

History of the Franklin Glass Works Portage County, Ohio

By George L. Miller

Location

Archaeological excavation of the Franklin Glass Works undertaken by Case Western Reserve University and the Western Reserve Historical Society from 1968 through 1970 prompted the need for a clear view of the factory's history and its relationship to the surrounding community.

Research efforts first focused on the location of the glassworks in Portage County, which in the 1820s was a sparsely settled area of Ohio. Between 1820 and 1830, however, the population of the country grew from 8,654 to 18,747. The number of residents in Franklin Township, where the glasshouse was situated, increased from 348 to 803 in the same period.

Prior to the War of 1812, most glasshouses in America were established east of the Alleghenies, near the centers of population. The major exception to this was the glass industry that developed in Pittsburgh. The Trade Embargo of 1807 and the War of 1812 made the buying public more dependent on native manufacturers. While there were only nine glassworks in operation in the United States in 1800, at least forty-four were built between 1808 and 1814. By 1820, half of the glasshouses in America had failed, largely the result of the importation of European glass after the War of 1812.

¹ Congress responded to this large influx of foreign goods by passing the Tariff Act of 1816, which placed specific duties on black glass bottles and window glass and a 20% *ad valorem* duty on all other glass.² However, it failed to protect the American glass industry because of a subsidy given to British glass manufacturers. In 1815 and again in 1816, the English Excise Act of 1812 was renewed. This Act taxed glass that was manufactured and consumed in England. If the glass was exported, however, then the tax was refunded to the manufacturer; in addition, he received a bounty for exporting it.³ Because of this subsidy, the English were able to compete quite freely with American manufacturers, leading to the demise of a number of American

glasshouses.

One way in which the Americans could compete with English glass producers was to move their industries to the interior part of the country, thereby placing the cost of land transportation between their product and the imported glass. A U.S. Senate committee report from 1816 states "that a ton of goods could be brought 3,000 miles from Europe to America for about nine dollars, but that for the same sum, it could be moved only 30 miles overland in this country."⁴ This high cost of land transportation appears to have offset the English subsidy judging from the number of glass factories built west of the Appalachian Mountains after the War of 1812. Certainly, many glassmakers moved west during this period.⁵

Another reason for going west may have been the availability of firewood for glass furnaces. In 1810, Tench Coxe reported that:

*Wood fuel and consequently alkaline salts are to be procured with a profit, because the land from which a glass manufacturer or potter should take them would be greatly increased in value, by the removal of the wood.*⁶

Fuel, fire clay, silicates and market would all enter into the decision of where to build a glassworks.


In 1824 the American glass industry received further assistance by the passing of a stronger protective tariff. Between 1824 and 1837, sixty-four new glasshouses were erected, thirty-three of them in the Midwest.⁷ Eight of these were located in Ohio during the 1820s; one was the Franklin Glass Works in Portage County.

In January, 1823, the Ohio legislature passed a law exempting "all mills, all woolen and cotton

manufactories, and all manufactories of iron or glass" from taxation.⁸ This exemption, the 1824 tariff, the distance from English competition and the availability of fuel and raw materials undoubtedly all played a part in the selection of Franklin Township for a new glass factory.

Aaron Olmstead of Hartford, Connecticut, had purchased all 13,830 acres of Franklin Township from the Connecticut Land Company in September, 1799, but died before he could develop it. Sometime before September 13, 1817, the trustee of Olmstead's estate entered into negotiations with Jesse Farnam and Charles Douglas of Westfield, Massachusetts, who wished to purchase 6,295 acres. Lot 80, upon which the Franklin Glass Works was later built, was included in the transaction.⁹ Through a

FRANKLIN GLASS-WORKS

PARKS, EDMUNDS & PARKS

RESPECTFULLY inform their friends and the public in general, that they are now able to supply any quantity of Hollow

GLASS WARE

At the most reduced prices, at the
Manufactory lately Established,
(North West of Franklin.)

BOXES, containing a general assortment of Ware, will be carefully packed to suit purchasers.

Orders are respectfully solicited—
They shall be thankfully received and punctually attended to

PARKS, EDMUNDS & PARKS

Franklin, Sept. 9th, 1825.—3w-21.

[Figure 1]

series of five deeds, the two men were able to secure clear title to roughly 90% of the 6,295 acres before their notes of loan were due in 1822. Although Lot 80 was not among those lots cleared by the deeds, it does not appear to have reverted to the Olmstead estate because Farnam and Douglas are named as the owners of Lot 80 in the Portage County land tax records for 1823, 1824 and 1825. The title to this lot was finally cleared from the Olmstead estate by a deed to Jesse Farnam dated November 28, 1828.¹⁰ Unfortunately, none of these documents includes specific mention of a glasshouse.

Because of the tax exemption status extended to glass factories, the glassworks is not named in the Ohio land tax records between 1823 and 1830. The exemption law was reversed in 1832, but the tax list for that year could not be located. On the 1833 list, however, no improvements are shown for Lot 80, suggesting that the Franklin Glass Works was out of business by that date.

Farnam eventually acquired an additional 2,900 acres of the township from the Olmstead estate; the two

Massachusetts men were considered in effect to be "the proprietors of the township."¹¹ With their large land holdings, Farnam and Douglas would presumably have been interested in developing their lands so as to increase its value, especially since improvements were not taxed until after 1832. One of the easiest ways to enhance land value was to clear it of timber. As discussed above, Tench Coxe recommended building a glass factory or pottery as a good means of doing this.

It is significant that both Farnam and Douglas had previous interests in glass factories. Both were among the incorporating owners of the Chester Glass Works in Berkshire County, Massachusetts in June, 1814.¹² Although it was a short-lived venture, closing in 1815, Farnam and Douglas would have come into contact with glass craftsman and learned something of the business. The collapse of the eastern market after the War of 1812 would have created a pool of unemployed glass workers who could have been interested in a project that would establish a glassworks out of the

reach of the cheaper imports. The success of the Mantua Glass Works and the Woodward, Hopkins, and Ladd Glass Works in Franklin Mills (Kent) might have suggested to Farnam and Douglas the feasibility of opening a glasshouse in that area. Whether or not they were actually involved in the undertaking is not known, however. No personal papers of either Farnam or Douglas have yet come to light which might clarify their role in the founding of the Franklin Glass Works.

In the 1829 land tax records, Farnam is listed as owning all 193 acres of Lot 80 where the factory was erected, but no information is given with regard to the physical plant of the factory. A note indicates that taxes had been paid on one section of the lot containing 53 ½ acres and one of the 100 acres; 39 acres were delinquent. This situation suggests intended sales of land. Records for 1830 name Samuel

Foster as the owner of the 53 ½-acre parcel, but Farnam still owned the other parcels. The glassworks was located on the 100-acre section. According to Ohio's law, joint owners of land could each separately pay his own part of the tax due.¹³ It is likely, therefore, that there was an attempt to purchase the site of the factory, but the transaction was not completed. In 1835, Farnam sold the westernmost 148 acres of the lot to Christian Cackler for \$680, or about \$4.60 an acre. A land boom was well underway at that time, but the low price does not reveal that a glass factory existed on the property. No mention is made of a glassworks or any other improvements in this deed. Cackler later noted in his published *Recollections*, "In the year 1824, James Edmunds, Henry Parks and a brother built a glass factory on the land now owned by Christian Cackler."¹⁴


According to the 1850 plat book for Franklin Township, Cackler's parcel contained 35 acres of plow land, 98 acres of meadow and 15.8 acres of woods and inarable land, probably a marshy area. Mengas Anderson owned the property early in this century. When he visited the site during the archaeological excavation, he recalled how they would drive the horses back and forth over the factory area to break up the brick walls (most likely the furnaces) with the plow. Because so little information about the factory site was contained in the written records, it was thanks to Anderson and successive owners who had plowed the land that knowledge of the glasshouse site was preserved over the years.

The Factory

On September 10, 1825, the *Western Courier*, a newspaper published in Ravenna, carried the advertisement which announced the opening of the Franklin Glass Works [Fig. 1]. The owners named at the bottom of the notice were Parks, Edmund and Parks. At the end of three weeks, the ownership was changed to James H. Edmunds [Fig. 2]. The announcement continued in this form for six months. These were the only advertisements of the factory to appear in the *Courier* for the years checked, which included 1825, 1826, 1830 and 1831.

Cackler had stated that the factory had been built in 1824, but it was not unusual for a year to pass before production could get underway. Another bit of evidence

**FRANKLIN
GLASS-WORKS**



JAMES H. EDMUNDS,
RESPECTFULLY informs his friends
 and the public in general, that
 he is now able to supply any quantity
 of Hollow
GLASS WARE
 At the most reduced prices, at the
Manufactory lately Established,
 (North West of Franklin.)
 BOXES, containing a general assort-
 ment of Ware, will be carefully packed
 to suit purchasers.
 Orders are respectfully solicited—
 They shall be thankfully received and
 punctually attended to.
JAMES H. EDMUNDS.
 Franklin, Sept. 9th, 1825.—tf.

[Figure 2]

supporting the 1824 date was found in the records of the Portage County Court of Common Pleas. Richard and George Parks, the probable partners of Edmunds, declared their intent to become United States citizens in May of that year. That they had emigrated from Great Britain is indicated by their renouncement of allegiance to "any foreign prince, Pottentate, State or Sovereignty what-so-ever and Particularly to George the fourth of Great Britain, Ireland and Scotland."¹⁵ If the Parks brothers were practical glassmakers, they must have broken the English laws restricting the emigration of skilled craftsmen, laws which were only repealed in 1824. This declaration, the 1825 advertisements, and Cackler's reminiscences are the only sources which mention the Parks brothers. Cackler, writing forty years after the event, gave the name of only one brother, which he remembered as Henry. None of the sources checked, however, produced any sign of a Henry Parks.

While the Parks brothers were in Portage County as early as May, 1824, they apparently left before the July 4, 1827 census of white males twenty-one years and older. If the brothers had been the capitalists behind the Franklin Glass Works, they might have persevered to recover their investment. If their share of the partnership was in return for practical glass knowledge, they may have exchanged an uncertain financial arrangement for the security of regular pay for work performed. The newspaper advertisements indicate the Parks brothers relinquished their partnership status soon after the first blow was begun. Even if they had been bought out, this change suggest there were financial problems during the first and critical year of production.

Nonetheless, the Franklin Glass Works continued in operation after the Parks brothers left. Perhaps their skills were not critical or replacements had been found. How long James Edmunds ran the glass factory as sole proprietor is not known.

In February, 1827, during the second season of production, Edmunds and Cackler borrowed \$139.47 on a two-year note from Jesse Farnam.¹⁶ This suggests that Cackler may have been a partner with Edmunds, although the glass factory itself is not mentioned. Interestingly, Farnam's note called for the payment to be in grain,

or cattle.

The third blowing season, from the fall of 1827 to the spring of 1828, apparently did not produce enough profit to continue producing glass. The chief evidence for this was found in the September 6, 1828 issue of the *Western Courier*, where the following announcement was published by the Commissioner Insolvents:

Notice: Will be exposed to sale at public venue at the glass works in Franklin on the 15th day of September next...four hogs, a quantity of oats, utensils for making glass, also farming & other utencils, &c...these articles were assigned to me by James H. Edmunds...for the benefit of...creditors. – The said James H...will make application to the next court of Common Pleas to be holden at Ravenna...on the eighth of September next for the benefit of the act for the relief of insolvent debtors.

During the summer months when glassblowing had ceased, furnaces were repaired and raw materials and fuel were acquired for the next season. That Edmunds applied for insolvency in the early fall may mean that he could not obtain the necessary supplies or labor force to begin full production.

Edmunds was apparently able to recover from this insolvency, probably by acquiring new financial sources. In a suit brought by Freeman Trask, Cackler and Issac Crank, or Grant, are named as partners of James H. Edmunds. The suit was over a due bill, issued November 13, 1829 for \$20 worth of material supplied to the Franklin Glass Works.¹⁷ This suggests that the 1829-1830 season of glassblowing had begun, but how long production lasted is not known. A garbage pit to the north of the Franklin Glass Works contained an 1830 American large cent indicating that someone, possibly Edmunds, was living at the premises into 1830, if not later.

In January, 1830, Jesse Farnam brought suit over the loan of \$139.47 cited above. Cackler and Edmunds argued that Farnam was not available and did not appoint an agent to receive the grain or cattle, which they were ready to pay. Moreover, they claimed that:

The said Jesse Farnam at the time of the commencement of this suit was indebted to them in the sum of two hundred dollars for money by them paid laid out and expended for him and for

*money by him and received to and for their use, and for goods by them sold and delivered to him, and for work and labor by them done and performed for him.*¹⁸

This suggests that Farnam had some relationship or agreement with the Franklin Glass Works. Unfortunately, Farnam did not answer this charge and the case was dropped. Farnam is not listed in the advertisements or named in Trask's suit as a partner, but this role may have been as landlord, receiving some part of the product as rent. Perhaps he had given money to have his vast land holdings cleared of timber. Farnam's previous experience with the Chester Glass Works may have made him wary of investing, and so he made a loan instead.

Glass may have been made into 1831, but the omission of the factory from the 1833 tax list implies that it was definitely out of business by that time. A number of factories may have figured in its closing. When the Franklin Glass Works was built, it was safely removed from foreign competition. However, there were two other glass facilities in Portage County, at Mantua and at Franklin Mills, which would have also been competing for the market in the Western Reserve. There was also strong competition from glasshouses in Pittsburgh and Zanesville. With the completion of the Erie Canal in 1825, and the Ohio Canal in 1832, the Western Reserve was no longer isolated, and glass from the east could easily and cheaply be shipped west via the canals. Even before the Erie Canal was finished, window glass from Geneva, New York, was being advertised as far west as Detroit.¹⁹

In 1832, a survey of American manufacturers was conducted by the House of Representatives to evaluate the need for a new tariff. Almost all of the glass manufacturers who responded said that glass prices had been falling for a period of six or seven years, the result of domestic competition.²⁰ There is some evidence that this decline in prices may have been accomplished – at least in Franklin Township – by increasing problems in securing wood fuel for the glass furnaces. Although difficult to document, the introduction of pressed glass must also have altered the market. The profitability of glass factories in Ohio was also diminished by the removal of the tax-exempt status in 1832. At what point these economic forces would have brought about the collapse of the Franklin Glass

works is not known, but it was probably a furnace failure that tipped the scales and ended the enterprise.

Archaeological excavation of the well at the Franklin Glass Works yielded fragments of one of the glory holes, large crucible shards, and large boulders of glass – one of which was so large that it plugged up the well. These are obviously the resulting debris from a major furnace failure, which must have been the *coup de grâce* of the glasshouse. A glass furnace full of hot glass represents a large investment in fuel, crucibles and labor. If it fails – if several pots break, or if the furnace collapses – it is often enough to bankrupt a glassworks. From Edmund's own financial insolvency and the partnership changes, it seems that the Franklin Glass Works was no great financial success. The collapse of the furnace broke the willingness of the investors to advance any more money.

A Note on James H. Edmunds

Census records indicate that James H. Edmunds was born between 1780 and 1790, but the place of his birth, and where he learned the glass trade, have not been determined. The 1820 census for Chester Township, Berkshire County, Massachusetts lists a John Edmunds and a Thomas Edmunds, who may have been related to the Edmunds in question.

A venture in which Edmunds may have been involved was the Zanesville White Flint Glass Works, which published the following advertisement in the Cincinnati Gazette for May 2, 1820:

*Zanesville White Flint Glass Manufacturing Company, Edmunds, Bingham & Co., respectfully informs the public that they have commenced the above business in its various branches, on the improved plan, and from their long experience, both in Europe and American, feel justified in saying that the glass manufactured at their works shall not be inferior to any made in the United States...*²¹

A major difference between the Zanesville factory and the Franklin works is that the latter enterprise did not advertise, nor presumably manufacture, "white flint glass."

It could not be proved that the Edmunds cited in connection with Zanesville is James H. Edmunds of Franklin Township. The 1820 census for Muskingum County, where Zanesville

was located, does not list anyone named Edmunds. Only heads of household are specified, but Edmunds may have boarded with his parents. There is a John Bingham listed in Brush Creek Township, for example, whose household contained two men between 16 and 18 years, two between 26 and 45 years and one over 45 years of age. From the Portage County census of 1830, it is clear that James Edmunds was between 40 and 50 years old at that time, so it is plausible. However, according to the census taker, no members of the Bingham household were involved in manufacturing.

The only personal statement of James H. Edmunds that has survived is a toast that he gave on July 4, 1825: "By Mr. Edmunds, - The clay of the West, not inferior to any clay in the known world."²² This salutation, one of many patriotic toasts, may refer to Henry Clay, one of the driving forces behind the protective tariff of 1824. Given his business, Edmunds must have delighted in the pun, because the toast can also be interpreted to mean the clay from which the crucibles for melting glass were made. A resistant fire clay was required for these crucibles and deposits of this type of clay are rather rare. Availability of crucible quality clay was an important attraction for the industry in the Western Reserve.

In March, 1831, Edmunds was charged with forgery in the Portage County Court of Common Pleas. The case was continued until the May, 1832 term, when the prosecuting attorney dropped the case. Unfortunately, the nature of Edmund's alleged forgery is not described.²³

Farnam's suit against Edmunds and Cackler indicates that Edmunds remained in Portage County at least until March, 1833, but his whereabouts after that date are unknown.

Products of the Franklin Glass Works

Most of the glasswares made at the Franklin Glass Works were bottles, flasks, tumblers and milk pans patterned in dip molds, having a plain or swirled rib design. A small quantity of sherds from some three-piece mold blown bottles were also recovered. The color of the glass ranged from light aqua to an olive green and from a light amber to brown. All of these colors could have resulted from varying amounts of iron in the glass and the degree of oxidation of reduction involved in processing each batch. Rims

on milk pans were usually folded over while others vessel rims tended to be only fire polished.

Other Franklin Glass Works Publications

David S. Brose of the Cleveland Museum of Natural History has his report describing the factory excavations and the glass produced by the Franklin Glass Works. The collections from the excavations have been turned over to the Western Reserve Historical Society in Cleveland, Ohio.

Collections from the house area of the Franklin Glass Works were analyzed by Meredith Moodey for her masters thesis at the College of William and Mary. This thesis was completed in 1987.

The following articles contain more information on the excavation and artifacts from the Franklin Glass Works:

George L. Miller and Silas Hurry, "Ceramic Supply in an Economically Isolated Frontier, Community: Portage County of the Ohio Western Reserve, 1800-1825," *Historical Archaeology*, 17, No. 1 (1983): 80-92.

George L. Miller and Meredith Moodey, "Of Fish and Sherds: A Model for Estimating Vessel Populations from Minimal Vessel Counts," *Historical Archaeology*, 20, No. 2 (1986): 59-85.

Acknowledgements:

I would like to express my gratitude to the numerous people who helped in my research of the Franklin Glass Works. First, I would like to recognize the financial backing provided by the Western Reserve Historical Society, which enabled me to gather the material for this history. The gifts of James F. Courtney, Mrs. Warren H. Corning and other members of the Committee to Restore the Franklin Glass Works, made this research possible. My report is an extension of Case Western Reserve University excavations, which were funded by a grant from the Kettering Family Foundation to David S. Brose. In addition to the funding I received, I would like to thank the several people who were the most helpful in my research. Both James Courtney and the late Duncan Wolcott were very helpful in the beginning stages of this project when I needed it most. Jim's advice on my interpretations of various legal documents from the Portage County Court House saved me from making several errors in the

interpretation of those records. Virginia Hawley and other librarians at the Western Reserve Historical Society pointed out many sources I would have overlooked. John Shoup, of Kent, Ohio, was a storehouse of information about Kent's history, which he generously shared with me. Arnold R. Pilling, my mentor Wayne State University in Detroit, read early drafts of the history and made helpful suggestions. To all of these people, and others, I owe a debt for their support and suggestions.

References:

- ¹ McKearin, George S. and Helen. *American Glass* (New York: Crown, 1948), pp. 132-133.
- ² McKearin, *American Glass*, p. 133.
- ³ Jarves, Deming. *Reminiscences of Glass-Making* (1868, repr. Ed. Great Neck, N.Y.: Beatrice C. Weinstock, 1968), p. 83
- ⁴ Quoted in George Rogers Taylor, *The Transportation Revolution 1815-60* ("The Economic History of the United States," 4; New York: Harper & Row, 1951), pp. 132-33.
- ⁵ White, Harry Hall. "Migrations of Early Glassworkers," *Antiques*, 32, No. 2 (August, 1937): pp. 64-67.
- ⁶ Coxe, Tench. *A Statement of the Arts and Manufactures of the United States of America for the Year 1810* (1814; repr. Ed. New York: Luther Cromwell Co., n.d.), p. xlv.

- ⁷ McKearin, *American Glass*, p. 135.
- ⁸ Chase, Solomon. *The Statutes of Ohio and of the Northwestern Territory Adopted or Extracted from 1788 to 1833 Inclusive*, 2 (Cincinnati: Corey & Fairbank, 1834), p. 1258.
- ⁹ Portage County Deeds, 4: 261, 298. Portage County Court House (hereafter PCC).
- ¹⁰ Portage County Deeds, 4: 300; 5: 72-73; 7: 42-43; 11: 240.
- ¹¹ Cackler, Christian. *Recollections of an Old Settler* (Ravenna: Record Publishing Co., 1964), p. 22. This book reprinted newspaper articles written by Cackler in the 1870s.
- ¹² McKearin, *American Glass*, p. 592.
- ¹³ Portage County Land Tax Records, Kent State Univ., Library, State of Ohio, *A Compilation of Laws, Treaties, Resolutions and Ordinances...which relate to land in the State of Ohio...to the years 1815-16* (Columbus: George Nashee, 1825), p. 432.
- ¹⁴ Portage County Deeds, 20: 597. Cackler, *Recollections*, p. 20.
- ¹⁵ Portage County Court of Common Pleas, Journal 4, p. 146. PCC.
- ¹⁶ Portage County Court of Common Pleas, Vol. 15-O, p. 134.
- ¹⁷ Portage County Court of Common Pleas, Vol. 13-M, p. 136-39.
- ¹⁸ Portage County Court of Common Pleas, Vol. 13-M, p. 136.
- ¹⁹ *Detroit Gazette* (June 4, 1824).
- ²⁰ *United States House of Executive*

Documents, Vol. 223, House Documents, Vol. 7, Pt. 2, Documents 308, pp. 523-32.

²¹ Quoted in McKearin, *American Glass*, pp. 232-33.

²² *Western Courier* (July 9, 1825).

²³ Portage County Court of Common Pleas, Journal 5, March term 1831, p. 251; May term 1832, p. 432.

Note: This article first appeared in *The Glass Club Bulletin* of The National Early American Glass Club, No. 152, Spring, 1987, pp. 3-9.

Photos:

Figure 1: Advertisement of the Franklin Glass Works, published in Ravenna's *Western Courier* (September 10, 1825), with Parks, Edmunds and Parks named as owners. [Photo courtesy Western Reserve Historical Society.]

Figure 2: Advertisement placed three weeks later, with only James H. Edmunds named as owner. [Photo courtesy Western Reserve Historical Society.]

George L. Miller
Senior Laboratory Analyst
Office of Excavation and Conversation
Colonial Williamsburg Foundation
Williamsburg, Virginia

Continued from page 19

a wood case for a traveling ink. The bottle is missing from the wood case. The pottery pints are stamped from P & J ARNOLD/LONDON. The labeled white cone is from THADDEUS DAVIDS & CO. (Photo by author.)

Figure 17: This grouping has a G.W. MERCHANT/LOCKPORT N.Y.; JOB/MOSES on two sides; M. DIMMETT/ST. LOUIS//COUGH//BALSAM; DOCT/MARSHALL'S//SNUFF; NY MEDICAL//UNIVERSITY (with backwards N) in cobalt; DR J.H. McLEAN'S/CANDY VERMIFUGE/ST LOUIS which looks like a lozenge cylinder; R.R.R.//ENTd ACCORD/TO ACT OF/CONGRESS//RADWAYS// SARSAPARILIAN / RESOLVENT; rolled lip MRS INSLOWS/ SOOTHING SYRUP/CURTIS & PERKINS/ PROPRIETORS; and an amber rolled lip snuff. (Photo by author.)

Figure 18: DR. J. HOSTETTERS/

STOMACH BITTERS in olive green (large size) plain base; a greenish yellow with L & W 10 on base with two dots under R; and amber with S. McKEE & Co. 1 on base. (Photo by author.)

Figure 19: L to R: ST/DRAKES/1860/ PLANTATION/X/BITTERS six-log black cranberry color; an amber KELLY'S/OLD CABIN/BITTERS//PATENTED/1863; four-log DRAKES in olive green. (Photo by author.)

Figure 20: All these bottles have open pontils except the soda, third from left, which has a graphite pontil. From L to R these are: a flared lip Jamaica ginger; acid with fitted stopper; blob top soda embossed H. GRONE & CO/St (with two dots under the T) LOUIS/Mo with letters FRL on the reverse; AYER'S //LOWELL/MASS // PILLS; 18 Paneled catsup; GIROLAMO/ /PAGLIANO; two-piece mold catsup; and a utility two-piece mold bottle in very

heavy glass. This one was found protruding from a cow trail. (Photo by author.)

Figure 21: L to R: Light amber lady's leg; BENNETT. PIETERS & CO//RED JACKET/BITTERS, amber; C. H. SWAIN'S//BOURBON//BITTERS on a yellow-amber, case-shaped bottle. (Photo by author.)

Figure 22: L to R: HELLMAN'S// CONGRESS BITTERS//ST LOUIS. Mo; C. LEDIARD/ST LOUIS six-sided with double neck ring; BRADY'S//FAMILY// BITTERS. (Photo by author.)

Ray Thompson is a Montana native with a life-long interest in western mining history. He can be reached via E-mail: kcthomp@aol.com, phone: (406) 273-7780 or by writing to: PO Box 9003, Missoula, MT 59807.