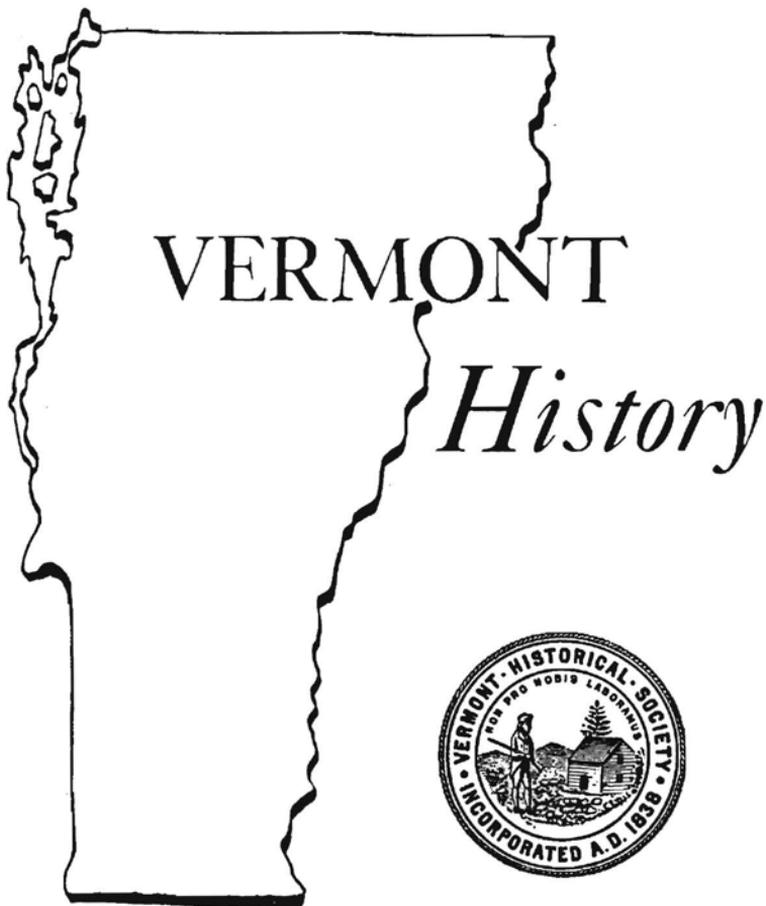


FALL 1987

VOL. 55, NO. 4



The PROCEEDINGS of the
VERMONT HISTORICAL SOCIETY



For a brief time, marble fireplaces made a small Vermont community a significant contributor to mainstream architectural fashion.

Middlebury's Marble Fireplaces

By Glenn M. Andres

Middlebury's marble industry was typical of much small-scale manufacturing in nineteenth century New England both in the national significance it briefly achieved and in the vicissitudes it experienced.¹ Dependent on local resources and ingenuity, it evolved rapidly from a purely local business to an ambitious operation with connections to the national scene. It died just as rapidly, a victim of competition, depletion of resources, and changing economic conditions. The industry, however, left a significant legacy in the marble fireplaces that it furnished fashionable American builders during the 1820s and 1830s.

Middlebury was founded, quite by chance, atop two major veins of fine marble. This marble formation extends from the Canadian border, down the east side of Lake Champlain, along the valley of Otter Creek, south through Danby, Dorset, and Bennington, and on through the Berkshires into northwestern Connecticut.² In Addison and Rutland counties it is manifest as two parallel strata about two miles apart, described as "surfacing in one hundred places" and appearing like "banks of snow" when viewed from the heights of Middlebury's Chipman Hill.³ Middlebury's portion of these deposits was considered noteworthy in the nineteenth century for the weather resistance, superb texture, and coloring (ranging from pure white to dove gray) of the marble it yielded. In 1821 Prof. Frederick Hall of Middlebury College wrote: "When polished, it strongly resembles the statuary marbles of Italy . . . in point of transparency, delicacy of texture, and general beauty [it is] not surpassed by any Carrara or Parian marble which has ever fallen under my observation."⁴

Middlebury was proud of its marble and made several claims to precedence in the marble industry, but it never claimed to be the first locale

in Vermont to produce marble products. That honor most likely goes to Dorset, where in 1785 Isaac Underhill began manufacturing fire jambs, chimney backs, hearths, and mantels.⁵ Closer to Middlebury, Jeremiah Sheldon began producing marble in Pittsford in 1795.⁶ His operation soon passed into Middlebury hands. The Middlebury *Mercury* of August 10, 1803, reported that "Levi Foot of Middlebury and William Barnes of Pittsford carry on the stoncutting business in Middlebury and Pittsford." They offered monuments, tomb tables, and headstones of blue or white marble, polished, carved and lettered, as well as building stone of all descriptions. The Pittsford quarry was acquired by one Ep Jones, who shipped the stone down Otter Creek to Middlebury, where he ran a stoncutting business between 1804 and 1809.⁷ Jones still dealt in funerary monuments, but trading upon the reputation for fire resistance of Pittsford marble, he also advertised slabs, hearths, jambs, and mantels for the fireplace trade.⁸ It is not surprising that many of the region's early fireplaces display the distinctive blue-gray of Pittsford stone and that some (like the chamber fireplace of the Ethan Andrus house of 1803 in Middlebury) display a chiseled texture as well. These early shops were hand-work operations, the rough split slabs smoothed by chisel and then polished by laborious hand-grinding using stone blocks and sand.⁹ Their products, as a result, were high-priced and limited to a modest regional market. Had the industry remained on this basis, little but antiquarian curiosity would be served by writing about Middlebury marble production. The Foot and Jones shops, however, ran into formidable competition from another local business, which was able to break the limitations imposed by hand-work and to gain more than local significance.

In 1800 Eben Judd, a Connecticut-born surveyor and real estate speculator, was imprisoned for debt in the Middlebury jail. While passing his time in town, he noticed what Timothy Dwight of Yale had remarked upon in his travels through Middlebury two years previously—that Middlebury Falls, in the core of the village, passed over a ledge of pure marble.¹⁰ In 1803 Judd raised one hundred dollars with the assistance of town father and promoter Gamaliel Painter and bought a 999-year lease on the lands of Appleton Foot, southwest of the falls, with the right to dig marble on any part of the lot between Foot's house and Otter Creek.¹¹ The townspeople were mystified and irritated by his subsequent activity. Judd prepared the site with blasting, breaking village windows in the process.¹² (His operation ultimately determined the quarry-like form of Middlebury's Frog Hollow and drew lawsuits as it threatened to undermine neighbors' outbuildings.)¹³ He built a dam across the creek some twenty feet below the falls and diverted its flow to turn a mill wheel with a crank that ran a single saw made of a nail plate on a moving frame.¹⁴ The stone to be cut was placed beneath the saw, sand was poured

along either side of the plate, water was poured from a teakettle, and the soft iron dragging the wet sand across the marble eventually cut through it. With this primitive apparatus Judd mechanized the Vermont marble industry.

It was an idea whose time had come. In 1792 Nathaniel Chipman had written in a letter from Rutland: "There are also in this part of the country numerous quarries of marble, some of them of superior quality. Machines may easily be erected for sawing it into slabs by water, and in that state it might become an important article of commerce."¹⁵ Judd was credited by many with inventing the water-powered marble-sawing process that brought Chipman's prediction to reality. A counterclaim was made, however, by the family of youthful mechanical wizard Isaac Markham. They reported that it was Isaac, aged ten at the time, who made Judd's ideas workable and who built the model for the machinery used by Judd. In an attempt to assign the proper credit for this important invention, the Middlebury Historical Society investigated the issue in the 1880s. Their findings, published in 1885, not only put the claims in proper perspective, but also provide an important history of the early marble industry in America.¹⁶

They discovered that the basic process was ancient, recorded by Pliny. In Book 36 of his *Natural History* he describes a toothless soft-iron saw, called a *serra*, which was used to cut stone in antiquity by dragging sand back and forth across its surface. In the fourth century A.D. the Germans were using waterpower to run such stone-cutting saws. The practice seems to have disappeared until about 1730, when William Coles of Kilkenny, Ireland, used waterpower to draw single blades to cut and polish marble. About 1748 this process was improved upon in Derbyshire, England, when it was combined with Leonardo da Vinci's idea of blades fastened in parallel to make a gang saw. The water-powered sawing process seems to have appeared in the United States around the turn of the nineteenth century. About 1800 Philo Tomlinson of Marbledale in New Milford, Connecticut, cut stone on one or both sides using a water-powered saw equipped with an automatic arrangement for distributing the sand and water. By 1802 waterpower was used in the West Stockbridge, Massachusetts, quarry that supplied the marble for the Capitol Building in Washington, D.C. It is unlikely that Judd would have known the details of these operations, but he could certainly have known the principles. That he did not claim priority for his process may be indicated by the fact that he never filed for a patent on it, though in 1822 he did receive a patent for an improved method that he had developed in 1806 for raising and lowering the marble saws.¹⁷

Judd had valuable assets—plentiful waterpower, labor-saving

machinery, and a source of high quality marble right at hand. He cut marble on the Foot site and, at low water, from the bed of the creek itself above the falls. During the warm months of the year, he employed about six quarrymen at forty cents a day to blast and wedge free as much as 160 tons at a time.¹⁸ Oxen rented from local farmers for \$1.25 a day hauled the marble to his mill. At the mill, carvers earned up to \$2.00 a day working the marble, while Judd's inscriber, Levi Foot, was paid two cents a letter.¹⁹



This photo detail of the John Warren House in Middlebury, built in 1804-1805, shows some of the marble architectural products manufactured at Eben Judd's marble works. Courtesy of Glenn M. Andres

At first the operation was small-scale and experimental, surviving mostly on direct sales to local clientele, but there was enough demand that some buyers came two hundred miles or more, often picking up the marble in the winter for ease of overland transport by sleigh.²⁰ It is possible to judge the early products of the mill from those that were furnished to the John Warren House in Middlebury, built in 1804-05.²¹ Here are plaques, lintels, a belt course, and a Palladian window with doric columns, all of gray marble. If production was small, quality was high, and the products were suited to fashion-conscious Federal-style architecture.

Between 1806 and 1808 the marble works were reorganized and recapitalized, first as Judd and Tiffany and then as the Middlebury Marble Manufacturing Company.²² A big new mill was built in Frog Hollow. Accounts described it as a two-story building, 60' x 38', situated over the creek, and containing between sixty and one hundred saws.²³ The marble was cut into slabs on the ground floor. On the second floor

machines covered with hard leather that was sprinkled with emery and Scotch sand polished the slabs.²⁴ After lettering, another machine rubbed the surfaces with old felt hats for a final buffing. In these new facilities Judd processed between 5,000 and 10,000 square feet of 2" slabs a year.²⁵ His products included tombstones and currier's tables (for the currying or dressing of leather); fireplace jambs, mantels and hearths; stoves, ovens, sideboards, and sinks; door and window caps, jambs and sills; and belting for brick or stone houses—made variously of the fire-resistant Pittsford stone or of Middlebury marble.²⁶ In 1811 President Timothy Dwight of Yale described the marble and the wares in his journals: "[it] is both white and dove-colored, elegantly variegated, and of finer texture than any other which has been wrought hitherto in the United States. It is sawn, ground, and polished by water machinery; and is cut and carved with an elegance not surpassed on this side of the Atlantic."²⁷

Judd's technology not only permitted the manufacture of marble products in significant quantity and quality, but it also lowered the cost of marble purchased at the mill. Jambs and mantels ran from \$5.00 to \$18.00, firebacks from \$1.50.²⁸ Even local transport did not adversely affect the cost—a hearth delivered to Vergennes (twelve miles away) was \$5.18. For the operation, however, to be profitable, it needed a wider market. Between 1807 and 1811 there were notices of substantial amounts of marble sent to Boston, Troy, Albany, New York City, Keene, N.H., Montreal, St. John's, and even London.²⁹ An 1813 handbill proclaimed shipping throughout the world; an advertisement in 1814 noted that mail orders were accepted and guaranteed safe transportation to any part of the United States.³⁰ In such fashion, Middlebury marble found its way northwards to Canada and south to Georgia.³¹

Transportation, however, was a problem. Middlebury was landlocked. The marble had to be carried overland either to Lake Champlain or to the Connecticut River and then transferred to barges, a slow and costly journey. A shipment down the Connecticut River to Hartford took almost two weeks and cost \$32.00 per ton (a single headstone typically weighing one hundred pounds).³² Transport to New York City via Lake Champlain and the Hudson took twenty-five to thirty days and cost \$30.00 per ton. Shipping to Boston routinely added 25-35 percent to the cost of the marble products.³³

It was feasible to pay such shipping costs through the War of 1812, for the Embargo Act of 1807, which blocked U.S. exports and reduced foreign trade, saved the East Coast markets for hinterland producers.³⁴ Smuggling (as with the shipments to Montreal and London in 1810-11) seems to have kept the Canadian market open for Judd as well. The business prospered. During the embargo years Judd averaged \$7000 in sales, as opposed to \$3000 in costs.³⁵ After the Treaty of Ghent ended the embargo, coastal markets were suddenly flooded with competing goods

from Europe. Even after a protective tariff was enacted in 1816, Judd's business experienced dramatic fluctuations of as much as 40 percent from year to year.³⁶

In 1820 Judd formed a partnership with his son-in-law, Lebbeus Harris, and set out to increase the scale of his business and the scope of his markets. They upgraded the marble works in Middlebury; their reopening announcement of 1821 featured the marble chimneypieces that would become the prestige product of the company.³⁷ Also at this time the first pillars and plinths appear on lists of the mill's products, higher shipping costs become a consistent item in the account book, as do large repeat orders.³⁸ Major shipments went to Boston.³⁹ The partners also looked westward in an attempt to diversify their market in the face of unstable conditions on the coast. To this end, they sent long-time employee Harvey Wilson to open a finishing shop "up the Western canal" in Auburn, New York.⁴⁰ Until that arrangement ended in 1826, they shipped large numbers of finished chimneypieces and significant amounts of rough white and gray marble to Auburn for finishing for the New York State market, a process made more feasible after 1823 by the existence of the Champlain and Erie canals.⁴¹

In 1826 Judd and Harris took another major step in developing their business. They opened a black marble quarry near Larrabee's Point in Shoreham.⁴² The stone obtained from this new quarry was reputed to have been the only known black marble in the United States at the time (though rivals from Canada and from Isle La Motte and Proctor in Vermont would appear by the 1830s).⁴³ Containing some fossils, it was thought to rival Irish Kilkenny marble in beauty. It appeared on the market at an excellent time. Black, sometimes called mourning marble, was a newly fashionable color for fireplaces. While copybooks suggested painting wooden fireplaces to look like black marble, Judd had the real thing.⁴⁴ The new stone was rushed into production. In 1828 the marble producers advertised for twenty quarriers.⁴⁵ They hauled some black marble overland to Middlebury for working, but shipped the rest to Vergennes, where it was worked at the Amos Barnum mill by, among others, Judd's son Daniel.⁴⁶ Thence it was shipped via the Vergennes Forwarding Company to Whitehall, Troy, Albany, and New York City three times a week.⁴⁷

The 1820s and early 1830s were the glory days for Middlebury marble, as the orders poured in from many locations. In 1827-28 the partners shipped seventy-four pilaster and columnar chimneypieces of Pittsford, Middlebury, and Shoreham marble to their agent, Charles Harlow, in Boston. Harlow responded that with the heavy demand he wondered whether the mill could keep up with the market.⁴⁸ An E. Dyer of Providence bought a columnar fireplace, and a General Willson of Keene,

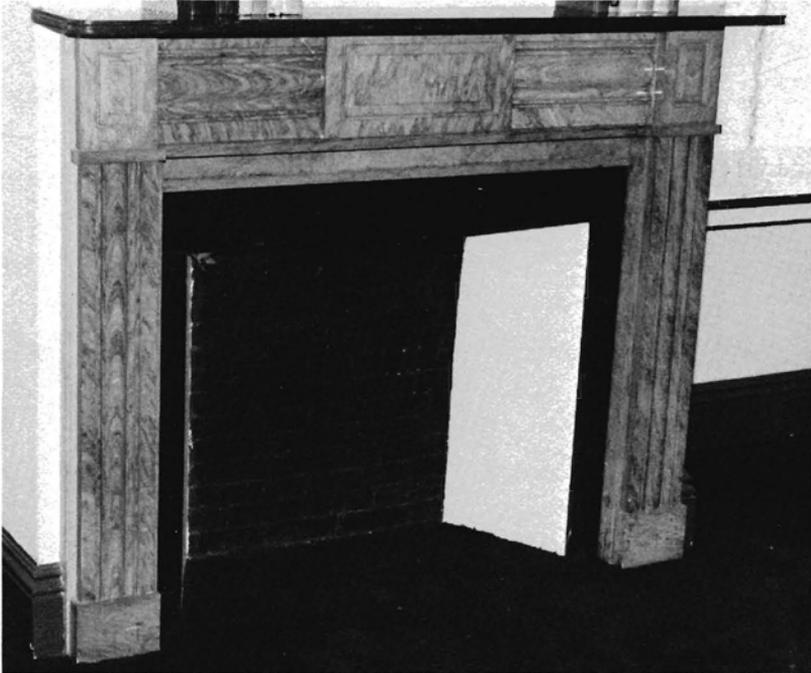
New Hampshire, bought three pilaster models.⁴⁹ In 1830 Judd noted that the marble works had taken a “job for 76 small pillars for pier tables and a quantity of other marble that is to be forwarded in the spring to Augusta, Georgia . . . also an order from Cortland village up the canal for a marble chimneypiece and some facings.”⁵⁰ The Cortland chimneypiece, destined for William Randall, was accompanied by a shipment of 1,112 pounds of marble for R. & J. Raynor of Syracuse, sent at the same time that 4,746 pounds of Shoreham marble was dispatched to Harlow in Boston.⁵¹



This pilaster (panelled) chimneypiece of black Shoreham marble was manufactured in the 1820s and installed in the Judd-Harris House, which is now the Sheldon Museum. Courtesy of Glenn M. Andres

The business in fireplaces drew the attention of major architects. In 1823 Charles Bulfinch wrote via Congressman Charles Rich of Shoreham, sending designs and requesting quotations on chimneypieces to be delivered to Washington, D.C.⁵² In 1831 Ammi B. Young wrote from Burlington, Vermont, requesting quotations on “plane [*sic*] marble chimney mantels, fireplaces, and hearths similar to the small one which you had at the Burlington Hotel for a time . . . so the bank folks may determine whether they have the price or not . . . If so, want them made immediately . . . also the price for a column mantel fireplace and hearth.”⁵³

Well might Young wonder if his clients had the price. Middlebury fireplaces, especially in black marble, were luxury items. Pilaster pieces ranged from \$25.00 in Pittsford stone to \$85.00 in dark marble. Columnar pieces ranged from \$60.00 in Pittsford stone to \$150.00 in black marble. When prosperous ironmonger Jonathan Wainwright ordered four panelled and two columnar fireplaces in dark gray and black marble for the grand house he had just built overlooking the Middlebury green, they cost him the princely sum of \$600.00⁵⁴ No one else in town seems to have been willing or able to pay such high prices. Marble fireplaces appear in only one other local building.



This panelled chimneypiece was one of four ordered from Eben Judd by the prosperous Jonathan Wainwright in 1824. It is in the northwest chamber of the Wainwright House in Middlebury. Courtesy of Glenn M. Andres

This was the proud house that Judd and Harris built for themselves in 1829 to show their town how well things were going. Now the home of the Sheldon Museum, it was a three-story, five bay, brick townhouse with a combination of Federal and Greek Revival detailing. The rectangular, marble window lintels were the first in Middlebury (all earlier ones had been trapezoidal, all subsequent ones would be rectangular).



The house that Judd and Harris built in 1829 displays a number of decorative features in marble. Note the ionic capitals on the porch columns done by "Obrian the Scotchman." The columns of gray Middlebury marble were later painted white. Courtesy of Glenn M. Andres.

Across the front of the first floor they placed a grand piazza carried by gray marble ionic columns (later painted white), which were carved by "Obrian the Scotchman" in return for \$10.00 and one month's board.⁵⁵ Six of the fireplaces were of the prized black marble. Those in the front parlors on the first floor were columnar, also the work of Obrian. Those in the corresponding rooms on the second floor were panelled. Those in the back rooms of the first floor received plain black facings. The columnar and panelled examples were virtually identical in design to the chimneypieces in the Wainwright house. Taken as a group these fireplaces provide a useful catalog of the Judd and Harris production.



The columnar chimneypiece of black Shoreham marble repeats the ionic capitals of the porch columns on the Judd-Harris house. Also this fireplace and the one shown on p. 203 illustrate the quality and variety of chimneypieces produced by the Judd and Harris marble works. Courtesy of Glenn M. Andres

The designs of the Middlebury chimneypieces seem to have been conceived for machine manufacture. Like the woodwork that would appear in Asher Benjamin's *Practical House Carpenter* of 1830, they were composed of straight lengths of moulding and panelled corner and center blocks, which could be mill-produced and then assembled to create frames of varying dimensions.⁵⁶ The columns, with their subtle entasis, could be turned by lathe. Only the ionic capitals would have required detailed hand carving. As an inventory of 1834 implies, the parts were stockpiled and then assembled.⁵⁷

It is tantalizing to speculate on the sources for these designs. Marble chimneypieces were a staple of Judd's business throughout the 1820s, and there is specific mention of both pilaster and columnar chimneypieces from the Middlebury works as early as 1827. At that date details like the Roman ionic capitals with their horizontally linked volutes could be found in print, but there was no builder's guide available that could have served as a model for the overall designs.⁵⁸ Plans for pilaster fireplaces were published at the end of the 1820s, but they tended to be more elaborate and more specifically classical than the Middlebury models, incorporating classical mouldings, fluting, meanders, and rosettes.⁵⁹ It was not until 1833 that a pilaster fireplace design appeared that could be considered close in style to the Middlebury examples.⁶⁰ The first published columnar design similar in conception and motifs to the Middlebury ones seems to have been in Minard Lefever's *The Young Builder's General Instructor* of 1829. It was also the last. This type of fireplace was transitional. It had descended from earlier Federal designs with elegantly attenuated columns carrying mantel shelves and was rendered more Greek in character by weightier proportions and decoration.⁶¹ As the 1830s progressed, the columnar design passed from the scene altogether, considered too cumbersome and ultimately unsuited to principles of Greek design promoted by the authors of the builder's guides.⁶²

If the Middlebury fireplaces do not derive from published designs of the early-to-mid 1820s, what could be their source? It is tempting to speculate whether Judd might not have utilized the drawings Bulfinch mentioned sending in his letter of 1823. Indeed, a Bulfinch connection can be demonstrated, for similar fireplaces appear in black marble in Bulfinch's Barrell House (1792) in Charlestown, Massachusetts, and in both black and white marble versions in his Swan houses (c.1807) in Boston.⁶³ In both cases, however, the fireplaces seem, by virtue of their black marble and their classical proportions and simplicity, to be later additions to the houses.⁶⁴ If that is so, there is the question whether these fireplaces can be considered Bulfinch designs or the result of remodelings.⁶⁵ It may be that the Swan and Barrell fireplaces were altered according to the architect's later tastes, but it is equally possible that they merely represent fashionable products that were available on the market. Whether or not these fireplaces reflect Bulfinch's sensibility, their material and stylistic closeness to Middlebury examples certainly seem to suggest Middlebury as the locus of their manufacture. Their presence in the Bulfinch houses, in conjunction with the 1823 Bulfinch letter and drawings that are known to have been in Middlebury, leaves open the intriguing possibility of some kind of direct connection between the great architect and the Middlebury designs.

The dissemination of this particular type of fireplace was hardly limited

to Bulfinch projects. Chimneypieces of similar marble and design can be found not only in the Judd and Wainwright houses in Middlebury (1829), but also in the Town and Davis Russell House (1828-30) in Middletown, Connecticut, and in the Governor Goodwin House (remodeled c. 1832) in Portsmouth, New Hampshire. Others in white and gray marble appear in Salem, Massachusetts.⁶⁶ Their marble, where a source is indicated, is often called Italian, yet their motifs are those of the Middlebury fireplaces and their manufactured character is in strong contrast to the more elaborate, hand-carved Salem examples imported from Italy.

Those Italian fireplaces were a problem for Judd. With labor costs less than one-tenth of those in America, the Italians could produce, ship, and market hand-wrought marble products at prices below those of machine-wrought domestic work.⁶⁷ In 1830 tariffs on Italian marble were dropped, and Judd quickly petitioned his congressman, William Slade, to reinstate them.⁶⁸ New York City contacts advised the Middlebury works henceforth to send only their best marble there and to hire an agent to promote it.⁶⁹ Judd and Harris hired agents in New York and Boston, but the reports from both sources were gloomy.⁷⁰ The market was flooded. Bostonians had been speculating in marble quarries in New England, and prices had dropped accordingly. There were complaints as well of a declining quality in the Middlebury goods.⁷¹ Also flaws in the some of the fireplaces indicated that perhaps the sound marble in the veins was exhausted.

The general economic picture was not encouraging either. Speculation in real estate threatened economic disaster. Judd, estimating his business worth in 1835 at \$22,000, considered selling out before the collapse.⁷² In October, 1836, he offered his house, woodshed, two barns, marble factory, water rights, and small office for \$18,000 to the Middlebury Woolen Manufacturing Company.⁷³ He was too late. Before he could sell, a real estate panic hit in the winter of 1836, precipitating a depression that would last until 1843. By that time both principals of the Middlebury Marble Company had passed from the scene. In April 1837 Lebbeus Harris died at age forty-five; and the following September Eben Judd died at age seventy-six.⁷⁴ Lebbeus's brother and major creditor, Nathaniel Harris, continued the business for a few years, selling unworked blocks of black marble in quantity in New York State, but this was not very profitable, and he turned to dentistry in the Judd/Harris house. Daniel Judd and his son E. W. made gravestones, furniture, and building details in a small shop, but they did no quarrying.⁷⁵ Eben Judd's marble mill was purchased by Francis Slason, who ran it briefly and then shut it down; in 1851 it was converted for the manufacture of wooden tubs.⁷⁶ The Slason family would pursue its marble interest further, but in a new location—West Rutland.

The decline of the Middlebury marble industry coincided with the rise of operations in Rutland County, where the propitious combination of power, capital, transportation, and vast quantities of high quality marble would make the Vermont marble industry known worldwide. Middlebury had quality, but not quantity, inventiveness but not local capital, power but not transportation. Even had Judd and Harris survived, their small company could not have succeeded in a climate of increasingly large-scale industrial production and marketing. In the decade and a half of peak production before their business disappeared, however, they had been able to play a modest role in the national architectural scene. Fireplaces had not been their only products, but as their most readily identifiable items of trade, the columnar and panelled fireplaces of the late 1820s and early 1830s (especially in black marble) offer evidence of the wide diffusion of Middlebury marble goods. They prove that at least some of the grand fireplaces in early nineteenth century America were not imported from Italy. Their marble came from Pittsford, Larabee's Point in Shoreham, and Frog Hollow in Middlebury, and their stylish carving was accomplished in Judd's mechanized shops. For a brief time these marble fireplaces made a small Vermont community a significant contributor to mainstream architectural fashion and did much to lay the cornerstone and establish the reputation for one of Vermont's major industries.

NOTES

¹ The Sheldon Museum in Middlebury, Vt., is a treasure trove of information on the marble industry and has served as the source of virtually all the material included in this study. Its visual and documentary resources are enriched by a collection of useful manuscript studies drawing upon and synthesizing these materials. What appears here neither exhausts the Sheldon materials nor begins to tap the broader documentation on the Vermont marble industry. Hardly definitive, this article is intended as an indication of an area of study that has the potential for yielding much information useful for refining our picture of the building materials industry and its role in the dissemination of style in nineteenth century America.

² Ezra Brainerd, "Geology of the Marble Belt," in *The Marble Border of Western New England* (Middlebury, Vt.: Middlebury Historical Society, 1885), 9-22.

³ *Ibid.*, 21; also *Middlebury Register*, 30 May 1866.

⁴ Frederick Hall, *Statistical Account of the Town of Middlebury* (Middlebury, Vt., 1821), 8-10.

⁵ Henry M. Seely, "Marble Fields and Marble Industry," in *Marble Border*, 36.

⁶ *Ibid.*, 46.

⁷ *Middlebury Mercury*, 29 August 1804; 16 October 1805; 12 August 1807; 22 March 1809.

⁸ *Middlebury Mercury*, 3 February 1808.

⁹ The hand-finishing process in the Foot shop is preserved in a description of 1883 by Catherine L. McLeod, "Marble Sawing Invented," Henry L. Sheldon scrapbook #128, 4, Sheldon Museum, Middlebury, Vt.

¹⁰ Timothy Dwight, *Travels in New England and New York*, 4 vols., ed. Barbara M. Solomon (Cambridge: Harvard University Press, 1969), vol. 2, 289.

¹¹ Samuel Swift, *History of the Town of Middlebury* (A. H. Copeland: Middlebury, Vt., 1859), 337. E. W. Judd, *Account Book 1805-1806*, p. 168, Sheldon Museum. Judd was able to pay back Painter's half of the money once his business was underway in 1804.

¹² Elias Hall, Testimony in Henry L. Sheldon scrapbook #128, 3, Sheldon Museum.

¹³ Abstract of lawsuit brought by Moses Leonard against Eben Judd, 1817, Judd-Harris Papers (hereafter JHP), Sheldon Museum.

- ¹⁴ Henry L. Sheldon scrapbook #128, 3, Sheldon Museum.
- ¹⁵ *Marble Border*, v.
- ¹⁶ *Ibid.*
- ¹⁷ Swift, 336. The patent was reported in the Middlebury *National Standard*, 24 September 1822. That he did feel proprietary about the marble sawing process, though, is indicated by an agreement of 27 January 1812 with John S. White and Stephen Whiting of Concord, N.H., in which he, as inventor of the system, contracted to build a mill for sawing whetstones in Bath, N.H., JHP.
- ¹⁸ Middlebury Marble Manufacturing Company Book 1, 1810-11 and 1812-24, (hereafter MMMC) Sheldon Museum; Frederick Hall, *Statistical Account*, 10.
- ¹⁹ E. W. Judd Account Book, 1805-1806, entries of September 14, November 16, and November 30, 1805, Sheldon Museum.
- ²⁰ James Lucas to Eben Judd, 27 May 1828, JHP.
- ²¹ E. W. Judd Account Book, 31 January 1806: "two small tablets to Martin S. Crandall for Mr. Warren's house." Sheldon Museum.
- ²² Middlebury *Mercury*, 3 February 1808.
- ²³ Hooker and Brewster, Hartford Fire Insurance Company ledger, 1813: entry of 13 December 1813 re "Middlebury Marble Company," Sheldon Museum. Also Hall, *Statistical Account*, 8-10.
- ²⁴ Levi Woodbury, "Levi Woodbury's Week in Vermont, May 1819," Introduction by H. B. Fant, *Vermont History*, 24 (January 1966): 47.
- ²⁵ Hall, *Statistical Account*, 10.
- ²⁶ Middlebury *Mercury*, 31 May 1809; Swift, 336.
- ²⁷ Dwight, *Travels*, vol. 2, 292.
- ²⁸ MMMC, 45.
- ²⁹ *Ibid.* Also, Joshua Henshaw Account, JHP, 23 June 1807: "marbles sent to Boston \$115.93"; 21 January 1808, "stone for Montreal \$280.56."
- ³⁰ JHP, Sheldon Museum; Vermont *Mirror*, 9 February 1814.
- ³¹ Eben Judd to Daniel Judd in Vergennes, Vt., 15 January 1830, Sheldon Museum.
- ³² Walter H. Crockett, *Vermont: The Green Mountain State*, 5 vols. (New York: Century History Co., 1921), vol. 3, 177, 189.
- ³³ MMMC, 126-127, 130-131.
- ³⁴ Heather Cross, *The Effect of the Transportation Revolution on the Middlebury Marble Manufacturing Company, 1803-1837*, Honors thesis in history for Middlebury College, 1982, 21-22, Sheldon Museum.
- ³⁵ Hall, *Statistical Account*, 10.
- ³⁶ MMMC, 105.
- ³⁷ Middlebury *National Standard*, 30 Oct. 1821.
- ³⁸ MMMC; among the larger accounts between 1821 and 1823 were those of Amasa Paine, William H. Brackett, and Creed and Baker of Boston.
- ³⁹ MMMC; marble sent to Boston in 1822-23 totaled \$2,498.13.
- ⁴⁰ Harvey Wilson in Auburn, N.Y., to Eben Judd, 1825; account of Harvey Wilson 15 May 1826, JHP, Sheldon Museum. Lawsuit, Eben Judd vs. Harvey Wilson, *Vermont Reports*, 6, 185.
- ⁴¹ The opening of the Champlain canal in 1821 had reduced the shipping time to New York City to ten to fourteen days and the cost to \$10 a ton (Crockett, *Vermont*, vol. 3, 189). Shipments from Shoreham, Vt., to Troy in 1828 ran \$2.69 a ton (Bill, August 18, 1828, JHP). Wilson's accounts of 15 May 1826 note some \$2,515.63 worth of marble and an additional seventy-six chimneypieces sent to Auburn, JHP.
- ⁴² Deed of sale of Shoreham, Vt., quarry by Samuel H. Holley to Lebbeus Harris, April 19, 1826, JHP.
- ⁴³ *Marble Border*, 41, 50. The Proctor quarry did not open until 1836 and was not vigorously worked until some time later. It produced "Columbian" marble, a veined, almost black stone much prized for mantels. The other major dark marble from Vermont, the fossiliferous Isle La Motte stone, was used primarily for monuments and floor tiles, and presented a challenge to the traditionally claimed priority of Shoreham black marble in the 1820s. It apparently was available on the market and sent to New York City for the fireplace trade as early as 1823 (Allen L. Stratton, *History of the Town of Isle La Motte, Vermont* (Barre: Northlight Studio Press, 1984), 118-119. Its variegated color and texture is in distinct contrast to the almost featureless uniformity of most Shoreham marble.
- ⁴⁴ E.g., Asher Benjamin, *The Practical House Carpenter* (Boston, 1830), 75: "These designs are formed suitably for marble, but may be constructed of wood. . . . If of wood, they may be painted black and varnished, which will give them a neat appearance, and render them less liable to be soiled with smoke than when painted a light color."
- ⁴⁵ Middlebury *National Standard*, 27 November 1828.
- ⁴⁶ Amos Barnum to Eben Judd, 1829, JHP.
- ⁴⁷ *Ibid.*
- ⁴⁸ Lawsuit, Nathaniel Harris vs. Benjamin Bacon of Cambridge, Mass., January 1830, JHP.
- ⁴⁹ *Ibid.*

- ⁵⁰ Eben Judd to Daniel Judd in Vergennes, January 15, 1830, Sheldon Museum.
- ⁵¹ Shipping statement of 31 May 1831, JHP.
- ⁵² Abstract of a lost letter of January 1823, Sheldon Museum.
- ⁵³ Ammi B. Young to Eben Judd, 11 August 1831, Sheldon Museum.
- ⁵⁴ Agreement, Eben Judd and Jonathan Wainwright, 15 October 1829, JHP. The Wainwright house is now the annex of the Middlebury Inn.
- ⁵⁵ Eben Judd to Daniel Judd in Vergennes, January 15, 1830, Sheldon Museum.
- ⁵⁶ E.g., Asher Benjamin, *The Practical House Carpenter*, plate 48; Asher Benjamin, *The Practice of Architecture* (Boston, 1833), plate 39 (door frames) and plate 47 (chimneypieces).
- ⁵⁷ Inventory, 7 January 1834, JHP: 1,233 feet of marble, 49 columns, 70 plinths, 129 large caps, 38 small caps, 88 bases.
- ⁵⁸ Plans for the capitals were published by Asher Benjamin as early as his *Rudiments of Architecture*, 1814, plate 18.
- ⁵⁹ E.g., Asher Benjamin, *The Practical House Carpenter*, plates 49-51; Minard Lafever, *The Young Builder's General Instructor*, (Newark, N.J., 1829), plate 46.
- ⁶⁰ Asher Benjamin, *The Practice of Architecture*, plate 47.
- ⁶¹ A Federal style version can be found in Owen Biddle's *Young Carpenter's Assistant*, (Philadelphia, 1805), plate 22.
- ⁶² Asher Benjamin, *The Practice of Architecture*, 91, stressed that columnar fireplaces were suited only to grand rooms because of their substantial projection. In his *Builder's Guide*, (Boston, 1839), 45, he discouraged columns on the grounds that they hampered the circulation of air to the fire and that they were inevitably spaced too widely to present proper classical proportions. He preferred pilasters.
- ⁶³ Fiske Kimball, *Domestic Architecture of the American Colonies and of the Early Republic*, (New York, 1927), fig. 201; Charles A. Place, *Charles Bulfinch, Architect and Citizen*, (Boston, 1925), 179-186. The fireplaces in the Swan houses are ionic, the one in the Barrell House was doric.
- ⁶⁴ The fireplace detail in the Barrell House bears no relation to the delicacy of the wooden fireplace found in the same building's oval saloon (Kimball, *Domestic Architecture*, fig. 192). Kimball, 271, notes that this house was altered by Bulfinch himself in 1818, but even this date seems early for black marble to be available and in fashion.
- ⁶⁵ Fireplaces were easy to remodel. Middlebury experience shows that fireplaces and front doors were favorite details to alter when modernizing a house style. Many Federal style houses from the first decade of the nineteenth century received Greek Revival door frames manufactured in the 1840s. Similarly a house from 1804 has a fireplace design only current a decade later; a house from 1801 has a fireplace identical to another produced in 1817. It is possible that even the owners of Bulfinch houses were inclined to redecorate with "store-bought" chimneypieces, especially when there was someone like Charles Harlow in town selling them.
- ⁶⁶ Samuel Chamberlain, *Salem Interiors*, (New York, 1950), 50, 139-143, 163, 174. Ionic columnar versions include white and gray examples in the Pickering-Mack-Ver Planck House of 1814-15, and gray in the Rantoul House. Gray panelled ones are found in the eighteenth century Mackey-Wheatland House and the 1828 Butler House.
- ⁶⁷ E.g., the *Middlebury Register*, 25 July 1866 reported on tariff debates in Congress, noting that even at that date marble workers in Carrara earned only eight to twenty cents a day as opposed to Vermont wages of \$2.50-\$3.00 per day.
- ⁶⁸ William Slade to Eben Judd, 1 March 1834, Sheldon Museum.
- ⁶⁹ Joseph Hough to Eben Judd, 2 April 1833, JHP.
- ⁷⁰ Nathaniel Harris to Eben Judd, 17 July 1836, Sheldon Museum.
- ⁷¹ Joseph Hough to Eben Judd, 2 April 1833, Sheldon Museum.
- ⁷² Eben Judd and Lebbeus Harris to O. S. Hartshorn in Portland, Me., 29 Dec. 1835, JHP.
- ⁷³ Eben Judd to the Directors of the Middlebury Woolen Manufacturing Company, 4 October 1836, JHP.
- ⁷⁴ Swift, 337.
- ⁷⁵ Swift, 338.
- ⁷⁶ H. P. Smith, *History of Addison County, Vermont*, (Syracuse, N.Y., 1886), 331.