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### McFadden, Thomas – The Knock At The Door

Dr. T. Gilbert McFadden

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THOMAS McFADDEN

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A Pioneer  
of  
Otterbein

Written by his son —  
T. G. McFadden

*Otterbein  
1847-1947*

THOMAS McFADDEN, M. D.

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A Biography

by His Son

DR. T. GILBERT McFADDEN

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The Knock at the Door

A student knocked at the door of the professor's vine covered cottage on West Street one day in the early eighties. The door opened slowly revealing Thomas McFadden, who had organized the science work at Otterbein and led it almost since the college's beginning. At first glance he would have been taken for a very old man; in fact, most people so regarded him, with his long silvery white hair parted low on the left side and carried thinly over his head, while the back was left long and tended slightly to curve upward. The front of his stiff white pearl studded shirt and little black bow tie that he always wore were almost concealed by his heavy white beard which gave him the appearance of being a larger man than he was. His shoulders slightly stooped and his eyes had a drawn and pained expression - a mute testimony to his physical suffering since the Civil War.

"I have a book here I'm sure will interest you", the student began and plunged into a long drawn out discourse that he had prepared about the merits of what he had for sale. He rambled on and on. Had he looked up he might have detected a twinkle in the professor's eye as he stood patiently waiting for the student to finish his apparently endless description. At long last it was over. The young man was delighted to find his professor approving heartily what he had said and showing intense interest in the book.

"Oh, then I can put you down for a copy", he said, getting out his order book.

"No", replied Professor McFadden, smiling at the crest-fallen student, "I have that book; I bought a copy when it was first published".

This true incident may seem a very insignificant one, and it is, but all who knew Professor McFadden will agree that it is an excellent illustration of the simple nature of his quiet chuckling sense of humor. He was not a man given to the boisterous type. He was seldom known to laugh heartily - a twinkle of the eyes sufficed. The student book agent would have been interrupted by most men after the first few words. But to Professor McFadden it seemed a joke of the first magnitude to let the student run on and on, headed for a fall.

### Early Days

Two small towns are inseparably associated in the early life of Thomas McFadden - Rushville, in Fairfield County, and Putnam, which eventually became a part of Zanesville. In the former he was born and lived his early years. In the latter he spent much time with an aunt and, as he grew to manhood, met the young woman who became his wife. The familiar turnpike between these towns became the scene of the great tragedy of his boyhood years. He was essentially a small town man, for his entire life, except when in medical college, was spent in little villages. To those mentioned might be added Augusta, Kentucky, Carlisle, Pennsylvania, and finally, Westerville.

In the first year of the XIX century the progenitor of the family in America, his grandfather Thomas, a man of Scotch-Irish descent, emigrated from Ireland with his family of small children, one of whom, Gilbert, a quarter of a century later became the father of the subject of this sketch.

Thomas McFadden, the first child, was born during the administration of John Quincy Adams, in Rushville, Ohio, November 9th., 1825 - a year remembered for the opening of the Erie Canal and for a far more important event over in England - the world's first railroad train whose locomotive was invented by George Stevenson - a distant cousin of the little girl yet unborn who was destined to bear his name. A new industrial age was being ushered into the world, although five years would elapse before the first locomotive would run in America, significantly enough past the very Hartley farm near Baltimore where that same little girl was then playing. But little did he care for this or the fact that his future father-in-law was furnishing from his own farm quarry the very stone for this first railroad.

Comparatively little is known of the very early days of little Thomas in the country town of Rushville where his father had a general store and was also postmaster. "Father" Haynie, as he was familiarly known in later years to his Westerville neighbors and is still remembered by the oldest citizens, be-

came Thomas' first school teacher, launching him on the road that led to Otterbein. He was probably fascinated, like all little boys, by the stage coaches dashing through the quiet town, for his father's house was on the newly opened pike branching off that first road to the west, the famous National Road, and running direct to Cincinnati and the Ohio River. Rarely a day passed without its immigrant wagons, great covered vehicles drawn by four horses, westward bound, opening up a new country. At this same time, but unknown to the little boy, another covered wagon was slowly wending its way westward from the Baltimore farm, while out from its curtains with wondering eyes peeped the little girl whom a few years later he would know so well. But this covered wagon stopped at Putnam. Truly the great western immigration was under way.

There has been handed down in the family a pencil portrait of little Thomas of these days, drawn by a professional and probably itinerant artist, for it was before the age of photography. It is in perfect condition, although yellowed by more than a century - a picture of a rather frail delicate featured boy of four or five, wistful eyes, ruffled collar that a XX Century boy would disdain, his hair cut much as he would wear it a half century later.

He was a boy of ten when the great tragedy entered his life. The innocent stage coach that had fascinated the little boy from his earliest recollection became a Juggernaut, his dearly beloved mother its victim. It was just a routine accident, runaway horses, stage coach upset - death. But it was tragic to the little home now broken.

As can be seen from the vantage point of later years, two factors in the little town of Rushville were prominent in moulding his life and determining his destiny. One was his step-mother whose good influence cannot be overestimated; the other was his neighbors, the Rev. William Hanby family, of whom more will be said presently. The question of education, particularly in the midwest, was not an easy one to solve a century ago when ambitious parents had as a goal a college education for a son. The meagre facilities of Rushville were soon exhausted, and, being loyal Methodists, it is not surprising that at the age of fourteen he was sent away for three years to a Methodist academy at Augusta, Kentucky, to prepare for college. He was fortunate in being able to live while here in the home of the academy's head, the man who in later life attained fame as Bishop Trimble of the Methodist Church. What an influence for the good this man must have exerted on the growing boy! But more potent, or at least better recorded, was the influence of his wise step-mother. There is preserved a package of letters she wrote while he was away at

school. One, dated 1839, praises his clear penmanship in his letters home, observes that his "ideas are in general well expressed", but, she writes, "You are most defective in division of your paragraphs and especially in punctuation, the rules of which it would be well to review". We wonder in passing how many parents today thus constructively criticize their children's letters.

It is strange to think of Thomas McFadden ever tiring of school and wanting to give it up. But such was the case as revealed in a letter a year later. Again his step-mother, who was apparently the correspondent of the family, comes to the rescue in a letter with advice as sound today as a century ago, - "I beg you will at once discard an idea which can have no foundation in reason". The letter continues well expressed thoughts on the need of an education, stressing the "advantage it will give you", particularly if pursued through college and in preparation for a professional career. The crisis was averted, and from that day Thomas never ceased to embrace all opportunities for further education.

After completing the course at the preparatory academy at Augusta, Ky., he matriculated in Dickinson College of Carlisle, Pennsylvania, becoming a member of the class of 1845. Why Dickinson College was chosen is unknown today. Possibly the fact that his grandfather and his own father had lived in Carlisle after their emigration to America, was a factor. But there was no question about its educational standing - the twelfth oldest college in the United States, founded in 1783 by Dr. Rush, a signer of the Declaration of Independence, and named after the Governor of Pennsylvania. It was during his college days here in Dickinson that the epoch making electric telegraph was realized and Morse sent that first immortal message, "What hath God wrought!"

It was a long, tedious trip between Carlisle and Rushville and as he was returning home for a vacation near the end of his Senior year he suffered from exposure and dampness, which tradition says was caused by fording a risen stream. Whatever the immediate cause, a long drawn out and very severe case of inflammatory rheumatism followed. When he was able to return to college the year was too far spent for him to graduate with his class. But he was not idle. He now loved to study and he began spending his days in the office of old Dr. Hyde in Rushville, reading and studying his medical books. They fascinated him and he decided to devote his life to the medical profession.

The way opened and the following year he entered the Medical College of the University of Maryland in Baltimore,

graduating with his medical degree in 1848, when he returned to Rushville to begin his practice, associated with his old friend and mentor, Dr. Hyde. The next year, 1849, he married Rebecca Hartley in Putnam, the little girl who eighteen years before had peeped out of the covered wagon, but now was a graduate of the well-known Putnam Seminary for Women. Two children blessed this union, the first being Louis, who was destined to succeed his father in Otterbein, and the second, Anna, who later as the wife of Rev. E. A. Starkey, assisted him in organizing the pioneer mission of the United Brethren Church in Los Angeles. The medical practice around Rushville became more arduous - mainly country practice for the town was insignificant. Naturally the heavier and more taxing part fell on the shoulders of the younger member of the association of "Hyde and McFadden".

In the early fifties the other "destiny moulding factor" of Rushville enters the picture, the Hanby family, particularly Rev. William Hanby. Although they were members of the new and less known United Brethren Church while the McFaddens were Methodists, a close friendship grew up between the families. Little Benjamin, who was later to bring fame to the Hanby name, must have seemed a mere boy to Dr. McFadden who was eight years older, but the close intimacy between them belied the difference in their ages. Benjamin was mature for his age and deeply moved by the problem of slavery and affected by the presence of runaway slaves that reached Rushville in those difficult days. While Benjamin's father, Rev. William Hanby, was sincerely interested in the problem of slavery, he was now more deeply concerned in the new movement of the United Brethren Church to establish its first institution of higher education - for he was one of the founders of Otterbein. This institution, then not much more than an academy, was in its seventh year. Benjamin was a student there bringing back home enthusiastic accounts of the growing institution and urging his parents to make Westerville, rather than Rushville, their home, which they finally did about 1854.

The removal to Westerville of the Hanbys and also the Haynies, close friends of the McFaddens, had a deep influence on them. We can imagine Rev. William Hanby speaking, "Well, Dr. McFadden, why don't you come to Westerville with us? Rushville promises little for you. Westerville is a town bound to grow and needs another doctor. Then there is the college - think what that will mean to your growing children." Purely a fictitious conversation, but there is no question that sentiments like that were expressed. And they bore fruit.

### Westerville Days

It was a spring day in 1855 that a mud covered wagon from Rushville pulled into town with the worldly possessions of Dr. and Mrs. McFadden. What a drive it had been! Mud, mud, everywhere, though the last few miles over the new plank road from Columbus afforded some relief. But even these planks, as they neared Westerville, sank beneath the thickening mud. The two little children, Louis aged four, and Anna only two, looked out in wonder as they stopped at their new home on the south east corner of what is now State and Main, where the Weyant Block and the A. & P. Grocery now stand. It was a little white cottage, long since removed, but visible even today as a part of a remodeled home on Lincoln Street.

What was passing through the minds of Dr. and Mrs. McFadden as they neared Westerville in 1855? Among their thoughts must have been wonder - Why had a college ever been located in such a swamp? Mud in the spring with corresponding dust in the summer time was certainly the early curse of Westerville. Even forty years later in the "gay nineties" the miring of a buggy on College Avenue so deep as to require abandonment is a matter of historical record. People living here today with paved streets and all city improvements can have no conception of the Westerville of ninety years ago. Then the charming town we know today was only a vague promise and not a rosy one at that. A map published by the county in 1856 tells us that it was bounded on the north by North Street (now Home Street). Beyond that, fields. It was bounded on the south by South Street (now Park Street) and beyond that swamps and ponds, traces of which may still be seen. There were a few houses on the east side of State Street, then called the Plank Road, but their lots trailed off into fields or the "big swamp" that bounded the village on the north east. Main Street ended at West Street. Why go father with no bridge over Alum Creek? Those who went west of town must use "South" Street and ford the creek about where the dam now stands.

The town was unincorporated. No railroads gave access to it, for several years would pass before it was possible to ford the creek and catch a train at Flint and nearly a score before the whistle of a locomotive would be heard in the village itself.

There was only one church edifice, The Methodist. The town was making progress, however, for the old log school-house south of town had just been abandoned and the citizens boasted of the new school house, a small brick building on "North Street" near the rear of the Methodist Church grounds.



Here was where their three children were to receive their elementary education, for Cora who was to become Otterbein's Dean of Women was added to the family the year they arrived.

The redeeming feature of the town was the college whose most pretentious part was its name, "Otterbein University", for it was before the day when much discrimination existed between the names "college" and "university" and the latter "sounded bigger" to the ambitious founders. There two buildings acquired eight years before from the defunct Methodist Blendon Institute - one a small white frame building standing on the site of the present Christian Association Building, the other a brick dormitory just west of the present Soldiers' Monument. A third building, Saum Hall, was about ready for occupancy. That was all of Otterbein except eighteen acres of school gardens in the fields north of "North" Street.

But Dr. McFadden, as they arrived, was more interested in the town than in the college, for the former was to be his field. He lost no time, for a professional card (still preserved) dated May 24, 1855, modestly announced that

"Drs. A. G. Stevenson and Thomas McFadden, Physicians and Surgeons, having associated themselves together in the practice of medicine and surgery, respectfully tender their services to the public."

Following the prevailing custom of those days, the new and younger doctor had joined forces with an older man. Dr. McFadden was now launched on his Westerville career.

While he probably intended to devote all his energies to his practice, he was not permitted to "hide his lamp under a bushel". He was a certain asset to the town and college - one of its few citizens with the benefit of an education in eastern college and university. He had scarcely become settled before he was asked by the college to deliver a course of lectures on physiology. (This is the first mention of his name in college records, June 6, 1855). A few days later the Board of Trustees appointed him and Rev. Kumler of Lane Seminary, Cincinnati, a "Visiting Committee on Examinations", whose duty was to attend examinations and report to the Board. Apparently greater stress was placed upon the formality of examinations ninety years ago. But those simple responsibilities were merely opening wedges, for at the same session the Board of Trustees appointed him a member of the Executive Committee of the college. Nor was that all, for at its first session, June 21, 1855, he was made the committee's

secretary. For the three ensuing years, the story of Otterbein's business is recorded in the clear hand of Thomas McFadden - a penmanship that had been praised by his step-mother fifteen years before. College responsibilities now began to multiply, for he was placed on the "Business Committee" a subsidiary of the Executive, having "in small matters full power to act of themselves". And again, early in 1856, he headed a committee to collect and organize "all laws governing trustees, executive committee, president, faculty, tutors, agents, officers and students." Apparently this included everything about the college. We can read between the lines of a little confusion in the finances of the college, for the authorities, in 1857, resolved "that in the future the Treasurer of Otterbein University be a man who has no other financial connection with the institution". Thomas McFadden was then made Otterbein's Treasurer, an office he held till the Civil War severed his connection with the institution. The Board at this time further agreed "that he be compensated for his services", which probably became no more tangible than a "minute" on the records, for there were too many demands upon the college's limited funds.

It is to be wondered just how he found time for these rapidly increasing duties at the college while he was still a busy practitioner in the village and country. The probable answer is that his heart was in it, that he was growing to love the stimulating atmosphere of the college and the inspiration of the eager students. His interests were becoming more and more closely affiliated with the college. And so, it is not surprising that in 1858 he said "yes" to the opportunity of the authorities that he become a full member of the faculty with the title "Professor of Natural Science". It is interesting to note that the same board session which made his appointment also reappointed him college treasurer, in spite of the resolution of the previous year separating that office from the faculty.

But the Board of Trustees in that session in 1858 "put one over on him" by changing the promised title of "Professor of Natural Sciences" to include "and Scientific Agriculture" and then adjourned. We know this is true because with the minutes of the Board of the following year is filed a protest from Professor McFadden against this "Scientific Agriculture" appendage to the title of his new position.

The "manual labor" question, which the Board of 1858 had attempted to camouflage under the high sounding name of "Scientific Agriculture", had been for several years a bitter problem at Otterbein, almost wrecking the feeble institution. Briefly, it was a plan to compel every student of both sexes

to cultivate a plot of ground assigned in the college gardens for the two-fold purpose of physical exercise and the small revenue resulting. Otterbein was not alone in this, for the movement was affecting the majority of the new educational institutions springing up in the west. It was not surprising, when we recall that their constituency then was largely agricultural. Otterbein had an eighteen acre garden plot immediately north of the present Home street, extending from West Street to Grove Street, taking in the present Athletic Field. The tool shed of the gardens stood on the present location of Professor Grabill's house.

Whatever the supporters may have claimed for the merits of the plan, the fact was that it was failing. No one knew this better than Professor McFadden, who had served for three years on the Executive Committee. He was well qualified to frame the indictment of the Manual Training Movement that he presented to the 1859 session of the Board, which contained such expressions as "not a ghost of a system exists", there was "lack of definiteness - lack of cooperation - lack of equipment". Apparently Professor McFadden had been chosen "to preside at the liquidation" of the vexatious problem. That stormy session of the Board lasted till two o'clock in the morning, but it marked the beginning of the end of the Manual Labor Movement, although the "Scientific Agriculture" part of his title was retained for two years.

Comparatively little is known about the teaching of science in Otterbein in those early days and less about the equipment. Before 1858 what little science had been taught had been bandied about among the professors who considered it a secondary assignment. Colleges of that day were essentially institutions for teaching Greek, Latin and philosophy. Professor McFadden began his teaching of science in one of the rooms of the old white frame chapel building. Fortunately his complete set of class books has been preserved by the library. What a story they tell! His first book of 1858 shows that he had a class in Geography at 8:00, in Physiology at 9:00, in Geology at 11:00 and Chemistry at 1:00. It is significant to note that the first name he recorded in his first class book, heading the list in almost a prophetic way, was the name of the boy he had known so many years as he had watched him grow up in Rushville, yes, "Benjamin Hanby", the one destined to bring fame to the college and become the best known name of its alumni.

Leafing through these old classbooks brings to life many a familiar name in church and college history. Besides the Hanby name are the Haynies, the Slaughters, the many Kumlers, the Shaucks and the Guitners, to mention just a few all-

prominent names in the church. Here is I. L. Kephart, later editor of the Religious Telescope, J. P. Landis of the Seminary, J. E. Guitner who filled the chair of Greek at Otterbein till 1900, Henry Garst who devoted his life to Otterbein. It is not till the seventies that the name of T. J. Sanders appears, for he was, comparatively, a "youngster". These class-books are a veritable "Who's Who" of the early Church.

Although reared as Methodists, Dr. and Mrs. McFadden transferred their membership to the new United Brethren church soon after their arrival in town, again showing the influence of their friends, the Hanbys. The church group was then a little one, organized with five charter members only four years before, no church edifice of its own but meeting in the college chapel, where it continued to assemble till well into the Twentieth Century.

Dr. McFadden was a busy man in the days of the late fifties. Not only his medical practice and the college duties, but the town also, began making a demand upon his time and energy. In 1857 Westerville was still only a part of the township, but civic pride was being born, for a petition for incorporation was being filed, and, naturally Dr. McFadden was one of the signers. So Westerville became in 1858 a real incorporated town, standing on its own feet. The village was growing to manhood. This meant an election. It is interesting to note that Dr. McFadden was a candidate for Westerville's first

town clerk and was elected by a vote of 119 to 1. The rival candidates must have cast their votes for each other.

Another evidence of his civic interest had been shown in 1856, when Westerville became "cemetery conscious" and steps were taken to "select and locate" an adequate burial plot for the growing population. On this committee was Dr. McFadden, who also assisted in laying out the grounds, planting the trees, drafting regulations and in the Cemetary Association served as its first secretary. Thus the early records, not only of the town and the college, but also of the Otterbein Cemetery, are in his familiar handwriting. This cemetery, started in 1856, was much smaller than the expanded one of today, but the boundary of that original part may still be clearly recognized.

The fifties came to a close. The sixties opened with the dark clouds of war becoming more oppressive, even in the peaceful little village of Westerville. Professor McFadden's class book of 1861, bears a mute testimony. He had bravely started off the fall term. The September record was complete. October began, but on Friday, October 4th. it suddenly stopped. The following pages for the fall term, blank ones, were carefully folded in and the book returned to his desk drawer. Professor McFadden had answered his country's call.

#### WAR YEARS

There hangs on the wall of the McFadden home one of its

most prized and cherished relics. It is a sword - the emblem of a surgeon's life in the Civil War. Still untarnished in its long brass sheath, though the elaborate sash has faded with the years, it stands for something more than mere sentimental value - it is the mark of a service.

If we examine the twelve volume "Roster of Ohio Soldiers" and turn to the pages devoted to the record of the 46th. Regiment of Ohio Volunteer Infantry, we find heading the long list of men, the group of its officers - the Colonels, the Majors, and next the name of Dr. Thomas McFadden, first in the list of surgeons. After it, the simple statement, "Enlisted Oct. 11, 1861 - just one week after he had closed his class register.

Why was he so prompt to offer his services?

No man was more peace-loving, more tender hearted, more disinclined to the ostentatious show and pomp of military life than he. The sacrifice would be great, for it meant leaving behind a wife and three little children who needed him. It meant leaving an unfinished home, for he had just purchased his lot on West St. and started the erection of his own house. Why did he feel he must leave all this? No other members of the faculty were enlisting.

The answer is beautifully expressed in that little drama of a war-time Otterbein faculty meeting, written by Dr. W. W. Bartlett and presented on Founders' Day, 1937, as a part of the Northwest Territory Sesquicentennial Celebration. In

this drama of the faculty meeting, whose incidents are historically accurate, among other things is represented the announcement by President Davis that Professor McFadden had resigned and was "in a few days to start for the battle front". While Dr. Bartlett had never known Professor McFadden, he could not have put truer or more appropriate words into his mouth than when he dramatically represented him as rising in that faculty meeting and saying, "You all know how I hate to leave the old university, but down there our boys are being shot to pieces - among them our own Otterbein boys - dying because they do not have medical attention. I cannot remain here, you would not have me. Down there our boys need me. That is all."

No, he was not moved by the glory of war but by the call of service - to bind up the wounds of comrade and foe alike.

The early spring of 1862 found him camped about five miles back from the Tennessee River near a little church whose peaceful name was destined to be perpetuated as the bloody one of "Shiloh". On that Sabbath morning of April 6, 1862, they little realized that the greatest, the most terrible and destructive battle the Western Hemisphere had yet known was about to break.

A letter written by him just after the battle of Shiloh is a valuable historical document of this great struggle. It contains page after page of vivid description from the

first "noise of distant firing" till "rapid firing was heard close at hand and I could hear the noise of dropping balls in our vicinity." Medicines and stores were abandoned, but he saved his medical records, though his main concern was "to take those unable to walk to places of safety." He continues "The hospital was just in the rear of heaviest conflict and the balls whistled above and around us very freely. One man was shot dead while standing in hospital tent door." He saw a ball strike a vinegar barrel at commissary, "making a hole through which the fluid ran freely". They were still a few miles back from the river where the gunboats were anchored whose protection they sought in that wild panic flight. He became lost - found a wounded man and put him on a horse and led him to the river, which he finally reached utterly exhausted. But what a sight met his eyes here! He wrote, "I estimated that there were at least five thousand men there in utterly disorganized condition." (Official reports issued later confirm this estimate of his.) "It was blind panic in which men acted without knowing why they did so."

He was exhausted when he reached the river and should have rested, but he was desperately needed. The next day and a half of continuous surgical labor were to be a veritable "hell on earth". His regiment, the 46th. O. V. I., was so disorganized he could not find any of his own men, so her served where the need was greatest.



Finally he went on board a transport in the river called "Black Eagle", where he spent the night with the wounded men. In the morning he boarded the steamship "Memphis" where he found similar conditions, all of which he described vividly:

"The sight was one I shall never forget. - On the cabin floor were lying wounded men its whole length, so thick that surgeons could scarcely move ten steps without causing some one to scream. - The lower deck, the guards, the hurricane deck, every available space occupied. Our prospects were gloomy indeed, brigades completely disorganized, artillery captured, line of defense hardly more than a half mile from the river. The gunboats began their bombardment and soon General Buell's army reinforced them. I never heard such sounds; the noise of explosions was in my ears for days. With what painful interest did we listen! Which side is winning? It is not long till the sound of the cannon is less intense, the concussions less overpowering - the enemy is retreating."

His great concern was for the helpless wounded. The tragedy that overwhelmed him was the lack of necessary medical supplies and the desperate necessity of the moment. He continued in his letter:

"Oh, those wounded! The sight will never leave me! Oh, that the Sanitary Commission had been there with their abundance of all things needed to save lives which must be lost! Many had died for want of help and a ghastly row of bodies of all ranks from colonel to private lay waiting for burial."

But he had no time to waste on thoughts of what might have been provided, for he continues:

"The work was incessant. Oh, how tired I became of the sight of bleeding mangled bodies and of amputated legs and arms. How unsatisfactory to look around and know we were not doing one-tenth that was absolutely necessary."

To the end of his days, the family remembers, he was almost haunted by the memory and knowledge that he had been

compelled to amputate to save a life, when, with even meagre supplies the limb might have been saved.

The battle of Shiloh began on Sunday, but not till Tuesday night did "I succeed in having a short nap sitting on a bench in the after-cabin". He had not been a well man when the battle started and the exhausting experiences of those three days left a mark from which he never recovered. Never again was he to know the feeling of a strong healthy body.

In spite of the strenuous duties with the sick and wounded men, he found time for many letters, even to his little children left far behind. To his little boy, Louis, he wrote with peculiar skill and easy though vivid words, but betraying the schoolmaster behind them:

"Do you ever think how far apart we are? Take your map and find on it where I am. Find the Tennessee River and run your finger up that river till it runs past the corner of Mississippi. Just there is where we are, but still in Tennessee. I did not expect to be here when I left home. Can you count how many miles we are apart? It is about 180 miles from Putnam to Cincinnati, about 500 from there to Paducah and 240 from there to this place. Now, how many miles does that make?

The letter is filled with interesting descriptions of things about camp that would appeal to a boy of ten, all written in a simple style that makes it a model child's letter. He concludes: "Do you often think of me, Louis? I am thinking of you and mother and Anna and Cora whenever I can. Read this letter to your sisters and tell them that papa thinks of them and loves them and hopes to see them before long".

He was such a home-loving man and of such a retiring disposition that the pain of being separated from his loved ones was probably harder for him to endure than for many others. Every letter was full of expressions telling only too clearly that he was a homesick man, whose thoughts were constantly returning to the little family he left in Ohio. One letter in particular, written soon after Shiloh reflects so beautifully the tenderness of his feelings that it seems almost a sacrilege to read it. But it shows that the man whom many who did not know him regarded as reserved, unemotional, even cold, was at heart the tenderest of men. To his wife he wrote:

"Dearest wife: Yes dearest indeed, far beyond any earthly consideration, dearer, far dearer now than ever. What would I not give to see you, to kiss you again and again, to receive the endearments you alone could give me and which would revive my drooping spirits. I feel I need your aid - your personal sympathy. Don't leave any blank spaces when you write. You can't conceive how much good your letters do me, how anxiously they are looked for, how often and how eagerly read, every word read and every word almost kissed. It does me good to spread your letter out before me and then imagine I can see you writing it."

No member of the family was overlooked in his correspondence home. Even little Cora, the youngest and almost a baby when he left, received hers:

"My dear little Cora: I have been thinking about you so much tonight that I concluded to write you a little letter. I know you will be glad to get a letter from your papa. -- Now, Cora, what I want to know is this, Have you got the doll head I promised you? I want you to write me all about it, whether I shall buy you a doll head or whether you got one at home. Kiss mother and Louis and Anna for me. Your loving father."

Yes, Cora did get her doll head and kept it for years and years. Even when she grew to womanhood it continued to be one

of her prized possessions, enchanted by its associations with a thoughtful and loving father.

After the battle of Shiloh his strength steadily weakened. His body refused to respond to the best of medical care. He was rapidly becoming a broken man, unable to minister to the thousands of sick and wounded men still of Shiloh's field. He was ordered home for recuperation, but without much improvement. Finally he was examined by a board of famous surgeons who pronounced his disease "Hypertrophy of left ventricular and diseases of the valves of heart - no hope - unfit for duty". Honorable discharge followed, but he rallied in the fall of '62 and felt stronger. Most men would have thought they had given enough already, but in 1863 the need for medical men for the army was truly desperate. Against advice he again volunteered, for the motto of his life was "service". He was not strong enough for the strain of the battle front, so he was assigned to the duty of Post Surgeon in Camp Chase, near Columbus, and to this was soon added the responsibility of Head of General Hospital. Again he was overwhelmed with work, long hours, loss of rest.

Camp Chase was a busy spot, filled not only with Union soldiers but with hundreds of Confederate prisoners. Many a Confederate boy, who even today rests in the Camp Chase Cemetery, received his last earthly ministrations from the hands of Dr. McFadden - service as tenderly given by him to the

South as those of the North.

The executive duties of Camp Chase proved too much and again broken in health he was compelled to give up in the spring of '64. He tried to resume his Westerville practice but his strength failed even for this. He had been warned that at any moment his heart might stop. For nearly twenty years he continued to live under this shadow.

IN THE PROFESSOR'S CHAIR

When a soldier returns from war and discards his uniform, how frequently a man emerges vastly different from the one who donned that garb a few years before. Thomas McFadden was no exception. The physically sound man of '61, who had carried so many burdens - his medical practice, his college responsibilities and village office - was now a man on whom a shadow had fallen - his weakened heart. After he had tried to resume his practice he became discouraged, for he found his strength insufficient. But the college was calling him back to the Natural Science chair, left vacant since he had answered the call to war. Again he said "yes" to its summons. He picked up the very same class book he had laid aside with its turned-in pages on October 4, 1861. On a fresh page he wrote "August, 1865" and recorded the names of a new class.

Those turned-in pages! Four years of sacrifice.

He now was compelled to conserve his strength too carefully to carry the additional burdens that characterized his pre-war

teaching. But he did consent to become college librarian - the first official title bearing that name to appear in the catalogue. The duties were not heavy in the library in those days. He held the office until his death. He also found it possible to represent Otterbein in the Association of Ohio Colleges, become its honored treasurer.

The little science work demanded in the college during the war years had been divided among the teachers of other subjects in the decimated school. So, his first task was to reorganize, but the new science room in the recently opened main building gave added inspiration. Though in use, this fourth college building was yet unfinished and presented many problems. This building probably contributed less to the growth of Otterbein than any other of its structures. It was never fully utilized and its life was only a decade. In fact it was still incomplete when the alarm awakened the villagers that cold January night in 1870 to the sight of reddened skies and told them all too clearly that Otterbein's main edifice was no more. Fire strikes with peculiar devastation on a science department. A class in Greek might resume in any room with a text and a desk, or even without a desk. But science cannot be taught from text alone. Yes, difficult days for science in Otterbein followed that great disaster. Yet a holocaust, that seems full only of despair and discouragement, frequently becomes a blessing. Out of the ashes of

that old main hall quickly arose the new Administration Building that has served the college now for nearly three-quarters of a century and is still the pride of Otterbein. What other college can point to a more beautiful architectural gem around which may cluster the traditions sacred to the name "Alma Mater"?

The science facilities in the new administration building of 1871 seemed to Professor McFadden the realization of a dream, although the three large rooms assigned to him served to make more prominent the meagerness of the equipment salvaged from the fire. The main science recitation room was on the southeast corner of the first floor - the room used today for the president's office. Dark shutters made it suitable for experiments in light and a heliostat in south window reflected the sun's rays for lantern or refraction. In those days this was the only source of a powerful light beam, unless the big rubber bags of oxygen and hydrogen were tediously prepared for a calcium light. Obviously light experiments were limited to sunny days. On the north side of room an elevated platform held the professor's desk while at his left always stood that enormous lead-lined pneumatic trough with its shallow horizontal shelf sticking out like a handle - a monstrosity, entailing endless labor to fill with water. The big air pump usually stood by its side. These were the days of big apparatus. The round bellied stove and its wooden coal box must not be overlooked - entirely too prominent near the center of the room, but efficiently placed for heating.

Across the hall was the room with the awe inspiring title of "Philosophical Room", probably so called because in it was stored the apparatus used in teaching "Natural Philosophy", an all embracing title for sciences of that day. The walls were lined with fascinating looking things, "philosophical toys" they are called by a twentieth century science writer. They must have mystified the unscientific pupils of that day - a doll with hair that stood on end when electrified, a house with little lightning rods, queer looking glass vessels for pneumatics, toy motors, leyden jars, brass resonators, bright colored ivory balls swinging over a graduated arc - the list is long, but it contains little that would serve well the science professor of today. On the floor of this room stood the large massive equipment, most prominent being the monstrous frictional electric machine with its glass wheel three feet in diameter. How terrifying it looked with its great brass tubes nearly eight feet high, but really how inefficient and harmless it was. The small Holtz machine at its side was ten times as "deadly". This "philosophical room" was the cold room, for it had no stove. Apparatus was moved across the hall when needed for class use.

Adjoining the recitation room through double doors, access was had to the science work shop (now the secretaries' offices) in some respects the most valuable part of the department.

Overhead was the lead lined tank for water supply, pumped by



hand from cistern outside. This was the only water supply, unless one went out to the pump in the college yard. In front of the extreme left window of this shop stood the lathe, a tremendously important part of the equipment, for much science apparatus, that might have been purchased had money been available, had to be painfully made by hand. At Professor McFadden's funeral service, President Thompson drew an unforgettable picture of him as he had so frequently seen him late in the day, when classes were over, leaning over his lathe, his foot moving its treadle up and down with rhythmic motion as he turned out another piece of equipment.

This description is ahead of the story, for it was far from the picture of 1865. In those early days the insufficiency of scientific equipment was the yearly complaint of Professor McFadden to the Board of Trustees, finally culminating in 1874 with this message - "It would be difficult to name an institution, pretending to give college instruction, whose facilities in these respects (scientific equipment) are not ten fold greater than ours". This was rather strong language and possibly true of the department prior to 1875. But in all fairness we must remember that in those post-war days nearly all colleges were notoriously characterized by poor equipment. Otterbein did not stand alone, particularly among the new western colleges. Dr. Nevins of Columbia University in his book "Emergence of Modern America" says of

this period:

"Harvard was a struggling college, many of its courses on a level of present high school - Yale's facilities were even more wretchedly insufficient. In Princeton Dr. McCosh in 1868 pronounced the scientific apparatus and collections fit only to be burned. In Universities of Michigan and Virginia there was little science, and laboratory practice was everywhere confined to a few experiments performed by professor before the class".

Otterbein did that at any rate, for Professor McFadden is remembered as one who made great use of lecture demonstrations. Probably Otterbein was not so badly "out of step" with the times, particularly after 1875.

The important thing is that Professor McFadden's last complaint to the Board finally brought results. An appropriation, liberal enough for the college in those days, followed. On advice of eminent authorities, he was sent by the Board of Trustees to Europe in the summer of 1875 to make investigations and purchases of equipment. His diary of the trip makes interesting reading, even in this day, as he records his thrill at the vanishing sight of land - his first view of an iceberg - a flock of "Mother Cary's Chickens" that followed them. Nothing escaped him, either on ship or during his tours of England and Scotland. It was the most inspiring experience of his life. While it is true that much was eventually purchased through American firms, the trip was invaluable in its broadening influence - visits to European universities and contacts with scientists and manufacturers of scientific

apparatus. He returned a new man.

Space forbids much enumeration of the equipment bought at this time.- an induction coil, scientific lantern, balances, galvanic batteries, barometers, pneumatic apparatus, a lathe, the human skeleton that was destined in following years to blossom, almost like a perennial, from campus trees, the victim of students' pranks. A few pieces may be seen even today in McFadden Science Hall, possibly classified as "relics". But they all served their useful purposes though now out-dated or worn out. They belong to another age.

His interest in scientific applications was not confined in those post-war years to the class room. It even pervaded the home. Somehow it seems very fitting that the houses of the two Otterbein professors most closely associated with science, Professors Haywood and McFadden, were early connected by an electric telegraph, although their homes were close enough to have used a visual semaphore, had an emergency for instantaneous communication arisen. It is doubtful, however, whether the learned professors had much opportunity to use it, so completely monopolized was it by the professors' children. What a thrill it gave them to use the Morse code - to be familiar with something that was then a mystery to many, particularly children, some of whom may have looked for a visible letter flashing along the overhead wires. Tradition says that these professors' children even tapped their Morse code in

college classes. Youth must be served.

The science department of those early days, and even down to the opening of the Twentieth Century, would seem rather crude to the pupils of today, coming as they do from well equipped high school laboratories. Three things would impress the modern student:

First, the entire absence of laboratories and sufficient apparatus for the students' use - places where they might experiment and use scientific equipment themselves instead of watching the instructor. But Otterbein was really "in step" with other colleges in this respect. It was not till the nineties that a rather insufficient excuse for a chemical laboratory was opened in the south west basement room. It was not till 1898 that science quarters were transferred to Saum Hall and all sciences were put on a laboratory basis.

Second, the modern student would be impressed by the entire lack of electrical wiring for power, light or experimentation. No electricity was available, even in large cities. Modern dynamos had not been invented, so naturally there was no distribution system. All current electricity had to come from batteries, and even they were just evolving from experimental stage. No storage cells - not even the common, compact dry cell seen everywhere today. What a blessing that dry cell would have been to the early science teachers. But Otterbein did have the latest and best source of electrical

power then known - the famous Grove Cells, a battery of at least twenty-four of these having been purchased in 1875. They were the pride of the science department - each cell with its sheet of pure platinum in nitric acid for one of the electrodes. It was a powerful battery - but here's the "joker"; it was a nasty mess to assemble, it gave off noxious fumes corrosive to apparatus near it, and after assembling, it soon deteriorated. The writer remembers as late as the nineties, when these "Groves" were still the source of electric power, assisting in assembling them. Garbed in old clothes we carefully filled the receptacles with strong nitric acid and sulphuric acid, cleaned the corroded terminals and wires, and finally pronounced the battery once more ready for use. Then quickly all the experiments requiring current electricity were performed - heating a platinum wire to make it glow, (the forerunner of the electric light), making a little arc with carbons, showing that the current was magnetic, running toy motors, producing high voltage sparks from induction coil, lighting Geissler tubes (forerunner of modern fluorescent lighting), - all speedily done, all electrical experiments crowded into the few days the batteries lasted, for they were rapidly running down. At last the experiments are performed; the nitric and sulphuric acids carefully returned to their bottles for another time; the electrodes are washed and dried and put away. The professor heaves a sigh of relief that

electrical experiments are at last over for another year. This was the picture of the seventies, the eighties and the early nineties. What a contrast to the modern laboratory, or even the home, with its ever available source of electrical power at hand.

A third thing to impress the modern student as he looked upon these older days would be the absence of gas and plenty of running water. Not till 1898, in the newly transformed Saum Hall, was gas available; even then it came from a private gasoline machine. What was used in those early days, and even in that first basement chemical laboratory where students were permitted for the first time to handle chemicals? Just little glass alcohol lamps with tiny flames above the cotton wicks.

It is not the equipment alone that makes a science department. It is the teacher. Tradition tells that when the first real graduate school in America, Johns Hopkins, was founded, and the greatest physicist of the day, Henry A. Roland, was called to fill that chair, he expressed his willingness, if necessary "to teach from a kitchen table". This was his figurative way of emphasizing the importance of the man above the material equipment available.

What kind of a teacher was Professor McFadden? What did he teach? How did he influence his pupils and how did they respond? Pertinent questions, but increasingly difficult to answer today, for few who knew him as a teacher are now living

and the answers are not found in statistics.

He is remembered by one (Mrs. Keister) as a teacher who sat at his desk, usually with his head cushioned against his hand, as though he were tired, yet not a thing in the room escaped him. For the honest faithful student he could not do too much. Alas for the unwary, inattentive one; he need never be called to attention more than once. Dr. Sanders recalls him as a teacher who impressed his pupils by the careful preparation made in advance for every class. Were gases needed for an experiment - they were ready when the classes assembled. No last minute scramble as they entered the room. Was it a lecture in geology - every note was prepared in advance. There were no awkward pauses as, like some, he might have "fumbled" for the next thought. He sat quietly, unobtrusively, usually with a long carefully pointed pencil in his hand, which he ceaselessly pushed against the desk, letting it slip through his fingers from end to end.

The late F. D. Wilsey, then a leading member of the New York Board of Education, told the writer of this sketch how he remembered Professor McFadden standing before his class with a little toy electric motor which he had just demonstrated as a machine to "convert electricity into motion", and making the prophecy that the day would come when the machinery of the world would be run by electric motors - a bold and far seeing prediction for that day before the dynamo was invented or the

distribution of electrical power was visualized. That little inefficient toy motor may still be seen among the "antiques" of the present physics stock room.

One of the most perfect pictures comes from the pen of Samuel S. Spencer, now still in active legal practice in Kansas, though a pupil at Otterbein in the early eighties. He writes:

"I have long recognized and appreciated my happy fortune to have known and sat at the feet of Dr. McFadden. He was an inspiration to better work and life. He was one of the very finest men I have ever known; unostentatious, understanding, kindly, generous and gifted with that God-given faculty a crystal clear mind. He instantly grasped and understood his problem and then had the rare gift of reducing it to the simplest basis and the ability to so express it that it was plain and clear to his classes in a few simple words.

He also had a rare vision and his accurate forecast of future possibilities was uncanny, or masterful if you will".

Mr. Spencer follows with an illustration of this prophecy that impressed him - a future utilization of the waste products of blast furnaces, all of which eventually came true. He told of his vision of a "vast future for chemistry", not easy to make then, but realized as a part of our every day world today.

He continues his tribute becoming personal in his reminiscences:

"He alone of all the faculty could hold the attention of Levitt Custer. One day when he was making some demonstrations with electrical apparatus we noticed Custer's dark eyes alight with interest as Dr. McFadden took occasion to prophesy that the field of electrical knowledge held vast and undreamed of possibilities and its study would be fascinating and profitable. Who can judge what a wonderful and directing influence he had on Custer's future in that line? From that day Levitt always talked electricity, studied it, had the first Roentgen Ray machine in Dayton, was the first in the United States to apply



electricity to dentistry, and he invented a great number of electrical gadgets".

It might be mentioned that Dr. Custer also wrote the first book on "Dental Electricity". Mr. Spencer concluded by referring to "many others of his pupils, whom, in his many years of teaching, he had directed and inspired to useful and profitable careers".

An indirect but very interesting testimony as to what Professor McFadden taught in the very early days comes from the Hanby House where is preserved the 1867 Commencement address of W. O. Hanby, a younger brother of Benjamin. His subject, strange for that day, was "Electricity", inspired by his course in "Natural Philosophy" which he had just completed under Professor McFadden. After eulogizing the "discoveries of Volta", the "perseverance of Farrady", the "comprehension of Franklin" and "the obstinacy of Morse", he indulges in fantastic prophecy. A crude magneto had just been made, but Hanby boldly foresaw "an achievement superior if possible to the magnetic telegraph itself". But he went more boldly into prophecy when he foresaw a day coming when "an engine or waterfall may transmit this force through wires to propel machinery in the heart of a city or indeed perform any office desired of the electric current". He touched the height of his almost fantastic prophecy for that day when he suggests that:

"This same force that propels machinery, that separates metals, that is a messenger to unite continents, that pierces the storm in crimson flame - - is probably the same force that causes plants to grow and the heart to throb".

Little did Hanby realize that far in the future, and made possible by electrons not yet discovered, man would be able actually to tap those electric currents of the heart and measure them.

To us the interesting part of this unique address of Hanby's is that it may be regarded as a mirror, reflecting the teachings of his instructor.

A question that cannot fail to interest us even today is how, as a science teacher, keeping abreast of the times though surrounded by pupils and others of the narrowest fundamental belief, he handled that "bombshell" dropped on the scientific and religious worlds shortly after the middle of the XIX Century. What narrow "super-fundamentalist" days, those of the early sixties, when a Boston preacher shouts, "If I cannot believe Joshua made the sun stand still, I lose faith in the Bible and in God". And when the Bishop of Massachusetts writes in his Bible, opposite the first chapter of Genesis, the exact date of creation, "March 2,404 B.C.", apparently forgetting that "one day is with the Lord as a thousand years, and a thousand years as one day".

Professor McFadden bought one of the earliest copies of that epoch-making book, Darwin's "Origin of Species", whose

theory of evolution divided the religious and scientific worlds into hostile camps for many years, and with a violent cleavage the twentieth century cannot appreciate. "Scientific dynamite" was a mild epithet applied to a book that found such an interested public that the first edition was sold out the day it appeared. Some clergymen interpreted it as a challenge to religious belief of man's place and denounced it as a "heathen volume". Other preachers, led by Henry Ward Beecher, defended it with equal vigor. Dr. Porter of Yale violently opposed the new theory and forbade any texts supporting it, while Dr. Elliott, newly elected President of Harvard, as earnestly endorsed its philosophy. It could not be ignored, yet it presented a difficult problem for a science teacher whose first concern was not to undermine a religious conviction of any student. Indeed, this was even a problem for Professor McFadden's sons, his successors in Otterbein thirty years later. How did he treat it in those days when the controversy was at its "white heat"? What were his views? How did he present it to his students?

Dr. Sanders, one of his most appreciative pupils, clearly recalls that the question was not permitted to become a controversial one in the class room. In fact it was little mentioned. He does remember, however, one incident in this connection that so indelibly stamped itself upon his mind that he could remember the very words used. The subject under discussion was

the recently announced theory of evolution of the horse from the present magnificent animal back through the geological ages to its supposed original prototype called the eohippus, which was usually compared to a fox in size. But Professor McFadden, with that sly twinkle in his eyes, the invariable accompaniment of his humor, concluded: "Now you must remember, ladies and gentlemen, that this eohippus was no larger than a tom-cat". The twinkle and the "tom-cat", instead of the fox, let us read between the lines.

Strong indirect evidence of his views on this difficult question, the battle between strict "creationalists" and the believers in slow organic evolution, may be found in his admiration for, and loyalty to, the great scientists of his day, Dana and Agassiz. He introduced as his texts the former's Geology and the latter's Zoology as soon as they were published and retained them till the end. Without doubt, their teachings and beliefs he essentially accepted.

Agassiz of Harvard was not an intense supporter of evolution, in fact almost an "anti-Darwinist", as he wrote: "All facts proclaim aloud the one God whom we know, and natural history must become the analysis of the thoughts of the Creator of the universe". Dana of Yale, the great geologist, who at first was non-sympathetic, finally accepted the theory of evolution with one reservation - "that the intervention of a Power above was at the basis of man's development - an evolu-

tionary process under the direction and intimate control of God the Creator". (Jaffee in "Men of Science of America"). This was probably Professor McFadden's philosophy too. Through his teachings no student could be led to deny the Bible or be undermined in his religious faith.

#### THE EVENTIDE

The thread that held the "Sword of Damocles" above his head was beginning to fray. He was more conscious of the incurable heart that, he had been warned in '64, might stop at any time. He walked with slower step. He avoided the excitement of a public appearance. Long since he had ceased to take his part with other members of the faculty in leading daily chapel exercises - lest that heart be overtaxed. He could no longer carry the burdens of the department alone. In 1882 his son Louis was called from Lebanon Valley College, where he had charge of the same work, to become his assistant. For the sake of his waning strength he should have retired, and:

"Husband out life's taper at the close,  
And keep the flame from wasting by repose".

He had long been eligible for an army pension, but he held to a very unselfish philosophy about pensions. He believed that he would be false to his country in applying for this aid while he was in any way able to work. For others, yes; for himself, no. There was a constant stream of old veterans at his door, comrades of the battle field, applying

to their old Surgeon of the 46th O.V.I. for aid in securing their pensions; but for himself he continued to refuse, even though he was eligible for a considerable sum in accumulated back payments.

He had long since ceased to walk home for his mid-day meal. One of the vivid recollections of the writer of this sketch, then a little boy of eight or nine, the child of his parents' advanced years, was the happy duty of carrying his father's lunch to the college and watching him enjoy it at his desk. Even now the memory is fresh of the always present fruit he so dearly loved, and of the milk bottle, insulated by his father to keep it cooler, for the modern thermos was far in the future.

The fall term of 1883 opened. He was no longer able to walk, even with slow steps, from his home to his recitation desk; a neighbor's daughter was employed to drive him to and fro. What were his thoughts during these days - the long unoccupied hours at his desk between classes, for he could no longer occupy himself as formerly; nor was it necessary with an assistant. One of the last things he did was to prepare an autobiographical outline of his life. It ended with: "In 1864 I tried to resume practice of medicine in Westerville, but my health was such as to cause me to give it up, and in 1865 enter teaching. This has been my work since. But now I am unable to do even that". Here the paper ends, evidently

unfinished, dropped in the drawer to be found after his death by his son. What pathos in those last words he penned - possibly the last he ever wrote.

In a few days he was confined to his bed, which he never left till death relieved him of his suffering on November 9, 1883 - his birthday - only fifty-eight years old, a comparatively young man who normally would have seen a half score more of useful years. For the first time since its beginning, death had entered the Otterbein faculty.

His body was borne up the college walk he had so often trod, beneath trees he had planted, past rows of students he had taught, into the old college chapel he loved both as a part of the college and as his Church. The press articles of that day say that the chapel "above and below was packed". The Mayor of Columbus, accompanied by a large group, honored his memory with their presence, as President Thompson and Dr. Garst conducted the service from the text "And so Moses, the servant of the Lord, died". President Thompson stressed many attributes, his "wealth of scientific knowledge", his "determination to give his classes the latest results of scientific research", his "eminent success as a teacher", his "warm and tender heart", one who "would not willingly wound the feelings of anyone".

Probably the most significant tribute President Thompson gave later in his report to the Board of Trustees, in which he stressed his service as a member of the faculty, calling him

"invaluable counsellor", a "man of sound experience, prudent and careful in judgment". He added, "He was a man of few words; again and again he would sit quietly and say nothing. When asked for his opinion he would likely suggest the very thing which would be adopted".

His grave was the first to break the sod of the lot he had selected in the Otterbein Cemetery when he had helped to lay it out twenty-seven years before. The very trees that cast their shadows across his resting place were probably ones he had helped to plant in the strength of his younger years.

At the close of the nineteenth century the great English scientist, Wallace, published a book entitled "This Wonderful Century". In it he argued that the progress made by civilization during that hundred year period was to be compared, not with any other single century, but with all previous time. It was the privilege of Thomas McFadden to live through the heart of that "Wonderful Century". The greatest progress the world had yet known, measured by the span of his life. He entered a world whose transportation was served by slow moving stage coach; he left it covered by a network of railroads.

He found it a world whose communications were limited by the speed of a horse; he saw the rise of the instantaneous telegraph to its culmination in trans-Atlantic cable. He saw the crude steam engine of the twenties become the mightily Corliss of the seventies.



When he was born the fundamental laws of electricity were just being discovered, and even electromagnetic induction, the basis of all dynamos, motors and electrical progress, was undreamed. He lived to see the dawn of an electrical age.

How fascinating this must have been to a man so deeply grounded in science and interested in its progress.

In his last days, after he had left his recitation room and shop, he still had with him at home a model of the new electric telephone so recently patented by Bell, a model he had made in his shop and was attempting to wind - his last and unfinished task.

It is interesting to give free rein to the imagination and to speculate on what would be Thomas McFadden's thoughts were he to return, Rip-Van Winkle-like, to the new Otterbein campus and to the present age whose last sixty years have witnessed more progress in the accelerated pace of invention than the comparatively slow moving nineteenth century ever imagined.

In the college campus he would recognize only two familiar land marks, the Administration Building and Saum Hall - all the rest new and strange. We can picture the culmination of his interest, surprise and happiness in the new science hall that perpetuates his name, and we can hear him say, "It was not so in the olden days". Even in the buildings on the streets around the campus he would search in vain for a familiar

house, till he saw President Thompson's old home (now the Cook property). It alone stands practically unchanged from those days when it housed the Art Department and when he entered it for counsel with his president in the familiar old study on the second floor.

Would he be bewildered by the scientific complexity of the new age, even as seen in practical application in the changed Westerville? He might be made to understand that many of the conveniences of the modern homes, with automatically controlled plumbing and heating and refrigeration depended upon that interesting differential heat expansion bar of his Natural Philosophy.

The automobile, with its internal combustion engine, might be explained to him as an outgrowth of one of his "philosophical toys" of the last century - the old oxy-hydrogen pistol, remembered by all his old students. A formidable looking affair, shaped like a "horse pistol" with big brass barrel, which, when filled with explosive gases and touched with electric spark, exploded, firing a cork across the room, or at the astonished class. Only, now, the automobile has harnessed that flying cork to its wheels. But what would he think of the airplane zooming overhead, whose "heavier than air" prophesied flight had been "proved" to be impossible by one of the greatest mathematicians of Professor McFadden's day?

What of pictures that move and talk? The little "sound

track" on the film turned into audible words and music, filling an auditorium?

What of modern medicine and surgery - yellow fever, typhoid, diptheria conquered, and the "impossible" achieved in surgery? Sulfa drugs and penicillin saving lives by the thousands on the battlefields?

What of the mystifying X-ray, with its "photography of the invisible" - "sight" through the human body? His mind would revert to the tragic suffering - the "probing" for bullets after Shiloh's bloody battle. We hear him say, "If only I could have had this then".

But what would be to him the most mysterious, the most difficult to understand, the most awe-inspiring? I've often thought of that question as I pictured myself introducing my father to this new scientific age. I think I know. It came to me up in our camp in the Maine woods. A little box was placed on the table. No wires in any way connected it. A knob was turned, and from it issued the voice of the Prime Minister of England, speaking from far across the ocean. That, I believe, would be to my father the supreme miracle of the new age. I could not explain it to him, for the radio wave had not been discovered when he died, and the electrons upon which this mysterious box depended were then still bound up in the atom, which to him was the ultimate particle of matter. Did not its very name, "atom", mean indivisible? It would be

a strange new world to which he had returned.

But as he surveyed the tremendous progress science has made since his death, and then contemplated its misuse in an insane war, he would agree with President Conant of Harvard in his declaration:

"Through many advances gained by science we may hope that as never before, man may be free from want. But science alone, untempered by other knowledge, can lead, not to freedom, but to slavery. At the root of the relation between science and society in the post-war world, must lie a proper educational concept of the interconnection of new scientific knowledge and our older humanistic studies".

Thomas McFadden would have said "yes" to such a thought, and he might have added: "That reminds me of what Paul wrote two thousand years ago, 'If I know all mysteries and all knowledge, but have not love - I am nothing' ".