- glass blower (1856 D.)
- Will, Christian -- glass blower, age 16, b. Pa. (1850 C.) - C
- Williams, David -- glass presser (1851 D.) - N
 -- glass cutter (1856 D. - 1860 D.)
- Williams, Jacob -- glass blower, age 39, b. Germany (1860 C.) - N
- Wirt, Jacob -- glass blower, age 19, b. N.J. (1850 C.) - N
- Wirt, Joseph -- glass blower, age 23, b. N.J. (1850 C.) - N
- Wise, Jacob -- glass packer (1856 D.) - N
- Wood, John C. -- glass cutter (1851 D.) - S
- Woods, William -- glass blower, M. & J.W. Sweeney - C

Yenker, Lewis -- glass packer (1856 D.) - C
 Young, Jacob -- fireman, glass works (1859 D.) - E
 Young, James -- glass pot maker (1851 D.) - N
 -- teaser, Wheeling Vial & Bottle Factory (1864 D.) - C
 Young, John -- teaser (1859 D., 1860 D.) - S
 Young, Joseph -- at glassworks (1865 D.) -N

APPENDIX B

F. PLUNKETT AND COMPANY PRICE LIST

The F. Plunkett and Company price list was issued as a broadside measuring 33.9 x 33.5 cm. The names of the factory and company were printed across the top of the sheet as they appear in the following transcription. Below them the lists of wares, from tumblers to cup plates, were printed in three columns. At the bottom under the heading, "APOTHECARIES' SHOP FURNITURE," the lists of the apothecary wares were printed in four columns. Since the present location of the F. Plunkett and Company price list is unknown, the following transcription was made from a photostatic facsimile at Oglebay Institute, Wheeling, West Virginia. The dimensions of the original were recorded by the late Delf Norona in the 1950s (see Norona and Shetler, West Virginia Imprints, 118). Decimal points have been added to the prices for clarity.

WHEELING FLINT GLASS WORKS

PRICE CURRENT OF GLASS WARE MANUFACTURED BY

F. Plunket & Co. at their Glass Works,WHEELING, VA.

TUMBLERS

Quart Flint, strait or knob - - -	per doz	\$3.00
Pint do. do. - - - - -	"	1.75
Quart do. puntied, - - - - -	"	3.50
Pint do. do. - - - - -	"	2.00
Third Quart, flint - - - - -	"	1.25 to 1.75
Do. do. puntied - - - - -	"	1.50 to 2.00
Half pint, tale taper - - - - -	"	.50
Do. No. 2 - - - - -	"	.60
Do. No. 1 - - - - -	"	.75
Do. Flint all shapes, - - - - -	"	.90
Do. Taper sham, - - - - -	"	1.50
Third pint, do. do. - - - - -	"	1.25
Do. Flint, - - - - -	"	.75
Do. light do. - - - - -	"	.60
Gill 50 cents, half gill, - - - - -	"	.30
Puntied Flint, half pint, - - - - -	"	1.12 1/2
Do. do. third pint - - - - -	"	1.00
Heavy sheared, double flint, best ground, half pint, - - - - -	"	1.75
Do. do. do. do. third pt. - - - - -	"	1.50
Extra do. do. do. - - - - -	"	
flat and hollow half pint, - - - - -	"	2.25
Do. do. do. third pint, - - - - -	"	2.00
Taper sham, puntied half pint, - - - - -	"	1.75
Do. do. do. third pint, - - - - -	"	1.50
Best tale flat fluted, half pint, - - - - -	"	2.00
Do. do. do. third pint, - - - - -	"	1.50
Double flint, 8 flute half pint, - - - - -	"	3.50
Do. do. heavy long, 8 flute, half pint. - - - - -	"	4.50
Do. extra do. best Lima, - - - - -	"	5.00
Mould flute do. - - - - -	"	2.00 to 2.25
Best do. cut concave, &c, half pint, - - - - -	"	3.00 to 3.50
Do. assorted cut, - - - - -	"	2.50 to 8.00

PITCHERS

Plain pint, - - - - -	[per doz]	2.00
Do. quart, - - - - -	"	3.00
Do. 3 pint, - - - - -	"	4.50
Do. half gallon, - - - - -	"	6.00
Ringed pint, - - - - -	"	4.00
Do. quart, - - - - -	"	6.00
Do. 3 pint, - - - - -	"	8.00
Fluted quart, - - - - -	per pair	4.00 to 6.00
Do. 3 pint, - - - - -	"	5.00 to 7.50
Fancy cut - - - - -	"	5.00 to 15.00

CREAM JUGS.

Half pint, plain - - - - -	per doz.	1.25
Do. footed, - - - - -	"	2.00
Do. engraved, - - - - -	"	2.00 to 2.50
Fancy cut, - - - - -	each	.75 to 3.00

SUGARS AND COVERS.

Footed, - - - - -	per doz.	3.00
Pressed foot, chevral arch rib, - -	"	4.00
Knob stem, do. do. - - - - -	"	4.50
Do. engraved, do. - - - - -	"	6.00

CELERY VASES.

Arch ribbed, knob stem, - - - - -	"	4.00
Heavy plain or figured knob stem, round or pressed foot, - - - - -	"	4.50 to 7.50
Engraved, - - - - -	per pair	1.50 to 2.50
Cut, fluted, &c. - - - - -	"	3.00 to 10.00

CUT OVAL DISHES.

Various patterns and sizes, - - - - -	"	5.00 to 13.00
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LAMP CHIMNEYS.

Globe or thistle, - - - - -	per doz.	2.50 to 3.00
French or straight, - - - - -	"	2.00 to 2.25
Proof Vials, - - - - -	"	1.00

MOLASSES CANS.

Glass stoppers, quart, plain, - - - - -	"	4.50
Do. do. pints, - - - - -	"	2.50
Best, with cork tops, quarts, - - - - -	"	7.50
Do. do. pints, - - - - -	"	4.50

DECANTERS.

Half pint and gill, common, - - - - -	"	.62 1/2
Globe or pear shape stoppered, quarts, - -	"	2.25
Do. do. do. pints, - - -	"	1.50
Do. half pints, - - - - -	"	1.00

Double ringed, mushroom stoppers, qt. - [per doz]	3.00
Do. do. do. do. pints, - "	2.00
Do. do. do. half pints, "	1.25
Triple ring, do. quart, - "	3.75
Do. do. do. pint, - "	2.75
Double ring, engraved or lettered, qts. - -"	6.00
Do. do. do. do. pints, -"	4.50
Triple ring, fluted top and bottom, qts. per pair	2.25
Do. do. do. do. pints, "	1.75
Best heavy fluted, cut stoppers, quarts, - "	4.00 to 6.00
Do. do. do. do. pint, - - "	3.00 to 4.00
Best do. fancy cut quart, - - - - - "	6.00 to 15.00
Do. do. do. do. [pint] - - - - - "	4.00 to 10.00
Tavern decanters puntied, with mounted	
cork stoppers, plain neck, quarts, - - per doz.	4.50 to 5.00
Do. do. do. do. pints, - - "	3.50 to 4.00
Double ring quarts, - - - - - "	4.00 to 6.00
Do. do. pints, - - - - - "	4.00 to 4.50
Triple ring quarts, - - - - - "	6.00 to 6.75
Do. do. pints, - - - - - "	4.50 to 5.25
Extra heavy quarts, - - - - - "	7.50
Do. do. pints, - - - - - "	6.00
Fluted top and bottom quarts, - - - - - per pair	3.00 to 4.00
Do. do. do. pints, - - - - - "	2.25 to 3.00

WINE GLASSES.

Tale taper, - - - - -	per doz.	.75
Ring or knob stem, assorted, - - - - -	"	.90
Do. do. engraved, - - - - -	"	1.25
Flint plain, - - - - -	"	1.12 1/2
Do. puntied, - - - - -	"	1.25 to 1.50
Best flint flat fluted, - - - - -	"	2.00 to 4.00
Do. do. cut fancy patterns, - - - - -	"	2.25 to 7.50

CHAMPAIGNES.

Best plain puntied, - - - - -	"	2.75 to 3.00
Do. do. fluted - - - - -	"	4.00 to 8.00

JELLY GLASSES.

Tale or common, plain, - - - - -	"	.90
Do. do. engraved, - - - - -	"	1.50
Flint plain, per doz. 1.25 puntied, - - - - -	"	1.50 to 1.75
Best flat fluted, - - - - -	"	2.50 to 4.50
Fancy cut, - - - - -	"	3.00 to 8.00

GOBLETS.

Arch, ribbed and ringed half pint, - - - - -	"	1.50
Knob stem - - - - -	"	2.00

Best do. plain or figured, - - - - -	[per doz]	3.00
Fluted do. do. - - - - -	"	4.00 to 8.00

LEMONADES.

Gill, strait or barrel, - - - - -	"	1.00
Do. or do. engraved, - - - - -	"	1.50
Do. or do. fluted, - - - - -	"	2.50 to 4.00

EGG GLASSES.

Plain or pressed, - - - - -	"	1.00
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INK STANDS.

Cone or well, - - - - -	"	.50 to .75
Double inks, for red and black, - - - - -each		.25 to .75

COMMON KNOBS AND PINS.

Plain 1 in. - - - - -	per dozen,	.62 1/2
Do. do. 1 1/4 in. - - - - -	"	.75
Do. do. 1 1/2 in. - - - - -	"	.90
Do. do. 1 3/4 in. - - - - -	"	1.10
Do. do. 2 in. - - - - -	"	1.20
Do. do. 2 1/8 in. - - - - -	"	1.35
Do. do. 2 1/4 in. - - - - -	"	1.50
Plain light, 1 3/4, 1.00; 2 in. 1 12 1/2;		
2 1/4 in. - - - - -	"	1.25
Cut, various patterns, 2 in. - - - - -	"	2.50 to 4.50
Curtain pins, with metal shanks, 3 in. 3.00;		
4 in. 4.00; 5 in. - - - - -	"	5.00

PRESSED PLATES.

Round or octagon, 9 inch, - - - - -	"	6.00 to 7.00
Do. do. 8 " - - - - -	"	4.00 to 5.00
Do. do. 7 " - - - - -	"	2.00 to 2.50
Do. do. 6 " - - - - -	"	1.25 to 1.50
Do. do. 5 " - - - - -	"	1.12 1/2 to 1.50

PRESSED SAUCERS AND NAPPIES.

Round or octagon, 8 inch, - - - - -	"	4.50 to 5.00
Do. do. 7 " - - - - -	"	2.50 to 3.00
Do. do. 6 " - - - - -	"	1.50 to 1.75
Do. do. 5 " - - - - -	"	1.12 1/2 to 1.25

PRESSED DISHES.

Oval or octagon, 9 inch, - - - - -	"	4.50 to 6.00
Do. do. 8 inch - - - - -	"	3.00 to 4.00
Do. do. 7 inch - - - - -	"	2.25 to 2.75

SALVERS OR JELLY STANDS.

6 to 8 in. each. 50 to. 62 1/2; 9 to 10 in. each	.75 to 1.00
11 to 12 in. " 1.25 to 1.50; 13 to 14 in. "	1.75 to 2.00

PRESSED SALTS.

Steam Boat, oval or square - - - -	per doz.	.50 to .80
Heavy pillar, square or oval - - - -	"	2.00 to 3.00
Cut salts, - - - -	per pr.	1.50 to 7.00

CANDLESTICKS WITH METAL SOCKETS.

Heavy do. do. assorted, - - - -	"	.75 to 1.50
Do. best plain do. - - - -	per pr.	1.50 to 2.00
Do. cut, do. do. - - - -	"	5.00 to 8.00

LAMPS.

Do. cut or frosted - - - -	"	8.00 to 10.00
Pressed foot, taper or globe, - - - -	per doz.	3.00 to 3.50
Do. heavy do. do. - - - -	"	4.50 to 7.50
Do. cut, - - - -	per pr.	1.50 to 3.00
Segar, wine or night - - - -	per doz.	1.50 to 2.00
Socket or peg lamps, - - - -	"	1.50

LANTERNS.

Barrel shape, tin mountings, - - - -	each	.50 to .75
Signal, do. - - - -	"	.75 to 1.00

CASTOR FRAMES.

Japanned, 3 to 5 glass, - - - -	"	.75 to 1.00
Britania, 4 to 6 do. - - - -	"	1.50 to 2.00
Best metal Japan, 4 to 5 do. - - - -	"	1.50 to 1.75
Wood or paper, 3 to 6 do. - - - -	"	3.00 to 8.00

CASTOR BOTTLES.

Peppers, with plated tops, - - - -	per doz.	1.00 to 1.62 1/2
Vinegars and stoppers, - - - -	"	.87 1/2 to 1.50
Mustards and glass tops, - - - -	"	1.25 to 1.62 1/2
Cut assorted, - - - -	"	6.00 to 7.00

CUP PLATES.

3 inch cable edge, - - - -	"	.25
3 " scalloped, assorted patterns, - - -	"	.28
3 1/4 " do. do. do. - - - -	"	.33
3 1/2 " do. do. do. - - - -	"	.37 1/2

 APOTHECARIES' SHOP FURNITURE

Specie jars--lackered covers.	[per doz]	
Two gallon, - - - - -	"	10.00
Six quart, - - - - -	"	8.00
Gallon, - - - - -	"	6.00
Three quart, - - - - -	"	5.00
Half gallon, - - - - -	"	4.00
Quart, - - - - -	"	2.75
Pint, - - - - -	"	1.75
Half Pint, - - - - -	"	1.25
Specie Jars & Covers--squat shape.		
Gallon, - - - - -	"	6.50
Three quart, - - - - -	"	5.50
Half gallon, - - - - -	"	4.50
Quart, - - - - -	"	3.00
Pint, - - - - -	"	2.00
Tinctures--with ground stoppers.		
Two gallon, - - - - -	"	12.00
Six quart, - - - - -	"	9.00
Gallon, - - - - -	"	7.00
Half gallon, - - - - -	"	5.00
Quart, - - - - -	"	3.00
Pint, - - - - -	"	2.00
Half pint, - - - - -	"	1.50
Four ounce, - - - - -	"	1.25
Salt Mouths--with ground stoppers.		
Two gallon, - - - - -	"	13.50
Six quart, - - - - -	"	10.50
Gallon, - - - - -	"	8.50
Three quart, - - - - -	"	7.00
Half gallon, - - - - -	"	5.50
Quart, - - - - -	"	3.50
Pint, per doz. 2.25; half pint, - - - - -	"	1.50
Four ounce, - - - - -	"	1.50
Shew Globes--with globe stoppers.		
Two gallon, - - - - -	each	1.50
Six quart, - - - - -	"	1.25
Gallon, - - - - -	"	1.00
Half gallon, - - - - -	"	.75
Quart, - - - - -	"	.50

Breast pipes, - - - - -	per doz.	3.00
Nipple shells, - - - - -	"	.90
Cupping glasses, - - - - -	"	1.00
Nurse bottles, - - - - -	"	3.00
Funnels, gill to quart, - - - - -	"	1.25 to 2.25
Graduated measures, - - - - -	each	1.00 to 1.50
Mortars and pestles,		
quart to half pint, - - - - -	"	1.25 to 2.25
Pungents, assorted, - - - - -	per doz.	1.00 to 1.37 1/2

F. PLUNKET & Co. are now

carrying on an extensive manufacture of CUT GLASS, of the most splendid and new patterns, which is unrivaled by any other factory in the splendor of the Glass and the beauty of the patterns.

Wheeling Oct. 12, 1837

APPENDIX C

SWEENEY - CLAY CORRESPONDENCE

On December 27, 1844, the Wheeling Times and Advertiser published transcriptions of two letters concerning M. and R. H. Sweeney and Company's gift of a cut glass vase to the recently defeated Whig presidential candidate, Henry Clay.

* * * * *

M. and R. H. Sweeney and Company to Henry Clay --

Wheeling, Va., 28th Nov., 1844.

Hon. H. CLAY -- Dear Sir -- We have sent to you a large Glass Vase, which was made at our Glass Manufactory in this city, and which was thought worthy of a medal by the Franklin Institute of Philadelphia, when exhibited at the recent Fair in competition with similar manufactures from other parts of the United States. We have supposed, therefore, that it may be deemed worthy of your acceptance, as a specimen of American skill and as an appropriate tribute to the enlarged wisdom, the patriotic zeal, and distinguished ability with which you have uniformly sustained and encouraged the arts and industry of our own country. To you, Sir, more than to any other statesman, your countrymen justly attribute the

present degree of perfection to which Americans have attained in the manufactures which are essential to national security, and conducive to the comfort and happiness of the people. As a testimonial that we cordially concur in this sentiment, and in the general admiration of the genius and virtues, which have made your life a blessing to our country, and which will hand down your name to future times, undimmed by the misrepresentations of the present, we pray you to accept this production of American manufacture.

With the highest esteem, Sir,

We are your friends,

M. & R. H. Sweeney & Co.

* * * * *

Henry Clay to M. and R. H. Sweeney and Company --

ASHLAND, 14th Dec 1844

Gentlemen -- I duly received your obliging letter and the large Glass Vase, in perfect condition, which, having received the medal of the Franklin Institute of Philadelphia, you have kindly tendered to me. I thank you, gentlemen, most cordially and gratefully for this beautiful article, surpassing in magnitude and splendor any production of Cut-glass which I have ever seen. And I thank you also for the friendly motives which prompted you to place me under an obligation so great to you. The Vase is a triumphant vindication of the wisdom of that policy, to the establishment of which I have devoted my utmost endeavors,

respecting which, however, others should share largely in the merit which you are pleased to assign me.

How surprised and, at the same time, gratifying is the reflection that in the City of Wheeling, on the site of which, at a period not much more remote than that of my birth, Savages roamed in undisturbed dominion, an object of costly manufacture has been produced rivaling in beauty, elegance and exquisite taste the most finished fabrics of a similar nature in the old world!

Long may that policy be cherished and sustained which, by stimulating American skill and enterprize, and protecting American labor, has led to these beneficial results. And I sincerely hope that you may long live, in prosperity, to witness the progress and enjoy the benefit of American Manufactures.

I regret that the Vase has not some more conspicuous place than in my humble dwelling, where it might be expected and would command the admiration of a greater number than can view it here. But we shall exhibit it to our visitors as a precious testimony of your friendly regard, and as a brilliant evidence of the degree of perfection to which that species of manufacture has already arrived.

I am gentlemen, with the highest regard, your friend and observant servant,

H. CLAY

Messrs. M. & R. H. Sweeney