

NEW SERIES : Price 1 dollar : VOL. XXVII No. 4

# VERMONT *History*

*Formerly the Vermont Quarterly*



October 1959

*The* PROCEEDINGS *of the*  
VERMONT HISTORICAL SOCIETY



## JAMES WILSON – GLOBE MAKER

By HAROLD WEBB HASKINS

“AMONG all the strange things that men have forgotten,” G. K. Chesterton said, “the most universal lapse of memory is that by which they have forgotten they are living on a star.”

Only on a star, surely, could a man find the fire, the courage and the strength to live the kind of life that James Wilson, the globe maker, lived.

In Bradford, Vermont, in 1796, in a community then only a generation removed from a wilderness marked with Indian trails, James Wilson completed his first globe with scarcely any formal education, without benefit of the encouragement and example of learned neighbors, without the inspiration and challenge of an area steeped in the traditions of educational and scientific achievement. What he did, he did from within—an amazing, miraculous thing! Perhaps the miracle was the manner in which his ancestors of Scottish blood must have balloted for him over the years.

James Wilson’s ancestors emigrated from Argyleshire in Scotland in 1612 to the province of Ulster in northern Ireland. His great-grandfather, Alexander Wilson, was in the siege of Londonderry. Sometimes called the most bitter and dreadful siege in British history, it lasted 105 days in the year 1688. With food long since practically exhausted, the city was finally relieved by the armies of King William. As a reward for his gallant services during the siege, Alexander Wilson was given his farm “rent free” when later he emigrated to America and settled in Londonderry, New Hampshire.

Martha McDuffee, a forebear of the globe maker on his mother’s side, likewise endured the siege of Londonderry and won special acclaim for her behavior. When mice and rats were the only food to be had in the beleaguered and starving city, she began sharing with her hungry comrades corn which she had sensibly and resolutely saved for such an extremity. For this heroic service, she was long hailed as “Matchless Martha.”

In 1718, thirty years after the siege of Londonderry, a company of one hundred and twenty Scotch Presbyterian families left the religious



intolerance of their surroundings in northern Ireland and the next year arrived in Boston, whereupon most of them pushed on to Londonderry, New Hampshire. Among them were the great-grandfather and the grandfather of the globe maker.

These Scotch immigrants via Ireland have been described in these words:<sup>1</sup>

They were remarkable for intelligence, for courage, for frankness to a fault. Their honor was as bright as their valor. They were high minded and chivalrous. They fought for their homes against the red men and for their liberties against their king. They were devout, religious, fun-loving. Their valor they learned of the Scotch Covenanter, their fun of the Irish peasant. From this colony sprang John Stark . . . among their descendants was Horace Greeley. . . .

Such was James Wilson's immediate heritage.

When one learns for the first time that the first globe made in America was made in Bradford, Vermont, by James Wilson, he is likely to say, "So, what?" and dismiss the matter as having little meaning and less importance.

But James Wilson's terrestrial globes do have meaning and importance to a people who are globe conscious; who nearly a century and a half later have recently struggled victoriously through the world's first global war; whose Globemasters now wing their way around the earth in ordered and regular flight; whose responsibilities, opportunities, dangers and hopes are global in nature and extent. His celestial globes, too, are significant because one hundred and fifty years ago they were picturing the courses and pointing the targets our rockets and satellites would seek out in this space age of ours.

And James Wilson does have meaning and importance—the meaning and importance of a human being doing a worthy thing in a skilled and inspired manner in the face of difficulties well-nigh insurmountable. He is important because he discovered and knew the importance of excellence, a thing which we in America today are just beginning to re-discover. He is important today because in an era that seeks safety and security, he reminds us what a lone man can do bare-handed, as it were, and thereby glorifies the strong heart and the courageous soul.

Let us see.

James Wilson was born on March 15, 1763 in Londonderry, New Hampshire, whence his great-grandfather, Alexander, had migrated in 1719 from Ireland. He worked on his father's farm until he was seventeen years old, and then added to his knowledge of farming a

proficiency in blacksmithing which later served him well. Together with his cousin, James McDuffee, he learned the trade of blacksmith from his uncle, Daniel McDuffee.

He bought some 100 acres of land in Francestown, New Hampshire, built a log cabin there, was married, and there his first child, a son James, was born. Shortly, he returned to Londonderry, and there the first promptings to manufacture artificial globes came to him. From letters in the possession of a great-granddaughter of his, it seems likely that he was engaged in preliminary experimentation in the construction of globes in a workshop in Londonderry. How this abiding passion came into being, we can only surmise.

Some comments may be in order:

He had been a great reader, with a wonderful faculty for grasping scientific principles, and a quick mind for applying them.<sup>2</sup>

Besides farming, Wilson had learned the trade of blacksmith, and through the years had found that he possessed considerable skill in the working of hot metal. The mastery of this accomplishment may have been partially responsible for his desire to construct the globes which later came to bear his name. To be sure, globes were a long way from blacksmithing, but in those days there were few technical lines into which one could graduate, and terrestrial and celestial globe making had its fascination, especially if one read the correspondence in the weeklies about voyages to uncharted seas, and the mysteries of the heavens, and was handy with tools.<sup>3</sup>

That the political and economic events of the day may have influenced him has been suggested.

The Napoleonic wars were raging; England and France were locked in a bitter struggle, and our American republic was drifting into its second war for independence. The so-called Louisiana Territory was engaging the active interest of France, Spain, Britain and our Federal Union. As geography was a popular topic of conversation, we do not wonder that James Wilson became interested in world affairs.<sup>4</sup>

In 1795 he set out for Bradford, Vermont, located on the Connecticut river in Orange County, there to visit his cousin and former blacksmith mate, James McDuffee, who some time previously had gone there to live. On the way he stopped at Dartmouth College in Hanover, New Hampshire to visit a friend who was a student there. At Dartmouth he is said to have seen, probably for the first time in his life, a pair of terrestrial and celestial globes. Some have thought that his passion for globe making was born here, but it seems more likely that an earlier resolve, already given expression to in the Londonderry just left behind him, was here only confirmed and strengthened.

Pushing on the remaining twenty-five miles to Bradford, Vermont,

he was struck by the beauty and fertility of the Coos meadows in this garden of New England at the confluence of the Connecticut and Waits Rivers. Here the parallel ranges of the White Mountains to the east and the Green Mountains to the west united to work their spell on him, and on July 27, 1795, he bought a lot of land of Colonel Thomas May, of Bradford.

In December of the same year, 1795, having in the meantime brought his family and possessions to Bradford, he bought of James McDuffee a lot of ninety-two acres adjoining the lot previously acquired from Colonel May. These lots formed the farm more recently known locally as the B. F. Chamberlain farm, situated a mile or so northwest of Bradford village on the Fairground Road, so-called, and now occupied by Harley Moore, Jr. and family. Here the first globe in America was made.

To help pay for this newly acquired land, James Wilson and his cousin, James McDuffee, made axes that winter. "They were manufactured and tempered so finely, it was said 'there could be found no such axes anywhere' and they were urged to make more."

Settling on a new farm in a new town in a new state did not wholly interfere with the project nearest his heart, for within the year 1796, he completed his first globe. It was a large, solid, wooden ball, covered with paper, with the continents and countries drawn in with pen and ink. It was a long way from being a practical, satisfactory product. Many problems needed to be solved before James Wilson could hope to make a globe that would not only compete successfully with, but excel, those being imported from England for sale in this country.

Problem One was his limited knowledge of geography, astronomy and natural science. Attendance at winter school as a boy in Londonderry at such times as he could spare or be spared from the work at home was little preparation for the job at hand, and even his wide reading and "wonderful faculty for grasping scientific principles" had provided him information hardly adequate to cope with the demands now made upon it.

He solved Problem One in a wholly typical manner. With one hundred and thirty dollars in cash, realized apparently from the sale of farm produce and stock, and being no small sum in those days, he went to Ryegate, Vermont, and purchased from Hugh Somers the third edition "in sheep" of the *Encyclopaedia Britannica; or a Dictionary of Arts, Sciences and Miscellaneous Literature*. It had been published in 1788 in Edinburgh on a sort of installment plan and was completed



in 1797 in eighteen volumes with 14,579 pages and 541 plates. The volumes which he brought back to Bradford with him and those which he received as the printing of the edition progressed must have been his almost constant companions in his 'leisure' hours, for "from their study, he became proficient in his knowledge of the natural sciences as they were then taught."

Problem Two involved the technique of engraving on copper. Through his own efforts he had acquired considerable knowledge of this art, but realizing his need of greater skill and mastery, he made a journey to Boston and thence to Newburyport, Massachusetts, for instruction. There John Akin "of South Carolina," one of the best known of the early American engravers "asked him \$100 for the service, an amount which Wilson did not have." The mission had not succeeded.

He returned to Bradford, and after a series of unsuccessful starts decided to see Amos Doolittle (1754-1832) in Connecticut, and went on foot to New Haven to interview the man who had engraved the two maps included in Jedediah Morse's 'Geography Made Easy' (1784), the first geography published in the United States. Doolittle, of course, was fairly well known as the engraver of those four curious military plates of Lexington and Concord: "six shillings a set for plain ones and eight shillings for coloured." He taught James Wilson the basic things to be known about the process of engraving on copper, and the farmer-pupil trudged back to the Vermont banks of the Connecticut to show his second wife and growing family what he had accomplished in Connecticut.<sup>5</sup>

A third problem was presented by the mechanical and technical difficulties encountered in the actual construction of the globes. Using his original globe in the form of a wooden sphere as a basis for experimenting, he covered the ball with paper, gluing several layers together, traced the continental outlines in ink upon the surface, cut the paper into hemispheres, and then removed it, after which he glued the hemispheres together. In this manner he solved the problem of making a light, portable and substantial globe, but the matter of printing his maps upon this paper sphere involved a problem that had tried the skill of great mathematicians: the projection in true proportion of the meridians upon a sphere.

Of this and other technical problems which faced him, we read:

The young mechanic did everything for himself. He made his own tools, his lathes, and his presses. He did his own printing, made his own ink, glue and varnish, and cast his own meridians and turned them; he designed all his own maps, and labored with great trouble in connecting hair lines. It is said

he worked a total of three hundred days on his first large copper plate, and meeting with difficulties in the problem of getting a true proportion of meridian upon a globular surface, went to see Jedediah Morse (1761-1826), "Father of American Geography" at Charlestown, Massachusetts. Morse told Wilson the remedies could not be made on the same plate, and the latter went back to his blacksmithing-globe-manufactory and began anew on some copper which was obtained at great sacrifice on the part of all members of the family.<sup>6</sup>

This time he was successful, and James Wilson was on his way to fame and modest fortune! In his *History of Bradford, Vermont*, Rev. Silas McKeen briefly but eloquently summarizes the struggle and achievement which we have here traced:

Mr. Wilson procured copper plates of sufficient size for his thirteen inch globes, protracted his maps on them in sections, tapering as the degrees of longitude do from the equator to the poles, and engraved them with such admirable accuracy of design, that when cut apart and duly pasted on his spheres, the edges with their lines, and even the different parts of the finest letters would perfectly coincide and make one surface, truly representing the earth, or celestial constellations. Though in the use of the graver he was self-taught, and this species of design and engraving was incomparably more difficult than plain work, yet by his ingenuity and incredible perseverance he succeeded admirably, and brought forth globes, duly mounted, and in all respects fitted to rival in the market any imported from foreign countries.

The demand for these "made-in-America" globes seems to have been considerable and the merchandising of them successful within reasonable limits, at least. It is likely that globes bearing the name of James Wilson were sold in 1809, but the earliest sale that can be clearly identified as to date is: "Jan. 18, 1810, sold Mr. Wellman 1 globe," and the second: "Jan. 25 sold Judge Niles 1 globe." But *before* this entry and upon the same leaf is recorded the sale of seventeen globes without date or destination; and *after* the entry the sale of eleven globes is shown, again without date. The next dated sale is: "Nov. 1, 1810, Mr. Melindy of Amherst, 1 globe."

That the merchandising of the globes was successful from the start is indicated by a comment regarding this sale of a globe to Mr. Melindy, which was made by an earlier writer and repeated by later ones: "The small unpainted blacksmith shop had become a globe factory which was throwing off its product as far as Amherst and paralyzing the heart of the English globe trade in America."

Some of the success of the fledgling globe industry was likely owing to the encouragement and sponsorship of Vermont's Supreme Court Justice Nathaniel Niles of West Fairlee. He is the "Judge

Niles" mentioned above in the second recorded sale of a globe on Jan. 25, 1810. He was a "preacher, poet and author" and a lawyer with University training. He had taught school, and perhaps more important to our globe maker, he had served as Representative from Vermont in the Congress at Washington, and so was able to be of help in seeing that the new globes came to the attention of important people in several states.

By 1813 or shortly thereafter, the globes had been introduced to Boston in a "perfected edition," and William Wells was Wilson's agent in that city. That the demand for them there was good is indicated in a letter from a well-known Boston firm seeking globes, dated "Boston 22 July 1817" and addressed to "Mr. James Wilson, Globe-maker, Bradford, Vermont," which concludes with this paragraph:

"We now address you to ascertain on what terms you would sell us six terrestrial & one celestial globe. that is—for what each, cash down, & for what one half cash in hand & the other half in 6 months.

Your ansr by first mail will oblige

Your obedt servants

CUMMINGS & HILLIARD

Boston Bookstore

No 1 Cornhill

Boston"

Great care was taken not only in the making of the globes but also in the mounting of them, and in the shipping of them.

The edition of celestial globes made at this time by Mr. Wilson had the Greek letters affixed to the groups of the stars, and were furnished with a new horizon. The frames and brass work were very neat. The frames were of ash. Each globe was furnished with a brass quadrant and the screw at the bottom could easily be turned with the fingers without a screw driver. Each globe was packed in a pine box of material half an inch in thickness planed and dovetailed, with hinges and clasp.<sup>7</sup>

In a very few years the Bradford shop was unable to keep up with the growing demand for the globes, and James Wilson, sensing the strategic location of Albany, New York as a sales center, formed a partnership with his sons and opened a manufacturing plant in Albany at 100 Washington Street under the name of J. Wilson & Sons.

The exact date of the starting of the Albany manufactory is uncertain, though there is reference to its being in existence "about 1815." We do know that in 1817 Samuel, the eldest of the boys in Albany, then 24 years old, was apparently in charge of operations. Among existing records is a contract drawn the next year, 1818,



however, between James Wilson and his second son, John, then 23, in which it is provided "that said John Wilson agrees to manage the business according to the best of his judgment and to employ all necessary workmen in said business and receive two-thirds of the profit arising therefrom." (The other third went to the father.) David, the third globe-making son, joined his older brothers at Albany, and did the engraving on a new edition of three-inch globes.

The successful Albany venture was pretty much the responsibility of the sons. "Bradford continued to be the home of the globe maker despite the developments in Albany; from his first settlement it was home to him. It is said that he made frequent visits to the manufactory and encouraged the boys in their undertaking, returning to Bradford at the first opportunity."<sup>8</sup>

David left the partnership of brothers some six or seven years later in 1824, went to New York, gained some repute as a painter of miniatures, and died untimely in 1827 of consumption at the age of thirty. Both remaining brothers, Samuel and John, died in 1833, sadly missed by their father. The main responsibilities of the business, which had rested on their shoulders, were now transferred to Cyrus Lancaster, who had been associated with the firm for the past seven years. Lancaster had taught at Bradford Academy, was twenty-four years old, and was doubtless expected to be a sort of sales manager and public relations man when James Wilson had prevailed upon him to join the firm in 1826.

At any rate, in December 1827, a new and improved edition of the globes was given national advertising—"national," at least, to the extent that "members of the Congress of the United States were handed a slightly oversized business card which read:

American Manufactures  
o O o  
A Pair of 13 Inch  
GLOBES

From the Manufactory of Messrs. J. Wilson & Sons of Albany, N. Y. is now exhibiting for public inspection at the United States Library in this city. James Wilson is the original manufacturer of Globes in this country and has brought the art to such degree of perfection as to supercede altogether the necessity of importation of that article from abroad.

Members of Congress, as friends of American production and ingenuity, are respectfully invited to examine these Globes.

Washington, Dec. 1827

And in the following April the story of this new edition of globes

was told to the entire country by means of a "large broadside with an elaborately engraved top piece showing two globes, two separate styles of bases, with a female figure quite dwarfed by the larger of the globes. The text gave complete information as to price and the virtues of the product,"<sup>9</sup> as follows:

WILSON'S AMERICAN GLOBES  
J. Wilson & Sons,

Manufacture, at No. 110 Washington Street, Albany, Globes of Three, Nine, and Thirteen Inches Diameter

Thirteen Inch Globes mounted on mahogany pedestal stands, with compasses, per pair . . . . .	46 & \$55
Ditto. Mahogany and curly-maple, turned frames with com- passes, per pair . . . . .	40
Ditto. Common, low frames, without compasses, per pair . . . . .	32
Nine Inch Globes, common frames, per pair . . . . .	22
Three Inch Globes, fancy mountings, per pair . . . . .	5

GREAT PAINS HAVE BEEN TAKEN, IN THE PLATES FOR THESE GLOBES, to make them elegant as well as useful; and in point of accuracy and execution, they are represented by able mathematicians to be equal, and in many respects superior, to those manufactured in Europe. The TERRESTRIAL GLOBE is as critically correct, as the most recent and authentic surveys can contribute to make them. The tracts of the various circumnavigators are carefully delineated, together with the recent discoveries of Parry and Franklin.

THE CORRECTNESS OF THE GEOGRAPHICAL DIVISIONS, & OF OUR OWN *country*, and the western hemisphere, renders these globes more useful and interesting to the American geographer, and gives them a decided preference to imported globes, on which this continent is greatly misrepresented.

THE SEVERAL STATES AND TERRITORIES OF THE UNION, ARE CORRECTLY divided by dotted lines, and variously coloured, by which they are easily designated. The new thirteen inch CELESTIAL GLOBE, with elegant drawings of the constellations, contains nearly 5,000 stars, carefully compiled and laid down, from the latest and most approved astronomical tables, and reduced, according to the precession of the Equinoxes, to the present time. The Celestial Globe, also, contains the names of several new constellations, not to be found on any other globes.

THE PRICES OF THESE GLOBES ARE MUCH LOWER THAN THE ENGLISH CAN be imported for, and of a more durable quality; consequently our Schools and Academies, as well as private families, would find it for their advantage to use them. The popularity and usefulness of Geographical and Astronomical science are so apparent and universally acknowledged, that it is unnecessary to urge the necessity of acquiring a knowledge of that important branch of education.

ALBANY, April, 1828

As indicated above in this advertisement, globes were very often



sold in pairs—one terrestrial and one celestial. In this combination they made a desirable parlor ornamentation in the homes of the well-to-do, and schools and colleges, needing both, found it advantageous to buy them in this manner.

How long Cyrus Lancaster continued to run the business for James Wilson after the death of the brothers is not exactly known. He died in 1862.

One final achievement of James Wilson, that of constructing a Planetarium, is related in Rev. Silas McKeen's, *History of Bradford, Vermont*.<sup>10</sup>

Mr. Wilson, with a remnant of his once flourishing family still with him, lived to old age, retaining his faculties remarkably. His love for geography, astronomy, and the mechanical arts connected with them, remained unabated. When past eighty years of age he contrived, and with his own hands constructed, a machine which finely illustrates the daily and yearly revolutions of the earth; the cause of the successive seasons; and the sun's place, for every day of the year, in the ecliptic. These movements are produced by turning a crank, which causes the earth to revolve about the sun in the plane of the ecliptic, always retaining its true relative position. The machine is also furnished with the means of causing the student to see and understand precisely what is meant by the Precession of the Equinoxes; a difficult thing, without some such means of illustration.

The large copper plate, on which are printed the months of the year, with their days, and the corresponding signs of the zodiac with their degrees, was engraved by Mr. Wilson after he was eighty-three years of age! Can a similar instance anywhere be found?

Lavalette Wilson, a grandson, bears witness to the fact that James Wilson "was a large, powerful, stalwart man, fully six feet tall, of commanding presence and very erect. His countenance stern, thoughtful and dignified. A kind hearted and generous man, modest and reserved as regarded his own ability, caring nothing for dress or show, and entirely free from conceit."

He died in Bradford, Vermont on March 26, 1855 at the age of ninety-two years and twelve days. He was three times married. He married (1) Molly Highland of Londonderry, New Hampshire; one son, James, who became a sea captain and was lost at sea; (2) Sarah Donaldson, also of Londonderry, New Hampshire; ten children, of whom three died young, the others being: Sally, who married Stephen Tabor of Bradford, Vermont; Samuel; John; David; Boyd H.; Eliza, who married a Mr. Wilson of New York; and Mary, who married a Mr. Van York of New York; (3) Agnes McDuffee of Bradford, Vt.; three daughters; Agnes, Mary Anne, who married



Willard Waterman of Norwich, Vermont; and Jane, who married William Waterman, brother of Willard Waterman.

Mr. Wilson lived in his first farm home in Bradford, Vermont for seventeen years, and then, in 1816, he bought farm land on the Upper Plain, so-called, in Bradford and built thereon a one and one-half story brick house, reputed to be the finest house then in Bradford. It burned in 1834, but since the walls remained standing, it was reconstructed by Mr. Wilson, only to burn two more times, the last time in 1901.

James Wilson was held in esteem by his neighbors and fellow townsmen in the Bradford he loved so deeply. He was one of the incorporators of Bradford Academy, incorporated November 7, 1820. He was the first vice-president of the trustees, an office which he held for several years, and for many years was a trustee of the Academy.

A few years ago, Ernest Martin Hopkins, then the President of Dartmouth College and now its President-Emeritus, said:<sup>11</sup>

The foundations of American Society were laid by men who endured economic want and physical hardships that they might gain access to opportunities few in number and inconsiderable in importance as compared with those which today lie close at hand for all of us. There was no thought in their minds that the conditions of life ought to be anything but a challenge, or that the rewards of life could be possessed except through valiant effort.

They accepted the conditions and went their individual ways without dismay and without complaint, with definite purpose and high aspirations. Thus, from the recognition of the fact that life must be a struggle for men to profit most from it, arose a great people.

Perhaps this is the meaning and importance of James Wilson! Certainly it is a fitting eulogy of the life he fashioned for himself.

The town of Bradford and the state of Vermont are honored in James Wilson, just as every other town, city and state in this country has been honored by valiant sons and daughters of an early era. It will be well with us who live today in these pleasant places if we remember that we are standing on the shoulders of giants!

In Vermont, and elsewhere, it is true that here a nation was nurtured; here events of moment and romance occurred; here great men walked and talked. Here still is the inspiration of places and personalities. Let us walk occasionally on hallowed ground.<sup>12</sup>

#### NOTES

<sup>1</sup> L. P. Tucker, "A Vermont Genius," *The Vermonter*, April 1904, 270.

<sup>2</sup> Lavalette Wilson, *Genealogy of James Wilson*, 1911.

<sup>3</sup> LeRoy E. Kimball, "James Wilson of Vermont, America's First Globe Maker," *Proceedings of American Antiquarian Society*, April, 1938, 33.

- <sup>4</sup> John C. Huden, "Vermont Globe Maker," *The Vermonter*, December, 1943, 242.
- <sup>5</sup> LeRoy E. Kimball, *loc. cit.*, 32-33.
- <sup>6</sup> *Ibid.*, 33-34.
- <sup>7</sup> L. P. Tucker, *loc. cit.*, 274.
- <sup>8</sup> LeRoy E. Kimball, *loc. cit.*, 39.
- <sup>9</sup> LeRoy E. Kimball, *Ibid.*, 40-41.
- <sup>10</sup> P. 250.
- <sup>11</sup> "Bill" Cunningham, *Boston Herald*.
- <sup>12</sup> Mrs. William S. Spencer of Bradford has aided immeasurably in writing this paper. She is the great granddaughter of James Wilson and has readily made available deeds and family papers for this purpose. H.W.H.

