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"Thomas Davenport, 125th Anniversary Address," 1927
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ADDRESS AT THE 135th ANNIVERSARY OF THE BIRTH

OF THOMAS DAVENPORT;

HELD AUG. 24, 1927, at WILLIAMSTOWN, VERMONT.

(For the Vermont Historical Society)

By Dorman B. E. KENT

1 NOT to be printed before
Wednesday AUGUST 24.

This year of 1927 should stand in future times as a memorable one in the annals of Vermont. It marks the one hundred and fiftieth anniversary of the birth of our State and celebrations and observances have been conducted at Windsor, at Bennington, at Hubbardton and elsewhere and the story of the men who paved the way in these wildernesses has again this year been set forth in address, in pageant and in printed page and it is fitting that it should be so.

"He who faithfully chronicles the performance of pioneers and patriots plays his full part in the consummation of their benefits to posterity"

Our State is small indeed in size and in population and perhaps the time may never come when any more people will live here than are here now.

Somehow it sometimes seems as if these rock-hewn hills and narrow valleys were constructed to please the eyes of those who look upon them and that the Almighty when he made them, never intended that their beauty should later be desecrated by any great industries or marts of trade together with the swarms of human kind who must ever attend and surround such undertakings.

Certainly no fairer state is in our Union.

From end to end and from side to side this Commonwealth is filled with such scenes as are well nigh matchless and the one thousand peaks and mountains over two thousand feet high together with the four hundred lakes and ponds at their feet, make of Vermont a garden spot of all the earth.

The pride taken by any man in his own achievements is a natural one. When over done it is conceit, when well done it is a strong factor in his attainment of success and when under done it is often a contributing cause to a complete lack of ambition or confidence. The sort of pride a man takes or modestly enjoys in his own success is felt also in the success of his immediate families. Carried still further, the pride arising from the knowledge that one's locality, city or State has performed well its part in producing men of attainments is a worthy one and it is shared by all normal minded individuals.

No other State in the Union was born in such bitterness or nourished amidst such contention as was ours and through it all, our forebears acted like men.

It can be and has been actually proven that Vermont, always one of the smallest states in population, ranks according to her strength high up in her gifts of men of ability to the world. Born and raised here could be named a list of Presidents, Vice Presidents, senators, congressmen, cabinet officers, governors, chief justices, college presidents, bishops, archbishops authors, editors, sculptors, artists, ambassadors, capitalists and financiers, generals, rear admirals and inventors far too long to rehearse here, together with mention of but few of their major achievements.

At no time down through the past sixty years has but one State led Vermont in proportion to her population in illustrious sons and that state, Massachusetts, has all along held closely her own, while over eighty-five per cent of the prominent men born in Vermont have gone out from her borders to win their fame and live their lives in other lands. Other states have claimed and enjoyed the fruits of their labors and other states have adopted them but the fact must ever remain that on these high hills and in these narrow valleys their fathers toiled and and lived and here their fathers lie. Here, too, the sons were born and received their early training and almost without an exception those sons have ever looked back and pointed back with a pride will justified to the scenes of their nativity and youth.

It was the immortal Webster who said, "Men hang out signs indicative of their respective trades, shoemakers hang out a gigantic shoe, jewelers a monster watch, even the dentist hangs out a gold tooth, but up in the Franconia Mountains of New Hampshire God Almighty has hung out a sign to show the world that in New England----He makes Men." And of course we who stand here believe that our State is the gem of New England and certain it is that in every war on land or sea and in every walk of peace Vermont and her sons have ever done well their part. To have been born and raised in this, our Commonwealth, is an advantage to any man.

The Sesqui Centennial observances held this summer have caused the people of the United States to pause and look back to Vermont and her early days and to listen again and read anew of the doings of those who laid down here one of the cornerstones of this Republic. Tablets have been unveiled, now here, now there all over Vermont, marking the scenes of battles, the birthplaces of ideas, the locations of historic houses and vantage points and the homes of the men and women who made this state what it is.

They were moulders of civilization and no less a one, nay oftentimes far more, is the man with a vision, he who sees clearly far ahead of his fellows and by invention paves the wayf or great industries and for the prosperity of millions of men and women yet unborn. Such a man was Thomas Davenport and now you and I stand here today to commemorate his name.

As Abraham Lincoln said in his immortal speech at Gettysburg, "The world will little note nor long remember what we may say here". But let me say that what we are doing here will be remembered through the ages, because we are leaving on this spot a thing we believe will remain here as long as the hills about it stand, a tablet to be read by scores of thousands of men and women in the many years to be and they will go away with the knowledge that in this town was born and here was raised to manhood, Thomas Davenport, the inventor of the electric motor. The first of his line this side the sea was Thomas Davenport who came from England and joined the church at Dorchester in 1640. Thomas, the inventor, was the great great great grandson of his ancestor the first Thomas and the line was, Charles born in 1656, Thomas in 1695, Lemuel in 1735, Daniel in 1764, and Thomas who was born in Williamstown on a hill some two miles from this spot on July 9, 1802. He was one of eleven children, some bearing such good old style names as Daniel, Simeon, Hannah, Lemuel, Oliver and Barzillai.

Among my own great grandfather Kent's family appeared such rock ribbed and outlandish names as Ezekiel, Rachel, Remember and Abdiel, somewhat worse indeed than those in the Davenport household, but my great grandfather was a straight laced old fashioned Episcopalian who would not allow his offspring to engage in even a game of checkers if he knew it, while Daniel Davenport, the father of Thomas brought up his family in the liberal Universalist faith, a religion my great grandfather probably despised as he did a toad.

Daniel Davenport and his wife Hannah Rice came here from Dummerston, Vermont, late in the eighteenth century and settled on a farm on the West Hill. They were poor people indeed as were in fact, practically all the early settlers of these regions but perhaps the Davenports were even much less endowed with these worlds goods than the average pioneer family in those times, anyway we know that when the father Daniel died he left no will and no particular property to will away if he had. In fact they were so poor that even before the father died, the children as soon as they were old enough were put out to live among their more fortunate neighbors. These children all attended the district school on the West Hill in a building now long gone and forgotten and there young Thomas received a fair share of his education and a meagre one it was. There were some sixty scholars in

that district all were crowded into a small school house. The teachers were Ephraim Luce and Alba Smith and crude indeed was doubtless the mental training these uncouth young boys and girls and young men and maidens of the hills absorbed.

Thomas was a frail, slender and touzle-headed boy---he never weighed a hundred and thirty-five pounds in his life---and those who outlived him and remembered him well, were wont to recall and relate that he made the most of his every opportunity and when the rest of the children were out playing during the noon and recess hours he could generally be found inside the school house diligently absorbed in his studies. That is somehow a habit that budding geniuses always have. That habit never bothered me---- but then----I was never publicly accused of being any genius.

Thomas' brother Oliver said "Tom always had great patience. When he went to school he would never go to the master to help him do a hard sum, but would ~~give it up~~ keep plugging at it and generally he didn't have to give it up." When his father died in that awful winter of 1812 when so many thousands of men and women at all ages in Vermont succumbed to the spotted fever that the death rate was one to every thirty-one human beings, the son, Thomas was but ten years of age and a year or two later, he was put out or apprenticed to Captain Samuel Abbott and one Enoch Howe the latter's brother in law to learn the blacksmith trade.

Perhaps there is within the sound of my voice, today, more than one descendant of that man Abbott or that man Howe or both. These men resided in this village, their blacksmith shop was hard by this very spot where we stand and here lived and labored for nine years, young Thomas. He was allowed to attend school a part of each winter, he had access to the town's small library and it was later long remembered that nearly every hour of his spare time was given up to books. It was well recalled too that he was a vastly better young reader than he was a young blacksmith; his future career at his trade was not a very promising one and we can almost see Captain Abbott and Esquire Howe shake their heads dubiously when his name was mentioned. We know that Howe said, "Tom works too much with his head to make a good blacksmith" and Captain Abbott said Tom wasn't as good a blacksmith as he ought to have been for he had too many other things in his mind and he was afraid he would never amount to much.

How little they knew that his name would be inscribed in bronze on a rock brought from his birthplace to this green, centuries after their names will be forgotten. So goes, sometimes, the world.

He was very fond of music too, he sang at his work and he would frequently stop his bellows first to read in a book and next to play on his fife and methinks I can see him now, a raw-boned, misfit country lad, misfit in that he was set at a task that was distasteful to him and in which he was never long to continue.

In 1823, when he became twenty-one and arrived at man's estate, he bade adieu to his former masters and went to Brandon where his elder brother Barzallai had set himself up as a lawyer and where this brother passed a long life, full of honors given him by his town and his county. Almost at once upon Thomas' arrival at Brandon, with some financial assistance given him by his brother he established himself as a country blacksmith and business came his way well. On February 14, 1827 he married Emily, daughter of Rufus Goss of Brandon and granddaughter of the somewhat famous travelor, author and explorer, Jonathan Carver. She was his greatest help in life. When one gets into some peck of trouble there is you know, an age-old French proverb which translated reads "Find the woman"! And it was Kipling who wrote those far-flung words "The female of the species is more deadly than the male." Perhaps Kipling is right and we know that the French proverb is alas too often true. But I am fifty-one years old and

I have had a lot of experience with the women and it has ever been my observation that a good woman is the noblest work of God and that a good wife is the greatest asset any man can possess. So it was in Thomas Davenport's case and his wife Emily bore with him and lived with him through their long years of poverty to the end. Perhaps one might say that had she played a different part and insisted that he give up the dreams their neighbors scouted and that rather he devote his whole energies to his forge, their lives would have been more peaceful, their living more easy and their sons would have been given greater advantages. But it was not her husband's desire or nature so to do and I believe she saw early what his life must be and accepted it gracefully. And she it was who tore up her silk wedding gown to help him wind his first magnet and she it was who uncomplainingly stood by him in all his days of trouble.

For about five years following his marriage he seems to have prospered well at his trade, for uprightness, sobriety and diligence at his appointed task always marked him and they accumulated enough to buy a good home and clear themselves of debt. But in 1832 he became completely infatuated with the subject of electricity, the smoke from his forge began to be seen less and less and in but a short time he shod his last horse, made his last nail and hammered out his last iron. In 1832 electricity was mainly a curiosity and what it would or could be made to do was well nigh untrodden field. But one must not jump to the conclusion that it had not been known of, for thousands of years,. The ancients stumbled on to the rude principles of dozens of our modern inventions, centuries before the birth of the Master. Steam was used in the temples of Babylon three thousand seven hundred years ago and images of gods were made to nod their heads, lift their arms and open their eyes through the hidden power of steam. One can well imagine the awe and terror in which they were gazed upon by their ignorant and superstitious beholders. The priests knew very well indeed how to fool their people with a rude and concealed steam-engine like contrivance but little did they dream what could and would one day be done with their so-called magic for the benefit of mankind! They understood too the principles of the concave mirror with it pictures were not only thrown on a wall, but as well the likenesses of their bronze images were displayed on the smoke of their altar fires and later the motions of living men were thrown on these smoke screens to the consternation of the worshippers at the temple of Alexandria. Those moving pictures were thought out and used some thirteen hundred years ago. Lighter than air contrivances were employed as early as 500 B. C. for then it was that a hollow statue of Apollo was filled with natural gas and made to ascend above the temple, float over the heads of the frightened populace and by means of clock work gracefully descend to earth. One Numa who was considered a magician by the Romans about four hundred years before Christ, carried on electrical experiments with which he made folks believe he could summon Jupiter from the clouds. It was his trick to place upright swords on the temple of Juno and draw down the lightnings to crackle and roar throughout the vast temple at his concealed mechanical command and lightning rods for ships certainly came in as a result of his studies, so you see it was not our own learned Benjamin Franklin after all who first thought of the spiral rods we see today on houses and barns throughout the country side. And along this same line let me tell you last but by no means least metal statues of Diana were raised from the ground through mid-air and suspended from the cornices of Grecian temples solely through the power of huge magnets. So you see it is very difficult to say just who or what body of men in history first hit upon some great principle of invention of mechanics. But in most things that make for the betterment of humankind why was it indeed that man was so long in wrinkling his brow!

For six thousand centuries and more he roamed this earth, an unthinking, hairy, hunted thing and the past century has seen in surgery, in preventive medecine and in all the near countless mechanical contrivances of man, more progress than was made in the six hundred thousand years of human life that preceeded it. Christopher Columbus came from Europe to America in 1492 in sixty-nine days and he didn't know where he was when he got here. Somebody had to tell him. Charles Lindburgh went back alone in 1927 in half as many hours and he landed in the night, right on the very spot he set out for. It should have been just as possible to have done that trick four hundred and twenty-five years ago as it was last May, but somehow, for some unknown and unexplainable reason, men hadn't got to it. But I must to the point and ramble no further.

As early as 1807 Professor Oersted of Denmark discovered the true relation between electricity and magnetism and in 1820 by actual demonstration he proved that his theory was a sound one. This caused great excitement throughout the then newly born electrical world and the next year one Arago succeeding in imparting permanent magnetism to needles and bars of steel, in 1821 Farady demonstrated for the first time that continuous rotary motion of a wire and a magnet could be produded and in 1823 Sturgeon discovered the electric magnet but in his hands it was little more than a toy. But large ideas had come to find lodgement in the minds of electrical students and in 1828 the great Joseph Henry threw the scientific world into amazement by his descriptions of his experiments in electric-magnetism by which he was later able to lift a mass of iron ore weighing over a ton, and proved all his ideas by no means to be silly sophistry. But the great developments of the subject were all still in the womb of Time, for that same year he published a paper in which he stated he had succeeded by the power of magnetic attraction and repulsion in producing motion in a tiny machine but he added "Not much importance can be attached to the invention since the article can only be considered a mere philosophical toy." So little did his achievements impress him, Professor Henry like Farady was satisfied to set his investigations by and leave to others any perfection or improvements that might be made in the field. But the study of magnetism was not to be deserted, men began delving into it more and more and the result was that this newly discovered force began modestly to enter the realms of business, among other things there was constructed a mechanical device to separate iron ore from the rock which surrounded it, one was set in use at Crown Point [illegible] and Thomas Davenport was soon to hear of it.

As was said a bit back, in 1832 he all but gave up his blacksmithing business and never again was his little family to know financial prosperity, for his devotion to electric-magnetism was to be the obsession of all his working hours during the next less than twenty years in which he was destined to live. He secured the services of a practical mechanic from Rutland named James Vaughn and they worked early and late together. Davenport mortgaged this good new brick dwelling and finally he lost it altogether. He next with a congenial and enthusiastic fellow worker named Orange A. Smalley went about from place to place delivering lectures on the subject of electricity and while they amused their hearers, interest in their subject was not very great among the country people "to hard toil's deforming business born" and they brought few shekels to his pockets and his self appointed task of educating the public only served to plunge him deeper into debt. Now this contrivance employed in the iron mines at Crown Point but a few miles from Brandon, possessed a horse shoe magnet with which the owners were wont to amuse and astonish the public, by lifting a large anvil. To well nigh all who heard of it save Thomas Davenport it was but a curiosity and they went their way to soon forget it, but not so he and he proposed to get that thing.

He learned that it had been obtained in Albany, N. Y. and with the dogged perserverance which was ever his, he set out for that city to procure one. He possessed but a hazy idea as to what it looked like and he had no more idea who in Albany made it, than had he how much the moon weighed, so upon his arrival he simply inquired at his tavern where he could buy a galvanic battery. He was told they made such things at a large nearby tin shop but when he arrived there he was directed to a jeweler, only to be informed that they needed no such heavy machinery as that in the making or repairing of watches and they advised him to go th the Eagle Furnace where they could cast out for him most anything he asked for. Failing there, he returned to Brandon having as a result of his time and his money, only his lost labor. He now decided to proceed to Crown Point to see if he could buy one there and his trip for that purpose let me describe by using the sentences set down long after by his brother Oliver at the age of eighty nine and in the full possession of his mental faculties, I quote "I was peddling when Tom sent me word to come to Brandon and go over to Crown Point with him and buy the magnet. I went to Brandon and Tom and I started for Crown Point on my peddlers wagon. It was towards the spring of the year and when we got to Charlotte and out on the lake there was a big crack in the ice and I said we couldn't get over it and must go back. Tom said 'No we can't go back, jump the horse over' and I did and we went on to Crown Point, reaching there on a Saturday night. There we saw the magnet and they had an extra one they would sell. It was shaped like a horse shoe, the arms were ten or twelve inches long and spreading six inches and wound with wire back and forth an inch thick. The price of that little thing was $75.00. This was more money than we had and I tried to persuade Tom to leave it but he said no, he must have that magnet and he proposed that I should sell goods from my peddlers cart and raise the money so I went ahead with the auction. The old man Penfield who owned the iron works wouldn't come down from his house on account of religious scruples it being Saturday night. The goods sold pretty well and I remember how I got cheated in striking off a dust pan for three shillings supposing it was fifty cents and not knowing the difference between a Vermont and a York shilling. It was soon evident that no $75.00 could be raised out of that auction but Tom wasn't going back without his magnet and so while I was busy auctioneering and not looking he swapped off my horse for a poor beast so old I could eat more hay than she could and by putting in the boot of the horse trade with the proceeds of the auction and scraping all the money together that we had in our pockets we got the magnet Tom promising to see me whole again, which he did later. I was sick enough of the whole business though at the time and told Tom we shouldn't have money enough to buy our dinner on the way home and he said never mind, perhaps we shan't want any and he was happy enough with his magnet. My notion was to exhibit the magnet and make some money out of it but Tom said no, he was going to see how it was made. I begged him not to destroy it but he was determined and said he could make another and the first thing he did that night, he and Emily his wife sat down, she with pen and ink and paper and he with the magnet and he commenced to unwind the wire. She had a fine education and was as enthusiastic as he was and wrote down exactly the way the wire was wound on and all about it from beginning to end as he unwound it. The next thing he did was to go to his blacksmith shop and make another horse shoe of soft iron many times larger than the first. Then he and Emily wound it. First a coating of glue was put on the iron then it had to be wound with silk and Emily tore up her silk wedding dress into strips and used that and the coils of wire had to be wound on without touching or else the whole thing would be spoilt and they went through and finished it and the magnet was a grand one and would lift a ton a minute. Tom kept right on working and working and studying. His idea was to

make a wheel revolve by the force of magnitism and he was possessed with the notion that some day machinery, steamboats and railroad cars would run that way. He worked at his wheel early and late. It was easy enough for the magnets under the wheel to draw the irons on the wheel until they got opposit but he couldn't break the current quick enough to prevent the wheel from stopping and he said to his wife 'Its no use Emily there's no power this side of Almighty God quick enough to do that.' But she wouldn't give up and she said 'I wonder if quicksilver isin't a conductor.' So Tom said 'We'll try it' and they did and after working one night until three o'clock the next morning they made the wheel turn." ~~End of the quotation~~.

Thomas Davenport had now made a machine that would turn a wheel but it had full many a fault and far, far to go. We must remember that he was a man who could never be called an expert mechanic. Neither by any manner of means was Fulton the inventor of the steamboat, Morse the inventor of the telegraph or Bell the inventor of the telephone. Davenport was the rather a man of broad visions and of prophetic foresight and a student, one who could see what should be done and with the assistance of apt mechanics working by his side and under his direction he could whip his ideas into actualities. And now came to him the long, weary fighting years, though they were not to be many---only eight in all---before he broke down, but never again w was Thomas Davenport to know peace of mind. With his man Smalley he worked early and late all through the winter of 1833 and in July of 1834 they succeeded in finishing a machine that would run and run smoothly---the machine which later proved to be the keynote to the solution of the problem and one that all electrical experts now agree, unquestionably embodied the principles of the modern electric motor. Highly elated was Thomas Davenport and almost equally pleased was his hired fellow laborer Orange A. Smalley but their excitement didn't extend ten feet beyond the front door of their little shop, for all their neighbors continued to pooh pooh their work and call them crazy. Was it Emerson who said in effect that, give a man the power to make what every man wanted and although he lived in a wilderness all the world would make a path to that man's door? Well somebody said it anyway, and somebody didn't know what he was talking about for there wasn't any path to Thomas Davenport's door and he lived in a place called Forrest dale too, and he had a thing all done that the whole world wanted as it never wanted anything before. Among others to whom he showed it and tried to explain it was the village clergyman. Considerably bored, he looked it over and after hearing the glowing accounts of what it would accomplish, the good domine said "I reckon if this wonderful power is good for anything it would have been in use long before this" and he turned and walked away. Evidently he was a far better man in expounding the intricacies of the books of Genesis, Joshia, Judges, Job and Jeremiah than he was in comprehending what electricity could be made to do and his attitude was that of practically every man the perfervid Thomas could find. So he decided to go up to Middlebury College and see if there was any Balm in Gilead there and accordingly one bitter cold day in December 1834 he went taking with him one of his best machines and on arriving in Middlebury he set it up in a room at the inn and went out to find the Professor of National Philosophy. Let me tell his experience in his own words.

"As I had never before seen a college or a professor I rather dreaded making my acquaintance with those functionaries but I mustered up courage and walked towards the college. As I reached the steps of the building I saw a fellow with a ragged coat on, an old rusty cap turned over his ears (for it was a cold, stormy day) and a large dirty plank on his shoulder, about entering the college at the same door as myself. I accosted him and

inquired if I should be likely to find Professor Turner about there. He said, 'Yes, come in and I will show him to you.' I followed him into a lumber room, he threw his plank down pulled off his mittens and said 'I am Professor Turner but perhaps I don't look much like a professor.' 'As to that, sir' I replied 'I could not say, for you are the only professor I ever saw to my knowledge, but I conclude that your judgement doesn't all lie in your clothes!"

The professor was at first extremely loth to journey to the tavern as he got it in his head it was a supposed perpetual motion contrivance but after being assured it was no such foolishness he went and he was simply astounded at what he saw and he said "You have discovered an absolutely new motive power." He at once sent for Professor Fowler who in his turn was dumbfounded at the thing and in that room in the presence of the little humming machine and a dozen curious bystanders Turner said in emphatic terms that those within the sound of his voice that winter day were then witnessing the first exhibition of what would prove to be the greatest invention of the nineteenth century. He then advised Davenport to show it about no more but to at once take steps to patent and protect it. He was a kindly man and he prepared for him a description of his work in language suitable of comprehinsion and coverage at Washington and Davenport was of course highly pleased and encouraged. With the exception of the constantly comforting words of his good wife and the assurance of his helper Smalley and his brother Barzillai who at times was luke warm enough to say "Tom, I reckon you may be on the right track" these were the first words of encouragement he had ever received from any man, woman or child on earth. He was loaned from the college some scientific books containing what little there was then known on the subject and for the first time in his life he learned the correct names of the instruments and materials he had all along been using to perfect one of the greatest devices of the ages. Can you imagine it.

Upon his return home some differences of opinion arose between Davenport and his mechanic Smalley but an amicable settlement was finally made by his paying off Smalley who left him and he was now again alone in his great adventure except for his wife who stood by him worked with him and often went hungry with him day after day throughout the long years. Finally after making several material improvements he brought his machine to what he believed to be the gighest degree of efficiency he could make it attain and he decided to wait no longer but to get his patent at once. In those times it was supposed absolutely necessary that an applicant for a patent should appear in person at Washington but alas how was he to get there The year was 1835, it was a long and expensive journey and had it been but a third the length he could not finance it for he was all but absolutely destitute of means. But pocketing his pride he went form door to door of the more prosperous residents of Brandon and all but sunk to his knees and begged for help and he finally succeeded in inveigling six men including his brother Barzillai to furnish him money and he set out alone by way of Troy, N. Y. for the seat of the National Government. He carried with him from Professor Turner of Middlebury an enthusiastic letter of introduction to Professor Amos Eaton of the Renssalaer Institute at Troy and he showed him his motor. Eaton had already heard of him, he met him most cordially was profoundly impressed with what he had done and he left Troy with Eaton's hearty approval and a letter in his pocket from the mighty and wealthy General Stephen Van Renssalaer introducing him to Joseph Henry of Princeton College, and there he next journeyed. Joseph Henry at that time was the acknowledged authority on the subject of electro-magnetism in this country and probably the greatest student of electrical matters in the world and one can well imagine with what eagerness this country blacksmith saw him and

doubtless hung upon his every word. The visit was a most successful one, Professor Henry publicly stated that that day he had met a genius, a firm friendship at once sprang up between them and they corresponded as long as Davenport lived. As just stated, probably no man on earth then knew more about electricity than did the great Joseph Henry but after Davenport had shown him his motor and said he intended building them up to one horse power Henry said to him "Go slow, young man electricity can never hope to compete with steam"

At Princeton Thomas Davenport met Professor Henry's friend Alexander Bache of the University of Pennsylvania. Bache haled him as a brother scientist and together they proceeded to Philadelphia where his little machine was set up in the library of the Franklin Institute and where he was most cordially received by many men of learning. He now went on to Washington where he arrived alas so impoverished in pocket he found he had not enough money to pay for his patent and pay his way home, so, discouraged to the very core he turned about with his little model and started on the long weary trip back to the village of Brandon. When he arrived at Troy his money was exhausted so he went on foot to the house of General Van Renssalaer to sell his model. Upon entering the grounds three vicious watch dogs tore hi his clothes nearly all off him but he at last got in, received thirty dollars from the General, a maid hastily patched up the fierce rents in his clothes and he went home. He was now at the lowest ebb of all his days and that was low enough for any man indeed. Day after day and night after night for two long years he had labored at his invention, his money was gone and so too, had well nigh vanished the credit of his townsmen. His father in law offered him every inducement that could occur to him to make him give up his visionary schemes and return to his blacksmithing and all his neighbors who to a man possessed high admiration for him except for his crazy schemes as they dubbed them, all his neighbors I repeat, now joined in and implored of him to give it all up. He finally wrote his friend, Professor Eaton of his sad situation and received an immediate reply the keynote of which was "Go on, go on you cannot turn back now." Certainly he was at the critical point of his career but he at length decided not to turn back. He had constructed a device to propell a railroad train by electricity and at Eaton's urgent invitation and perhaps too with some financial assistance form him, he went to Albany and exhibited it. Of that electric train and of how far ahead of its times it was let me say that T. Commerford Martin in 1893 took to the Worlds Fair at Chicago an exact duplicate of Thomas Davenport's model of an electric railway in 1835 and he received an award on it.

Among his audience at Troy was a young mechanic from Springfield, Mass. named Kimball. He was intensely interested in the railroad model and he persuaded Davenport to accompany him to Springfield where they could work together on it and he decided to go. For two months they labored at it and made some improvements but for some reason Kimball decided to go no further. It was the middle of December, our inventor was in a state of destitution and a hundred and fifty miles from home, but he now decided to proceed to Dedham in reply to a letter from a silk manufacturer there, who desired to apply electro magnetic power to the processes employed in his factory, or at least he so stated. So borrowing fifty dollars from his friend Kimball he went but although received kindly by the silk man, the latter finally decided to take no chances in remodelling his plant nor did he venture to reimburse Davenport for his long trip. So he went into Boston and for two weeks exhibited his railway model for which he received in all, the princely grand total of twelve dollars which just paid for the use of the room in which he showed it, but his good friend Kimball again came to his aid, furnished him with a suit of clothes and enough money to get back to Brandon and told him he need never mind to pay it back.

Of his prospects at that time he wrote later, "My friends were worn out and tired of my talk of electro-magnetism being used as a substitute for steam. Many hundreds of ingenious mechanics and wealthy people had seen the power propel machinery of various kinds and all expressed a strong anxiety that I should persevere and apparently wished with all their hearts that I might succeed, but yet I was totally unable to reach the purse strings of the capitalist. The objection urged by many was that my letters patent had not been taken out and when I informed them that the patent could be obtained as soon as I could raise the means sufficient for that purpose, the reply was that I had delayed so long already that some other person would probably anticipate me"

He now went from place to place exhibiting his work to the curious and one of the greatest geniuses of all ages wasthus obliged to turn a a simple showman to keep the wolf from his door and the world still waited many a year before availing itself of the marvellous devices of his fertile brain that were to one day revolutionize all industry. He finally wandered to Saratoga Springs where he met a friend indeed, on Ransom Cook, a successful furniture manufacturer, a man always deeply interested in mechanics and inventions and above all, a man who was touched always by the plight of anyone in adversity and he formed with Davenport a sort of partnership which continued two years. Again, then the inventor turned his entire attentions to his motor again he improved it to some extent and again, this time with funds furnished by Cook, he set out for Washington and on February 25, 1837 the United States of America issued to Thomas Davenport of Brandon, Vermont, a patent for propelling machinery by magnetism and electro-magnetism, a patent the like of which had never been granted before. He returned home where he was joyously welcomed by his good wife and it did seem as if at last the clouds were to lift from their stormy way but alas it was not to be for long. Going the next month to New York City he and Cook started the ElectroMagnetic Association to raise funds for their work. This was the first electric stock company in the world the newspapers of New York City of other cities and even abroad, were from time to time highly praising the new invention and for the only time in his whole life things seemed to augur well for Thomas Davenport and subscriptions to their proposition came in slowly but quite satisfactorily Then it was discovered that the slippery eel to whom they had entrusted the financing of their company had sold stock right and left for whatever he could get, pocketed the proceeds and only reluctantly from time to time paid in enough to keep the laboratory going so he could sell more stock. Of course the sorry situation right soon became known everywhere, the result was the total collapse of the whole undertaking and Cook who was a sensitive man and the soul of honor, lost what he had and retired from the partnership. Poor Davenport lost no money because he had none to lose but one can readily discover how so upright a man as was he, should have been filled with the bleakest and blackest of despair.

The year 1839 held nothing for our good man but reverses which time prevents my rehearsing here for I must hasten on to the end.

Finally he decided to publish an electrical magazine of paper and on January 28, 1840 he began printing a small sheet six teen by eighteen inches called the Electro-Magnete Mechanical Intelligencer. This little thing with so long a name died an early death and on July 4th it was succeeded by, another under the name of the Magnet which too, soon went the way of its predecessor. These papers were wholly the work of Davenport and they were the first of their kind in the world, which of course made of him, the father of electrical journalism.

filed his application for a

In closing the record of achievements of this most remarkable man, mention must be made of his participation in the invention of the telegraph. It was in September 1837 that the artist inventor Samuel Finley Beese Morse ~~took out his~~ patent for sending a message by dots and dashes over a wire, a device on which he had been working some five years. Davenport first met Morse in New York City in 1835 and there is a tradition in the Davenport family that Morse came to Brandon to consult with Davenport before 1837. We know that there are owned by their son's widow in Washington, D. C. oil portraits of Thomas and Emily Davenport and of their sons which are the handiwork of Morse and this ~~above~~ ALONE would show his firm friendship for Thomas for certainly the Davenports were never possessed of sufficient means to engage Morse to paint their portraits. And we know that Davenport himself completed a telegraphic device. How early he made it may never be known how much Morse copied from it may ever be equally uncertain but that Thomas Davenport working alone, hit upon the principle of the device that revolutionized the sending of messages is an attested fact.

His editions contained no advertising and in one number he stated, "I have no means of securing money except through a few subscriptions" but his pleadings proved in vain.

The world was not ready for his paper, the world was not yet ready for Thomas Davenport. But the world is now ready for his little publication, two or three copies of both the journals are kept and highly prized at the headquarters of the National Electric Light Association, to my knowledge no complete file of them is known and last year, one lone number went at auction for forty dollars. How well Thomas Davenport could have used that money eighty-seven years ago! And the press that printed his leaflets was run by electricity and that made of him the first man in the world to drive a printing press with an electric motor. It has well been often said by men in his profession that it is astonishing how many different things in electricity he was absolutely the first man to do. His press was run by the so-called axial magnet and his caveat filed in 1838 in the United States Patent Office was the earliest proposal to employ such a principle for industrial purposes.x The records of his life for two years following the collapse of his journalistic endeavors are a bit meagre except that we know he was able to get but one man on earth to help finance his invention. And that man who lived in Ohio, listened to him believed in him and sent him $3,000 in bills on a Ohio bank and almost the very day those bills arrived in New York City the bank in Ohio suspended payment, his backer was ruined and the bills were of course worthless. He now gave up all hope and returned to Brandon, a gone cock in the pit, right soon he broke down nervously suffered a long and dangerous illness and was left permanently physically disabled. He then retired to a house and a few acres of land in Salisbury and there he lived in enforced complete retirement and in poverty for eight years, when on July 6th at the age of but forty-nine, the disappointed and worn out man was called home. His good wife survived him nine years and they are at rest together in Pine Hill cemetery at Brandon. Some one has told me that the headstones at their graves are but simple indeed but that is not so to be deplored for there stand today two other tablets to the memory of this most distinguished son of Williamstown, one here and one at Forestdale in Brandon. That one reads: "In memory of Thomas Davenport 1802-1851. The Inventor of the Electric Motor. Near this spot stood the building where he developed his invention. This tablet is placed here by the Allied Electrical Associations of America in recognition of the great service rendered mankind, by the invention, to the development of which he devoted his life." For one I am sorry that somewhere on that tablet there was not room for the name of Emily Davenport. She it was who lived there with him, worked hard with him, rejoiced with him when the all too few happy days came in their lives and comforted him through all the discouraging times, cared for him in the last nine bitter years and laid him to rest. But so it too often is and always has been----in the case of a woman.

Had the dynamo been known in his time his great work would have at once leaped into prodigious proportions and success. Where he failed and where many another man who was to come after him was to fail was first because they had no source of cheap current and second, they did not understand the double function of the motor in that if it was operated by an exterior power it would generate current. Steam and scores of thousands of waterfalls were ready at their right hands and they did not know how to use them. But Thomas Davenport it was who hit upon the keynote of it all and sixty years after, Franklin L. Pope the leading electrical patent expert of his times said of him "If this patent which expired away back in 1851 were in force today, it is not too much to say that upon a fair judicial construction of its claims every successful electric motor now anywhere on earth

x see addt'l sheet

would be embraced within its scope."

It would have been good indeed if he and his good wife could have had more easy years, years filled with the successful fruition of his great ideas but such too seldom comes to a genius and often in the world's history they who have paved the way have been trodden under by those of their own times and the value of their lives and their labors to posterity has been appreciated only long years after they have been laid to rest. So alas was it wholly true in the case of this man. In 1910 T. Commerford Martin, Secretary of the National Electric Light Association said of him: "It would have been a merciful dispensation if the bitter bread of struggle and disaster eaten all the years of his short life by this extraordinary genius, this prophetic village blacksmith, could have been sweetened with the merest mite of the vast wealth that his glowing conceptions have helped to create for all mankind." No one but a fool could say or even think that the great electrical industries from end to end of our country, in their present state of perfection of attainment are the work of Davenport. But in 1910 Martin also said, "His work may not have been done on a grand scale, but it is not magnitude that counts. What does count is the conception, the idea, the execution of the idea in practice and in this we find Davenport's record astounding and unimpeachable." And every electrical expert today would tell you with Martin that the man born here near where we stand, was the pioneer of them all, the one in their line of endeavor who saw far, far into the future. To those of us who have been privileged to come into New York harbor, whether from abroad or from our own coast, and see growing higher and higher and larger and larger, Bartholdi's Statue of Liberty facing Europe, with her high arm and her torch uplifted to the skies and symbolizing to all the world that here men are free, strange indeed must be the citizen of this country whose bosom does not heave, whose eye does not moisten or whose heart does not give thanks that he is a part of the greatest and the most prosperous land on earth today. And the tremendous prosperity of this country we love depends first upon her agriculture that men may live to labor and second but by no means least, nay far more, upon her manufacturers.

The value of the electrical plants built up around Davenport's invention in the United States today is eight billions of dollars which is greater than the entire value of the taxable property of his nation in 1851, when tired out and unappreciated he was laid to rest. The capital invested in factories run by machinery is fifty billions, they pay an annual wage of over twelve billions and turn out each year, products to the value of seventy billions. By day and by night all over our land these factories are humming, humming, humming, and teaming with the intense activity of millions of men and let us never forget that they are largely operated by millions of wheels driven by thousands of motors, first thought out and patented here and abroad by the man whose memory we revere today and to whose honor we leave this stone through the ages----Thomas Davenport of Williamstown and Brandon, Vermont, a man fore-ordained to die forsaken, but a man whose name was destined to come again and be known throughout the world.