

# The Journal of Dr. Tiberius Hess

## Librarian's Introduction

A few months ago, a longtime Hamilton resident donated a battered cloth-bound journal she discovered during a renovation. It's a vivid story written by Dr. Tiberius Hess, a doctor who lived and practised in Hamilton during the Victorian era.

In it, Hess claims to have invented a time machine, powered by electricity and steam, and governed by mysterious "nautilus gears". He wrote of using that machine, called a "Chronocycle", to travel to present-day Hamilton. The enigmatic Hess wrote of things far beyond the period in which he lived. Fascinating.

His journal is divided into two parts. The primary section contains first-person entries about his experiences in Hamilton from 1854 - 1860, with a brief sojourn to 2019.

The second section is made up of six "clue sets". Hess claims these clues point to the location of a set of nautilus gears that he hid somewhere in Hamilton during his brief time-travel here. You can delve into those clues, and try to locate his nautilus gears, elsewhere on this website.

The journal entries offer a fascinating glimpse into life in Victorian Hamilton. As befits a time traveller, Hess's entries jump about in time, capturing his experience more as a rousing tale than a strict chronological account.

They mention real historical figures such as: Isaac Buchanan, Sir Allan Napier McNab, James McFarlane and others. Hess lived through actual historic events such as the cholera outbreak of 1854, the Desjardins Canal rail disaster of 1857 and the visit to Hamilton by the Prince of Wales in 1860.

Many of the businesses, sites and craftsmen of the time are real, too: these include the Hamilton Waterworks Pump House, the Crystal Palace; The Royal Hotel and the Argyle Coffee Rooms and the Arbor Dining Hall. They all existed; so did the craftsmen John Pettigrew and Edward Zealand.

In all, from his descriptions of Victorian medical treatments to the business and politics of the day, Hess paints a vivid picture of a time before this city became an industrial powerhouse.

But, what are we to make of his claims to have invented a time machine? The science seems sound and resonates with the discoveries of the time. But, did he? That we shall leave to you. Enjoy the journal.

Karen Milligan

Manager, Local History and Archives

Hamilton Public Library



## The Dark Night Of Pursuit

**September 25, 1860 - 2:10 a.m.**

It has finally rained. For the sake of the citizenry of Hamilton I am pleased. Although, a few hours sooner and my enterprise would have foundered before it had begun. But now, a cold September downpour falls through the obsidian darkness. It is a rain that burdens greatcoats, tests the finest macintoshes and penetrates boot leather as though it were wrapping paper.

It urges torrents headlong down the recently parched fissures of the escarpment. It weaves watery curtains that blow through our streets like howling phantasms. In the gutters sodden shreds of bunting, a reminder of the Prince of Wales' recent visit, clog and cluster. The smell of dampened smoke is carried on a west wind.

On such a night MacNab, Sanford and other such worthies curse their rheumatism and ring for coal and blankets, while the destitute scurry for whatever meagre shelter our harbour town can offer in this mercurial, mad and merciless season.

It is after 2 a.m., later than I need it to be, and I hurry to Henry Street towards the dry comfort of the stable that has served, these past many months, as my laboratory and workshop. The rain courses off the brim of my Homburg as I hunker against the lashing wind. Beneath my coat an oilskin is keeping my newly acquired gears dry, but still I instinctively hold the package close,

like a mother shields a child – oh, cruel simile that comes so sharply to my mind.

A stranger, merely a rough shape in the masking gloom, still follows me, as he has since my deliberately circuitous journey from a workshop near the waterfront. My pursuer is less than discrete in his surveillance. I suspect he is one of Buchanan's men; in fact, I am certain. He may know of MacDonald's earlier deed. He may know all! I pray not, for then all is lost.

I had hoped to evade him and his intents, but with bitter irony I acknowledge that I am Time's slave, for a while still at least. I must press on, despite the possible cost to my endeavour. But what a storm! As if the Heavens themselves rebel against what I must do, and by so doing, rend the orderly fabric of nature asunder.

But my story rushes headlong and I get ahead of myself and my tale. Let me, good reader, begin anew.



## The Grand Physics Society

**September 8, 1858**

I was nursing a brandy in the company of my fellow members of the Grand Physics Society, a fanciful name for our little gathering of local doctors, tinkerers and armchair philosophers.

It was our regular monthly meeting in an upstairs lounge of the resplendent new Royal Hotel. I had been, with both bluster and eloquence, expounding the theories which I'd refined for some months. It were these hypotheses that had kept a flame of hope alive since the terrible loss of my dear wife and daughter four years earlier.

"My dear Hess," said Captain James Hickson, a bellicose Scot with prodigious moustaches, "do you mean to suggest in all sincerity that you believe time and space can be skipped about as readily as a tossed stone hops on the surface of a still pond?"

Hickson, as a gangly youth, had fought at Queenston Heights, and had seen General Brock fall there. He also comported himself nobly at Lundy's Lane and at the Battle of Buffalo. But now he was a belligerent and corpulent old war horse, an expert on the science of armed conflict, and a connoisseur of fine shag tobacco. He was also, I must note, a confederate of Isaac Buchanan, a railway man with military ambitions of his own. As a former ship's surgeon I've had

a belly full of war and have little time for sabres or their rattlings.

Earlier that evening, Hickson had given our band a private lecture on the use of the telegraph during the Crimean War. I had challenged him on some of the finer points of electromagnetic amplification. I now saw that my small sting was still irritating him. But the captain and I had sparred before and I was in no mood to give ground.

“What I am suggesting,” I retorted, our small audience turning in my direction, “is that nature is harmonic. If we can but tune an instrument so that it resonates with nature’s overtones and partials, perhaps we can leap from node to node, where the waveforms are at their nadir.”

“And this harmonic nature,” interjected MacDonald, my medical mentor whose gentle manner I had oft admired. “Have you determined its patterns?” MacDonald drew heavily on the cigar he had recently lit with a phosphor match and let the smoke languidly curl to the ceiling of the cozy lounge.

I motioned to the pattern of smoke with my own cheroot. “A spiral,” I responded. “A natural arc of the golden mean. We see it in the curve of the nautilus shell, the whorl of the sunflower head and in all manner of natural wonders. Mathematically we detect it in the series described by Leonardo Fibonacci.”

“The sequence also informs the Divine Proportion of Euclid, and of the constant Phi itself,” interjected Richard Prince, our resident classicist and a maker of fine optical instruments.

“All fascinating,” retorted the Captain, “but to suggest that man might use such knowledge to ape divinity and so leap like a gibbon from place to place and epoch to epoch is folly and hubris, sir, surely!”

“And imagine the energy such journeys would entail,” said Samuel Kellogg, my man of business and a fine amateur astronomer. “All the coal of Cape Breton would need be bent to the task.”

“Ah, there you err in reasoning,” I chided, my blood a little too warm from the brandy and the fine wines that had accompanied the oysters, trout and beef of our recent repast. “Give me a place to stand and I shall move the Earth!”, so said that fine Greek fellow, Archimedes, and so say I of these Fibonacci harmonics. Why, think with how little effort the master flautist jumps octave to octave with a precise adjustment of embouchure, or the manner in which standing waves build strength to strength of their own accord! Offsetting oneself in space would require merely the electrical force even a small Wheatstone dynamo might offer,” I concluded.

“Pish!” rumbled the Captain, his face blotching red in consternation. “Flummery of the first water!”

All eyes turned to me through the room’s bluish haze.

“And yet my calculations stand,” I countered, my colour rising.

“And, Time itself, sir? Do you suggest one might hopscotch through time from the Pleistocene to the Ming Dynasty and then have tea with Napoleon on the force of a gnat’s sigh or the single beat of a hummingbird’s wing?” Captain Hickson inquired and cast a brightened eye on the others.

Our band chuckled mightily at Hickson’s jab, but I parried swiftly.

“The harmonics of the fourth dimension are more challenging, it is true. Time is not a two-headed arrow. All moves from order to entropy, but not the converse, so history is immutable. One cannot return to a time prior to the one you departed. The past is carved in a tablet of stone. But, with a rapidly applied jolt of great electromotive force I believe the future can, and will, be journeyed to!” My fist landed upon the table with more anger than I had intended.

Here, I feared I had lost my fellows. Even kindly MacDonald looked into his glass and fell silent. But Captain Hickson held my gaze. His eyes narrowed slightly and I knew that he considered I could be travelling beyond the theoretical.

“Speaking of time,” said Thomas Harris, the printer, clapping his hands nervously, “it is perhaps time for more coffee and some of the excellent apricot tarts this establishment has on offer!”

The Society’s meeting came to a close shortly after our refreshments. Hickson kept to himself as he donned his coat and hat. As we were dispersing, MacDonald touched my elbow.

“Tarry a while, Tiberius,” he said. “I have a pretty chess puzzle you may find amusing.” He led me to a corner of the room where we had a board set up for our members’ use.

“Of course. I am in no hurry,” I replied. And, in truth, I enjoyed the company of the kind doctor immensely. Over the years I had learned much by his side as his eager apprentice. And, I had admired his bravery the prior spring as we worked to save the stricken who lay dying on the ice when a train left the bridge at the Desjardins Canal. How I cursed the owners of the Great Western Railway whose parsimony had resulted in the death of sixty innocent souls.

MacDonald toyed with the chessmen in a desultory manner as I took my place opposite him. "You do yourself no good making an enemy of Hickson, young man," he said. "And you do your anger no service by wasting it on him." I felt ashamed and my colour rose again. "And the spirits you insist on pouring into yourself, they will not drown your ghosts."

The good doctor knew of my mental anguish since the passing of my dear wife Adelaide and daughter Miranda. Many a night I think it was only his good counsel that kept me from joining them in their flight from this world. And he had been at my side as I sweated and swore the last of the laudanum out of my system a year after those dreadful deaths.

"You are right, sir," I said. "And you are correct to admonish me for it."

"I am, indeed," said MacDonald, smiling faintly. "But, that is not why I wanted to talk to you," he added, moving a pawn forward a square.



## The Pursuit Continues

**September 25, 1860**

The night is a mighty cloak and I take great advantage of it in order to evade my pursuer. I cut through Reverend Geddes' property on Colborne Street and hide myself in the nearby wood at James and Lind Streets. The stranger pauses at James and turns about, unsure of my path. A twig snaps under my foot, the sound carried on the wind. His head pivots in my direction and I see a metallic glint at his hand. I head deeper into the small wood then emerge on Hughson Street, aiming for the stable just beyond Juson's Nail Factory. I must confound my dark gentleman. Time, time, stay your hand!



## The Dismal Hour

**August 4, 1854**

Flies are the angels of death. They are on the eyelashes and lips of the recently deceased. They huddle and crawl at the edges of sick room windows and fill the grief-stained air with a maddening drone. They cling to my soiled hands as I care for patients stricken by the cholera that came ashore unbidden two scant months ago. So many patients, so many flies. This morning Thomas O'Shea, a fine Irish tinsmith, was hale and ruddy-cheeked. This evening his body – spent now of spasm – is stiff, his skin blue and taut on his face. His death is certain – all but the last of his bodily fluids have fled, as will soon his soul. I have done all I can do, but my bleedings and compounds have been of little use. I am of little use. Outside his Corktown dwelling a hasty coffin leans against the wall, ready. I note it when I leave, his family's lamentations in my ears. In the coming days, many of them will also fall, as quickly, as dreadfully, with fewer to mourn the emptying abode of the innocent and doomed. I ride to the northwest through the choking dust of the dry summer streets. A dull patina covers this cursed city like a shroud. Out on York Road, a steady procession of wagons filled with the wrapped dead slouches towards the lime pits of Burlington Heights. There, the bodies are dumped and

quickly covered before the pestilence can make its way back along that weary road. I pause, my hat upon my heart and turn away. One more patient, his only hope his Redeemer, awaits, then I head home to my good wife and my darling daughter – two bright doves in this dismal hour.



## The Chess Game

**September 8, 1858**

I moved a pawn of my own forward, black to MacDonald's white. "And what is it that you wish to say?" I asked, though I feared I knew the matter.

"Your theories, Tiberius," MacDonald said. "How far have you taken them?" Another pawn advanced.

"My calculations ..."

"Please," he said, "your move."

"Sir," I said, for I could not contain myself in the presence of my great friend. "I have designed the most remarkable gearing, built upon the Fibonacci series." I brought a knight forward.

"And these gears are capable of what, in theory?" My mentor countered with a knight of his own.

"Offsets of space, and time. These devices, I call them nautilus gears, are meshed. The left rotates at a constant rate, the right skips forward in perfect synchronicity, never losing contact with its twin, but jumping harmonic to harmonic!" I brought a bishop into battle. "Provided, of course, that sufficient electrical forces might be brought to bond the gear pair to the ebb and flow of our normal time and space." The good doctor mirrored my bishop, then lit a fresh cigar.

"Hickson knows what you are about," he said through a wreath of smoke. "It was as plain as the ruddy nose on your face. So let us abandon this game and I will ask you directly. When did you first let the gears dip into the stream of time and space?"



## The Last Doll

**August 5, 1854**



The morning following the death of Thomas O’Shea, I awoke to my daughter Miranda playing with her two porcelain dolls, Alice and Jane, from which she was inseparable. My wife had already been out delivering a wholesome broth to a neighbour on Catharine Street. She was removing her bonnet as I came into our small kitchen. She sat heavily at the table and smiled at Miranda, who was hosting a tea party for the dolls. Then she closed her eyes, shivered and slid sideways on the back of her chair. I was at her side in an instant. I caught her as she turned away from the table and was ill upon the floor. Miranda dropped the dolls in horror, shattering Alice’s head. I carried my poor wife to bed and closed the curtains. It was, I told myself, her exhaustion, something she ate. “Mama is poorly,” I told my daughter, frozen at the doorway. “Fetch my bag from the hallway, then go see Mrs. MacKenzie and visit a while.” The dear child returned with my bag, clutching solitary Jane in her other hand.

I stayed with Adelaide all that day and into the evening. It was happening, but I could not bear to acknowledge it was happening. It tore my heart to tatters to perform venesection on my wife, to see her precious life blood fill my metal bowls, to watch the calomel and quinine perform their brutal alchemy on her frail, failing frame. But it was all the physic I could muster from my savage art – that and my prayers to a God I saw receding with each mumbled syllable of desperate pleading.

Near 11 p.m. she rallied a little and beckoned across the room. “In the drawer,” she said with great effort, as if dragging stones from a deep ocean. “Bring it to me.” I opened the drawer. In the back was a small dove-tailed and mahogany box I had not seen before. I quickly pressed it into her hands. She smiled, her lips thin and pale against the blue-tinged skin of her lovely face. “It was for your birthday, two months hence. Take it with you always. Heed it.” She handed me the box. Inside was a golden pocket watch. I opened it and saw a photograph of my darling pressed into the lid. A half-hour later she was still and I was alone and adrift, my sobbing head upon her chest and the watch clasped to my heart.

Oh reader, my grief crushed me like a giant’s hand and wracked my body with spasms I could scarce control. Later, I know not how long exactly, I heard a sound at our bedroom door. Mrs. MacKenzie was there, Miranda’s last doll hanging from a pale hand. The good woman met my gaze, a wail beyond redemption filling the room like the buzzing of flies.



## Endgame

**September 8, 1858**

I abandoned all pretense of the chess game and slumped in my seat. “Not time and space, no – space only,” I offered weakly.

“I thought as much,” said MacDonald. “You did not speak as a man of theory earlier, but as a man of action, a foolhardy man of action.”

“It works, sir, it works!” I replied. “I have crafted small, crude nautilus gears, induced them with electromotive force and have shifted a small device a full inch across my lab bench! First it is here,” I grasped a pawn and propelled it forcefully a square forward, “and then here, in the blink of an eye, with no intermediate motion!”

“Instantaneous transportation across space!” exclaimed my mentor, excited despite himself. “But here I must concur with Hickson. It seems impossible! You claim to journey in time as well! I fear for your sanity, sir!

“Fear not, my friend, it is as I have said, and my grey matter is sound. One day soon I will show you.”

“Until that day I shall have to trust your word. But, Tiberius, you have tipped your hand about this supposed miracle of science to a man of war and a friend of one of our country’s great railway barons. And, angered him in the mix. Think what you have done. If it works, your scheme could unseat the entire transportation industry at a single blow!”

“Spatial transference is a mere side effect,” I argued. “I aim to conquer time itself. I care not a fig for Hickson or Buchanan nor their hulking metal beasts of burden and infernal devices!”

“Nevertheless, Tiberius, I have heard that Hickson, though a lumbering old soldier, is still a crack shot. And you, sir, have placed yourself squarely in his sights.”



## The Aftermath Of Death

**August 7, 1854**

Adelaide and Miranda are both lost to me! Miranda's thin body lies in Mrs. MacKenzie's bed, wrapped in sheeting. Two coffins lean upon my own home, one so tiny it could not hold all my daughter was in life. The hollow service, my more hollow home, its every scent, possession and memory – precious mockeries.

I am told that the night of the funerals, the good Reverend Burnet found me prostrate at the doors of St. Andrews, screaming at the God who had so forsaken me. Mrs. MacKenzie, spared from the pestilence, took me in and nursed me through days and nights I could not bear to emerge into the light. My patients meant nothing to me, nor did life itself. After two weeks I returned to my own home and drowned myself in bitter laudanum, its mad sleep my only respite. In the dreams it brought on, I was scrabbling in the dry earth of a nearby street. Flies covered an object buried there. I brushed them aside and discovered the watch Adelaide had given me. It appeared to me that the case was transparent and I could see the gears within. But they were distorted, twisted into strange spirals. The hands of the watch were skipping forward in an erratic St. Vitus' dance, as though a mockery of cholera death throes. All around me the landscape changed, now the dirt and dung of my own time, then a strange hard surface, black as tar and marked by worn, painted lines. Dust returned and through that dust came a snail, its shell spiraling inward as it moved. Sunflowers burst from the dry ground, their centres likewise spinning inwards, endlessly. Upon my ears came harmonies so sweet and pure I thought though God had abandoned me, he had left his angels in his wake.

I began, slowly, to return, during the day, to a semblance of life. I saw my patients and did my best by them, but at night I let the purple bottle of opiate coax what little sleep I could squeeze from my mind, as I felt myself forever drifting in a time no longer my own.



## The Chronocycle Revealed

**September 8, 1858**

“Gunsights, or no,” I told MacDonald, “I have in mind to create a remarkable conveyance!”

“Which might be?” he asked, gathering up the chess pieces from the board.

“I call it the Chronocycle. It is that which I intend my nautilus gears to control.”

“Chrono, as in time, of course,” said MacDonald through a smoky haze. “But you said yourself earlier tonight such time travel would take massive amounts of power. How would you come by such brute energy, my young friend?”

“We all know of the great waterworks now underway near the lake,” I said.

“A prodigious undertaking indeed, supplying fresh water to all of Hamilton from water pumped from Lake Ontario to a reservoir on the Mountain.” He paused, grinning around his cigar. “The pump ...”

“Exactly,” I exclaimed. “It has two mighty 100 horsepower engines, but more vitally, they each have the force over distance, the torque, I require to propel the Chronocycle into the time stream! But I have months of work ahead of me before that can be accomplished.”

“Then work with stealth and strategy, sir,” said MacDonald, placing a few pieces on the board. “No more outbursts such as tonight’s display, I beg you.” He motioned to the board, “Speaking of strategy. Tell me, what single move might white make so as not to put the black king in checkmate?”



## Sub Rosa

**September 9, 1858**

I write this in the surgery I rent from Dr. James Bates. Here I have dwelled since I sold the home I shared with my beloved family. Bates will soon retire and is happy to let me make use of his offices on the days he would rather spend reading Marcus Aurelius and tending to his turnips and roses. He is likewise happy for the small income he makes from me as a boarder in a small upstairs room of this Gore Street abode. It is centrally located and has a pleasant hominess to it, though, like Bates himself, it is showing its age in a genteel way.

It is late and my lantern casts long quavering shadows on the woodstove that squats in the corner beside an engraving of our Queen Victoria. The objective lenses of my Leitz Wetzlar microscope catch the light on its burlled edges and the frosted lids of my glass medicine bottles glow softly in the dim light. A scale I use to measure newborns sits on a cabinet of medical files.

I feel a simpleton tonight. Last evening my loyal friend Dr. MacDonald had schooled me for my foolishness. I should not have allowed my pride and anger to suggest to Hickson that I was on the verge of a breakthrough of this import. Idiot! Of course a conveyance that makes laying rail and road or plying dangerous waters obsolete is a threat to men like Hickson. Or imagine my invention as a weapon of war! Whole battles could be replayed with the odds rearranged! Enemy lines would be so much gossamer and futility. Imbecile that I am, I failed to see so obvious a danger! Seen in this light, my Chronocycle should soon be wrested from me!

No more! Henceforth no talk of my theories! All my calculations, planning and experimentation shall be done in secret and stealth, as MacDonald advised. From this day forward, to the public, and even to my Society fellows, I shall be the forlorn and fanciful Dr. Hess, as harmless as a gadfly. My light shall be kept under a bushel, my method subterfuge and silence. But, like a burrowing mole, my undertaking will proceed apace, sub rosa. By these words I swear.



## An Assistant Is Forged

**September 25, 1860**

The rain is unabated and my pursuer harries me once again, emerging from the woods that shielded me from his view. I know that a few blocks away my assistant Angus Ambrose awaits in the laboratory. He is doubtless full of worry at the late hour but is, I have no fear, keeping my Chronocycle in readiness. It is with this invention that I soon shall ply the waves of time and space!

Three years ago, Angus was a machinist in John Gartshore's foundry in Dundas. There the mighty engine – tonight churning in the Waterworks far to the east of the city – was cast in hellish flame and molten metal. But one July afternoon, when Angus toiled at a gear casting, the mould shattered and red hot iron seared his leg. I was nearby, as I was filling in for my friend Dr. McMahon, a fine, progressive physician of that prosperous town. I arrived to find Angus in great pain, a leather belt clenched in his teeth.

At first, I feared I would have to remove the limb. I managed however to spare him that agony,

for which he was most grateful. The accident, however, left him unemployable by Gartshore, as he informed me when I attended to his recovery. It was then I proposed that he become my laboratory assistant.

“I have,” I said, “a most curious undertaking that will require your finest machining skills, some reconnaissance and your discretion.” I offered him \$1.50 a day for all three.

“Pleased to be at your service, Doctor Sir,” said Angus, and a fine servant has he been.

My pursuer gains the roadway just as a carriage, its sole light bobbing, passes. I look to his hand once more. What I had feared was a gun is not! Instead, a fearsome hook extends from the black of his cloak. I press myself against a thick wall and wait, the events of the last years scrolling behind my closed lids.

Angus began work at once, helping me refine my drawings and securing me the necessary equipment: dynamos, metal lathes, coils and necessary voltaic piles. The concept, born of my fevered dreams, I had known would require capital. And so, with more discipline than desire, early in my enterprise I had invested well and wisely in grains and pork. I did myself – and the Gore Bank – proud, and provided myself with a comfortable annuity.

Angus was a competent machinist and set about casting and lathing all that could not be purchased or cajoled quietly at a variety of establishments about town – bearings from the Wanzer factory, cabinets from Meakins & Sons, castings from the Mary Street Foundry and various pieces of milling and smithing from the fine craftsmen who surround us. That which was more esoteric I obtained through international brokerages or via a variety of ad hoc companies I set up for the purpose, or by placing anonymous ads in *The Daily Spectator*:

*WANTED*

*A leather doctor's examining chair, some honest wear acceptable, frame must be of sturdy metal amenable to welding.*

*WANTED*

*Gold pocket watches. Will pay fair price for fine quality.*

*WANTED*

*Job lot of insulated copper wire of stout and consistent grade capable of conveying large voltage, purity of utmost import!*

We toiled night after night, me feverish at my calculations, Angus keeping a coffee pot on the hob and fine-tuning this or the other small model that he skillfully crafted. One evening, about six months ago, I examined his latest model, a brass and copper instrument with a capsule the size of a loaf of bread. "I think, Mr. Ambrose," I said, "it is time you find us a stray cat or two."

A sound breaks my reverie. It is the stranger, passing not ten yards from my hiding place. I hold my breath and listen as he passes, dark oaths on his lips. He slips by, circles and returns south, back the way he came. I dare not move for a few minutes more, then as silently as I can, I make my way toward Angus and my appointment with Time.



## The Man Of Business

**October 12, 1859**

Sam Kellogg was a nervous man of two score years. His belly challenged his grey waistcoat and a flat hank of hair strained to reach across an oily and mottled pate. Kellogg closed the commerce pages of his *Daily Spectator* and looked out sadly at James Street. "Dr. Hess," he said, waving his hand at the window as he looked toward me. "Overextended! Dreadfully overextended! God knows what Beasley and the others are thinking," he complained. "The railways, some gaudy bauble of a water feature in the Gore and now that pump house nonsense in the east end everyone is ballyhooing about."

"The Waterworks? I favour it, sir, for several reasons," I countered. "It will, I believe, bring fire insurance rates within reason. There is talk of modern hydrants for our brave firefighters everywhere, and abundant water for all."

"True enough," he said nodding, "But it will take more than quenched thirsts and a few fresh factories to unburden us, I fear. Now, to business. You wish to purchase a warehouse, Doctor?"

"Yes, at the corner of Nichol and Wilson."

Kellogg swung in his chair and examined a city map he had framed on his wall. "Nichol and Wilson," he muttered, running a finger over the glass. He tapped it with satisfaction. "That is far from the hurly-burly of the docks, I must say," he exclaimed as he turned back to face me.

"Quite so," I said. "North-east corner; a Mr. Kennedy is the owner. The price is fair and it is

available. I believe my company, Faraday Holdings, will do nicely for this transaction, Mr. Kellogg.”

“As you wish,” he replied, “I will see to it immediately. Is there any other business you would like to transact today?”

“Edward Zealand’s fine schooner, the *Dove*, will soon be in port with a large shipment of raw cotton.”

“I was not aware.”

“Nonetheless,” I replied. “I wish to purchase the cargo.”

“How much shall I obtain for you, Doctor?”

“All of it. The capacity of the warehouse should be sufficient. I’m certain arranging the transfer of the goods will be a trifling matter. I shall obtain the key to the warehouse on my next visit.”

“Very good, sir. Anything else?”

“Yes, there is, Mr. Kellogg. You know John Pettigrew, the watchmaker?”

“Indeed sir, his shop is near the Royal,” he said, pointing out the window.

“The very man, indeed. I wish you to broker a discrete transaction. Please inform him you have a client who wishes to remain anonymous.”

“Of course,” Kellogg said, making careful notes.

“Tell him this gentleman requires the handcrafting of an exotic and extremely precise gearing mechanism, tooled to exacting tolerances. His skill and silence, of course, will both be handsomely compensated, as will yours.”

“Consider it done, sir!” Kellogg responded with a theatrical flourish of his pen.

“Thank you. And Kellogg,” I said, donning my hat. “Do try to find a bit of artistic sentiment in that businessman’s heart of yours. If I were to return here in 100 years time or more, I’d wager the fountain destined for the park in the Gore will still be a balm to perambulating Hamiltonians.”





## The Laughing Stock

**October 8, 1858**

I have just come from our monthly society meeting at the Royal. Richard Prince had finished a detailed lecture on the design of the ingenious Roman aqueducts, though I confess when he quoted at length from Vitruvius' Latin works on the subject I found myself wool-gathering for some long moments. Captain Hickson was there, and during the ensuing discussion, commented on the strategic advantages of the underground waterways during the Third Samnite War. I had wanted to engage him on this matter, as the provision of good water has strong merit in its own right, but I held my tongue.

"But perhaps," the Captain said, turning in his chair towards me, "Hess here might enlighten us with his first-hand observations of these architectural wonders, having witnessed their construction using only the energy of a maiden's sigh."

Prince cleared his throat and others elsewhere in the room looked our way.

"Well played, sir," I responded. "I am chastened in my enthusiasms of last month. I can but blame the burgundy for my flight of fancy."

"Indeed," said the Captain. "You were most convincing in your conviction and calculation when last we met. Perhaps you would like to indulge in a bit of humble pie this evening?"

"I shall, with apologies," I responded. "And now that the topic has changed from water to wine, perhaps I shall wash it down with some of the house's fine port, gentlemen."

So I begin, letting Hickson's thrusts hit home, playing the public laughing stock, though every fibre of my nature fights against the necessary pretense.

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## My Mentor Witnesses The First Test

**March 12, 1860**

The calico cat paid us no heed as it lapped milk from a saucer I had placed on the floor of my stable cum laboratory. Mindless beast that it was, it was unaware of the place it would soon take in the history of science. For a week now, Angus and I had been testing his latest prototype – devoid of passenger. We had shifted the empty capsule a few feet back and forth across the stable floor with jolts of electricity released from the voltaic piles we had stacked in wired columns along one wall. We worked alone and in secret, often at night, our lights and sudden flashes hidden from the world by dark curtains we strung up over the stable's small windows. Tonight, however, I had invited my mentor Dr. MacDonald to observe. I had been giving my loyal friend updates on my progress since that night almost two years ago now, when I had confessed how close I was to turning my theory into practice. In all that time my mentor had not asked to see my laboratory. Now he paced it, ubiquitous cigar in a hand behind his back.

"This is your dynamo," he said, pointing to a large cast iron device we had bolted deep into the floor of the stable. "And this your commutator, for generating direct current?" He pointed to the heart of the electric marvel with his cigar.

"Just so!" I said proudly. "It is powered via the steam from the boilers," I added, pointing to a black cylinder throwing off prodigious heat. "I have adapted these voltaic piles to store a great deal of electrical energy, then release it in an instant!" I showed him a length of wire running from the piles to the Chronocycle. "The electric force is like that of a lightning strike!"

MacDonald, a kind soul, bent over and stroked the calico behind its ears. "And this fine fellow will be our chrononaut?"

"A brave new word!" I exclaimed. "I shall note the neologism as your own in my journal, sir."

MacDonald stood upright and then bowed slightly. "The floor is yours gentlemen."

Angus picked up the cat and lowered it gently into a metal tray he had welded to the small Chronocycle. We placed the device at the east end of the stable and had set the controls to shift it five yards to the west. There, on the floor, Angus had placed a black wooden box, barely an inch larger than the Chronocycle on all sides.

"Best don these glasses," I said to MacDonald as I handed him a pair of blue spectacles with tinted sidelights. Angus and I each put on a pair of our own.

"Whenever you're ready, Mr. Ambrose," I said and encouraged MacDonald to step back a few

paces with me. Angus walked over to the nearby control panel, adjusted a couple of rheostats and then pulled down on the oaken handle of a large copper switch. Green light filled the room for an instant and there was a popping sound, much like a cork leaving a champagne bottle. A tang of ozone filled our noses.

As one we removed our blue spectacles and looked out into the stable. The Chronocycle appeared to be gone! All that rested in the middle of the room was the black box. Angus stepped forward, bent down and lifted the box from the floor, revealing the Chronocycle. There was a yowl of displeasure from inside the container. The box jerked in Angus's hands as the brave chrononaut leapt free and rocketed into a corner of the room. The Chronocycle itself sat on the floor, whole and undamaged.

"Astounding, gentlemen!" MacDonald exclaimed as he pumped our hands in congratulations. "But what was that struggle with the box, and why was the cat so discomfited?"

I confessed ignorance and curiosity. Angus turned the box upside down in his free hand. On one side, a large patch of the cat's fur had embedded itself into the molecules of the wood itself. The calico had torn the hairs from its hide in the haste of its terrified escape.

"We must refine our spacial offsets," I said to Angus. "Perhaps to six decimal places." I turned to MacDonald. "The nautilus gears are not yet to the tolerances we require," I explained.

MacDonald's face darkened. "This is dangerous business indeed, Tiberius. A few more inches and the poor beast's very vitals would have been ensnared and destroyed. Death would have been either instantaneous or an agonizing few moments of horror. Even more so for a sentient being who would know the full import of such an unholy injury."

Angus met my eye then looked down.

"But, still," said MacDonald, "I am astounded by what you have achieved, sir."

"There is more," I replied, nodding to Angus.

My assistant stepped outside and returned with another cat, this one a ginger with a white diamond-shaped patch on its nose. Again Angus placed the feline in the Chronocycle. He then produced a small timepiece from his breast pocket. I extracted my own from my waistcoat, noting Adelaide's sweet face as I opened the lid. Both watches agreed it was 10 minutes past the hour of eleven. Angus placed his in the Chronocycle beneath the lazy cat and stepped over to the control panel. This time I joined him, and fit my watch into a hollow designed to hold it

snugly.

“This will establish the flow of time we experience, as if it is the conveyance’s heartbeat,” I said to MacDonald. “In turn it will magnetically engage a nautilus gear that will mesh with its fellow, which will skip along the harmonics of the time stream the Chronocycle will experience.”

“Remarkable,” exclaimed MacDonald, bending closer.

“In the final model,” said Angus, “we’ll be puttin’ all these controls right in the chronocycle, so’s the chrononaut, as you say sir, can have them handy.”

“Let us stand back,” I said and donned my glasses, as did my fellows.

Again a green flash, the pop and the acrid scent of the allotrope of oxygen.

This time the Chronocycle and its inhabitant vanished completely.

“Now we wait ten minutes,” said Angus, looking up from the controls. To pass the time, Angus proudly showed Dr. MacDonald the details of his machining and wiring. At the appointed moment we were interrupted by a pop as, right where it had been before, the Chronocycle reappeared.

Angus bent down and picked up the cat, unharmed and unconcerned. I retrieved the pocket watch and showed it to MacDonald.

“11:10!” he exclaimed. “Why, no time at all passed for the puss!” MacDonald’s face suddenly turned white. “A chair, please!” he cried out. Angus responded in an instant and I knelt beside my stricken friend. My mentor waved me away. “I’m fine, sir. I, I am just overcome with the miracle of what you have achieved.” He passed a hand over his ashen face and looked up at me. “And by the knowledge of what you plan to do next.”



# Xanadu And The Dream Of Black Roads

**March 14, 1860**

Two days after the successful experiments with the cats, I was sitting in the Arbor Dining Hall with MacDonald, he anticipating one of the fine cigars the proprietors proudly imported.

I had just gone over the finer points of our calculation of geographical offsets using circular bubble tubes, analytic telescopes and barometers, for elevation.

“So,” MacDonald said, lighting up a heady corona. “If I understand your mad scheme correctly, you intend to use these calculations to transport yourself and the Chronocycle into the heart of the Waterworks pumping station while its behemoth engines are running.”

“Just so,” I said. “The resourceful Mr. Ambrose has obtained a copy of the pump house blueprints from his former colleagues at Gartshore, so we know the exact dimensions, and, with our geographical instruments, its precise offset from the laboratory!”

“And you plan to, what? Hitch your time-travelling wagon to the engine’s spinning flywheel?”

“Precisely!” I exclaimed, trying to keep my voice low in the hall, though few patrons were about, so long had we tarried over lunch. “Each of the Woolf Compound beam engines generates 100 horsepower.”

“As do many steam engines employed by industry,” interrupted MacDonald.

“But it is the torque of the 24-foot diameter pumphouse engine flywheel I require,” I said. “I can use my dynamo to propel the Chronocycle to the engine deck of the pumphouse and then rapidly engage the crown gear of the mighty flywheel to thrust my conveyance into the time stream.”

“But, if your offset is inaccurate by even the slightest margin, your arm could be embedded in the limestone of the pumphouse wall, or your face ensnared in a cast iron pillar!” exclaimed my mentor with no small degree of alarm.

“Our calculations and readings are sound,” I assured him, though, in truth, doubt was a demon upon my own shoulder. “And I have employed John Pettigrew, the watchmaker, to fashion

full-sized nautilus gears of sufficient precision to align with the finest time-stream harmonics. He shall have them completed by September at the latest.”

“And when do you propose this madcap scheme take place?”

“Upon my birthday, October 5,” I said. “If the pump house engine is running.”

“That would require refreshing the reservoir on the Mountain, as I understand it,” said MacDonald. “With an ample supply of water, the engines lay idle.”

“Yes. We have little control of that, though I have made some provision. What think you, sir?”

MacDonald stubbed out his cigar in a glass ashtray at his elbow. “What I think will alter nothing,” he said. “But I continue to believe this is foolhardy beyond imagining! Supposing you can, in fact, travel in time like a leaf on a river – where, or more exactly, when, will you go?”

“In my dreams, all those years ago it seems now, I saw roads smooth and black, roads that are now but dust, decay and dung. I will cast myself forward past this century and the next, beyond our pestilence and death.”

MacDonald raised his hand to a waiter and looked at me solemnly.

“And will you return from this Xanadu,” he asked, with resignation in his voice.

“Our friendship excepted, sir, there is little to compel that. I already feel I have been a temporal vagabond, unmoored from time and space, these six years past.”

“A chrononaut of the wounded heart,” MacDonald said sadly, offering his hand. “May that heart find peace at some other time.”



## A Traitor Revealed

**September 24, 1860 - 2 p.m.**

We are betrayed! Richard Prince, a Society member whose analytical telescopes I had recently purchased, called on me in my surgery earlier today. He was breathless with excitement and

threw himself into the leather examining chair beside my desk. The dry heat of the day had exhausted him.

He had, he explained, just come from lunch at the Argyle Coffee Rooms. There he had overheard Captain Hickson in conversation with my man of business, Kellogg – the foul traitor! Prince, who is a man few notice, sat behind Hickson and was unknown to Kellogg.

“I was gobsmacked, sir!” Prince told me, mopping his brow, so rapidly had he come from the incident. “Kellogg was telling the Captain that a certain doctor who had suffered a great loss had been carefully amassing a tidy fortune. The doctor in question, who had a foreign last name, had been making strange purchases using a variety of companies Kellogg had created at the gentleman’s behest.”

Prince then relayed this conversation to me:

Kellogg said, “Hess is buying electrical apparatus from Germany and ferrous materials from Russia! And much copper wire and voltaic mechanisms from the Balkans!”

Hickson responded, “You are right to bring this to my attention, sir! A loyal subject of Her Majesty would do no less. And what has become of this dangerous gimcrackery? What are his intentions?”

Kellogg replied, “I know not, but he demands utter secrecy and employs various craftspeople anonymously. I only know his shipments of late have increased and there is great urgency in his manner! He has one warehouse at the edge of town, and others, I know not where. I worry sir, I worry.”

“Fear not, I shall deal with this,” said Hickson. “I shall speak this afternoon to Buchanan and Captain Ryckman of the Wentworth Cavalry. Doubtless we shall have a man on him to track this scoundrel to his lair. He has played us for fools!”

“I am much relieved; I hope I did right,” Kellogg said.

“Fear not, I shall inform Buchanan of your loyalty. I’m certain his custom will continue heartily for this intelligence,” Hickson replied.

“That was all I heard,” Prince said, sitting up in the examining chair. “Dr. Hess, I know you as a man of science and of medicine. I tell you this to warn you. I do not know what you are about and it is no concern of mine. But I say this to you: Hickson is not to be trifled with. Whatever it is you must do, do it with all haste or risk calamity!”



## The Contingency Explained

**September 24, 1860 - 7 p.m.**

“I must make the jump early tomorrow morning,” I told MacDonald and Ambrose as we gathered in the laboratory. “There is not a minute to be wasted!”

I had sent them notes earlier, in a keyed Caesar cipher we had devised between us, using the key CORONA – in MacDonald’s honour – to decipher the text:

TLKFDET SAVAK ICO RLJA CS TELUDE BLIILWAN

TONIGHT SEVEN LAB COME AS THOUGH FOLLOWED

I had informed them of Kellogg’s foul treachery and Hickson’s intention to have me trailed. “I am unaware of a man on me yet,” I said. “Did either of you note a pursuer?”

“Not I,” said MacDonald.

“Nay, sir,” echoed Ambrose.

“Good men,” I said, claspng their brave shoulders in turn.

I had pinned maps of Hamilton and a blueprint of the Waterworks grounds to a wall of the lab and stood before them.



"I worried this day might come," I said, "and have made provision. But our timing must be precise and our hearts unfailing."

"I am with you," said MacDonald.

"I stand as your servant, sir," said Ambrose.

"Then this enterprise cannot fail!" I exclaimed.

I stepped up to the city map.

"As you know, it has been a dry and dusty season and water has been in much demand at local fountains." I tapped their locations on the map. "But we know from our telescopic surveillance that the reservoir, here," I placed a finger on the open basin on the Mountain to the east of the city, "is low, but it has not near exhausted its 25-foot depth, so the Waterworks pumps are not running."

"That is true, sir," said Angus. "I had a pint with one of the oilers from the pump house last night and all is quiet as a sleeping nun up there at the pump, it is."

I turned our attention to the downtown segment of the map.

"Almost a year ago I purchased a warehouse, here," I indicated my building just west of downtown near the waterfront. "It is currently packed with cotton, nicely dried by our arid weather. I gestured to a glass vessel on a table beside me. "I have prepared some of that cotton with a bath of nitric acid," I explained.

"Guncotton, pyroxyle," said MacDonald.

"Just so," I said. "A most flammable compound."

Angus's eyes lit up. "I see, sir. Ay, that's clever!"

MacDonald exclaimed, "You speed ahead, the pair of you!"

"I selected the warehouse as it was far from neighbouring buildings. So, should it catch fire, little damage would be done, other than to itself," I explained.

"And should it catch fire, Dr. MacDonald," Angus explained, "Old Mr. Boyd, the chief engineer of the Fire Department, he would have no choice but to call upon Joe Hoodless and his No. 1 Company to open them new hydrants to cope with the inferno!"

“Exactly,” I said. “A major fire taxes the reservoir to the extreme, especially in these dry conditions. So the pumps would be called into service.”

“All well and good,” said MacDonald, sitting himself upon an upended log. “But how would the Waterworks know of such a calamity? No telegraph lines run four miles from the city’s limits!”

“Billy Calder, the reservoir keeper, can see all of downtown from his house up there on the Mountain.” Angus walked up to the map and pointed out the reservoir. “Billy can get down to alert the pump house crew in under an hour’s ride.” He traced the route on the map with a grimy finger. “I timed it myself with Jack, he’s my horse,” explained Angus proudly. “And me with my game leg and all.”

“I have still to get the final two sets of nautilus gears from Pettigrew, but I shall early tomorrow morning – by 1 a.m., I hope. I had to press him sharply for the favour, but he is a fine craftsman and promises satisfaction.” I laid my hand on the glass vessel beside me. “Dr. MacDonald, I must ask for your assistance with the pyroxyle. I assure you, no harm will come to anyone. The loss is mine alone.”

MacDonald nodded.

“If the conflagration begins at 10:30, about three hours from now, Calder should see the flames a short time later. By 11:30 or thereabouts, he will have arrived at the pumphouse and will have alerted James McFarlane, the chief engineer.” I pointed to an overhead view of the Waterworks grounds that Angus had rendered. “McFarlane lives next to the pump, and the crew house is on the property as well, so they will act swiftly.”

“My oiler mate, George, says they can leg it when needs be,” added Angus. “My mate says, what with all the dry weather they’ve banked down the boilers, so it won’t take long for them to fire up full.”

“Excellent,” I replied. “Angus, you start our dynamo’s boiler at midnight. We should have sufficient steam to generate the Chronocycle’s electromotive power in time. I’ll retrieve the gears from Pettigrew and make my way to you as quickly as I can.”

“The sky looks foreboding,” said MacDonald. “Pray God it does not rain immediately.”

“I will leave the prayers to you,” I said to my brave mentor, and turned from the diagrams to face them.

“Gentlemen, I could not ask for better fellows for such an adventure!” I exclaimed. So saying I

clasped their hands in friendship and bid the company good luck as we dispersed into the gathering dusk of the violet hour.

