

TOM SWIFT AND HIS AERIAL FIRETRUCK

OR

*FIGHTING INFERNOS WHILE GETTING
HIS OWN BACK AT A MEAN YOUNG MAN*

BY

VICTOR APPLETON

AUTHOR OF "TOM SWIFT AND HIS MOTORBOAT," "TOM SWIFT AND HIS
AIRSHIP," "TOM SWIFT AND HIS SUBMARINE BOAT," ETC.

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THE TOM SWIFT SERIES

TOM SWIFT AND HIS MOTORCYCLE

Or Fun and Adventure On The Road

TOM SWIFT AND HIS MOTORBOAT

Or the Rivals of Lake Carlopa

TOM SWIFT AND HIS AIRSHIP

Or the Stirring Cruise of the Red Cloud

TOM SWIFT AND HIS SUBMARINE BOAT

Or Under the Ocean For Sunken Treasure

TOM SWIFT AND HIS ELECTRIC RUNABOUT

Or the Speediest Car on the Road

TOM SWIFT AND HIS WIRELESS MESSAGE

Or The Castaways of Earthquake Island

(Other volumes in preparation)

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Tom Swift and His Aerial Firetruck

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THE TOM SWIFT SERIES

Tom Swift And His Aerial Firetruck

By Victor Appleton

Book eleven in **The New Tom Swift Invention Series**, titled *Tom Swift and the AntiInferno Suppressor*, heavily references a certain notebook written more than a century earlier by the Tom of this adventure.

While it is not necessary to enjoy either story without the other, I believe that the reader's experience may be enhanced by reading them together. In which order is up to you. My belief is that while one uses points from the other, both are standalone stories.

An effort was made to write this in somewhat the style of the books from the early 1900s, but that is a Herculean task at best. So my hope is to be forgiven if the reader finds some of the prose in this a little stilted and old-fashioned.

This book is dedicated to Howard Garis who wrote many, many of the original Tom Swift stories. As I read those later in my teen years I gained great pleasure knowing that he also wrote the Uncle Wiggily stories I loved as a small child. Thank you, Mr. Garis.

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This story takes place somewhere between the books
Tom Swift and His Wireless Message and
Tom Swift Among the Diamond Makers

AUTHOR'S NOTE:

More than one hundred years ago, when the first Tom Swift books were published, there were differences in how books were written. For instance, what we call “gas” was “gasoline” because a gas was something like air or propane or, as in this case, carbon dioxide.

To add to all that, spelling was often a hit and miss proposition with one editor or author preferring it differently from another. Then, when you added in the typesetters, few of whom were educated, guess work was all part of the process.

I have attempted to capture some of that in this “historical” novella. And so, as you read you might find things you question, believe to be mistakes, or are just plain strange.

While I cannot guarantee that each and every one was intended I can tell you that I know of at least fifteen instances that are not in keeping with spelling, grammar, word usage or punctuation by today's standards.

I suggest that you put your “editor's eye” into neutral and enjoy this for what it is. I promise that it will not ruin your appreciation of the story unless you are a strict grammarian or an English teacher.

For those people, I can only beg forgiveness for trying to capture the feeling of the original Tom Swift books, in this case about circa 1913.

Quality paperbound copies of all of this author's works may be found at the following web address:

<http://www.lulu.com/spotlight/tedwardfoxatyahoodotcom>



TOM SWIFT and His Aerial Firetruck

CHAPTER I

A HARROWING EXPERIENCE

"I CAN'T BELIEVE this is happening," cried Mr. Wakefield Damon—an eccentric man generally given to more fanciful exclamations—said to the teenage boy and his friend standing to his right.

"That is certainly a great pity," the first boy told him. "The old Shopton Hotel has been a fixture in this town for more than fifty years, and here it appears to be ready to crumble into just so much soot and ash."

Indeed, the old wooden structure, a full five stories tall and by far the tallest structure in the small town set next to Lake Carlopa in the northern area of New York State, was now fully engulfed in flames and smoke. Later there would be whispered accusations and rumors of a mischief gone wrong, but for now all anybody could think was that the fire was getting the better hand against the small fire department and their two trucks.

Even with a portable pump and a hose tossed over the side of the small dock on the lake just one block away, not enough water was getting to the current concentration of flames that threatened to take out the fourth and fifth floors.

"Oh, bless my garden hose, but I do wish they would direct their

efforts where it might account for something,” Mr. Damon cried.

The second boy had been watching the disorganized men of the fire department as they rushed here and there, stopping to aim one of their water streams at flames escaping from windows that were shattering and exploding outward from the intense heat. In his mind he could tell that this was not going to end well.

Tugging on his friend’s sleeve, he tilted his head toward the building and asked, “Why are they only watering the fire down here? Why don’t they start up on top where it is really roaring and work back down?”

His friend, Tom Swift—teenager, inventor and son of Barton Swift, also an inventor—looked back at him. “Well, Ned,” he began as he stood next to his best friend, “you see, the problem is that water is very heavy and it requires a lot of power to make it fly through the air. So much that I am afraid our little fire trucks can’t provide it. That goes double for the oldest machine, the hand-pumper over by the front entry.”

“Why don’t we get bigger trucks?” came the innocent question.

Tom almost had to laugh in spite of the terrible situation happening behind him. “Ah, out of the mouths of babes, my friend. It is actually an excellent question and one that ought to have an excellent answer. But alas, I have only to tell you that such trucks do not exist. Even down in New York City where I believe they have trucks with extension ladders capable of reaching practically to the top of our doomed hotel, the truth is that water being pushed upward in a hose forms a very weighty tube. Then, for each new gallon of water added to the beginning of the tube, that means practically eight pounds more to have to push upward. So,” he was ready to turn this and any other experience into a teaching opportunity for anyone who would listen, “if a hose contains one hundred and fifty gallons at eight and a third pounds, how much weight does the pump have to push?”

Ned Newton was a junior teller in one of the town’s two local banks, and could do many forms of mathematics in his head. His face scrunched up as he pictured the numbers and did the sums.

“Twelve hundred and fifty pounds.” And, as soon as he uttered the answer his eyes widened when he realized the enormous figure

he had just quoted.

Nodding in agreement, Tom told him, “Right.”

“Golly,” Ned exclaimed. “No wonder they’ll never put out that fire. You have to invent something to do it, Tom,” he stated with the assuredness of youth.

Looking to his friend and mentor, Mr. Damon, Tom shrugged. What could he do? He was certainly adept at things mechanical, but doubted that he might create an improved pump. The latest ones no longer featured cylinders and valves working somewhat like automobile engines did—up and down, water in one side and out the other under pressure—but now featured powerful diesel motors that turned gears that in turn spun a multi-bladed fan-like object inside a circular chamber. With a special curvature of the blades it was now possible to both pull in water from a nearby source and to speed it up greatly as the blades turned, expelling it at high pressure.

He knew that the Shopton fire department used the older pumps with barely a fifty-foot vertical capability where new engines could spew water another twenty feet or more. Even now he could see on the perspiring faces of the closest of the fire brigade that they were resigned to losing the battle.

Try as they might to cover as much of the structure, as soon as the flames went out in one area, shortly after moving on to a nearby flaming section of the building the original area would erupt back into life.

Tom tried to calculate the arc of the water and how it was entering the small window areas. He figured that most of the water never reached more than six or possible eight feet inside allowing about eighty-five percent of the interior to remain on fire and ready to burst back into life

Quite possibly more water than the structure could withstand was needed to put everything out.

Looking back at his expectant chum, Tom Swift had to shake his head. “I’m not certain that I can, Ned. But I will promise you this; I will take some time in the next few days and see if I can think of something. Will that satisfy you?”

Ned thought a moment and then shook his head. “No. You have to *do* something so that your father, Mrs. Baggert and Old Rad and Mary and even me won’t burn.”

“You meant to say ‘I’ didn’t you?”

Ned thought about it and then saw his error. “Yes, sir,” he responded with a slight grin. English had not been one of his favorite subjects. “Me meant to say I.”

“Bless my ruler and chalkboard, this isn’t any time to be giving the boy elocution lessons, Tom,” Mr. Damon admonished him.

Tom smiled. He had a lot to thank the older man for. Over the years Mr. Damon had been a friend, a traveling companion, a sounding board and more. He frequently begged blessings on the most fantastic array of objects from his own shoe laces to the control cables of Tom’s incredible aircraft, the *Red Cloud*.

Evidently Ned was reading his mind for he now inquired, “Why can’t you use your airship to carry the water above the flames and then drop it down? Would’t that make everything too wet to burn?”

Tom looked at his friend with some sense of wonder. Everything was cut and dried to Ned. He knew that Tom invented things and simply believed he could do something this time. Sighing, he pulled out his slide rule and did a calculation.

“I am afraid that isn’t very practical,” he responded finally. You see, the *Red Cloud* can lift just about two tons, besides itself. And so, even if you have just two people, a pilot and a spotter, that gives it something like one hundred and seventy gallons carrying capacity. And, besides, it is dangerous to fly right over flames. They give off tremendous heat and that can shoot the dirigible wildly up into the air, and the swirling vortex can suck it right back down to its destruction.”

He looked at Mr. Damon. Both had been in the *Red Cloud* months earlier when she drifted over a large forest fire. The results had almost killed them.

A call went out for everyone, including the firemen, to move back. “Get back! She’s gonna go any time!” the fire Chief yelled through the large megaphone he was carrying to shout orders to his men.

As Tom, Mr. Damon and Ned moved back there was a cracking sound. They spun around in time to see the entire top floor collapse downward and into the floors below. One by one they went down like the bellows of an accordion until, with a final *whoomp!* of flames and smoke and air, the hotel was no more.

Tom glanced to the right as some movement caught his eye. A man about his age had turned and was running off at a fairly good clip.

Andy Foger!

Tom Swift well recognized the departing boy from years of being antagonized by the spoiled and undisciplined son of the local banker. Starting when both were in their early teens, Andy and a series of equally evil-minded cronies had practically gone out of their way to interfere with whatever it was Tom was involved in at the time.

If Tom were fixing up a car, Andy had to go out with his father's money and buy a larger auto. If Tom were tinkering with a flying machine, Andy had to have one and turn things into a contest to try to prove he was better. Fortunately, Andy often only succeeded in breaking whatever his new toy had been. On several occasions his actions had led to damage to the property of others and even to injuries.

What annoyed Tom most was that Andy's father would jump in to the rescue of his son, even when the proof was solidly against the boy.

Of course, Tom had taken great pleasure in knocking Andy down a peg, sometimes literally, on numerous occasions, and had been tickled pink when Andy pulled one of his most insane tricks right in the view of the local police constable. No matter what the older Foger tried—money, threats, pleas—Andy had spent an entire week in jail. Rather than coming out a better person, Andy had become more bitter and more determined to make the lives of Tom and Ned, miserable.

Bidding Mr. Damon a good day, Tom and Ned walked down the block and to a waiting automobile. The inventor had recently converted the car to run on methane gas rather than gasoline, and had installed a device on the back into which he could place everything from table scraps to animal waste. Bacteria inside broke

everything down with the results being heat, steam and the methane. The first two were necessary to keep the reaction continuing, but the gas was drawn off, run through a filter Tom had invented to remove impurities, and then a small pump forced it into a special holding tank.

The Swifts had a larger version sitting behind one of the buildings at the family home from which he might refuel the auto at any time. The small device was meant to provide an emergency source or additional gas for trips longer than the one hundred mile range of the main tank.

As he pressed the switch to turn the pump system on and to start the car, Tom's mind turned to the filter. It was a membrane of a material he had come across in a technical journal that only allowed the desired materials to pass through. In the case of his car, it was the methane gas.

Something nagged at the back of his mind as they drove off, heading for home to telephone Mary Nestor, Tom's girlfriend currently attending school out of town, of the demise of the Shopton Hotel.

TOM SWIFT and His Aerial Firetruck

CHAPTER II

AN IDEA JUST POPS UP

"EVERYTHING BAD SEEMS to involve Andy Foger!" Tom complained to his father, Barton Swift. The aging inventor had taught his son many things, even removing the boy from school when he turned ten to tutor his son in those things he believe made a man. He also imbued a sense of invention that Tom now carried on in his own way.

The things he had not been able to teach the boy were those that a mother might impart. Mrs. Swift had passed away when Tom was quite young, and his memories were only of a petite woman with a shiny face and a big smile who would hug him and give him kisses on his cheeks and tell him stories. Now, the only female in the household was their housekeeper, Mrs. Baggert.

She had tried to give the young boy a level of compassion for all living things, but had been ill-equipped to help him in cases like with the Foger boy. Pure meanness and an evil spirit pervaded the Foger family in general and Tom frequently ran afoul of Andy. And Andy's hangers on, like Sam Snedecker, who were always ready to follow Andy no matter how foolish it might seem to others.

Through the patenting of several of his inventions, Barton Swift had become a very rich man, having more money than Mr. Foger,

which was a source of jealousy on the part of the bank manager. It seemed that no matter what Andy's wild schemes might be, his father handed over enough money to see them begin with a bang, but Andy's own lack of patience and willingness to cut corners that ought not be anything but perfectly squared generally meant that he failed, or at least did not prevail over Tom.

Tom, on the other hand, earned all of his spending money. First by doing chores and later through a few of his won inventions and improvements to existing devices.

The whole situation bothered Tom and he was at a loss as to how to combat it at the best of times. But, now this latest happening had him both puzzled and worried.

"I saw Andy Foger sneaking away from the hotel building as the fire raged," he told his father. "He looked mighty suspicious. I wish I could get the goods on him. I'm certain he has had some hand in the terrible disaster."

"Now, Tom," his father cautioned. "It does nobody any good to point fingers when you have nothing to back up your assertions. Perhaps he had a perfectly good reason for being there and simply was leaving once he had seen enough."

Mrs. Baggert let out a snort from her position by the kitchen sink. "If you are asking me I'd say Tom here is probably more right than you are, Mr. Swift. That Andy Foger is a bad'n and no mistake. Even Mrs. Whittaker, their housekeeper, can hardly be in the same room with the boy for fear of what he might be planning!"

Tom hoped he might change the subject. Talk of Andy made him feel ill at ease. "Dad? Ned posed an interesting question while we watched the firemen try to put out the blaze. We both could see how ineffective their water hoses were what with most of the fire too high and too deep inside the building to reach. Once the timbers in the upper floors were weakened enough, down the whole thing came!"

Mr. Swift set down his newspaper and looked at his son. "You sounded as if you had a question, but it seems you forgot to ask it. What was it?"

Tom smiled. He had allowed himself to go off on a slight tangent but his father, as usual, brought him back around.

“Ned asked if I could refit the *Red Cloud* to carry water up high over a fire and then drop it or spray it somehow onto the flames. I did the calculations and told him we couldn’t carry enough water to make any difference. But the real question is, is there some manner in which I might fly some flame-dousing liquid or even a powder up there and help. Perhaps not put the fire out but retard its growth and burning rate enough so that the professional firemen might save a building. What do you think?”

Barton Swift looked first at his son and then at the ceiling. As he gazed upward his mind began contemplating his son’s question. At some level it made a type of sense, while at a purely logical level it was almost too far fetched. Finally he looked back at Tom.

“I would say the same thing I’ve told you time and again. In the world of invention, nothing is impossible until you have exhausted all attempts to make it work. That doesn’t mean some things aren’t impractical, but you cannot know what those are until you try. You give it careful consideration over the next few days and see what ideas you might come up with. And, of course, you may run any idea by me to see if I might help.”

Tom kept up his smile even though he had been hoping for something a bit more... substantial. But, that was his father’s way. He excused himself from the table and headed out to his work shed.

He pulled out several notebooks filled with his handwriting and sketches. Finding the one he was looking for, he set the others to one side and opened the book. He was looking for a series of equations dealing with the lift capacity of his *Red Cloud*, part dirigible and part aeroplane. He, Mr. Damon and their friend John Sharp—a former carnival aerialist and balloonist Tom had rescued when the man’s balloon caught fire and he had nearly plummeted to his death into Lake Carlopa—had many adventures in the craft.

Finding what he sought, Tom studied the figures. His hunch had been correct when speaking to Ned. The cargo capacity of the *Red Cloud* was relatively low due to several factors. Among these were the weight of the airship itself, the cabin-like gondola that was positioned under the multi-chambered aluminum structure that held the lifting gas—a special gas of his own design that could be made with a few special chemicals so he was not reliant on the purchase of hydrogen gas or its more expensive cousin, helium.

While the *Red Cloud* could carry a greater amount of weight in forward flight, using the somewhat stubby planes—or wings as some might call them—to provide additional lift, these only worked to the craft’s advantage when moving above a speed of nearly forty miles per hour.

Tom knew that was far too great a speed at which to attempt dropping water or some other suppressant. He might be required to either find something that was far lighter than water, develop an all-new and extremely lightweight aircraft, or both.

He also understood the principle behind not putting the cart before the horse. In this case it meant that he should be looking for the means of dousing the fire before he designed the delivery vehicle.

Tom wasn’t even certain that a flying aircraft was the answer. Recalling the harrowing experience he and his fellow travelers had when the *Red Cloud* flew over the top of a massive forest fire, he felt a cold chill run down his spine. They had been buffeted about, shot into the air and even sucked back down dangerously near to the licking flames by the vortex action of the winds.

Would it be any different flying near to a large building fire? It might be something he needed to test. If it turned out that flying over any fire was too dangerous, could he come up with an alternative delivery mechanism?

He decided to take a walk around the Swift property. It often was useful in clearing his head and allowing the inventor to concentrate on the matter at hand.

“Oh, hey, Rad,” Tom greeted the negro gentleman who was outside raking up some of the twigs and other tree debris that fell every time Shopton experienced a little storm. Eradicate Andrew Jackson Abraham Lincoln Sampson—named for the man who became president on the day his mother had been born and also for the man who freed his family the same year Eradicate had been born—was the local anything-for-a-nickel character who did occasional odd jobs for the Swifts.

Along with his mule Boomerang, a beast who gave true meaning to the term, ‘stubborn,’ Eradicate, or Rad as most folks called him, greatly disliked actual work but never shied away from it because of the reward at the end of a job.

“Mornin’, Mista Swift,” he called out to Tom. “Yo looks lack yo gots somefin mighty serious on yo mind.”

Tom laughed. “You might well say that, Rad. “Have you heard about the Shopton Hotel fire?”

Rad stopped raking and leaned against the handle with one hand while he pulled out an old bandana with the other and wiped his glistening, dark forehead. “Shore did. Effen went down thar an’ saws me a bit of it. That’s a terrible pity, that is. Nice lookin’ place, althoughs ah never could afford to go inside fer fear theys charge me ten dollahs fer a glass o’ water.”

Shaking his head, Tom told him, “They didn’t even charge ten dollars for a room, Rad. And I’m pretty sure that the water was free. Anyway, I’m going on a walk. If my father or Mrs. Baggert ask, tell them I’m going down the path to the lake and then walking toward town.”

Eradicate agreed to do just that, so Tom set off.

An hour later the boy had reached and wandered around town, going past the still-smoking ruins of the once great hotel.

Two very tired looking firemen stood to one side of the ruins spraying water onto everything. As Tom watched, smoke would rise from one spot and the men would direct their hose over to it. Minutes later another area would have a few small flames licking up and the hose shifted to cover that.

“It looks like very hot work,” Tom called out.

One of the men, a local sheep rancher and fire fighting volunteer look over at him with a wry grin. “Hotter’n you might imagine, young Swift. Dratted thirsty as well. Say, I don’t suppose that if I gave you a couple nickels you could run to the general store and fetch us back a couple bottles of soda?” He looked hopefully at Tom.

“Of course I’ll do that, and it will be my treat,” called out Tom. He began to turn to leave but turned back to face the men. “For all the hard work you do, it’s the least I can do to say thanks.”

He purchased five bottles, two for each man and one for himself. Walking back he drank his. A moment later the natural reaction of the carbonation from the drink made him burp. It came up through his nose, the gas stinging and making his eyes water.

Tom stopped, an idea hitting him. Could it be that simple. He knew the properties of the gas well. Could the smothering ability of carbon dioxide gas be the solution?

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CHAPTER III

TOM IS IN A PONDER

THE REST of the afternoon, once he delivered the soda bottles to the two men, was spend reading through many books in the Shopton Library. Although not a large library by most standards—it was one of the smaller models of libraries the Carnegie people had build all across the country—it did feature a substantial reference section.

Unbeknownst to most of the townsfolk, many of those books had been secretly donated by Tom’s own father in hopes of encouraging people to learn more as adults than they picked up in school when they were children.

He devoured every article he could find on the properties of carbon dioxide, even locating a five-year-old technical journal that held a short article by an Austrian engineer detailing how to build a simple carbon dioxide “flame overwhelmer” using sodium bicarbonate and household vinegar to form a chemical reaction. Supposedly by setting a beaker with the dry powder on a stand over a short candle and then adding the liquid, the resulting carbon dioxide gas would spill out and down the vessel and smother the flame.

It was an excellent idea, and Tom wrote down all of the important facts including how much of each ingredient offered the best results, how much each weighed in a measured amount, and how long the reaction lasted.

For a few minutes he considered whether it might be possible to carry the sodium bicarbonate up in the *Red Cloud* and drop in over the flames, then have the firemen pump an acid-laden water onto that, creating the gas. But, a few simple calculations and he crossed out those notes. Not enough control of the powdery substance and too much liquid would make it ineffective.

Heading for home, Tom was confronted by Andy Foger and Sam Snedecker.

“And, where do you think you’re going after visiting the library, Swift?” Andy sneered. Sam, on seeing his friend sneering, did the same though he was unable to pull it off very well, looking more constipated than anything else.

“Yeah. Bookworm!” taunted Sam.

“Shut up, Sam Snedecker. Just because all of the black squiggles inside books befuddle your pea-sized brain doesn’t mean they aren’t a good thing,” Tom rejoined. “And as for you, Andy Foger, I believe that you have a lot of explaining to do regarding your appearance right at the fire. You certainly high-tailed it away once you saw that I spotted you there!”

Andy’s face went white and his lower lip trembled a little before he turned beet red and stepped toward Tom, fists clenched.

“You just take that back, Tom Swift. Besides, you were there. I’ll bet you set that fire trying out some sort of new thingamajig or another! Yeah. That’s it. I’ll bet Sam here saw you there as well. Plain as day! Tell him, Sam.”

Sam looked decidedly uncomfortable. “Uh-h-h, Andy? I wasn’t—”

“Shut up, Sam!” Andy ordered. “You were there and you spotted Swift lurking around an hour before the fire. Let’s go talk to the constable and tell him!”

“If you do, Andy, you will need to explain your being there. I have a witness and he is more believable than Sam here. Ned Newton is well respected in Shopton where as Sam is known to be a snitch and

your personal groveler. Go ahead, Andy, and make that mistake,” Tom dared the other boy.

He turned away and started walking toward the road that would see him out of town and heading for home. Behind him, and a full thirty seconds later, he could hear Andy finally figuring out something to say.

“You just watch it Tom Swift, or some day you might just find yourself in a burning building!”

Tom stopped and turned slowly around with a look on his face that caused the two other boys to quickly turn and walk away.

Turning back and starting to walk again, the young inventor smiled to himself in satisfaction. He had both put Andy on notice over seeing him at the fire and had “stared down” the bully and his crony.

When he arrived back home, Rad was just putting his mule back into the harness of the small cart that carried his tools and belongings. “You daddy come out mebbe five minutes ago an’ he was a-askin’ fer ya. I tole him where you was an’ he says to me to tells ya if’n I sees ya that he wants ta talk to ya. Well, Ise gotto go. Come on, Boomerang, ya obstinate ole mule!” he said as he tugged on the side of the harness. With a great deal of snorting to show its lack of delight in being made to leave the shade and tasty grass of the Swift front yard, Boomerang took a few slow steps and the pair of them shambled off down the country lane toward town.

Tom bounded up the steps at the front of the house and into the front room where he found his father reading a paper he intended to submit for publication.

“Ah, there you are, Tom. Come in and take a seat. I want to show you something and have a little discussion.”

“What about,” Tom inquired. he wanted to discuss some of his discoveries from the library but knew that if his father wanted to speak about something entirely different it would be difficult to swing the conversation around.

“Well, why don’t I begin by letting you read something I found. I wrote this months ago and then filed it away as a lost cause, but a recent inquiry by our very own Government had me looking for it

today. Take a look,” he prompted his son.

Tom took the five sheets of paper and began to read. As he got to the second page a small smile was on his lips.

Barton Swift had been asked to come up with some way to propel small, hand-launched torpedoes relatively short distances. There was no mention of the intent for such a device, but the older inventor had written that it was recognized that his own incredible turbine device was too large and had no practical manner in which it might be successfully downsized.

What really caught Tom’s eye was the stated theory that an engine powered by a chemical reaction could be made in a size appropriate for such a device.

The reaction would be from mixing ordinary sea water with two powders and they would create great amounts of *carbon dioxide*.

Tom looked up. “Father, this is precisely the sort of thing I wished to tell you about.” He detailed his research that afternoon and his belief that carbon dioxide was one avenue he believed ought to be investigated.

Barton Swift smiled. “It came to me on reading the letter from Washington D.C. this morning that I had looked into such matters and then it knocked around in my addled old brain that the very thing to remove the oxygen from a fire might be that same gas. And, I might have a suggestion for allowing you to carry what is required in the *Red Cloud*.”

He told Tom that the general idea in his mind was to outfit the airship with a trio of metal tanks, or actually two hoppers for holding the pair of powders and one tank in which to mix them, add water and to allow the buildup of the gas.

“So, does that mean I ought to plan to carry the water as well?” Tom inquired. I suppose that it could sit in the mixing tank until I release the powders.”

Mr. Swift held up one finger. “Not so fast, Son,” he advised. “If you want to get to a fire quickly, and I believe that is a mandatory expectation, then you will want the airship to be as light as possible. So, what do you believe is the solution if you do not carry the water with you?”

Tom looked at his parent a moment before breaking into a grin.

“Why, I get it once I arrive. From one of the fire pumpers, I suppose. All I would need to do is to drop a hose down with the appropriate fitting and they simply shoot the necessary water up to me. With the necessary amount in the tank I can travel right to the dropping position, mix everything and shoot out the results into the fire below.”

They spoke for another hour on the possibilities before Mrs. Baggert announced that they were to have an early supper as she had a ladies guild meeting to attend that evening.

“And don’t go trying to do any cleaning of my dishes,” she warned them. “The last time you broke a plate and they cost nearly a quarter dollar to replace. I can’t have with you throwing away good money when I can wash them and keep them whole!”

After dinner Tom went out to the shed he used as a workroom and unlocked the door. He spent nearly two hours there making notes and a few drawings of what might be necessary to build a device as he and his father had discussed. He was just locking backup when the housekeeper came back.

Tom was about to call out a greeting to her when he heard something off to one side. The noise came from the direction of the large building that housed the *Red Cloud*. Keenly aware that a few attempts had been made in the past to either damage or steal his airship, Tom picked up an old ax handle that leaned against his shed and started toward the noise.

As he came around the final corner of one of his father’s sheds the alarm system of trip wires and a gridwork of small tubes laid onto the ground—now covered with grass—that sensed anything treading on it, caused the lights and alarm bells to go off.

There was a sound of somebody colliding with the side of the building and then running footsteps from at least two people.

In the bright light that covered the entire rear yard area of the Swift property, Tom saw two young men running into the woods.

Andy Foger and Sam Snedecker!

Tom began to give chase. He dashed into the woods and took an immediate left turn down a disused path. He knew that if Andy and

Sam ran to the shore of the lake and headed back toward town he would cut them off.

What he could not see in the gathering darkness was that the hoodlums had second guessed him and had strung a rope between two trees. It hit Tom in the stomach causing him to loose his breath and be catapulted backward into some bushes.

As he lay there trying to get in some good breaths he could hear the two laughing as they ran away.

His chest hurting quite badly, the young man staggered back to his home. He was met by his father who reported that nothing appeared to have been broken into before helping Tom into the house.

Tom resolved to report Andy and Sam the next morning to the local constable. If nothing else it would cause them to be visited once again regarding their illegal escapades.

TOM SWIFT and His Aerial Firetruck

CHAPTER IV

RED CLOUD IS NOT THE RIGHT ONE

WHEN TOM woke up the next morning his lower rib cage was sore but his head was clear. After eating breakfast he requested his father's permission to make the report to the town's lawman.

Mr. Swift advised caution. "We only have your brief glimpse of young Foger and his crony, Tom. It is hardly legal proof and would not secure a conviction in a courtroom. No, that would require that they get caught in the act of vandalism and to do that I believe I must make an enhancement to our alarm system."

"What would that be, father?" Tom asked. The current system involving the thin wires that would break if walked into, setting off the entire system, was frequently rearranged so that no criminal could make a map of their location and thus avoid them on a repeat visit.

"I propose to purchase and install in weatherproof boxes a set of five or even six cameras with flash bulb attachments. And with some adjustment to how the system reacts to an intruder I also believe I can control each camera so that they only go off in the area where the would be vandal actually is located."

He told Tom he knew of a shop in Albany, the capital of the state

and about ninety miles to the south, that sold the very equipment he needed. He asked to borrow Tom's motor car for the journey and was granted that privilege immediately.

"I shall return this afternoon and have things set for tonight," he declared.

During the following week the alarms did not go off and Tom was able to make great headway in adapting the Red Cloud for his new purposes.

As there would be no great requirement for the week's worth of supplies generally carried aloft, nor would there be need to carry the additional one hundred gallons of gasoline in a pair of tanks that flanked the motor which operated both the front and the rear propellers.

Tom made one more decision to remove the shaft and the propeller from the front of the craft. It would save a few hundred pounds of weight, allow him to install a larger mixing tank and to set it onto the floor and not have to work over or around the boxed in drive shaft that rose fifteen inches above the floor.

It would be impractical to involve the fire department men in his initial tests. For security and safety reasons he wished to hold them on the family property next to Lake Carlopa.

This meant that his mixing tank would need to be brought to the scene already filled, and that was a relatively easy task.

In all his changes to the airship required nine days of Tom's time along with the occasional assistance of his father and Ned. With everything completed he wheeled the big, red vehicle out of its hangar and then tethered it to a large stump that had earlier been outfitted with a large iron ring just for this purpose.

Tom's airship was not dependent on either of the two gases used by both the United States for their military airships and blimps—helium—or by foreign governments such as Germany where the more readily available and less expensive hydrogen was used.

Helium was the safer of the two. It was fairly inert and only slightly less powerful as a lifting gas than its explosive cousin. This had been learned the hard way and was still something other nations had to deal carefully with.

Tom created his own lifting gas. It was a close third to hydrogen, as safe as helium, and could be manufactured on the fly, so to speak, whenever he needed to. Several chemicals Tom was exceptionally careful to protect the names of, when mixed in precise proportions created the gas. A load of only two hundred pounds of these chemicals could fill the multi-chambered aluminum air box above the gondola.

Tom now set the process into motion and then climbed into the gondola to make certain everything was prepared for this first test.

Twenty minutes later he felt the airship begin to lift from the ground. It reached its short chain tether and stopped rising. The simple pressure gauges showed that all six of the chambers in the lifting body were coming to the three-quarters point. For this test the lit would be tested to its limits and so he had determined that them must be ninety-five percent full at a minimum.

Tom climbed out and attached the hose he had previously rigged to take water from the irrigation well on the property and to pump it into the tank.

There was a point about five minutes later when the ship dipped slightly until more gas allowed it to float back up.

Before he knew it, the ship was ready.

His ground crew had gone down to the lake an hour earlier to arrange things for the target fire. so he called to his father. "Come release me, please."

Two minutes later the release lever had been thrown and the airship rose above treetop height. Tom turned on the motor, engaged the propeller and steered toward the lake.

When the *Red Cloud* reached the drop point for his first test Ned, Mr. Damon had old Rad had a good fire going in the clearing by the lake. It had been agreed that the proximity to water was preferred if anything should go wrong. Tom had brought along a small water pump, powered by a small gasoline motor, in case water might be required.

He slid his side window open and picked up the small megaphone on the floor. Placing it to his mouth he called out, "Ahoy! I intend to pass over the fire in about two minutes. Go ahead

and toss on a few more boughs and then move off to the side. This gas I am carrying will choke you if you inhale too much.”

“Well, bless by old lungs,” Mr. Damon exclaimed. “And here I thought all we needed to do would be to cover our mouths with handkerchiefs. Here, I even brought along extras.” He shook his head, but followed the young inventor’s command.

Several additional pine branches with their pitch-engorged needles were tossed on and the flames rose by at least ten feet.

Tom, seeing that his gondola was beginning to fill with some of the smoke had already closed his window and turned the *Red Cloud* to the north. As he reached a point nearly one hundred yards away he swung the tail planes hard to the right and the flying ship nearly spun around on its own axis.

He had to smile as the great weight of the pressure tank behind him caused the ship to over-rotate and he had to adjust his course back the other direction.

Red Cloud began moving forward. Tom held her about one hundred feet over the water as he eased forward, coming to a near stop over the flames. The ship was buffeted by the updraft of the hot air and he knew it would only be safe to remain there for a few seconds.

His right hand was hovering over the lever that would release the gas, and now he gripped it and pulled back with all his might. A great hissing and whooshing sound came from behind him, loud enough to make him wish he had brought along some sort of ear muff to reduce the effects.

From below the sight was an amazing one. To Mr. Damon and Ned it looked like what it was, a great deal of gas dropping down from the two exit pipes and onto the fire.

But to Rad it looked like a giant waterfall heading his way and he hightailed it into the safety and cover of the nearby trees.

The effect on the flames was easily noticed and quite effective.

In just seconds all flames had stopped and the fire sizzled and popped for a moment before reigniting.

Tom had moved a little to the south and spun the ship back

around in time to watch the flames come back up. It was a disappointment but one that he had already believed might occur.

Later, after the three on the ground had used the pump to douse the fire and when they all assembled in the *Red Cloud's* hangar, Tom explained.

“As I imagined, the carbon dioxide gas in the tank was sufficient to knock down the flames, but not enough to cool the actual burning wood. I have to admit a combination of success and failure, but this is most definitely a step in the right direction.”

Mr. Damon raised on hand and inquired, “But, Tom, if the fire did not extinguish, how can this be a success?”

The boy explained that there was a mis-match between the amount of fire and the amount of the gas his airship could carry.

“If I were able to carry perhaps four or five times the amount of gas, and under sufficient pressure to cause it to go into its liquid state, then that super cold liquid would fall on the fire and both smother and cool it at the same time.”

“Mista, Tom,” Rad said. “How’s ya gonna do all that with dis here shop o de air ya gots?”

Tom chuckled. “Well, Rad, that is a very good question. Unfortunately I now believe that my *Red Cloud* may not be the solution. I fear that she isn’t capable of carrying the needed load of liquid gas. In fact, as I think more and more about it, I believe that simply filling the tank or tanks in any new ship and then flying to the scene of the fire will not work.”

“Why,” Ned and Mr. Damon asked in unison. Rad nodded his agreement.

“Simply because of time. Too much of it, in fact. Too much time lost flying to the fire in the first place only to drop the load and spend all that same time flying back for a refill, back to the fire and back and forth again and again. You could never get ahead of things.”

“But surely the local firemen could rush in and keep things under control.” Ned stated.

“Perhaps,” Tom admitted. “But I would rather find a way to

manufacture the gas right inside a new airship so it might be accomplished near the site of the fire. And so, as much as I cherish her, I am afraid that my *Red Cloud* is not the solution. I must build another!”



Tom and Barton Swift sat at the dinner table discussing the test. The younger man was disappointed but admitted that he knew it had just been a test and that refinements were inevitable.

“Do you believe that the system is sound in theory, Son?”

“What do you mean?” Tom asked.

“Well, is the carry and mix on site system going to give you what you need when made larger? I still believe in the promise of carbon dioxide but I have to admit to having snuck down and watched the test. I fear that the gas was coming down with very little force. Much of it appeared from my vantage point to simply be lifted and carried away by the heat of the flames.”

This was something Tom hadn’t considered.

“If that is the case, then I must devise a way to force the gases to the ground under much greater pressure,” he stated.

Inside he was thinking to himself, *I only wish I knew what that solution might entail.*

TOM SWIFT and His Aerial Firetruck

CHAPTER V

MR. SWIFT PROVIDES A FINE IDEA

THE NEXT afternoon Mr. Swift knocked on his son's shed door. "Might I have a word, Tom?"

Puzzled, Tom replied, "Of course. At any time, father. Why do you even ask permission like that?"

"Because I may be about to suggest something you could find to be an annoying intrusion or at the very least to be a needless expense."

"Please," Tom said indicating the single "guest" chair he had in the ten-foot by fifteen-foot building.

Barton eased onto the chair. Tom knew his father had been feeling the ravages of rheumatism in his hips and lower back for some time, a curse of older people everywhere.

"Fine. Well, here it goes. As I overheard you remark to Ned and the others, your fine airship is probably not sufficient for the task at hand." He looked to see Tom's reaction. The younger man nodded.

"Well, as long as you agree then I also must tell you that as much faith as you place in your homemade gas mixture, you have had to contain it inside a solid metal case. Its nature is such that it will not be contained inside a woven cloth gasbag."

It was true. Being slightly corrosive it had been mandatory to construct the *Red Cloud* with the heavy metal chambers.

“What are you suggesting, then?”

“Helium. Now before you say anything like ‘it is too expensive’ or ‘it is controlled by the Army,’ I have to tell you that I have a good acquaintance in Washington who has told me on several occasions that I may purchase a fair quantity of it at any time I decide it will be helpful for any of my experiments or inventions.” He looked at his son a second time.

Tom had been nodding his head as this information was being imparted. He had to admit to himself that he only had developed the formula when it was necessary to do so to overcome the lack of a safe gas to purchase.

“I could save quite a few hundred pounds by eliminating the aluminum shell,” he stated. “There are considerations for having to bolster the gasbag so it might withstand faster travel speeds but those are not insurmountable. Now costly would the helium be?”

When he was told the figure, the young inventor was flabbergasted. He had expected it to be an exponential number. “That is incredible. Why, for that price I can only make two fills of my own gases and those must be vented after every three or four days of use as they lose efficacy. With helium I could add a small pump and remove it from the gasbag when not needed, and store it in a tank here on the property.”

When his father excused himself Tom set to coming up with a new design specially purposed for his aerial fire fighter. All old considerations could be abandoned in favor of everything that would make the vehicle the most effective it might possibly be.

His mind became so enthralled with the design that he barely ate or slept for three days straight. It was only when he staggered into the house one afternoon that Mrs. Baggert steered him up the stairs to his bedroom and gave him a gentle shove.

Tom tumbled onto his bed and was asleep two minutes later.

When he rose the next morning he had dreamt of several refinements he might make to his system. Among these was to include a fairly small pump whose only job it would be was to fill a pressure bladder inside of the mixing tank. As the bladder would

inflate it would compress the gathering gases. Those, in turn, would reach a pressure where they would begin to thicken.

It was that thickening he felt was needed to be able to force the carbon dioxide down through the flames and into the heart of the fire.

It would also mean that the gases would be many, many degrees colder and that would assist in cooling the hot source.

Mr. Swift provided his son with sufficient funds that the boy could hire several local craftsmen to help build the gondola of the craft, and three expert seamstresses who would sew the four chamber gasbag from a very tightly woven silk coated with a thin layer of a liquid rummer compound of Barton Swift's making. With such assistance the craft began taking shape just one week later and was complete a further nine days after that.

Tom shook the hands of each man and assured them their work was not simply appreciated but could change people's lives.

During the construction a large hole had been dug next to the Red Cloud's hangar. And beside that the floor and framework of a new and larger hangar was being erected.

The purpose of the hole became evident when on the day prior to completion of the new craft a very large truck arrived with a large metal tank on its trailer. The hole was inspected by the driver who pointed out several places where small lumps needed to be flattened a little.

Next, two more trucks arrived, one carrying a load of sand and the other holding a heavy-lifting crane.

Nearly a third of the sand was dumped into the hole and then smoothed out by two men with large rakes. The crane groaned into life and the steam-powered engine began to unreel thick cables from rollers on top of the cab; These were attached to the tank at various places and in minutes the tank—filled with Tom's helium—was set into the hole.

To finish things and stabilize the tank, the remaining sand was poured into the hole filling in the gaps around the sides and covering the tank by at least two feet leaving only a raised valve and gauge housing sticking above the ground.

As quickly as they had arrived all the trucks trundled down the road and disappeared.

It required another two days for Tom to get ready for a test in his new craft but that was Saturday and so he had a full compliment of friends and his father in attendance.

Again, Ned, Mr. Damon and Rad went down to the lake and set up a good fire while Tom and Barton carefully attached both the fill and overflow hoses to the new gasbag and began the task of filling the thing with helium. A previous test using only normal air had shown it to be completely seamed and capable of holding gas at pressure. The bag rose from it's perch atop the gondola—it could be folded and stored there easily—and was soon rising toward the sky. Only the weight of the gondola and its content kept the bag from going up until Tom gave the signal.

His chemical tanks and the water tank were full but the helium had little problem lifting everything. If anything it lifted the heavier craft faster than the Red Cloud could manage.

Everything was run in the same manner as the first test weeks earlier. There were several differences. To begin with the larger gas bag was buffeted more strongly by the rising heat and Tom felt like he was being shaken by a giant's hand.

Next, the pressurized gas did indeed come out of the nozzles in more of a thick stream than as a pouffy cloud. It was only as it neared the flames that it practically exploded outward. And this had to effects. The fire was blown out, and the shock of the expanding gas hit the new aircraft hard.

This was minimized, however, but the face that once the heavy semi-liquid was gone the craft had so much lift that it began to rise at an almost alarming rate.

Tom got everything back under control before he reached five hundred feet. Turning back around he could see that the fire, still hot inside, had come back up but was much lower than before.

As he mentioned to everyone while they were deflating the gasbag and preparing to put the new craft away for the evening, "If I only had enough chemicals and water for another two shots I would have put that put that out."

"How might you do that," Mr. Damon inquired. "Bless my newly singed eyebrows but I hope you can answer that one!"

"So do I," Tom told them all. "I'm not certain what the answer

will be but there has to be a way to either carry more gas up there or to make it along the way.”



Tom and Barton sat having breakfast the next morning talking about the new issues with the airship.

“Well, I might suggest that you don’t go fight in over the flames to start with,” the older inventor said. “That will stop the rough handling the heat gave you and perhaps even safeguard your gasbag a little more.”

Tom stopped with a forkful of corned beef hash part of the way to his mouth. “Well, if I do that then how do I get the carbon dioxide into the heart of the fire? Unless I am rushing forward and that momentum carries the gas along, I can’t see how it might be possible.”

“Do you recall when I taught you to shoot my old shotgun at clay pigeons?”

Tom nodded, taking his bite of the hash finally.

“What did I tell you then? How do you it the moving disk?”

Tom swallowed and smiled. “Oh. I see. You lead it. Aim ahead and estimate where it will be. But how do I do that with my airship?”

“I suppose that you will need to increase the pressure inside your tank and then force the liquid gas though the nozzles like you already do, but position them facing forward at an angle.

Tom excused himself and raced to his shed where he filled several sheets of paper with computations. Finally he came up with a good angle to test. As he described to Ned that evening, “If I angle the nozzles forward about forty degrees I can release the liquid gas early enough to steer to the side of the fire. That plus the immediate rise I get with the lighter craft should keep me safe and steady. Come outside and I’ll show you what I mean.”

They left the house and headed for the now complete new hangar. After the test Tom had only removed about half of the gas to make further testing faster.

“Tom,” began Ned as he looked up at the incredible sight of the

partially-expanded gas bag above the sleek and, frankly, ultra-modern gondola attached underneath.

“Yes, Ned?”

“The other boy hummed a few seconds before inquiring, “Have you decided on a name for the new airship? After all, every ship deserves to be christened with an official name. even though I realize you have simply been calling her ‘the flying fire engine.’” He grinned at Tom with a hopeful look.

The inventor sensed that his friend had a notion already as to what the new flying machine ought to be called. He asked, “And, what do you think she should carry as her official name, Ned?” smiling in anticipation.

Now it was Ned’s turn to smile. He walked from the front of the ship to the back, both hands behind his back, as if inspecting the large vehicle. He returned to the front where Tom ad gone back to making the small adjustments on the fifteen blades of his incredible new intake system.

“*White Cloud*,” Ned told him.

Tom stopped and set his screwdriver down. “*White Cloud?*” he inquired. “Isn’t that awfully close to the *Red Cloud?*”

Ned’s head bobbed up and down. “Yes it is, but if you will hear me out I can give ample reason for the moniker.”

Tom had to keep himself from laughing at his friend’s use of the word, ‘moniker.’ He reminded himself that the other boy had recently sent away from a booklet titled, “Learn A Word a Day” and had been attempting to use as many as possible.

“Fine, Ned. Please do explain it to me.”

“Very well. You see, as I was witnessing your test of the expelling system the other day I was greatly taken by the near cloud-like appearance of all of that gas. It was so thick and billowy that I could not see beyond it. At that moment the name hit me. Why, I said to myself, that is putting out a white cloud, and that is the name I believe she ought to carry.”

Tom laughed. “Then, with that explanation given I can hardly refuse. She will definitely be christened *White Cloud* both informally and officially, at least once she proves her mettle.”

TOM SWIFT and His Aerial Firetruck

CHAPTER VI

RESEARCH AND DEVELOPMENT

TOM MADE several enhancements to the controls and to the release mechanism for the tank. But, try as he might over a series of three additional tests the thickness of the gas was not sufficiently liquefied to really force it out soon enough and to have it reach the flames at the perfect moment where it would spontaneously expand and both smother and cool the fire.

Even when he got close that still left the issue of only being able to carry enough to make gas for a single run. In a timed trial he and his support team—again consisting of Ned, Mr. Damon and the mostly ineffective bug game Rad Sampson—managed to make a simulated drop, return to the landing point where the ship was resupplied with what it needed for the next drop, and then back to the “fire,” the very best they could manage was eighteen minutes.

“That just will not do,” Tom declared.

“What can you possibly do, Tom?” Mr. Damon asked.

“Dat’s what I’s been thinkin’ too,” Rad piped in. “It’s a lookin’ lak yo gotta make it yerseff each an effer time whilst ya’s flyin’.” He chuckled at the notion, but stopped and looked around as Tom was suddenly staring at him. “What I do?” he asked in a frightened

voice.

“Rad, you didn’t do anything except give me a great idea,” Tom told him.

He explained to the all how repeatedly making the gas, what they did for a single tank full now, was what was needed, but it had to be accomplished in the air and without any support team or resupplying.

“Well, bless my lungs and tonsils. What do you plan to do, Tom? Capture your exhaled breath as you fly yon miracle ship?”

The inventor smiled at Mr. Damon.

“Listen, everybody. There is a veritable trove of carbon dioxide right here,” he told them.

Mr. Damon and Ned looked dubious while Rad’s head swung left to right and then back again several times.

“Where dat?” he asked.

“In the very air we breathe and my airships fly through. In fact, if you were to simply take all of the air in our new large hangar and somehow manage to remove the carbon dioxide gas, you could fill a box of about two feet on each side.”

Ned cleared his throat. “It actually doesn’t sound like it amounts to all that much,” he offered.

Tom shrugged and gave a little nod. “Well the truth is that it is less than one percent of the air around us, but like all of the gases it can be separated and contained in pressurized tanks. How do you think they get the gas to make what some people call dry ice? Easy. They have machines that filter it out of the air, capture it, and put it under such pressure that it first turns into a liquid cold enough to freeze a finger solid in three seconds and then it solidifies.”

Ned’s face scrunched up in thought. “Fine, I suppose, Tom, but I recall our ninth grade class taking a bus trip down to such a factory in Albany and the equipment they had would fill a large auditorium. Not even your new ship with all of the helium it can contain would budge that from the ground.”

It was a truth that Tom knew would require both considerable thought to even plan a way around the problem as well as a

potential money outlay that would doom the project.

Several days passed before Tom asked permission to visit the large library of New York City. He had exhausted the resources of both the Shopton and Albany repositories.

After receiving parental permission he took his motor car, filled the gasoline tank from the supply the Swifts kept on their property, and drove south. The drive was a long one and he suffered a puncture about two hours after setting out, but as the car carried a repair kit he had the tire dismounted, off its oak and steel rim and the tube out and fixed in no time.

After checking into a small hotel a few blocks away from Grand Central Station he took a trolley car to the New York Public Library on 145th and was allowed into their reference section upon identifying himself as the son of Barton Swift.

For three hours until the librarian had to ask him to leave for the evening, Tom poured over nearly a dozen large volumes detailing every aspect of the properties and methods of collection for carbon dioxide.

He returned the next morning and only left at four that afternoon because he had promised to be home by nine. But he time had been more than worth it. He now knew what he had to do in order to collect large enough amounts of the gas.

“I will have to construct a membrane with gaps so small as to only allow gas molecules smaller than the desired ones to pass beyond, and then collect the results. It will not be perfect but there will be a possibility to achieve greater than ninety percent pure gas,” he told his parent at the table where they sat having a late dinner.

He described the process where he might build such a thing and tumbled into his bed an hour later. Tom rose early enough to meet the telegraph man as he was opening the office at seven the next morning.

“It is a good thing that I just send these and don’t have to understand them,” the man told Tom as he stood scratching his head on wonder. “You do know that a telegram this long will cost extra. But, I guess I can keep it to about fifty cents. Is that acceptable?”

Tom said it was and handed the man three quarters. "That's two for the message and one more for you to make sure I get their reply as quickly as possible."

It required a week but delivery was made of nearly ten yards of a very special fabric made from the most tightly-woven silk possible. And still, this was not going to be sufficiently dense enough for his purposes.

What would make it so was a solution of chemicals that he repeatedly dipped the fabric into, once it had been tightly stretched in one by one yard squares over wooden frames. Each repeat of the process was followed by a period of drying and then curing using carefully applied heat.

Three days came and went before the young man was satisfied that the spacing between fibers was so small that it would perform as required.

Tom had not been idle during the week it took to get his fabric. He had constructed a special mechanism that was part compressor pump and part airplane motor. A special propeller was being built for him by a company in Connecticut that would have not two blades as with most, nor would it have three or even the four blades of large propellers being used on large aircraft.

This one was to hold twelve blades all angled at a more acute degree than any airplane could use. But all the extra blades had a specific purpose.

When surrounded by a circular cowling that was barely wider inside than the edges of the blades, it would force nearly ten times more air into the part of his machine that held the membrane than a regular propeller could.

This air would be under great pressure that was, in turn, mandatory to push the unwanted gases through leaving behind the desired one. Then, to facilitate the gathering of the carbon dioxide Tom had installed a rod right in the center of the tunnel where its rounded end would push the fabric into a shallow cone.

Pressure inside would force the gas to the edges where it would go through a series of small holes around the perimeter to then be pumped into an aluminum tank under incredible pressure to be used against a fire.

About the only thing necessary was for Tom to test the system so he might determine how much of the flame killing gas he could get in a predetermined period of time.

His hope was to have a machine capable of filling the tank every two minutes. It was ambitious, he knew. but anything much longer would lose the advantage of repeated attacks.

His first test, held while the equipment was stationary and on the ground, was mildly successful. Working against him was the amount of yard debris that was sucked into the new propeller that quickly covered much of the membrane and finally, before he could shut the motor off, punctured it.

He cleaned up everything and installed one of his backup membranes before locking the hangar and his shed and going inside for the night.

It was just after midnight when Tom was rudely woken by the sounds of the alarms going off in the Swift back yard as well as the bright lights that lit everything. He hurriedly pulled on his trousers and shirt and ran from his room. As he bound down the outside stairs he was in time only to hear whoever it had been who tripped the security system.

Barton Swift joined his son, a shotgun he kept with shells full of rock salt to fire painful but not injurious punishment to would be intruders.

Even Mrs. Baggert, generally given to sleeping through even the most noisy thunder storms, appears soon after.

“Did you see anyone?” the older man asked.

“So,” Tom told them both. “Only the sound of one or more persons fleeing. I hope the cameras were able to capture a good image of our *visitor*.” He emphasized the last word as if it were a distasteful thing.

“I will fetch the ladder and see which of our cameras tripped and then begin the processing of any exposed plates. I suggest that you, Mrs. Baggert, go back inside and prepare some strong coffee for me and a good hot mug of cocoa for Tom here.”

As she bustled back inside, Tom headed across the yard and his father walked to the tool shed next to the house.

Inside of five minutes two things had been discovered.

Barton Swift let out a holler to tell his son that one of the cameras was showing exposure. "It is the one pointing to the hangar buildings, Tom," he called out."

Tom had been checking his own shed as well as his father's main office shed. He now ran to the indicated area.

As he neared, something caught his attention. It sounded like the hissing of a snake, but Tom realized, in horror, that the noise came from the valve for his tank of precious helium.

Lunging forward he tore the wood box off and immediately could see that the valve had been turned so that some of the gas was now escaping. Tom reacted quickly managing to get the valve shut in just seconds. With the pressure gauge attached to the fill hose it was impossible to tell how much had been lost. That would be something to check in the morning.

Tom went back to the house and stood outside of the small closet where his father had set up a film processing dark room.

He called through the door to tell of the open helium valve.

"I was afraid of something like that," Barton's voice came through the door. "I shall have this plate processed in about three more minutes and then we shall see who we have captured."

When the older inventor finally came out and to the dinner table where Mrs. Baggert had their hot beverages waiting, he was shaking his head. He handed the plate to his son.

Tom gasped. "Andy Foger!" he exclaimed.

TOM SWIFT and His Aerial Firetruck

CHAPTER VII

THE TEST VERSUS REAL LIFE

TOM MADE three prints of the photographic plate on special paper. One was to be locked away with his most private and special papers in a fireproof container, one was to give to the local constable as evidence against the miscreant, and the third was to be taken to the county courthouse to be registered as potential evidence.

He went to bed feeling a mix of emotions. While he was happy that proof had been taken of Andy's crime, he still did not know the extent of the helium loss. If it were greater than one-tenth the amount in the tank it would be devastating. He would not have sufficient lifting gas for his new airship plus the somewhat heavy gathering and compressing equipment that needed to be installed.

In the morning his father offered to take both the courthouse copy as well as the one for the local lawman, as he had to go to the hardware store to purchase some additional chemicals to use in making more photographic plates.

Tom agreed that it was a wonderful idea and was soon outside examining the valve of the tank. He was relieved that no sign of actual damage was evident. He had awakened before dawn after having a dream where the valve had been damaged by Andy and

had leaked all of the remaining gas out during the night.

There was no worry on that account. The valve was in fine condition. All that was left was to install the hose, close off the far end and open the valve. The pressure building up in the hose would give him a approximate idea of the level of gas in the tank.

Once it was attached and double checked for closure, Tom took a deep breath and opened the valve. To his immense relief Andy's actions had resulted in very little loss. Perhaps even less than a single percentage.

Tom now took the far end of the hose into the large hangar and attached it to the fill valve of the gasbag. He released the helium into the bag, not enough to cause the fabric to move, but it was gas he did not wish to lose.

By the time his father returned from the errands, Tom had managed to create an improved design for the filtering and collection of gas.

"I believe that enough of the unwanted gases do not go through my membrane but do slide to the collection holes in the side of the duct tunnel and are then put into the tank," he told his father at lunch.

"What is your solution to that, always assuming that a problem exists. Have you, for instance, tested the collected gas or gases?"

Tom nodded. "Just after I measured the remaining helium. Of the gas remaining in the tank from my abbreviated test it would seem to be about seventy percent carbon dioxide, and most of the rest is nitrogen."

"I see. You will not want that so I again ask about your solution."

"More filter membranes," Tom replied. When his father looked disbelievingly at him, he added, "I will create a secondary membrane system. Once I collect the first of the gases, that amount will be diverted into a second chamber that acts just as the first one. I am certain that with far less of the undesired gases in that mixture that the highest majority of them will pass through and only allow the carbon dioxide into the pressure tank."

"I look forward to seeing the results of your tests, then." his father said with a smile.

Five additional days were to pass before Tom had created his second stage filtering system. This time he wanted to hold a full test and that, he knew, meant that he needed to go aloft. With the assistance of Ned on the weekend and his father and their handyman, Garret Jackson, on two additional full days of labor, everything was dismantled on the ground and installed inside the now extremely cramped gondola.

It was so cramped that Tom would be forced to sit in the tight space to the left of the great fan duct.

When Tom felt ready he was saddened to know that Ned would not be there. It was the middle of the day and a Thursday, so the other youth would be at work.

The old fire site was raked flat and new branches and some dry kindling from the house were taken down and stacked. As these were roaring to life Tom was sitting in the fully filled and ready to fly *White Cloud*. Mr. Damon had administered his blessings on helium, the giant gasbag and “cramped spaces,” and now stood ready to release the hold down chain.

“Let her go!” Tom called out the side window, and Mr. Damon pushed the lever of the release with his foot. It shot forward and he shot back.

“Bless my—” he exclaimed and then though better of the word he was about to utter.

Tom had not seen the flailing of arms or the sudden seated position of his friend. He was concentrating on clearing the treetops and getting the airship moving forward.

He first started the motor that turned the pusher propeller at the back of the gondola. It shoved the airship forward and he turned her to fly out over the lake while attending the his collection machinery.

With the large duct and many-bladed propeller in the front, his visibility was reduced, but upon starting that motor and getting the propeller to spin, his vision was mostly restored.

There was an unintended result coming from starting the new propeller to turning. It seemed to be drawing in sufficient air to provide some pull to the craft, and the speed increased by nearly ten miles per hour. He wondered how much of the increase was due to

the excess air being expelled down the sides of the gondola.

Impressed, but with many other things to be attended to, Tom made a mental note to find a way to measure this new propulsion method.

The gauges were soon showing that gas was being compressed into the pressure tank and a quick mental calculation told him that at the present rate, the tank would be full and to the desired pressure in under two minutes.

He spun the small wheel to the left and the nose of the craft turned. He was soon heading straight north and soon turned to a southerly course.

Tom had brought a small electric Aldis lamp with which to signal his readiness, and this he did with a prearranged five flashes. With the tank now full he put the engine into neutral and the propeller slowed to a halt. His view was obscured again but there was little to be done.

The men on the beach ran to the edge of the trees and prepared themselves.

As he neared the fire, Tom pulled the release for the gas, counted to seven, the time it would take to empty the tank, and then swung the craft hard away from the fire and back out over the lake. He turned a little farther around so he could view the results.

A huge smile crossed Tom's face. The smoke was mostly gone and the flames nowhere to be seen.

He activated the propeller and the tank was soon refilling at a merry rate. As it neared full, Tom decided to only reduce the revolutions of the propeller so he might still see out the front of the windshield. It worked.

He gave the signal again and made a second run at the fire that was now a mere shadow of its former blazing glory. Another turn and he now could see that the liquid nature of the carbon dioxide had not just put the fire totally out, the ground all around was covered in what appeared to be a layer of frost.

He slowed the *White Cloud* and send a signal, this time in plain Morse code, to the team below:

WORKS FEW CHANGES BACK TO HOUSE

He received one long flash telling him of their agreement.

Tom shut down the forward motor and turned for the Swift property. It took some maneuvering but by the time he was hovering above his landing spot his father and Mr. Damon were waiving their hands and shouting at him.

He risked shutting the rear motor down so they might be heard and opened his small side window, putting his ear outside.

“Son. You have to go to Thessaly. They just reported a large fire in the automobile tire factory there. Hurry!”

Tom pulled his head back in, shoved his left arm out giving them a “thumbs up” signal and then started up the back motor. In a minute he had gained enough forward speed to steer the ship around. Thessaly lay about twenty miles to the northwest of Shopton. It was the site of the school for young women of good families where his female friend, Mary Nestor went to school.

He recalled that the factory with the fire stood barely a quarter mile from that school.

Giving the rear motor full throttle, Tom remembered the extra speed provided by the forward one, so he also turned that one on. Not only was his forward vision again restored, his speed began to come up. The byproduct, of course, was that his tank began to fill as well. What would happen once it was full? In moments he would find out.

He was mildly surprised to find that as soon as he closed the valve to the tank that his speed actually increased again. A few ideas went through his mind until he told himself, *Of course. Everything is bypassing and rushing out the side exits under pressure!*

Tom briefly wondered if there were a good application for an aircraft motor that worked simply by creating a great pressure stream, but soon was maneuvering the aircraft as he adjusted his course to head toward the rising column of black smoke.

Tom hoped that his father might think to send work to the firemen or at least to the mayor’s office over there of his impending arrival and what he would be doing there.

Unfortunately, such a call had not been made and so when he did arrive it was over a scene of chaotic attempts to get water far enough

onto the burned through roof to make a difference.

He swung the airship around and approached a crowd several city blocks away. Using his small megaphone he tried to hail the policeman who was keeping the people at bay.

“Ahoy! Police,” he called causing the man to cover his head and duck. “Up here. I am Tom Swift.”

The man finally looked up and his face turned white as a sheet. But, his training finally got the better of the situation and he cupped his hands and returned the hail.

“Ahoy to you. Get that thing out of here. We have a fire to fight and do not need anything inciting this crowd to come to riot!”

Tom called back down and explained what his airship might be able to do. He ended with, “Get word to the firemen. I will be passing over the building in five minutes coming from—” he looked outside to see the wind direction, “—from due east. Go!”

He watched the man pull out his pistol, waive it around and speak to several nearby men. He must have been deputizing them as they now stepped forward and began yelling at the crowd while the policeman turned and ran toward the nearest fire truck.

Tom made his first run at the time he had indicated. His aim was off and most of the liquid gas splashed off the roof and exploded into a cloud of gas. Run number two was more on target but before he could make run three a very angry fire chief signaled him to stop.

Again hovering over that man, Tom was treated to a balling out the likes of he had never heard before. He was ordered from the area on penalty of being shot down and arrested if he did not go.

It was only the next day when two officers came to the Swift home that he understood the man’s anger.

One of the firemen had not given ground and had suffered ice burns on both of his arms. The man might never regain their use!

TOM SWIFT and His Aerial Firetruck

CHAPTER VIII

ANOTHER TEST AND SUCCESS IS ANNOUNCED

WHILE TOM was totally speechless, his father was not. He insisted that the law men come inside and tell the entire story.

They hesitated at first and it wasn't until the first man, the local constable and not the Thessaly officer, blurted out that Mr. Foger was calling for Tom's arrest that the true story emerged.

It turned out that Tom's first release had overshot the mark but it had not hit the fireman. Rather, he had rushed forward to see what the mystery liquid was and had reached into it with both hands that his injury had occurred.

"That hardly makes it Tom's fault," Barton stated. "In point of fact, that fireman is almost wholly to blame. And while I sympathize with his injury, a good doctor will tell you that unless he left his hands in the liquid—which would have been turning into mostly gas by that point—his injuries are akin to frostbite and that can be overcome. And now, you had best come clean about Mr. Foger's accusations and why you are paying attention to them."

The Thessaly lawman shook his head and stepped back. "Not my bailiwick," he stated.

That left the Shopton officer of the law looking decidedly

uncomfortable. He stammered out a short story about how the accusations Tom had made against his son had put him in a bad light with his bank's Board of Directors and now wanted to exact some level of revenge.

"Well, I suggest that you either come clean to the county judge about taking part in this sham visit, or I shall."

The two officers left seconds later apologizing for any "misunderstandings that might have happened."

Mr. Swift excused himself and stepped outside to his office where the one telephone on the premises was located. It was rarely used but now he place a call to the Thessaly Hospital. He told the doctor who was available about the nature of the carbon dioxide and what forms of treatment were indicated, and the physician admitted that the earlier diagnosis had been both hasty as well as uneducated.

Returning to the house Barton had Tom sit down in the front room where they discussed the aircraft and the results of the Thessaly fire.

"As it turns out, your second release made a great impact. With all of the walls still intact, as it dropped in through the hole in their roof it billowed out and extinguished nearly three-quarters of the fire. Their firetrucks were able to handle the rest in the next hour. Good job, Son!"

Tom was not to be wholly consoled. He was saddened about the injury, no matter whose fault it might be. In addition to that he had a list of at least five changes he wanted to make. One of these he mentioned to his father.

"I believe that I must find a way to not just dump the liquid carbon dioxide on a fire. There will be times when a steady downward stream of just the gas may be all that is required. But there is no such thing as an adjustable valve that can do it all. What do you think?"

Barton thought about the matter for nearly ten minutes before announcing that it was going to take much more time. "Perhaps I will come up with something in the next day or two," he offered.

But it was only the next morning that he announced an idea that had come to him.

"Currently I can only see that the ends of the four tubes you use

to spread out the liquid gas are uncontrolled. By this I mean to say that they are wide open all of the time. As soon as gas reached the end it cascaded out.” Tom nodded but did not comment. “Fine. Then you must create something akin to the adjustable shower head that I purchased last year.”

Tom thought about it. The device mentioned had been installed onto the end of the pipe coming from the wall. It took the heated water and spread it out into a wide pattern using a series of nearly one hundred small holes. The adjustable aspect was a second plate with only half as many holes in it that could be swung over and constricted the amount of water passing through with the side effect that the water making it past this plate hit the head and body at nearly twice the speed.

Tom could see the logic of this immediately and promised his parent to begin to build set of more sturdy versions for his airship.

Two days later he had to admit partial defeat. While he could easily construct the “head” unit, there was a notable lack of strength in any outer covering to change the flow. Another attempt to put such a plate inside met with failure when a water test showed that far too much came out of the slot where the disc swung in and out.

When he was questioned about his success he told his father that he was going to settle on creating interchangeable head units or nozzles.

“The more I gave it consideration, Father, the more I came to the realization that there are possible as many as four or even five different types I might use, but I am satisfying myself with just three. One will be the full open setting and that one will remain attached at all times. The other two can be clamped on or easily released and removed at will.”

“While you fly?” came the incredulous question.

“No. If a change is required then the airship must be lowered to near the ground and the change made from outside.”

“And how do you impart the instructions to someone on the ground?”

“I intend to do some small refitting inside the gondola so I might take a crewman. On arrival at the site of a fire I let the man out who attaches the appropriate nozzles as indicated from a visual

inspection as we fly in. He remains on the ground ready to make another change if and when needed. And, the ship can easily carry two men on the inbound and outbound trips, and then fly as before with a full tank and a single occupant.”

Barton Swift nodded. It sounded to be a good plan. “Who will you take as your crew?”

Tom smiled at his parent. “Why, Father, I was considering that the perfect man would be you!”

Barton laughed. “And you somehow imaging that an elderly man such as myself can do all that?”

Tom tutted and replied, “You really must get that notion out of your head. You are barely fifty yeas of age, in reasonable health, and with many more years ahead of you. The days of men only living until their mid fifties is as far in history as the Civil War. Of course you are the perfect person.”

With some personally held reservations, Mr. Swift agreed to give it at least one try.

With his latest Government contract satisfied, the older inventor was able to lend a hand with many of the changes Tom made to his airship. Although it would cut down on side to side visibility inside the cockpit area, Tom remade the duct running back to the separator area taller and thinner giving both pilot and passenger enough room to sit comfortably. He also made it slightly less high by cutting a trench in the floorboards and running the curved duct lower in the craft.

Together they installed a clutch so that the propeller could be disengaged and turn freely in the wind rather than always having the motor turning it so that Tom could see through it.

On the day Tom wanted to begin the final installation of a slightly more powerful compressor a call came in telling them that a fire had been discovered in an old ghost town five miles from Shopton, once the site of an active gold mine. Now, the fifteen ramshackle structures were empty and not even used as a tourist attraction. No serviceable road existed and it would take almost two hours to get one of Shopton’s trucks to the site.

Barton said they could be there in fifteen minutes of less.

Tom had left most of the helium in the gasbag over the past days

so that testing could be accomplished with little or no delay. This came in very handy for this response.

They called for Mrs. Baggert to act as the chain release “man” and she came out wiping her hands on a disk cloth. Unlike Mr. Damon she used her hands and had the ship unleashed in seconds, then hurrying back to the pie she had left in the oven.

It only took twelve minutes to get to the site and one the way the two men discussed whether to try a nozzle swap or not. It was decided to go ahead and fill the tank as they approached and make a first pass, dropping the liquid to the ground right in front of the first building. Using the prevailing breeze it was soon vaporized and drifting into and around all of the buildings. Although not out, the fire was diminished greatly.

“Well, Father, it is time for me to let you out. Please attach the red nozzles. Those let the liquid disperse more as a cloud than as a liquid.”

The older man was fast and accurate and Tom was soaring back up in less time than it would take to fill the tank again.

The next pass was a true success. As he hoped, the gas came out in great gusts and headed to the ground where the white cloud enveloped the entire town. Mr. Swift had hurriedly walked a hundred yards away so he was not inconvenienced by the choking gas.

On the trip back he congratulated Tom and said he believed the variation in use of the gas was the key to success.

When the fire chief finally visited the site of the fire the following day he was so impressed that he came back to Shopton and went straight to the local newspaper. He gave an interview and what he believed would have been the sequence of events, even though he had not been given them by either Swift.

The paper came out just twice each week and so the story was not released for two days. When Barton Swift opened his copy on Saturday morning he was surprised to read the headline:

LOCAL INVENTORS, THE SWIFTS, SAVE TOWN

READ THE STORY ABOUT THEIR INCREDIBLE FLYING
PUMPER TRUCK AND HOW IT SAVED A LANDMARK

He chuckled as he read how they had evidently constructed a fire truck with either wings or a gigantic blimp over it, and how it made water by sucking it from clouds before dousing the flames below.

When he read it, Tom was not as amused but followed his parent's advice to just let it go. He was not happy, though.

He was even less happy, furious in fact, when the alarms went off late that night. He ran outside without a shirt hoping to catch Andy Foger in the act, but he slid to a stop on the dew-dampened grass.

The hangar housing his new aerial fire truck was ablaze. As he watched helplessly the roof collapsed onto the gasbag, puncturing it, freeing nearly all of the helium he had, and announcing the end of his new *White Cloud*.

TOM SWIFT and His Aerial Firetruck

CHAPTER IX

ANDY GETS IT WORSE THAN HE GIVES

BY THE TIME the local fire brigade assembled and made it out to their property, Tom and Barton Swift had connected their own fire system to a pump—that took water up from the nearby lake—and had the fire almost out. They managed to save the nearby hangar of the *Red Cloud* as well as to other small structures.

In all, just the *White Cloud's* hangar had been lost and with it, as Tom feared, the entire airship. Only the heat-twisted metal from inside survived.

It was a bad next two days. Barton was sad for his son and Tom was nearly inconsolable. He had worked so terribly hard on his new airship and it had held such promise. And the worst part of all was he just *knew* that Andy Foger was responsible! Only after he vented his anger at the other boy in front of his father did the older man slap himself on the forehead, let out a curse word, and race from the room.

Tom gave chase fearing that his own anger has set his father over the edge of reason, but he stopped when he saw the man almost calmly walking around the corner with the ladder on his shoulder. He went up to the first tree that had a camera mounted such that it would have taken a picture of the grounds to the left of the burnt

hangar, and then to one that would have snapped an image of the front of the structure and a third that would have captured the far right side and the edge of the other hangar.

Giving Tom an encouraging smile and waiving the three sealed photograph plates he climbed down, leaving the ladder against a tree, and marched into the house.

Thirty minutes he was back outside showing the results to Tom.

“It was him!” he angrily exclaimed. “That rat Andy Foger did this!”

“And we must immediately take this evidence to the constable and insist that the Foger boy be incarcerated post haste! Let’s go,” he instructed his son.

Barton and Tom took the younger man’s motor car and drive quickly into town where they accosted the constable. The many was not pleasantly inclined toward either the senior or junior Foger having been made to look the fool regarding Tom’s involvement in the Thessaly fire. And he was even less likely to look kindly on Andy Foger given that the Swifts now had multiple photographs of the delinquent wrecking damage on their property on at least these two occasions.

Upon seeing the newest pictures of Andy, one of him actually placing a lit torch to the side of the hangar that was damp with the contents of a gasoline can sitting at the boy’s feet, he let out an angry cry and told them, “I will see to this immediately!”

And, he did.

In court two days later he told the story of marching to the Foger home, knocking on the door and having it opened by the offender only to be slammed right back in his face. He entered the home and made a thorough search, eventually finding Andy hiding under his bed.

“The boy struggled and kicked at me as I dragged him out and then attempted to run from the room. I did not allow this and soon had him in hand irons. While I was taking him to the jail he began by threatening me and then pleaded to be let go and finally began sobbing telling me that his mother was so ill and he could not leave her side.”

The Judge, a man who had been almost instantly visited by Mr.

Foger who had tried everything from threats to mentioning special friendships with government officials—none of which worked—looked down at Andy.

“After seeing the photographs that clearly and plainly show you on the property of Mr. Barton Swift engaged in destruction one of their buildings plus—” he consulted a paper on his desk, “—plus something called an aerial fire fighting ship, I have to ask you what you can say that might be in your defense?”

Andy’s face had been alternating between the paleness of fright and redness from anger. He now swung around to look right at Tom.

“He was asking for it! He’s always doing things to make himself seem important. Well, I’m the important one here. His father is just some old kook who tinkers with little machines where my father is an important man and head of the bank! So there, Tom Swift!”

Shaking his head in wonder at the lunacy of Andy Foger, the Judge turned to his father.

“You, sir, seem to have exerted little if no controlling influence on your son. Make no mistake about that for this is not the first second or even fifth time the actions of Andrew Lawrence Foger have been brought to the attention of the constabulary of this town and also to my attention. In fact it was only two months ago that I sent Andrew to sit in the jail cell for two days when he was caught damaging property and pressing the blame on Tom Swift here.”

Mr. Foger stood next to his son and their attorney his fists clenched behind his back and his face rigid with anger and embarrassment. He made no reply.

“Well, then given the evidence and no alternative explanation in his defense I hereby find Andrew Foger guilty of trespass, guilty of malicious release of United States Government helium, and a second trespass with damage and destruction of property by use of fire. You will be taken to the county jail in Thessaly where you will spend one month. You will also pay reparations to the Swifts for damages.”

He banged his gavel and began to stand up when Andy shouted, “What about Sam Snedecker? He was there as well. He’s as guilty as I am!”

Sitting back down the Judge motioned Andy to be quiet.

“Young Snedecker is not to be seen in the evidence. As he is always seen with you, he was questioned and denies being with you in the evenings. He evidently takes care of his invalid grandmother. Someone who is *actually* ill. Charges have not been brought against him. If you now accuse him of taking part in this, and the matter goes to trial, unless you supply ample proof of the accusation you might end up back in jail for lying in court. Well?”

Andy sputtered, “Well then, Tom Swift lit the fire at the Hotel. I was there I saw him—” his voice trailed off as he could see that bringing up the larger fire was not going to go in his favor.

Andy looked at his feet and said nothing more. He was led from the room by the bailiff, followed by his father who turned to glare at Tom for a moment before leaving.



The first order of business was to now clean up the remains of the building and the airship. Seeing that his son needed to be left to the tasks alone, Barton remained in either the house or his own office for the full day the operation required.

Part way through the day Tom’s mind shifted from sadness to pondering what he might do to make an improved version of his airship. There were many possibilities and by the end of the day he not only had the site cleared and the remains dragged to a large rubbish pile—with ample assistance from Rad and Boomerang—he also could picture a better, wider and possibly more effective way to make a new one.

He spent several days organizing his various note and finally transcribed everything into a brand new one of the notebooks he favored for such purposes. On the cover he wrote:

Aerial Firetruck: Flying Fire Fighter

Then, turning to the very front page he purposely had left blank, he carefully wrote the following:

During the past two months I have been working toward the creation of a singularly elegant flying vehicle capable of

dousing flames at heights far surpassing the capabilities of any conventional fire pumper truck or device. I undertook this for a variety of reasons, but primarily because of my witnessing the demise to the beautiful and historic Hotel Shopton, a structure taller than any other in the county and much too tall for our local fire department to properly deal with.

The other reason for designing and building my airship was because of a premonition that a certain local bully—Andy Foger and his assortment of ruffian cohorts—had not just been responsible for setting the hotel ablaze, but that they might repeat the dastardly task again. And while no other structure in town is so tall as to be above the stream of water our pumper can manage, there are several nearby towns not as well outfitted.

Therefore, as detailed in this book of my notes on the subject, I have listed both the basic story along with a few details of evidence I recovered that also pointed to Andy's hand in this, as well as my calculations, formulas and other information necessary to reconstruct the aerial fire device should anyone wish to undertake it.

Sadly, and again at what I now know to be at Andy Foger's hands, my A.F.T. was destroyed in, of all things, a fire set on our home property. If needed I shall build a second one in the future.

August 1913

Tom Swift

Tom placed the notebook into a box with about eighteen others and space for several more, lifting the leather-clad lid and setting it down on the wooden box. The four small secret release points clicked into place, securing the lid.

Finally, Tom moved the heavy table from its position against the wall of his shed, opened the iron door underneath, and slipped the box back into place along with three identical ones. They would remain safe even in the event of a fire or flood in their sealed compartment.

He replaced everything, locked up for the evening and headed up to dinner.

Mrs. Baggert had promised chicken pot pie and he was really anxious to dig in.

THE END

Tom Swift will next be seen in his forthcoming story

TOM SWIFT Among The Diamond Makers

A new adventure for today's science minded boys.

This story will be available for prepaid order by mail from this publisher, from all reputable booksellers, and may be borrowed from most public libraries.

