Worrall, James

Memoirs of

Colonel James Worrall
MEMOIRS

OF

COLONEL JAMES WORRA LL,

CIVIL ENGINEER,

WITH

AN OBITUARY POSTSCRIPT

BY A FRIEND.
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INTRODUCTORY.

Some years before Colonel Worrall's death the present writer, receiving a letter from him in which certain interesting passages of his experience were narrated, made the suggestion that he should jot down from time to time, the story of his life, as, in the event of his going first out of this world, the junior survivor would have not even material for an adequate obituary, so scanty was his knowledge of that life. He made no answer to the suggestion. After his death a packet of manuscript, addressed to the said survivor, was found amongst his papers, of which manuscript the following pages contain the substance. It required considerable editing, because of disconnection and repetitions, the author seeming never to have reviewed what he had already written. There were personals also, and emphatic forms of expression, highly characteristic, but which it seemed better to omit or to somewhat tone down. These were judged to be legitimate editorial liberties.

The Memoirs, thus arranged and modified, are commended to the acceptance of his old neighbors and his professional brethren.
Some account of my life, written by myself—a native of Ireland but a citizen of the United States of America, commencing Anno Domini 1812, ending Anno Domini (1885.)

James Worrall.
Some one has said that every human life, without exception, is a tragedy. If this be true, the record of every human life should be interesting, as all our yesterdays do but light us fools the way to dusty death; and this constitutes tragedy.

Any life story told in plain and simple terms will attract attention, whether the hero be large in the world’s view or but an unpretending unit amongst its millions. If he tells his story as he would to a dear friend, those made for friendship will hearken, will personate the character and quicken or sink at heart with his vicissitudes. Who ever read a more interesting production than the fragment of autobiography by Benjamin Franklin? Yet every event in that story occurred before Franklin had become of any more importance to the world than an ordinary journeyman printer. My undertaking, then, needs no apology beforehand. If completed it may entertain an hour for few or for many. It will at least have occupied myself, not unprofitably; I hope, and given to those nearest me a view of my life from the soul’s seat that lived it which shall bespeak even from them, if it were possible, a tenderer memory.

We are all, it is generally believed, descended from Adam; and one, therefore, can scarcely boast of an older family than another. Some of us, however, can trace our later lineage a few years further back than others and our very names form a kind of inferential evidence of the length of that lineage,
Worrall is a Norman name and it is found in Ireland, where a very considerable settlement of Normans was made not long after the Conquest. Thus Burke (de Burge), Wellesley (Wesley), De La Poor, Lorequer, Verequer and other names, seem etymologically to belong to that set. From the Worralls I came on the father's side; but he, on the mother's side came from the Mahanys; for was not his grandfather a certain Laurence Mahany, a centenarian who sunned himself toward the latter end of the last century at the gate of Garry Owen (Owen's garden)—a sort of Vauxhall to the City of Limerick? With his long white beard he used to brush the rosy cheeks of the children, happy to sit on his lap. Of those he so sported with there may by possibility be one or two left who can remember Daddy La, as they were wont to call him.

A certain John Worrall, Tanner, married Daddy La's daughter, and she was my grandmother.

The Mahanys, of the County Limerick, are as old nearly as the O'Briens and the MacNamaras, Septs that were at feud in that vicinity for ages, dating back to the old Milesian times.

My father was one of the youngest of some baker's dozen of children born to John Worrall, the Tanner. The eldest son, James, became a preacher, having studied for the church, but he could not sign the Articles and became a dissenter of some respectability. He was made postmaster of Clonmel and held that place for perhaps two-score years. He was nearly twenty years older than my father, who always spoke of him with respect and affection. He died at Clonmel about 1828, leaving a large family of whom I know almost nothing, but I believe no one of them has reason to be ashamed of his birth.
Memoirs of Colonel James Worrall.

My father's oldest sister, Catharine, was a woman of fine acquirements which she turned to account as the head of a boarding school in partnership with a certain Madame Laurent, in Limerick. She was known to Miss Edgeworth and respected by that lady—a respectability high enough for any one. She died a maid at a good old age.

A brother of my father, William Worrall, became an Attorney or Counsellor, and lived and died in Limerick. He married into the Monsell family, a name well known there, one of whose members sat in a recent cabinet of Queen Victoria, being Postmaster General. One of that same family married a sister of my father.

My father was placed in the counting-house of the well known John Connell, a great Limerick brewer, whose name used to be sung in a verse of the celebrated Garry Owen time, as thus:

Johnny Connell is tall and straight,
And in his limbs he is complete,
He'd fire a gun of any weight
From Garry Owen to Thounand Gate;

a capacity that I never could understand as giving him any ascendancy over his fellows, or the red end of a cigar.

My father served his time at the brewery, whence he was transferred to the Branch Bank of Ireland in Limerick. He there became, and for nine years remained, head bookkeeper. With his savings he set up for himself as a provision merchant and was at first successful. He built a large store house in William street, seven stories high, and bid fair to hold his own amongst the merchant princes of the day. But having two or three vessels containing provisions at sea, Napoleon the Destroyer, issued some decree closing continental ports
against the admission of English merchandise, and provisions being perishable, my father's ventures were consequently either lost or sold at such a sacrifice as obliged him to succumb. Bankruptcy changed the whole course of his life.

During his prosperity he had paid a visit one summer to his brother James who at that time, was preaching in Larne, County Antrim. As they sat one day after dinner on the porch of the house and enjoyed the beautiful views of that vicinity, my father, having a telescope in hand, saw a young damsel in the distance picking her way from stone to stone across a brook. He immediately turned and asked his brother whether he knew the young lady. The elder took the glass and recognized one of the belles of the village, a Miss Jane Holmes, daughter to a respectable Chandler of the place. "You know the young lady!" said my father. "Very well!" said James. "Then you know my wife that is to be, and you must forthwith introduce me." The introduction took place and marriage was the result. Thus I find myself connected with the Normans, the Milesians and the Scotch-Irish; for that little place, Larne, and its County Antrim have produced the elite of the Scotch-Irish blood. Hence came the Browns (Brown Bros. of Liverpool and Philadelphia), the McCalmonts, the Stewarts, the McHenrys, the Andrew Jacksons (Carrick Fergus), the Leslies—the interior of Pennsylvania has still many of these names—the Glasgows, the Kirkes and others with whom these Holmes' were connected by marriage or by blood.

My father took Miss Jane Holmes to Limerick as his wife and there lived happily, blessed with many children. I can say blessed truly, without including myself, for I have never known a family in which there was
truer affection between parents and children. Four were born before I came into the world, three daughters and a son; the son just one year before myself, but he died a few weeks after seeing the light, and I took his place to struggle at least as far as the grand climacteric, this present 1874 being my sixty-third year of existence. There were eleven of us altogether, three of whom died in infancy. Three were born in Pennsylvania, eight in Ireland.

Napoleon ruined my father as he ruined millions of others. Other millions had their lives broken by his restless ambition. Hundreds of thousands were killed to satisfy his whims. If there be compensations hereafter what an account will the Petit Caporal have to settle?

I presume my father's failure to have taken place in 1816 when I was but four years old. I remember the big store and the large packing yard, where I have been told that I once displayed childly heroism. I was by myself in the yard, left by my nurse who thought the enclosure to be safe, as it was shut from the street by a sort of gateway of open bars and there were no horses about at the time. My dress displayed some gay color and this attracted the attention of an old sultan of a turkey-cock who lived upon the gleanings of the packages of wheat, oats and the like, constantly passing across the area. He no sooner saw the bright dyes than he made at me. But it seems I had sense enough to defend myself, having picked up an old broomstick from the pavement which I swung backward and forward and thus kept him at bay. The compting-house was up stairs, opening on a portico or gallery, from which a flight of steps descended. My father, hearing the noise of the gobbler, came out to see what was the matter,
It is hardly necessary to say that he hurried to my rescue, but in relating it always added that before he reached me he more than once observed that I wielded the broomstick in such a way as to keep my antagonist at a respectful distance. I should have soon been overcome, however, had not my father arrived when he did. My instinct on this occasion lent me a capacity for self defense. Later in life I was obliged to stand against attack and may hereafter allude to the circumstances, but I have often regretted that I did not believe myself to be possessed of aggressive courage.

My experiences of life before quitting Ireland had necessarily a narrow range, for I left five and a-half years of age. Yet there are many things I can remember. Two servant women of the house I never can forget. They were sisters, and were of the old Irish Fitzgerals. One, Elizabeth—"Betty" we used to call her, had the name as Surrey's Love. But the poet Surrey never could have loved his Eliza Fitzgerald better than I loved mine. I have had mother, sisters, wife, and in all these I have been, I think, specially blest; but there was none amongst them I loved as I loved my nurse. She was more than forty years my senior. To the day of her death I would have sacrificed my life for her, and indeed, prayed to be taken in her stead when she was taken, at the the age of fifty-eight, I being then in my eighteenth year.

Has any other body ever had such an experience? I suppose so, here and there a rare one. All the children loved her seemingly as I did. My father, a strong man, broke down utterly when she was insensible and passing away. She was fidelity, truth, honor, industry, benevolence, devotion, in all things. She followed the fortunes of the family and almost starved with it. Once,
when brought down to a daily deficiency of market money, she found a little sum in the street which she brought home intact and gave to "the master." At another time, a rich bachelor invalid, requiring a constant nurse whom he would pay well—say three or four dollars a week—employed her through a long illness, and every cent that Betty got she gave to the family, who had nothing to return except a love such as is rarely found on this earth. This indeed she had in full measure and, surrounded by us all she died as I believed she wished to die, certain that we returned the affection she felt for us every one. No death-bed scene has occurred in our family so demonstrative as that was.

Under this good Betty's and Nelly's care I was nurtured, with the rest of the children, in Ireland. I had my measles, my whooping cough and the other infantile diseases. I had also one of those Irish typhoids, with delirium. Ah! what an experience for a child under five, with the pulse of infancy in maddening play, the feeling of falling through infinite space, and forever falling, the winning slowly back towards healthful life, and the dear bosom in which to lay my head with the delicious sense of convalescence, thankful to that fond heart who I thought produced the change. Nelly was not with us so long and did not come away with us; but we all loved her nevertheless. We knew no more of her after leaving Ireland except that she did not survive our departure long.

Our home in Limerick was a small house near father's great store yard, on William street, not far from Swinburne's Hotel. We went thence to a roomier building on Clare street and subsequently moved to Castle Connell where I saw and still remember the Leap of Dooonas and Carrick O'Gunniel, celebrated points on the
Shannon, the first salmon leap I ever saw and which I recalled when, fifty years afterwards, I had to make a leap for salmon and shad on the Susquehanna, the Shannon of Pennsylvania. Here, with the rest of the children I had to submit to the morning bath in the open river; a savage custom—no! not savage—savages have more sense—to tear young children from their warm beds and plunge them into that icy flood. Could they not see by our little livid lips, our goose-flesh skins, our shrinkings and quakings that they were stunting nature by such cruel practices? I believe this usage caused that dreadful typhoid fever, already spoken of, which recurred and recurred afterwards on the Delaware and the Potomac until I finally outgrew it. This fever gave me a nervousness which has troubled me all my life.

There was another custom in Ireland, of which I have felt the evil results. It was supposed that in order to make children good their fears should be aroused—bug-a-boos, devils, the naughty man is after us. At school the hated cat o-nine tails hung as a terror at the domnie's desk, and poor little wretches were stripped and scored as much to frighten others as to better themselves. Any man who knows this world must know that courage is as useful a quality as man can possess. How cruel, then, to take every possible means to break courage down and make the poor child a bundle of nerves. Yet this was the almost universal practice in Ireland at that time. What Frenchman was it who said that L'Audace was the secret of success? Why, then, rob the helpless little ones of that precious secret? Boldness may sometimes be a fault, but to make it the great fault, the synonym for bad, as was there done, was a mistake from which the Irish people have suffered immeasurable evil consequences.
My nervous system was first shaken no doubt by the Irish fever and that probably brought on by "sanitary" measures. There may possibly, too, have been a hereditary cause, the use by my ancestors of whiskey, which was then universal and awful. Then the school—for I was sent one session to a school kept by a man named Martin, whom I feared, him and his "cat," as I did the fiend. Not that I myself ever suffered such punishment, but I had a lively imagination, the "cat" always hung in sight, I saw other boys flogged, and that frightened me, made me all it could a coward. That dreadful "cat" taught me the multiplication table, which I conned in school and out of school, fearing the "cat" always, losing sleep and weakening into a condition to take the fever.

One day they sent me in a young nurse's arms—it was neither Betty nor Nelly—to see the soldiers on King George's birthday, probably 1816, when I was four years old. She brought me quite near the cannons which were suddenly let off within a few yards of where she stood, to me unexpectedly. Conceive the effect on a sensitive child, wholly unprepared for such a shock, of a dozen or twenty heavy field pieces tearing the welkin to tatters within five yards distance. I remember that now as well as if it were yesterday;—and "'tis sixty years since," as Sir Walter calls "Waverley." Oh, how careful should we be of these tender weaklings, who can express themselves only by appealing cries and shudders! How many a fine organization is bruised or ruined every day by creatures who know not with what they have been intrusted? Often and often have I felt the want of the nervous energy thus torn from me in my infancy.

The family was tossed about from post to pillar till at
last I heard father talking to his friends of a book written by a Mr. Birkbeck about America, and he concluded he would come out.

I have mentioned many of my experiences in Ireland; let me now recall scenes. The gate of Garry Owen I remember,—St. Mary's cathedral, the Episcopal service and the little boys in white; the new chapel. Catholic, and the thousand red-cloaked women constantly going in and out of a Sunday; a canal lock near Limerick,—I afterwards built scores of them—Arthur Quay, the shipping, the bridge, the mall, the streets where we dwelt.

Father took us once to Kilrush and I remember the cliffs of Moher, three hundred feet high—the boys who gathered “samphire, dreadful trade” on their awful front—the sands of the shore, the jagged rocks, the crabs left by the tide, the drowned sailor surf-shaken on the beach, the dinner of “praties” and buttermilk at Malachi Shehan's little cabin and the relish of which I never forgot—all these things are in my memory.

I even had a conception of the difference of the sexes. There was little Eliza Brown, and two sisters named Rogers whom I specially liked. How comes it that I remember them better than the boys? Yet boys there were, my childish playmates; Christopher Anglum and the Russells, sons I think of a merchant named John Norris Russell. But I remember the girls better and because they were girls.

I recollect perfectly a procession of soldiers conducting six fine-looking young men to the gallows. One was dressed in white. They had committed a peasant murder—a crime not yet stopped in Ireland. A whole family named Dillon were surrounded in their little cabin, the men beaten to death or shot and the women
and children burnt up in the house. One of the women threw out an infant, but it was pitch-forked back. Yet, as I said, these were fine-looking fellows and him in white I shall never forget. He walked erect and proudly as if he had done a meritorious act. He followed at the cart's tail, free as to his limbs, but surrounded by a guard of soldiers. I remember our movings from house to house, our summer months at a grange near Castle Connell, called the Hermitage, the fishermen amongst whom I played truant on the beautiful river, my punishments after that play or, as often befell, my shieldings from the birch by poor Betty. Ah me!

All this I vividly recall, yet I could not have been more than five years old.

And now we were all to cross the sea.

Mother first went with the girls to visit her relatives in Larne. I kept my father company for the last time to grandmother's—the last of many like journeys. How distinct in my memory the tiled chimney, the deep window sill with the book of martyr's lying on it and an odd volume of Percy's Reliques which I could read. For had I not quaked under the bloody Martin and had I not been taught at home besides, and did I not almost know by heart Sir Aldinger and Sir Andrew Barton, the Blind Beggar's Daughter of Bethnall Green, King Edward and the Tanner of Tamworth, and the Brave Lord Willoughby? I mind them yet and the half-clad volume, one cover gone, from which I learned them.

Thence to beautiful Dublin, where I remember Stephen's Green, the bridge across the Liffey, Nelson's Pillar, the statue of King William, wide stately Sackville street, Trinity College with its courtyard and its students wearing square caps. How would I enjoy another visit to that ground, to see St. Patrick's Cathedral, to tread
where Goldsmith trod, and the Dean. But it is not for me. I would not go "my lane" and I would not be sent now; it is too late. Yet I have lovely Dublin in my eye as she looked in her June of 1818.

After that, northward. The magnificent bare mountains, the undulating roads, the greater neatness and order as we advanced; positively I noticed it. And I observed also as we went north that the children did not sing in tune like the southern children. I had and still have a great fondness for music. Probably few Irishmen have a more crowded and various repertoire, all kinds from all quarters, down to fiddlers, beggars and such raff, including Tom Moore and his set. Tom got some of his from my uncle Joe, his college mate, whom I often heard my father speak of as a man of cultivated taste, unfit for struggle; a delicate, nervous, poetic creature, beloved by all. Captain Tuthill, of Faha, near Limerick, a wealthy gentleman, gave poor Joe asylum in his decline, where, like the swan, he died singing, the delight of that kindly gentleman's hospitable home. Was this eleemosynary? I suppose it was. But what would you? He knew nothing of worldly ways and means; how to work along and get ahead, as they say. He did not cost much and he gave his talent for his living. How worse is he than the Chief Justice? Does not he too barter his talent for his living, though sometimes he may win more? He was perhaps like Harold Skimpole, not worse, not so bad: and Dickens needed for setting Harold as a prototype of Leigh Hunt. Poor Dickens! Was there ever such a snob? and writing against snobs all his life! Give me to be a Leigh Hunt rather than a Dickens the best day Charley ever saw! "Jennie" could never have "kissed" Dickens,—
never! never! but she kissed poor Harold even in the gout, "jumping from the chair she sat in."

Well! we plied northward, and the children could not sing, and we came to Belfast with its quay, its salt, and fish, and tar and tarry breeks, its ships and its road- stead. There my little brother Alexander, eighteen months younger than I, joined us under escort of some of the elder members and we set out for Larne by wagon. As night came on Sandie cried and roared for his Mammie and his Daddie. At last we won to the village where my aunt, my mother's brother Alexander Holmes' wife, came to the door with candles. We got a warm supper and kisses and off we were huddled to the nursery to sleep with our cousins. Here at Larne farewell parties were given and all arrangements made for our departure. One splendid party I remember at a place called Island McGee, surely the loveliest place in the world; an opening in the rocks say a hundred yards wide, the floor a velvet green, cloven by a cool and sprightly brook, the walls dripping crystal. Then the gladsome company, the bagpipe, the blind fiddler, the dancing on the sward—somehow I seem never to have beheld the equal of Island McGee. There were rides, too, and walks about the coast, visits to the linen factories, the pure water, the beetles, the long strips of lovely white linen stretched upon the grass. These beetles were queer monsters to my young eyes, worked by water power and hammering the poor linen, while the great wheel turned in gushes and sparkles of pearl. I remember the jaunting cars, the romantic road along the cliffs and one spot where we could discern far away the hills of Scotland. Here in this Larne was where my father first saw my mother, and here their offspring in my person played truant for a day and night with a
young comrade named St. Clair, and here my good
grandmother, my mother's mother, saved me partly
from the penal thrashing due to that offence.

After these visits were paid we went to Belfast to
embark. We children got presents. A toy ship was
given me and one Mr. Starkie promised me a pair of
brass barrelled pistols on which I had set my heart. I
should have them on board the ship. Now why did he
promise and not perform? I could have borne re-
usal—but to put me off he made a promise. We took
passage in a small vessel, the Emma Matilda. I re-
member the "yo-heave-oh" of the sailors at the wind-
lass and, as the anchor left the ooze, the ship gently
moved forward and shaped her course through the Bel-
fast Lough. We saw Carrick Fergus, Jackson's ances-
tral home, and the public gibbet visible from the road.

So we left Ireland. I asked for my pistols and they
had not come. This was the first faithless act in my
experience in life. It sank deep. I remember Mr.
Starkie for it to this day. Had it ever fallen in my
power to do him a good turn I should probably not have
gone out of my way to do it. But I never saw him
again. He did not prosper in after life, I believe; and,
to tell the truth even if it be not wholly to my credit, it
was with a kind of satisfaction that I heard so. I had no
special expectations about the pistols until he pledged
them to me. Then I had happiness in the prospect
of them; but when his promise turned out to be a
deliberate falsehood it rankled in me, young as I was,
and I never wished him well afterwards. Friends!
make no false or rash promises to any one. Even a
little child may suffer, feeling that he has had wrong at
your hands instead of right.

So we fared forth in the good ship Emma Matilda,
Ansdell, master, a civil gentlemanly skipper, with his delicate wife. We were father, mother, and seven children, Jane, Catharine and Anna older than myself, Alexander, Mary and Charlotte, called for the Princess Charlotte, younger. Charlotte, a sweet infant and destined to die an infant, with two others of us, the only ones named out of the family. Charlotte was at the breast. Poor mother had all these and nobody to help but Betty. But Betty was herself a host. We were not bad children and we all loved her intensely.

I knew all the sailors, but particularly affected one Bill Clifford who taught me to plait yarns, to climb ropes or, seated astride of a small locker in the "foksle," contended with me in mock fisticuffs. Poor Bill! where is he now? I used to liken him to long Tom Coffin as I grew older. Then there were Dutch John, and Portuguese Joe, and the black cook,—I knew them all and they all liked the little fellow. We had steerage passengers whose names I have forgotten. There were two cabin passengers besides ourselves,—a gouty Mr. Veevers who dreaded my vivacious approaches, and a Mr. Brown, a pleasant man, returning from a visit to his old home in Ireland.

One day I had been sailing my ship in the lee scuppers, or along the gunwale whence the scuppers ran. The cabin was on deck and had recently been holy-stoned, as they called it. Father, mother and the cabin passengers were chatting there when I ended my sport and brought my ship in dripping water on the floor. Captain Ansdell scolded me angrily for my heedlessness; but my father took the ship from my hands and deliberately threw it overboard. Never shall I forget that act of outrageous injustice. My little ship was full rigged, a beautiful thing that no doubt cost some
ingenious body weeks of labor, and merely for the sprinkling of a few drops of water on the cabin floor to have her confiscated irrevocably—it tore my heart, and I yet think it an outrageous, a cowardly and inexcusable act. Oh! how careful should be the parents of human children.

Irishmen are always doing some unforgivable deed like that. How good soever they may be individually, it is like the nation. You can never calculate on their consistency. My father was naturally a good, just, kind, charitable, benevolent man, but this thing was Nero-like and especially Irish. Ireland will never be different while she remains Irish. I do not know that I myself have ever done such a thing; I don’t think I have; but no doubt I have been sufficiently inconsistent otherwise.

Is it worth while to speculate as to the causes of this? Ireland produces some of the most beautiful and lovable specimens of humanity known—their very imperfections amiable. Goldsmith is a type of many Irishmen; without his foibles and frailties he would not be Goldsmith, and who would have Goldsmith other than he is? But vast numbers of Irishmen for centuries past have had their consciences kept by others until independent thought and action have become the exception in that country. A thorough change of the social system is needed. Is that change coming? One would hope so; but the paternal religious organization which has so powerful an influence in Ireland yields slowly. Its effect on the Irish—I do not say the intended, but the practical effect, is to associate the self-seeking class with a body that preys upon the candid, honest, trustful class. I suppose no larger percentage of bad people exists there than among other races, but this dominat-
ing corporation appears to me to make it easier there than elsewhere in our English-speaking family for the bad to colleague and exploiter the good. I think daylight approaches. Independent thought is beginning to assert itself and its antagonists are proposing defensive measures which must frustrate themselves. I love the Irish—they are my brethren—and who does not love them in the mass? Would to God the habits of the nation might be changed and the good in that noble race freely manifested. Everything humanly great may be expected of them if loosed from the bondage of this evil enchantment. The nation is a puzzle to its rulers and a puzzle to mankind. With the rules that govern society in Massachusetts adopted in Ireland I cannot but think a wholesome change would set in. Massachusetts is already full of Irish, Celtic-Irish, and they assimilate admirably with the Yankee. It is the civilization of Massachusetts that does the good there and would presumably do the like in the Old Island.

But I have wandered. The tight little ship Emma Matilda beat about in her course across the Atlantic till, at the end of nine weeks, she moved up the Delaware and, on the 25th of August, 1818, hitched her hawser at Race street wharf, Philadelphia, consigned to Warden & Brothers. Our big family got ashore and went to the house of Mr. Thomas Dunlap, a grocer, at Race and Tenth streets, for a week or two until a house could be found for us. My father indulged in some melons, ripe at that season, and was taken with cholera-morbis which very nearly carried him off. Immense doses of laudanum saved him; and the family found a home at 90 North Front street, where father tried to dispose of a consignment of linens with which he had been in-
trusted. He was unsuccessful as a jobber, and in the spring he set up a retail shop at 19 South Second street, corner of Black Horse Alley. Here he remained for some months but did not prosper. In this house poor little Charlotte and myself lay sick together, she with cholera infantum and whooping cough, which carried her off, and I with intermittent fever. During this sickness I was treated, under the barbarous practice of the day, with blankets and every possible heating device, deprived of water and permitted to sip hot drinks only. One night, however, the Masonic Hall on Chestnut street took fire and burned to the ground, illuminating the whole city. The family went to the front of the house to see the light and the engines running by, leaving me alone. On the table was a stone pitcher of fresh cold water. Finding myself free I made an effort, threw off the blankets, clutched the pitcher and, in the face of instructions to the contrary, drank the most of its contents. Back I went to my blankets and very soon a perspiration started all over me, which I have every reason to believe effected my cure, though poor mother was frightened nearly out of her wits by my disobedience of the doctor.

The retail trade did not flourish at 19 South Second street. So father removed to No. 132 in the same street, near Barry’s great furniture warehouse, just below the old Custom House and north of Spruce street. Here he tried for a few months more; then again removed to No. 41 North Second at the corner of Comb’s alley near Arch, not far from the spot where Matthew Newkirk made his fortune.

A few months more of ill success there proved that fortune would not spring forth of that ground for the Worralls and that my father’s mercantile experience
could not command patronage on this side of the water. After this failure we were reduced to poverty. We had to leave the Second street home and shelter in what was almost a shanty in Ferne's court running from Vine street south below Eleventh street. Here we lived for several months seeking employment and sustained, I believe, by some good friends to whom mother's family were known in the old country. At last an academy in Chester, Delaware county, wanted a teacher. Father applied and was successful. I remember going with him in the Chester packet, a sloop that plied daily between the two places. It cost him thirty-seven and one-half cents to take us both down. We stopped at Nimrod Maxwell's tavern, staying all night to return in the packet the next day. This brought us to perhaps the beginning of 1820. Father took the place. We lived in a house built by William Penn for his private residence six or seven score years previously; a quaint house, the bricks probably imported. There was one window in it diamond paneled, with lattices of lead. Before the door were two magnificent sycamores, in all likelihood planted by Penn. This was a unique building and our residence in it certainly delightful to the children. The people of Chester were pleasant—old Quakers and some descendents from English squirearchs. There were the Anderson family, Commodore Porter's family, the Eyres, the Pearsons, the Maxwells the Teriills, the Deshongs (Des Champs). They were all kind to us and I wish father could have remained. But here as elsewhere it was hand-to-mouth living with his large family. Dear Betty was with us through all this; devoted to us; never thinking of wages. And where will you find such people except amongst the
Irish? Some negroes, I believe, have shown a like affection, but the cases are more rare. She, however, was first best in comparison with any individual, or race, or people.

In the latter part of the summer of 1820 father returned to Philadelphia and set up a mixed school at No. 28 North Ninth street, in a house rented from Cornelius Stevenson, an old and highly-respected citizen, who was city clerk for many years, and was the father of May Stevenson and William; May still living; William killed by an accident with horses in the park in 1874. Mother's Northern Irish connection helped us here, and we had scholars from Dr. Samuel B. Wylie's congregation—Covenancers—in Eleventh street, now the negro minstrel opera house. Here came to us the Bell children, Samuel Bell, of Bell & Sterling; the two Cornelius boys, the great silver platers, Robert still living, their father a German, their mother an Irish Covenanter; the Millikens, afterwards and now well connected in Philadelphia; some of the neighbors, the Lybrandts, and others I remember. During this school keeping I got my education with the other children and fairly held my own in all branches, particularly grammar, in which I was always head. Father would have kept me back to show that he was not partial to his own; but it could not be done, the difference was so marked, as I say, in grammar and in geography.

Still it was hand to mouth, hand to mouth. My eldest sister Jane had to go out governess at sixteen. She went to the Griffith family in New Brunswick, N. J., the widow of the distinguished Senator of that name and quite a blue, who used to write to Miss Edgeworth and Sir Walter and get answers. She had a large acquaintance in Philadelphia; a daughter married one of
the Whartons and left descendants now well known in that city. Jane was a bright young thing and an amiable and she endeared herself to these new friends. They were, I may say, fashionable people and attracted attention to us.

Thus were we one mouth the less, and mine was next to go. I was tall, and at ten years of age seemed to be thirteen, so I got a place in a book store, the Half-Price Book Store, No. 4 South Front street, the house probably where Franklin had his printing office in the old, old times. My wage was seventy-five cents per week, with breakfast and dinner. I had to be down at six A.M. and open the shop. The morning I started I owned no hat fit to wear, so had to use one of my father's old ones, padded under the lining, and exposed to the chaff of the small boys. Two or three fights were the immediate consequence, but I did not have to stand it long. My first seventy-five cents got me a cap with fox fur ear flaps. The first day I went down was a Saturday. I started about daylight, the streets being lonely at that hour. On the Monday following—I think it was the 25th of March, 1822—an awful storm had taken place, snow and rain—an equinoctial storm. Snow had drifted through the cracks of the bow windows and all the prints, ink bottles, sand boxes and miscellaneous articles had to be taken in and dried. Thus began my world's work at ten years of age. Since then I have been a man; that is if paying for my living ever since has made me a man.

Reviewing my childhood I perceive that my parents did not quite understand me. I was a nervous, imaginative, impressionable child. The system of raising children in Ireland was a cultivation of fear. Bogy was to catch me if I did wrong. Noises were horrid to me; yet they
sent me to King George's birthday celebration and the cannonading frightened me, I may say, for life. I was attacked with fever before I left Ireland, making me more nervous. They put me at that brutal Martin's school, where the cat-o'-nine tails hung in terrorem over the master's desk and filled me with dread. I must learn the multiplication table or I must be stripped, hoised and catted. I learned it and have never forgotten it, nor have I ever forgotten the cat. The shocks to my nervous system thus occasioned have had a lasting effect. I was not absolutely destitute of courage. I had fought and, in many instances, conquered; but fighting was dreadful to me. My attacks of fever in this country still further shattered my nervous system. But for this irrecoverable loss of vital force, robbed from me as a child, I should probably have taken a more leading position as a man.
II.

From the shop at No 4 South Front street, besides my indoor tasks, I ran errands, carried books to and from the auction stores and the like. I could read, though, and did read, all that interested me—poetry in the main and mariner's chronicles of shipwreck, such as Byron must have read to qualify him for his graphic creations in that kind. Learned poor men resorted to the book store. Many religious societies had their annual meetings in Philadelphia and the preachers used to come to the book store. It was owned by a Dr. Lemuel B. Clarke, formerly in the U. S. Navy—a surgeon, I think. He was a Virginian and married his wife, a Miss Cleaver, an English woman, in Alexandria. I believe I was a lazy dog. I liked looking into the books and cared not about their prices. I took my seventy-five cents every Saturday to my mother and she gave me a “fip-penny bit,” or picayune, out of it, with which I bought lay-overs to help my growth.

Meantime father was persuaded to set up a more fashionable school. Mrs. Griffith got Matthew Carey to interest himself for us, and by judicious advertising father hoped to get on in a wealthier neighborhood; so he took a house on Chestnut street opposite the new theatre. A good clientele came in. Some of the best families of the city sent their children and for a while there was hope of success. But the family was large, the rent high. It did not work. In the fall of 1823 I got another fever and was away from Clarke's a long
time. The doctor was getting old; he wanted a stronger assistant, so he hired a man and let me go during my sickness which lasted about two months. Thus I was thrown out of employment until the next summer when one day I learned that I would be wanted at Carey's. On the 3d day of July, 1824, I was engaged by that establishment. Monday was the 5th of July, but was celebrated as the 4th, and on Tuesday I presented myself at the store. How different from Clarke's; what bustle, stir, activity! And what a bewildering world of literature. Here indeed would my taste for reading be gratified. A certain B. A. W. bossed the younger helpers. Casually that morning, after my old Clarke way, looking inside of a book, I was suddenly asked if I had nothing to do, and ordered to dust down shelves and "dress" the volumes on them—things, it is true, not needful to be done, but there was to be no reading there.

"Water, water everywhere,
And all the boards did shrink;
"Water, water everywhere,
Nor any drop to drink.

I suppose it was right; but oh! it was terribly tantalizing. I was constantly tempted, and surrounded by temptation, but I dared not touch. As for taking books home at night we were allowed to do that, but we were generally so tired by the labors of the day that we could not give time to reading at night. Hence my reading was exceedingly desultory and exceedingly scrappy. I had an inextinguishable thirst, but could only sip, sip. Who ever saw a cook enjoy a regularly set dinner? Mr. W.'s father, I think, was English, and had kept a drinking shop on Seventh street near Market. The father dying, the mother opened a boarding house in North alley, as it was called, from Fifth to Sixth near Arch. The son
was ambitious, was assiduous in attention to business, had talent for trade and courted the favor of his chief most carefully. He was proud and, I always thought, tyrannical. There was nothing attractive in him, but he was undoubtedly a first-rate man of business, ready at figures, good at estimating values, knew if a book would pay to print, and all that. L. was pernickety—a conchologist—used to write "papers" for learned societies; yet was attentive to work and always at his post. Then there was Mr. E., rather dandyish, not the man of business his brother was, but kind hearted. Old Mr Carey had retired and occupied an office back of the store where he wrote letters, articles on tariff, statistical essays. He used to borrow young employés from the store to copy these things for him. He wrote a cramped hand requiring Champollionic talents sometimes to decipher. In handing a manuscript he would say: "Now, sir! if you don't understand don't hesitate to come to me for explanation. Put nothing in of your own and nothing in you are not certain of." Well! a couple of words would occur sure, at the very least. We would save them until the copy was finished and then ask the meaning. "Ah!" he'd say, "you stupid brat; where did you learn to read? It's as plain as print." And it was well if we escaped with an ear-pulling. Oh! what volumes, volumns he used to call them, of statistics we had to copy and arrange. Tariff, tariff, tariff, finance, political economy, Ricardo, Smith and the rest—an innutritious medley to our young minds. But Mr. Matthew Carey was charity itself; indeed, "his pity gave ere charity began."

Troops—absolutely troops—of old women came every day for their "levy" or their "quarter," certain not to be refused unless the smell of whiskey was absolutely
overpowering in his little library. I think he laid aside a certain sum every year for straight giving, *argent comptant.* One of his secretary drawers was always supplied with change in silver and this was scarcely ever appealed to without success. I have no doubt he gave away much to undeservers; but we dared not turn them from the door; they always had admission through the shop. Matthew Carey was a good man, better than his offspring; he went to his grave with the respect of that large city and the love of the poor, the Irish poor, perhaps, especially.

Charles Dickens' account of his childhood feelings agree well with my own experience. He was just one month younger than I was and the same events passed before us both. His very first productions charmed me; I predicted his success from the beginning. But I am of opinion that Charles never could have associated with gentlemen in his nonage. In this respect I was the better fortune. My father was, I always thought, a polished gentleman. He had a very graceful address, conversed beautifully, instilled principles of honor into his children and punished promptly offences against good taste. When he failed and was drawing up his schedule of assets, my mother offered him a small piece of property of her own which he had not previously thought was at his disposal. But the moment she offered it, down it went into the schedule. How much it was I do not know; perhaps not more than $15,000. Whatever it was, as soon as it was *his* he could not consistently with his views of right keep it out of the schedule. This we all thought a sin on his part. But, as the French say, *Que voulez vous?* It was his view of right. What kind of experience could have made this a second nature in him? What about
Darwin and his instincts? The dog scents, his son scents better, his yet better, and so on. Now, in this world of experiences, what kind of experience could have taught this exquisite sense of honor? His father was a tanner—he himself had been a brewer's clerk—yet we find him displaying a sense of justice worthy of the angels. Is the world becoming worse? My father has not transmitted that sense to me. I would not have put that item into the schedule. I might say: "No, my dear. That is yours. Keep it for yourself. I shall never use it and it shall not be involved in my ruin. I never traded on it, never expected to trade on it. It is as much yours as if you were a stranger to me. It does not belong to my schedule." I might say that, and yet I am not half dishonest enough to get on in this world.

My father ought not to have let me go into a shop. He ought to have put me into a lawyer's office where I would have prospered much better. A shop was distasteful to me; a book shop especially so. Thoughts, aspirations, images, intellectual productions, to be treated exactly like so many pounds of sugar or dozens of eggs, and only thus. How much a piece? How many dollars will they fetch? It was horrible to me. I might even in a lawyer's office have "penned a stanza when I should engross;" but in a book store—a dozen Popes at $1.50, fifty Lord Byrons at $2.25—like fifty yards muslin or four barrels salt. I hated trading in thought, and a book shop was no place for me. I struggled on, however. The constant dread was of losing my place and going home to a starving family. I tried to please, but it was hard to please. One day E. said to me: "James, you are too much of a gentleman ever to be a bookseller." That rankled in me. If only my father had
seen my unfitness for trade and set me timely at the law. I was paid but two dollars and twenty-five cents per week, finding myself. I religiously took the money home to my poor mother. She would sometimes return me the twenty-five cents. Ah! it was wretched compensation. They even made indentures, two dollars and twenty-five cents for the first four years, three dollars for the next one, and four dollars for the next two, I clothing and boarding myself. But that was the rule in those days. I got through my first four and my next one when the firm changed. C. took in Mr. H., a promising young Israelite of my own age, as a partner. He paid me five dollars a week and I worried on until 1831.

My experience of Mr. W. was not pleasant. He appeared to me to be uneducated and unrefined. He knew poetry only in its commercial aspect—as "1 doz. copies Byron's Don Juan, Cantos 15x16, 18mo. bds. 50c. ea. 15% disct. to trade." I, on the other hand, was constantly taking home to my father what he called respectable works—the best histories, the best philosophies, Johnson, Robertson, Bacon, the British poets. At home I could glance at these books myself, but never dared to open one at the store except to beat the dust out of it and reset it on the shelf. W. never talked except on business; was never entertained by anything else. Wit and humor were lost on him—fell from him like rain from a duck's back. He kept us to our labors. Work as hard as we might when work was to do, we must find work, anything except reading, when there was nothing on hand. Those shelves were dusted and redusted thousands of times. He would not even let us write. We must be stirring, doing some manual service. There were writing clerks who did all
the writing. We were not allowed to sit down. We were timed on our errands. If we missed ten minutes a scolding was sure to follow and formal complaints were filed about once a month with the heads of the firm. He used to give us packages to deliver after the store was closed. We hardly ever got a chance at the theatre; but if he knew we had one, a package was ready so that we might lose our seat. I remember having a ticket to hear the great Edmund Kean, in King Lear, and W. knew it. A package for Eleventh and Market was accordingly given to me to deliver. It was deliver that package and, perhaps, miss Kean forever. I decided for Kean. The man went to old Mr. Carey for his book, as he was to leave town early in the morning. Whether he got his book or not I don't remember; think he did; but didn't I catch it next day? With tears I pleaded Kean—the whole world was crazy about him then; and they did not turn me away. I almost wish they had; for if I could have found a place with people who understood me things might have been very different during my whole after life. But I was pardoned for the nonce, though my feelings toward W. settled down into a calm and steady hatred. He made his point. He gave his whole soul up to the handling of books. He stuck to the Carey's and was taken into partnership. Subsequently the firm broke into two concerns. I staid with Carev & Hart. Mr. C. told me they had thought of taking me instead of Mr. Hart, and if I had shown a similar aptitude for business they would have done so. I did not have it. They were right. I remained with C. & H. at five dollars per week while Mr. H. was a partner. I did not grudge it to him. He was made for business, and Darwin tells truth. Mr. H. was a good man, an honest, consistent Israelite, believing in the
Hebraic system. I have not a word against him. He was kind and good to me always. We differed in tastes, but that made no difference in his treatment of me.

While I was at Carey's, I used to have errand running to do, and once, when fifteen years old, I was sent over to Kater's bindery in Library street, the ascent to which establishment was an enclosed flight of steps on the outside of the house overlooking the gardens of the people living on Walnut street. Half way up this flight there was a hole in the boards through which enough light came to prevent stumbling. The ascent was long and I often would rest on the way to gaze out of that "window." On this day I saw a bevy of young girls playing under an apricot tree in Dr. Hudson's garden—Dr. Edward Hudson, dentist, well-known over the Union in that profession. He was an Irish exile, a friend of Tom Moore, mentioned in Tom's last edition of his works in connection with the "Origin of the Harp." The eldest of these girls was about twelve year old and stood apart as if matronizing the party. I remember her straight figure to this day. It is now nearly half a century ago. I made some demonstration and the little girls looked up at the hole and laughed. The faces impressed themselves upon me, especially the face and figure of the eldest. I saw them no more; it was only on that one day I had an opportunity of seeing them, but I never, as I say, forgot that occasion.

Four years went by. Father's fashionable school in Chestnut street having made insufficient returns he had removed to a less prominent neighborhood—Spruce above Fifth, south side—thence to Market below Sixth into the very house in which Washington lived part of the time when President of the United States, thence
to Market above Eleventh into a fine house opposite Girard square, front parlor turned into a store—413 I think was the number. I occupied a little room on the third story over the door and one morning I saw the first brick moulded of which the houses on Girard square were built, for the cellars of those houses furnished the material for their walls. I used to go down Chestnut street from this last Market street house at six o'clock in the morning to open the store. One morning I met two young ladies coming up the street and thought there was something familiar in their faces. At first I was at a loss, but the next morning all was clear. They were the two elder of the group of Walnut street children. I could not be mistaken. Dr. Hudson, adopting an absurd European custom, sent these two young ladies before breakfast to take lessons from a Mr. Poole, a teacher on Chestnut street below Eleventh, and our hours were the same. I say an absurd custom. It might have done for Europe, England or Ireland, but in a miasmatic city like Philadelphia it was absurd. My early rising in that city gave me a malarial fever which recurred almost annually; and Dr. Hudson soon had to take his daughters from Mr. Poole, the health of one them seriously impaired. It was the younger. But I had met them before the change was ordered. Whether they remembered the garden scene I am not sure. I certainly did. Now four years make a difference at that time of life in a young girl. The difference between twelve and sixteen is decidedly manifest. The elder of these girls was sixteen, just budding into womanhood. I was approaching nineteen, the age when young gentlemen learn to

"Play the flute and fall in love," as Lord Lytton says.
I could not help admiring them. We were almost alone in the street at that hour and we met daily almost at the same spot, between Tenth and Eleventh. A smile escaped the elder and the next day I dared to touch my hat. The meetings continued; there was nothing said. I spruced myself up, got me a new hat at Shelmerdine's, paying for it at fifty cents per week, which took me fifteen weeks. But old Mr. Shelmerdine was kind. I did not know him; merely told him I was at Carey's and would pay, and he trusted me.

My suit of clothes was paid for in the same way, fifty cents a week, from Thomas Folwell's, Market above Sixth. I dressed like Pelham—blue coat, black pantaloons, black vest and stock and a Shelmerdine beaver. I had not a good figure. I was six feet and over and weighed but a hundred and forty. Still the dress was genteel and I tried to look like a gentleman. My father was a gentleman, an Irish gentleman at that, and he taught me deportment. I tried to look like a gentleman and by my deportment I attracted the attention of this young lady. I read all I could, the poets, the historians. I was fond of music, learned to play a little on the violin, aussi la flûte. I found out where Miss Hudson went to church, St. Peters', Pine and Third, where her uncle by marriage, Mr. Gurney Smith, was an awful magnate. Dr. Hudson was musical, Mr. Smith musical, and a big gun at the Musical Fund Society. I got my flute lessons from a brat of a store boy, one Jim Osborne, brother of the afterwards well-known and respected Mr. Osborne, of Waterman & Osborne, grocers. I knew Oliver Hopkinson, grand-son of the "signer," and whose father wrote "Hail Columbia." Oliver's mother was a Mifflin, I think, of that ilk, daughter or niece of the Governor.
In that Hopkinson family there was great talent—poetry and painting. Oliver, just my age, was probably the best amateur violinist in the country. I cultivated my music. Jim Osborne used to get me orders to the Musical Fund concerts. I had no money. I lived, mind you, and kept out of debt on five dollars a week, paying my mother, I think it was, two dollars and twenty-five cents for board. This was my expense at that time, too, for I could have boarded elsewhere at that. So, when I went to theatres and concerts I went on orders. At the theatres and concerts I would see the Hudson family and was thus preserved in the memory of this young girl. I did not affect the society of young men. I picked out two bosom friends, both remarkable for humor. One was English, named Adams, which he afterwards changed to Morris. He was brought up in the Brothers Montgomery's store, Front above Arch, in the W. I. trade. There were three or four of them. John C., Austin, and these other two, the nearest thing to Cheerible Brothers I ever knew, and Morris was a Nicholas Nickleby complete. His natural talent was wonderful. A mimic he was, but would have made a comic actor of the first rate. He is celebrated by a paragraph in Anthony Trollope's "West Indies and Spanish Main." He became head book-keeper for the great house of Terry, I think at Cien Fuegos. There Trollope saw him and dined with him. Trollope says he was the pleasantest table companion he ever met. He is still living and is United States Consul at Cien Fuegos.

Now this Morris and a Charles Dillingham and myself were a triune brotherhood invariably together in off hours; none of us properly educated, but all possessing a certain brightness and humor. We used to sing
negro melodies along the streets at night before Rice began them. We learned them from the stevedores who could not unload a cask of treacle except in cadence with the music; and the singer who did nothing but sing and guide the cask when it reached its elevation was paid highest. We had nothing to do with Rice; but I think he got our songs at second-hand from some of our companions and being on the stage availed himself of them to the prospering of his fortunes. We three herded together. We did not go with young men about town. We met at a few houses where there were young ladies. There was a John T. Sullivan, a great politician in those days, an Irishman, who made blank-books for the Government, and was known by everybody. He had some daughters, fine intelligent girls. And my sisters gave us a dance once in a while, Morris or myself playing the violin and father's young lady scholars always invited. We were very poor. Once, I remember, I came home from the store and found absolutely nothing to eat in the house. I was going to bed hungry when a ring came at the door. It was ten o'clock. A servant left something wrapped up in napkins. It was a boiled ham. No one knew where it came from. It might have been left in mistake, for there were other families living in the house. It was always strange to me where that ham came from. I ate of it and drank water for my supper; there was no bread. Where did that ham come from? Singular that it should come on the one night when we were brought to the last extremity.

Yet we were cheerful. We had our little parties. We struggled along. God took care of us. Why did I not learn to value money then? I did not. Give me sufficient for the day and I never cared for the rainy
day. Morris' mother was poor, mine, Dillingham's. We all got about the same pay. We used to club and buy a dozen fried oysters for three "leven-penny-bits;" four a piece, and then five cents a piece for a pewter pint mug of cream beer. Ah! what a beverage—cool, creamy, not bitter, plenty of malt. There was substance in it. Then there was a good hunk of bread and some butter, and beets, "cold slaugh" or salad. We always cleaned the table. We could do this or get our twelve good oysters stewed for a "levy" or "three fips," twelve and one-half or eighteen and three-quarter cents. Or we could have a "dozen roast" for a quarter, and admirably cooked. There were Italians who kept oyster cellars in Philadelphia at that time, and colored cooks from the shores of the Chesapeake; and did they not give us the petit soupers? Do not think that senility is talking high and exaggerates the things of his youth. I have epicurean authority to sustain me. Brillot Savarin, who traveled in this country a few years before my time, has awarded to the Chesapeake three specialties, canvas-back ducks, soft-shell crabs and terrapins. When we consider that the gustatoriarchs allow scarcely one hundred first-class dishes to be found in the world, it is remarkable to find three of them in one neighborhood. And these three are peculiar to it. There are no canvas-backs, no soft-shells, no terrapins anywhere else. Then the reed-birds; are they not the ortolans of the Romans? But could the Romans cook them as our colored women of the Chesapeake could? Kill the bird and clean thoroughly, dip in the whites of eggs, or perhaps in eggs beaten, then dip in grated water crackers, fry in butter quickly to a rich brown and crunch whole in your mouth, washing down with such wine as you choose; dry golden sherry will do, or the
best possible, not too old, Madeira, or Chateau Margaux Real, or Burgundy; the last is probably the best.

Now, whence this cooking? I think I can tell. The whole peninsula of the eastern shore of Maryland and Virginia was settled by Cavaliers chiefly, the best blood of England, younger sons and their wives. They were isolated here. Bountiful Providence gave them a goodly land and plenteous waters, a mild climate and the richest delicacies of earth and ocean. The ladies of the Cavaliers in the old country, secluded in their great houses, were the best of cooks and housekeepers. It was the custom to preserve house-wife lore in large volumes, sometimes called "Herbals," a name probably handed down from the days of

"My mother Circe, with the Syrens three,
Amidst the flowery-kirtled Naiades;
" for all the hundreds of receipts for culling of simples were found in these books. They in turn had gotten them from the monasteries and religious houses of the middle ages. I warrant you the monks were well fed, and the sisters preserved the art and mystery of wholesome dietetics in vellum folios, constantly enlarging with the advance of culinary invention. But Bluff Hal changed all that. His nobility succeeded to the houses and their muniments. Their ladies inherited those luxurious records; and, when the knights returned from the chase or the foray and there was feasting in the halls, you may be sure that those who "loved their lords" would like the hospitable board to smoke and creak with vivers the choicest. Look at that correspondence of the Pascal family—is it not?—which has come out within the last twenty years. How it opens up the house-keeping of the old days! And look Shakespeare throughout, and Milton—the
"neat-handed Phillises," Eve "on hospitable thoughts intent." So came the elegant house-keeping of the ladies of England, which was transmitted whole and unchanged to Virginia, Maryland and the Southern States generally. Everything was done in simple, tasteful perfection. These ladies taught the art to their house servants and found them scholars not unapt. Hence not only were the things to be cooked of the best, but the cooking was of the best. Their ortolans, crabs, lobsters, terrapins were dishes fit for Olympus; and so that same kitchen king Savarin who visited the region on his search for the best cates and delicates in the world, found them and approved them. The cooking of the house servants of Virginia and Maryland developed itself in Baltimore and Philadelphia. The old "oyster cellar" of Philadelphia could furnish you a supper unexcelled in richness, elegance, cleanliness and palatableness by Frascati or Les Trois Freres. That was in my early day. Clay, Webster, Gibson, Meredith, Marshall, Randolph—what a roll of names—used to enjoy their suppers subterranean. I have seen most of them taking their pleasure in those places and have often listened there to the social converse of one at least of that bright band.

The last of the Philadelphia oyster cellars, properly so called, was Prosser's. He was a light mulatto and served the public on Market street. You can get a roast there even now; but I think scarcely any one of the great dishes except the roast is left. We have the Restaurant in place of the "Cellar." There is plate-glass, cut-glass, silver, and black walnut enough and to spare, but the old "dozen fried" and "dozen stewed" are gone. They serve you up oysters, but they are not what they were. Fifty years ago you found them every-
where in perfection, served by Italians or mulattoes. Now it is Tom, Dick and Harry—nothing clean, nothing tasteful, nothing artistic as of old.

In such haunts Charley, and Morry and Jim had their weekly supper, costing at the most "a half and a fip" or "five levies." This was the extent of our dissipation. Our pay was less than three hundred dollars per annum, and we did not embezzle. We would save five dollars and buy a ticket to Whale's cotillion parties where, every two weeks, there was quite an assembly—daughters of the bourgeoisie of Philadelphia, with whom we danced. Mr. Whale inquired us out and, if we were unexceptionable, would introduce us to his pupils who wished an introduction. The request always came from the lady—not pointing out any person but indicating some young gentleman. Mr. Whale was very particular. He would not lead up any young fellow whose respectability he could not answer for. The acquaintance did not necessarily extend beyond the walls of the dancing room unless quite satisfactory to both.

One evening at Whale's in December 1830, or January 1831, I met a lady with whom I happened to be well acquainted—Miss Burling, afterwards Mrs. William Lynn Brown, daughter-in-law of the novelist, Charles Brockden Brown. Miss Burling introduced me to Miss Anna Maria, eldest daughter of Dr. Edward Hudson. This was the young girl of the apricot tree and of the early morning Chestnut street.

I suppose I may say that this was the happiest night of my life up to that time, and the most important, for it colored my whole existence afterward. I have thanked God for it often on my knees or in my prayers and thanksgivings devoutly standing if not kneeling. Had I not been charmed by this woman—had not her society suf-
ficed for my happiness, I might perhaps, by exertion, have made much more of a figure in the world than I have done. For although I have met many worthier and abler men than myself who never reached even my stage of eminence, I have, on the other hand, seen many outgo me, less worthy and less able, of whom I was qualified to take the lead. But it may be said with perfect candor and truth that, if life were again newly set before me, knowing all that I know now, and free to choose between great position and my bosom companion, I should choose her. I have lived with her now nearly two score years and, as I thought then I think still, that night of our first acquaintance was the happiest and most important of my earthly existence. The couleur de rose through which I regarded her at nineteen has not faded at sixty-three.

I had pleasant associations at this time. Certain wits and good fellows were in the habit of resorting of an evening to Davy Gibbs', under the Arcade in Chestnut street. There were James and John Musgrave, Joseph C. Neal, an elder brother of Godey's, Mr. Cross, the musician, and one or two other intelligent members of the Chestnut Street Orchestra. Adam Waldie, a Scotchman, was one of our members. Judge Gibson, when in town, would join us. We each paid for his own pint of beer or temperate sip of whiskey punch; and I tell you those were noctes ambrosianae. The elder Sanderson, the classical scholar would be there; Roland Parry, Joe Bailey, of Bailey & Kitchen, and others. It was delightful. They were mostly well read; or, if not, possessed natural brightness and humor. Here my social character grew fast and my more mature tastes were formed. Morris acquired there the social ways which charmed Anthony Trollope and caused him to
wonder why such talent was buried in a petty West Indian Consulate. The Musgraves were both scholars, John, classical,—James, English. Their conversation induced me to read and taught me to talk, so that, without any regular education, I have passed for college-bred all my life. I knew nothing of the classics except in translation. I learned French from an immigrant German Professor in return for some little service I did him. I was not extravagant. How could I be on five dollars a week, out of which I paid my board and clothed myself? If I had not money to pay for it I would not take my grog, and scarcely ever exceeded the single glass when I had money. I lived within my means, for I always had a horror of debt.

I think such clubs were fashionable in those days. Thackeray mentions one in London to which he belonged. We did not emulate the style of Thackeray and Lemon and the Punch men; but with John Banister Gibson as a regular visitant, by preference, when in town, our little club was good enough. On St. Andrew's night Davy Gibb used to give us a gratuitous supper. There was no constitution, no organization; we had no name even. The thing was entirely spontaneous. Our place of meeting was a stall far away back, removed from the transient customers. Those evenings were most agreeable and instructive, occasions of genuine enjoyment. There was no wealth or ostentation. Our members were gentlemen of parts or education, simply able to pay their way.

But by degrees death came; the duties of life called some away to the ends of the earth, and, like all mortal things, the club faded out of existence, thereafter to give pleasure only in retrospect, as I am now enjoying it.

To return to my young introducer, Miss Burling, who
still lives, I believe (1875), as Mrs. William Lynn Brown, and I am yet alive to thank her for the introduction. It was what might be called a "case." I shall never forget it. It was simply perfect happiness. Charley Dillingham and myself had an oyster supper at my expense afterwards and did not retire until the small hours.

This meeting confirmed my dissatisfaction with the business in which I was engaged. Buying and selling were not my métier, buying and selling anything; but books—the products of mind—I could not become interested in the traffic. Handiwork I might content myself possibly to make merchandise of, but brain-work I could not bring myself to the idea of permanently trading in. I looked about me. I was nineteen years old. Was it too late to learn a profession? I thought of Engineering. It wanted the mathematics, French and drawing. French I had learned to read. Geometry I had glanced at. I had heard of great engineers who were not profound mathematicians. Mathematicians, in a sense, they must have been or they could not have been engineers; but Tycho Brahes and Isaac Newtons they were not. Everywhere around me I saw Constructors, builders of churches, of wharves, of canals, of fortifications. They were not deep mathematicians. They knew practical geometry and trigonometry; and was it too late for me to master these? I thought not; so I went at them, applying meanwhile to a friend, Mr. Robert Faries, whom my father had aided to the situation he held, to aid me in return. Stephen Girard had died leaving a railroad about to be built in the coal region for the benefit of the vast estate he had bequeathed to the city of Philadelphia. Mr. Moncure Robinson, then a great gun amongst engineers, had
charge of the first surveys and early construction of this road. Francis W. Rawle was his associate engineer. Faries applied to Rawle for me and I was offered a place. I told my good fortune to my friend Mr. Edward L. Carey who, on the whole advised me to take it; he thought me better fitted for a profession than for trading. He was very kind. He told me frankly that as a merchant I did not hold out much promise, but that he had great hopes of me in a profession and that with industry he felt certain I would succeed. He gave me a hundred dollars in money and bade me God speed. I got a letter of introduction from Mr. Henry C. Carey to his friend Mr. William McCarty, the old Sunbury bookseller, and a general letter from Mr. Matthew Carey, which I remember, stated that I was sober, active, intelligent and worthy of perfect confidence. I have tried during my life to deserve these good words and to realize the character. I am now sixty-three years old, or will be in a few days, on the 11th January, 1875. I cannot say that in my whole career that character has done me any worldly benefit. It may serve me yet, however; and, whether or not, I shall still try to be worthy of old Mr. Carey's kind encomium. It will be seen that I am Irish. Sixty-three, yet

"Hope enchanting smiles and waves her golden hair."
III.

I took my letters, bade farewell to the family and, to be up in time in the morning, went to the White Swan Hotel in Race below Fourth, whence the Pottsville stage started at three A.M. the next day, late in June, 1831. I slept little, but rose bright and went off. On board the stage was Harry Masser, of Sunbury, who seemed to me to be as old then as he does now. I took a liking to him on the way, and he to me, which has lasted ever since. I never knew a man of more equable nature. Will he ever die? He was then a thin, delicate young fellow, and now is a thin, delicate old one, but has not changed in the least. Equability is the happiest characteristic a man can be possessed of here. Yet there can be no moments of enthusiasm for such people.

It was a lovely summer's day and the ride was simply delightful. I sat most of the time with the driver and saw the beautiful Schuylkill Valley. We reached Reading for dinner, some fifty miles from three A.M. to about two P.M. Nothing can be more charming than a summer day's drive up that lovely valley. We dined sumptuously at Reading, a borough then, leaving off at that place Mrs. Mark John Biddle, an austere lady I thought, and a daughter or niece, a modest, quiet little thing. After dinner the country began to roughen. Pottsville was El Dorado. Fortunes were won and lost as they were afterwards won and lost on the Pacific. Young men thronged there who could do nothing elsewhere. Capital was lavished. Some colossal fortunes were made. Girard had invested heavily and, as it
afterwards proved, with sound judgment. He died, however, before the result came, leaving his lands to the city which is now reaping the benefit. I stopped off at Pottsville for the night. Perhaps the stage did not go till morning. I found Joe Neal there at Mr. Sanderson's house—Mr. Sanderson, the classical gentleman, formerly teacher of a classical school for boys in Philadelphia. He was a man of ability and of elegant acquirements, had many children, attractive daughters, and lived handsomely in Pottsville. I do not remember how he was engaged, but his home was delightful, and an evening there was to be remembered. We had music in the parlor and on the lawn. The grassy plots and escarpments, the cool night, the delicious mountain breeze, made mere breathing existence a pleasure. But when breath was song or wit or repartee or learning, such a night is not easily forgotten. Charles L. Schlatter was there, son of a leading merchant of Philadelphia. A lady-killer was Charley, with a perfect whisker and an Apollonic leg—knacky at many things, his highest talent being artistic. He excelled in dashing caricatures and was capable of distinction that way had he cultivated it. I believe he still lives in the South, whither our wandering profession had borne him previous to the war. He was subdued, I have heard, to what he worked in, and joined the Rebellion. Some native born Confederates came out afterwards and were successful in the North—such was the extraordinary good nature of our people; but Northerners in the South, who mistook their duty, have generally fallen under a shadow of reproach, and Charley probably shared that fate. I do not think he attained permanent eminence.

In the morning I was off and reached Sunbury at
noon, thirty-eight miles, where I met Mr. Hother Hage, the Principal Assistant Engineer. I passed the evening at Mr. Rawle's, who had married a Miss Hall, niece of the Coleman family, and I made acquaintance with an agreeable company passing the summer at his house. The next morning I went to work. After some weeks in the field we returned to Sunbury to make up estimates and I occupied myself, when work allowed, in studying geometry and practicing drawing. Of evenings I used to take walks with the young ladies of the village, the most notable of my friends being the Misses Bellas, daughters of an Irish lawyer of talent who had won to prominence in that community. Sunbury up to about this time was the frontier town of the upper Susquehanna. It was in the Supreme Court circuit and some distinguished lawyers were found there—Mr. Greenough for example, and Mr. Hall, Mr. Levy and others. The Supreme Court held a session while I was there. I met Judge Gibson. I was introduced to Judges Rogers and Houston, and to some Pennsylvania lawyers, the Watts, the Petrikins, etc. Frederick Watts I met there for the first time, an acquaintance I always considered an honor; and "Jim" Petrinkin, a man of talent, a musician and, I believe, a versifier. He was in the State Senate both before and after that period—a strong Democrat.

Here the pleasant summer passed, but it was embittered for me by the news that Miss Hudson had met with a serious accident on her return from Cape May. Not yet being well enough acquainted to address her directly I had to depend on others for intelligence of her precarious convalescence and it caused me many anxious hours.

Toward fall, in November, our Danville and Potts-
ville Railroad was suspended for want of funds and I returned to Philadelphia with what I had saved from a monthly salary of forty-five dollars. I went to school that winter to Martin Roach, an Irish philomath, at the corner of Fifth and Walnut. Here I looked down street every day in the hope to see my loved one coming abroad for the first time. I had managed to convey to her that I had returned and of evenings she would come down to the little door in the basement for a chat; or sometimes drop me a note from the window wrapped in bon-bons to make it fall straight. At last, on the 22d of February, 1832, she walked out with her father. She had been attended by Dr. Hewson, a skillful and reliable physician and surgeon, and he had done for her all that art could do. Presently she was free to go and come at will, and after that we met whenever it suited her convenience. Not a word was said of marriage all this time. Where was the use? I had nothing—was not even employed. But we enjoyed each others society and trapesed Philadelphia most effectually—walked to all the suburbs, to Laurel Hill, to Fairmount, across the two bridges, to Ronaldson's Cemetery, down to the Point House, down the Neck, everywhere. Those were halcyon days.

Time worked on. Mr. Rawle was engaged to make a survey in North Carolina and he called together his old corps. In June, 1832, I joined Mr. Hagé again and that summer was passed in the piney woods. It was good experience for me in my profession. I learned there to explore and the lesson learned stood me in good stead afterwards. By December we were through; it was only a survey, the road did not build for many years. I recollect change was scarce at that time and North Carolina issued paper money. I smiled at the
idea of a great State becoming responsible for five cents, little thinking that a generation later the United States would be uttering the same kind of currency.

Another winter in Philadelphia and another course of study. I had saved enough from my one dollar and fifty cents per day to pay my mother for board and Martin Roach for some more mathematics. All spare hours in the days were passed with my dearie. Round came 1833. Early in this year Dr. Hudson died. Soon after his family removed to Twelfth street not far from where we lived, Market above Eleventh. A decent respect to the memory of that estimable gentleman we paid and our intercourse was interrupted for a time. In April I was again called away. Recommended by Mr. Moncure Robinson to Judge Wright I went to Canada and took the compass under Mr. J. B. Mills for the first surveys of the ship canals of the St. Lawrence—Les Galloppe, Point Iroquois, Le Rapide Plat and Le Long Sault. All these I ran the lines for and mapped, except a portion of the Cornwall Rapids surveyed and mapped by Mr. Samuel Keefer, afterwards and now distinguished in connection with the public works of Canada. Here I was associated with William J. McAlpine, who carried the level on those surveys. We worked very industriously this summer, beginning in April, and had finished by the middle of July. Mr. Mills was a very thorough-going man, somewhat austere, but an honest, worthy man. Set in his ways. He had been on the Erie canal during its construction and exposed to dissipation there. With us he went to the other extreme—adopted cold water, no tea or coffee even, and worked us remorseless, never retiring until the small hours when in the office, taking a few crackers for dinner when in the field. It was a bad
system, but we were let off in July to await the action of Parliament. I have reason to believe that our maps were laid before the British Parliament; quite an honor for a Yankee boy. They were no great shakes as to drawing, but they were correct, the main point—that I can avouch. We were sent home. McAlpine and I stopped at Kingston and Toronto and took the Falls of Niagara on our way. At Utica Mac found Mr. John B. Jervis, afterwards engineer of the Croton aqueduct and the Hudson River railroad, who was building the Shenango canal, and obtained employment. He tried for me but failed. At Utica I left him and proceeded to Saratoga, afterwards to New York city where I found my dear one paying a visit to a friend of the family Dr. Trenor, of College Place. A day or two of dissipation in New York, meetings on Broadway and strolls about the metropolis, when my "sinking fund" prompted return home. Then a few weeks more in Philadelphia, diversified by lover's walks and professional studies until August, when I was taken down with fever, no doubt induced by Mr. Mills' absurd system of not eating in the daytime on the banks of a great river. Dr. Morton got me up, and early in September, my friend, Mr. Hage, sent for me to come to the Chesapeake and Ohio canal, at Williamsport, on the Potomac.

Here opened an entirely new life. I was set immediately at construction. A grand work was going on in full blast. The heaviest contractors in the United States had it—the great old "Byrne & Co."—pronounced Burns & Co.—Michael and William Byrne. Locks, aqueducts, culverts, heavy excavations. Here were a host of sub-contractors, too, and here, of course, as ever, occasionally came a financial difficulty. Money
was not plenty and there were occasional suspensions of work; then dissipation, the fruit of idleness. The engineers associated with two diverse kinds of people—the contractors and the elegant society of the neighborhood, differing as much as possible in character but alike in their excesses. Coarse, heavy drinking amongst the contractors, good fellows all of them, but beyond us in carrying capacity, and then dinners, balls, parties and refined heavy drinking. We were invited to the best houses in that region, Judge Tom, Judge John Buchanan, the Ringgold, the Masons, the Hollingsworths, the Pendletons. We seldom crossed the Potomac, but the Virginians would come over to us. It was all very elegant, very delightful, but it was dissipation, and it required hard heads. It would not have been so bad if we had confined ourselves to the genteel society; but on the canal we mixed with the others whose active lives and powerful constitutions were too much for us. We associated with these men in good-fellowship; we did not, as is too often done now, associate with them in their contracts. A hint at such a thing then was an insult. Their heads were too hard for ours; we knew nothing of their pockets. We paid our way and they paid theirs. Some of the engineer boys began a course of ruin there; some escaped. J. B. Moulton and myself are alive to-day. Many, many others are gone. A year and a half of this kind of life taught me its lesson. I had been tempted by play a little, but that I never had a taste for and it was easy to leave it. I never loved money sufficiently to be injured by play. Drink was the danger; and drinking was allowed and practiced everywhere, even sometimes to sharpen a man’s wits before he entered the pulpit of a Sunday morning. It came to such pernicious and
shameful prevalence that the carrying of so much grog under your belt was reckoned a gentlemanly accomplishment. I found that to pursue it was certain ruin both to my prospects and my health. Thank God, the work was finished at last. We let in the water and went up to Cumberland on surveys for an extension. This was an interruption. I cut off drinking straight, somewhat lamed by what I had passed through, but essentially sound. I shall ever regret that I was thrown into dissipated society for the year or two spent on the Chesapeake and Ohio canal. My nervous system was injured by it, and I am entirely convinced that alcohol should never be used except as a remedial agent and never without the advice of a physician. It seems almost incredible now that such excesses could have prevailed amongst rational beings. I have known companies to sit up a whole night, singing, telling stories and drinking whiskey punch until the few conscious survivors were summoned from their orgie by the breakfast bell. A gentleman whom I have the honor to say was a friend of mine, one of the greatest men of this country, some fourteen years my senior, told me that he knew instances in his father's house, I think he said his father's house, in which the door was locked on a dinner party at their wine and was not allowed to be opened except to the last man who had not sunk under the table. This gentleman was a member of the highest and most respectable class of society in Philadelphia and New York. The diners out most sought for in my early day were those who knew most about liquors and could talk most learnedly about them at table. I remember calling at the house of a "Friend" in Philadelphia, to pay my respects to a young lady whom I had met in the country. He was, it is true, in commerce and com-
mander of a ship, but while making that visit cake and wine were brought in as a matter of course, a cut-glass silver-bound flagon and a cruet with bitters on the salver.

I accepted the custom and followed the example of society in my early manhood. True! there were lessons the other way. Franklin's autobiography tells us that he set up as an ascetic, drank nothing and tried to live on vegetable food. But his case was isolated; most of such cases were. The men who followed this exemplary sort of life were called eccentric and individual—a kind of prigs. Horace Greeley was one—an imitative and shadowy Franklin. The growing youth of a people naturally prefer to be like the average manly character, and that character is not priggish nor exclusive. So all the generous young men of that day drank. Those gifted with good organizations went through. Those whose systems were in the least vitiated sank under it, ruined themselves in constitution, fortune and reputation, merely because they emulated "good fellows" with strong stomachs and livers. Again there were men who had the good organizations and who craftily ruined weaker brethren for their own worldly advancement. I name them not. Of such is the Kingdom of Hell!

I worked hard on the Cumberland surveys. Both my seniors were sick. One poor fellow—well! I will not "draw his frailties from their dread abode." The other was punctilious—sick of self-love, like Malvolio, and tasted with a distempered appetite, hemmed and hawed, wanted his corps made up this way and that way, until the Chief Engineer lost patience and excused him. He turned to me, and referring to an order as to some miles of new canal to be explored up the
North Branch of the Potomac, said: "Engineer Worrall! can you make this survey and give me an estimate?" naming a certain day for its completion. "Where is my corps, sir," said I. "Get your corps, sir," said he. Now, there was a lad, Chester Lynn, in town, from West Point, who, I knew, could use an instrument. With him and a young assistant in the office, not then occupied, for the expert work, I could make up the remainder of the party. So I replied to the Chief Engineer, Mr. Purcell, "I will try it, sir, and I think I can do it." "Start at once, then," said he, "don't lose a minute." This was eleven A.M. That afternoon I was in the field with a full corps, one of my axemen being a well-to-do lumber and coal merchant, John Hoffman, old enough to be my father and under no necessity to drudge, but being idle just then and of an active habit he joined us. And a very efficient "hand" he proved to be. We pushed along with energy and I had the satisfaction of achieving the thing, complete in all its parts, at three A.M. of the day fixed by the Chief Engineer. Mr. Purcell received it as a matter of course, and said nothing; but I felt his friendship afterwards in the form of advancement from an unexpected quarter offered me through his influence which, however, I did not think it advisable to accept. I thank him. His place was made uncomfortable for him that summer by parties in Washington and he retired. Thomas F. Purcell, some time Chief Engineer of the Chesapeake and Ohio Canal, was a good eng'neer and a gentleman. His wife was a lady, the daughter of a former mayor of Washington, I believe. They were both delicate and died young. They had a daughter, a sweet child when I knew her. She was called Sophia, after Sophia Western—that alone showed her father's good taste.
I fear they are all dead, even the daughter. If she be alive, God bless and prosper her and hers. Mr. Purcell built one or two railroads west and has not been much known. Moulton, my rodman, went with him and prospered, becoming Chief Engineer of St. Louis, I think—the place which a certain U. S. Grant afterwards sought and could not obtain, being wanted for something else then coming to the fore. Moulton was a West Pointer, or partially so, a nephew of Colonel Thayer, some time headmaster there. Moulton was a good fellow. He deserved his fortune. May his light never go out. I will not mention my other associates—they walked their way through the world casting no great shadow nor shedding any great light.

Fisk came after Mr. Purcell on the C. & O. He was a Connecticut man and a good engineer. He had a splendid corps—Elwood Morris, Gore, John A. Byers and others—but the canal was never finished and they had no great career. Canals were subordinated to railroads, for a time, and this batch of able engineers counted nothing; there was no use for them. Fisk struggled along with the company, got poor with them, always respected but never adequately paid. The work was grand and his talents were worthy of it, but money was lacking. At length came up the Virginia railroad, from Richmond to the Ohio, afterwards called the Chesapeake and Ohio railroad. Fisk was made Chief Engineer. He planned the mountain crossings via White Sulphur Springs—masterly work, great location, and all that; but in the midst came 1861, and all was thrown into pi. It broke Fisk's heart; a fine intellect went down in disappointment. Had he remained at home amongst the Yankees where he was born he would have been a distinguished man and to some purpose.
But he starved down there in an abnormal environment. The great storm was brewing, it had to come, and Fisk sunk before it. The Chesapeake and Ohio railroad was not finished until after the war. It will not be useful until the effects of the war are obliterated. A generation must pass away, perhaps another, before things settle into a heathful condition in Virginia. Had they been half wise—even half shrewd—all would have been well. But they were not, and are now paying the penalty. They are buying wit and bought wit is the best perhaps.

From the Chesapeake and Ohio canal, after we got through with the surveys about Cumberland, I took a position with Charles L. Schlatter, then Chief Engineer of a rival road to the Camden and Amboy, the Trenton and New Brunswick turnpike, which wanted to change itself into a railroad. We ran over the line of the pike. The Camden and Amboy, then all powerful in New Jersey, brought suit against us in chancery and beat us; so there was an end. Herman Lombaert was my assistant under Schlatter. We were together but a few weeks and the remainder of 1835 was passed near Trenton. In the winter I returned to Philadelphia to study and make love. In the spring of 1836 I was appointed Assistant Engineer under Judge Wright, Consulting Engineer of the James River and Kanawha canal and took my place as Resident at Warminster, Nelson county, Virginia, on the James river. Mr. Daniel Livermore was our Principal Assistant. He unfortunately lost his mind while in charge of this work and was obliged to abandon it. Mr. Charles Ellett succeeded him, by lengthening that gentleman’s charge and giving us juniors somewhat greater responsibilities. Mr. Joseph Byers was my immediate neighbor above
Warminster, a good, clever, amiable man and a sound engineer. My division extended from below the mouth of Rockfish, where it joined a Mr. Beckwith's, to near the mouth of Tye river. It was plain work, merely excavation, embankment, locks and the Rockfish aqueduct. Mr. Ellett consulted with me about this work, but I did not remain to complete it. I did, however, stay long enough to like Mr. Ellett, who became Chief Engineer after Judge Wright resigned the place of Consulting Engineer. Mr. Ellett was a man of brilliant talents, about as bright a man as the profession has produced in this country. He was also an exceedingly positive man, determined on carrying his points, so much so as to have been sometimes accused of even twisting an algebraic equation in support of them. I can only say I liked him and that he was very kind to me. I admired his talents and never saw anything indirect in him.

Judge Wright I loved, as did all his assistants and élévés. He was not profoundly scientific, perhaps, but he was eminently practical and being one of the old Erie canal engineers, is of course immortal. I remember him almost as I would a father—at any rate as a very kind uncle.

I was paid three dollars per day on the James river and soon began to think it time to get married. My board cost little. Three or four hundred dollars would do to commence the world with. By 1837 I was rich. I must have had nearly four hundred dollars ahead. So on the 15th of July, 1837, having arranged things previously by letter, I was married by Dr. William H. DeLancey, afterwards Bishop of Northern New York, in a house, no longer standing, at the north-west corner of Twelfth and Filbert. Mr. Matthew Carey, Dr. Samuel
Jackson, Mr. James Musgrave and Mr. Joseph Drayton, artist of the Carey's establishment and a good friend of mine, were all present at the wedding, with relatives on both sides, Mr. Gunney Smith being one, an uncle, by marriage, of my wife. Mr. Drayton was father of Henri Drayton, the celebrated baritone in English Opera. We went to Virginia on the 18th, and saw, on that journey, the ship of the line Pennsylvania which I think was launched on the day or within a few days of the wedding. The Pennsylvania never made a cruise. She lay at Norfolk as a receiving ship for some years before the war and was burned there by our Southern brethren who also tried to blow up the dry-dock, one of the finest works of the kind in the world. If they could have kept Norfolk after taking it, where was the use of destroying this magnificent structure which, had they become a nation, would have been as useful to them as it had been to us all. But wisdom was not the governing principle of that rebellion. It shut its eyes against the light and antagonized the welfare of mankind. Hence its downfall. The big ship always put me in mind of my wedding. We set up housekeeping at Warminster on about three hundred dollars and say ninety dollars per month; and, like all such set-ups, it was a happy one.

I remained in Virginia and made pleasant friendships there, Mr. Ellett, Mr. Joseph C. Cabell, the President of the company, his nephew, Mr. Frank Cabell, General Cocke, Major Yancey, the Garlands and others. I liked it all, but it lacked stir; and I thought the work was too large to be built right along. Resources were wanting. The mountains were to be crossed; it would take money, and where was so much money to come from? So I listened to offers from the North and in
1838, when my division was about half done, I accepted an appointment as Principal Assistant Engineer on a survey about to be made for the Commonwealth of Pennsylvania between Chambersburg and Pittsburgh. I was sent to the summit of the Allegheny mountains to come down east and afterwards to go down west. My old friend, Mr. Hother Hagé, the Principal Assistant under whom I began engineering was Chief Engineer, and he gave me the most difficult part of the work. The Allegheny had not been crossed before without inclined planes, and the reader may guess the magnitude of the task imposed upon me at that early stage in the construction of railroads which not only required me to cross without inclined planes but with no gradient greater than one in a hundred. But fortunately that region had long been a thoroughfare. Braddock, in 1755, had crossed the range in two places, one by way of Wills' creek and the Youghiogheny, the other by way of Deeter's Gap, which was approached on the east up Dividing Ridge, between Susquehanna and Potomac waters; on the west by the divide between waters of the Allegheny and the Monongahela. I found that key to the transit, but the parties east and west of me omitting to avail themselves of similar ground, the real capabilities of the country were not presented in the report and no action was had on it by the Legislature. Many years afterwards, in 1860, I had an opportunity to supply this omission and develop the true theory of the route. It is not yet built on (1875), but built on it must hereafter be, and must follow my general location. The difficult portion of this work, either with Harrisburg or Chambersburg as an eastern terminus, will commence at Burnt Cabins. Thence across the Allegheny mountain there is properly but one location which shall avail
itself of the divides between Susquehanna and Potomac, and Allegheny and Monongahela. This was the aboriginal trail. It is better than the Juniata crossing now used by the Pennsylvania railroad. It must eventually take precedence, and supplant the Juniata. I claim credit for this discovery. I chose it against the judgment of the inhabitants, but when explained to them they immediately saw its advantages. I showed it to Mr. Latrobe, who expressed his appreciation of it strongly. A gentleman, Lewis, was afterwards employed by the Pennsylvania Railroad Company to investigate the route. The results of his labor have not been published. Had they seriously differed from mine they probably would have been published and I think they must have gone to confirm my conclusions.

I had hopes when I came north that an appropriation would have been made by the Commonwealth for this line. But Mr. Hage did not seem to form the same opinion of the whole project from Chambersburg or Harrisburg to Pittsburgh as I have since done. My charge was limited by Bedford on the east and Laurel Hill on the west. Mr. Hage did not appear to generalize the scheme. He suffered Mr. McLlvaine, who was east of me, to blunder about in the valley of the Aughwick instead of finding the divide, and Mr. Davis, who was west of me, in neglect of the same principle, to gratify local prepossessions by zigzagging down Laurel Hill towards Ligonier. The report fell flat because the true merits of the line were not developed. The Allegheny mountain was found eminently practicable. Its spurs ought to have been all the easier. The key of the spurs was not discovered until my late survey of 1860. The engineer of the Pennsylvania railroad should have developed this route—that is if he had
carte blanche from Harrisburg—for it is better, very much better than the one adopted. Perhaps that engineer found himself bound by the Juniata Valley, as the main line of the public works occupied it. He should certainly have at least examined the southern alternative. If the future, as I think it will, shall demonstrate the superiority of the alternative, that demonstration must affect his prestige as an engineer. When a great road was to be built between Harrisburg and Pittsburg, it ought to have been built on the best ground. The engineer is responsible if that is not recommended.

After getting through with the field work the corps retired to Chambersburg to make their maps and calculations, which occupied us nearly till the end of the year. On the 13th of October, while on detached service at the headwaters of Sewickley, a son was born to me in Philadelphia whom we named Edward Hudson Worrall after his grandfather on the mother's side. Did I mention this grandfather before? He was an exile of the '98, and was one of the nine or eleven betrayed at Oliver Bond's house in Dublin by that quintessential traitor, Reynolds, I believe. He was a friend of Tom Moore. Tom mentions him with great affection in the last edition of his works, collated by himself. Thomas and he entertained similar sentiments—they were both great patriots—Tom being a Roman Catholic, Hudson a Protestant. Tom wrote the articles in the papers but somehow or other was smart enough not to be caught. Hudson might have escaped, perhaps, had it not been for the betrayal. He and Thomas Addis Emmet, a first-rate man by the way, a certain Thomas Trenor, John Binns and others got off with exile. Tommy shut his mouth and wrote pretty verses
for the women. All right. He was probably one of the greatest lyrical poets the world ever saw—not equal in character to Béranger or Burns, but a master of epigrammatic expression. Perhaps he never wrote anything to match "Scots wha hae," though the strong Doric of this last takes it out of the rank of elegance. But Tom wrote several love songs that stand unexcelled in the world, in any language and in any age. He goes to posterity with Catullus, Tibullus, Sappho, Béranger, Burns; but Tommy was a small creature, a tuft-hunter and a dandy. There was nothing great about him but his exquisite expression. And one marvels again how such genius could be so mean; for after all it is meanness, snobbishness. Strange that intellect can so condescend—that mind should be unequal to instinct. A gentleman is a gentleman by instinct. I have seen more than one black gentleman and many white ones in smock frocks. But why were not Bacon, Pope, Swift, gentlemen? Shakespeare was one super-eminent, or we would have known more of his personal history. Didn’t he write Coriolanus and Hotspur? We know nothing mean about Shakespeare. But Tommy Moore, with whom I began, was not a gentleman, though Edward Hudson, my wife’s father and Tommy’s friend, was. My son was born on the 13th of October, 1838, and is now (1875) living. I trust he will prove as gentle, not gentler, than his grandsire, and happier than his sire, though on the whole I have no proper reason to complain. Had I ever acted on my own judgment I would have been much happier than I have been.

The Chambersburg and Pittsburgh survey was mapped and calculated at Chambersburg, as mentioned.

Had the gentleman whose corps commenced in Cumberland Valley, after passing through Cowan’s
Gap, thought of the dividing ridge between the Potomac and the Susquehanna, and had he come to Bedford aided by that feature of the topography, meeting my survey there which would have continued on that line all the way to Laurel Hill; had the gentleman who had charge from Laurel Hill west, pronounced the passing through Laughlinstown and Ligonier impossible, which it was, without inclined planes, and had he taken the ridge between the Monongahela and the Allegheny which I came upon to the gap in Laurel Hill where he started, a complete and beautiful line from the Cumberland Valley to Pittsburgh would than have been developed, and probably by this time (1875) been built upon. But these things were not thought of by these two gentlemen, nor had the Chief Engineer thought of them. The country in its entirety was not submitted to me. I had only from Bedford to Laurel Hill and afterwards from Greensburg via Sewickley to Pittsburgh, which last was mere bagatelle. The report elicited no attention from the Legislature and the scheme slept for twenty years.

During the winter of 1838–9 I was in Philadelphia unemployed. In the spring I received an offer from Mr. W. Milnor Roberts, a man one or two years older than myself and with more experience as an engineer, who had been appointed by the Canal Commissioners Chief Engineer of the Erie Extension of the Pennsylvania Canal, from Newcastle, in Mercer county, to Erie—a very interesting work, designed to connect the Ohio with Lake Erie. It had been commenced by Dr. Whippo, an engineer from New York State, and was well planned. I met Mr. Roberts at Pittsburgh and we went over the line together. At Conneaut Lake we were joined by Mr.
Milton Courtwright, the Principal Assistant in charge between that lake and Erie. The line was divided into three residencies—from Newcastle to Clarkesville, Mr. Boyce; from Clarkesville to Conneaut Lake, myself, and from thence to Erie, Mr. Courtwright. We continued the work as planned by Mr. Whippo, without material variation. Here I became acquainted with James M. Power, who had a large contract on the Conneaut level. Mr. Power was a man of great energy and of commanding business talent and tact. Mr. J. B. Curtis was the superintendent and paymaster, living at Sharon. Power and myself, having business in common on the line, were a great deal together. We had many pleasant days. Dissipation was quite common at that time amongst men of action; Power and myself were not wholly free from it. We had so much outdoor life, however, that it did not appear to injure us. Indeed I rather think it helped Power's health, as he was of a consumptive habit. He was a gay, handsome fellow, genial and companionable. My experience on the Chesapeake and Ohio had taught me the evil of excess—a lesson I did not forget. I resided at Greenville, boarding with a Mr. Hildebrand. The year 1839 was a busy one; 1840 not so busy. The election of that year caused much excitement, political meetings, hard cider and the rest, but, thank God, a good resolution and Jim Power's good advice brought me safe through. In the fall my wife was taken down with one of those horrible lake fevers. I attended her the whole time; and finally, by infinite care, she recovered. Toward winter we removed to Meadville, the work being finished nearly to the lake. The State asked for an estimate of the work done. I estimated mine as finished, as I knew that the appropriations would not reach us until
it was finished. My judgment proved correct and my work was finished and paid for. Had Mr. Courtwright's assistants thought of the same idea in making the return, his work would also have been finished when the money came. But he was away and the matter was not thought of. So, when the money came, there was a good deal due and the work not finished at that, causing considerable inconvenience, with the result that the canal was actually given away to a company. As things have turned out perhaps it has made no difference. The company who got it for nothing as good as gave it away some twenty-five years afterwards and now it is out of use, hardly to be resuscitated. It was a noble work. It might yet be enlarged after the Ohio shall have been improved and canals again brought into vogue—for after all these things go by vogue as much as Paris fashions. On this canal I obtained useful experience in excavating through quicksand and embanking through swamps. I have been consulted since concerning such difficulties, at Union Mills on the Philadelphia and Erie Railroad, at Chicago when the cut was making which carries Lake Michigan waters into the Mississippi, and elsewhere. The Erie Extension period of my life was a happy one. At Meadville there was excellent society—Judge Baldwin of the United State Court and his elegant wife, nee Ellicott, the Dicks, the Shattucks, Mr. Stewart Riddle, the Huidekopers, the Magaws, constituting a refined association which made it pleasant for my wife; and, as for myself, there were the lawyers, the doctors, the public men, the engineers and the contractors. Here I made the friendship of John Mitchell in his latter days, an excellent good man, formerly Canal Commissioner. He was our superintendent when the canal passed out of the hands
of the State. I was always proud that this old man liked me. Here a friendship commenced between Milnor Roberts and myself which has held unbroken ever since. He is one of the purest men I ever met, of remarkably clear and sound engineering ideas, and of noble character. Here we became acquainted with his wife and her sister, Mrs. McClure, daughters of Chief Justice Gibson. Such rare creatures are seldom found in this world and the association with them was delightful.

Roberts, like myself, had a bilious-nervous temperament, liable to be led away in a society that used alcohol in various forms as a beverage—a barbarism which I hope the world will eventually free itself from. Such temperaments in such circumstances are called upon for a self-control which others cannot understand or appreciate. Roberts and myself are here yet, which shows that we have either not been too much tempted or, having been strongly tried, have strongly withstood. I know what it cost me and from myself can judge what it cost him. No poor fellow ever commits suicide under the secondary influence of alcohol whom I do not sympathize with. Those may condemn who have not been tried. The danger is less to the rising generation than it was with us. At that day I have seen hotel tables where brandy and gin were within the reach of every guest like vinegar or salt. In Philadelphia the bottle of wine was as customary as the cup of tea or coffee nowadays. For our children’s sake we ought to be thankful for the change. I have carefully studied this thing and my conclusion is that alcohol, like those other poisons, opium and calomel, should never be used except medicinally under the advice of a physician; never, never! If low spirits come on, be
quiet and starve, wait till you get sleepy; sleep will generally cure all. Wait till you get hungry; a meal eaten with good relish will help much. But of all things use patience, learn how to associate with yourself, learn to like books. Books are a great help. Learn to play on some musical instrument, learn to like out-door sports—go fishing or gunning. Or, if melancholy seizes you, sit still and try to do without everything for a few hours. The processes of the body are always helping you and driving out obstructions. These are often the cause of melancholy. If you find yourself uncomfortable, be more temperate in food or even pass a meal, as corporations sometimes pass a dividend. Every hour will clear something away and the mind will brighten again of itself. But "take" nothing for melancholy. Melancholy is more frequently caused by having "taken" too much of something than in any other way.
IV.

After the Extension Engagement I buoyed along on occasional jobs until the fall of 1843, when I heard that my old friend and chief, Mr. J. B. Mills, was about to build the canals I had surveyed in 1833—the ship canals of the St. Lawrence. I stepped out of the house one day and who should I meet but Joseph Chamberlain, one of the contractors on the Erie line, a respectable and excellent man, to whom I proposed that we should join the expedition to Canada and bid on the great canals. This accident shaped his future and resulted in his brother Selah becoming a millionaire. Not so Joseph. He was a kind, honest, sensible, trustworthy business man, not destined to "success" as it is called. We went to Canada, taking up on the way Stephen C. Walker, who had relatives there and was instrumental in obtaining for us the requisite security. We bid for work at the Gallopes Rapids, the Rapidé Plat and Point Iroquois, the whole amounting to nearly $400,000. I had no capital. The Chamberlains might have had perhaps five thousand dollars between them in ready money. We went to work—myself residing at Ogdensburg, the Chamberlains in Canada, but as we progressed soon found there was no profit in it at our prices. We assembled a sound and admirable force of helpers and our operations were carried on to the satisfaction of everybody. The Board of works showed us special favor in awarding new work, but all our prices were so close to the wind that we were constantly in

(70)
debt and paying broker's interest. We built a mile of the Galloppes, a mile of Point Iroquois, two miles of Rapide Plat and its guard lock. Then we constructed the Lachine basin and a lock and dam at St. Ours in the river between Lake Champlain and the St. Lawrence. All this must have exceeded a million in value, but we absolutely made no money out of it; simply paid expenses. We made reputation, however. We were sent for by the Rutland and Burlington Railroad Company and took some forty miles there, connecting ourselves with John Bradley and Timothy T. Strong in Burlington. Still the prices were too low. Then we were given about fifty miles of the Ogdensburg and Rouses' Point Railway. This railroad work amounted to a million or more; yet we could not make money. A commercial panic occurred in 1845, I think, which helped to keep our noses to the grindstone.

My sojourn at Ogdensburg was a pleasant period of my life. I met there Preston King, David C. Judson, John Fine, a second cousin of my wife. Joe McNaughten, and others whom I respected and on whom I hope I left a good impression. Joseph Chamberlain conducted our business. His admirable equanimity and perfect trustworthiness saw us through. We lost nothing; we did our work faithfully, paid our debts and, when all was done, we were as we were. We had lived the five years or thereby but made not a farthing. We educated a valuable corps of workers. Our foremen and other clérés went west and some of them to-day are leading railroad men of the country.

While in Vermont, on our works below or east of Cavendish, I employed a wandering Yankee as foreman, on his own recommendation and promising appearance, and put him in charge of a rock cut near
Chester. The day before I had passed the blacksmith's shop and noticed that most of the cast-steel drills were "broomed" at the heads. The blacksmith not being busy, I ordered him to "upset" all those drills. They were from an inch to an inch and a half in diameter and octagonal, but very smooth. My little Yankee foreman soon afterwards, in preparing for a blast was, I think, ramming it with one of these drills weighing twenty pounds or more, when a premature explosion took place. The drill passed under his jaw and up through his brain; but as I had had it "upset" it simply made a clean round hole from below the chin through the top of his head. This turned out to be one of the most extraordinary cases in surgery probably that ever happened. They lifted him into a wagon and took him two or three miles to the inn at Cavendish. He actually mounted the stairs with a little assistance. They laid him on a bed and he said he thought he would get well. He did get well. He lived, I believe, for twelve years afterwards and died from some other cause. He was attended at Cavendish by Boston surgeons and finally taken to Boston, where he was provided for during the remainder of his life. The case, I believe, is recorded in the standard books on surgery and is marked as almost a miracle. I was called away to Ogdensburg immediately after employing him and did not see him after the accident; but if I had not had those drills "upset" this poor fellow would never have gone into medical history. If a broom-headed drill had been used the story would not have been recorded.

On the completion of our work in the north Mr. Selah Chamberlain, as belonging to our firm, was offered, or found, work on the Cleveland and Pittsburg Railroad, which he took on his own account. Joseph
Chamberlain, however, having some bargain or other in rails, was for that reason admitted to partnership with his brother. I sought my fortune in Philadelphia. Through the assistance of Decatur and Dr. Frank Smith, cousins of my wife, I was appointed engineer to enlarge the Union Canal of Pennsylvania. It had now got to be 1850 when I entered upon this new work. The canal had baffled engineering skill for years and people came to believe that to make it hold water was an impossibility. I found that a system of planking had been used for many miles to prevent leakage. On reflection I concluded to abolish this practice and substitute puddling, which I did, with the result that the canal is now as tight as any work of the kind in the world. There were about one hundred miles of canal—seventy-seven from Middletown to Reading, by the meanderings of the valley, and a branch about twenty miles long, several aqueducts and one hundred locks. All this work could not have cost $2,000,000 in actual money. It was wonderfully cheap. Nothing anywhere near it has cost less than one hundred per cent. more. Yet it was not a financial success and, although the engineering was good, I got no reputation because there were no dividends; in fact suffered in reputation because there were no dividends. I made some good friends in the Lebanon Valley, Mr. Dawson Coleman, Mr. Charles Forney, Old Jacob Weidman and his son John, Levi Klein, "Pap" Siegrist, and others. As work progressed on the Union Canal I sent for Joseph Chamberlain, who built some miles of it for me, the stretch from the water works east, including the summit level. This he did, I think, at a profit of twenty or thirty thousand dollars, he and our old head clerk, Edwin C. French, of Canada, as worthy a man as ever
I knew. I always feel myself under a kind of obligation to Joseph Chamberlain, because I am not sure that while we were connected in business I was not somewhat in his debt; for my support came out of the funds of the firm. He never made any claim of the kind, but I was glad of the opportunity to do him a friendly turn by getting him this job. It was a lump-job, so there can be no suspicion of "cahoot" with him, for the price in lump was fixed before he touched it. The final estimate of course had some extras in it. The company questioned them. The question was laid before John Edgar Thomson, Edward Miller and Thomas J. Power, who gave the points in favor of Mr. Chamberlain. So Joseph, I think, cleared his fifteen thousand dollars without stealing from anybody, and if I owed him anything indirectly he was thus paid indirectly. Joseph and Selah made about $150,000 a piece out of the work from which the latter excluded Walker and myself. Joseph invested his in various ways. He was always active. Unhappily about 1860 he connected himself with some scamp and failed. Selah did not fail. He happened always to be with Joseph when Joseph made money and always by himself when Joseph lost—such is the singular fortune of some people—so Selah prospered. Joseph failed in money about 1860, failed in health afterwards and died bankrupt about 1866. Selah got a claim on a wrecked railroad in the West, secured all its bonds, put them into court, fought from court to court, business growing meanwhile, and in the end the bonds were paid to the amount of a million or so. The prestige of our firm in Canada, to which we admitted him in 1844, and the great respectability of Joseph's character were mainly instrumental in obtaining him the western contracts.
from which his fortune sprang. Our original firm of Chamberlain & Co. ceased to exist. It was a pity. The very underlings of the concern, as has been said, afterwards became distinguished. Selah got wealth; but the honorable good repute which caused work to seek us did not long survive our dissolution. We perhaps wanted him as much as he wanted us; the union of the qualities made Chamberlain & Co. Selah now enjoys his wealth, so far as broken health permits enjoyment of it and, I have been glad to hear, has been very kind to Joseph's family.

Let me say a word here for Timothy Strong who was with us in Vermont. He gave up a hardware business to join us. I never knew a more excellent man. He accompanied Selah west, but did not remain long with him. He succeeded afterwards and is now living, I believe, at Fond du Lac, Wisconsin. God bless him, wherever he is; he deserves every prosperity.

After Joseph Chamberlain finished his piece of the Union, the portion between Reading and the Summit remained to be enlarged. This was let to Rockafellow, Kupp & Co. John Rockafellow was a contractor of the first rate, an uneducated man, but a born gentleman. They took the work at a fair price and proceeded with its execution. "Rocky," as we called him, was the outside business man, J. D. Cameron the financier, and Henry Kupp the thorough-going hard worker along the line. Work was never done better or managed better. I think it was to cost something like $900,000, a large portion to be taken in bonds and notes of the company. It was completed in the fall of 1856.

After the completion of this canal I was obliged to leave the house I had occupied in Harrisburg for several years, as the owner wanted it. I cast about to find
a place and, in my dilemma, Rockafellow one day advised me to buy the house on the river bank next below St. Stephen's church. It was for sale, a bargain, only $7,500. I had not enough money, but Rockey said he would help me out, and appropriated some Union Canal notes for that purpose, leaving me to pay him back when I pleased. The notes anyhow were not due for from one to four years. The purchase was a tempting one and I accepted, paying all the ready money I had down on the nail. The year 1857 came round; I failed in the second payment, for the Union Canal Company failed to pay their notes, and after having settled down comfortably in that pretty house I was compelled to give it up. I had other resources, but they were not immediately available. With a few months time I could have pulled through and probably still owned that nest, which is now (1875) worth $25,000. I almost complained of Providence for taking that home from me, for as a housekeeper, my wife was simply perfect, and why has she never had a home except for short periods? I cannot tell. One reason is that I don’t know how to pile dollars together.

On one occasion during my connection with the Union Canal I tried a stock speculation and put two thousand dollars into it. Of course I might just as well have put it into a reverberatory furnace in the form of greenbacks. I never got back a cent of it. My judgment in such matters is always wrong. I calculated on results that ought to come according to what seemed manifest rules of common sense; but things never so regulate themselves when I have risked anything. The fools always make. Well! why not? People must get on, and are not nine-tenths of us fools? If fools did not prosper the majority of us would be unfed, un-
clad and unhoused. Consider whole nations—and, with a starry litter of wise men interspersed, what a portentous, dusty firmament of fools! Take France—fool bestridden and fool-ridden for eighteen years. There is scarcely a country town in the United States which could not have produced a man superior in all respects to Napoleon III. There is not an arrondissement in France without at least two or three his superiors. Yet! what did France? "Fools rush in where angels fear to tread," and room must be made for the rush. Nevertheless a few men of talent and principle are always wanted. They can mostly make a living, and the best of them do not ask or want any more. Vivent les Fous!

Whilst with the Union Canal Company in 1852 or 1853, the Commonwealth asked me one day to do some work on the Delaware. I went and did it—three or four locks, commencing at New Hope and ending a short way this side of Easton. I always considered this an energetic achievement. One lock was deemed a failure when the water was let in and there was a general fear that the Delaware coal trade might be stopped for two or three months. I was fortunate enough to quiet that fear, promising that all would be right in a week at furthest. It was right, as promised. I recall that occasion with some complacency. It passed without notice, but I have known reputations to be made on successes far less important and difficult. It had a strange effect on me for the nonce. I almost lost consciousness and moved about automically after the proper orders had been given. I returned to the city not rightly knowing what I was about, went to bed and sent for a doctor. He said I had all the external symptoms of mania-a-potu. I had not taken any stimulant
or narcotic stronger than tobacco or coffee for years, and not an extra quantity of those. He was glad to hear it, he said, as that made the case easier. He gave me some “drops” and I was as well as ever in the morning. Was it the intense feeling of a critical responsibility acting like a material drug on the nervous system? It passed off and I have never since been similarly affected.

Well, we have got on now to 1857 or 1858. In 1858 my friend David Mitchell was offered the charge of the western division, Philadelphia and Erie railroad, as Principal Assistant Engineer, which he could not take; so he recommended me and they sent for me. The appointment of Chief Engineer to this enterprise had previously been tendered me, upon conditions which I felt honorably bound to reject. The subordinate position thus opened was very timely and welcome, for it was unconditioned and I was in need of employment. I have never ceased to feel grateful to David Mitchell for his friendly service. He is in a good place to-day; God preserve his fortunes. Had I been ever able to make him a return since I would have done so. My division extended from Sheffield to Erie. I tried to better the location near Warren by getting away from the Broken-straw at Pittsfield, ascending the Little Brokenstraw, thence via Dead Man's Run to Dewey's school house, and thence passing through Columbus straight to Union. But it was too late. The location on Brokenstraw was through a swamp which absolutely necessitated a local change, because of poverty, and the road was injured by it.

I probably saved $200,000 by the shift. It is not possible to estimate exactly what it would cost to build on the original line from Pittsfield to Corry. I would add
at least $100,000 to any estimate based upon the ground profile. I have been blamed for the alteration made on Brokenstraw. There were reasons more than sufficient to justify it. I tried for a mile, through what is called the Cowpens, to find bottom with rods twenty to forty feet long without success. The sink hole crossed at Waterford was soundable with those rods, yet twenty or thirty carts and horses constantly at work did not advance an inch for weeks. Situated as the company was financially it would have been ruinous folly to attempt to cross the Cowpens. I am inclined to think it would be cheaper, if ever any change is made, to go by the way of my proposed alternative up Little Brokenstraw than to try to fill up the Cowpens. That portion of the line cannot be estimated even approximately before hand. There is an objectionable piece of road there, but under the circumstances it had to be put up with. Had I had my way—and I went to Philadelphia to try—the location would have been unexceptionable. But Columbus would have benefited; Corry would not have existed. I could not get consent to my way and was obliged to resort to a cheap local alternative. I was sorry for it. If ever the road prospers it can rectify things there. The P. & E. was so poor that it could not even pay its engineers when they were discharged, and we had to wait a year or two for the drags that were due to us. King, Brown & Co., the contractors for the whole of the western division, after getting their final estimate, which was first reported by Mr. Faries and myself, and afterwards arranged by the company with the contractors, found that they had some $150,000 to distribute amongst themselves. How much of it was profit I do not know. They chose me to make the distribution. I gave a great deal of attention to the mat-
ter, most carefully adjusting and equitizing it. I spent some months on it and finally made an award for which they paid me an allowance of about five per cent., partly in money, partly in stock and bonds—not quite five thousand dollars realized, as I remember. Of course I could not please twelve men. Twelve men can please one—else where would be our trial by jury—but for one man to please twelve in a money quarrel is a more difficult thing, and it is not surprising that I failed. I remember one of the parties, an old practical lawyer, told me that although my allowance scrimped him, he did not see how I could have done differently, and he gave me great praise for my equity. Nevertheless two or three were dissatisfied and took their cases to the courts where I understood they fought them for years and did not change the award one cent. I always felt a little proud of this thing.

I ended my service with the Philadelphia and Erie Railroad Company in 1860. I spent a few weeks, with my wife, very pleasantly at my old Canada friend, S. C. Walker’s house in New York that summer, and in the fall was requested by Mr. Josiah Espy, of Harrisburg, to examine the ground surveyed by a Mr. Lampman some years before for a railroad by way of Sherman’s Valley and Broad Top to the west. Espy said he had one thousand dollars which he would give me to scout that region. I found a couple of young engineers idle who agreed to go out for their expenses, and went straightway to work, commencing at Marysville. I took charge of the party. By great economy we succeeded in connecting this line with the survey I had made in 1838 across the Allegheny, striking the old line at Burnt Cabins and changing Mr. Hagé’s line from that point west by occupying the dividing ridge between
Susquehanna and Potomac until we got to the crossings of the Wraystown branch of the Juniata, whence we took the valley of that stream to Bedford, A Mr. James Kelly, of Burnt Cabins, who was born amongst those mountains, when I mentioned the line to him on the spot and asked him to guide me to the ground which I knew must be there, stared at me, and wondered how I could think of such a thing. But, having ridden on horse back through the woods along the base of Scrub Ridge and come out at Kemp's farm, his eyes were opened at once and he saw the possibilities. True, there is tunnelling, but the expense of that, thrown over some splendid tangents and the vast saving in distance and undulation, make the tunnelling unimportant. Perhaps further investigation may reduce even the tunnelling. There is some hope now (1875) that this line may be taken in hand and that I may have the opportunity to finally develope it. Should this hope be realized, I shall feel that I was not sent into the world for naught. Nearly forty years have passed since I first conceived it; it would crown my life to be the engineer of its successful construction.

After completing this survey I came to Harrisburg and soon the muskirements of civil war were heard through the land. That subject overwhelmed all others. Occasional consultations and commissions kept me afloat, and for a couple of years I worked for the Government in the Quartermaster's office at Harrisburg, boarding at Mrs. Espy's and taking my meals daily by the side of William M. Meredith during the whole time he was Attorney General of Pennsylvania. I spent almost every evening with him. To find myself in intimate relations with such a man gave me
very great satisfaction. I still remember that association with a peculiar pride and pleasure.

I had adhered all along to the Democratic party. About 1863 I found it impossible to go any further with them and commenced that year to vote with the Republicans. In 1860 the Democratic and Bell-Everett parties had run me for Congress, my opponent being John W. Killinger. Of course I was beaten, for the district was set on the other side. But in 1863, as I said, I joined the Republicans. In the fall I went out with Curtin and made speeches. In 1864, the campaign of Lincoln's re-election, I was of the War Democrats and went to the convention of that body in New York city where I was chosen president. I think that convention carried New York State for Lincoln. It is true that that only made Andy Johnson his successor, but even that was better than if a Democrat had been elected.

By the help of a commission now and then from the Commonwealth, and chance jobs, I warped through to 1865. In the fall of that year Sir Morton Peto came to this country for the purpose of improving his railroad interests. His view was to extend the Catawissa railroad by the best route to the Ohio State Line, there connecting with the Atlantic and Great Western. Mr. Kinnaird, the Chief Engineer of that route, sent for me to make the surveys, and I had carte blanche from Milton to the Ohio Line. I immediately cast about for assistance and found first-class men ready to take hold—Mr. Milnor Roberts, P. Jarrett, M. Ritner, a certain Tom L. Rubidge, of Canada, whom I had known there, William F. Shunk and others, and set them in the field. The parties worked like ants, so that by March the surveys were nearly completed. But the Ides of March
brought bankruptcy upon Sir Morton; and, besides, he was connected with a set of scoundrels who took every advantage of him. Sir Morton failed and some of us never received the money due us for that work. However, I surveyed the lines and reported upon them, recommending especially a line now occupied by the Low Grade railroad, a branch of the Pennsylvania, which is now (1875) built, but cost, or was reputed to cost, three-fold a fair estimate of it, and to have materially increased the fortunes of some very highly respectable people.

After completing this survey and worrying a good deal as to how to get my pay for it, my friend, Mr. Robert Andrews, now Chief Engineer of the Toledo, Wabash and Great Western railroad nominated me to General James H. Wilson, United States Army, to take charge of a survey of Rock river, in Wisconsin and Illinois, for the Government, with a view to its navigation by river steamers. On the 1st of September, my Principal Assistant, Mr. W. F. Shunk, proceeded to organize a corps and took the field. We laid down a line some three hundred and fifty miles long from Fond du Lac to Rock Island, between that date and the 1st of December, taking full topographical notes and soundings of the river as we went along. There never was better work done than that. The estimates, maps and profiles were submitted to Congress in February and are now in the archives of the Engineer Corps at Washington.

In 1867 I was called on again by General Wilson to take charge of a similar survey of the Illinois river, but this time I had not the aid of Mr. Shunk. We began in June and remained in the field long enough to collect all the information required. I examined the
Illinois and Michigan canal, the deep cut from Chicago to Lockport, the canal from thence to La Salle, and the Kankakee. Whilst examining the Kankakee I met with an accident in getting on board an exploring boat which disabled me from further investigation. But as the project between La Salle and the mouth of the river called for simple treatment—but five dams, or six at the furthest—our main work may be said to have been finished at La Salle. My observations enabled me to prepare a scheme looking to the eventual reclamation of the whole Kankakee swamp. Proprietors immediately began to drain on correct principles and, if they so continue, it will end in the recovery of that ground for cultivation. The secret was the removal of rock in the Kankakee at Momence; this will suggest the rest. I left also the idea of a ship canal from the mouth of the Kankakee to the Wabash and thence to Lake Erie, saving an immense round, which I hope will yet be carried out. My survey, as summarized in the report of the Secretary of War for 1868, conveys the idea of this work. I did not fix dimensions; these can be derived from future examination.

The accident on the Kankakee disabled me for life, although not materially affecting my general health. It was a fracture of the thigh bone inside the socket or "capsule," I believe they call it, which shortened my right leg some inch and a half. It confined me to my room for many weeks.

From 1866 to 1872 I served as Fishery Commissioner for the Commonwealth of Pennsylvania, and during these years reported progress without spending any money for the State except about one thousand dollars per annum for my own expenses. These reports tell all that I have done in that department. Incidentally they ed.
ucated the people on the subject and led to the stocking of our home streams to some extent with varieties from other waters. Governor Geary arrested the movement by a veto in the last year of his life, but Governor Hartranft approved the act of the next Legislature and a Board of Commissioners, of which I am Actuary, has since been in existence. They have had money at their disposal and have spent it honestly, so that Pennsylvania is keeping pace with her sisters in this matter.

After my report on the Illinois river the State of Illinois took the navigation subject up and built one of the dams I had recommended on that river. The cost of it closely approximated my estimate, although the work was not executed by the engineer who planned it, as natural courtesy would have indicated. But what would you expect? Some of us are born mean and do not know it and never find it out.

Apropos. In 1869 I went down to South Carolina, with four or five others, endorsed by Tom Scott, and took a contract for nine millions of work. The State got frightened, abrogated the contract, paid our party $75,000, and the scoundrels gave me out of it but two hundred and fifty dollars, three-fifths of which amount had been absolute outlay on the journey. Some of them yet survive and they also are of the eminently respectable in an age which appears to exalt business duplicity and unscrupulous shrewdness. With my one hundred dollars net I returned to the study of fish.

I should say a word here of my family. We all loved each other as well as a family could, but we had to make our living and fate divided us. My father and mother lived with the girls on and on until somewhere about 1845 when they died within a year of each other while I was in Canada.
Sister Jane, the eldest, married a Mr. Ellies in 1828, and went to live with him on a farm in Staten Island. They had two children, nice girls, one Mary Lee, the second, Anna Maria. Mr. Ellies became intemperate and, about 1835, died, leaving Jane the little farm, which she sold for a small sum and went home, taking care of her parents. Catharine married a Mr. Joseph Lough, and died of consumption in New York city about 1846. Catharine I loved the most of all my sisters. Mr. Lough afterwards married Margaret, my youngest sister, and they still live in Baltimore. Catharine had no offspring; Margaret, a boy, dying in infancy.

Anna married a widower named Larmour, and had two children who lived; one, John, a preacher in the Episcopal church in Maryland, and Jennie, who married Mr. John Stewart, a rising young man in Chambersburg. They have offspring and will continue the blood in a respectable line. Anna died about 1841 in Alexandria.

Mary, next to the youngest, married William Mariner, of Delaware, who subsequently lost his mind and is still living, cared for by his friends. Mary died leaving a daughter, Katy, who supports herself by teaching.

Jane's Anna Maria married another John Stewart, a preacher in the Presbyterian church, now stationed at Towanda and held in good estimation. They have some children, three I believe.

We were scattered abroad. All had to live from hand to mouth, but I hope we have all been decent. Our affairs never knitted and we have not corresponded. If I could do anything to add to the happiness of any
one of them, I would do it gladly. But I could never learn how to accumulate this world’s goods.

My brother, Alexander, twenty-two months younger than myself, married, but is without issue.

My brother John was born about 1822. Having tried his fortune in Calcutta with a cousin, one Alexander Holmes, he was not successful, and poor John died prematurely about 1850 or 1851.

The Worrall blood will descend through the two Stewart families and the children of John Criswell, of Shippensburg, who married a daughter of my sister Jane.

My son had a son, but he was taken away suddenly, at three years of age, by croup, though in perfect health the day before.

We shall be Stewarts or Criswells. The Larmour name is gone, the Lough name and the Marriner name, for Katy is a quiet little thing, and is now old, being nearly forty, and is unmarried.

Looking back over my life, one striking observation is that I have had no financial luck. I have been hurt by every panic which has occurred since that of 1816. I have been concerned in good enterprises. My partners and my agents have become rich. Mr. Milton Courtwright, leaving the Erie Extension with precisely the same chances, certainly with no better talents, and associated with partners of less business ability, became almost, if not quite, a millionaire, whilst I am nervous with the fear of penury. I have been industrious and not unskillful. I have constructed the works given into my charge with scrupulous honesty and extraordinary economy. Yet I have not been the fashion.

In my family, however, I have had riches of another kind. There cannot in this world be a happier couple
than my wife and myself. The loss of my little grand-
child, who, I hoped, would keep my name alive, snatched
suddenly from his mother's bosom—that was my su-
preme pain. Are we not creatures of fortuity—or
how can these things be? My two heaviest griefs in
this world were the loss of my nurse, Betty, and the
loss of my little grandson. I felt the death of my
mother; but she lived very nearly the three-score years
and ten. I felt my father's loss; these were ripe shocks
garnered in due season. I had no right to complain.
As for myself, I am over the three-score and am ready.
Yet would I do something before I go. The Isthmus
Canal has been a dream of mine since I first saw the
Isthmus on the map in 1822, and asked my father why
they did not cut it through.

I perceive the possibility of a great canal between
Montezuma on the Erie, and Havre-de-Grace, Mary-
land, a better than the Erie canal and quite as short to
the ocean. I would like to build it. I have laid out
two great canal lines in the West; later men are des-
tined to construct them. I have found a better route than
the Pennsylvania railroad between Harrisburg and
Pittsburgh. It waits and waits, and time is going. Its
day, too, like that of the others, is hereafter.

Reflecting on my career it seems strange that I have
not been more extensively engaged in my profession. I
am not deficient either in talents or industry. As said
before, I have been economical, honest and not unskill-
ful. The Union canal enlargement required much
care and experience. It had one hundred locks and
was more than a hundred miles long. The cash expend-
diture for that work did not exceed $1,675,000 at the
utmost. I think there is no such cheap work in Penn-
sylvania, and it is good for its bonds to-day.
The six miles of railroad which I built between Cornwall and Lebanon, for ore carriage, did not cost $90,000 for graduation.

The sixty miles of the Philadelphia and Erie, from Erie to Warren, was built for less than $2,000,000, whilst the A. & G. W., crossing it, for the same length through the same kind of country, required probably $100,000 per mile.

The Allegheny Low Grade, which I would have undertaken, on my own knowledge of the ground, to construct for $40,000 per mile, was made to cost $120,000 per mile.

I offered to build the Lebanon Valley railroad for $2,275,000, and would now build a parallel to it for $3,000,000. Its cost was $4,800,000.

Indicating obvious improvements of the location to the President of a road in Central Pennsylvania on one occasion, he told me that those changes would have given them a better road at $100,000 less outlay.

I was offered the appointment of Chief Engineer of the Philadelphia and Erie Railroad Company on the condition that I would not disturb a location made by its directors. I refused, and have seen that fact result in a loss to them of $500,000, which they are liable at any time to meet again. Their President, Mr. Moorehead, admitted to me that certain alterations I judged expedient would have saved them $250,000 on the construction account.

I was asked to estimate the cost of a little road in the Cumberland Valley and did so. My old friend Judge Watts pooh-poohed the estimate; yet the actual cost scarcely varied one dollar from my estimate, as the engineer subsequently informed me.

Why it has been that, with much to be done and
done right, I, who seemed qualified to do it right, should be superseded by others who either would not or could not so do it—this thought baffles me. Consider that "Low Grade." There was not the slightest necessity for its excessive cost. The country is precisely the country of the Philadelphia and Erie and, although some allowance should probably be made for what is known as "cahoot" on a portion of it, there must have been unjustifiable extravagance besides. Yet those chargeable with this extravagant work were the very men who sneered at such noble contemporaries as Roberts and Jarrett. The Pennsylvania railroad was built by them; a grand enterprise. Nevertheless its stock, paying the same dividend as the B. & O., rates in the market at less than two-thirds the valuation of the latter. The stock board estimate is the touch-stone.

But I would not murmur. I have been sustained and I am thankful. Little things have constantly turned up. I negotiated a transaction in real estate on one occasion and received five thousand dollars for it. I was paid ten thousand dollars for a railroad survey. The Commonwealth has employed me, putting an odd one hundred dollars in my way now and again. I have had leisure, and books, and the general respect of the people who know me. Had it been permitted I would have liked to do something more for my fellowmen. I could serve even yet; but if it is not the will of Providence it is not for me to complain. I never could get anything out of what I proposed myself. All my blessings have come unsought.

"Not more than others I deserve,
Yet God has given me more;
For I have food while others starve,
And beg from door to door,"

"Memoirs of Colonel James Worrall."
I am ready even now, at sixty-three, to work out faithfully what remains of life, could I get the work to do.

I have had the fortune to save several lives in my time; for instance:

1. At Smith's Island, about 1826, a boy slipped between two floating stages and was carried under by the tide. I was washing at the opening and it so happened that I reached him. His hair was long and I helped him out by it. It was funny that the fellow met me on the street next week and cut me. I think his name was Scott.

2. One evening in 1831, I was taking a lonely walk along the Susquehanna above Sunbury. It was after dark. A woman had fallen in an epileptic fit on an unrailed bridge over the brook, which ran in a stony bed about twelve feet below. She was in spasms and just working herself over the edge as I came up. I seized her and drew her away, and sprinkled her face with water dipped from the river in my cap. I staid with her till a wagon came along and we took her to the village.

3. I once went shooting frogs with a man near Williamsport, Maryland. He had a rifle. I don't think he missed a frog the whole afternoon, so expert was he in its use. With that same rifle he came out to help in the quelling of a riot the next winter, 1835, under the command of a captain of militia. We were searching for arms. An Irishman ran from the shanties across the ice with two or three muskets. The company was ordered to fire. The man was then within forty yards of us. My friend drew the rifle to his shoulder—his finger was on the trigger—"shall I fire?" said he. I remembered the frogs and I said, "For God's sake, no!" He did not fire. The man was fired at by others with
pistols and struck in the leg, but he got off. Had my rifleman fired he must have died on the spot, and I saved him.

4. In 1837 I found a woman on a lonely road in Virginia who had been recently bled by a doctor and given some whiskey to help her home. The whiskey went to her head, the bandage was loosened and she was bleeding to death. I had a dime in my pocket. I covered it with my handkerchief and squeezing it tight over the wound, held it thus until her husband came along. We then replaced the bandage. Had I not met her when I did she must have died.

5. In 1840, at the falls of Niagara, two college students were sauntering along on Goat Island, not looking before them. I happened to see them and, just as one of the companions was about to step over the precipice, I hauled him back. He was surprised, but thankful.

6. In 1846 an infant two years old had fallen into a lock in Canada. Its little sister, not four years old, held it up by the hair of its head. The little thing's grip was giving away when I happened along. I had the satisfaction of handing the dripping babe to its mother.

I believe these are all I can remember. They were pure accidents; no heroism or anything of the kind. I was only an accidental instrument and claim no merit any more than if I were a stock or a stone which a drowning man might clutch to save himself.

What are we here for? Am I wanting in faculty—have I no veneration, or why is it, that I cannot satisfy myself as to our errand as a race, our use as such in the universe? Why gift matter with life, passions, ambitions and all its concomitants for any net result perceivable by us on the face of the earth? What end
was served by the thousands of years of Asian and African civilization? What by Greece and Rome? Whereto serveth our Nineteenth Century European civilization?

Little girls of a Saturday afternoon arrange broken china on a kitchen bench. They set their dolls in the midst of this splendor. My Lady Bessy Waterhouse receives My Lady Maggie Pepelouse, and a discussion of the weather and baby's health ensues. Sunset comes, or tea bell rings, and off the whole party has to trundle for its evening glass of milk and then to bed. _C'est tout._

Or, a German _Ingenieur_—I mean the word in its etymological sense—invents a clock with extremely beautiful and life-like _androides_ attached. The Emperor of Lilliput comes out through an archway in dazzling state, heading apparently forty thousand horses and forty thousand men. He meets the Great Mogul of Laputa, leading an equal array. Majestically they march and countermarch. The clock strikes, the wizard processions retire. We see now only the wooden towers and the painted trees. The burning mountain is quenched, the conflagration of Moscow dies out leaving only a smell of sulphur behind it. _C'est tout_ again.

Were I master of this whole earth—Prince, Emperor, Supreme Commander, of the thousand millions of human creatures, my contemporaries, I should take not a whit more pleasure in the command, and probably not as much as Mr. Maelzel did in manoeuvring his beautiful _androides_. Have we not had for thousands of years these grand processions, and have they left even so much as a smell of sulphur behind them?

The coral insect has built more permanent structures and vastly more massive structures than man has done.
There was language, civilization, morality, religion, superior to anything of the kind now in existence, two or three thousand years ago. There were greater men, nobler women, better poetry, finer art, worthier architecture, grander empire. The highest summit of civilization had been attained, barring the steam engine. But what was its real use? It is said we go on improving. So we do; yet the improvement seems to be restricted to individuals and does not cumulate. A child improves to be man; a man improves to wise and virtuous old age, then dies, and then the improvement stops. Our cities are growing in riches and power—a few of them emulating old Rome itself, though none have reached its height of grandeur; but the same causes which gnawed away the foundations of old Rome are nibbling at those of our great cities. The wild beast element begins to assert itself. True, we have what Rome in her glory had not. We believe that God has sent us His only Son to help our weakness and enlighten our darkness. How have we used or misused this Divine favor? The precepts of the Savior were and are and ought to be all-sufficient. They should be our comfort and strength. Yet there are some amongst mankind so limited in understanding that, simple and beautiful as these precepts are, they require interpretation. Shrewd bad men saw this early—in the first centuries of our era. They perceived that "there was money in it," or at least a support at others' cost for designing idlers. They invented an organization whose outer object was the interpretation of the religion of Christ; its inner and larger object, taxation of the faithful by those in whom they trusted. Bright, unprincipled intellects were drawn to this body and finally controlled it. The rules of the church, as they called this corporation, had
reference chiefly to the worldly furtherance of its leaders and the perpetuation of its corporate life. Self-seeking and hypocrisy trod, under holy cloaks, at the world's van. The corner stone of the system was obedience, and, that obedience might be exacted, the person to be obeyed was endowed with godhood. But man is changeful. Conscience awakening in the tenant of this impious prerogative, or death bringing to the succession a good man forbidden by conscience to accept it, might impair the temporal prosperity of the church, which was the primary object to be preserved at all hazards; and the most ingenious plan conceivable was arranged to guard against this danger. It was not perfected in a year or a generation. It was the result of careful study and practice in human nature for generation—perhaps for centuries. A college of Cardinals was established whence the divine person must be selected. This college was to consist of sixty or eighty members, each one before entry subjected to the keenest and most rigorous investigation—for any one of them might come to be head and that head must make no mistakes. The shrewdest and most unscrupulous worldly-wisdom of ages was thus embodied for the conduct and maintenance of the corporation. But in the nature of things many priests and bishops must be good men. Honest, earnest, pious men will enter any priesthood and it will not do to systematically keep them out. In fairness the priesthood must be consulted as to the fitness of candidates for promotion to the college, and the good priests must look to it that cardinals shall possess good qualities. If their recommendations, manifestly right, were set aside, these good priests might inquire into the cause, and the real grounds of selection be thus exposed. To provide against this
danger a satellite organization was created whose prime requisite was intellect alone and its sole object the temporal welfare of the great corporation. It was not church, but issue of the church, and absolutely devoted to its worldly interest. To commend it to the people it was named the Society of Jesus. Keen, unscrupulous talent and unflagging zeal were the only qualifications required from its membership. These men wielded the arms of controversy, fought the battles of mind. They were consulted by the regular body on all important concerns, and it may be well believed that no new cardinal could enter the college without their approbation. No pure, simple, single-hearted man could ever pass these double ordeals. That kind of man must never become head of the church; his many excellencies must disqualify him. For how could such a man present himself to the people as the vicegerent of God on earth, infallible because Godlike, unless he believed it; and how could he possibly believe it, being, pure, simple, single-hearted? He might, in his humility, believe it of another—never of himself. But what to do with such a man! Set him to teach and exemplify the divine religion as he believed it, to diffuse it amongst the simple, the faithful, like himself. And how beneficent are such lives—devout, self-sacrificing, serviceable to mankind—as little cognizant of the inner workings of the corporation whose badge they bear as of the Eleusinian mysteries or the secrets of Brahma! Subordination is their law. They obey orders. They are legion, man and woman. They are found in monasteries, nunneries, or in scattered self-supporting pulpits. They send their surplus money to the central treasury. They pay nothing in charity. That is for their superiors, who however, invariably receive more than they give.
These good men and women are used as examples by the great corporation to advance the prosperity of its leaders and to extend and confirm its power.

There are priests like these, monks like these, nuns like these, men and women by thousands like these, in the Roman Catholic Church, as pure and single-hearted creatures as ever were in this world. Such characters are as little consulted by the heads of the church as they are by the Flamens of Mahomet at Mecca or Medina. They are outward and visible signs held up to signify the inward and spiritual grace of the corporation. But oh! what cruel, what lamentable deceit! I need not go on. The whole contrivance is artificial, exquisitely so no doubt, meeting it would appear every possible contingency. It is the result of many trials and many failures, and seems now to have attained perfection. Has it indeed? It rules two hundred millions of men, about one-fifth of the world's people. It has lived a thousand years. How much longer shall it survive? Speculation is baffled. None of all that live can fix the term.

We are now come to the latter end of 1882.

During these intervening years I have lived and little more, though respectably employed; always with the Fishery Commission on a small salary, having desk room in the Adjutant General's office and afterwards in the office of the Secretary of Internal Affairs. Colonel Dunkel, who was very kind to me, as was also his assistant, Mr. Lucius Rogers.

In 1877 I was appointed by the Governor to be member of a Board to fix the northern boundary of the State. That work lingered until 1882, as the appropriations were not large enough. Our doings are of record. I differed from my New York colleagues in
advocating absolute sidereal accuracy, they preferring to follow the old landmarks. The latter method seemed to me ephemeral, liable to change—the references I sought are eternal in the heavens, the same yesterday, to-day and forever. My opinion is that the line will yet have to be marked astronomically.

In the year 1878 I was appointed Commissioner to fix the western boundary between Pennsylvania and Ohio, I was obliged there to yield to the same opposition. I did all I could to prevent it in both cases, but was overruled.

In that same year, 1878, I was employed by the Engineer Corps of the Army to reconnoitre and report on the Kiskiminetas river; in 1879, the North Branch of Susquehanna; in 1880, the Red Bank, and in 1881, the Clarion. The original reports were made to Colonel William E. Merrill and Colonel McComb, of the United States Army, and were reprinted by the Pennsylvania Legislature.

In 1881 parties from New York came here to Harrisburg and bought a majority of shares in my South Pennsylvania Railroad. At last it seems to be appreciated properly, or promises to be, and to-day, January 1883, after examination by the best engineering talent in the United States, there is a likelihood of its building essentially on the line which I prescribed for it long ago.

December 3d, 1881, I lost my boy. Poor fellow! Poor fellow! He sacrificed himself to duty. He was engaged for years on the Mississippi, under the Government, was attacked by a virulent catarrh and had no proper treatment. It finally acted almost like a cancer and found its way to the brain. When that occurred he at once became insensible and died after four or five
days illness. It was better he should go, than stay to suffer. Poor fellow! He's happier than those who are left.

In my report on the Peto surveys I recommended not only the "low grade" line, since built, but also a southern line from Lewisburg through Bellefonte and over the Allegheny mountain to a juncture with the former line below Brookville. These two lines embraced an immensely rich mineral area which I proposed to develop by lines radiating inward from both. Of these a branch from Lock Haven by way of Beech Creek was one. Not only has the "low grade" been built by others since, but advance has been made on the line from Lewisburg to Bellefonte which will eventually extend into Jefferson county aiming towards Pittsburgh, and the Beech Creek line, the first of the radials, is now under construction. A singular fact was developed by these surveys, namely: That both lines, from Lewisburg, say to the Ohio boundary near Greenville, Mercer county, Pennsylvania, were within a mile the same length—two hundred and sixty-four miles, if I remember rightly. I think there is no copy of my report. I made but one, which was submitted to the A. & G. W. people in New York. I suppose it is lost. But the lines already built on the ground are a more permanent record than a paper report.

I have been called unpractical by one of the gentlemen now richer by many thousands for my "visionary projects." Great capitalists have built my northern system and at this writing seem about to build my southern system. It would seem that such visionaries are not without their use in the world, however little may be their worldly success.
POSTSCRIPT.

Little need be added to the foregoing narrative to complete the record of Colonel Worrall's life. He continued to dwell in Harrisburg, boarding at Mrs. Espy's on the river front, where, for eighteen successive years, he occupied the same room. His household consisted of Mrs. Worrall and of his son's widow, who gave him a daughter's devotion and was cherished on his part with the love of a father. Excepting the brief periods mentioned in the previous text, he had never the happiness of living under his own roof. This was a constant privation, for he was social and hospitable by nature and had a strong domestic instinct. His commissions from the Commonwealth gave him office room at the Capitol. His daily round was thither and back again, taking the post-office on his way, always courteous in saluting friends and ready for a casual chat. His familiar figure will long be remembered by Harrisburgers. We miss him from the face of nature.

One event befell, in these closing years, of vital import to Colonel Worrall; mortal import were the fitter term, perhaps, although for a long time it did not break the routine of his outward life. After rejecting several tenders, made at considerable intervals, for the purchase of the South Pennsylvania Railroad franchise, he was finally, in the summer of 1881, approached to that end by parties who seemed to have the requisites for which he had been waiting, namely: a resolved inten-
tion to build and ample means to build with. He accordingly transferred to them the essential papers, together with majority stock, for a nominal sum, to be supplemented, as he informed the writer, by a payment to himself, as President and Chief Engineer, at the rate of one thousand dollars per annum, for the time during which he had conserved the property. Unhappily the supplementary agreement was not put in writing, and he was unable to collect the promised payment.

That wound cut deep. His grip of things loosened thenceforward. It was to be yet a slacker hand. He had parted irrevocably with the nursling of his early genius, pang-born nearly half a century ago. He could forego all personal advantage from it, now coming to man’s estate and about to do the world service. But he was called upon, so to speak, to forego its society besides. From the date of transfer he had no voice or hand in the affairs of the South Pennsylvania Railroad, which had been a vision and hope to him for more than forty years. He was too manly for complaint, too kindly for resentment, too magnanimous for rancor, too proud for inconstancy. Like that other excellent gentleman, Colonel Newcome, in Thackeray’s story, he simply bowed his head and withdrew in honorable silence.

But it was not possible for him to cast off interest in the work. It gladdened him to hear about it. The recital of familiar localities alone—Tuscarora Mountain, Burnt Cabins, Fort Littleton, Sideling Hill, Juniata Crossings, Bedford, Dry Ridge, the Allegheny, the Glades of Somerset, Laurel Hill, Chestnut Ridge, Sewickley and Youghiogheny Waters—the names themselves were a kind of nutriment to him. For, with the utterance of every one of them, he recovered early images and lived his prime again. How his blood warmed
to be told that the engineers had lighted on old stakes or blazed trees along the line, his own markings out of the thoroughfare for the coming millions.

He did not survive to witness the strangling of the enterprise by the Pennsylvania Railroad Company.

During the winter of 1884–5, his energies sunk and he was rarely out of doors. Toward spring he took to his room; then to his bed; then, tranquilly, without special disease, without physical distress, to his heaven.

"There was no discord—it was music ceased."

He died April 1, 1885, aged 73 years.

The Boundary Commissions, the Fishery Commission, the Engineer’s Club of Philadelphia and other associations with which he had been connected, paid formal honor to his memory. A few friends mourned him, and will ever hold him to heart in affectionate remembrance. To one or two survivors his translation was a darkening of the sun and the disenchantment of earth. Their joy of life went out with him and can be found again only in that reunion which is the hope of the desolate.

In person Colonel Worrall was tall and shapely. He had a vigorous stride before the accident which lamed him. His ordinary bearing, while wholly free from awkwardness, had no special gracefulness; but in the courtesies his action was remarkably elegant. Unconsciously perhaps, and with a most captivating deference, he seemed to salute in all womankind his noble mother and his noble wife.

His tender condescension to little children was beautiful to see. With men he was rather grave and laconic at the outset; but, so unsophisticated in character and so fervent in generous sympathy, that his reserve broke on the slightest indication of good-fellowship. He was, therefore, an easy prey to the crafty. Honorable himself,
he believed the honorable shows of others. Deceived, enraged, disgusted and exasperated ninety-nine times hand-running, the hundredth plausible knave found him the same susceptible, frank, high-minded gentleman, constitutionally unable, by reason of his own essential worthiness, to mistrust the fair seeming of another. He could discourse, it is true, shrewdly enough—none more shrewdly or from a more positive experience—on the weakness and selfishness of mankind and the necessity for wary circumspection in dealing with them. Robert Burns, too, could give utterance to world-wise shrewdness.

“\nAye free, aff' han' your story tell
When wi' a bosom crony;
But still keep something to yoursel'
Ye scarcely tell to ony.
Conceal yoursel' as weel's ye can
Frac critical dissection.
But keek through every ither man
Wi' sharpened, sly inspection.”

*    *    *    *

“\nI'll no say men are villains a';
The real, hardened wicked,
Wha hae nae check but human law,
Are to a few restricked.
But, och! mankind are unco weak,
An' little to be trusted;
If self the wavering balance shake.
It's rarely right adjusted.”

But in both cases it was the mere vaporing of after-thought, blown out of sight, as the winds of heaven blow other vapors, by the first gush of native feeling. There is something pathetic, and at the same time laughable, in his grave regret that he had not been apprenticed to the law. Not that mind was lacking. But
of all the sons of men it were hard to find one less qualified for success in that vocation as to the main prerequisite, which a great writer of our time defines to be a certain professional impartiality that advocates, for hire or favor, any cause irrespective of its justice. The mere attempt to fancy it of him strains the faculty. Impulsive, pure, conscientious, upright and magnanimous, Burns himself was not more absolutely unfit for such a career both morally and temperamentally.

Colonel Worrall's expression in repose would have been somewhat severe except for the mild, grey eyes. His forehead was spacious—wide between the brows. The nose straight, thick at the root, the nostrils well spread, a becoming feature, neither large nor small. The mouth and chin had a resolute aspect; but as before intimated, the things signified by this aspect were resolute, indignant contempt of meanness, injustice, self-seeking to others' injury, dishonor in every form, degree and measure. There could hardly be in this world a less mercenary spirit, a purer or kindlier one. He might almost have said, with Shakespeare's king:

"I am too childish foolish for this world."

Not to be read, however, in any disparaging sense, for his foolishness partook of the folly of Paul and his childishness of that heaven-winning child-likeness whereof Christ spake.

Intellectually his endowments were large. He was quick to perceive and wise to forecast in things of the mind. He had imagination in riotous exuberance. That faculty and his alert sensibilities, we might say, disqualified him to some extent, as poets are said to be disqualified, for worldly success. They caused him pain and required of him a courage and endurance, in the ordinary conflicts of business, which the ordinary
business man, lacking wherein he so abounded, could form no conception of more than the depraved criminal lawyer can form an adequate conception of Christianity or honor. Hence, also, he was misapprehended by the vulgar amongst his contemporaries; and, as the employers of his profession ranked among them no small number of that class, his services were less sought than those of men very far beneath him in character, in attainment and experience. He felt this neglect. He felt it in straitened means; but much more sensibly in restricted opportunities for serving his generation to the full of his talents and accomplishments. In times of dejection he blamed himself for these short-comings, reproached himself for want of push and failure thereby to achieve his providential errand here. At times, too, as from some ancient prophet, there came from him a fierce denunciation of woe on the strong and crafty who devoured the earth, blood-guilty in that they took the bread of the needy which was their living, covenant breakers, oppressors of the poor, of the weak, of the widow and orphan.

Right-loving soul! All this is passed.

He looks back at things now. let us trust, in a light which transfigures, and which trues them into their just relations. He sees the earth a little green raft in the ocean of space; the crew provisioned for a day and dependent on the daily bounty of God; that they are there, men, women and children, seeming sometimes to themselves castaways, but really at school to learn brotherhood and faith, mutual helpfulness, the strong to serve the weak, in honor to prefer one another, to bear one another's burdens; that this lesson is slowly learning—slowly indeed—but as fast as these weaklings in righteousness can safely bear; that, meanwhile, there
is "push" enough and to spare, hog-shouldering of the ignorantly greedy and rapacious for more than their due; "push," the want of which in himself he now perceives to have been a divine repugnance to shame, a heaving disgust at the face of essential meanness; that these voyagers, moreover, live not by bread alone, but are nurtured otherwise in secret, if they will, even at the breasts of wrong and privation; that the selfish, filled bodily full by iniquity, are self-starved as to true manhood, yet mercifully know it not; that whether wittingly or unwittingly, his providential errand on this raft was achieved; that the day cometh when right and good shall prevail; until it comes and when it comes, now and evermore, evil is evil to itself alone; such is the ordinance of our Maker, the precious muniment of our individual freedom.

All this beholds our enfranchised Colonel and is content. We who remain afloat are tempted sometimes to deplore our shortcomings too, and to denounce the situation in an occasional prophetic fury. Patience, brothers! Misbehavior will see its own ugliness in due season. Let us, whether at the helm, the oar or the canvass, water-catching or fish-catching, do our several parts in simpleness and dutifulness, looking not for reward above our fellows. So may we hope to hasten the better day, to accept our relief with joy, when it comes, and to remember the voyage hereafter without painful self-upbraiding.

Colonel Worrall was well read both in his profession and in general literature. Judge Black himself wielded not the Shakespearian sceptre more aptly and masterly. He was familiar with our home classics, with the leading ancients, in translation, and with the vernacular moderns down to our own time. He was fluent and
racy in conversation. No one more enjoyed that social commerce than he, unless it were a hearkener fitted to appreciate good talk. It was the only kind of commerce Nature had equipped him to excel in, and Nature, in his case, was justified of her offspring. His full mind, vivid and manifold imagination and command of speech were supplemented by enthusiasm easily awakened, a trait which men of the world usually discountenance as puerile and unbusiness like. But the Colonel was their opposite, certainly, as to being boyish and unbusiness-like in friendly colloquy. That same enthusiasm, once arouse in genial company,

"Like to the Pontic sea,  
Knew no retiring ebb."

It was a natural phenomenon, not less so than flood in the river, a thunder storm, or the vicissitude of day and night. It must run its course. It was beyond his will or power to control, and probably no auditor ever wished to control it. Who amongst his intimates will not remember the characteristic, impetuous rush of anecdote, image, metaphor, quotation, original thought, solemn, profound or pathetic—wit sparkles, thrills of humor, hilarious, sideshaking fun, jocund quips and cranks, harmless, unmalignant dams and devils—like summer wind through multitudinous trees, each having a voice, all voices blended and no voice without significance!

Another gift which incapacitated him, under Shakespearean philosophy, for "stratagems and spoils" in this life was the rich endowment of "music in himself." Singularly, though long his associate, he never talked music to the present writer or even hummed a tune. Yet it was an art in which he delighted and in which
he had the reputation of excellence. He blew the flute, they say, to his wife's piano, little short of witchcraft—the two together like

"My mother Circe and the Syrens three
Amidst the flowery-kirtled Naiades,"

quoted in the preceding text,

"Who, as they sung, would take the prisoned soul
And lap it in Elysium."

As an engineer Colonel Worrall did not affect details. He was moulded for the grand considerations. He was peculiarly at home in the field of original conception. Others worked out his conceptions. He had the scientific imagination. The ideal railroad, canal, river improvement or drainage system bodied into visible being under his intense creative faculty, as one may suppose a great sculptor to see in the marble beforehand his forthcoming statue. Surely there was something mistaken in the organization of the raft crew when such a helmsman and pilot could be spared to sit on a log and bait hooks.

Readers of the Memoirs need not to be told what a warm heart he had and what a retentive memory. It is wonderful that he should have held in such distinct remembrance the scenes and events of his early childhood. Did ever nursling have a faithfuler nurse or nurse a more devoted nursling? No doubt his old eyes were wet when he traced those records of a noble foster mother.

That portion of the Memoir relating to the Roman Catholic Church was retained in the text after considerable hesitation. The present writer does not agree with his principal on this subject, but felt obliged to admit a passage in which he had expressed himself so
fully and earnestly. That venerable church was for ages the conservor and sheltered the Ark of Christianity. She is yet vital with beneficent life. Whatever the errors may have been, or may now be, of her hierarchy, in political and other secular matters, the great fact remains that she is preeminently the church of the poor, faithful to her heritage of truth, and embraces within her fold the main flock of living believers. God prosper her goodly work, her devout priesthood and her pious children.

The writer closes this obituary tribute sadly. The story itself is sad. It is piteous to see this tender, generous, gifted and kindly spirit so wrung and thwarted during his career on earth. He was spared, indeed, the anguish of closing those eyes which were the chief light and comfort of his life; but, that heart-break excepted, what a weaning time he had from things and creatures transitory! Think of his ailing childhood, the long bondage in that city book store, the struggle for a profession, the hand to mouth livelihood it yielded, the fruitless digression into contract work, the forced idleness of later years, the loss of his only child—and of that little grandchild—tearing his heartstrings—and, finally, the crumbling of his almost life-long hopes in regard to the South Pennsylvania Railroad. To the momentary glance his work seems frustrate. No doubt there were gladsome seasons interspersed; like the rest of us, he had his portion in the hidden solacements and the natural joy of life. But the tree bore inward record of its storms and winters. It was the feeble because of them. It toppled at last. Weaning time was ended for this man-child. Happy for him!

Could he teach us his lesson and give voice to his prayer for us, they would probably be something like this:
First. That we are all of a family on this Raft, being children of one Father. We should pray for the childly and brotherly spirit proper to our relations. That spirit will come to the prayer of simplicity and teach us all our duties here, the doing whereof in a right spirit is the main errand for which we were sent the voyage.

Secondly. That this Raft is borne by the winds and currents of Heaven—too deep for our wit, too strong for our power—whither we know not, nor can know. No heart can think upon these things worthily; and who is able to conceive His ways! Trusting to God, therefore, the direction and end of the voyage, we ought to do our duty of the present hour, the present moment. as it is given us with that hour and moment, looking neither before nor after, and unmoved by others' misdoing, ill-doing, undoing, slack-doing or counter-doing.

Thirdly. Seeing that we are transients here, and that the Raft is formed to carry little more than Provision against Daily Need and Tools for Virtue, we should not take anxious thought about those things, nor cleave to them, as having value in themselves, but value them solely as means of right living. He who would mould clay into beauteous semblances must have hands it cannot stick to. Furthermore, since to be man is to be temporary, so that we are, not co-eternals, but co-temporaries here, it were irrational to lament out of measure the departings of kindred and comrade. Some must go that others may come. No otherwise may this School of Nature be replenishing. Thus is wrought the Divine intent. One by one is most merciful. True! the human heart must grieve or break outright. Grieve freely, then! It is a form of comfort, and unforbidden. To chide it were to chide love itself. Only lament not!

O! God, who sendest grief, send hope too! If hope be
withheld, compassionately lead them darkling, so seasoned to Thy holy will that they shall be faithful children even hopeless—and murmur not—and wander not—choosing rather to thirst after Thee, despairing, than to drink the sweetest Earth hath else to give!