



The Rocks

**A novel by
Frederick H. Morse**

THE ROCKS

This novel is dedicated to my wife Judy J. Eriksen, for her loving support of any endeavor that I embark upon.

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We would very much appreciate receiving comments from readers.

Email: motioninwood@msn.com

PREFACE of THE ROCKS

- The novel is aimed at the full spectrum of readers, from the youthful to the elderly and both sexes.
- Historically accurate fiction (1853 - 1856). The daily lives of the characters are intertwined with the significant historical events of the times.
- It is the story of a 14 year old orphan boy who through honest hard work, ingenuity and the knowledge gained from extensive reading rises from poverty to become an entrepreneur within a span of three years.
- He starts out by performing entertaining scientific feats that the average person would think impossible and earns money thereby. These are described and explained in dialogue form and is essentially popular science to the reader.
- He purchases a property which is known locally as "The Rocks" that is an ancient riverbed strewn with massive boulders and a multitude of smaller stones. It appears to be an absolutely worthless property in south-eastern New Hampshire.
- He saves five orphans from the streets and together they turn that wasteland to great profit in a number of interesting and unexpected ways that reflects actual life and technology in the 1800's. These are described and explained in dialogue form and are essentially popular science/nature. Also, it is every person's dream to take something that appears worthless and turn it into something of value and I believe that a tale of ingenuity in pursuit of that achievement will enthrall readers.
- The characters include 6 orphan teenagers, the mayor, sheriff, minister, editor, doctor, young girlfriends, murderers, farmers, craftsmen, several women, escaped slave, hangman and others.
- The story never goes slack and to maintain reader interest it includes components of adversity, achievement, humor, murder, young love, popular science, nature, danger, adventure, pre-Civil War sentiment, narrow escapes, slavery, the underground railroad, ties to real historical events, and the lifestyles of the 1800's. It is written in a manner that causes the reader to always wonder what will happen next.
- The ending is suspenseful.

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Chapter 1

On Wednesday, January 5, 1853 the twelve-hour workday at the railroad company's train barn ended at six o'clock. As the laborers left for the evening the young lad at the blacksmith forge set down his hammer and tongs, wiped the sweat from his face and flopped onto a wooden bench. He planned to remain in the warm workplace and read for several hours as the forge coals slowly burned to ash. Olin Collins was a fourteen year-old who was six feet tall, lean of structure, blue eyed, light complexioned and possessed of a full head of straight ginger colored hair.

He always had a book near at hand and this evening it was "Uncle Tom's Cabin; or Life Among the Lowly". It had been first published on March 20, 1852 and had immediately provoked strong reactions from two opposing groups. The slaveholders had banned and burned it. The abolitionists clasped Harriet Beecher Stowe's novel to their breasts and thanked God that someone had finally revealed to all the horrors of bondage. Just as Olin opened the book and began reading Mr. Martinmon, the middle-aged railroad foreman entered the huge building where entire locomotives awaited repairs.

"You either always have your nose in the forge or in a book," Martinmon joked. "What are you reading now?"

"Uncle Tom's Cabin," Olin answered.

Martinmon's face reddened. "Are you crazy? There are some that would burn this building to the ground if they thought it would also turn to ashes a copy of that book! Close it and take it with you when you leave. Why do you have to be reading all the time?"

"I love reading," Olin smiled. "As much as you love your supper judging from your stomach."

"Don't get wise with me," Martinmon cautioned Olin. "If you weren't an orphan I would have your father thrash you in the woodshed. Mind you, I might do it myself. And also, the townsmen are impatient to see another one of your demonstrations of magic. Put away that book and think about things that bring in hard cold cash. Let the slaves take care of themselves."

Olin was annoyed but remained fairly respectful towards the man. "I don't put on magic shows. I show the effects of nature's laws and to many people they appear magical. Now sir, I ask that you let me stay warm at the forge as I read."

"I should make you throw the book into the coals," Martinmon said as he turned to leave the train barn and allow Olin to read in peace.

The next day a surge of arctic air assaulted New England. During Thursday, January 6, 1853, it severely chilled the Town of Boston, Massachusetts that was forty-four miles to the south of the train barn. During the early evening the frigid wind whipped about the railroad station platform where passengers were assembling to board the train to Concord, New Hampshire. Those waiting passengers that could not gain entry into the small and crowded station house stood huddled on the open platform, shivering and stomping their feet to maintain circulation to their aching toes.

An elderly lady was apprehensive about the train trip. She leaned toward her

companion of a similar age and loudly whispered, "I know it's bad luck to take a train trip on a Sunday. But somehow I don't feel safe even today and it is only Thursday."

The other woman attempted to calm her. "Well, ministers want us in the pews on Sunday so that is why they ask heaven to make it unsafe to travel on that day. And of course the Good Lord is going to grant the wishes of preachers and priests before ever He listens to pleas from the likes of us. But look here. I have a rabbit's foot. So please my dear, take it to keep yourself safe."

The first woman moved away somewhat and shuddered slightly. "Oh, no. I don't believe in such things as that. Lucky charms and amulets are not for me. My father always warned me that being superstitious would bring bad luck." She was oblivious of the contradiction.

The second woman was herself beginning to have fears of the train ride. "We must be careful who we sit next to. Only last year thousands were killed by influenza. Some of these people might have a disease and I think that more than a few have nits."

The first woman cringed at the thought of the pestilence and diseased lice that might be about them. "You are scaring me. This past summer the newspapers reported that yellow fever killed more than eight thousand people in New Orleans. And they could only guess at the cause of the disease. Many suspect miasma; evil vapors that inflict illness and death when a person inhales them. If you see anyone that seems sick hold your breath while near them."

Disease was not the only potential problem that the passengers might encounter in close quarters. There were persons that lacked morals and some women worried that those might attempt to secure an uninvited erotic encounter. But not all abhorred such social intimacy. The men joked that maidens of marriageable age would actively "reconnoiter for bachelor prey" during the course of the cold, rough and otherwise boring journey.

Two well-attired pickpockets had remained on the open train station platform because if they were detected plying their craft in the close confines of the station house there might not be a ready means for escape. But there was a second reason for their choice of locations, which was that many of the passengers waiting outside had already unknowingly revealed to them in which pocket or place they kept their purse or poke, and soon many more would also do so. The thieves would later be able to extract the wealth with a minimum of probing and searching into their victims' thick winter garments.

A coffee vendor had set his brazier of glowing charcoal at the windward edge of the platform and when he cast several beans into the hot coals the aroma of roasting coffee was driven to the passengers' nostrils upon the cruelly frosty air. The response of the chilled people to the tantalizing smell was immediate and they surged towards the merchant in their urgent desire for something delicious and hot to relieve their aching discomfort from the winter weather. The steaming coffee was served up in small tin cups that the customers held tightly in their cold hands in order to warm their fingers as they sipped the hot brew. When the customers reached into their clothing to bring forth the coin to pay the merchant, the two pickpockets learned in what place each person kept their funds and they could also judge with some reasonableness the amount of

wealth carried by an individual. The two selected their prime targets but would only move to acquire dishonest gains at the most opportune time.

The train engineer and the fireman had remained warm by working up the coal fire under the steam boiler of the locomotive in preparation to departing the railroad station. The intense heat of the coal fire resulted in such a high value of steam pressure that it had to be periodically vented while the locomotive was stationary. This was in order to prevent a boiler explosion, a not uncommon event. It had only been in July 1852 that a boiler explosion on the steamboat "Henry Clay" in the Hudson River had taken the life of Nathaniel Hawthorne's beloved sister Louisa along with nearly a hundred other unfortunates.

The seriousness of what could happen if he didn't properly monitor and control the steam pressure caused the engineer to have thoughts of the afterlife, in either heaven or hell, and that led to thoughts of religion.

"Do you go to church, Harold?" the engineer asked the fireman.

"Yes, and yourself?"

"Indeed. Last Sunday I heard the preacher talking sternly to a young lad who had arrived late. The man of the cloth asked him the why of it."

"What did the lad answer?" asked the fireman.

The engineer answered, "He said that he had at first started to go out ice fishing as it was a fine morning for it. But then the lad's father wouldn't let him and sent him to church. That much pleased the preacher and he asked the lad if his good father had explained why the boy should go to church instead of fishing."

"Did the lad answer?"

"Yes," replied the engineer. "He said that his father told him that there was not enough bait for the two of them."

The fireman laughed and asked, "Have you heard the locomotive psalm?" When the engineer shook his head the fireman recited:

"I'm the engineer and he's the fireman, it's true

At least it was so until the engine blew

St. Peter's holy advice is truly sound

Can't come in until all the pieces are found"

They both laughed at the macabre rhyme as other railroad men on the platform shivered in the cold while attending to their duties in order to prepare the train for its departure. Among them were the axle ringer and his trainee. In their work these two men stooped down along side of the passenger cars to gain access to the steel shafts that ran between the large cast iron wheels. Fifty two year old Lloyd Adept crouched and swung his hammer against each axle to rap and ring the thick metal cylinder and to listen for its desired resonant response tone. His much younger assistant, the lanky red-haired Charlie Proust, crouched next to him listening intently. "Is it a good one?" asked Charlie.

"Yes. Just listen to it," Lloyd responded as he once again rapped the steel axle with his hammer. Lloyd tilted his head slightly so that his right ear could catch the "sweet tone" from his hammer tap. The chill wind whipped at his salt and pepper hair, as it was always his habit to remove his railroad cap when he listened to a ring back.

"But how will I know a bad one?" whined Charlie. "All I have ever heard you ring these past two days is good ones. The company has given me the job to learn when an axle is cracked and you were to teach me how it sounds. How will I learn how a cracked axle sounds unless I hear one or two to know them by?"

Lloyd slowly rose to his full height of six feet and with light blue eyes looked Charlie in the face. "I am going to rap your noggin and then you will know what a bad one sounds like, you idiot. May Heaven help us if they are really going to entrust the safety of a train full of decent souls to someone like you. For two days I have taught you what a cracked axle sounds like and you have not understood it."

Charlie stepped back in apprehension at Lloyd's threat, not being quite sure if the man meant to carry out the action. "What are you talking about, I haven't heard a bad axle yet!"

Lloyd lowered the hammer and replied with subdued exasperation. "Exactly. I was teaching you that it does not sound like anything that you have yet heard. You damn fool, it will not sound like a good one." He turned away from Charlie and proceeded towards the axle of the next set of wheels. From the experience of many thousands of ringings of good axles Lloyd's ear could easily detect the existence of the slightest crack if it were present in any of the two and one half-inch diameter steel shafts. Expert wheel and axle ringers were valued employees needed by the railroad to assure safety. Ringing was an art form and it required the accumulation of years of experience listening to echoing tones within solid metal for a ringer to ultimately be entrusted with the safety of a train.

Lloyd Adept spoke again to Charlie. "In the granite quarries stone ringers have a lot of responsibility. When a massive block of granite is cut out for the purposes of constructing a monument it is the stone ringer's task to find any hidden flaws in the block. The cost in money can be great if months of labor are expended in truing up the block and grinding its faces smooth to only later discover a hidden defect in the process."

Charlie smiled. "Well then, that is fine. If ever the railroad goes out of business we can ring stone for a living."

Adept asked Charlie, "Do you know who was the greatest stone ringer in history?"

Charlie was amused by the question. "Are you saying that someone of our ilk was in history books?"

Adept answered, "Yes. The most famous and expert ringer known was Michelangelo Buonarroti. He selected his marble blocks at an Italian quarry and tested them prior to transport to his workshop. It would not do at all to spend two or three years in the sculpting of a large statue only to have an arm of it break off and crash to the ground due to the presence of a slight hidden flaw."

Charlie scoffed at the words. "Well, the arms fell off his Venus de Milo, didn't they now?"

"You're both ignorant and a fool," Adept declared. "Michelangelo did not carve that statue."

Lloyd Adept was dedicated to the safety of the train's patrons and would hold a passenger car, even an entire train, in the station for repairs or replacement if his ear

detected the slightest discrepancy in the ring tone of an axle. He was certain that his days and nights would be haunted to the end of his life if he ever allowed a derailment because of his oversight of a defect. As they walked alongside the last passenger car of the train Lloyd tried to explain something to Charlie. "There is such a thing as consonance in the sounds of metal axles when they are rung by a hammer. When a sound is consonant it is smooth and agreeable to the ear and that is the singing voice of a good axle. If a crack exists in the axle the overtones of the sound will not be in the correct ratio to the lowest frequency and the result will be dissonant, or disagreeable. If you hear consonant sounds often enough you will instantly know when you hear a dissonant sound."

"This sounds more like a music lesson than anything to do with train axles," Charlie said in a disgusted tone of voice.

"It is just about one and the same thing," Lloyd responded. "Listen closely to me Charlie, as I will explain this once and that's all. A piano and a violin can sound exactly the same note, but even if you had your eyes closed and could not see which had sounded the note your ears would quickly tell you if you had heard the piano or the violin. That is because the overtones of a piano and a violin are different. It is the same with a good axle and a cracked axle." Lloyd did not actually dislike Charlie but he was not yet certain that the man could develop the dedication to the trade that was necessary to assure the safety of the train's passengers.

At the next axle they stooped to the ringing position and as they did so Lloyd handed the hammer to Charlie. "Here, take it. When you rap the axle listen to the ring with your eyes shut. It somehow seems that the ring tone is clearer in the mind when the eyes are closed."

Charlie hefted the hammer to feel its weight. He was a little taken aback that Lloyd was going to actually let him use it and he now regretted his earlier complaints. A little. He reached under the coach and rapped the axle, listening for the sound with his eyes shut. As best he could determine it sounded like all of the previous axles. He reached a conclusion. "It is a good one."

"Are you sure?"

"Pretty sure."

"Pretty sure is not sure. Rap it again."

Charlie rapped the axle a second time and listened intently to the resultant sound. "Yes, it is a good one. It sounds just like all the others."

All of the train's other axles had rung true so Lloyd was satisfied. "Alright, that is all of them." The large cast iron train wheels were also prone to cracking in cold weather and those had been rung successfully some hours earlier so the train could now be safely released to the engineer's control. Lloyd stepped back from the last car to see if the engineer was awaiting his report and observed the man standing beside the engine and looking towards him. Lloyd Adept then performed the hand signal required by railroad regulations that indicated that all the axles were true and sound.

The engineer acknowledged the signal with a wave of his hand and then mounted to the control compartment of the locomotive. But he would not drive the train out of the station until he was assured that a very important person was safely aboard.

A short time later a hired horse driven coach stopped in the street in front of the station house and two men, a woman and a young boy disembarked from it. The passengers that were gathered on the platform somehow sensed that these were people of some importance and opened a path in the crowd at their approach. The men tipped their hats in a courteous manner to the on-lookers as they walked directly to the car that was the first behind the coal tender. Two porters trundled the baggage carts along behind them. There were murmurs of curiosity among the bystanders but none realized that the President Elect of The United States and his chief of staff had just passed among them. An entire car had been reserved for Franklin Pierce, his wife and their 11-year-old son Bernie, their third and only surviving child. Forty-eight year-old Franklin Pierce yearned for the quiet of their Hillsborough, New Hampshire home to give some thought to his inaugural address and also to concentrate upon the inflamed question of slavery.

With the dignitaries safely aboard the remaining passengers could be herded from the platform and crowded station house to board the other cars in order that the train could then depart for Concord. The two pickpockets moved forward with the impatient passengers and in the crush of the distracted people they nimbly extracted the purses that they had previously targeted. A short time later a man realized that his poke was missing and set up a cry of alarm. "Thief! There is a thief or pickpocket among us!"

A woman cried out as she pointed at another man. "I saw him touch you! Grab him! Search him!" As the crowd converged on the astonished and frightened man, grabbing him roughly and thrusting their probing hands into his garments, the pickpockets edged slowly to the back of the crowd. With the attention of the angry mob focused upon the supposed culprit they slipped away towards the street. Their clothing spoke of middle class status and blended well with the garb of the majority of the citizens walking in the area.

One of the pickpockets was gleeful. "Shirley, I got the poke of the big-bellied man that raised a cry and it felt heavy with gold coin as I passed it off to Gracie."

Shirley answered with a little excitement in her voice. "I tell you Helen, the moment was gone for me to pass my loot off to April when the crowd shoved in to get their hands on that man. Why did you point to him as being the crook? That crowd might do him some harm before they find out that he is innocent."

Helen scowled. "Not a bit did I like his looks as he reminded me of my worthless first husband."

Further up the pavement two teenage girls stood snuggled up in their coats against the cold as they waited at the corner of Essex and Martin Streets. One was the pretty blonde and blue-eyed Gracie. The other was the red-haired and green-eyed April. The women walked up to them and Helen asked the older of the two girls, "Well, Gracie, do you think that there is gold coin in it?"

The pretty fourteen-year-old lass smiled happily at her grandmother as she stood with her hands thrust into her warm wool muff. She shook the muff slightly up and down several times. "I am sure that there is from the feel of it. I will be so happy when you let me show you all that I have learned about picking pockets."

Helen smiled at the girls. "You two are a delight. As soon as we make the snatch

we can pass it off to you girls in case the law puts a grab on us. And no one would suspect two sweet darlings such as you. And yes, the next time we visit the train station Gracie, I will let you snatch a few valuables. But very carefully as we don't want anyone to suspect you of being pickpockets."

Gracie smiled happily. "I have been practicing at school. The teachers all suspect the boys, them not thinking that it might be a girl like me."

Helen frowned. "Gracie, keep your hands out of the boys pockets."

In the meantime back at the station it was some minutes before the crowd was quite through searching and abusing the hapless, innocent man and not finding the possessions of the others upon his person they finally released him. He was soon to learn that often the only thing that separates an honest person from a thief is a lack of opportunity. As he began to regain his composure and straighten his ruffled clothes he felt for his wallet and realized it had been filched during the crowd's search.

A ragamuffin boy of perhaps eight years of age approached a matron who was snuggled up inside a warm and beautiful fur coat and who wore a hat trimmed in glossy sable. With beseeching eyes he looked up at her face as he gently took her left hand in his own cold little paw.

"Oh please wonderful lady, oh please," he said in a pitiful and pleading voice. "I am so hungry and cold. A penny or two and I can buy some stale bread, as I have not eaten a thing today. Oh please, I am so hungry and cold." He shivered in the frigid air.

The appealing cherubic face of the boy aroused the woman's sympathy and his pleading eyes gazing up at her instilled a motherly feeling of pity in her heart. When she saw a shiver ripple down his lean lightly clothed frame she smilingly reassured him. "Of course, you poor boy." Turning towards her husband she instructed him. "Edwin, give the boy a few pennies." The man obediently began to rummage in his pockets for coins.

Upon hearing the woman's instructions to her husband, an angelic and happy smile flooded upon the ragamuffin's face much to the delight of the matron. He continued to clasp her warm hand and leaned a little forward to kiss it. As he waited for the man to find the coins he slowly turned her hand gently over so that the palm was upward. He then spat thick phlegm into it.

The woman took a step backwards in shock, horror and disgust, her hand outstretched so that the vile spit would not touch any other part of her body or clothes. Her husband Edwin stood dumbfounded by what had just transpired.

A second and older ragamuffin yelled at the small boy. "Albert! What have you done?" He kicked the culprit in the behind. As the younger boy fled from the train platform this boy pulled a piece of cloth out of his pocket. "Oh, generous madam, please let me wipe that off your hand. I don't know why he did such an awful thing."

The husband motioned to the boy that he should do so because he himself did want to have come into contact with phlegm that might carry lung disease. The distraught woman held her hand out with her face turned away in revulsion.

During the pretense of cleaning her hand the boy actually used the cloth to spread the mucus over her ring finger to lubricate it so that he could easily slip off her diamond solitaire band without her noticing. With the ring enveloped in the cloth he broke away and sprinted for the street to catch up with the younger boy and they easily

made their escape.

The victim's cries of "Thief! Thief!" had no other result than to cause all the boarding passengers to once again quickly reach for their wallets, purses and money belts to assure that they still possessed them. The man that had been roughly searched flinched in fear of a further accusation against him. The stationmaster had witnessed the entire proceedings out of the corner of his eye and was sure that the boys would later bring him quite a large diamond to be fenced to a buyer of stolen goods.

The unheated passenger coach where the Pierce family sat offered a buffer against the chill wind but it was devoid of any means to provide added warmth, not even the benefit of the body heat of the huddled masses in the other cars. However, there existed a method by which the elite and important passengers could be made somewhat more comfortable during their journey. Towards that end two workmen of superior strength emerged from the station house carrying a 260-pound block of Georgia soapstone upon a wooden plank, each of the men straining at his end of the plank against the weight. The soapstone block was one and a half feet long, a foot wide and a foot deep. It had been heated upon the coal-fired stove in the train depot and would serve for hours as a foot warmer during the otherwise freezing journey. Most homes of the day possessed at least one soapstone bed warmer but of much smaller size than the block that the men lugged. The heat content of the large soapstone would be approximately equal to that of one pound of burning coal, or twice that of the same weight of heated iron.

The first soapstone block was placed on the coach floor near the foot of the seat that Mrs. Pierce would occupy. When the block was in place she sat upon the bench seat and set her booted feet atop the hot stone. As the heat of it penetrated her boot soles a look of relief appeared upon her face and she graciously thanked the two workmen.

A second hot soapstone block that was placed in front of Bernie's seat. Both Pierce and his wife were extremely considerate towards Bernie and were ever concerned with his welfare. Much to their sadness Bernie's two siblings lay in their graves and this all the more made their remaining son the light of their lives. A short while later a third block had been placed in the compartment for the comfort of Franklin Pierce. As the workmen stepped down from the train the President Elect's Chief of Staff leaned out from the platform of the coach and signaled the stationmaster that the dignitaries were safely aboard. This meant that the train could then depart for Concord.

Within minutes after the train had left the station the clickecty-clack sound of the wheels over the track joints and the gentle swaying of his car provided a soothing effect to Franklin Pierce, which he much appreciated. He remembered well that it had taken 48 ballots before he had been nominated at the Democratic convention and that he had won the presidency by only a narrow margin of popular votes. And southerners who had appreciated his pro-slavery declarations during the campaign gave that edge to him.

He cast a copy of a runaway slave reward poster aside in disgust. He spoke to his chief of staff in a strong, angry voice. "That is disgusting, absolutely revolting. It is not right that these good men should be put into such a situation. We must do something to assist them." Pierce was full of ire at the situation. "That honest,

hardworking men have to pay a reward to have returned to them something that is rightfully theirs in the first place is criminal. It is an unjust burden. If it were their horses that had strayed then any honest person that might come across them would hold them for retrieval by the owner and ask not a cent of reward. Slaves are property as are horses and should be captured and returned just as benevolently. Perhaps the owner would justly be charged only the dollar or two for the feed of his animals or captured slaves." As the train rolled along upon the iron rails Pierce hunched up in his heavy cloth coat and pondered the possible actions that he could take as president to protect slave owners.

During the following hours the train moved steadily northwards towards the Town of Andover, Massachusetts, en route to Concord, New Hampshire. The bitter cold air of the January night whirled about the open locomotive cab as the train sped along the rails and whenever possible the engineer and fireman stood close to the fire door to benefit from its radiant warmth. For safety reasons it was necessary for the engineer to periodically view the tracks ahead to assure that they were clear of obstructions. To avoid suffering gusts of bitterly cold air in his face he used a small hand mirror that he pushed out into the frigid wind and then from the shelter of the cab he could observe the tracks ahead.

The fireman was impressed with the idea of it. "Why did you have a hand mirror in the cab? Had you been smart enough to think ahead about its good use in the winter wind?"

"I came upon the idea as a young man," responded the engineer. "Some years ago I had the mirror because at the end of my run I would arrive in Quincy and there I would court my young lady at her father's house. She is now my wife, but whenever I went to woo her I would be sure to look my handsomest, for her being quite pretty she had other suitors also. I had the mirror to assure that my hair was neatly combed at the end of my run when I removed my engineer's cap. However, one night I looked into the mirror and I saw the rough stubble of my dark beard that had grown that day since I had shaved before dawn. I had no manner in which to shave again and I was woefully aware that my love did not at all like scratchy beards."

The fireman was sympathetic. "What a shame. You're right that there is no washbowl and lather soap in a locomotive cab."

The engineer's tone of voice brightened. "But, I came upon an idea. I opened slightly the boiler pressure gauge drain valve here in the cab and got only so much water as needed to wet my whiskers. I then stuck my face out into that miserably cold wind. The temperature was so low that the water at once froze upon each and every one of my whiskers and this caused them all to become very brittle small black icicles. In less time than it takes a heifer to fart the force of the rushing wind due to the speed of the train and the howling gale snapped all of them off close to my skin, making my face as smooth as a baby's bottom."

The fireman roared with laughter at the absurdity of the story and still chuckling he entered the coal tender car. He used his shovel to maneuver the shiny jet-black lumps of anthracite fuel further forward in preparation to his return to the locomotive and the continued feeding of the engine's furnace. A sudden violent jolt to the tender caused

the fireman to slip down onto one knee and he looked towards the engineer apprehensively. The jolt had been less severe in the locomotive but the engineer throttled back the engine as a precaution as he listened and felt for any further abnormality of operation. They had just passed the street in Andover, Massachusetts and in the moments after the jolt the train seemed to be proceeding normally. The engineer throttled back up to speed in anticipation of a rising and curving embankment just ahead. As they entered the curve the left front end of the coal tender abruptly sank down into the tracks and wooden cross ties with a resounding crashing noise. The entire train was severely and erratically shaken and abruptly slowed.

Due to his forward momentum the fireman was catapulted out of the coal tender and back into the locomotive cab where he slid across the steel plate floor as it lacked any handhold to restrain his hurtling motion. He came to a violent stop up against the red-hot fire door. The smell of the burning flesh of his face and his screams of agony filled the air and greatly added to the consternation of the engineer who could not fathom what had happened or guess what would happen next.

Due to the tremendous twisting mechanical strain upon the locomotive the steam boiler pipes sheared and burst allowing huge clouds of hot water and vapor to be violently released into the night air with deafening hissing and eerily shrieking whistling noises, which added yet more horror to the nightmarish scene. The passenger cars piled up and derailed behind the crippled locomotive and the coal tender. As the wreckage of the train cars came to rest the screams of the dying, the injured and of the merely terrified echoed on the frigid night air and the animals of the forest turned their head and ears towards what had been at first unfathomable mechanical noises. They now related to the cries of pain as those are sounds that are universally recognized throughout the animal kingdom and they wondered which predator had taken which prey.

It was the fate of Franklin Pierce and his wife that once their overturned car finally scraped to a halt they discovered that they were only slightly injured in body. Their son Bernie had been killed instantly when his granite footstone crushed him.

It would be hours before the residents of Andover could tramp through the dark night and snow to reach the site of the wreck.

In the days following the train accident, railroad workers from surrounding areas had helped clear the wreckage at the derailment site. Among the laborers was Olin Collins, the fourteen year-old blacksmith from the train barn. He had come down from New Hampshire with five other railroad laborers to participate in the extensive track clearing effort. The wrecked locomotive had tipped onto its left side but in its sliding motion it had spun a quarter turn and come to rest partly across the railroad tracks. It was necessary to move the engine so that other trains could have safe passage. The damage to the locomotive had placed it beyond any hope of repair and once clear of the rails it would be left to rust away.

Heavy rope lines were attached to the wreckage and then they were run back through block and tackle systems that were anchored to stout oak trees about seventy feet distant from the tracks. Some fifty men grasped the free ends of the lines and upon the command of the recovery supervisor the laborers began hauling upon them. Inch by

slow inch the effort of the men transmitted through the mechanical advantage of the pulleys in the block and tackle systems began to cause the locomotive to move off the tracks.

As Olin pulled upon the stout ropes in unison with the others, images of the Egyptians slowly raising stone blocks by lever, pulleys and brute force to construct the pyramids wafted through his mind. He did not consider his experience at the recovery site to be work; instead he was enthralled by the mechanical engineering techniques employed to move massive metal objects with relative ease and was happy for the chance to be involved in the activity. It helped to rid his memory of what he had seen during the prior day's search of the area for the corpses of victims. Scavenging crows had been quick to the feast and their presence gave clues to the location of mangled body parts that had been scattered about in the snow.

The fireman had survived and was found nearly frozen to death in a snow bank as his first urge had been to get away from the residual fire in the engine and to press his burnt face into the cold snow. He had no way to foresee it but his facial scars would gain him entry into the lore of railroading history. He would become known as the fireman that defied death in the "Wreck of "53"" and he would proudly wear the badge of recognition upon his face. The nickname "Hot Harold" would not have much of a romantic ring to it, but he would still relish the fame of it. Due to a drastic loss of blood and a lack of warm covering the engineer had slipped away to death before help arrived.

Railroad inspectors at the crash site had determined that the cause of the train wreck had been a snapped front axle of the coal tender. Once the recovery operation had been completed the snapped axle sections were transported by wagon to the train barn in New Hampshire where Olin was employed. The train maintenance barn was a huge cavernous wooden structure constructed with thick, one foot square white pine posts and beams, employing mortise, tenons and wood pins at the joints. The overhead clearance was forty feet as was needed to accommodate the tall smoke stacks of some models of locomotives.

Chapter 2

Seven months passed. On Monday morning, August 1, 1853, Olin was reworking rivets on a passenger car when he noticed a well-dressed man standing over the broken axle and gazing down at it. Thinking that the man might be a curiosity seeker he approached the newcomer to advise him that the axle was not to be touched. "Excuse me, Sir. That axle is evidence in the cause of a derailment and you are not allowed to move it or take it away."

The man raised his gaze from the axle to the boy's face. Olin saw that the man had a high forehead, was balding, perhaps in his thirties, paunchy about the waist and had eyes with bags and drooping eyelids. He was by no measure handsome but his face was unique and interesting.

"What is your name, son?" the man asked quietly.

"Olin".

The man said, "Well, my name is, Benjamin Franklin Butler".

"Well, in that instance Sir, I am Olin Terrel Collins, and I have been told to keep this broken axle safe".

The man informed Olin of the reason that he was there. "I have been requested by the President of the United States, Franklin Pierce, to inspect this axle".

The man appeared believable and respectable so Olin felt that he was in no position to deny him the right to inspect the axle even though he thought him to be joking in the reference to the president.

At this moment the stocky middle-aged train maintenance foreman Mr. Martinmon, walked up and addressed Benjamin Butler. "Mr. Butler, Sir, we have placed a new axle of this same type by the hydraulic press as you requested. It can be snapped whenever you desire. Olin here understands the operation of the press and can do the work for you. The corporation president has instructed me to provide you with every other assistance that you might require and he has informed President Pierce of your determined interest in the matter of the derailment."

"Thank you, Mr. Martinmon. Perhaps you have a person trained in metallurgy who is available and might assist us."

Mr. Martinmon glanced at Olin and then answered Butler. "You might believe this strange, Sir, but the person that most understands metals in this maintenance barn is Olin here. He seems to know more about metals than a Frenchman knows about cuisses de grenouille. None of my men are schooled. They all began as apprentices as Olin did also, and most are Irish immigrants. But, Olin here is a reader of books, being in fact my only worker that can read. He tells me, and his knowledge shows it, that he has read every book within miles on the subject of metals. I fear that if he continues he will someday have my job."

Olin's taste buds had tingled at Martinmon's mention of deep fried frog legs as he stood silently by. Mr. Martinmon continued to inform Mr. Butler of Olin's status in the train maintenance barn. "I hired Olin five years ago, a nine-year-old pipsqueak he was then, at the urging and recommendation of his aunt Henphra, the town librarian. We used him as a fetch. He wanted to work very badly so he quickly ran to get any tool or

other thing that the workers needed. He even ran to get them buckets of steam and skyhooks." (They all laughed at these ages-old practical jokes.)

Martinmon fondly placed a hand upon Olin's shoulder. "He kept his nose poked into all the work that was being done on the trains and at the smithing forge and he learned it all quite well. With each year going by, I could see that he was becoming a smart pup, and he talked sense. It's five years now and he is my most knowledgeable man, be he a boy still or not. In this train barn he is the one you need talk to about the axle, lessen you want me to get a mechanical engineer up from Boston."

Butler declined the offer, reserving that possibility if later events should demand it but his expression still displayed some skepticism. After all, this was an important case that involved the President of the United States and the Railroad Company. He might be laughed out of the courtroom if he declared a fourteen-year-old lad as a technical expert.

Martinmon sensed Butler's apprehension at having the young Olin advise him. "Ask him some questions on the matter," he suggested.

Butler was hesitant to base his case upon what a mere youth might tell him about metals. The problem involved the mechanics of large machines in the form of an engine, its coal tender and the passenger cars. If ever he required Olin to testify in the case he needed to be sure that the lad would not wither under an attack by an aggressive opposing attorney. He turned to Olin. "I am going to ask you a question that the average person could not easily answer. Only someone trained in mechanics and mathematics would be able to quickly respond correctly."

Olin was intrigued. "Please ask it as now you have my curiosity up."

Martinmon became apprehensive as he had just earlier vouched for Olin's knowledge and he would look the fool in front of an important man if Olin could not give the right answer.

"Imagine an entire train composed of a locomotive, tender and several passenger cars proceeding normally upon the rails at a velocity of sixty miles per hour," Butler instructed him.

Olin nodded. "Yes, Sir."

Butler then posed the question. "Is there any part of that entire set of machinery that is actually not traveling down the tracks at sixty miles an hour, but instead is stationary?"

Martinmon groaned. He was convinced that it was some sort of trick question and that it would trip Olin up.

"Yes," Olin smiled. "And the number of them is equal to the number of wheels upon the tracks."

Butler expressed satisfaction with the answer. "Very good and very quick."

Martinmon was confounded. "What in the world are you two talking about? Of course all parts of the train are moving down the tracks, how could it go from one place to the other without all of the parts moving along?"

"Will you agree that the tracks are stationary?" Olin queried Martinmon.

"Of course. What kind of a crazy question is that?"

"Can you agree also that the wheels are not skidding along those stationary

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