



THE NEW TOM SWIFT INVENTION SERIES

Tom Swift And His Cyclonic Eradicator

By Victor Appleton II

Another disastrous hurricane has slammed through the Caribbean and wrecked havoc across many of the island nations as well as along the coast of Georgia and the Florida Panhandle. Hundreds of lives have been lost and billions of dollars of damage have occurred.

Tom is hired by a consortium of nations to devise a method of either halting the formation of such storms or to be able to dissipate them once they have been determined to be heading toward civilized land. They are desperate to prevent even one more storm season.

Tom and Damon Swift join forces to develop a new technology designed to corral such storms and save lives, but they run afoul of both mother nature as well as a group of foreign eco-terrorists bent on discrediting the Swifts. But, their true aims have yet to be revealed.

Once revealed, the world stands aghast at their reasons and their methods.

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This book is dedicated to anyone who ever climbed into a P3 Orion or other aircraft and willingly headed into the heart of a tropical storm in the name of science. We all 'know' that the eye of these storms is sunshine, lollipops and cherubs. Right? But, only *you* know what sort of hell it is getting through the actual storm. I salute you all.

Tom Swift and His Cyclonic Eliminator

FOREWORD

If I live to be one hundred, I can't believe that I will ever see a limit to what Tom can tackle. As if racing to the depths of the ocean, to the moon. or the "four" corners of this wonderful globe of ours isn't enough for him, if science can help with a problem—or a disaster—he is there.

Tom regularly communicates with intelligent beings from beyond our own solar system, and yet maintains a fairly straight-on-the-shoulders head and ego. I am not certain that I could be as level-headed as he is given any number of circumstances he has found himself in. Could you?

I have gained much pleasure from bringing you a few of Tom's more earthly adventures. Ones where Tom not only gains increasing pleasure from helping others, but in helping this planet of ours. Give the man a problem—such as the fuel-dependence and noise-pollution problems chronicled in his *Quieturbine SkyLiner* adventure—and you see immediate nose to grindstone activity.

This latest adventure hits home with me particularly hard. I had a close friend who lost his family to a deadly storm in the Caribbean. He lost everything, including his will to live. I know that he is not alone. His pain and anguish is felt year after year, storm after storm. Around the world.

Victor Appleton II

CHAPTER 1

PRIORITIES

"THAT, SON, is the weirdest-looking giant rolling pin I have ever seen." Damon Swift, world-renown scientist and inventor stood looking at his son's latest invention. He wasn't sure whether to smile or shake his head.

Tom Swift was tall and athletic and could pass for a much younger brother to his still-youthful father. Like Damon, Tom was an accomplished inventor and scientist. Still in his late teens, he had already been involved in dozens of adventures and was responsible to more than a hundred inventions.

"If I may ask, what is it?"

Tom grinned. "Gee, Dad. I was sure that you'd recognize the front part of my new asphalt rejuvenating system. Remember? From the transcontinental train project? Isn't it obvious?"

Damon Swift walked up to and around the front of the giant cylinder. Closed at both ends and attached to a large armature, it was light gray and featured hundreds of cupped teeth spaced at odd intervals all around it. Touching one of the teeth he remarked, "Right. This was the grinder machine you made for one of the other construction companies. Wait— Asphalt? As in roads?" He looked at his son with curiosity.

"That's right. And parking lots and runways and anything else you can think of. You know that Swift Enterprises is surrounded by it, right?"

"Sure," the elder scientist agreed. "Taxiways, runways, roads. And you will remember that I was the one who had them built."

"Well, I've been working with the guys in facilities and maintenance and they tell me that about one third of all our asphalt is in need of either resurfacing or replacement."

He described how most of the roadway in and around the four-square-mile complex was nearing its normal life span. "And, anywhere we run aircraft is in double need of attention. All of the unburned av-gas and jet fuel and the exhaust residue eats away at the structure and dissolves the tar that binds it all together."

Mr. Swift agreed. He had been so engrossed in several government contracts dealing with both rocket programs as well as nuclear energy that he had little time to spare to consider the state of their complex.

"I guess I haven't given it enough thought. So, tell me. How much are we looking at today?"

Tom thought for a moment and then answered, "We have eleven miles of dedicated roads here added to the twenty three total miles of runways and taxiways around the perimeter of Enterprises. The roads are each about twenty feet wide and the runways range from sixty feet by a mile long up to the super runway at the north end that runs the entire full four miles and is one hundred twenty feet wide."

Damon whistled. "I know I signed off on all of that, but it was over a period of more than ten years." He stopped and pondered the expense. "Times are fairly good here, but I can't help but believe that we would be hard-pressed to pay for all of that."

"That's where my new system comes in." Tom explained that the device he was building would be about 12 feet wide and more than 50 feet long. The cylinder they stood next to was one of two that would be at the front of the machine.

"We'll have a wide arm with propane torches that fire down onto the road surface, softening it. This grinder will be set a bit lower than the one behind it and can be lowered about six inches below grade. It will spin at about two hundred RPM and will tear at the old asphalt, throwing all the big chunks into a hopper where it gets further pulverized by the second grinder.

The biggest thing pieces comes out from that will be less than an inch square."

"What happens then, Son?"

"A giant sweeper brush cleans out the new twelve foot wide, four to six inch deep hole and adds all of that to the ground up old asphalt. All that goes into a mixing unit that will knead in fresh, hot tar and other binders including millions of one millimeter durastress beads to give the new asphalt additional strength and durability."

Mr. Swift took up the narrative. "So, if I have this right, you now have a hot mixture of the old and new materials that you can spread back onto the road?"

Tom was proud of his father's sense of reasoning. He knew that everything he understood about scientific method came from his father.

"Yep! We reheat the open hole with more propane torches then spread in the mixture and pack it down with a pair of smooth rollers at the very back. Anything that gets loose will be scooped up by the two people training the machine and tossed onto small conveyers on each side and then back into the mixing chamber."

Damon marveled at the entire concept. He recalled an older variation of such a machine working on small-scale road repairs when he was a youth.

"Do you know yet how quickly this will run and what the per-foot cost will be?"

Tom pulled out his electronic pocket organizer and called up a page of computations.

"I think that she will be able to move along at a rate of about two miles per hour."

Damon looked over the computations and raised an eyebrow.

He had been thinking along the line of yards per hour or even a few hundred feet per hour. When his eyes fell upon the costs he looked directly at his son.

“Those are *real* figures? Not placeholders?”

Tom shook his head. “They’re real. The durastress beads will run about two hundred dollars per mile’s worth and the tar another five hundred. Figure in propane and the three man crew and you get under a thousand dollars per mile of twelve-foot-wide rejuvenated road.”

After a few more minutes Damon excused himself and headed to the spacious office he and Tom shared. He looked up a few facts and figures and made a call to a friend who owned a specialty paving business in California.

“That’s right, Damon. The standard is ten feet wide by one hundred feet long at a customer cost of ten thousand bucks.”

Damon sat stunned for a full ten minutes before his secretary, Munford Trent, knocked lightly on the door and walked in.

“You have a meeting with Peter Fatherston and his assistant from NOAA in twenty minutes. That is set for a half hour and will be followed by lunch with all senior staff from the Construction Company.”

Damon knew the agenda for the first meeting but was puzzled by the lunch meeting. His look of curiosity was answered by Trent. “Mr. Aturian and his staff have asked for an hour to discuss some plant enhancements they would like to undertake. I believe those include a new assembly building and an updated computer-control system for the automated lines.”

Damon nodded. Now he remembered. He had dreaded the meeting as it would be necessary for him to turn down the request for a new, multi-million dollar building. He sighed.

“Thanks, Mu— Thanks, Trent.” He knew that the man

wished to be called by his last name. Even at the one social event Trent had attended at the Swift home a year earlier, he had asked to be called ‘Trent’ rather than by the more familiar.

At the appointed time, Trent ushered in a pair of well-dressed men from the National Oceanographic and Atmospheric Association. After shaking their hands, Damon motioned them to the over-stuffed leather chairs and low table that sat in one corner of the office.

Before they could begin their meeting a brief but heavy knock came on the door and it opened to reveal Chow Winkler pushing a cart outfitted with a pair of coffee urns and a small plate of pastries.

“Pardon the interrupt, Mister Swift. Gotcha some hot coffee and a couple o’ fresh danishes.”

Chow was a former Texas ranch cook who had met the Swifts in New Mexico more that four years earlier. He had taken to them, especially to young Tom, and they to him. When their trip to build the first privately-owned nuclear power and research facility had been over, he had asked to be allowed to accompany them back to Shopton had worked as their private chef ever since.

“Thank you, Chow. Right there will be fine.”

The pudgy range cook moved the cart to the indicated area and then left. They could hear his cowboy boots clomping down the hall as he returned to his private kitchen.

“So, Peter. And, Barry. What can we do for you?”

Clearing his throat, Peter Fatherston began. “NOAA is at a turning point, Damon. We’ve just finished moving our key West Coast facility to a more advantageous centralized location and are preparing to do the same with our Gulf of Mexico facility. We have realized that we need to have faster access to the main waterways that surround this nation.”

“And,” added his assistant, “that has pointed out a couple of areas where we need assistance in outfitting our facilities.”

Damon said nothing but raised a single eyebrow.

Barry James continued. “We’re moving out of safe havens and into the heart of areas that get battered by storms. Really battered. Louisiana and Alabama get a lot of action from Caribbean storms and hurricanes but our new facility at the southern tip of Florida is going to get something like sixty percent more storm hits.”

“Where is that?”

“At the top end of the Everglades near the west coast town of Marco. On one of the islands on Gullivan Bay actually. It has an almost immediate drop off to more than a hundred feet of water. Marco is a little community with a good deep bay and a couple square miles of storm-dampening land behind it.”

“Does it have an airfield?” Tom asked.

“Hardly. You can get to within about a kilometer and then you take a small boat across. We want to add a helicopter pad out there; more for emergencies that day-to-day access. Until then...” He shrugged.

They talked about both the position and the planned charter for this new NOAA station. Within minutes, Damon understood the strategic positioning and advantages to that location. He did not yet see the issues they came to discuss.

Peter picked up the story. “We need to be able to construct three buildings that can withstand one hundred sixty mile sustained winds along with a ninety foot communications tower capable of the same. No construction company cares to promise anything without burrowing the buildings underground.”

“Plus, we need a new type of mooring system for our five ships. Also to withstand really heavy winds,” Barry added.

These, he described, ranged from their smallest at just over 86-feet up to their two largest at 268- and 270-feet, respectively.

Before they departed, they provided Damon with both geological and surveyed measurements plus photographs. He promised to investigate possibilities and they promised to provide budgetary information within the following week.

Damon left his office moments later having scooped up the stack of papers he would need for his meeting with Jake Aturian—one of Damon’s closest friends and the manager of The Swift Construction Company—and his senior staff.

The Swift Construction Company had sprung up on the original site of the old Swift Construction Company founded by Damon’s grandfather and was a major holding in the Swift family for more than a century.

He bypassed taking one of the small all-electric cars provided throughout Enterprises and the Construction Company for employees to use when running short errands between building and facilities. Instead, he climbed into his 4-door sports saloon and was soon driving out of the private gate used by him, Tom and senior staff at Enterprises. It was the exit nearest to his destination.

Jake started the meeting off with a statement. “Damon. We know that the economy isn’t in the greatest shape right now, and we realize that money is tighter now than, say, two years ago.”

Damon merely nodded in agreement. Jake continued:

“I will be the first to admit that we are not taxing our manufacturing capacity today. But—” he held up a finger to forestall any comment, “—our projections for several of our aircraft including the Toad and our new military contract for Tom’s little SR-1 single-seater are quickly taking up all our available construction space.”

“When do we hit the wall?” Damon asked quietly.

“If nothing happens to forestall it, six months... seven tops.”

Damon nodded. “Give me a moment here,” he requested pulling out one of the recent reports Jake had provided. He read through the first page and flipped quickly through the remaining five pages before looking back up.

“I can’t refute these numbers.” The others around the table smiled. “I can, however, ask for verification on your estimated number and kinds of projects that we might get on top of all this that would necessitate an entirely new building.”

Faces around the table fell as the five members of Jake Aturian’s senior staff looked at one another.

Finally, Bob Tripp, Director of Line Management spoke up. “Mister Swift. I’ve done a little figuring and came up with this. If we put on a third shift, we are going against one of your won directives regarding health concerns with people working from midnight on. Setting that aside, New York mandates that even salaried employees working assembly lines on an all-night shift be paid a fifty percent premium over day or evening workers. I know that building the new assembly hall is a ten million dollar proposition, but we can save about a quarter of that the first two years versus overtime payments.”

He showed Damon his calculations. “Okay. Go on,” he prodded the man.

“Well, even doing that, we have all but one possible line dedicated to existing projects. It’s impossible to break down a line and change what we build on it each night to accommodate anything new that might come along! The best we can do is to do a line swap about once a week. Even so, we have to account for a lost day for break down and set up at each end.”

Damon looked from face to face. Each person sitting around the table nodded agreement with the logic. Finally, Damon nodded as well.

“In theory, you’ve convinced me. However, on the practical side, we have a major issue that is coming up.” He mentioned the forthcoming end to one large government contract. “I know that practically everything for that product was transferred to Fearing Island a year ago, but that is around twelve million in annual profits that stop in about three weeks.”

Fearing Island was the formerly scrub grass-covered island off the coast of Georgia that was leased by Enterprises as the site of their domestic rocket and missile program along with their submarine facilities. Both Damon and Tom had created various space- and ocean-going craft that launched from Fearing.

The Construction Company team had not previously heard of the end of the government program.

“Unless we get a solid contract to fill that void, I’m afraid that...” He tailed off. Grabbing his stack of papers, Damon rifled through them. He pulled out Tom’s figures and his scribbled numbers regarding Tom’s new asphalt machine.

“What is is, Damon,” Jake asked.

Looking back up, Damon replied, “I almost forgot I was going to say that we had an infrastructure problem coming up.” He told them about the massive amount of asphalt surfaces that needed near-term resurfacing. They all knew about the deteriorating state of some of the tarmac on the Construction Company grounds.

“I was putting off telling you guys that we have a lot of road surface that should have been attended to a couple years ago,” Jake mentioned.

Damon told the group about Tom’s machine. Then, he told the astonished people in front of him the enormous savings that would be realized. Open-mouthed, they sat in silence for more than a minute.

Jake was about to say something when Damon’s attention

was interrupted by his TeleVoc pin—the tiny lapel pin communicator device that many employees used to keep in contact while on Swift properties.

His face drained of color as he stammered, “I— Uh— I’ll be right there.”

Damon turned to the team. “I have to go. *Tom’s been crushed under his new paving machine!*”