The Project Gutenberg eBook of The Bramble Bush

This ebook is for the use of anyone anywhere in the United States and most other parts of the world at no cost and with almost no restrictions whatsoever. You may copy it, give it away or re-use it under the terms of the Project Gutenberg License included with this ebook or online at <u>www.gutenberg.org</u>. If you are not located in the United States, you'll have to check the laws of the country where you are located before using this eBook.

Title: The Bramble Bush

Author: Randall Garrett Illustrator: George Schelling

Release date: December 7, 2007 [eBook #23764]

Language: English

Credits: Produced by Greg Weeks, Stephen Blundell and the Online Distributed Proofreading Team at http://www.pgdp.net

\*\*\* START OF THE PROJECT GUTENBERG EBOOK THE BRAMBLE BUSH \*\*\*

# **The Bramble Bush**

Usually, if a man's gotten into bad trouble by getting into something, he's a fool to go back. But there are times ...

### by Randall Garrett

**Illustrated by Schelling** 

There was a man in our town, And he was wond'rous wise; He jumped into a bramble bush, And scratch'd out both his eyes! —Old Nursery Rhyme

Peter de Hooch was dreaming that the moon had blown up when he awakened. The room was dark except for the glowing night-light near the door, and he sat up trying to separate the dream from reality. He focused his eyes on the glow-plate. What had wakened him? Something had, he was sure, but there didn't seem to be anything out of the ordinary now.

The explosion in his dream had seemed extraordinarily realistic. He could still remember vividly the vibration and the *cr-r-r-ump!* of the noise. But there was no sign of what might have caused the dream sequence.

Maybe something fell, he thought. He swung his legs off his bed and padded barefoot over to the light switch. He was so used to walking under the light lunar gravity that he was no longer conscious of it. He pressed the switch, and the room was suddenly flooded with light. He looked around.

Everything was in place, apparently. There was nothing on the floor that shouldn't be there. The books were all in their places in the bookshelf. The stuff on his desk seemed undisturbed.

The only thing that wasn't as it should be was the picture on the wall. It was a reproduction of a painting by Pieter de Hooch, which he had always liked, aside from the fact that he had been named after the seventeenth-century Dutch artist. The picture was slightly askew on the wall.

He was sleepily trying to figure out the significance of that when the phone sounded. He walked over and picked it up. "Yeah?"

"Guz? Guz? Get over here quick!" Sam Willows' voice came excitedly from the instrument.

"Whatsamatter, Puss?" he asked blearily.

"Number Two just blew! We need help, Guz! Fast!"

"I'm on my way!" de Hooch said.

"Take C corridor," Willows warned. "A and B caved in, and the bulkheads have dropped. Make it snappy!"

"I'm gone already," de Hooch said, dropping the phone back into place.

He grabbed his vacuum suit from its hanger and got into it as though his own room had already sprung an air leak.

*Number Two has blown!* he thought. That would be the one that Ferguson and Metty were working on. What had they been cooking? He couldn't remember right off the bat. Something touchy, he thought; something pretty hot.

But that wouldn't cause an atomic reactor to blow. It obviously hadn't been a nuclear blow-up of any proportions, or he wouldn't be here now, zipping up the front of his vac suit. Still, it had been powerful enough to shake the lunar crust a little or he wouldn't have been wakened by the blast.

These new reactors could get out a lot more power, and they could do a lot more than the old ones could, but they weren't as safe as the old heavy-metal reactors, by a long shot. None had blown up yet—quite—but there was still the chance. That's why they were built on Luna instead of on Earth. Considering what they could do, de Hooch often felt that it would be safer if they were built out on some nice, safe asteroid—preferably one in the Jovian Trojan sector.

He clamped his fishbowl on tight, opened the door, and sprinted toward Corridor C.

The trouble with the Ditmars-Horst reactor was that it lacked any automatic negative-feedback system. If a D-H decided to go wild, it went wild. Fortunately, that rarely happened. The safe limits for reactions were quite wide—wider, usually, than the reaction limits themselves, so that there was always a margin of safety. And within the limits, a nicety of control existed that made nucleonics almost an esoteric branch of chemistry. Cookbook chemistry, practically.

Want deuterium? Recipe: To 1.00813 gms. purest Hydrogen-1 add, slowly and with care, 1.00896 gms. fine-grade neutrons. Cook until well done in a Ditmars-Horst reactor. Yield: 2.01471 gms. rare old deuterium plus some two million million million ergs of raw energy. Now you are cooking with gas!

All you had to do was keep the reaction going at a slow enough rate so that the energy could be bled off, and there was nothing to worry about. Usually. But control of the feebleizer fields still wasn't perfect, because the fields that enfeebled the reactions and made them easy to control weren't yet too well understood.

Peter de Hooch turned into Corridor C and kept on running. There was plenty of air still in this corridor, and there was apparently little likelihood of his needing his vac suit. But on the moon nobody responds to an emergency call without a vac suit.

He was troubled about Corridors A and B. The explosion must have been pretty violent to have sealed off two of the four corridors leading from the living quarters to the reaction labs. Two corridors went directly to one of the reactors, two went directly to the second. Two more connected the reactor labs themselves, putting the labs and the living quarters at the corners of an equilateral triangle. (Peter had never been able to figure out why A and B corridors led to Reactor Two, while C and D led to Reactor One. Logically, he thought, it should have been the other way around. Oh, well.)

Going down C meant that he'd have to get to Reactor Two the long way around.

What had the damage been? he asked himself. Had anyone been hurt? Or killed? He pushed the questions out of his mind. There was no point in speculating. He'd have the information soon enough.

He took the cutoff to the left, at a sixty-degree angle to Corridor C, which led him directly to Corridor E, by-passing Reactor One. He noticed as he went by that the operations lamp was out. Nobody was working with Reactor One.

As he pounded on down the empty corridor, he suddenly realized that he hadn't seen anyone else running with him. There were five other men in the reactor station, and—so far—he had seen no one. He knew where Willows was, but where were Ferguson, Metty, Laynard, and Quillan? He pushed those questions out of his mind, too, for the time being.

A head popped out of the door at the far end of the corridor.

#### "Guz! Hurry, Guz!"

De Hooch didn't bother to answer Willows. He was short of breath as it was. He knew, besides, that no answer was expected. He had known Willows for years, and knew how he thought. It was Willows who had first tagged de Hooch with that silly nickname, "Guzzle". Not because Peter was such a heavy drinker—although he could hold it like a gentleman—but because he had thought "Guzzle" de Hooch was so uproariously funny. "Nobody likes a guzzle as well as de Hooch," he'd say, with an idiot grin. As a result, everybody called Peter "Guz" now.

The head had vanished back into the control room of Reactor Two. De Hooch kept on running, his breath rasping loudly in the confines of the fishbowl helmet. Running four hundred yards isn't the easiest thing in the world, even if a man is in good physical condition. There was less weight to contend with, but the mass that had to be pushed along remained the same. The notion that running on Luna was an effortless breeze was one that only Earthhuggers clung to. He ran into the control room and stopped, panting heavily. "What ... happened?"

Sam Willows' normally handsome face looked drawn. "Something went wrong. I don't know what. I was finishing up with Reactor One when I heard the explosion. They are both"—he gestured toward the reactor—"both in there."

"Still alive?"

"I think so. One of 'em, anyway. Take a look."

De Hooch went over to the periscope and put his eyes to the binoculars. He could see two figures in heavy, dull-gray radiation-proof suits. They were lying flat on the floor, and neither was moving. De Hooch said as much.

"The one on the left was moving his arm—just a little," Willows said. "I'll swear he was."

Something in the man's voice made de Hooch turn his head away from the periscope's eyepieces. Willows' face was gray, and a thin film of greasy perspiration reflected the light from the overhead plates. The man was on the verge of panic.

"Calm down, Puss," de Hooch said gently. "Where's Quillan and Laynard?"

"They're in their rooms," Willows said in a tight voice. "Trapped. The bulkheads have closed 'em off in A. No air in the corridor. We'll have to dig 'em out. I called 'em both on the phone. They're all right, but they're trapped."

"Did you call Base?"

"Yes. They haven't got a ship. They sent three moon-cats, though. They ought to be here by morning."

De Hooch looked up at the chronometer on the wall. Oh one twelve, Greenwich time. "Morning" meant any time between eight and noon; the position of the sun up on the surface had nothing to do with Lunar time. As a matter of fact, there was a full Earth shining at the moment, which meant that it wouldn't be dawn on the surface for a week yet.

"If the cats from Base get here by noon, we'll be O.K., won't we?" de Hooch asked.

"Look at the instruments," Willows said.

De Hooch ran a practiced eye over the console and swallowed. "What were they running?"

"Mercury 203," Willows said. "Half-life forty-six point five days. Beta and gamma emitter. Converts to Thallium 203, stable."

"What did they want with a kilogram of the stuff?"

"Special order. Shipment to Earth for some reason."

"Have you checked the end-point? She's building up fast."

"No. No. I haven't." He wet his lips with the tip of his tongue.

"Check it," said de Hooch. "Do any of the controls work?"

"I don't know. I didn't want to fiddle with them."

"You start giving them a rundown. I'm going to get into a suit and go pull those two out of there if they're still alive." He opened the locker and took his radiation-proof suit out. He checked it over carefully and began shucking his vac suit.

A few minutes delay in getting to the men in the reactor's anteroom didn't matter much. If they hadn't been killed outright, and were still alive, they would probably live a good deal longer. The shells of the radiation suits didn't look damaged, and the instruments indicated very little radiation in the room. Whatever it was that had exploded had done most of its damage at the other end of the reactor. Evidently, a fissure had been opened to the surface, forty feet above—a fissure big enough to let all the air out of A and B corridors, and activate the automatic bulkheads to seal off the airless section.

What troubled him was Willows. If he hadn't known the man so well, de Hooch would have verbally blasted him where he stood.

His reaction to trouble had been typical. De Hooch had already seen Willows in trouble three times, and each time, the reaction had been the same: near panic. Every time, his first thought had been to scream for help rather than to do anything himself. Almost anyone else would have made one call and then climbed into a radiation suit to get Ferguson and Metty out of the anteroom. There was certainly no apparent immediate danger. But all that Willows had done was yell for someone to come and do his thinking and acting for him. He had called Base; he had called de Hooch; he had called Quillan and Laynard. But he hadn't done anything else.

Now he had to be handled with kid gloves. If de Hooch didn't act calm, if he didn't go about things just right, Willows might very likely go over the line into total panic. As long as he had someone to depend on, he'd be all right, and de Hooch didn't want to lose the only help he had

right now.

"Fermium 256," said Willows in a tight, flat voice.

"What?" de Hooch asked calmly.

"Fermium 256," Willows repeated. "That's what the stuff is going to start building towards. Spontaneous fission. Half-life of three hours." He took a deep breath. "The reactor won't be able to contain it. We haven't got that kind of bleed-off control."

"No," de Hooch agreed. "I suggest we stop it."

"The freezer control isn't functioning," Willows said. "I guess that's what they went in there to correct."

"I doubt it," de Hooch said carefully. "They wouldn't have needed suits for that. They must have had something else bothering them. I'd be willing to bet they went in to pull a sample and something went wrong."

"Why? What makes you think so?"

"If there'd been trouble, they'd have called for someone to stay here at the console. Both of them wouldn't have gone in if there was any trouble."

"Yeah. Yeah, I guess you're right." He looked visibly relieved. "What do you suppose went wrong?"

"Look at your meters. Four of 'em aren't registering."

Willows looked. "I hadn't noticed. I thought they were just registering low. You're right, though. Yeah. You're right. The surface bleed-off. Hydrogen loss. Blew a valve, is all. Yeah." He grinned a little. "Must've been quite a volcano for a second or two."

De Hooch grinned back at him. "Yeah. Must've. Give me a hand with these clamps."

Willows began fastening the clamps on the heavy suit. "D'you think Ferguson and Metty are O.K., Guz?" he asked.

De Hooch noticed it was the first time he had used the names of the two men. Now that there was a chance that they were alive, at least in his own mind, he was willing to admit that they were men he knew. Willows didn't want to think that anyone he knew had done such a terrible thing as die. It hit too close to home.

The man wasn't thinking. He was willing to grasp at anything that offered him a chance—dream straws. The idea was to keep him busy, keep his mind on trivia, keep him from thinking about what was going on inside that reactor.

He should have known automatically that it was building toward Fermium 256. It was the most logical, easiest, and simplest way for a D-H reactor to go off the deep end.

A Ditmars-Horst reactor took advantage of the fact that any number can be expressed as the sum of powers of two—and the number of nucleons in an atomic nucleus was no exception to that mathematical rule.

Building atoms by adding nucleons wasn't as simple as putting marbles in a bag because of the energy differential, but the energy derived from the fusion of the elements lighter than Iron 56 could be compensated for by using it to pack the nuclei heavier than that. The trick was to find a chain of reactions that gave the least necessary energy transfer. The method by which the reactions were carried out might have driven a mid-Twentieth Century physicist a trifle ga-ga, but most of the reactions themselves would have been recognizable.

There were several possible reactions which Ferguson and Metty could have used to produce Hg-203, but de Hooch was fairly sure he knew which one it was. The five-branch, double-alphaaddition scheme was the one that was easiest to use—and it was the only one that started the damnable doubling chain reaction, where the nuclear weights went up exponentially under the influence of the peculiar conditions within the reactor. 2-4-8-16-32-64-128-256 ... Hydrogen 2 and Helium 4 were stable. So were Oxygen 16 and Sulfur 32. The reaction encountered a sticky spot at Beryllium 8, which is highly unstable, with a half life of ten to the minus sixteenth seconds, spontaneously fissioning back into two Helium 4 nuclei. Past Sulfur 32, there was a lot of positron emission as the nuclei fought to increase the number of neutrons to maintain a stable balance. Germanium 64 is not at all stable, and neither is Neodymium 128, but the instability can be corrected by positive beta emission. When two nuclei of the resulting Xenon 128 are forced together, the positron emission begins long before the coalescence is complete, resulting in Fermium 256.

But not even a Ditmars-Horst reactor can stand the next step, because matter itself won't stand it —not even in a D-H reactor. The trouble is that a D-H reactor *tries*. Mathematically, it was assumed that the resulting nucleus did exist—for an infinitesimal instant of time. Literally, mathematically, infinitesimal—so close to zero that it would be utterly impossible to measure it. Someone had dubbed the hypothetical stuff Instantanium 512.

Whether Instantanium 512 had any real existence is an argument for philosophers only. The

results, in any case, were catastrophic. The whole conglomeration came apart in a grand splatter of neutrons, protons, negatrons, positrons, electrons, neutrinos—a whole slew of Greek-lettered mesons of various charges and masses, and a fine collection of strange and ultrastrange particles. Energy? Just oodles and gobs.

Peter de Hooch had heard about the results. He had no desire to experience them first hand. Fortunately, the reaction that led up to them took time. It could be stopped at any time up to the Fm-256 stage. According to the instruments, that wouldn't be for another six hours yet, so there was nothing at all to worry about. Even after that it could be stopped, provided one had a way to get rid of the violently fissioning fermium.

"Connections O.K.?" Willows asked. His voice came over the earphones inside the ponderous helmet of the radiation suit.

"Fine," said de Hooch. He adjusted the double periscope so that his vision was clear. "Perfect."

He tested the controls, moving his arms and legs to see if the suit responded. The suit was so heavy that, without powered joints, controlled by servomechanisms, he would have been unable to move, even under Lunar gravity. With the power on, though, it was no harder than walking underwater in a diving suit. "All's well, Puss," he said.

"I'll keep an eye on you," said Willows.

"Fine. Well, here goes Colossus de Hooch." He began walking toward the door that led into the corridor which connected the reactor anteroom to the control room.

It took time to drag the two inert figures out of the anteroom. All de Hooch could do was grab them under the armpits, apply power, and drag them out. He went out the same way he had come in, traversing the separate chambers in reverse order. First came the decontamination chamber, where the radioactive dust that might have settled on the suits was sluiced off by the detergent sprays. When the radiation detectors registered low enough, de Hooch dragged Ferguson into the outer chamber, then went back and got Metty and put him through the same process. Then he dragged them on into the control room so that Willows could get them out of the heavy suits.



"Can you help me, Guz?" Willows asked. It was obvious that he didn't want to open the suits. He didn't want to see what might be inside. De Hooch helped him.

They were both alive, but unconscious. Bones had been broken, and Metty appeared to be suffering from concussion. They were badly damaged, but they'd live.

De Hooch and Willows made two trips down E and C corridors, carrying the men on a stretcher, to get them in bed. De Hooch splinted the broken bones as best he could and gave each of them a shot of narcodyne. He had to do the medical work because Quillan, the medic, was trapped in Corridor A. He called Quillan on the phone to tell him what had happened. He described the signs and symptoms of the victims as best he could, and then did what Quillan told him to do.

"They ought to be all right," Quillan said. "With that dope in them, they'll be out cold for the next twelve hours, and by that time, the boys from Base will be here. Just leave 'em alone and don't move 'em any more."

"Right. I'll call you back later. Right now, Puss and I are going to see what's wrong with the control linkages on Number Two."

"Right. By-o."

De Hooch and Willows walked back to the control room of Number Two Reactor in silence.

Once inside the control room, de Hooch said: "How are those control circuits?" Willows was supposed to have been checking them while he had been dragging Ferguson and Metty out of the antechamber.

"Well, I ... I'm not sure. I'll show you what I've found so far, Guz. You ought to take a look at them. I ... I'd like you to take a look-see. I think"—he gestured toward the console—"I think they're all right except for the freezer vernier and the pressure release control."

He doesn't trust his own work, de Hooch thought. Well, that's all right. Neither do I.

Painstakingly, the two of them went over the checking circuits. Willows was right. The freezer and pressure controls were inoperable.

"Damn," said de Hooch. "Double damn."

"They're probably both stuck at the firewall," Willows said.

"Sure. Where else? I'll have to go in there and unstick 'em. Help me get back into that two-legged tank again." He wished he knew more about what Ferguson and Metty had been doing. He wished he knew why the two men had gone into the anteroom in the first place. He wished a lot of things, but wishing was a useless pastime at this stage of the game.

If only one of the two men had been in a condition to talk!

He got back into his radiation-proof suit again, took one last look at the instruments on the console, and headed for the reactor.

Through the first radiation trap—left turn, right turn, right turn, left turn—through the "cold" room, through the second radiation trap, through the decontamination chamber, and through the third radiation trap into the anteroom. Now that Ferguson and Metty were safely out of the way, he could give his attention to the damage that had been done.

Had Ferguson and Metty actually come in to tap off a sample, as he had suggested to Willows? He looked around at the wreckage in the antechamber. Quite obviously, the heavy door of the sample chamber was wide open, and it certainly appeared that the wreckage was scattered from that point. Cautiously, he went over to look at the open sample chamber. It looked all right, except that the bottom was covered with a bright, metallic dust. He rubbed his finger over it and looked at the fingertip. A very fine dust. And yet it hadn't been scattered very much by the explosion. Heavy. Very likely osmium. Osmium 187 was stable, but it wasn't a normally used step toward Mercury 203. Four successive alpha captures would give Polonium 203, not mercury. Ditto for an oxygen fusion. It could be iridium or platinum, of course. Whatever it was, the instruments in his helmet told him it wasn't hot.

He had a hunch that Ferguson and Metty had been building Mercury 203 from Hafnium 179 by the process of successive fusions with Hydrogen 3 and that something had gone wrong with the H-3 production. It appeared that the explosion had been a simple chemical blast caused by the air oxidation of H-2. But the bleeder vent at the other end of the reactor had apparently kicked at the same time. An enormous amount of unused energy had been released, blowing the entire emergency bleeder system out.

Something didn't seem right. Something stuck in his craw, and he couldn't figure out what it was.

He opened up the conduit boxes that led through the antechamber from the control console to the reactor beyond the firewall. Everything looked fine. That meant that whatever it was that had fouled up the controls was on the other side of the firewall.

"How does it look?" Willows' voice came worriedly over the earphones.

"Have I already said 'damn'?" de Hooch asked.

"You have," Willows said with forced lightness. "You even said 'double damn'."

"Factorial damn, then!" said de Hooch.

"What's the matter?"

"Apparently the foul-up is on the *other* side of the firewall."

"Are you going in?"

"I'll have to."

"All right. Watch yourself."

"I will." He went over to the periscope that surveyed the part of the reactor beyond the firewall.

Everything looked normal enough. He carefully checked the pressure gauge. Normal.

"Check the spectro for me, will you?" he asked. "Make sure that's just the normal helium atmosphere in there."

"Sure." A pause. "Nothing but helium, Guz. What were you expecting?"

"I don't think I'd care to walk into a hydrogen atmosphere at three hundred Centigrade."

"Neither would I, but how could there be hydrogen in there?"

"There shouldn't be. But there's something screwy going on here, and I can't put my finger on it."

"Well, whatever it is, it isn't hydrogen in the reactor room."

"O.K. Stand by. I'm going in."

He walked over to the firewall door. On the other side of it was a small chamber where the oxygen and nitrogen of normal air would be swept out before he opened the inner door to go into the inner chamber itself. There was no need for an air lock, since small amounts of impurities in the He-4 didn't bother anything.

It was just as he turned the lever that undogged the firewall door that he realized his mistake.

But it was too late.

The door jerked outward, and a hot wind picked him up and slammed him against the far wall.

There was a moment of pain.

Then—nothing.

I here was something familiar about the man who was turning the wheel, but de Hooch couldn't place it. The man was wearing a black hood, as befitted a torturer and executioner.

"Idiot," said the hooded man, giving the wheel of the rack a little more pressure, "explain the following: If a half plus a half is equal to a whole, why is halfnium plus halfnium not equal to wholmium?"

Stretched as he was on the rack, de Hooch could not think straight because of the excruciating pain.

"Because a half is eight point two eight per cent heavier than a hole," said de Hooch.

"You are an idiot, none the less," said the torturer. He gave the wheel another twist. De Hooch wanted to scream, but he couldn't.

"Try again," said the torturer. "What is a half plus four plus four plus four plus four plus—"

"Stop!" screamed de Hooch. "Stop! Stop at the osmium!"

"Ah! But it didn't stop at the osmium," said the hooded man. "It went on and on and on. Plus four plus four plus four plus four—until there were so many plus fours in there that the place looked like an old-fashioned golf course."

"My legs hurt," said de Hooch. The man was no longer wearing a hood, but de Hooch couldn't tell if it was Willows or himself.

"We will all go together when we go," said the man.

De Hooch turned his head away and looked at the ceiling.

And he realized that it was the ceiling of the antechamber.

"My legs hurt," he repeated. And he could hear the hoarse whisper inside the helmet. He realized that he was lying flat on his back. He had been jarred around quite a bit in the suit.

He wondered if he could sit up. He managed to get both arms behind him and push himself into a sitting position. He wiggled his feet. The servos responded. He hurt all over, but a little experiment told him that he was only bruised. Nothing was broken. He hadn't been hit as hard as Ferguson and Metty had been.

"Willows?" he said. "Willows?"

There was no answer from the earphones.

He looked at the chronometer dial inside his helmet. Oh two forty-nine. He had been unconscious less than ten minutes.

The same glance brought his eyes to two other dials. The internal radiation of the suit was a little high, but nothing to worry about. But the dial registering the external radiation was plenty high. Without the protection of the suit, he wouldn't have lived through those ten minutes.

And then he knew, and he pushed any thought of further help from that quarter out of his mind. What had to be done would have to be done by Peter de Hooch alone. He climbed to his feet.

His head hurt, and he swayed with nausea and pain. Only the massive weight of the suit's shoes kept him upright. Then it passed, and he blinked his eyes and shook his head to clear it. He found he was holding his breath, and he let it out.

The trouble had been so simple, and yet he hadn't seen it. Oh, yes, he had! He *must* have, subconsciously. Otherwise, how would he have guessed that the stuff in the sampling chamber was Osmium 187? Ferguson and Metty *had* been trying to make Mercury 203 by adding eight successive tritium nuclei to Hafnium 179, progressing through Tantalum 182, Tungsten 185, Rhenium 188, Osmium 191, Iridium 194, Platinum 197, and Gold 200, all of which were unstable.

But the Hydrogen 3 reaction had gone wrong. The doubling had set in, producing Helium 4. Successive additions of the alpha particles to Hafnium 179 had produced, first, Tungsten 183, and then Osmium 187, both of which were stable.

Ferguson and Metty, seeing that something was wrong, drew off a sample and then reset the reaction to produce the Hg-203 they wanted. Then they had come down to pick up the sample.

They hadn't realized that the helium production had gone wild. Much more helium than necessary was being produced, and the bleeder valve had failed. When they opened the sample chamber, they got a blast of high-pressure helium right in the face. The shock of that sudden release had jarred the whole atmosphere inside the reaction chamber, and the bleeder valve had let go. But the violence of the pressure release had caused a fault to the surface to open up and had closed the valve again—jammed it, probably. There had been enough pressure left in there to blow de Hooch up against the nearest wall when he opened the door. Since the pressure indicator system was connected to the release system, when one had failed, the other had failed. That's why the pressure gauge had indicated normal.

And, of course, it had been the pressure differential that had caused the controls to stick. Well, they ought to be all right now, then. He decided he'd better take a look.

The firewall door was still open. He walked over to it and stepped into the small chamber that led to the inner reactor room. The inside door, much weaker than the outer firewall door, had been blown off its hinges. He stepped past it and went on in.

What he saw made him jerk his glance away from the periscope in his helmet and check his radiation detectors again. Not much change. Relief swept over him as he looked back at the reactor itself. The normally dead black walls were glowing a dull red. It was pure thermal heat, but it shouldn't be doing that.

Moving quickly, he went over to the place where the control cables came in through the firewall. It took him several minutes to assure himself that they would function from the control room now. There was nothing more to do but get out of here and get that reaction damped.

He went out again, closing the firewall door behind him and dogging it tight. There would be no more helium production now.

He went through the radiation trap to the decontamination chamber to wash off whatever it was he had picked up.

The decontamination room was a mess.

De Hooch stared at the twisted pipes and the stream of water that gushed out of a cracked valve. The blast had jarred everything loose. Well, he could still scrub himself off.

Except that the scrubbers weren't working.

He swore under his breath and twisted the valve that was supposed to dispense detergent. It did, thank Heaven. He doused himself good with it and then got under the flowing water.

The radiation level remained exactly where it was.

He walked over and pulled one of the brushes off the defunct scrubber and sudsed it up. It wasn't until he started to use it that he got a good look at his arms. He hadn't paid any attention before.

He walked over to the mirror to get a good look.

"You look magnificent," he told his reflection acidly.

The radiation-proof armor looked as though it had been chrome plated.

But de Hooch knew better than that. He knew exactly what had happened. He was nicely plated all over with a film of mercury, which had amalgamated itself with the metallic surface of the suit. He was thoroughly wet with the stuff and no amount of water and detergent would take it off.

There was something wrong with Number Two Reactor, all right. It had leaked out some of the Mercury 203 that Ferguson and Metty had been making.

He thought a minute. It hadn't been leaking out just before he opened the door in the firewall,

because Willows would certainly have noticed the bright mercury line when he checked with the spectroscope. The stuff must have been released when the pressure dropped.

He walked back to the anteroom and looked at the sampling chamber. There were a few droplets of mercury around the inlet.

Thus far, the three pressure explosions had wrecked about everything that was wreckable, he thought. No, not quite. There was still the chance that the whole station would go if he didn't get back into the control room and stop that "powers of two" chain. The detonation of Instantanium 512 would finish the job by doing what high-pressure helium could never do.

He glanced at the thermometer. The temperature behind the firewall had risen to two-forty Centigrade. It wasn't supposed to be above two hundred. It wasn't too serious, really, because a little heat like that wouldn't bother a Ditmars-Horst reactor, but it indicated that things back there weren't working properly.

He turned away and walked back to the decontamination chamber. There must be some way he could get the mercury off the suit—because he couldn't take the suit off until the mercury was gone.

 $\mathbf{F}$  irst, he tried scrubbing. That was what showed him how upset he really was. He had actually scrubbed the armor on his left arm free of mercury when he realized what he was doing and threw the brush down in disgust.

"Use your head, de Hooch!" he told himself. What good would it do to scrub the stuff off of the few places he could reach? In the bulky armor, he was worse than muscle-bound. He couldn't touch any part of his back; he couldn't bend far enough to touch his legs. His shoulders were inaccessible, even. Scrubbing was worse than useless—it was time-wasting.

He picked up the brush again and began scrubbing at the other arm. It gave him something to do while he thought. While he was thinking, he wasn't wasting time.

What would dissolve mercury? Nitric acid. Good old HNO3. Fine. Except that the hot lab was at the other end of the reactor, where the fissure had let all the air out. The bulkheads had dropped, and he couldn't get in. And, naturally, the nitric acid would be in the lab.

For the first time, he found himself hating Willows' guts. If he were around, he could get some acid from the cold lab, or even from the other hot lab at Number One. If Willows—

He stood up and dropped the brush. "Dolt! Boob! Moron! Idiot!" Not Willows. Himself. There was no reason on earth—or Luna—why he couldn't walk over to Number One hot lab and get the stuff himself. The habit of never leaving the lab without thorough decontamination was so thoroughly ingrained in him that he had simply never thought about it until that moment. But what did a little contamination with radioactive mercury mean at a time like this? He could take F corridor to Number One, use the decontamination chamber and the acid from the lab, shuck off his armor there, and come back through E corridor. F could be cleaned up later.

So simple.

He went through the light trap to the next chamber and turned the handle on the sliding door. The door wouldn't budge. It had been warped by the force of the helium blast, and it was stuck in its grooves.

Well, there were tools. The thing could be unstuck.

Peter de Hooch was a determined man, a strong man, and a smart man. But the door was more determined and stronger than he was, and his intelligence didn't give him much of an edge right then. After an hour's hard work, he managed to get the door open about eighteen inches. Then it froze fast and refused to move again. All the power and leverage he could bring to bear was useless. The door had opened all it was going to open. Beyond it, he could see the next radiation trap—and freedom.

Eighteen inches would have been plenty of space for him to get through if he had not been wearing the radiation-proof suit. But he didn't dare take that suit off. By the time he got out of the suit, the intensely radioactive mercury on its surface would have made his death only a matter of time. And not much time at that.

He told himself that if it were simply a matter of running to the control room to shut off the D-H reactor, he'd do it. That could have been done before he lost consciousness. But it wasn't that easy. Damping the reaction took time and control. The stuff had to be eased back slowly. Shutting off the Ditmars-Horst would simply blow a hole in the crust of Luna and kill everyone if he did it now. There were four or five men out there who would die if he pulled anything foolish like that. The explosion wouldn't be as powerful as the Instantanium 512 reaction would be, but it would be none the less deadly for all that.

There had to be either a way to scrape the mercury off the suit or a way to open the door another six inches.

Or, he added suddenly, a way to get safely out of the suit.

At the end of another twenty minutes, he had still thought of nothing. He wandered around the decontamination room, looking at everything, hoping he might see something that would give him a clue. He didn't.

He went into the antechamber of the reactor and glared at the door in the firewall. The instruments said that things were getting pretty fierce on the other side of that wall. Temperature: Two ninety-five and still rising. Pressure? He carefully cracked the inlet of the sampling chamber and got a soft hiss. The helium was expanding from the heat, that was all. Part of the trouble with the reactor, he thought, was the high percentage of oxygen and nitrogen that had mixed in during the ten minutes or so that the door was open. All hell was fixing to bust loose in there, and he, Peter de Hooch, was right next to it.

He walked back into the decontamination chamber.

What would dissolve mercury?

Mercury would dissolve gold. Would gold dissolve mercury?

Very funny.

He was like a turtle, de Hooch thought. Perfectly safe as long as he was in his shell, but take him out of it and he would die.

Hell of a way to spend the night, he thought. A night in shining armor.

That struck him as funny. He began to laugh. And laugh.

He almost laughed himself sick before he realized that it was fear and despair that were driving him into hysteria, not a sense of humor. He forced himself to calmness.

He must be calm.

He must think.

Yes.

How do you go about getting rid of a radioactive metal that is in effect welded to the outside of your suit?

The trouble was, he was a nucleonics engineer, not a chemist. He remembered quite a bit of his chemistry, of course, but not as much as he would have liked.

Could the stuff be neutralized?

Sure, he told himself. Very simple. All he had to do was go climb into the reactor, and let the reactor do the job. Mercury 203 plus an alpha particle gives nice, stable Lead 207. Just go climb right into the Ditmars-Horst and let the Helium 4 do the job.

But the thought stuck in his mind.

He kept telling himself not to panic as Willows had done.

And several minutes later, chuckling to himself in a half demented fashion, he opened the firewall door and went in to let the helium do the job.

It was nearly eight in the morning, Greenwich time, when the three surface vehicles, with their wide Caterpillar treads lumbered to a halt near the kiosk that marked the entrance to the underground site of the laboratories.

"O.K.," said one of the men in the first machine, holding a microphone to his lips, "let's go in. If what Willows said is true, the whole place may blow any minute now, but I'm not asking for volunteers. Nobody will be any safer up here than they will down there, and we have to do a job. Besides, Willows wasn't completely rational. Nobody would put on a vac suit and run away like that if he was in his right mind. So we can discount a lot of what he said when we picked him up on the road.

"The five of us in this car are going straight to Number One Reactor to see what can be done to stop whatever is going on. The rest of you start trying to see if you can get those trapped men out of A and B corridors. All right, let's move in."

Less than five minutes later, five men went into the control room of Number One Reactor. They found Peter de Hooch sound asleep in the control chair, and the instruments showed that the Ditmars-Horst reactor was inactive.

One of the men shook de Hooch gently, awakening him in the middle of a snore.

"What?" he said groggily.

"We're here, Guz. Everything's O.K."

"Sure everything's O.K. Nothing to it. All I did was wait until the temperature got above three fifty-seven Centigrade—above the boiling point of mercury. Then I went in and let the hot helium *boil* the stuff off me. Nothing to it. Near boiled myself alive, but it did the trick."

"What," asked the man in a puzzled voice, "are you talking about?"

"I am a knight in dull armor," said Peter de Hooch, dozing off again.

Then he roused himself a little, and said, without opening his eyes: "Hi yo, Quicksilver, away." And he was sound asleep again.

And when he saw what he had done, With all his might and main, He jumped back in that bramble bush And scratch'd them in again!...

#### **Transcriber's Note:**

This etext was produced from *Analog* August 1962. Extensive research did not uncover any evidence that the U.S. copyright on this publication was renewed. Minor spelling and typographical errors have been corrected without note.

\*\*\* END OF THE PROJECT GUTENBERG EBOOK THE BRAMBLE BUSH \*\*\*

Updated editions will replace the previous one-the old editions will be renamed.

Creating the works from print editions not protected by U.S. copyright law means that no one owns a United States copyright in these works, so the Foundation (and you!) can copy and distribute it in the United States without permission and without paying copyright royalties. Special rules, set forth in the General Terms of Use part of this license, apply to copying and distributing Project Gutenberg<sup>™</sup> electronic works to protect the PROJECT GUTENBERG<sup>™</sup> concept and trademark. Project Gutenberg is a registered trademark, and may not be used if you charge for an eBook, except by following the terms of the trademark license, including paying royalties for use of the Project Gutenberg trademark. If you do not charge anything for copies of this eBook, complying with the trademark license is very easy. You may use this eBook for nearly any purpose such as creation of derivative works, reports, performances and research. Project Gutenberg eBooks may be modified and printed and given away—you may do practically ANYTHING in the United States with eBooks not protected by U.S. copyright law. Redistribution is subject to the trademark license, especially commercial redistribution.

#### START: FULL LICENSE THE FULL PROJECT GUTENBERG LICENSE PLEASE READ THIS BEFORE YOU DISTRIBUTE OR USE THIS WORK

To protect the Project Gutenberg<sup>™</sup> mission of promoting the free distribution of electronic works, by using or distributing this work (or any other work associated in any way with the phrase "Project Gutenberg"), you agree to comply with all the terms of the Full Project Gutenberg<sup>™</sup> License available with this file or online at www.gutenberg.org/license.

### Section 1. General Terms of Use and Redistributing Project Gutenberg<sup>™</sup> electronic works

1.A. By reading or using any part of this Project Gutenberg<sup>™</sup> electronic work, you indicate that you have read, understand, agree to and accept all the terms of this license and intellectual property (trademark/copyright) agreement. If you do not agree to abide by all the terms of this agreement, you must cease using and return or destroy all copies of Project Gutenberg<sup>™</sup> electronic works in your possession. If you paid a fee for obtaining a copy of or access to a Project Gutenberg<sup>™</sup> electronic work and you do not agree to be bound by the terms of this agreement, you may obtain a refund from the person or entity to whom you paid the fee as set forth in paragraph 1.E.8.

1.B. "Project Gutenberg" is a registered trademark. It may only be used on or associated in any way with an electronic work by people who agree to be bound by the terms of this agreement. There are a few things that you can do with most Project Gutenberg<sup>™</sup> electronic works even without complying with the full terms of this agreement. See paragraph 1.C below. There are a lot of things you can do with Project Gutenberg<sup>™</sup> electronic works if you follow the terms of this agreement and help preserve free future access to Project Gutenberg<sup>™</sup> electronic works. See paragraph 1.E below.

1.C. The Project Gutenberg Literary Archive Foundation ("the Foundation" or PGLAF), owns a compilation copyright in the collection of Project Gutenberg<sup>m</sup> electronic works. Nearly all the individual works in the collection are in the public domain in the United States. If an

individual work is unprotected by copyright law in the United States and you are located in the United States, we do not claim a right to prevent you from copying, distributing, performing, displaying or creating derivative works based on the work as long as all references to Project Gutenberg are removed. Of course, we hope that you will support the Project Gutenberg<sup>™</sup> mission of promoting free access to electronic works by freely sharing Project Gutenberg<sup>™</sup> works in compliance with the terms of this agreement for keeping the Project Gutenberg<sup>™</sup> name associated with the work. You can easily comply with the terms of this agreement by keeping this work in the same format with its attached full Project Gutenberg<sup>™</sup> License when you share it without charge with others.

1.D. The copyright laws of the place where you are located also govern what you can do with this work. Copyright laws in most countries are in a constant state of change. If you are outside the United States, check the laws of your country in addition to the terms of this agreement before downloading, copying, displaying, performing, distributing or creating derivative works based on this work or any other Project Gutenberg<sup>™</sup> work. The Foundation makes no representations concerning the copyright status of any work in any country other than the United States.

1.E. Unless you have removed all references to Project Gutenberg:

1.E.1. The following sentence, with active links to, or other immediate access to, the full Project Gutenberg<sup>™</sup> License must appear prominently whenever any copy of a Project Gutenberg<sup>™</sup> work (any work on which the phrase "Project Gutenberg" appears, or with which the phrase "Project Gutenberg" is associated) is accessed, displayed, performed, viewed, copied or distributed:

This eBook is for the use of anyone anywhere in the United States and most other parts of the world at no cost and with almost no restrictions whatsoever. You may copy it, give it away or re-use it under the terms of the Project Gutenberg License included with this eBook or online at <u>www.gutenberg.org</u>. If you are not located in the United States, you will have to check the laws of the country where you are located before using this eBook.

1.E.2. If an individual Project Gutenberg<sup> $\mathbb{M}$ </sup> electronic work is derived from texts not protected by U.S. copyright law (does not contain a notice indicating that it is posted with permission of the copyright holder), the work can be copied and distributed to anyone in the United States without paying any fees or charges. If you are redistributing or providing access to a work with the phrase "Project Gutenberg" associated with or appearing on the work, you must comply either with the requirements of paragraphs 1.E.1 through 1.E.7 or obtain permission for the use of the work and the Project Gutenberg<sup> $\mathbb{M}$ </sup> trademark as set forth in paragraphs 1.E.8 or 1.E.9.

1.E.3. If an individual Project Gutenberg<sup>™</sup> electronic work is posted with the permission of the copyright holder, your use and distribution must comply with both paragraphs 1.E.1 through 1.E.7 and any additional terms imposed by the copyright holder. Additional terms will be linked to the Project Gutenberg<sup>™</sup> License for all works posted with the permission of the copyright holder found at the beginning of this work.

1.E.4. Do not unlink or detach or remove the full Project Gutenberg<sup>TM</sup> License terms from this work, or any files containing a part of this work or any other work associated with Project Gutenberg<sup>TM</sup>.

1.E.5. Do not copy, display, perform, distribute or redistribute this electronic work, or any part of this electronic work, without prominently displaying the sentence set forth in paragraph 1.E.1 with active links or immediate access to the full terms of the Project Gutenberg<sup>™</sup> License.

1.E.6. You may convert to and distribute this work in any binary, compressed, marked up, nonproprietary or proprietary form, including any word processing or hypertext form. However, if you provide access to or distribute copies of a Project Gutenberg<sup>™</sup> work in a format other than "Plain Vanilla ASCII" or other format used in the official version posted on the official Project Gutenberg<sup>™</sup> website (www.gutenberg.org), you must, at no additional cost, fee or expense to the user, provide a copy, a means of exporting a copy, or a means of obtaining a copy upon request, of the work in its original "Plain Vanilla ASCII" or other form. Any alternate format must include the full Project Gutenberg<sup>™</sup> License as specified in paragraph 1.E.1.

1.E.7. Do not charge a fee for access to, viewing, displaying, performing, copying or distributing any Project Gutenberg<sup>™</sup> works unless you comply with paragraph 1.E.8 or 1.E.9.

1.E.8. You may charge a reasonable fee for copies of or providing access to or distributing Project Gutenberg<sup>m</sup> electronic works provided that:

• You pay a royalty fee of 20% of the gross profits you derive from the use of Project Gutenberg<sup>™</sup> works calculated using the method you already use to calculate your applicable taxes. The fee is owed to the owner of the Project Gutenberg<sup>™</sup> trademark, but he has

agreed to donate royalties under this paragraph to the Project Gutenberg Literary Archive Foundation. Royalty payments must be paid within 60 days following each date on which you prepare (or are legally required to prepare) your periodic tax returns. Royalty payments should be clearly marked as such and sent to the Project Gutenberg Literary Archive Foundation at the address specified in Section 4, "Information about donations to the Project Gutenberg Literary Archive Foundation."

- You provide a full refund of any money paid by a user who notifies you in writing (or by email) within 30 days of receipt that s/he does not agree to the terms of the full Project Gutenberg<sup>™</sup> License. You must require such a user to return or destroy all copies of the works possessed in a physical medium and discontinue all use of and all access to other copies of Project Gutenberg<sup>™</sup> works.
- You provide, in accordance with paragraph 1.F.3, a full refund of any money paid for a work or a replacement copy, if a defect in the electronic work is discovered and reported to you within 90 days of receipt of the work.
- You comply with all other terms of this agreement for free distribution of Project Gutenberg  $^{\rm TM}$  works.

1.E.9. If you wish to charge a fee or distribute a Project Gutenberg<sup>TM</sup> electronic work or group of works on different terms than are set forth in this agreement, you must obtain permission in writing from the Project Gutenberg Literary Archive Foundation, the manager of the Project Gutenberg<sup>TM</sup> trademark. Contact the Foundation as set forth in Section 3 below.

#### 1.F.

1.F.1. Project Gutenberg volunteers and employees expend considerable effort to identify, do copyright research on, transcribe and proofread works not protected by U.S. copyright law in creating the Project Gutenberg<sup>™</sup> collection. Despite these efforts, Project Gutenberg<sup>™</sup> electronic works, and the medium on which they may be stored, may contain "Defects," such as, but not limited to, incomplete, inaccurate or corrupt data, transcription errors, a copyright or other intellectual property infringement, a defective or damaged disk or other medium, a computer virus, or computer codes that damage or cannot be read by your equipment.

1.F.2. LIMITED WARRANTY, DISCLAIMER OF DAMAGES - Except for the "Right of Replacement or Refund" described in paragraph 1.F.3, the Project Gutenberg Literary Archive Foundation, the owner of the Project Gutenberg<sup>™</sup> trademark, and any other party distributing a Project Gutenberg<sup>™</sup> electronic work under this agreement, disclaim all liability to you for damages, costs and expenses, including legal fees. YOU AGREE THAT YOU HAVE NO REMEDIES FOR NEGLIGENCE, STRICT LIABILITY, BREACH OF WARRANTY OR BREACH OF CONTRACT EXCEPT THOSE PROVIDED IN PARAGRAPH 1.F.3. YOU AGREE THAT THE FOUNDATION, THE TRADEMARK OWNER, AND ANY DISTRIBUTOR UNDER THIS AGREEMENT WILL NOT BE LIABLE TO YOU FOR ACTUAL, DIRECT, INDIRECT, CONSEQUENTIAL, PUNITIVE OR INCIDENTAL DAMAGES EVEN IF YOU GIVE NOTICE OF THE POSSIBILITY OF SUCH DAMAGE.

1.F.3. LIMITED RIGHT OF REPLACEMENT OR REFUND - If you discover a defect in this electronic work within 90 days of receiving it, you can receive a refund of the money (if any) you paid for it by sending a written explanation to the person you received the work from. If you received the work on a physical medium, you must return the medium with your written explanation. The person or entity that provided you with the defective work may elect to provide a replacement copy in lieu of a refund. If you received the work electronically, the person or entity providing it to you may choose to give you a second opportunity to receive the work electronically in lieu of a refund. If the second copy is also defective, you may demand a refund in writing without further opportunities to fix the problem.

1.F.4. Except for the limited right of replacement or refund set forth in paragraph 1.F.3, this work is provided to you 'AS-IS', WITH NO OTHER WARRANTIES OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO WARRANTIES OF MERCHANTABILITY OR FITNESS FOR ANY PURPOSE.

1.F.5. Some states do not allow disclaimers of certain implied warranties or the exclusion or limitation of certain types of damages. If any disclaimer or limitation set forth in this agreement violates the law of the state applicable to this agreement, the agreement shall be interpreted to make the maximum disclaimer or limitation permitted by the applicable state law. The invalidity or unenforceability of any provision of this agreement shall not void the remaining provisions.

1.F.6. INDEMNITY - You agree to indemnify and hold the Foundation, the trademark owner, any agent or employee of the Foundation, anyone providing copies of Project Gutenberg<sup>TM</sup> electronic works in accordance with this agreement, and any volunteers associated with the production, promotion and distribution of Project Gutenberg<sup>TM</sup> electronic works, harmless from all liability, costs and expenses, including legal fees, that arise directly or indirectly

from any of the following which you do or cause to occur: (a) distribution of this or any Project Gutenberg<sup>TM</sup> work, (b) alteration, modification, or additions or deletions to any Project Gutenberg<sup>TM</sup> work, and (c) any Defect you cause.

#### Section 2. Information about the Mission of Project Gutenberg™

Project Gutenberg<sup>m</sup> is synonymous with the free distribution of electronic works in formats readable by the widest variety of computers including obsolete, old, middle-aged and new computers. It exists because of the efforts of hundreds of volunteers and donations from people in all walks of life.

Volunteers and financial support to provide volunteers with the assistance they need are critical to reaching Project Gutenberg<sup>™</sup>'s goals and ensuring that the Project Gutenberg<sup>™</sup> collection will remain freely available for generations to come. In 2001, the Project Gutenberg Literary Archive Foundation was created to provide a secure and permanent future for Project Gutenberg<sup>™</sup> and future generations. To learn more about the Project Gutenberg Literary Archive Foundation and how your efforts and donations can help, see Sections 3 and 4 and the Foundation information page at www.gutenberg.

# Section 3. Information about the Project Gutenberg Literary Archive Foundation

The Project Gutenberg Literary Archive Foundation is a non-profit 501(c)(3) educational corporation organized under the laws of the state of Mississippi and granted tax exempt status by the Internal Revenue Service. The Foundation's EIN or federal tax identification number is 64-6221541. Contributions to the Project Gutenberg Literary Archive Foundation are tax deductible to the full extent permitted by U.S. federal laws and your state's laws.

The Foundation's business office is located at 809 North 1500 West, Salt Lake City, UT 84116, (801) 596-1887. Email contact links and up to date contact information can be found at the Foundation's website and official page at www.gutenberg.org/contact

### Section 4. Information about Donations to the Project Gutenberg Literary Archive Foundation

Project Gutenberg<sup>™</sup> depends upon and cannot survive without widespread public support and donations to carry out its mission of increasing the number of public domain and licensed works that can be freely distributed in machine-readable form accessible by the widest array of equipment including outdated equipment. Many small donations (\$1 to \$5,000) are particularly important to maintaining tax exempt status with the IRS.

The Foundation is committed to complying with the laws regulating charities and charitable donations in all 50 states of the United States. Compliance requirements are not uniform and it takes a considerable effort, much paperwork and many fees to meet and keep up with these requirements. We do not solicit donations in locations where we have not received written confirmation of compliance. To SEND DONATIONS or determine the status of compliance for any particular state visit www.gutenberg.org/donate.

While we cannot and do not solicit contributions from states where we have not met the solicitation requirements, we know of no prohibition against accepting unsolicited donations from donors in such states who approach us with offers to donate.

International donations are gratefully accepted, but we cannot make any statements concerning tax treatment of donations received from outside the United States. U.S. laws alone swamp our small staff.

Please check the Project Gutenberg web pages for current donation methods and addresses. Donations are accepted in a number of other ways including checks, online payments and credit card donations. To donate, please visit: www.gutenberg.org/donate

## Section 5. General Information About Project Gutenberg^{\sc m} electronic works

Professor Michael S. Hart was the originator of the Project Gutenberg<sup>™</sup> concept of a library of electronic works that could be freely shared with anyone. For forty years, he produced and distributed Project Gutenberg<sup>™</sup> eBooks with only a loose network of volunteer support.

Project Gutenberg<sup> $\mathbb{M}$ </sup> eBooks are often created from several printed editions, all of which are confirmed as not protected by copyright in the U.S. unless a copyright notice is included. Thus, we do not necessarily keep eBooks in compliance with any particular paper edition.

Most people start at our website which has the main PG search facility: <u>www.gutenberg.org</u>.

This website includes information about Project Gutenberg<sup>™</sup>, including how to make donations to the Project Gutenberg Literary Archive Foundation, how to help produce our

new eBooks, and how to subscribe to our email newsletter to hear about new eBooks.