

IN THE CARDS

An Amazing Novelet

By GEORGE O. SMITH

When Jim Forrest stole the block of zonium from Ellen Haynes he almost upset the entire Solar System, but he had the most compelling motive for theft in history!

CHAPTER I

The Theft

THE masked man crept down the corridor stealthily. It was quite dark in the hallway but he knew that it was a synthetic darkness, a matter of temporal convenience, for on a spaceship, time is regulated by the Terran daily cycle of twenty-four hours.

On spacecraft the passenger-sections observe a strict twelve-hour division between sheer brilliance and utter darkness. He estimated that it was a full two hours before light-time, which meant that those couples who preferred to sit and hold hands whilst staring at the rather over-stable aspect of the sky were by now bedded down and asleep.

Even so the masked man understood that with such it was not the sky that was appealing, and that under such circumstances time was a minor and often disregarded item. So he went carefully just in case he should happen upon such.

He was lucky. There were no couples immersed in one another's dreams and so the masked man went all the way from the auxiliary spacelock near the bottom to the "B" deck, just below the rounded hemisphere of seamless plastiglass that domed the top of the spacecraft.

He entered the corridor that led to the staterooms and, by the dim hall lights, found the room he sought. The lock was obviously intended to keep out only honest men and the door was of the same manufacture. He took a tiny fountain-pen-sized implement from a loop in his belt and applied the business end to the door.

There was neither sound nor light. Silently the thing worked and it completely removed a sliver ten-thousandths of an inch wide as he moved the tiny beam in a careless square around the lock. He grasped the knob in his hand as he completed the cut. That way it would not drop to the floor and make an unwanted racket. .

Shoving the door open gently, he entered and closed it behind him. He took a moment to replace the square of aluminum with the lock and, with a couple of quick motions, he welded the square back in place.

An experienced welder would have called the job 'buttering' because the patch was held by only two minute battens of welded metal. It could be broken out with a single twist of the hand.

Then, reasonably safe from outside detection—if the steward passed, he would not notice unless he gave each door a careful scrutiny—the masked man took out a tiny flashlight and searched the room quickly.

A tousled head of luxuriant hair half covered the pillowcase but the face beneath it was not visible from the door. The masked man shrugged and turned to the wall compartment where the baggage was

stored. He knew about where to look. He fumbled through three drawers, and finally came up on a box of some ten cubic inches.

It was not too heavy and the masked man tucked it under one arm and smiled confidently. His pen-beam he used to weld the call-button to its frame so that it could not be pushed. He used it to weld the lock in a barred position and, again outside, he welded the patch together firmly. The inhabitant was to all intents and purposes a prisoner until she could command attention by yelling and beating upon the door.

With the same stealth that he had used in coming this way he returned to the auxiliary spacelock. He donned the spacesuit he had left there and looked at the safety-switch that had been welded closed. He shrugged—no need of opening the switch to close the door upon it. He'd welded the switch shut so that opening the auxiliary lock hadn't flipped the warning lamp on the pilot's panel.

Then the masked man stepped out of the airlock into empty space, kicking himself away from the side of the spacecraft. At once he became a separate celestial body, and the motion of the ship with regard to his present status was an acceleration of one gravity, though his velocity was intrinsically that of the spacecraft upon his instant of severance.

But intrinsic velocity of this nature never harmed a soul and the action as he saw it, was that the ship was stable and he was falling with Terran constants towards the tail.

HE WAITED, counting off the minutes by his watch. The spacecraft dwindled and was finally lost in the distance. Yet he waited, for the first use of his suit-drive would raise a spot on the pilot's celestial sphere, giving warning.

An hour later he applied the drive on his suit and, using a small direction finder, he located another, arriving ship. Using extreme care, he put himself in the course of the oncomer and applied his suit-drive with extreme caution. He matched the acceleration of the other ship, matched its course and then, by increments, let the ship catch up with him.

Eventually it passed him close enough, and he drove himself through the main open spacelock. He slammed the airlock door and went to the control room. He made a rapid turnover and applied the drive to put as many miles as possible between himself and the pirated superliner.

Only then did he remove his suit, stow it, and address his interest to the package. It contained a strange crystal. The crystal was a perfect cube two inches to a side. From face to opposite face it was as transparent as space itself. Even the surfaces were non-reflecting. Looking through it one derived a sort of tunnel effect, for the surrounding faces were opaque. Holding it at a distance from the eye and looking through it gave the impression of a two-by-two square tube made of some metal having zero thickness. A thin square—an optical illusion—marked the boundary of the optical axis.

He nodded. This was the crystal he sought. He checked one of the opaque pair of faces with a continuity tester and confirmed his belief. For one axis of the crystal was optical, another axis was a superconductor of electricity. The third axis was a magnetic axis and was a perfect conductor of magnetic flux. This was harder to check with simple equipment but the testing of the other two axes gave him sufficient proof.

He nodded in satisfaction.

Success!

Now, give him time to work out his problem, and everything would be just as he had planned. Getting his hands on that crystal, he felt, was going to be the first step in the success of Jim Forrest. He opened a cabinet door and started to push things aside to make space for it, when from behind him, a cool voice said:

"I'll take that!"

He turned at the voice and his face went through several changes, coming out finally with a stunned look.

"You were locked in."

"Yes?" The girl shrugged. "Well, you were locked out! Now I'll take that crystal!" Her statement was backed up by a heavy blaster that looked like a semiportable in comparison to her spacegloved hand.

The hand was small and the blaster was heavy but there was no waver to the green-crystal muzzle. It was trained perfectly upon Jim Forrest's belt buckle.

"Yes? And where will you take it?"

"None of your business!" she snapped.

He looked at her suit and shrugged. "Better call for aid," he said, pointing at the space radio. "You'll never make it in suit-drive."

"Drivel!" she snorted. "You'll run me near Terra before we part."

"My dear Ellen Haynes," he said with exaggerated politeness, "may I point out that we are not going to Terra?"

ELLEN laughed nastily, which made it seem worse because it went against the human grain to hear such purely vicious laughter coming from such an attractive girl.

"We'll go," she said shortly, "whether you drive or not. I can run this doodlebug too." She waved the blaster suggestively. "Turn it—or else!"

"Y'know," he replied, "maybe you'd better drill me. I don't know that I like the idea of chasing all over the solar system with Ellen Haynes."

"Turn the ship and get going."

"No," he said flatly. He stretched and went into a relaxed posture. "We're heading for Ganymede." He looked at her—stared at her—and smiled slightly. His attitude became almost paternal, as he stepped forward. "You know," he said quietly, "we both want the same things. We ought to do them together."

"Not on my life," she said. "And stop right there!"

"You stole it first," Jim Forrest told her. "Right out from under my hands. I know why. You want to prove the opticostrictive effects, don't you?"

"It is my right to try it," she said flatly. "And I'm going to do it my own way!"

"But I know more about it than you do," he told her gently.

"I doubt that," she snapped.

"I've studied it," he said quietly. "I can identify the proper magnetic and electric axes without test. Can you?"

"I can learn," she said sharply. "Now stop—or I'll fire!"

"You see, when your dad discovered this thing he turned it over to the government. That was the law with any by-product of the uranium pile. They, however, happened to be working on something else, looking for some definite effect and couldn't take time off to investigate a crystallographic monstrosity. So it just laid around and grew dust until I—"

"I know all that," she snapped. Now . . ."

"Right," he said calmly. "Right. And I was merely holding your attention until . . ." He leaped forward—forward and slightly to one side. She pulled the trigger hastily and the beam spat viciously but invisibly, scorching the aluminum wall of the little craft, where its reflection ricocheted across the room to burn a wall map. The aluminum behind that reflected it again, and this time it lost itself in the absorbing surface of some methacrylate plastic, which swelled and exploded gently into shards of gooey stuff.

By this time, Jim Forrest was beside the girl. He chopped down on her arm viciously. She dropped the blaster and he kicked it into the corner. Then, using his weight, he crowded her into the pilot's seat and reached over and slammed on a full five gravities.

"I can take that and move," he told her. "But you can't. Ellen Haynes, we're heading for Ganymede."

"Captain Turner will kill you," she snapped.

"Captain Turner will have to catch me first." He laughed. "And in the meantime perhaps we can come to some agreement."

"I'll never deal with a common criminal," she told him.

"How righteous!" he scoffed. "And how did you come by this in the first place?"

"Well, it was my father's," she told him.

"A matter of opinion only," he said. "Just your opinion against most of the Solar System. The odds, Ellen, are against you!" He laughed. "And your Captain Turner? Whose side will he take? Yours—or the

Solar Guard, for whom he has worked for eight years?"

"Mine," she said stoutly. "He understands moral justice."

Forrest laughed bitterly. "Uh-huh—and a pair of luminous, provocative brown eyes!"

She turned her head angrily away. There was no sense in arguing with the man. Furthermore, she knew that Captain Turner was a long way from an impersonal member of the law so far as Ellen Haynes was concerned. She would bide her time.

Turner would be certain to find them soon and then this criminal would get what he deserved—even if she had to use her charm to enrage the officer. She knew that Jack Turner would see a mad, flaming red if he thought that Forrest had harmed her in any way.

CHAPTER II

Rescue in Space

NOT very far behind them, Captain Jack Turner of the Solar Guard was following the little cruiser grimly. When it leaped in acceleration to five gravities, he assumed that they knew he was following them and decided that stealth was no longer necessary.

He crammed his power on, getting a full six gravities out of the Guardship. From time to time he considered the problem that confronted him. His—well, she was not his fiancée, but she meant more to him than the word 'friend' implies—was in possession of material labeled contraband. Nothing of intrinsic value, true—normally it would never have been missed—but it had been removed from the specimen files of the Solar Laboratory, and that in itself was a breach of the law.

There seemed to be a dog-in-the-manger effect here. The government physicists might never get around to looking at the thing regularly, so busy they were. Yet they could not permit any other experimenter to do more than study the peculiar thing through a plate glass specimen case.

Turner's mind rejected the problem. He did not know the circumstances wholly. His matter-synchronized detector told him that the crystal had embarked on the spaceliner from Venus to Terra, that somehow it had left the liner and was now decelerating in such a back-vector that he suspected one of the Jovian satellites as its destination.

The problem of what he would actually do, he disregarded. Up to the time he confronted the girl he could view the problem dispassionately and impersonally. Whether his love for the girl would overcome his sworn duty—he'd face that when it came.

Watching his range integrator carefully, he set the autopilot to bring him into contact with the fleeing ship and then sat back to relax. It was hard on the human system to hit it up at six gravities, though everything possible had been done to make the flyer comfortable under such accelerations.

Even so, loaded with gravanol, which added tonus to the muscles and prevented the draining of blood from the nerve and brain centers, the record was held by a small, wiry fellow named Tom Whitcomb: Eight gravities for four hours before blackout was his mark.

Whitcomb, of course, was merely out for a record and did not have the emotional impetus of a project to steel his system with adrenalin.

The Guardship approached the fleeing craft and Turner dropped his acceleration to match the other ship. He sent a flaming beam at them that racketed against the hull and flared greenish hell through the observation ports and rang all the alarms in the ship. His audiostricter beam caught the hull and his voice, as he spoke into the microphone, made the little cruiser ring to his stentorian tones.

"Guardship under Turner!" rattled the ship's hull in a controlled vibration that shook the eardrums. "Drop to one gravity! Prepare to submit to search!"

In the other ship, Forrest shrugged. "There's your little pal now," he said.

Ellen looked at him, white-lipped. "What are you going to do?"

He laughed as he flipped the power switch down to one gravity. "This is a personal cruiser," he said. "We have nothing to fight back with other than harsh words and a set of knives in the galley. I should dislike to have this crate riddled by a Guardsman. I should even further dislike the possible

discontinuation of my checkered career. We'll see your little chum."

"He'll help me," she said with a positive air.

"That's swell." He grinned wolfishly. "I wish you both luck. But I'm sensible enough to think that it might be better if we could circumvent him."

Forrest smiled wearily. There was no reason to tell the girl that laws were laws and therefore inflexible regardless of the instantaneous injustice to an occasional individual. By and large, laws worked for overall justice or they would not be laws. He rested easily, getting up only once to retrieve the girl's heavy blaster, which he inspected and dropped into his pocket idly.

THEN the Guardship was upon them close enough to reach out and take hold of the little cruiser with tractor beams. The spacelocks came together under Turner's manipulations of the beams and both space-locks clanged open.

Jack Turner swallowed deeply. Whatever the score at this point, he was confronted with the problem of his life. "You surrender?" he demanded as he entered the control room.

"You're in," said Forrest cryptically. "Now what?"

"The zonium crystal," stated Turner shortly. "I'll take that first. It is the property of the laboratory."

Ellen looked quietly at him. "What about him?" she asked, indicating Forrest.

"Well?" he said shortly.

"He stole it from me," she said plaintively.

"But you stole it from Venus," said Turner. "Under the law, you are conspiring to deprive the government of its rightful property."

"I presume that I am listed as a criminal?" asked Ellen, more plaintively.

Turner blinked. "What can I do?" he asked.

Ellen looked pleading. "Dad discovered zonium," she said. "Dad predicted it and spent six months producing the single crystal we have. Then because of laws, Dad was deprived of the possible benefits of his study and work. Is that fair?"

"Who is to judge fairness?" asked Turner. "It has been the law for seventy years that any product of the uranium piles is the exclusive property of the government. That is because danger might attend any individual experimentation on unknown materials. "If you do not know nuclear history I can tell you that Tompkins and Clagone nearly blasted Terra off of the map because they inadvertently stacked a couple of transuranic elements side by side. To prevent such mishaps the law was set up. I ask you, Ellen, do you know anything about zonium?"

"Not much excepting its principal properties."

"Then you might be meddling with something that could destroy Sol."

"Not likely," she retorted.

"So?" asked Turner with a smile. "Remember that the unpredictable effects start with the uranium series. Fission occurs in several of the uranium-rare-earth metals, plutonium and the uranium isotopes two hundred thirty-four and two hundred thirty-five. Number ninety-seven was never known until the uranium pile made it, you know, and it, like other elements of the zero group, is an inert gas.

"But it is a gas which exhibits magnetic properties. Number ninety-eight has been known to combine with all of the acid elements. And number ninety-nine is naturally radioactive, breaking down to protoactinium by a double emission of alpha particles. Unless you know what to do with zonium how can you predict its behaviour?"

"Is it right to bury the results of a man's lifework?" demanded Ellen.

Guardsmen Turner faced Jim Forrest. "What can I do?" he asked simply. "My affection and my duty are opposing. I understand both viewpoints. It is hard to see a life work set aside by officialdom, rules and what might seem like bureaucracy. On the other hand I am a member of the Law. I cannot turn traitor, yet I cannot harm Ellen. I would like to retain both Ellen and my self respect."

"My father—" began Ellen harshly.

"Was, after all, working for the Lab," interrupted Turner. "He was amply paid."

"Yes," she said bitterly. "A laboratory fee. You know very well that every technician in the Lab that

discovers something useful is given a royalty in addition. That's what I've been cheated of!"

"They may yet investigate it," said Turner.

"I'd prefer the rewards before I'm a hundred years old," said Ellen.

"Look," said Turner after a moment's thought. "Admittedly the government lab ignored zonium for more important things. The government was not interested in zonium until it was stolen. But consider—this crystal has been stolen by people who have experimental experience.

"The government will wonder just why it is so important that an individual will break interplanetary law to possess it. That is a question that will probably force someone to work on it. Then you can gain the benefits legally."

ELLEN considered that for a moment. It was more or less true. "Then tell me how it is to be returned?" she asked.

"That is easy. I can make you a temporary deputy of the Solar Guard. You return the crystal to headquarters. I continue to pursue the thief."

Forrest, who had been sitting easily in his chair watching the play of personalities, suddenly sat up and looked at Jack Turner pointedly.

"You mean me?" he asked.

"I do."

"That's a nice trick," snapped Forrest, "Why not deputize me and go hunting her?"

"Because you have nothing to lose by jumping deputization," said Captain Turner shortly. "Miss Haynes has every reason in the world to do exactly as I said. As for the true thief, my report will state honestly that I located the crystal in this ship—your craft, Forrest. I will also state that it is my belief that Miss Haynes was not here of her own free will."

"She came here unasked," snapped Forrest.

The Guardsman nodded. "So did I," he said easily. "And possibly for the same reason. To return the zonium crystal to its rightful owner."

Forrest laughed harshly. "Nice sophistry," he said with a sneer. "You'll omit the fact that your definition differs from that of Miss Haynes as to the term 'rightful owner'? She thinks it belongs to her, you know."

"When she returns the crystal," said Turner, "her intent will be shown by act regardless of her statements—or your statements for that matter."

Forrest smiled. "The scales of justice seem to have become unbalanced by the added weight of a lipstick," he said cynically. "I hope you two will be very unhappy together."

"Accusing members of the Guard will get you little," said Turner.

"I seem to have been got already," grunted Forrest. "Frankly, why don't you return the crystal and let Miss Haynes pursue me? As any pursuit is going to be a laughing matter since you've already caught me, I'd prefer to be pursued by Miss Haynes."

"No thank you," replied the girl. "We'll do it as Captain Turner suggests."

"And he'll chase me all the way to Ganymede while we're living in the same ship—with his crate fastened on to mine?"

"That need not be mentioned."

"Well, I'll darn well mention it!" snapped Forrest.

"You can't prove it," she told him.

"Ellen," said Turner to the girl, "you go into my ship and get the tender ready. You'll take off and head for Mars in the tender, which will be a little rigorous but not too uncomfortable nor dangerous.

"Once you reach Mars, you contact Guard Headquarters at the spaceport.

"Your arriving with the ship will give you amnesty until you can see General Harris and I'll write an official letter proving your deputization. Check?"

Ellen Haynes nodded. She turned to Jim Forrest and said, "It doesn't make much difference who does the work on zonium so long as it is done. At least it will not be done by you.

"And when it is done I'll get my legal share, which can't be claimed for any work done by Jim

Forrest." Then she turned to Captain Turner. "Be careful," she said sincerely. "He's a glib operator."

"He'll not get away from me," said Turner. Ellen Haynes took the crystal out of the cupboard and tucked it under one arm. Since she was still in space suit she merely flipped the helmet bowl over her head and left the pilot room to make Turner's tender ready for a spacehop.

CHAPTER III *Counteroffensive*

SO," SAID Jim Forrest, "she won."

"Won?" replied Turner. "She said that she'd end up with the crystal. What makes you think that if she stole it once from the laboratory she wouldn't steal it from you the second time?"

"Ellen Haynes is no thief!" snapped Turner.

"No? Well, consider this, Turner. Ellen Haynes does not consider herself a thief when she appropriates that rare hunk of rock. So far as Haynes is concerned, she believes that she has every right to it, especially in view of the fact that the government ignored it, thus depriving both her and her father of whatever benefits it might bring. Since she considers herself no thief, she is under no moral compulsion to deliver."

"She is a deputized Guardsman," said Turner. "As such, she is sworn to uphold the law."

"She was—and until proven otherwise—a citizen and equally responsible to uphold the law," said Forrest. "But who took the thing in the first place?"

"She is now a sworn member—"

"Look, Captain Turner," interrupted Forrest sharply. "Do you mean to stand there and tell me that a policeman is morally better than a citizen?"

Turner flushed. If he said 'yes' he'd be talking like a hypocrite—if he said 'no' he would almost be admitting that he might have been mistaken in sending the desired crystal out under the supervision of the one who had initially stolen it. His training and loyalty to the Guard made him believe that a man dedicated to the interests of the law was under more compulsion than a mere citizen without an oath.

He admitted it was wrong. He was forgetting that a criminal can swear an oath and be unfaithful to it because he doesn't mind adding false witness to a list of greater crimes providing it is gainful for him.

Forrest noted the turmoil in the Guardsman's mind and pressed his point. "Ellen told me that you'd help her," he said. "And you have. I think that Ellen believed that you'd go all the way and eschew your uniform for her, but the way you did it was to both of your advantages."

"Ellen wouldn't lie to me," said Turner stoutly.

"I know," said Forrest cynically, "because she loves you. Fine. So if she loves you in the first place, why does she break the law you've sworn to uphold? To heck with appearances, Turner. You know in your own mind that if you condone her theft of the crystal you might as well throw that fancy black and gold suit into the converter and join her in a life of—well, she's no criminal save for one breach—petty crime. No doctor ever got along with a medicophobe for a wife. No policeman ever spent a happy married life with a she-pickpocket. So it is either your life or hers that you'll have to follow."

"Perhaps not," replied Turner. "If she does as I expect her to and returns the crystal she can erase her minor offense. Everybody makes mistakes, Forrest. The smart man seldom repeats his errors."

"You're still forgetting that Ellen Haynes considers her act no crime. Whatever the crystal is good for she has been deprived of benefit by a situation that ignores its existence. Her theft of the thing works no hardship on the Solar System or any of its people. Define theft, Turner."

"Look," snapped Turner, "Ellen is no criminal. She has committed a crime which she can erase by her own hand. Why should she be punished for an interplanetary offense when she can and will do that which will nullify her crime?"

"Meaning?"

"Meaning simply that the uninterested arm of the law will be more convinced when she turns up with the crystal and knows that I am still pursuing the thief. I'll gladly sacrifice one criminal—you—who have

no justification as she has, in order to see her free and rewarded."

"Well," said Forrest standing up and stretching, "I think this has gone far enough, Turner." He picked up a package of cigarettes from the table, put one in his mouth, and then felt for a match. He lifted the fountain-pen-sized blaster from his belt and triggered it.

The tiny beam lit his cigarette and he drew in a lungful of smoke. He blew out the smoke in a large cloud that hid his actions momentarily. Under the cover of the smoke he turned the cap on the little gadget, pointed it at Turner, and pressed the button.

THE tiny beam seared the air and drilled a tiny hole in the broad green muzzle-crystal of Turner's blaster. It heated to dull-red almost instantly, and Turner hurled the weapon from him with a shock of unexpected pain. The weapon charred the floor as it landed.

Following the beam as fast as he could Jim Forrest threw his Sunday punch while Turner was still reacting from the burn-shock. The flying fist caught Turner on the jaw and the guardsman went down like a pole-axed steer. He came to as Forrest was snapping the Guardsman's own handcuffs on him.

"I'm no murderer," he told Turner. "I calculate it to be sixty hours to Mars at one gravity. I'll set the autopilot that way. I'll set the warning-radio also. I'll lock you in the living-suite below, where you will have all the comforts of a celibate home excepting the means with which to get out. In sixty hours your velocity will be zero with respect to Mars and the warning radio will hurl out your own personal distress call."

"You're . . . !" blazed Turner.

"Yes, I know," smiled Forrest. "A criminal. Well, kidnaping a Guardsman is merely adding to my long and checkered career. But you see, Turner, I want that crystal. You can also add theft of an official Guard-ship to my roster of criminal acts. So, lead the way to the living-suite below."

"I'll"

"Oh. Turner, I might suggest that when you come looking for me you be very careful. I'll be driving a Guardship, you know, and if someone takes a shot at me I'll be psychologically forced to defend myself as a mere matter of survival. Guardships are pretty well-armed, or need I tell you?"

Turner blazed with anger. "Okay," he snarled. "Lock me in. But you can't lick the whole system! We'll get you cold! And if in the meantime you intercept Miss Haynes, remember that you are interfering with an official deputy."

"Then," smiled Forrest quite cheerfully, "I'm actually helping you to prove that Ellen Haynes is no criminal, aren't I?"

Turner fumed and continued to fume as Jim Forrest welded the living-suite door shut with his pen-beam.

Twenty minutes later, Turner felt the ship turn and accelerate towards Mars. He felt a slight shoo a moment later and knew that Jim Forrest had just cast off in his Guard-ship. He cursed roundly and then, sensibly, he sat down and relaxed.

He concluded sensibly there was little to be gained by spending sixty hours in self-villification.

He'd failed temporarily but Forrest couldn't lick the whole solar system. . . .

Using Turner's matter-synchronized detector, Jim Forrest tracked the tiny space tender down in a matter of less than two hours. The tender, of course, was helpless when the Guardship tractor beam fastened onto it, and it was drawn easily into the tender-lock and anchored.

The door opened and Ellen Haynes emerged, furious.

"Before you say anything," said Jim, "tell me whether you were really going to headquarters or were just making off with the crystal again."

"What difference does it make now?" she asked bitterly.

"No difference to me," said Forrest idly. "I'm just trying to estimate your character."

"I'm not taken in," she snapped. "With certain individuals you might stir their interest enough to make them look at it askance. But with the Solar Lab, who've already ignored the thing for years, they'd continue. So"

"So you think you're going to work on it yourself?"

"I most certainly am," she said with conviction.

He laughed shortly.

"You think not?" she demanded. "Either alone or with you, since you've been after it and seem to have both me and the zonium at the same time right now."

"Ellen," he said slowly, "I intend to destroy that crystal!"

SHE grabbed for the box and shielded it with her body but Jim shook his head. "Not here," he said. "There's nothing here that would destroy it."

"Your blaster?"

"Wouldn't touch it."

"I—a blaster wouldn't touch it?" asked Ellen Haynes in amazement.

"Wouldn't touch it," he said firmly and convincingly.

Ellen's eyes opened wide. "Armor!" she breathed. And in that one instant the whole mighty idea came, flooding her mind and making her almost reel in dizziness at the flood of jumbled ideas.

Guardships plated with zonium for protection; personal armor because zonium was light in weight; zonium-lined blaster barrels to keep the things from falling apart after a hundred or so shots and perhaps even super-projectors protected by zonium liners.

The big projectors used on the Guardships were none too efficient because they etched themselves into uselessness after a hundred or less of the gigantic blasts. Half of a Guardship's bulk was filled with spare blaster replacements.

"Armor," he nodded, with a look of horror.

"What's wrong with that?" she demanded sharply.

"That's the point. There's apparently nothing wrong with it," he said, "except that there's no real reason for it. Who or what will attack a Guardship? There is no common enemy loose in the Solar System and we know that there are no extra-solar races capable of any massed attack on Sol's family—so far, anyway. There is an occasional, wild-eyed pirate but he is usually tracked down within a few weeks after he takes his first victim. With zonium armor there could be piracy because a pirate could then laugh at the heavily-armed Guardships."

"But it sounds good," she interrupted.

"And you know darn well that the Guard would immediately plate their ships with zonium!"

"Certainly. And my income from that ... Why, I'd be unmentionably wealthy!"

She positively glowed for a moment with the idea. Then she turned to him and said, "But if a blaster wouldn't touch it, how do you hope to destroy it? Toss it into the sun?"

Jim Forrest paled. He walked over to her and pushed her aside. He took the zonium crystal from the box and hefted it while Ellen looked on in fear that he would destroy it then and there.

"Ellen Haynes," he said solemnly, "this much zonium if hurled into the sun would create a nova!"

"But it is so small."

"Yes, but zonium is a strange metal," he said. "The mass-energy relation is carefully disregarded by zonium. In normal matter, energy equals the mass times the square of the speed of light in centimeters per second."

"But its mass is not considerable."

"Zonium is a temporal metal," said Forrest. "When it is under the influence of a magnetic field passing through the magnetic axis—an electrical current through the electrical axis—and a beam of light through the optical axis its mass increases according to some exponential function of the energy levels of the radiation that is passing through it.

"Throw it into the sun where the radiation-energy output is some four million tons of energy per second and zonium increases its apparent mass by a factor of the cube—one exponential power for each axis accepting and passing radiation—of the mass of the zonium times the factorial expansion of the energy passing through it. It would be much like hurling Jupiter into the sun."

He handed her the crystal. "Ellen Haynes," he said dramatically, "you hold in your hand the agent of Sol's destruction!"

She looked at it with fascinated horror and gingerly replaced it in the packing.

"So develop it. Plate your ships with it. Line the millions of blasters with it. Line your power converters with it. Use zonium in the units that give each dwelling light and power. Load every sportsman's crate with it and have everybody tossing cubes of the stuff around. Interesting stuff—kids will be playing with it. Then calculate your chances of keeping a bit of it out of the sun."

Ellen Haynes shuddered. About once each year some spacecraft didn't return, usually a small, privately-owned job that was trying to cut the perihelion too thin. The mortality was rather high on the drones that rode the inner flame-area of Sol's domain with automatic recorders. Yet, with good supervision, zonium would be safe.

"How," she asked drily, "do you hope to destroy it?"

"I don't know," he said. "But it must be destroyed."

CHAPTER IV

Biggest Meddler

ELLEN nodded slowly. Her dream of untold wealth dimmed somewhat. Yet she knew that supervision of the zonium metal would insure its safety. It had been so with the original fission of uranium and plutonium.

What had been made before could be made again. She would let Jim Forrest destroy it and then set about getting it rebuilt again in the government laboratory. What could any one man do to stop the development of any single phase of science?

The thing to do now was to agree with him, learn from Jim Forrest all the math and reasoning behind the stuff. Just how did he know—he alone of all the worlds of Sol and their teeming billions—that zonium would react that way. Especially when he had not worked with it.

But Ellen knew that before she could interest the laboratory in zonium, she must have scientific and mathematical basis for her predictions. With that, not only could she interest them but she would be forgiven for her original theft. She would go along for now and learn as much as she could about zonium.

"Tell me," she said interestedly, "how do you know all this about zonium?"

"Know matrix-math?" he asked.

"A little."

"I'll bet I lose you along the way," he said. "But we've a week of hard travel between here and Ganymede in which I can prove to you—and also teach you how to handle matrix-math—that everything I've said is true."

Jim Forrest locked the crystal in the cabinet, and found paper and pencils. He started to talk and he wrote equations as he spoke, explaining each step as he went along. Ellen Haynes nodded. It was thick, and she would require the whole week even to catch up to the theories of Jim Forrest... .

Captain Turner, imprisoned in Jim Forrest's personal cruiser, spent a full twenty-hour period wondering. He had been resigned at first, but the idea of sitting there was against his grain.

The welded door was a mean problem. How does one breach a solid aluminum door when the thinner panels are three-sixteenths sheet aluminum-magnesium alloy and the edgings and crossbars that hold the panels are one-inch stock?

He undid the floor thumbscrews that held the chair down against maneuverings in space and hefted it. It too was aluminum alloy. He swung it at the door and dented the panel, but broke the legs of the chair. Had the seat been heavy and solid that would have done nicely, he thought.

But the chair-bottom itself was a mere frame upon which was woven a plastic-rope in the standard pattern of a cane-bottomed chair. The metal of the chair was brittle and he broke it after three swings that put but a few minute scars on the panel of the door.

The floor-lamp was little better—aluminum-zinc-magnesium die-castings. Not only were the parts light and brittle, they were positively friable.

He tried the drawers in the dresser and they added to the pile of broken metal. The bed was no good

at all—just a welded-down shelf on top of which was a thick airfoam mattress.

The kitchen quarters produced a couple of sharp knives, which he employed to some advantage, but their very-long blades left Turner with too little leverage until he broke them off short. Cutting three-sixteenths aluminum alloy panel was no job for a knife.

HE SAT down to think after that. Brute force was useless—brainwork might produce an answer.

Aluminum is soluble in certain reagents—and he was in what amounted to a three-room apartment. What common reagents did exist in the average apartment? A few ounces of vinegar—three percent acetic acid. A pound of salt—sodium chloride. Aluminum is soluble in a solution of sodium hydroxide. Electrolysis of water containing sodium chloride produced chlorine and sodium, which reacted with the water and produced sodium hydroxide.

It looked like a long process. He was not a chemist, and therefore he was not too certain of any effect. There was no reaction that he knew of that would attack that door. Perhaps a chemist would know and no doubt he would be laughed at by the chemists of the Guard when he told of his futile attempts.

He went into the kitchen again. The drainage from the sink went into the converter far below him in the ship. He had no chance of getting to that at all. There was a small ventilator in every room but he was neither an eel nor a cat and removing them, if he could, would give him no chance. The air was forced out through a larger duct by an electric fan but even so it was too small for him.

The electric fan?

The electric fan!

He tackled the fastenings with a dinner-knife and succeeded in removing the small fan. He hitched it to longer leads from the floor lamp. He removed the blade and saw the swiftly-rotating shaft—it could be used as a drill.

It was blunt and polished, instead of sharp, but none the less a drill in embryonic form. To sharpen it .

...

He pawed through the bathroom cabinet and returned with a small nail-file. There was a corundum sharpening-stone in the kitchen. He filed and he honed and the end of the fan-motor shaft took on a wide, flat point. He set it against the door and tried to drill.

It was slow work but he made progress. He drilled through and then set the drill near the first hole and continued. Slowly and inexorably Captain Turner of the Space Guard added to his line of holes. He forgot eating, ignored sleep. And as the hours passed Jack Turner came closer to freedom by the minute.

At last he had a rough oval of holes in the bottom panel of the door. Then, taking a heavy iron frying pan, Turner hammered at one side of the oval where the holes were almost tangent. He broke through, turning the slight end outward.

He hammered until he could set one end of the iron handle through, and then he pried. The webbing between the holes tore until he had an opening that prevented the use of the utensil at all.

He pried with knives, with fragments of the shattered chair, with his bare hands. He finally took the motor itself, which was of steel and heavy though small, and he swung it on its wire leads. He hurled it again and again at the oval. The ship rang with the blows, but each crash saw the oval leaning outward just a fraction more.

And then, lying on his back, Jack Turner kicked the oval outward with his heels. He was free!

Thirty hours instead of sixty—Turner raced to the control room and set the ship on course toward Ganymede. He crammed on the power until he could hardly stand to slow the course for Mars that he was on—almost at turnover where his velocity *was* highest—and he added a vector that would curve him through space toward Jove. Then, utterly weary, Jack Turner found his bunk and went to sleep. . . .

"You seem to know quite a bit about zonium," said Ellen.

Forrest smiled. "I've had little to do but think about it."

"But why the interest?" she asked him.

"Just think of me as an infernal meddler," he said.

Ellen bit her lip in disbelief.

"Well, I am," he said with a laugh. "I'm the biggest meddler of all time. Now, let's get to work. We've a week."

ELLEN HAYNES nodded. She did not know what to make of Jim Forrest. Here on cold Ganymede he had a comfortable brick building that was built along the lines of a good sized mansion. Though the cold and the winds beat at the outside with an ammoniac odor, inside of the building it was warm and pleasantly filled with the smell of a Terran garden.

Jim Forrest, she knew, was wealthy. But the word 'wealth' had a world of meanings. After Ellen had seen the building and had seen shown the inside—part of it anyway—the was beginning to understand just how wealthy the man must be.

She had wondered about her relations with this strange man until he showed her a small suite of rooms that he said were to be hers. That in itself was comforting but it posed a greater question as to his character. For the apartment was not devoid of the signs of human occupancy—feminine occupancy—also young feminine occupancy.

There were the collections of scents and cosmetics and silks that are unmistakably those of a young, desirable woman. The apartment was more luxurious than any that Ellen Haynes had ever known and, though she felt distaste at the idea of using another woman's things, she found them all cleaned and properly pressed. The cosmetics were enigmatic—some of them looked used and some of them had their original labels and seals intact. The used-appearing ones, on the other hand, bore the stamp of the immaculate. They were unmarred, neither smudges nor fingermarks.

The clothing was a passable fit for Ellen Haynes—not perfect, as were her own clothes, but passable.

Ellen wondered. She wondered even more as he led her into what would have been the grand ballroom of the mansion-design and found it to be fitted as a physical laboratory. She looked around at the vastness and shuddered slightly at the unpeopled silence of the great house.

"Doesn't the lack of company get you down?" she asked.

"Seldom does," he smiled. "Besides, it is seldom this unpopulated. I've seen the day when the place was positively bulging with people. I hope to return to that happy state soon."

"But that suite you gave me . . ."

"That's been used, but not recently."

"By whom?" she persisted.

"By several persons," he said noncommittally. He smiled inwardly, knowing what she wondered about. He let her go on thinking mostly because it made no difference and it kept her from brooding on the matter of her father's discovery of Zonium and the things that it implied.

"What are you going to do?" she asked.

"I'm going to make a few tests," he said. "This rock has got to be destroyed. Not just thrown away or buried, but completely destroyed. Disintegrated."

"In what way?" she asked.

"I'm going to try bombarding it with neutrons," he said. "The easiest way, of course, is to transmute it."

"Where will you get a neutron-supply?" she asked.

"I haven't got a uranium pile," he said unhappily. "But I have got a healthy cyclotron here. We bombard beryllium with deuterons and place the zonium in the resulting output. You see, that is one of the $\text{Be}^9(\text{dn})\text{B}^{10}$ reactions, yielding a goodly spread of neutrons with energies from zero to nine million electron volts. I'd try other particles, but the neutron transmutation is always best."

He recalled Turner briefly and smiled. They had a sixty hour start on the Guardsman at least and the vectors of travel made it almost certain that they had a full week before Turner could get away and come after them in a new ship.

He did not believe that Turner could break out and he thought that if he did, the Guardsman would repair to Mars anyway to get himself a new Guardship. There was little sense in a Guardsman trying to

fight an armed Guardship in Jim Forrest's unarmed sports cruiser.

CHAPTER V

Revelation

UNFORTUNATELY for Jim Forrest his mansion was not equipped with space radar and so the only indication of the arrival of Jack Turner was given in the control room of Turner's captured ship. Turner landed in Forrest's ship beside his own and viewed the huge mansion wonderingly.

Then, shrugging, Captain Turner checked his blaster, appropriated from Forrest's supply in the pilot room, and stepped to the front door of the mansion.

He set the blaster against the doorlock and drilled it once, silently but effectively. He pushed the door open and went in on silent feet. He prowled the place quietly, eventually coming to the laboratory. To find that, after the scene of carpeted floors and all of the myriad things that could be expected in this mansion were it upon Terra, made Turner blink. Incongruity followed incongruity—first this definitely lived-in house on a barren place like Ganymede, then this magnificent laboratory stuck right in what should have been a ballroom.

What manner of man was Jim Forrest?

He stepped into the room, and saw the opened stairway to the cellar—a heck of a place for such, he thought. He went down and saw the cyclotron and it stopped him with sheer wonder. He saw Jim Forrest and Ellen Haynes, busily engaged in working over the cyclotron-target.

He lifted the blaster and said, "Up with 'em!"

They turned and blinked.

Then Forrest smiled.

"Well," he said in amusement. "Now the picture is complete! We have three factions present. One that wants to make zonium work. One who wants to destroy it utterly. One who wants it to sit in a laboratory case and moulder. Now what, Captain Turner?"

"You are my prisoners," he stated flatly. "You, Jim Forrest, are now accused of attempting to experiment on government property as well as stealing it."

"I intend to destroy it," said Forrest flatly.

"I intend to stop you," said Turner sharply. "And I've had enough foolishness!"

Ellen smiled. She turned, picked up the zonium crystal and handed it to Turner. "Jack," she said softly, "I know what it will do now."

Captain Turner of the Space Guard smiled bitterly. "Well," he said, "what will it do?"

"It will withstand the blaster beam," said Ellen Haynes.

"I don't believe it," said Turner.

She placed the cube on a metal table and motioned for him to drill it. Turner shrugged.

"No," he said, "I'll not destroy government property."

"But you won't," she said.

"There are other things that will withstand the blast," said Turner. "Less difficult elements to make than zonium."

Forrest smiled. "Go ahead and fire," he said. "You'll hurt nothing."

Doubtfully Turner lifted the weapon. Neither of them would have told him to do so if it were not true. Both of them had been willing to steal to get it. They'd not see it destroyed, for Turner did not believe Forrest's statement to the effect that he intended to destroy it.

He pressed the trigger of his blaster and—Nothing happened!

He turned the weapon away from the crystal, pointed it down into the concrete floor and tried again. Nothing happened!

"What is this?" he asked, checking the weapon. It was charged. It should have worked.

"This," smiled Jim Forrest, "happens to be one place in the Solar System where no blaster will fire. I have an anti-radiation field working in here that selectively prevents blaster output. Your blaster beam will

just not propagate here."

"There's no such field known," said Turner stolidly.

Forrest smiled, went to the wall and pressed a button. "Now try it," he said.

Turner blasted the floor and it worked, but violently. Forrest then released the button.

"So," said Forrest, "we need not fear your weapon, Turner. Now, may I explain?"

"Do so."

FORREST smiled genially. "Come on up into the living room," he said. "It's a long story and we might as well be comfortable. I promise that there will be no violence. I've worked rather hard to see that this identical situation obtained. I'll not spoil it now!"

Wondering, they followed Forrest, who had taken over the leadership again. Forrest mixed a drink at the serviette and handed one to each of them. He opened cigarette boxes on the coffee table before the sofa upon which Ellen and Turner were sitting. He turned to the fireplace and touched a button. The logs flickered.

"Artificial," he said unhappily. "I hope some day to go where I can have a real fireplace but everything that goes up the chimney as air must be replaced from somewhere, since we couldn't use Ganymedian air very long without developing a vicious case of bronchitis. But it looks pleasant anyway."

"Zonium," said Forrest, "is a rarity. Do you know where the elements of the universe come from?"

"Do you?" asked Ellen skeptically.

"According to established theory," replied Forrest, "the sun is running due to the so-called Solar Phoenix. Carbon is forced to combine atomically with hydrogen under the pressure-temperature conditions of the sun, releasing a gamma quantum, and producing nitrogen thirteen which is unstable and by ejecting a positron returns to carbon thirteen. "Carbon thirteen takes on another hydrogen, becoming nitrogen fourteen, which is stable. Nitrogen takes on hydrogen, becoming oxygen fifteen, which ejects a positron and becomes nitrogen fifteen. Another hydrogen makes it oxygen sixteen, which is stable excepting in the solar conditions, where it ejects an alpha particle and reverts back to carbon again, ready to go through the same process.

"Sometimes the oxygen does not break down but takes on another hydrogen again, becoming fluorine seventeen, which breaks down by positron ejection to oxygen seventeen—and another hydrogen brings it up to fluorine eighteen, back to oxygen eighteen and up to stable fluorine nineteen. You can go up and back, adding hydrogen, to make every known element.

"The curve of elemental stability peaks across iron. Elements lower than iron are more easily built up and elements above iron are more easily broken down. The whole roster of natural elements is accepted as being built by offshoots of the Solar Phoenix."

"And zonium?" asked Turner.

"The ability of zonium to withstand the blaster beam," said Forrest, "is due to the fact that zonium is really an element from another universe!"

"Another universe?" exploded Ellen Haynes.

"Right," he said. "A universe which operates differently from our own but which produces elements fundamentally constructed of the standard atomic particles of energy, which are basic. Zonium will not combine chemically with any Terran element. Its physical effects are outrageous compared with even the transuranic elements which carry the Solar Phoenix to the extremes far above uranium."

Forrest went on to explain in detail the effects of zonium on the sun. "Zonium came into being by unhappy accident," he said. "Only the furious energy of transmutation can breach the dividing energy-levels between the universes of the Cosmos. It takes place under high magnetic, electric, and optical conditions.

"These effects took place, according to my theory, at a coincidental instant when the element under bombardment was adjacent in space-time with a small crystal of zonium in the other universe.

"Using that for a pattern, this crystal of zonium came into being, was measured and accepted as a certain element in the scale. The space occupied by zonium on the periodic chart is fillable, but the metal that will be made will not be zonium like this crystal.

"Any more zonium of this type must have a splinter of this rock for a matrix to start the peculiar intra-atomic structure that gives zonium its bizarre properties.

"Once this is destroyed, as it must be, it can be made again only by extreme happenstance, for the possibility of conjacent matter between the two universes is no less a probability than possible collisions between—not suns in the galaxy but the galaxies themselves!"

"But why couldn't all this be explained?" demanded Turner. "It seems to have entailed a large amount of mad galloping."

FORREST smiled. "You two people are very much involved," he said. "You are attracted to one another, which is itself good. Yet your viewpoints differed greatly. So long as the zonium existed you could not but let it mar your love. Ellen felt deprived of possible benefits. Jack was a symbol of that which barred Ellen and Ellen was a symbol of that which resented everything that Captain Turner of the Space Guard held honorable.

"It is certain that the future existence of Sol depends upon the destruction of this crystal. A stasis existed during all the years of its dust-collecting stay in the laboratory, a stasis that merely was a threat to the future. For destruction must be complete!

"Supposing I merely hurled the thing into space at a velocity high enough to send it, eventually, into the gravitational grasp of some distant star. A nova would result—a nova with the Solar Phoenix gone wild and with a sample of zonium upon which to build uncounted tons of more zonium, which in explosion would be hurled throughout the universe! A chain-fission extending to every star in the universe, given time!

"Where then," he asked loftily, "would the hoped-for Grand Galactic Civilization be? Yes, I am planning on fifty million galactic years, with Sol grown cold and dead ere man is united throughout the universe. It must have its chance!"

"But why the penny's worth of plotting?" asked Turner.

"I had to do that which would bring you two together," smiled Forrest. "The silent inert threat of zonium in the laboratory was bad enough but stabilized. I could watch that. Knowing that Ellen Haynes would try to take it eventually, I merely spent my time keeping tabs on the young and attractive lady until she swiped it. Then I took it, knowing that you were on the trail.

"I was a little surprised to find Ellen in my spaceship but it saved me the trouble of collecting her at a later date. I anticipated that you would arrive and that I could cope with you, Turner. Well, my machinations over that incident went to pieces and I planned then upon the fact that Ellen was available.

"So I spent the intervening time explaining to her just exactly how I knew the dangers of zonium. I knew also that you'd be arriving but I didn't know how soon. I've still to destroy that rock, you know. But now that I've shown Ellen and explained to you, your psychopathic animosity toward one another's principles is gone.

"By stealing the rock from Ellen and giving you the chance to offer her a means of absolution I showed her your interest. By preventing her experimentation when she took off with it I prevented disaster.

"Instead of zonium, Guardsman, I offer you the anti-propagation field. Here are notes—you and Ellen take them and expand them so that the invention will be yours.

"And now," he said, "I'm going downstairs again and blast this zonium rock into something inert."

"And we?"

Forrest laughed. "You are to go back and explain your deputization of Ellen Haynes and my theft and destruction of the zonium block. Also," he grinned, "you two have been racing all over the system together. You'd better marry the wench, Turner, and save her good name."

"Will you, Ellen?" asked the Captain. She nodded vehemently but her gaze was on Jim Forrest.

"But you, Jim," she said. "They'll be hounding you from here on."

"Oh me? I'm a lawbreaker," he said. "I'll escape easily."

"How?"

"Easily," he said. "I'll be out of here in time. Just give me time!"

He grinned and insisted that they leave at once. He escorted them, walking between them to the Guardship. He shook hands with Turner and congratulated him. He turned to Ellen Haynes and, with a half-smiling, half-serious expression, bent forward and kissed her lightly on the lips.

"Goodbye—Grandmother," he laughed.

He shoved her inside the spacelock and snapped the starting switch on the frame of the door. The lock clanged shut.

"Grandmother!" exploded Ellen. "What did he mean by that?"

Jack Turner had a flash of inspiration. "He said he would escape in time," he muttered slowly. "The greatest meddler in all time. But look, Ellen, his name is Forrest, not Turner."

"Funny man," she said dreamily, "Egotist. Ever give thought to the idea that your—our —firstborn might be a girl?"