The Gilpins and Their Endless Papermaking Machine

A business new to Delaware was established on Brandywine Creek in 1787 when Joshua Gilpin founded the state's first paper mill. His brother Thomas later joined the firm, and for the next half century the Brandywine Paper Mills were noted for their high-quality products. In 1817 America's first endless paper machine, an invention of Thomas Gilpin's based upon English models, went into operation in these mills. Revolutionizing the industry, this invention forced other paper manufacturers to mechanize their plants; by 1860 handmade paper had become a luxury.

Joshua and Thomas Gilpin are not the heroes of a rags-to-riches story. Their father, Thomas Gilpin, was a prosperous Quaker merchant in Philadelphia. Through inheritance and industry he acquired flour mills on the Sassafras River in Maryland and on the Brandywine, as well as properties in Wilmington and in Philadelphia. He was married to Lydia Fisher of the well-known Philadelphia Quaker family, and was active in the American Philosophical Society, exchanged letters on scientific subjects with Benjamin Franklin, advocated the construction of a canal from the Delaware River to Chesapeake Bay, and helped establish the Wilmington Grammar School. During the American Revolution, he was suspected of disloyal tendencies and was exiled to Winchester, Virginia, where he died in 1778.1

His son Joshua, born in 1765, was educated by tutors and in the Wilmington Grammar School. Joshua attempted to emulate the eighteenth-century concept of a gentleman, and the journal of his "grand tour" of Europe from 1795 to 1801 reveals that he was an

acute observer of antiquities, museums, and society. At great length he described and drew sketches of industrial processes in paper, iron, and pottery factories. During his travels he associated with such persons as Benjamin West, Robert Fulton, Joel Barlow, Lord Stanhope, Matthew Boulton, and William Gilpin of Bouldre, a distant relative and literary figure. In 1801 he married Mary Dilworth, the daughter of a Lancaster banker, from whom he acquired "a handsome fortune" and by whom he was to have eight children.² Gilpin and his family spent the years 1811–1815 in Europe, and three of his sons were later educated in English schools. Upon returning to America, he built an elaborate residence on the Brandywine called "Kentmere" after the English estate of his forefathers, and it was there that he subsequently passed most of his life.

A man of literary bent, Joshua Gilpin published Verses Written at the Fountain of Vaucluse (1799), Memoir of a Canal from the Chesapeake to the Delaware (1823), and Farm of Virgil and Other Poems (1839). His "Journal of Western Travels" appeared in the pages of The Pennsylvania Magazine of History and Biography.³ Among his unpublished works are a fragmentary history of Delaware, a volume upon the English woolen industry, and a journal of travel in New England and the eastern states. A plump little gentleman, with a round face, owlish eyes, and receding hair, Joshua was, like his father, a member of the American Philosophical Society.⁴

Thomas Gilpin, who was born in 1776, never married. At the early age of nineteen, when Joshua went to Europe, Thomas was left in charge of the paper mill. In 1848 he published Exiles in Virginia, in which he described the sufferings of Philadelphia Quakers, including his father, during the American Revolution, and compiled genealogical studies of the Gilpin and Fisher families. He too was a member of the American Philosophical Society and contributed papers to its proceedings. Possessed of decided mechanical genius and talents, he

² Seven of his children survived him, several of whom became prominent. The nomination of Henry Dilworth Gilpin as governor of Michigan Territory was twice rejected by the United States Senate, but subsequently he was approved as Attorney-General of the United States in 1840. William Gilpin was appointed governor of the Territory of Colorado in 1861 and wrote several books about the West.
³ PMHB, L, LII (1926–1928).
patented three papermaking inventions, including the endless paper machine. Thomas was a more practical man than Joshua and was accustomed to handling machines, men, and finances. It was said that "his nature was social, his temper singularly cheerful, and his manners and conversation winning." In 1825, a Wilmington banker wrote the following characterization of Thomas Gilpin:

He is an extraordinary man, ingenious, intelligent, and capable of the most laborious and incessant exertions. His life for some years past, appears to have been one of continual bodily motion, constantly traveling from Philadelphia to Wilmington and back, present wherever his complicated and critical affairs required him. With all his endowments, it's said, there is speculative vein in his character, which has led him into extravagant and unnecessary expenditures in the erection of useless houses and works on the Brandywine.

The first public notice of the Gilpin papermaking enterprise was an appeal for rags by Joshua Gilpin and Company in the Delaware Courant of May 12, 1787. The advertisement stated that the mill would soon be set "a-going," that its success, it was hoped, would free adjacent states from dependence upon imported paper, and that many poor children could find employment there. The location of the manufactory in a mill built in 1765 by the Gilpins' grandfather, Joshua Fisher, was excellent. Brandywine Creek provided a source of power and facilitated shipping to all parts of the world. A ready market and a source of raw materials—rags—were both found in near-by cities. Of special importance was the purity and clarity of Brandywine water. In June the Gilpins manufactured their first paper, probably aided by the advice and financial backing of their uncle, Miers Fisher. Although the firm was first advertised as Joshua Gilpin and Company, the business at various times was conducted under the names of Gilpin and Fisher, Thomas Gilpin and Company, and Gilpin and Company. Locally the establishment was known as the Brandywine Paper Mills.

Benjamin Franklin, who was friendly with the Gilpin and Fisher families, undoubtedly encouraged the Gilpins to enter the paper-

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5 Ibid., 409-412; Elizabeth Montgomery, Reminiscences of Wilmington (Philadelphia, 1851), 37.
making industry. His printing experience gave him an interest in the subject, and in his writings Franklin takes credit for helping to found at least eighteen American paper mills. In 1788 he lent Miers Fisher some French volumes on papermaking in return for which he was presented with samples of paper from the Brandywine manufactory. On November 25, 1788, Miers Fisher told Brissot de Warville, a French traveler then in New York, that his nephew Joshua "has conversed with Dr. Franklin on the Subject who has given him all the Information he could." Fisher hoped that de Warville might assist in securing paper molds and workmen from France, since efforts to procure them from England had been unsuccessful. When de Warville visited the Gilpin mills later that year, he enthusiastically observed:

This town is famous for its fine mills; the most considerable of which is a paper-mill belonging to Mr. Gilpin and Myers Fisher, that worthy orator and man of science, whom I have often mentioned. Their process in making paper, especially in grinding the rags, is much more simple than ours. I have seen specimens of their paper, both for writing and printing, equal to the finest made in France.

In November, 1788, the firm purchased paper molds from Nathan Sellers, a Philadelphia merchant. On the left side of the mold was the name J GILPIN & CO with the word BRANDYWINE underneath, and on the right the design of a plow. Later watermarks included a postman's horn, a fancy shield, and the initials "TG" intertwined. Dard Hunter, an authority on early papermaking, credits Joshua Gilpin with purchasing the first wove wire molds made in America from Sellers in July, 1789.

In 1797 La Rochefoucauld wrote a lengthy description of the Gilpin mills:

The paper-mill is below the house. There are two warehouses adjoining, where many labourers are constantly employed. The rags are pounded by


vertical wheels, the bands of which are about six inches wide, armed with sharp blades of iron, which drive the rags against six other blades, placed lengthways at the bottom of the great vat in which the wheel turns. I have described thus much of the process, as it is performed in another manner both in France and Holland. The other parts are performed nearly in the same manner as in those countries, but the manufactory is not yet brought to an equal perfection. The rags are not brought to the mill as in France, by people who collect them in the neighbourhood, as the small population of America will not admit of such industry. They are bought up by agents in the most populous towns, as far as three hundred miles distant, and are sent by water to Wilmington; from whence they are brought in carts to the mill, as Brandywine-creek ceases to be navigable above the bridge which leads to Wilmington. The consumption of rags in Mr. Gilpin’s mill is one hundred thousand pounds weight a year, which makes one thousand reams of different sorts of paper. The price of the rags is from three to nine dollars the hundred weight, according to the quality; the average price is about four dollars and a third. The rags are divided into nine different sorts at the manufactory, of which are made various papers, from vellum to coarse brown. The vellum letter-paper is sold from four dollars a ream; it is neither so white nor so well moulded as the fine European vellum paper; it is, however, a beautiful and good paper.

La Rochefoucauld reported that there were twenty-seven employees, that the pay of men varied from three to seven dollars a week, and that women received one dollar a week. Most of the paper was sold in Philadelphia.\(^{11}\)

The Gilpin mills prospered and in time came to specialize in bank note paper. Thomas Gilpin kept a scrapbook in which he preserved samples of paper made for the Union Bank of Rhode Island, Elkton Bank of Maryland, State Bank of North Carolina, Louisville State Bank of Kentucky, the United States Treasury, and other institutions. The cashier of the Mechanics’ Bank in Alexandria, Virginia, had high praise for Gilpin paper: “In my humble opinion, it is the best in the District.” In 1816 Thomas Gilpin collaborated with Jacob Perkins of Newport, Rhode Island, in inventing a new device for making watermarks, which were of special importance in bank note paper.\(^{12}\) The original mill and the water power equipment were re-


39^ H. B. HANCOCK AND N. B. WILKINSON October

built for the Gilpins by Thomas Oakes in 1808. The new arrangements proved so satisfactory that by 1816 Oakes had constructed three other mills on Gilpin property. By 1820 the Gilpin mills were producing $40,000 worth of handmade paper annually, had forty-four employees, and were paying $10,000 in wages. A severe flood in 1822 damaged the mills, and a fire in 1825 completely destroyed the building in which the handmade paper was manufactured. Since the Gilpins had now turned their attention almost exclusively to machine-made paper, they did not resume the manufacture of the handmade product.\(^{13}\)

The Gilpins were familiar with developments in the mechanization of the paper industry in Europe. During his tours of Europe between 1795 and 1801 and between 1811 and 1815, Joshua Gilpin had become acquainted with Bryan Donkin, John Hall, John Dickinson, Henry Fourdrinier, and John Whatman, all of whom were associated with the development of the endless paper machine. In 1798 Louis Robert of France had invented a machine in which paper was formed upon an endless belt of woven wire, which passed continuously through a vat of pulp. This machine was perfected by Bryan Donkin and John Hall in England and placed in use there in 1804 in the factory of Henry and Sealy Fourdrinier. The Fourdrinier machine, as it was called, was not imported into the United States until 1827. Independently, John Dickinson of England had invented a cylinder machine for manufacturing paper, which he patented in 1809. By this method, paper was formed upon the wire-covered surface of a cylinder which revolved in a vat of pulp. Thomas Gilpin's invention of 1816 closely resembled the Dickinson machine.\(^{14}\)

The resemblance was no coincidence. In the Gilpin Papers in The Historical Society of Pennsylvania is a manuscript volume entitled "Paper Making Machinery—1816. Property of Richard Gilpin." Although the name of Joshua's son is on the cover, most of the letters and memoranda in it were written by Joshua and Thomas Gilpin and by Lawrence Greatrake, manager of the Gilpin mills. The volume is important to students of papermaking because it reveals clearly that

\(^{13}\) Thomas Gilpin, "Fairmount Dam and Waterworks," \textit{PMHB}, XXXVII (1913), 473; "Gilpin Mills" in "Raw Returns," 1820 Census (Photostat at Eleutherian Mills-Hagley Foundation, Wilmington, Del.).

the Gilpins in 1815 and 1816 were endeavoring by every means in their power to obtain models, drawings, and patent specifications of the Fourdrinier and Dickinson machines. Lawrence Greatrake was in England in 1815 and 1816, where, at the behest of his employers, he was paying special attention to papermaking. When Thomas Gilpin developed his invention, he was in possession of a detailed drawing of at least one machine and had probably received patent specifications for both English models which he had discussed with his brother and Greatrake.15

Upon Joshua Gilpin’s departure from Liverpool for America on September 6, 1815, he wrote a note to an English papermaker, probably Fourdrinier, in which he regretted the existence of ill-feeling which seemingly had originated over his failure to acknowledge the gift of some sample paper. He also expressed a fear that a more serious reason for disagreement existed:

Another ground of jealousy may exist in your ideas that I wish to make myself master of your new machine and take it to America—I assure you Sir that except what I have seen of your own and Mr. Dickinsons works, I have not been in a single paper mill in England, nor taken any measures whatever to obtain any further knowledge of the machine, workmen, or materials.

Joshua Gilpin could not see that any particular injury would come to English trade if the machine were to be exported to the United States, since he considered the United States to be largely self-sufficient in papermaking. Actually, the inventor might “materially” benefit if the patent were set up.16

By September 17, ten days after Joshua’s departure, Lawrence Greatrake had gathered enough important information to forward to his employers by separate routes two substantially similar letters. In these letters he described the events of a three-day visit with John Dickinson, the inventor of the cylinder machine. Greatrake had once been a fellow apprentice with Dickinson in the firm of Richardson and Harrison, stationers to the East India Company, and held him in high esteem. In one letter Greatrake described Dickinson as “the genius, the Gentleman, & the liberal mind,” and in the other, as “a Young Man of science, very Gentlemanly in his manners, & like

15 “Paper Making Machinery—1816,” Gilpin Collection, HSP.
16 Joshua Gilpin to [?], Sept. 6, 1815, ibid.
yourself [Thomas Gilpin] of great Mechanica[l] talents.” Ggreatrake was shown the Fourdrinier machine at Apsley Mill and Dickinson’s own model at Nash Mill.

The most favourable Opinions I had ever entertained of these machines are infinitely exceeded by their operation, & whoever first gets one to work in America conjoined with bleaching will open a sure road to the fortunes of all concerned, & the Object I conceive to be infinitely more worth attention, than either woolen or even cotton under the existing state of things, & it is this impression induces me to write as early as possible to you, as you may govern your expenditures, alterations, &c at Brandywine as you may then judge best.

At length Ggreatrake described Dickinson’s machine, whose principles were the same as those later used by Thomas Gilpin17:

The machine of his own invention works by a cylinder covered with a 60 inch wove wire through a box of thin stuff which adheres for about a diameter or a third of its circumference to [the] wire & then gives it to a cylinder covered with an endless felt, which passes it off to 2 rollers covered with felt & afterwards between two brass rollers from whence it is wound off on a wooden roller ready for cutters. the adhesion of the Stuff to [the] first wire roller is caused by exhausting or as they call them suction pipes. these pipes are under ground, & the air is pumped up by a beautiful little air pump as I judge 30 ft distance from [the] stuff box or little vat.

The difficult part of Ggreatrake’s task was to secure a drawing or model of a Fourdrinier or a Dickinson machine. He had approached John Hall and Bryan Donkin with only limited success. “I cannot buy one, that is plain,” he wrote. “Mr. Dickinson has shewn & explained all I chose to ask, & whether he thinks He has now acquitted himself of all friendly attentions I cannot yet judge. Hall refused proceeding with [the] first machine of Fourdriniers, judging it was impossible to answer. Donkin took it up and completed it, and he could give me a drawing.” Fourdrinier, whom Ggreatrake described as “an ignorant, swearing low man, & not much esteemed here,” had said that one of his machines would never be sent out of England, but believed that an imitator might successfully set one up from a drawing. As a matter of fact, one of Fourdrinier’s machines had been taken to Russia by his son, and several were about to be exported to

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17 Ggreatrake to Joshua Gilpin, Sept. 17, 1815 (two letters), ibid.
the Netherlands. Fourdrinier’s men watched Greatrake closely at all times. Obviously, his best chance of success lay with Dickinson.18

Greatrake submitted another report to the Gilpin brothers on November 8, 1815. He had finally secured from Hall a drawing of the Fourdrinier machine, and Dickinson was willing to have Greatrake make a drawing of his invention, but believed that because of concealed parts no one in America could duplicate it. Be it a Fourdrinier or Dickinson model, Greatrake hoped that some type of papermaking machine would soon be operating in the Gilpin mills. “It truly is a proper Object for America,” he observed, “as it makes [the] sheets so beautifully equal in thickness, so extremely smooth, & a small one would work all the stuff four Engines could give at Brandye. driving day [and] night, & make as much paper as 10 or 12 vats at the present rate of mens wages for one vat.”19

The Gilpins apparently felt that Greatrake was not making sufficient progress, for in December, 1815, Thomas Gilpin requested the aid of an English friend:

... you know that my brother, and self, are concerned here in the paper manufacture, and it has been so admirably improved by him, in my business as to constitute an excellent concern, certainly the best in the United States—there are however some improvements in England, which it is exceedingly important for us to possess, as my brother has begun works which must be suspended till we have them; and when I assure you that the possession of them, if they do not actually make a fortune for my family bid fair to increase it, I am sure you will serve them and me in the business.

He thought that the Dickinson patents might be obtained from a clerk at the patent office, or through Mr. Wyatt, editor of the Repertory, whose brother was a clerk there.20

Thomas and Joshua Gilpin carefully studied the information that they received from England. Memoranda with such headings as “Dickinson’s Machine,” “The New Improvements in Paper Making,” and “Sequel to my own Information taken from letter of L. G. Allen to T. Gilpin, September 17, 1815” are scattered through Richard Gilpin’s papermaking book. Other memoranda were entitled

18 Ibid.
19 Greatrake to Thomas and Joshua Gilpin, Nov. 8, 1815, ibid.
20 Thomas Gilpin to “John” [?], Dec. 15, 1815, Gilpin Collection, Vol. 54. It is not known whether these patents were secured by the Gilpins.
“Ideas Relative to a Contemplated Improvement in the Paper Mill at Brandywine,” and “Ideas Relative to the Improvement of Water and Works at Brandywine Generally.” It was predicted that the use of the Fourdrinier and Dickinson machines would become “universal” in the United States with the expiration of patents. The new machines would produce more paper, would require fewer employees, and rid the owners of dependence upon skilled journeymen.21

Thomas Gilpin perfected his own cylinder machine during 1816 and patented it in December. A brief account of the invention is given in his own words:

This was the first Machinery for manufacturing paper put up in America—Thomas Gilpin so far proceeded in the idea as to take out a patent as far as it was his invention in his own right—afterwards established it partly in immitation of the English Cylinder Machine Movement—but the account of it could not be obtained to be available—or any of the Models or workpeople—it had to move even on a large scale with the accuracy of a mathematical instrument, and therefore the construction of it on Successful [lines?] became extremely difficult—It was eventually accomplished with as much labor as if it had been wholly an original enterprise—and then the introduction [of] a new art, had to meet all its difficulties.

The first Paper thus made in America and by Machinery was perfected to be sent to market from the Brandywine Paper Mills in February 1817.—and came first into use as noticed in Poulson’s Daily Advertiser—being the paper on which the Gazettée of that month was printed.

According to the inventor, “the machine paper was a perfect and successful operation from its establishment till the end of manufacturing paper at the Mills.”22

Visitors to the Gilpins’ new mill were impressed. Miers Fisher wrote in his diary in July, 1817:

we went into the new Factory, it is the most spacious thing for the purpose that I have seen anywhere, the upper floor is fitted as drying loft for Paper two large rows of Tables and ventilated in an ingenious manner, we then took a Boat & went down to the Island, landed, viewed the Rag room, thence to the New Mill which is the neatest thing that can be imagined & has a Suit of 3 Engines for washing & beating, & room for Moldes. The Vat and stuff Chests for the new machine are prepared the Water Wheel is ready to move; thence to the laboratory where the Rolling Mold is prepar-

21 These memoranda are scattered through “Paper Making Machinery—1816.”
ing it is in great forwardness but too ingenious & complex to admit a short descript., if it succeeds it will be most capital I see no danger & heartily wish it.

Fisher rode out to the mill again a month later and “viewed the Machines for manufacturing Paper in long Sheets, it has been set at work & made some but requires a little adjustment. . . . I have a sample of it & the machine is promising.” In October, 1817, Fisher was one of a group which sat around a table about fifteen feet in length that was “covered with White Paper of the new machine, which at first view I took for a fine damask cloth.”

With great pride the editor of the American Watchman in Wilmington announced the success of the machine in November, 1817:

The process of making paper delivers a sheet of greater length than any made in America—and of any length—in one continued unbroken succession of fine or coarse materials regulated at pleasure to a greater or lesser thickness—The paper when made is collected from the machine on reels, in succession as they are filled, and these are removed to the further progress of the manufacture. The paper in its texture is perfectly smooth and even, and is not excelled by any made by hand, in the usual manner of workmanship—as it possesses all the beauty, regularity and strength of what is called well closed and well shut sheets. The Mills and Engines now prepared are calculated to do the daily work of ten paper vats, and will employ a water power equal to about 12 to 15 pair of millstones, of the usual size.

In March, 1818, the Baltimore Federal Gazette took notice of the improvement, reporting that the valuable machine made three reams of paper per hour, and once the rags were put in, the entire process was automatic until the paper was wrapped around receiving reels. Sheets of any length could be manufactured and came off the rollers as “smooth as satin.” Attended by two men and one boy, the machine produced as much as the old hand method did with twelve men and six boys. An estimated $6,000 to $12,000 in wages was saved annually by the improvement.

“Certificates” or testimonials by users of large quantities of Gilpin paper were printed in a pamphlet in 1818. The public was assured that the endless paper was of the finest quality. The statement by

23 Diary of Miers Fisher, June 29, Aug. 21, 23, 1817, Fisher Collection, Friends Library, Swarthmore College.

24 American Watchman, Nov. 1, 1817.

25 Ibid., Mar. 4, 1818.
Mathew Carey and Son of Philadelphia read: "We have used the copper-plate paper made on the Brandywine paper machine for our Atlas, and cheerfully declare that it is equal to any paper we have ever used, foreign or domestic, and superior to most. It receives a better impression than almost any paper we have ever had." Lavoisne's *Atlas*, published by Carey in 1820, was the first major publication printed on paper manufactured on "Gilpin's Paper Machine."

In March, 1819, Joshua and Thomas Gilpin presented a specimen of their endless paper to the American Philosophical Society, and at a meeting of the Society "exhibited printing on endless paper at the time of its manufacture by a cylindrical water press, and with a degree of rapidity never before equalled." By 1820 machine-made paper worth $35,000 to $50,000 was being produced annually, sixty persons were employed, and wages of $10,000 were being paid. In 1832, Thomas Gilpin valued the mill property at $75,000 and machinery at $25,000. Eighty persons were employed, and three engines and one paper machine were in operation. "From the introduction of the most perfect machinery and workmen and an experience in the business during the long period since its establishment," he claimed, "we have so economized in its various processes as to furnish paper suited to every demand of the country lower than the same qualities are furnished to the public of any country in any part of the world."

What was Thomas Gilpin's machine like? Historians have not hitherto been able to answer the question satisfactorily because the inventor purposely concealed details to prevent imitation and because the only available copy was presumed to have been lost in the Patent Office fire in the 1830's. Fortunately, Thomas Gilpin attached a copy of his patent and a drawing of his machine to a deposition he filed in an 1833 law suit brought by John Ames of Massachusetts against the firm of Howard and Lothrop, and the specifications of his machine are thus preserved in the court files.

The success of the Gilpin machine had naturally aroused the envy of other American paper manufacturers who made attempts to copy

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GILPIN PAPER MACHINE

A. mesh cylinder revolving in a vat of rag pulp
B. felt covered roller to which pulp adheres
C. pulp being carried on felting to pressing rollers
D. pressing rollers; paper and felting separate
E. felting moving toward cylinder to pick up pulp
F. reel on which paper is wound after pressing
G. bucket wheel that raises water from trough into pulp vat
H. crank to tighten up felting
I. vat of rag pulp
J. spout that carries water from vat back to trough
K. trough containing water
L. agitator, or paddle that stirs pulp

Drawing Made From Patent Sketch and Specifications for the Eleutherian Mills-Hagley Foundation
the machine. The court papers reveal, furthermore, that Gilpin's patent specifications and drawing had mysteriously disappeared from the Patent Office. In March, 1822, John Ames of Springfield, Massachusetts, appeared on the Brandywine and attempted unsuccessfully to visit the Gilpin mills. Later a Gilpin workman named Hugh McFee received a note "from an unknown friend" asking him to come to a Wilmington tavern. Ames met him there, took him to his room, and locked the door. He showed McFee paper made by machine at the Ames mill which was inferior to the Gilpin product, and asked advice about how to improve it. McFee refused to answer. Ames then attempted to bribe him with a handful of bank notes from his pocket and a promise of more money if McFee would tell him the secret. The Brandywine workman spurned the bribe—"neither money nor fair words would induce him to inform Ames anything about Mr. Gilpin's machinery or business." Undaunted, Ames offered to move McFee's family to Massachusetts and to pay him fifteen dollars a week to work in the Springfield mill, but McFee persisted in his refusal. In desperation, Ames attempted to get McFee drunk, but the Gilpin employee disdainfully refused the brandy: "If I want a glass, I'll call for it and pay for it myself!" McFee informed Lawrence Greatrake of his interview, and the next morning Thomas Gilpin called on Ames, examined the Ames paper, which he considered of such good quality that no help from him could improve it, and reprimanded Ames for attempting to "seduce" his employees. Eventually, Ames did locate a former Gilpin employee who gave him the desired information, and on May 14, 1822, within two months after his visit to the Brandywine, Ames patented a papermaking machine which closely resembled the Gilpin invention.

Eleven years later, in September, 1833, Ames returned to the Brandywine, seeking help in the suit that he was bringing against Howard and Lothrop for infringing upon his patent and for hiring away his foreman. Gilpin refused to appear as a witness, but offered to provide written testimony. A few weeks later Gilpin and McFee received a long list of questions which they answered and forwarded to Boston to be read into the court records. Their testimony gave the full story of the seduction.29

29 Depositions of Thomas Gilpin and Hugh McFee in Ames v. Howard and Lothrop, Case No. 36, October term, 1833, United States Circuit Court Records, Boston, Mass.
For all their innovations, the Gilpin paper mills did not prosper. The flood and fire in the 1820’s had ruined a part of the mill. Moreover, the Gilpins had sustained financial reverses, losing money in establishing cotton and woolen mills during the War of 1812, and in riding out the depression of 1819. Rivalry with other domestic manufacturers was keen, and Congress did not alleviate foreign competition by sufficiently raising tariff duties. Furthermore, Thomas Gilpin had ploughed in a great deal of money in expanding the paper mill, while Joshua Gilpin had built himself an expensive home.  

Beginning in 1825, the Gilpins made repeated efforts to obtain new capital and to secure a charter from the Delaware legislature. These attempts were unsuccessful until 1837 when a group of Philadelphia businessmen purchased the properties of Joshua and Thomas Gilpin and James Canby on the Brandywine, secured a charter from the legislature, and organized the Brandywine Manufacturing and Banking Company, with a capital of one million dollars. The last paper manufactured at the Gilpin mills was in June, 1837, just fifty years to the month after the mills first opened. In its half century of operation, the company had acquired a deserved reputation for a fine product, and a major revolution in papermaking had begun on its property. Recently a large manufacturer of paper paid a well-merited tribute to Thomas Gilpin by naming a brand of paper after him:

GILPIN TEXT is named in honor of Thomas Gilpin, who, in August, 1817, produced the first machine-made paper manufactured in the United States. The paper was made on a machine of Gilpin’s own manufacture and was the first paper made in this country in a continuous web. It revolutionized the manufacture of paper, reduced its cost, increased its production and made possible similar progress and improvements in printing.

Eleutherian Mills-Hagley Foundation

Harold B. Hancock and Norman B. Wilkinson
