

EARLY MANUFACTURING IN LANCASTER COUNTY: 1710-1840

(PART 4, CHAPTER VIII)

MISCELLANEOUS MANUFACTURES

The Proprietor of the American FLINT GLASS MANUFACTORY at Manheim, in Lancaster County, with the Advice of many Gentlemen in this City, his Friends, has offered a SCHEME of a LOTTERY to the Patronage of the Public, to enable him to carry on a Manufactory of public Advantage, and to raise a Sum of Money for that and other beneficent Purposes in the Scheme mentioned.

—*Pennsylvania Gazette, March 17, 1773*

The detailed story of Henry William Stiegel's ventures in the manufacture of glass is already a matter of record and need not be reiterated here.¹ His first glass was blown at Elizabeth Furnace in 1763, and a few years later operations were transferred to the Manheim glass factory which subsequently gave way to a second factory in the same town. Investments, speculations, and extravagant living strained Stiegel's resources to the breaking point. When his inverted financial pyramid collapsed in the early 1770's, it swept him into ruin and poverty. Two generalizations of interest for the present discussion emerge from the Stiegel story. The employment of scores of workmen in the Manheim glass houses justifies the placement of these works in the factory class, a status which, if the ironworks be excepted, was rarely attained by Lancaster County manufacturing enterprises in the eighteenth century.² A second generalization is suggested by the quotation which introduces the present chapter. Lotteries, although freely employed for religious, educational, and internal improvement puposes, were practically never used to raise manufacturing capital in Lancaster County during the period of this study. Stiegel's flint glass lottery, the only lottery organized and authorized on behalf of a local manufactory, was projected as a move of desperation. As a venture into a new and untried field of manu-

facturing finance, it met with little success and made little impression upon the public mind which was conditioned to think of the lottery almost exclusively in terms of philanthropic and internal improvement enterprises.

Early attention was given to the manufacture of tobacco products in Lancaster County, and eight tobacconists had shops in Lancaster in 1773.³ One of these craftsmen, Christopher Demuth, founded a business which is still perpetuated in the city under the Demuth name. Today when the county is noted for its tobacco crops, it seems odd to think that the early shop tobacco industry developed on the imported leaf. Such was the case, however, for the small beginnings of commercial tobacco planting in the county only occurred in the 1820's. The Virginia and Kentucky regions were principal sources of supply for the raw materials required by the early tobacco shops, but imports of the leaf were also received from Cuba and Santo Domingo in the Caribbean.⁴ The manufactures of these shops included chewing and smoking tobacco, snuffs, and various kinds of "segars."⁵ Simple tobacco cutting machines were in use toward the close of the eighteenth century, and snuff mills were in operation in 1810.⁶ During the following three decades, the industry grew from an annual production valued at approximately \$5,300 to one valued at about \$19,500, and eighty-one persons were employed in the tobacco manufactures at the close of the period studied.⁷

A local market for clay products — brick, tile, and earthenware — combined with the presence of the necessary clay deposits, called clayworking industries into existence in the county in the eighteenth century. An interest in brick and tile manufactures developed very early, for in 1724 Martin Mayley requested a grant of land on Conestoga Creek to make these items.⁸ At least as early as 1753 there was a brick kiln in the town of Lancaster.⁹ The subsequent growth of the brick industry suggests that the area was independent of outside sources of supply for these building materials. There were thirteen brick kilns in the county in 1810, with an annual production of more than 3,000,000 bricks. Between 1810 and 1840 the dollar value of bricks made annually increased from about \$18,000 to approximately \$47,000. This industry employed 127 men at the latter date, a number greater than that of the employees of the textile mills in the same period.¹⁰

Like brick making, pottery manufacturing got an early start in Lancaster County. Andreas Fisher and Michael Schwaab, potters, died in the town of Lancaster in 1753 and 1758 respectively.¹¹ By the early nineteenth century, the county was one of the chief pottery centers in Pennsylvania, only Philadelphia City and Philadelphia County having larger numbers of works. The local industry reached its peak about 1810 when fifteen potteries produced more than \$10,000 worth of clayware.¹² In contrast to brick making which grew in importance after 1810, pottery making declined. In 1840 the number of works, and the annual value of pottery products, were only about one-half of what they had been in 1810, but the industry continued active throughout the nineteenth century.¹³

The skill of David Tanneberger, the most renowned of the early American organ builders, made Lancaster County famous as a center for the manufacture of musical instruments in the eighteenth century. From the shop established by this talented craftsman in Lititz in the 1760's, many organs were sent to Moravian, Reformed, Lutheran, and Roman Catholic churches in Pennsylvania and other states. Anburey, a British officer who visited Lancaster in 1778, was much impressed by the fine Tanne-

berger organ in Trinity Lutheran Church, and described it as follows:

... the organ is reckoned the largest and best in America, it was built by a German, who resides about seventeen miles from Lancaster, he made every individual part of it with his own hands; it was near seven years in completing; the organ has not only every pipe and stop that is in most others, but it has many other pipes to swell the bass, which are of an amazing circumference, and these are played upon by the feet, there being a row of wooden keys that the performer treads on. I do not recollect ever seeing an organ of this construction, except those of the Savoy Chapel and St. Paul's; in the latter they are shut up as the vibration of sound was found too powerful for the dome; but then they had only four or five of these wooden keys, whereas this organ has a dozen: the man who shewed the instrument played on it, and the effect of these keys was astonishing, it absolutely made the very building shake. It is the largest, and I think the finest I ever saw, without exception; and when you examine it, you wonder it did not take up the man's whole life in constructing; to estimate its goodness and value, I shall only tell you it cost two thousand five hundred pounds sterling . . . (14)

Today the original case of this beautiful organ is still one of Trinity's most cherished features. Another musical instrument maker, Johannes Scheible, had a shop in New Holland in the 1780's. where organs, pianofortes, spinets, and other instruments were manufactured.¹⁵

The extensive use of edge tools in the Lancaster vicinity stimulated the local manufacture of whetstones at least as early as the 1780's. Samuel Bond and Company erected a whetstone manufactory in Lancaster about 1787. Their product, advertised as "The American Whetstone," was produced from a bluish rock formation found in the upper Susquehanna Valley. The favorable response of farmers and wood and metal craftsmen to the introduction of the new whetstone encouraged the company to produce it on a large scale in 1788. Agencies for the sale of this product were established in Philadelphia and Baltimore, and in various other trading centers in Pennsylvania and Maryland. American whetstone manufacturers had to meet the competition of imported German whetstones in this period.¹⁶ John Fowler's intention to establish a manufactory of artificial whetstones in Lancaster County in 1797 is of interest because of the unusual plan put forward for the raising of manufacturing capital. He desired to have money advanced in any sum for which he would give a ticket redeemable at double its face value in the product of the whetstone factory, or at face value cash after sales were begun.¹⁷ Like the Stiegel lottery, Fowler's capital-raising plan made little impression upon contemporaries who wrestled with the problems involved in financing manufactures.

Abundant supplies of hemp raw materials, and the demand for rope products among the farmers of the community, provided incentives for the erection of rope walks in Lancaster County. Two rope makers plied their craft in Lancaster on the eve of the Revolution, but the local cordage industry never became extensive during the period studied.¹⁸ About seven tons of rope were manufactured in 1810, at which time five rope walks were operated in the county.¹⁹ While the annual value of rope manufactures increased considerably between 1810 and 1840, the number of rope walks decreased from five to four during that interval.²⁰

References to numerous other articles manufactured to a greater or lesser extent in Lancaster County before 1840 occur in the sources. These articles include glue, starch, potash, salt petre, soap, candles, brushes, brooms, combs, windmills,



Hand spinning rope on early spinning wheel. After hemp was hackled, it was wrapped about waist of the spinner who walked off backward down the long "rope-walk" from the spinning wheel, all the while spinning with each hand a thread.

Courtesy of Plymouth Cordage Company

looking glasses, mattresses, reed furniture, umbrellas, paper, newspapers, books, and eatables including baked goods and confectionary products. Some of these manufactures, such as soap and candles, long tended to remain branches of home industry, although the professional "sope biler" was known in Lancaster before the Revolution.²¹ Many of these products were of relatively little importance, but a few are worthy of special notice. Three paper mills manufactured annually 3,900 reams, worth more than \$10,000 about 1810.²² Printing, which was begun at the Ephrata Cloisters at least as early as 1745, became increasingly important in the county with the passage of time. In 1840 there were nine printing offices, nine weekly newspapers, and three binderies, which employed thirty-eight men.²³ The shops of the confectioners and sugar refiners, which began to appear toward the close of the eighteenth century, mark the beginnings of one of the important present day industries of Lancaster County. These shops supplied loaf, lump, and brown sugars, sugar-candy, chocolates, and molasses. At least as early as 1810, some of the confectioners also made ice creams.²⁴ In 1840 there were six sugar refineries in the county, with an annual production exceeding \$11,000 in value.²⁵

A few other early manufactures of Lancaster County are of some special or novelty interest. In the late eighteenth century, Peter Getz entered upon the manufacture of fire engines in Lancaster. One engine which he produced discharged

water at the rate of 200 gallons per minute to a distance of fifty yards. He hoped that he had shown himself "capable of executing the works superior to any in America," and he offered to take orders from any part of America.²⁶ As will be further emphasized in the next chapter, advertisers during the period studied rarely followed the example of Getz in suggesting absolute superiority of product. Early in the nineteenth century Lancaster also had a "Spectacle Manufactory," and its proprietor, Isaac Martin, advertised "Spectacles of the first quality, mounted with Silver, Tortoiseshell, and Steel."²⁷ Henry Bachman who offered his newly invented patent bathing machines for sale in Lancaster in 1833 was striking out on untried paths in a generation when bathing customs were quite different from today. The inventor had some of his appliances in operation, and their function may be inferred from his advertisement that he had:

. . . prepared suitable Bathing Rooms, on his newly invented plan of using cold or warm baths; whereby the body is agreeably refreshed without being too suddenly affected. Those wishing to favor him with their visits, will find very good accommodations at any time of the day. (²⁸)

Women rarely administered manufacturing enterprises in Lancaster County during the period under consideration, but an occasional example of a female executive can be found. Thus "Widow Gander" was a tobacconist in Lancaster in 1773, and Julia Logan operated a millinery shop in the same town at the beginning of the nineteenth century.²⁹ Millinery manufactures, of course, fell naturally into the hands of women. Toward the close of the period under consideration, Eleanor Getz of Lancaster displayed unusual feminine initiative and resourcefulness, for she manufactured and installed water hydrants and also laid iron and lead pipe.³⁰ Since the picture of the female plumber in soiled overalls is hardly in accord with the sentiment and practice of that day we may infer that this lady depended upon workmen whom she described as "first-rate" for the actual manual labor involved in her enterprises. About this same time another woman, C. Kieffer, advertised as the proprietress of "The Lancaster City Mill, at the Water Works." However, the actual operation of this mill was directed by a master miller whom she employed.³¹

Most of the manufactures mentioned in this chapter were of minor importance as compared with those discussed in the preceding chapters. All of those considered here, however, made some significant or novel contribution to the rich and varied pattern of early Lancaster County manufacturing enterprise, and the value of their combined products was not inconsiderable.

NOTES

¹ F. W. Hunter, *Stiegel Glass*.

² See the lists of glass house employees in *Ibid.*, pp. 235-238.

³ *Pennsylvania Archives*, 3rd Series, XVII, 454-465.

⁴ *Lancaster Journal*, June 5, 1829, Aug. 11, 26, 1831; *Lancaster Examiner*, April 21, 1831, June 27, 1833; *Hazard, Register*, XII, 160; *Intelligencer and Journal*, Oct. 1, 1839.

⁵ *Lancaster Journal*, June 3, July 15, 1797; March 30, 1818, Dec. 29, 1820, Aug. 11, 1831; *Lancaster Intelligencer*, April 18, 1837, Oct. 30, 1838; *Intelligencer, and Weekly Advertiser*, June 30, 1802.

⁶ *Lancaster Correspondent*, Aug. 2, 1800; *Coxe, Arts and Manufactures*, p. 64.

⁷ *Coxe, Arts and Manufactures*, pp. 64, 66; *Compendium of Sixth Census*, p. 137.

⁸ *Pennsylvania Archives*, 2nd Series, XIX, p. 721.

⁹ Draught of James Hamilton's Land, 1753.

- 10 Coxe, *Arts and Manufacturers*, p. 74; *Compendium of Sixth Census*, p. 135.
- 11 Burial Records, Trinity Lutheran Church, Lancaster, Pa.
- 12 Coxe, *Arts and Manufactures*, p. 65.
- 13 *Compendium of Sixth Census*, p. 139. As late as 1887, five Lancaster potteries were in production. Their clay supplies were found entirely in the vicinity.
- W. U. Hensel, *Resources and Industries of the City of Lancaster*, p. 69.
- 14 Thomas Anburey, *Travels Through the Interior Parts of America*, II, 176-177.
- 15 *Neue Lancaster Zeitung*, Nov. 19, 1788.
- 16 *Ibid.*, March 26, 1788.
- 17 *Lancaster Journal*, Aug. 12, 1797.
- 18 *Pennsylvania Archives*, 3rd Series, XVII, 454-465.
- 19 Coxe, *Arts and Manufactures*, p. 66.
- 20 *Compendium of Sixth Census*, p. 140.
- 21 *Pennsylvania Archives*, 3rd Series, XVII, 455.
- 22 Coxe, *Arts and Manufactures*, pp. 62-63.
- 23 L. M. Bausman, *Bibliography of Lancaster County, 1745-1912*; *Compendium of Sixth Census*, p. 139.
- 24 *Lancaster Journal*, June 10, 1797, May 2, 1806, April 24, 1807, May 12, 1810, April 24, 1829; *Lancaster Correspondent*, Dec. 4, 1802.
- 25 *Compendium of Sixth Census*, p. 139.
- 26 *Lancaster Journal*, Dec. 2, 1796.
- 27 *Ibid.*, Jan. 20, 1809.
- 28 *Ibid.*, April 19, 1833.
- 29 *Pennsylvania Archives*, 3rd Series, XVII, 457; *Intelligencer*, and *Weekly Advertiser*, Dec. 2, 1801.
- 30 *Lancaster Intelligencer*, May 1, 1838.
- 31 *Intelligencer and Journal*, Dec. 3, 1839.

CHAPTER IX

PROBLEMS OF MARKETING, FINANCE AND LABOR

When the price of produce was high, the expense of transportation was not thought of, but now when this expense exceeds the profit of sale, our farmers, distillers, etc. have been induced to look out for a cheaper mode of transporting their produce to market, than that heretofore in use. Their attention has naturally been turned to the river, which borders our county upwards of 40 miles. . . .

—Lancaster Journal, June 29, 1821

As part of the back country of Pennsylvania in the eighteenth century, Lancaster County faced the transportation problems common to frontier communities. These problems were accentuated by the lack of any good natural waterway communication with the seaboard market centers. Roads were soon opened -- it would perhaps be extravagant to say that they were built -- with dirt and clay beds. These were dusty in dry weather, muddy and often impassable in wet, and rough at all times. In spite of road difficulties and hazards, a remarkable wagon freighting system developed early in southeastern Pennsylvania. The German settlers led the way. About the middle of the eighteenth century Lewis Evans wrote:

. . . the Oeconomy of the Germans has since taught us the method of bringing their produce to Market, from the remotest part at a small Expense. The Method is this, ev'ry Farmer in our province almost, has a Waggon of his own, for the Service of his Plantation, & likewise horses for Tillage, in the Spring and Fall of the Year (when it is here a Vacation from farming) they load their Waggon & furnish themselves with beasts, & provender for the Journey. The Waggon is their Bed, their Inn, their every thing. many of them will come one hundred & fifty Miles without spending one Shilling. (1)

The sturdy Conestoga wagon and the powerful Conestoga draught horse were the special contributions of Lancaster County Germans to wagon transportation. Throughout the eighteenth and early nineteenth centuries, large quantities of county farm produce and manufactured goods were hauled to market by the famous Conestoga bell teams. Wagon traffic was very heavy. By the close of the Revolution it was not uncommon to meet in a day on the Lancaster and Reading roads, fifty or one hundred wagons on their way to Philadelphia, and in the 1790's as many as seventy or eighty wagons frequently passed through Lancaster in a day.² A class of professional wagoners developed in response to the heavy demands for transportation. Military wagon requests and requisitions indicate that these vehicles were more numerous in Lancaster County than in neighboring counties.³ The inauguration of the turnpike era with the completion of the Lancaster and Philadelphia turnpike in 1794 was a great boon for wagon transportation. Other road improvements followed, and the county had 132 miles of good stone turnpike road by 1843.⁴

The Susquehanna River made no important contribution to Lancaster County transportation before the 1820's. Ascending navigation was impracticable below Conewago Falls, although the difficult river sections between that point and tide were passable downstream by rafts during freshets.⁵ Until the 1790's, Conewago Falls effectually blocked the trade in produce descending from the Upper Susquehanna Valley. Middletown, therefore, was the southern terminus for the river traffic during most of the eighteenth century, and the up country wheat, flour, whiskey, and lumber were carried to market from that point by wagon. Toward the close of the eighteenth century, the first arks descending from the upper reaches of the river successfully ran Conewago Falls. This achievement and the construction of a canal to facilitate passage of the falls destroyed Middletown's advantage in the river trade. Thereafter Columbia became the chief distributing center from which a great deal of river produce was teamed on the turnpike to Philadelphia or dispersed over Lancaster and Chester Counties.⁶ Much of the river freshet trade, however, went on past Columbia to Tidewater.⁷

Lancaster County was affected very little before the 1820's by the increase of trade activity on the Susquehanna River below Columbia. Early in that decade, however, there was a burst of local enthusiasm for river transportation. This sudden change in attitude was caused by the collapse of prices during the period of the Panic of 1819. When prices were high, little thought was given to the costs of land carriage which had always been the rule. However, when prices fell to the point where wagon transportation costs exceeded the profits of sale, farmers, distillers, and other manufacturers cast about for some cheaper mode of carriage. They discovered that their goods could ride the river freshets to Baltimore cheaper than they could be hauled by Conestoga wagons to Philadelphia. As a result, a large portion of the produce of the southwestern part of the county was sent to Baltimore in 1821 and the years which followed, and much of the whiskey distilled in and about Lancaster at that time was taken to Columbia for shipment to the Maryland metropolis.⁸

The decade of the 1820's witnessed experiments in ascending river navigation from tidewater to Columbia. Jacob Strickler of Columbia built the **Lady Lightfoot** drawing nine or ten inches of water in 1821 and made at least two round trips to tide. Flour and whiskey comprised the downstream cargoes, while plaster, fish, and groceries were returned. Strickler's success stimulated other individuals and in August, 1821, several boats were under construction for the tidewater trade.⁹ While these experiments proved that a loaded boat could be forced up the lower course of the river, the difficulties of the undertaking were so formidable as to preclude the development of any practicable upstream navigation. In the years following the Strickler voyages, there was much Lancaster County interest in the possibility of improving the lower course of the Susquehanna.¹⁰ A dramatic incident in this period was the laborious but successful passage of the steamboat **Susquehanna** from tidewater to Marietta. This vessel, a stern wheeler eighty-two feet long and fourteen feet wide, was built in Baltimore for operation northward from York Haven. It was at the head of the Maryland Canal¹¹ on May 13, and reached Marietta on June 22, 1825, where a celebration was held on board.¹² The length of time required to make this relatively short passage is an indication of the impracticability of upstream river navigation along the Lancaster County border.

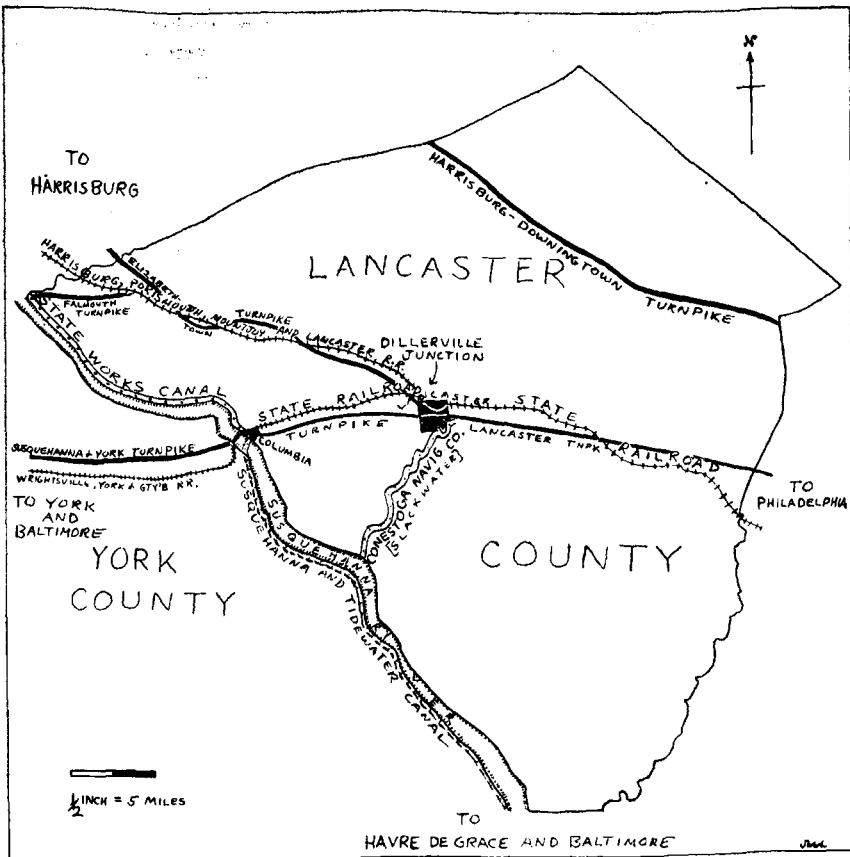
Of considerable importance for the marketing of Lancaster products toward the close of the period of this study was the improvement of the Conestoga Creek below Lancaster. A series of dams, locks, and slack-water pools were completed in the late 1820's. Arks and rafts descending from the upper Susquehanna Valley with coal, lumber, and other Lancaster County imports were thereafter enabled to discharge their cargoes directly at Lancaster City landings where they could then reload for Baltimore. Early in January, 1829, the first ark from Lancaster, the **George Louis Mayer**, reached Baltimore by way of the Conestoga and Susquehanna, with a cargo consisting of 15,000 pounds of tallow, thirty-five hogsheads of whiskey, thirty barrels of flour, three barrels of lard, and a quantity of old copper.¹³ Although this creek improvement and its successive owners suffered various vicissitudes, such as damage from a great ice freshet in 1832, at least one sheriff's sale, and competition from the railroad after 1834, the total volume of business done was considerable. Among the county exports which descended the Conestoga were farm produce, whiskey, flour, linseed oil, furniture, and old copper.¹⁴ Export cargoes for the period from April 1, 1842, to August 10, 1842, included 4,552 barrels of flour, 20,328 bushels of grain, 267 hogsheads of whiskey, and other items.¹⁵ The opening of the Chesapeake and Delaware Canal in 1829 gave the Lancaster County exporters a choice between the Baltimore and Philadelphia markets. During the 1830's, the Conestoga trade could be carried on only while the Susquehanna River was at flood stage, although the southern location of Lancaster County permitted its traders to open the trading season earlier than could the counties farther up the valley. This gave the local exporters a chance to reap substantial profits before the city markets were glutted with up river produce which all came down in a relatively short period of time.¹⁷ After 1840 the connection of the Conestoga improvement with the newly opened Susquehanna and Tidewater Canal along the western side of the Susquehanna River relieved the county from dependence upon freshet transportation. A new epoch in water transportation was dramatically introduced in November, 1841, when the steamboat, **Edward Coleman**, arrived at Lancaster from Philadelphia, and a local editor exulted that Lancaster was at last "a port of entry."¹⁸ Regular two-way transportation service was soon inaugurated between Lancaster on the one hand, and Baltimore and Philadelphia on the other.¹⁹

When Pennsylvania in the 1820's launched an ambitious program of public works, Lancaster County had the good fortune to lie astride the main route of the Pennsylvania Canal system connecting Pittsburgh and Philadelphia. In 1834 the eastern end of that system was completed by the Columbia and Philadelphia Railroad joining the canal terminus with the state metropolis. This gave Lancaster County early railroad facilities at state expense and wrought a revolution in the local transportation situation. Thereafter county shippers had convenient and rapid access to the Philadelphia market. This enabled them to profit from the short range or daily fluctuations in that market, a privilege denied to competing traders located at greater distances from Philadelphia. Thus, for example, Lancaster County whiskey could now reach Philadelphia on the same day that it left the distillery.²⁰ Before the building of the railroad, the completion of the Pennsylvania Canal to Columbia had connected that town with Philadelphia in a roundabout way through the Union Canal and Schuylkill River. There was some interest in the development of

contacts over this route prior to 1834, for in April, 1833, the *Cordelia* arrived in Columbia in seven days from Philadelphia. This was heralded as the first direct boat transportation between the two points.²¹ The completion of the Columbia and Philadelphia Railroad the following year destroyed whatever prospects there were for trade over this indirect water route.

Stimulated largely by the transportation innovations which have been discussed, purchasing, forwarding, and commission merchants appeared in Lancaster toward the close of the period under discussion. These men performed very important marketing services for the farmers and manufacturers of the community, for they bought goods for cash at prices somewhat below those which prevailed in the large city markets where such goods were forwarded for resale. If the seller preferred, the merchant managed the sale on a commission basis. He advanced money on the goods, transported and sold them, and received his compensation in the form of interest on the money advanced, and a commission for the service rendered.²² These marketing accommodations were enthusiastically welcomed by the producers of Lancaster County. In the early 1830's three local merchants, Mayer, Hager, and Reigart, combined to carry on the purchasing, forwarding, and commission business as a sideline. Within a few weeks their capital investment far exceeded expectations, and they deliberately curtailed operations to avoid withdrawing capital from their other businesses. From March 3 to May 10, 1831, this firm forwarded the following products to Philadelphia and Baltimore: 1,780 barrels of flour, 315 hogsheads of whiskey, thirty barrels of tallow, forty casks of oil, and various other items including wool, bacon, lard, old copper, and furniture. During the same period they also bought 2,800 bushels of rye and 1,400 bushels of wheat on order for mills on Conestoga Creek.²³ There were three extensive commission houses in Lancaster in 1837.²⁴

Borough fairs presented many county manufacturers with a special marketing opportunity. These fairs were commonly authorized in the town charters with a view to expediting the marketing and exchange of goods such as livestock, provisions, and manufactured wares. Thus the Lancaster borough charter of 1742 specified that fairs might be held twice a year, in June and October.²⁵ Fair occasions, which attracted visitors from far and near, were gala holidays characterized by merrymaking, feasting, and romantic pursuits. Frequently fair diversions were carried to excess and the resulting revelry, violence, and licentiousness aroused opposition and contributed to the decline of the institution. Thus in 1816 the town council of Columbia forbade the holding of fairs in that place, on the grounds that they contributed to violence and immorality.²⁶ In Lancaster, the borough type of fair persisted throughout the period under discussion with emphasis tending to shift toward the amusement aspect. That its economic function was not entirely lost sight of, however, is indicated by the presence of the stands of craftsmen such as hatters and silversmiths at the June fair in 1815.²⁷ About 1840 the fair institution was definitely on the decline in the city. Two years later a local editor reported that the fair was dead and that a visitor to Lancaster on fair day would not have known it as such. He attributed the decline of the fair to a public reaction against "the odium that of late years has attached itself to the regular fair day," and he suggested that the people were not desirous of participating in the sports of a day consecrated more to



ARTERIES OF COMMERCE OF LANCASTER COUNTY 1800 to 1840

- Turnpikes:** Lancaster-Philadelphia Turnpike, built 1794
 Lancaster to Columbia Turnpike Extension, built 1807
 Harrisburg-Downingtown Turnpike, built 1819
 Elizabethtown-Lancaster Turnpike, built 1812
 Elizabethtown to Harrisburg Turnpike Extension, built 1818
 Falmouth to Elizabethtown ("Pumpkin Vine") Turnpike, built 1810
 Many other turnpikes were built but those listed herewith were important commercially)
- Canals:** Conestoga Navigation Company slackwater canal, Lancaster to Safe Harbor, built 1828
 Pennsylvania State Works canal, Western Pennsylvania to Columbia, finished 1830
 Susquehanna and Tidewater canal, Wrightsville to Havre de Grace, finished 1840
- Railroads:** Pennsylvania State Works railroad, Columbia to Philadelphia, built 1834
 Harrisburg, Portsmouth, Mountjoy and Lancaster rail-road company, built 1838
 Wrightsville, York and Gettysburg Rail Road Company, built 1840

Bacchus than to any of the more sober gods.²⁸ There is no evidence that the agricultural fair or exhibition which was characteristic of the nineteenth century was introduced into Lancaster County before 1840.²⁹ The tardiness of the region in responding to the general trend represented by the agricultural fairs is to be accounted for in part by the indifference of the local farmers to the agricultural society movement which gave birth to these fairs.³⁰

Advertising was freely employed as a selling device in the early history of Lancaster County, but its emphasis stands in striking contrast to that of the present day. Most of the extravagances, sensationalism, and high pressure appeals which bombard the modern consumer were conspicuously absent. The following 1839 advertisement of craftsman John Block reflects the candid, subdued approach of the early Lancaster County advertiser:

HAIR MATTRASSES; as he cannot promise that he will sell lower than anybody else, he will promise that he will make them of the best country hair of his own manufacturing, and make them as low as they can be brought from Philadelphia . . . ⁽³¹⁾

Philadelphia competition had to be constantly kept in mind by Lancaster County craftsmen, and Block's publicity in this respect is typical of a number of the early advertisements.³² A very characteristic note is sounded by the following statement of John E. Pfautz who manufactured windmills near Ephrata in 1838: "By punctual attendance, and good work, he hopes to receive a liberal part of the public patronage."³³ Typical also is a line from an earlier advertisement of James B. Sloan who announced the opening of his new looking glass manufactory: "The smallest favors thankfully received, and done on the most reasonable terms."³⁴

Early Lancaster County advertisers generally made their appeals on the grounds of good workmanship, high grade raw materials, and prompt, efficient service. Competitors were respected and almost never disparaged. Rarely did a craftsman claim absolute superiority for his product, although this modern selling technique was not unknown. Thus Lancaster gunsmith, Jacob Fordney, Jr., sounded a note in advance of his times when he announced that: "The superiority of his Rifles over those of any other manufacturer in this city, have been (sic) long and extensively known."³⁵ Much more characteristic of the period is the following modest statement of George Buckius, boot and shoe manufacturer: "The work he may be fortunate enough to sell, will be warranted for superiority of execution, and the materials he uses will be equally good, with any in Lancaster."³⁶ Occasionally the word "bargains" is encountered in the early advertising literature, but the monotonous bargain refrain of the present day is missing.³⁷ The exceptional advertisement struck a note of unusual spirit faintly suggestive of the striking quality or sensationalism of a later age. Thus, for example, R. Erben advertised ready made clothing for sale in Lancaster in 1843 "at prices so very low as to astonish the natives."³⁸ However, advertising techniques, which varied little throughout the period studied, were on the whole simple and restrained. In 1840 the modern advertising age still waited to be born in Lancaster County.

One of the serious problems of American marketing in the eighteenth and early nineteenth centuries was the lack of an adequate medium of exchange. Lancaster County manufacturers suffered along with the general public in this respect. Much trade in the county was of necessity carried on by barter as there was gen-

erally a scarcity of coins, especially in the eighteenth century. Death sentences passed upon a father and son by the name of Hainly in Lancaster in 1751 for counterfeiting the halfcrown and ninepenny bills of the Province reveal a local phase of what was also a general problem which further confused the currency situation in the period studied.³⁹

The second decade of the nineteenth century was a time of special money difficulties in Lancaster County. Expiration of the charter of the First Bank of the United States removed the restraining hand of that institution from state banking. By 1814 the chaotic currency situation forced banks in most sections of the country to suspend specie payments. Lancaster County farmers and manufacturers found themselves overwhelmed in a flood of depreciated bank paper. In the years which followed, the problem continued. Public meetings were held in the county and remedies sought.⁴⁰ Thus in January, 1818, an assembly of citizens endorsed a proposal that storekeepers, ironmasters, millers, distillers, farmers, and citizens generally should refuse to accept any bank paper, except that of the county banks, not at par with the paper of the Philadelphia banks.⁴¹ The local money difficulties of this period were absorbed into the general complex of maladjustments caused by the general economic collapse in 1819.

Another grave money crisis was precipitated in Lancaster County by the Panic of 1837. Along with the other banks of the county, those in Lancaster suspended specie payments in the panic year.⁴² This threw trade back upon credit, paper, and barter.⁴³ In an effort to relieve the money stringency, a town meeting in Lancaster authorized the City Councils to issue small notes on the faith of the city. There was no legal basis for such an action, but the critical times forced the adoption of expedients.⁴⁴ These certificates were duly issued over the mayor's signature and made redeemable in two years.⁴⁵ Several citizens also sought to relieve the currency situation by issuing certificates or orders upon their several places of deposit, but these were soon called in because of some legal difficulty.⁴⁶ Speculators aggravated the local money situation by selling Lancaster County exports in Philadelphia at par and then buying uncurrent money at considerable discounts. With this they returned to the county to trade and settle debts, thus flooding the community with cheap paper.⁴⁷ At the close of the period under consideration, the money crisis was still causing grave distress in Lancaster County, for the long depression lasted on into the 1840's.⁴⁸

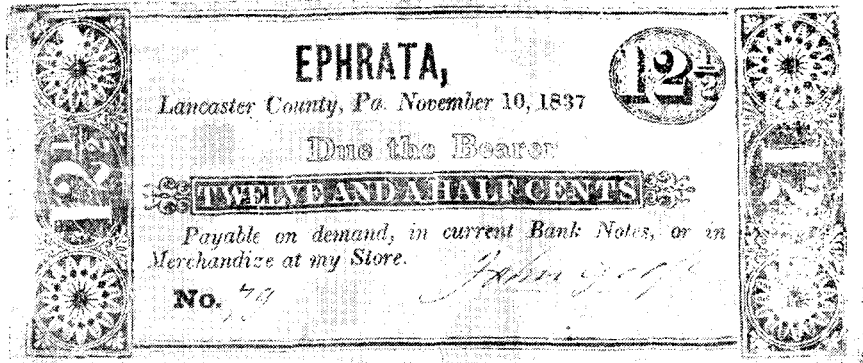
The financing of the county manufactures created problems which varied from one line of endeavor to another.⁴⁹ Many small shop industries required only a limited capital outlay, and the man who completed his apprenticeship could purchase a few tools, rent a room, and start production. When a venture required more capital than an individual could command, recourse could be had to the partnership which facilitated the pooling of capital. This device was used freely in many lines of Lancaster County manufacturing. The voluntary unincorporated joint stock company was rarely employed in the county manufactures before 1840, and only two manufacturing corporations were formed during the period studied.⁵⁰

Merchant capital was an important source of funds for the carrying on of early manufacturing enterprises, but wealth accumulated in other lines of endeavor was utilized as well.⁵¹ Prospective borrowers occasionally sought to locate

capital through the medium of newspaper advertisements. Thus in 1778 Theophilus Cossart in Lancaster announced that he had information for anyone who had from one to five hundred pounds sterling to lend,⁵² and in 1841 the following notice appeared: "Persons desirous of loaning money at a good interest, are desired to leave their names at Reitzel's Office, in West Orange street, or at the office of this paper."⁵³ In the latter instance money from \$4,000 to \$44,000 was wanted. The quest for capital was facilitated in 1799 when Conrad Ihrie and John Morris opened a conveyancing, broker's and intelligence office in Lancaster. Among other functions, this partnership firm discounted bonds and notes and procured money on interest on approved security.⁵⁴ In 1825 W. B. Ross opened a loan office in the same city. He kept a register of persons who desired money on loan upon real or personal security, and also of persons who had money to loan.⁵⁵ Early in the nineteenth century formal banking facilities were provided in Lancaster, and thereafter manufacturers had convenient access to bank loans.⁵⁶ There were at least three banks in the county before the Panic of 1819. Local manufacturers such as John F. Steinman, Robert Coleman, John Swar, and Cyrus Jacobs played an active part in this early banking movement.⁵⁷

There was no strong labor movement in Lancaster County during the period under discussion, but master craftsmen occasionally combined to promote their interests. Thus in 1813 the weavers formed a society with the avowed purpose "... to advance their trade to an equality with other mechanics which they believe themselves entitled to do." Members of the society agreed to a scale of fixed prices, and the list was published for the information of the public.⁵⁸ Similar price fixing agreements were made in some other crafts, such as carpentry and milling, to the annoyance of the farmers who had to pay higher prices for such services.⁵⁹ These agreements made by the master craftsmen are more suggestive of the functions of the ancient guild than of the modern labor union.

A movement to unite the mechanics of all crafts in a program of enlightened self-interest was begun in the city of Lancaster in the late 1820's. The chairman of a mechanics' meeting in 1829 pointed to the heavy importations of Philadelphia wares as the cause of distress and unemployment. A resolution was passed that the meeting recommend to the Lancaster mechanics the importance of supporting each other in their respective occupations, promoting domestic manufactures, and patronizing and encouraging those who were the friends of the manufacturers of the city. Appointment was made of a standing committee of correspondence to meet from time to time and call mechanics' meetings when necessary.⁶⁰ Later "The Mechanics' Society of the City and County of Lancaster" was organized with the object of promoting domestic manufacturers by giving them preference over articles of the same kind and quality imported from foreign countries or distant workshops. A spokesman for the society specifically disclaimed any intention on the part of the mechanics "not to deal with those who do not deal with us." Instead it was the intention that the organization should employ "a moral power" and by publicity and reasoning show the citizens of Lancaster that home industry ought to be patronized on grounds of self interest.⁶¹ The public, however, continued to harbor suspicions that the society was designed to serve political purposes and that the members intended to withdraw their patronage from non-members.⁶² Any secret intention of this kind evaporated with the passage of time. As an organization of master crafts-



Specimen of 12½ cent note issued by John Gross of Ephrata, dated November 10, 1837.

men, the society took a keen interest in the welfare and education of apprentices, and it was this aspect of the program which gradually came to the foreground.⁶³ In 1832 it was asserted that the sole object of the organization was "the improvement of the rising generation."⁶⁴

This mechanics' society which disavowed both political and direct action was not a labor union in the modern sense of the term. However, there is evidence of an embryonic labor movement in Lancaster about the close of the period under discussion, for when the city shoemakers refused the demands of their journeymen for higher wages and other benefits in 1837, the latter went on strike.⁶⁵ In the early 1840's a Working Men's Party was active in Lancaster. Its members were mechanics and workingmen who sought "Social Reform" and taxation relief through political action. This organization ran a ticket in the city elections at least as late as 1843.⁶⁶ In the light of these examples, it is evident that there was a measure of labor consciousness in Lancaster about 1840, but on the whole, the early nineteenth century labor movement made but slight impact upon the area.

NOTES

¹ Lewis Evans, in Gipson, *Lewis Evans*, p. 100.

² Rush, "The German Inhabitants," *Pa. Ger. Soc. Proceedings*, XIX, 59-60; La Rochefoucault, *Travels*, 1, 43.

³ *Pennsylvania Gazette*, May 31, 1759; *Pennsylvania Archives*, 2nd Series, III, 113, 426-427. See also, "Lancaster Penna., for Capital of the United States," *Pa. Mag. of Hist. and Biog.*, XL, 358-361.

⁴ C. B. Trego, *A Geography of Pennsylvania*, p. 271.

⁵ Lewis Evans, in Gipson, *Lewis Evans*, p. 98.

⁶ Hazard, *Register*, II, 300-301; Gilpin, "Journal," *Pa. Mag. of Hist. and Biog.*, L, 76.

⁷ Hazard, *Register*, II, 300-301.

⁸ *Lancaster Journal*, June 29, 1821, Nov. 25, 1825. The second reference cites the *Baltimore American*. See also, Hazard, *Register*, II, 320.

⁹ *Lancaster Journal*, July 27, Aug. 10, 1821.

¹⁰ *Ibid.*, Aug. 17, 31, 1821, Nov. 29, 1822, Jan. 24, Feb. 14, April 4, June 20, 1823, Jan. 23, June 25, 1824, Jan. 28, 1825.

¹¹ This canal paralleled the eastern bank of the Susquehanna River from tide-water to the Pennsylvania boundary and was designed to overcome the most difficult rapids below Columbia. *Ibid.*, Jan. 28, 1825, citing the report of the Maryland Canal Commissioners.

¹² *Ibid.* Dec. 24, 1824, May 13, 27, June 22, 1825.

¹³ *Ibid.*, Jan. 2, 1829; *Lancaster Intelligencer*, Jan. 6, 1829, citing the *Baltimore Chronicle*.

¹⁴ *House Report*, No. 168, 25th Cong. 3rd Sess.; *Hazard, Register*, III, 42-43, 254, V, 256, XII, 67, XVI, 72; *Lancaster Journal*, April 10, 1829, May 7, 1830, April 12, 1833; *Lancaster Examiner*, Nov. 4, 1830, March 10, 1831; *Lancaster Intelligencer*, May 12, 19, 1829; *Columbia Spy and Lancaster and York County Record*, March 1, 1834; *Intelligencer and Journal*, Aug. 16, 1842, April 23, 1844.

¹⁵ *Intelligencer and Journal*, Aug. 16, 1842.

¹⁶ *Hazard, Register*, IV, 31, V, 240, 311, 396, VII, 411; *Hazard, United States Commercial and Statistical Register*, VI, 75.

¹⁷ *Hazard, Register*, III, 254.

¹⁸ *Examiner and Democratic Herald*, April 7, Nov. 3, 17, 1841; C. B. Trego, *A Geography of Pennsylvania*, p. 271.

¹⁹ *Examiner and Democratic Herald*, March 9, 1842; *Intelligencer and Journal*, Nov. 14, 1843, April 23, 1844.

²⁰ *Hazard, Register*, XIV, 312.

²¹ *Ibid.*, XI, 271.

²² *House Report* No. 168, 25th Cong. 3rd Sess.; *Lancaster Union*, July 10, 1838; *Intelligencer and Journal*, Oct. 22, 1839, Feb. 18, 1840; *Examiner and Democratic Herald*, Aug. 8, 1839.

²³ *House Report*, No. 168, 25th Cong. 3rd Sess.

²⁴ *Lancaster Intelligencer*, Aug. 8, 1837.

²⁵ This charter is printed in Mombert, *Lancaster County*, pp. 141-146.

²⁶ *Marietta Pilot*, June 7, 1816.

²⁷ *Lancaster Reporter*, June 5, 1828; *Lancaster Intelligencer*, May 30, 1837; *The Age and Lancaster Weekly Gazette*, May 29, 1841; *Intelligencer and Journal*, May 25, 1841; *Lancaster Corporation Book*, Sept. 13, 1815.

²⁸ *Intelligencer and Journal*, June 7, 1842. See also, *The Age and Lancaster Weekly Gazette*, June 7, 1842.

²⁹ The first agricultural fair or exhibition of which record has been found in Lancaster County was held at Columbia in October, 1854. It was sponsored by the Lancaster County Agricultural Society which appears to have been formed about 1853. Pennsylvania State Agricultural Society, *First Annual Report of the Transactions*, p. 222, *Second Annual Report of the Transactions*, p. 149.

³⁰ *Ibid.*, *First Annual Report of the Transactions*, p. 222.

³¹ *Lancaster Intelligencer*, July 2, 1839.

³² *Pennsylvania Gazette*, July 14, 1773; *Lancaster Intelligencer*, April 8, 1823; *Lancaster Journal*, Dec. 28, 1832.

³³ *Lancaster Examiner and Herald*, May 10, 1838.

³⁴ *Lancaster Intelligencer*, April 8, 1823.

³⁵ *Lancaster Journal*, Aug. 8, 1834. See also, *Ibid.*, Dec. 2, 1796.

³⁶ *Lancaster Intelligencer*, Oct. 31, 1837.

³⁷ *Ibid.*, March 8, 1825; *Lancaster Journal*, Jan. 24, 1834; *Intelligencer and Journal*, Feb. 15, 1842.

³⁸ J. H. Bryson, *Lancaster Directory for 1843*, p. 10.

³⁹ *Pennsylvania Gazette*, Oct. 17, 1751. See also, *Lancaster Journal*, Aug. 12, 1818.

⁴⁰ *Intelligencer, and Weekly Advertiser*, Dec. 10, 1814; *Marietta Pilot*, Jan. 3, 1817; *Lancaster Journal*, Jan. 19, 30, April 1, Nov. 6, 1818.

⁴¹ *Lancaster Journal*, Jan. 30, 1818.

⁴² *Lancaster Intelligencer*, May 16, 1837.

⁴³ *Ibid.*, May 23, 1837; *Intelligencer and Journal*, Nov. 8, 1842.

⁴⁴ *The Age and Lancaster Weekly Gazette*, May 22, 1841; *Lancaster Intelligencer*, May 23, 1837.

45 **Lancaster Intelligencer**, May 23, 1837.

46 **Ibid.** The meaning of places of deposit is obscure, but these appear to have been banks.

47 **The Age and Lancaster Weekly Gazette**, June 7, 1842.

48 **Ibid.**; **Intelligencer and Journal**, March 29, Nov. 8, 1842.

49 See the references to finance in Chapters IV and VII.

50 See Chapter VII.

51 **William McCord Merchant Account Books**, 1761-1769.

52 **Pennsylvanische Zeitungs-Blat**, March 18, 1778.

53 **Intelligencer and Journal**, Jan. 19, 1841.

54 **Intelligencer, and Weekly Advertiser**, Dec. 4, 1799.

55 **Lancaster Journal**, April 8, 1825.

56 **Lancaster Corporation Book**, Feb. 10, 1803; **Minute Book of the Farmer's Bank of Lancaster**, 1810-1846.

57 **Intelligencer, and Weekly Advertiser**, March 26, 1814; **Lancaster Journal**, Nov. 5, 1819; **Minute Book of the Farmer's Bank of Lancaster**, 1810-1846.

58 **Lancaster Journal**, March 18, 1813.

59 **Ibid.**, April 15, 1813; **Lancaster Examiner**, Jan. 6, 1831.

60 **Lancaster Journal**, Jan. 16, 1829.

61 **Ibid.**, Feb. 13, July 10, 1829; **Constitution and Rules and Regulations, for the Government of the Mechanics' Society of the City and County of Lancaster.**

62 **Lancaster Journal**, Nov. 27, 1829.

63 **Ibid.**, June 19, 1829; **Constitution and Rules and Regulations, for the Government of the Mechanics' Society of the City and County of Lancaster.**

64 **Lancaster Journal**, Feb. 17, 1832.

65 **Lancaster Intelligencer**, June 13, 1837.

66 **Examiner and Democratic Herald**, Dec. 28, 1842, Feb. 1, 1843; **Intelligencer and Journal**, Jan. 31, 1843.

Conclusion

During the period of this study, Lancaster County developed from a primitive frontier community to a thriving agricultural and manufacturing center. Farming rather than manufacturing, however, was the predominant economic interest of the people at all times. This was due to a unique combination of circumstances. When the pioneers penetrated the virgin forests of the area, they set foot upon some of the finest soils of the American continent. These lay in an excellent climatic latitude for cropping and were spread over a rolling plain which, once the forests were cleared, offered few obstacles to cultivation. Among the stream of immigrants which poured into southeastern Pennsylvania in the eighteenth century, were large numbers of Germans, many of them from the Palatinate, a fertile agricultural region in the upper valley of the Rhine River. These "Palatines" knew the value of the limestone soils which they found in Lancaster County, and they applied to the cultivation of these soils the knowledge and techniques of the progressive agriculture of their homeland. The result of this integration of natural environment and selective immigration was an agricultural system which, before the close of the eighteenth century, earned for the county the designation, "Garden of Pennsylvania," a title retained with variations until the present day.

Early Lancaster County manufacturing was greatly influenced by its agricultural environment. Grain crops were important from the beginning of settlement and provided some of the first farm surpluses. Thus there was an early incentive for the beginning of industries to process and consume grain. Both distilling and grain milling soon developed into major enterprises and continued as leading industries throughout the period under consideration. Whiskey and flour were among the first and most important of the county exports. Brewing developed also on a more limited scale than distilling, but brewery products were produced primarily for a limited local market. The grain-consuming industries required vast numbers of cask containers, which gave rise to extensive cooperage manufactures. Industries such as textile manufactures, oil milling, and tanning sprang up to utilize farm products other than grain. Still another group of manufactures including blacksmithing, copper-smithing, wagonmaking, and leatherworking engaged on a large scale in the production of items required by the farms or the grain-consuming industries. Thus it is evident that the agricultural environment was one of the most important factors which guided the development of manufacturing in the early history of the county.

While many of the early manufactures of Lancaster County drew heavily upon the productions of local agriculture for raw materials, there were a number of conspicuous exceptions. These included such industries as brick and pottery making, the woodworking crafts, cotton manufactures, and above all, the charcoal iron industry. Most manufactures of this type, however, were indigenous to the area, that is, they found their raw materials close at hand within or near the present county boundaries. In a few industries some raw materials such as cotton, tobacco, copper, and mahogany and pine lumber were imported, and eventually even grain and hides were brought in to supplement local supplies. Nevertheless, with few exceptions the early manufactures of Lancaster County came into being under the stimulus of local supplies of raw materials. Thus the presence of abundant non-agricultural natural

resources such as timber, clay, and iron ore was another important factor in the rise of the manufactures of the area.

The location of Lancaster County had great significance for the development of manufacturing. As a frontier community in the eighteenth century, the region experienced an increase in population which continued throughout the period under consideration. This provided a constantly enlarging home market for manufactures in terms of both quantity and variety of wares. The inland position of the county at the crossroads of heavily traveled routes between the seaboard and the West provided unusual opportunities for trade, which in turn encouraged manufacturing enterprise. As the frontier advanced westward beyond Lancaster, the demands of the pioneers and western traders for articles such as saddlery and firearms continued to stimulate industries which had come into being in and about Lancaster. At the same time, nearby urban centers such as Philadelphia, Wilmington, and Baltimore provided markets for goods such as whiskey, flour, and iron. The inland situation of the county gave its artisans a measure of protection from imported wares as well as from those produced in the port cities. At the same time those cities were near enough to supply the county manufacturers with articles such as buhr millstones in whole or in pieces, and foreign hides when the local tanneries needed an increased supply of raw materials. As the interior of Pennsylvania was settled, the descending produce trade on the Susquehanna River made abundant supplies of grain and lumber available for the mills, distilleries, and woodworking industries of Lancaster County.

The manufactures of this region began in the homes of the pioneers, but mill and shop industries soon appeared. The numerous local streams with their excellent mill sites made possible the use of power machinery which was introduced at an early date. Thus, for example, the fulling mill appeared at least as early as 1731. As the period studied advanced, water power was used on an increasing scale and applied in many industries. While many manufactures prior to 1840 involved hand-work entirely or primarily, water was the principal prime mover of manufacturing machinery in Lancaster County throughout the period. In the decade of the 1830's, however, forward looking industrialists who caught a vision of things to come began to utilize steam power in cupola foundries and machine shops. The study of the sources for that decade suggests that great industrial changes were close at hand.

Eighteenth century manufacturing enterprises of Lancaster County were conducted by individuals and partnerships and, except for the charcoal furnaces and forges, and Henry William Stiegel's glass works at Manheim, were on a small scale. During the early decades of the nineteenth century much small scale industry persisted, and except for one cotton mill in the vicinity of Lancaster, which was operated for a time by a voluntary unincorporated joint stock company and then successively by two corporations, there were no changes in the forms of business organization. Toward the close of the period studied, various manufacturing enterprises of the county reached the small factory stage in terms of volume of production and number of workmen employed. In the 1830's examples of the small factory were to be found in textiles, shoemaking, cabinetmaking, riflemaking, and secondary iron manufactures. Throughout the period studied, local capital was used to finance manufactures, although persons outside of the county occasionally invested in the ironworks.

Three internal improvements were of special importance for the marketing of the products of Lancaster County agriculture and manufacturing. These were the Lancaster and Philadelphia Turnpike completed in 1794, the Conestoga Slack-water Navigation completed in 1829, and the Columbia and Philadelphia Railroad completed in 1834. The demand created for railroad cars and engines by the last-named improvement greatly stimulated the development of local cupola foundries and machine shops in Lancaster and along the route of the railroad, thus paving the way for a revolution in secondary iron manufactures.

The relation of selective immigration to the rise of Lancaster County manufacturing is not easily determined with precision. However, it seems clear that the German immigrants who settled in large numbers in the region included many skilled craftsmen, and that the rapid growth of manufacturing which made Lancaster one of the leading industrial counties of Pennsylvania before the close of the eighteenth century owed much to the mechanical knowledge and aptitudes of these people. A striking example of the original element in their contribution is the transplantation of the European riflemaker's craft into the American frontier environment. This emphasis upon the German influence in early Lancaster County manufacturing should not divert attention from the fact that persons of other nationalities also played a significant part in this field of economic enterprise.

In conclusion, it may be observed that, while farming was always the dominating economic interest of Lancaster County during the period studied, a rich and extensive system of manufacturing also developed in close integration with agriculture. The rise and nature of the early manufactures of this region are to be explained largely by the generous endowments of natural environment on the one hand, in interaction with the more obscure factor of selective immigration on the other.

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