The Battery of Hate

BY JOHN W. CAMPBELL, JR.

CHAPTER I

BRUCE KENNEDY looked delightedly at the ampere-hour-meter on the laboratory bench, at the voltmeter, and finally at the ammeter. Then he drew out the notebook from the left-hand desk drawer and carefully wrote in the new entries.

"Wednesday, May 28, 1938, nine-thirty A.M. Ampere-hours, five thousand, six hundred seventy-two; watt-hours, twenty-three thousand, eight hundred twenty-two; volts, four-point-two; amperes, eighty-five. Sweet spirits of niter, isn't she a brute for work!" He looked happily at the squat, black case on the floor, two feet long, eighteen inches wide, and two feet high. A small, humped projection at one end seemed the source of a faint whine that filled the cellar-laboratory. A mass of heavy leads ran from two thick copper terminals at the top of the black case, up to the table which served as a laboratory bench. Over on one side of the room, where the angle of the concrete cellar wall joined the wallboard, a pile of unused apparatus of various sorts was heaped in disarray. Inductances, voltmeters, heavy resistance coils, all the apparatus of an experimenter in electrophysics. On the concrete wall, sections of shelves had been placed, holding rows of various chemicals; in a rack on the floor below the window that let a patch of bright golden sunshine on the floor hung a dozen curious rectangles of a black, lustrous material. They were just the shape of the end of the black case on the floor, plates for the battery evidently, black, lustrous plates, soft black graphite.

To one side of the door through the wallboard was a frame of

pipes, and, attached to it by porcelain insulators was a network of wires that resembled a gigantic electric toaster. A plate of zinc hung behind it, evidently protecting from the heat the more or less combustible wallboard, which had, nevertheless, been scorched slightly.

The room was terrifically, uncomfortably hot, though both door and window were opened, for it was a warm May day, and the huge heater certainly did nothing to alleviate the temperature.

Kennedy wiped the perspiration from his forehead, happily, however, and smiled down at his battery.

"The fuel battery—the ideal source of power! Electricity directly from coal—or graphite. Electricity produced so cheaply nothing can compete! Electric automobiles ten times more powerful and a hundred times simpler than the best today—electric airplanes, noiseless and unfailing, because an electric motor has just two bearings and a magnetic field. These batteries won't fail—they can't.

"Lord, the world will be a better place, I guess." He smiled and stretched himself ecstatically. Some men get more pleasure out of proving the world isn't a bad place, and making their fellows like it better, than from cornering the means to bring what pleasures the world already has to themselves. Bruce Kennedy was one of the first kind. He smiled whimsically at his "toaster" now. "You were all right when I started these experiments last January, but May in New Jersey and you don't get along. Guess it's time to test those batteries on a refrigerating machine." He stopped, as still another thought struck him. Success was here and the thousand and one tiny but

irritating problems were ironed out, and now the great problem of its use came before him. "Another thing people will have—home cooling will be worthwhile when electric power comes at ten dollars a ton!"

Bruce Kennedy saw the good his invention of the fuel battery would bring the world. A plate of graphite, cheaper and more plentiful than coal, down there in the Archiazoic Period, oxygen from the air, a plate of copper, plated with a thin layer of gold merely to collect current, and a cheaply made solution. Power. Power, as he said, at "ten dollars a ton," for the air was free; the graphite alone had to be renewed. The little whining motor, run by the battery itself, served to force the bubbles of air through the solution, to keep it saturated with oxygen.

So Bruce Kennedy blithely set about patenting the great invention and making himself an electric automobile to be driven by these super-batteries. Had someone pointed out to him the terrible path of

hate and bloodshed that lay ahead of that squat, rounded block of power on his cellar floor, and ahead of him, he would not have believed it, for he was young enough to think that men worked for the good of men, as he himself did.

CHAPTER II

Marcus Charles Gardner, large, very friendly, and popularly known as M. Chas. Gardner, the big power of finance, was looking in some surprise at his secretary.

"What? Who's this wants in? What's he got that's so important and confidential, he can't tell you?"

"I don't know, for of course he didn't say, Mr. Gardner, but he's one of your patent examiners. It might well be important."

"Oh, well. He might have waited till later in the morning anyway. Everybody knows I hate to do or listen to anything important before lunch. Send him in; it probably isn't much."

A small, shrewd-looking man came in. His clothes were very neat and very somber. He looked like a successful lawyer, and was one, a patent lawyer.

"Mr. Gardner?"

"Yes," replied the magnate.

"I'm Peasley Jamison, as you have seen, and I have some news I am sure you will want to hear. Perhaps I should not be certain, perhaps you will certainly not want to hear it. At any rate"—he smiled at the bigger man ironically—"there's a new invention. I've been watching for it for the last twenty years, hoping I'd get hold of it. Hardwell and Thomas got it, new firm, not big at all, but they tied it up beautifully. Very skillfully drawn patent. Very pretty work."

"I," said M. Chas. Gardner angrily, "don't give a damn how beautiful it is. What is it?"

Still the lawyer did not seem content to disclose his mystery. "I believe you have control of North American Super-power? And proxy-control of most of the oil fields of the country?"

"Yes, what of it?" Gardner was beginning to be wearied.

"If you can, sell out, and do it quickly," snapped the little man. Gardner suddenly looked very much more alive.

"Eh, what? What in hell is this invention?"

"You wouldn't know if I told you. It's called a fuel battery, in-

vented by a young man by the name of Brace Rollings Kennedy. It's a device that can produce power directly from graphite, and it gives it as electricity, the most adaptable of all powers."

"Well, why not buy it?" snapped Gardner.

"Because, my dear man, you haven't money enough to pay adequately for it," smiled the little lawyer.

Gardner looked startled. That was the first time, in some twenty years, anyone had told him he hadn't money enough to buy what he wanted. "What? How- Why I'm worth at least a billion."

"Could you get that billion in cash? No, you could not. Neither could you buy that invention. Even if you could, what would you use it for?"

"Why not in power plants, which is the natural answer? Tear out the boilers tind generators?"

"Because it generates direct current, which can't be shipped along a line readily; because there won't be any power plants when any man can make his own, as he now owns his own cellar furnace; and lastly because that is only one of the very minor possibilities. Do you know what's going to happen to the oil companies? There won't be one where there are hundreds now. There aren't going to be any gasoline-burning, oil-wasting, smelly, greasy, troublesome gasoline automobiles any more. They'll be electric, and a gasoline motor uses two quarts of oil for every drop an electric motor needs on its two bearings. Gasoline is going to be so cheap they'll pay to have it carted away, and save the insurance."

Gardner laughed. "I hope the rest of your predictions are as empty. I've seen electric automobiles and their batteries. Now and then you can see one having a furious race with some spavined truck horse."

Jamison's tight-lipped smile returned. "Did you ever see a hundred-and-fifty-horsepower electric car? I did; I went to Florida to see it. I was one of the few who saw it and knew what it was. Kennedy built one. He went one hundred and seventy-five miles an hour. He said later he got scared and had to stop."

"One hundred and fifty won't do that," said Gardner keenly.

"One hundred and fifty gasoline won't," Jamison acquiesced, "but one hundred and fifty electric is something different. You've seen electric trucks, haven't you? Some make a good twenty-five miles an hour—with two horsepower.

"A gasoline engine is in a constant state of explosion, which means

it wastes ninety-nine percent of its power on noise, heat, friction, and waste motion. An electric motor has two bearings, no explosions, no . noise, no waste motion, and almost no heat."

"You mean the automobile is doomed?"

"I said nothing of the sort. It's going to have a new lease on life, but the gasoline car is going out the way wooden battleships did when the Monitor and the Merrimac called it a draw. Battleships didn't go out, but wooden ones did."

"Gasoline is out, oil isn't needed, power stations won't be wanted; how about iron and steel?"

"Still safe—except that new types of refining will be introduced. Gas for cooking won't be wanted, which will finish the oil fields."

Gardner had been looking at his desk, thinking deeply, his head in his hands. He looked up slowly. "My God, man, he'll ruin the world! It's going to ruin me. I won't have a cent left after this panic gets over." His face was going white. "Oil—dead! Power—dead! Automobile corporations—save one—dead!" His voice took on a cold, steely menace.

"I've got to buy that patent! Get out." The lawyer left the great man brooding, staring out at New York sweltering in a late September heat. But he didn't see New York; he was seeing the things that would happen if this invention were sold. His comforts would be stripped from him, his yacht, his home, his apartment—and another apartment—everything. He could not get out, for the instant he started selling heavily enough to make a practical retreat, the word would be out, and he would be swamped, the market would drop to zero-everywhere—he'd be cleaned out as his pyramided loans collapsed—

God, but he hated the man who invented that battery!

CHAPTER III

By the next morning Gardner had decided to try his one hope for salvation. He had not slept that night, and his face was lined from lack of sleep; his eyes were bloodshot, and there were patches under them. He knew he stared ruin in the face if he did not succeed today.

At the office he rang for his secretary at once. "Arthurs, I want to locate Brace Kennedy; try this address, and see if you can get him here before lunch."

Robert Arthurs looked surprised. He had found out quickly that the patent lawyer's visit yesterday had upset his employer badly indeed, but he had not learned how. But now he was again violating his hitherto inviolable rule—he wanted to see someone before lunch!

Nevertheless it was nearly eleven-thirty before Kennedy arrived. Arthurs went into Gardner's office at once. "He has come now, sir," he announced. No need to say who had come—Gardner had been asking him about it all morning.

"Ahhh-send him in! No, wait. What does he look like?"

"About twenty-five, sir, six feet I should say, weighs about one hundred eighty, I should guess, powerfully built, intelligent, well-mannered, soft, deep voice. Clear eyes, brown, and brown hair. Good-looking, and seems very anxious to see you. I took the liberty to mention it was on the matter of an invention of his, and he promised to come at once."

"Damn! Why did you—oh, well, perhaps he'll want to sell. I may be able to get it reasonably—" Gardner seemed lost in thought. "Young you say—probably no

more money than he needs?"

"Oh, no sir, he is young, but Bradstreet says he's worth close to a quarter of a million. His father left it. An old mining claim that petered out—that is, gold mining—was reopened shortly before his death. Someone sold him the mine as a gold mine, salted it first, it seems, and shortly Mr. Kennedy found a genuine vein, but when it gave out he left. He had gone west for his health. Five years ago he sold it for a quarter of a million as one of the rich tungsten mines. He would have gotten more, but it was inaccessible."

"Thank you, Arthurs. Excellent. That may help in talking to him. Send him in, please."

Kennedy came in smiling. "I don't know just what this call is for, Mr. Gardner, though your secretary mentioned a patent, and I have only one."

"That was the one; I heard of it through a patent attorney of mine. You seem anxious to get to business." The great man smiled disarm-ingly.

"I am, I guess. I got the patent only a few days ago, and have been getting ready to attempt marketing it."

"Have you offered it anywhere?"

"Yes, but no one has seen it," Kennedy admitted ruefully. "They didn't believe."

"That is a model?" Gardner asked, noting the small satchel in his hand, not unlike a doctor's bag.

"Right." Kennedy opened it and took from it a miniature battery such as that still working in his home in New Jersey. He pushed a button, and a small motor hummed feebly, rapidly gained power and speed, and finally settled down to a steady whine.

"The blower—air is needed to supply the oxygen for combustion of the graphite. This battery simply burns coal electrically instead of thermically. The energy that would come off as heat in a furnace comes as electricity. Furthermore, it uses graphite, the natural form of free carbon. Coal can be converted to graphite in electric furnaces cheaply, now that electricity will be cheap."

"That might run a flashlight," said Gardner skeptically, "but it wouldn't replace a dynamo."

"That would run an automobile," said Kennedy, "and it, or a larger one, would easily replace a dynamo. The case is steel, with black enamel baked on. It is a strong, tough battery. The solution, which is the real secret, of course, is cheap and, like the solution in the ordinary lead-acid storage battery, lasts practically forever, with the occasional addition of water. The solution in a storage battery is renewed by charging; that is, renewed by the current forced through it."

"How much do they cost?"

"This one cost me five dollars to build, but if you built a hundred thousand they would cost about one hundred thousand dollars."

Gardner whistled softly. "What's the trouble with them?"

"Why—nothing!" replied Kennedy, puzzled and annoyed.

"Lad, there is nothing in this world that's perfect. Automobiles run out of gas, storage battery plates shed, generators overheat and burn their insulation. What's wrong with them?"

"Oh, well—graphite is soft, and somewhat brittle. I've been using very high grade artificial graphite, which leaves practically no ash, but in commercial power plants they would have to use cheap, natural graphite, and add an ashtray of some sort. That would mean draining and refilling at periods. The cheaper the grade of graphite, the more ash."

Gardner nodded slowly. That certainly was not a serious objection. "But in automobiles—don't the plates crack, and break?"

"They were mounted on springs and sponge-rubber in the car, and mine haven't cracked yet."

"I understand the metal plates are gold-plated," said Gardner at length, "and that sounds expensive. How can you make the set for a dollar?"

"They give away gold-plated razors," Kennedy reminded him with a smile.

"Well, I'm convinced. You had a model at the Patent Office, and they accepted it, so it must be O.K. What do you want for your patents?"

"Mr. Gardner, I don't want to sell them. I want backing. I want five million dollars' worth of backing, but I don't want to sell the patents. I want to put this on the market."

Gardner's face did not change, but he was going to have those patents. He had to have them.

"I offer you one million dollars cash for those patents," he said slowly.

Kennedy's face fell. "I'm sorry, Mr. Gardner. I had hoped we could do business. I am not selling."

He put the bag on the desk and returned the battery to it. Again Gardner made an offer, and though he tried as much as five millions, Kennedy would not sell.

"Good God, man. Why won't you sell?" he demanded at length, just as Kennedy started for the door.

"You own heavily in power and oil, Gardner. You are making money in it, and this invention is going to change things. I want to hold these patents, and see that they are used. This is an invention that is not going to be suppressed. If necessary I can start in a small way myself." Kennedy went out.

Gardner settled back heavily in his seat. Kennedy had not been angry, simply immovable; he had decided, and the decision would stand. He knew that type of man.

Presently color returned to his face, and he sat there steadily looking out of the window, while his secretary refused all comers. He did not eat, and it was nearly two o'clock before he moved again. Then he hurled himself into action at once.

"Arthurs," he said sharply, hurriedly, "get Jimmy Blake and Bob Hill in here. Tell 'em it's worth their while."

In ten minutes, from other parts of the great building, the two men came. They listened and paled while Gardner talked. In the end, scarcely ten minutes later, they nodded and started for their offices.

Two and a half billion dollars set about crushing certain stocks and

bonds, marshaled and directed by three of the keenest minds in the Street. In the short time remaining that day, those stocks were crushed so low that they were almost valueless. They were the stocks in which Kennedy's money was invested.

But there remained some ten thousand dollars in Government bonds, and a few thousand more in some of the finest industrials that even Gardner and his friends had not dared to assail, they were so solid.

CHAPTER IV

The dining room of the very exclusive club was a beautifully furnished place, paneled richly. An air of quiet and impressive dignity, almost of overawing dignity, lent a quieting effect that hushed voices tending toward raucous volume. Lung-power is frequently well developed on the floor of the Exchange.

Gardner was talking to a group of friends at his table, and as he finished the dessert he chuckled to himself. The group of hand-picked friends looked at him admiringly.

"Well, Charlie, what is it? Whom did you fool today?" asked Wainwright, smiling.

"Nobody, Bob, nobody. Somebody tried to fool me." The great man chuckled again. "Come on down to the smoking room, and I'll tell you the story of a patent."

"Well," said Caller, settling himself between Gardner and Wainwright, five minutes later, "here we are, waiting expectantly for your tale." He bit off the end of a cigar, lit it and settled back comfortably.

"A man came in to see me yesterday morning with a great idea. He was going to put all the power plants in the country out of operation. He had invented, and patented, a sort of a wet dry-cell, as far as I could make out from his cautious statements. The only things he said that weren't cautious and as discreet as one should be when selling a patent to the man who is scheming to rob you, as he decided I must be, since I wasn't enthusiastic, were his claims." Gardner permitted himself a hearty laugh.

"Well, he had a battery that was like a big dry-cell, only it was wet, and he wanted to put that in place of generators, just have a lot of big batteries instead of generators."

A general laugh was interrupted by Wainwright. "Well, you bought it up, of course!"

"No, but would you believe it, the fellow was really quite surprised and put out because I didn't. His point was that it was more efficient and didn't require a lot of boilers and generators. He evidently neglected to figure the cost of his metal plates—oh, by the way—the plates had to be gold-plated!"

"Gold-plated batteries for power houses! Good Lord, why didn't you call up the Psychopathic?"

"And direct current at that, you know. He'd have us using cables like those in the George Washington Bridge to ship power!"

"Who was this genius?"

"Ah—let's see—" Gardner pulled out a notebook and consulted it a moment. "Oh, yes, fellow named Bruce Kennedy—the inventor of the gold-plated wet dry-cell for power houses!"

The talk veered after that, and shifted to many other subjects, and Gardner left, to go back to his office and make certain the stocks he had depressed stayed there.

His work had been done, and, he felt, well done. None of those men he had talked to, the most important on the Street, would touch that battery now. That was a clever touch, he felt, mentioning the gold-plated plates of the battery. By tomorrow every man on the Street would know the story and would be laughing at it. Kennedy's stocks would be useless to him. He could not build the things himself. He would try to get help, and help would not be forthcoming. He had turned on that battery the heaviest bombardment he could find—the bombardment of ridicule that will blast asunder the greatest hopes and the wisest plans.

Kennedy sat morosely behind the wheel of his car as he drove slowly along. The Holland Tunnel seemed crowded, and the comet of yellow light he followed and kept pace with seemed as elusive as his hopes of selling that idea to some of the big men who could have supported it.

Out of the tunnel, up the ramp, then up and across the Meadows, past the lights of the Newark Airport. He turned off and cut across country to the southwest, avoiding the city ahead. His low gray coupe hummed softly along the road, and as he got free of the heavy traffic he opened out a bit; the accelerator went toward the floor. The

smooth whine of the powerful electric motors mounted in crescendo, and the road began to flash back at higher speed.

Automatically he followed the road back to his home, for in the past week these trips had become automatic. His name had been sent into the sanctums of the great, and it seemed almost as though something discreditable had been known of it, for invariably it came out almost instantly. He had not seen one of the men he had wanted to see, and still his stocks hung so low on the market he could not sell them for the money he needed.

Suddenly he sat straighter, and the swift-moving car swerved slightly under his hands. "And I almost forgot—!" He smiled happily.

Bob Donovan! Just a short while ago he had thought of Bob Donovan as one of his best, and poorest, friends. Bob's father was rich, distinctly so. But he had gotten rich by his own hard work and had every intention that his son should do the same. In fact, the stipulation was that until Bob could gather the sum of ten thousand dollars in one year, by his own efforts, the estate would not be his, and the interest would simply add.

Then Bob had succeeded, and in just one week that year would be up! In that time, he could not have transferred his estate of better than five millions to stocks, which Kennedy was beginning to distrust.

A little town appeared ahead, and the swift gray car slowed down, the motors

taking on a peculiar whine as it did so. The car became momentarily warmer, as the motors acted as generators, throwing their current into heating resistance coils.

Before a drugstore the car stopped. Kennedy locked the car and went into the shop.

He telephoned a telegram to the nearest office and came out smiling.

It was an hour later when he reached his house, garaged the car, and went in. A telegram awaited him:

GOT ESTATE AT LAST STOP VERY BUSY AND CAN'T COME STOP WHAT DO YOU WANT BOB.

Another half-hour, and Bob Donovan was looking at a yellow slip with the familiar strips of letters:

NOT HALF AS BUSY AS I AND YOU CAN COME ONLY YOU DON'T KNOW IT STOP LEAVE ESTATE AS IT IS AND COME STOP FOR GOD'S SAKE DON'T

BUY STOCKS STOP I NEED CASH AND YOU WANT MORE COME STOP INVENTION BRUCE.

Bob Donovan frowned, finally grinned, and called his lawyer. Then, having gotten that immensely annoyed gentleman out of bed, and arranging to leave the estate as it was, he sent a telegram-collect:

YOU'RE ANNOYING ME STOP COMING TO ANNOY YOU AND WON'T STOP BOB.

Apparently he was very anxious to carry out his threat, for he hired an autogyro and covered the two hundred and thirty miles from Boston in an hour and'thirty minutes. It was then after four A.M., and he greatly enjoyed getting Kennedy out of his comfortable bed.

"Well, look who came. I see you lived up to your promise, didn't you?" said Kennedy slowly.

"Such a greeting, such a greeting, and from one who invited me. Don't you know, my lad, that I'm a dignified and important millionaire, and that little boys with inventions should go to the millionaires, and not make the millionaires come to them?"

"Shut up. That's what I've been doing all week. You never wrote me or let me know you'd inherit that estate, and you almost missed out. I've been running to millionaires trying to sell them the idea of backing me, but the only man who would see me wanted to buy it, and it isn't for sale."

"What is it?" demanded Donovan.

Kennedy led him down to the cellar and turned on the lights. "I haven't been connected with the city power for three months now," he explained, and pointed to a long black case against one wall. It was far larger than the small experimental battery he had been working with in May, and leads from it connected to the house wiring. "That's the invention. I've installed electric heaters in every room, and you noticed I turned one on when you came. It's chilly these late summer nights, and already they are useful. That combines my furnace, power and light, and my gas connections."

"What is it?"

"Battery, of course. Do you remember my lectures on that subject before we left school? I've been working on it now for three years, and I got it at last. That's the result."

Donovan started, and wheeled on his friend, his blue eyes opened wide in amazement. "Fuel battery! You did it, Bruce! And I'm backing you for all it's worth. How much do you want, why didn't you back it yourself?"r

"Bob, I'll tell you. I told Gardner about that—he seemed to have heard I had the patent, and sent for me. He wanted to buy, but I wanted backing, so he wouldn't agree. I told him I could get backing elsewhere and if necessary do it myself. That afternoon my entire group of stocks, save for a few of the biggest companies, where I owned comparatively small amounts, lay down and went to sleep. They are still sleeping. And I haven't seen anybody else."

"Is that so? And what do you think happened?" Bob's eyes squinted slightly at his friend.

"I don't know. I thought Gardner might depress the stocks, but he couldn't keep his enemies from seeing me."

"Couldn't he? Why couldn't Columbus get anybody to back him when he tried to sail to the Asian coast?"

"Everybody laughed at him—but—" Kennedy's quick mind began to understand and see the laughing points. "And do you know, this thing has gold-plated metallic plates."

"That's the answer, Bruce," nodded Donovan. "He probably told them you had some sort of an oversize dry-cell with gold plates that you wanted to replace the power plants with. Tell that to a group of friends as a joke, and the whole financial crowd would know it in a day. The only support you'll get, according to his lights, is from him, and he wants to buy. What are you going to do?"

"Do? Why, build a plant and start manufacturing, if you'll let me. Your estate hasn't been taken out of bonds and banks and real estate, has it? He can't depress the price of Government bonds, and banks still have to pay cash. We can start manufacturing anyway."

"Manufacturing what? Flashlights? We won't be able to borrow; Gardner and his pals have too much influence, and five millions won't do a lot. We need five hundred millions, and we could get it in a day after a few big demonstrations—if Gardner weren't opposing us. If we manufacture flashlights, or anything little, no one will ever believe they will work in a big size."

"No, and by all the planets, I'll wreck Gardner! He can keep banks from loaning, he can keep brokers from investing or offering stock, but he can't keep you from using your own money, if you will. Listen—all we have to do is to make a few thousands of those over

there, and sell them to private owners! I can make one of those for about one hundred and twenty-five dollars on a quantity basis, and they cost about five or ten dollars to install. Their one difficulty is that they give D.C., and all modern radio sets use A.C., and the television sets use the A.C. power lines as a third circuit for synchronization.

"But there aren't many television sets yet, and there are lots of D.C. radio sets. We can get G.E. to make some sort of a heater for rooms that works on 110 D.C., and then we are set. We can sell to suburban homes. How many women

would like to have electric ranges, if the power were only as cheap as gas? How many men would like to have a heating system that would warm the house in ten minutes in the morning, and could be turned on with an alarm clock that would work every time? Our greatest, in fact only, difficulty will be the electric clocks and radio sets.

"But look what happens. We steal a lot of Gardner's power customers, we bring the battery sharply before the public, not as a flashlight power source, but as a genuine source of practical power. Farms will buy them for power, then small cities will see that the municipal plant could use a big set.

"Then there will be the next step—automobiles. I'll show you one tomorrow—mine. I made better than one hundred seventy down at Daytona Beach, but I got scared, I guess, and cut the power. It has two motors, and a big battery under the hood. The motors are in the wheel. I reversed the usual system and have a revolving field with a stationary armature. The wheel is the field."

"You're right, Brace. We can—and will!"

"Now let's sleep."

CHAPTER V

M. Chas. Gardner looked up from his work, at a tiny red light that appeared suddenly in the frame of a picture on his desk—He looked across the study toward a long oil painting. He hesitated a moment and punched at something on his desk—the lock, apparently, of one of the drawers. A faint click was the response, and the oil painting opened inward. A slim, black-haired man with sharp black eyes stepped quickly into the room, and the painting returned to its frame.

"Chief, they beat me. Gawd, I never saw anythin' go like that gray coupe of his. He got a friend wid him. I dunno who it was."

Gardner's face flushed quickly. "Cazoni, I told you to put some men on him!"

"Aw, Chief, I did but, hell, the guy went into dreamlan' about two in the A.M., an' the guy was tired as hell, so he pulled out. I had another torp on the job about five, an' it was dark. How'd we know anybody came. They—"

"Fool! I told you to change men so he wouldn't know he was trailed. He found it out, and beat you! Imbecile!"

"Aw, Chief, I did change men—plenty. I dunno how he found out, but anyway, that friend musta slipped in at night, an' how was we to know?"

"What happened this morning?" demanded Gardner.

"About six-thirty, the man on the house—Tony, ya know, he got Chi to take his place and got some chow. It was after seven 'fore he got back, an' Chi was mad an' beat it. Nothin' happened though till about ten, then they—only Tony thought he was still alone, he sent away that housekeeper a while back, and has her come in every other day—well, they got breakfast, then about eleven two guys came out, an' went to his garage and got out that gray car of his. Ya know, it looks like hell, no lines at all. Looks like a model of 1930. Big square-front radiator, posed headlights—got pants on the wheels, though. Well, we didn't think it could move worth talkin' about, and we had a big Packard 16.

"Well, they start out, an' light for the north. They go nice and easy up the Hudson, cross above the Big Town, cut toward the coast again —an' hit the main Route One north. It was early in the afternoon and it was a weekday. They lit out—man how they moved! Tony picked me up, when he saw where they were goin', an' I was with him. That boat of mine will do one hundred and twenty any day easy. But that old gray can was doin' one hundred by the time we could hit eighty, and was so far away we couldn't see it, when we hit better'n a hundred. Chief, I never saw anything move like that did. That boat of mine acted like it was a balky truck beside an airplane.

"We gotta get a boat like that, Chief, before we can keep him in sight. What kind is it, d'ya know?"

"So you lost him. Lost him just after he found some friend. What did the friend look like? Tony say?"

"Tall, blond, good-lookin', looks like a college friend of this guy's.

Looks slow, but Tony says he moves fast, dropped somethin' an' it never hit the ground. They had a big black box that made the springs move when they put it in, but this bird handles it easy. Guess he's strong. Kinda slim though. 'Bout five-eleven or six-one, somewhere in there."

"College friend, eh? Headed north on Route One, and just ran away from you? Keep a plane handy after this, and use a shortwave set to keep in touch," ordered Gardner. He paused in thought. "And find out who that friend is, and locate Kennedy! Get that? There's more in this than in the rest of our business. The car—he made it! The thing that made it so fast is what I want. It's cost me five million dollars on the market already to keep him from getting some support! Now do you know how important that is?"

Gardner's eyes blazed at his lieutenant. Jimmy Cazoni whistled softly. "Five millions! It's worth that, eh?"

"No. It's worth a hundred tunes that!" Gardner spoke tensely. "Don't lose that man when you find him!"

"We won't, Chief," promised the gangster. "How about an accident to that car-wouldn't that help?"

"No. It would be worse, if anything. He and a friend of his named Robert Donovan made exchange wills, I believe. Neither has any relatives, and they fixed it up a couple of years ago. Some kid stunt, I guess, but it holds. And this Donovan—" Gardner broke off with an exclamation of dismay! "Donovan—Boston—Route One—Good God! That Donovan just came into a fortune of five millions, and he could give that man support!

"Cazoni!" He turned his eyes sharply to the slim, black-eyed man. "Get men on the lookout in Boston. Try first at"—Gardner searched hurriedly through some papers, and found the letter he wanted—"409 Marlboro Street, Boston. This Donovan owns the place—apartment house, I beh'eve, and he's been living there. Keep Tony watching, and if he recognizes the man, send me word. Now beat it, and move!"

Cazoni started rapidly toward the painting, but Gardner called him back. "Wait—let Nannery take over the other business, and don't bother me. I'll be busy, so he can handle it himself. This is more important."

Cazoni stepped in front of the picture with a word of agreement, the frame clicked, the picture swung back, and Cazoni disappeared.

"Thank heavens I have an organization I can depend on in time of

need," piously declared Gardner. "With those two together, I may be able to get somewhere." He smiled approvingly.

"Well, do you believe in it, Bob?" asked Kennedy, as the gray coupe swung to the curb in Boston. The whine of the motors died, and the parking lights went on.

"Sweet, little brother, sweet. I never heard so pleasant a sound as the hum of those motors. Even when we hit one hundred and forty they hummed, and there was no engine vibration. How long can you go on one set of plates?"

"About three thousand miles, Bob. I carry a spare set, as well. Remember that I get eighty-five percent efficiency from those plates, and an electric motor is better than ninety percent efficient."

"What a thing for an airplane motor!"

"I've been wanting to try it, but I made this first, as easier and safer to experiment with."

They were getting out their bags, and walked across the street, into the apartment. "I have a plane now," said Donovan softly. "Or should have. Lockheed promised it today. It's a special stratosphere racer with high-altitude Diesel. How much would batteries and motor weigh?"

Kennedy's eyes were bright. There was more fun, more enjoyment in the experiments than the constant disappointment of the business. He calculated rapidly. Presently he frowned slightly. "Hard to say. The batteries increase in weight for desired cruising range. I should say eight hundred pounds for one thousand horsepower and ten-thousand-mile cruise, but with every additional two hundred pounds another ten thousand miles of spare plates can be added."

Donovan whistled. "The engine and charger alone weigh one thousand pounds, fuel additional, and the power declines from eight hundred horse at sea level to three hundred at fifty-five thousand feet. Any decline in your scheme?"

"I'll tell you, I don't know. I've never tried it, you see. The composition of the air at fifty-five thousand is about the same, but the density is easily arranged—just a pump, and the batteries use one anyway. Simply make it larger. Or better, have them in the fuselage and keep air there."

"Not so good," replied Donovan, sitting down in a chair, "because air has weight, and it will just mean that many more pounds of thick air to carry with us. But will it work?"

"I'll bet I can get at least nine hundred at any height the plane will fly."

"Let's have supper and then we'll see," suggested Bob.

They reached the field after dark to find that the plane had been delivered, a five-place stratosphere plane, the air-tight cabin with its double walls streamlined with a beauty that seemed to make the plane move even when at rest. The great radial Diesel, surrounded by the Venturi cowling and the bulge of the supercharger, alone seemed to break the lines.

"No cooling on an electric motor," muttered Kennedy, "but that's the prettiest

thing I've seen in years."

"It'll be prettier," replied Donovan. "I'm going to take it up now, though, and then you'll be able to see the difference."

"I'll get busy—the Lockheed man is still here," replied Kennedy, and stuck to his decision.

Before they left the field that night, men were at work unshipping the heavy Diesel and the fuel tanks.

The next morning they went to see James Montgomery, of Montgomery, Harrison and Flagg, Donovan's lawyers.

"So what we want," Donovan concluded, "is your advice and help, and perhaps, if you wish, a partnership with us."

Montgomery shook his iron-gray head and laughed. "Couldn't make it—your lawyer. Corporation law. Want to incorporate, don't you? What's the title?"

"Kennedy Fuel Battery, Incorporated," replied Donovan instantly.

"Kennedy and Donovan," said Bruce insistently.

"Kennedy Fuel Battery is better—it's your battery."

"And your money."

"All right, give me a show for my money, will you! I say Kennedy Fuel Battery," grinned Donovan.

"Now the next question," interrupted the lawyer, "is whether you have any money, Bob. If what Kennedy suspects is true, you'd better draw out of banks before they close. I can believe it, because that's Gardner's way of fighting."

"Why—what do you mean?" asked Donovan in surprise.

"About a quarter of a million of your money is still in banks, due to the original trust, and another million due to the fact that it is changing hands. If Gardner suspects you are lending help, he can readily tie up those funds-break the bank if necessary, close it for ex-

amination of books, a number of things. Get out of that, and buy-Government bonds, I guess would be the best bet."

"Do it," nodded Donovan.

But it was easier said than done. They acted quickly, taking the largest deposits first, finally coming to the smaller. They did not get four of these, totaling one hundred and seventy-five thousand dollars. The rest were in bonds already, and unassailable.

"He's already moved. How under the sun did he know so soon?" asked Kennedy helplessly as they left the doors which bore the announcement that payment had been temporarily suspended.

A short, heavily built man across the street could have told them. He ducked into a drugstore and telephoned as the gray coupe started down the street, a powerful black touring car following it.

" 'At's him. Mus' be this Donovan, all right. What is he, a cop? No? Soun's like a cop's name," he reported.

Presently he was walking rapidly across the Common and made his way toward Marlboro Street.

M. Chas. Gardner had given another order.

CHAPTER VI

Gardner listened to the somewhat metallic voice from the telephone, and cursed softly to himself. Donovan had beaten him to his banks by minutes only, and now there was practically the whole of his fortune in a condition he could readily use. Further, it was in bonds, bonds that could not be driven down in value, and Gardner realized that no amount of juggling would get those funds frozen again.

Further, the companies with whom Donovan would place orders would accept the orders—but loans—? He would have to have some loans if he wanted to make the batteries on the scale that would be demanded. To manufacture batteries for power plants would require more than a few millions, particularly as only the small, municipal plants would be available to him. Gardner himself controlled the big plants that could have given saving orders. Automobiles—no, he could control that. Laughter! The bomb that would explode any plan among the giants of industry, the men who gave orders in the thousands of units, hundreds of thousands of dollars. Unless he started a new make of car, and that meant months of designing, more months,

years, perhaps, before the public accepted it. Flashlights—that was the place for batteries, but there were no millions in that, and it would do enormous damage to Kennedy's invention. Flashlights and million-horsepower power plants don't come in the same thought.

No, Donovan would be tied for some time yet, and Gardner decided, as he hung up the receiver, that the campaign of ridicule must go on. It must spread to Boston, to other cities. So on that day men from his office went to various cities—to tell a joke!

They were sent to financial centers to do some business, some reasonable excuse was given, but everywhere the tale of the golden battery was told.

But that was not enough. A second report reached him soon after they left. "Kennedy Fuel Batteries" was being incorporated. The next order would have surprised even the not easily surprised Montgomery. Gardner went home to give the order, and he used a private telephone, which was not listed, to call an unlisted number in Boston, and a second unlisted number in New York City.

"And remember, Cazoni, be careful to have that pen job first and do that second one right! If you fail me in that, Cazoni—" Gardner's voice was harsh.

Cazoni understood, and assured Gardner things would be "fixed up."

Gardner was worried, horribly worried. He had spent thirty years in building up the colossal machine that he represented to the world, and nearly five years building up that secret, deadly machine which had more than once aided in the smooth passage of the greater machine. It had grown out of one of those rough passages. At the end of the depression in 1933 a certain man had threatened the horizon, a black cloud of storm that seemed about to sweep away those pyramided loans, toppling already. That man had been murdered—

mysteriously.

But never before had so serious a menace appeared. This was, he knew, a Hydra of Business. To lop off one head, he knew would be useless, unless he could fasten himself firmly in its place. Those patents—the patents that he must control.

They meant millions to him, if he could get them, but he was growing old, and these younger men were thinking faster than he now, foreseeing his moves. They meant millions if he could get them, but if he didn't—

And all he wanted was peace!

CHAPTER VII

When the large battery in his cellar had been made, dies and patterns for the parts had been cut; and as they were by far the most expensive parts in the construction, Kennedy had made twenty complete sets. As a result, the batteries for the plane were readily put together, a freight plane making the trip down to New Jersey and back with them. In the meantime the powerful, light electric motor was easily obtainable, for that was practically standard equipment obtainable at once.

They ripped out the fuel tanks and the engine during the morning, and in the afternoon the batteries were set up in their place, electric heaters were installed, and electric motors were provided to power the compressors that would maintain atmospheric pressure in the cabin.

Nearly the entire day was spent at the field, working on the ship, and night was falling when at last they were ready for the trial.

Wainwright, the Lockheed engineer, had been a great help in the work, for he knew the plane thoroughly, and the tensile strains the various members could safely resist. And now that the plane must be relicensed, he offered to go with them to testify as to its fitness before the Inspector of Aviation. To reach the Government official, they found they would have to go to his home in Quincy, and the three men crowded into the gray coupe.

Across Boston, out through the Jamaica Parkway, and finally swinging into the Cape Cod Superhighway, the gray coup6 moved leisurely.

Behind it a large black sedan with New York plates moved along at an equal pace. As the two cars swung out on the eight-lane concrete superhighway, the powerful sedan spurted ahead, rapidly cutting down the quarter-mile lead. Presently it swung across the round of the speed-lane separation rib. The two-lane, high-speed concrete with its banked curves opened out before it, and almost simultaneously the gray coupe shot forward with swiftly rising speed, and struck the high-speed lane.

But the black sedan was wide open, its powerful multicylinder engine roaring gently through the muffler. It flashed rapidly faster.

"Lord, this boat can move. I could scarcely believe you when

you told me about it," said Wainwright, watching the speedometer move steadily across. Eighty—one hundred—.

"Still rising," said Kennedy smiling and watching the road ahead. The speed lane was practically deserted, though the slow lanes were fairly well traveled.

A whistling roar mounted suddenly from behind them and a great black shadow moved up beside them and passed them with a speed a full twenty miles an hour greater. But as it drew alongside, a dull popping, like a whole carload of champagne bottles, a burst of dull red flame, and a metallic rapping burst out suddenly.

Three machine guns were discharging high-velocity lead at the driver of the little coupe! The car suddenly fell off, a whine changed to a hum as motors suddenly became dragging generators, and the car wavered in the road. With an added burst the black car with the New York plates drove ahead!

Kennedy's face was white, his hands clasped on the wheel with an intensity that made them as white as his face. Wainwright's eyes were opened wide, and staring. Donovan looked slightly sick.

"I—I didn't guess that. Good God, how did they miss us?" he asked weakly.

"They didn't," replied Kennedy, a slow grim smile touching his lips. "Look." His groping hand found a heavy wrench on the floor of the car, and wielded it heavily against the clear plate of the windshield. The massive wrench was nearly torn from his hand, as the windshield bounced it back—the glass unharmed!

"I built for accidents. Experimental, you know—reinforced the frame and the body to protect me, used an accident-proof, and incidentally bullet-proof, window I discovered, but forgot in the discovery of the fuel battery." The grim smile of tight lips persisted. He turned to the slow lane, maneuvered over to the right, and cut into the circle.

"Wait—where are you going?" demanded Donovan, his face relaxing rapidly.

"Back, brethren, back, where they can't try again. They'll use a truck next time, and I can't guarantee the resistance of the machine to that."

"That's where they'll look for you," Donovan stated sharply. "Go back to the next circle at your highest speed, now you've started, then turn, and run back on your course a second time toward

Quincy. We'll do the business we started on, and they'll be looking for us somewhere else."

Kennedy nodded, and the gray car swerved over to the Boston lanes, turned quickly to the high-speed lanes as they passed sixty miles an hour, and mounted till they were whining down the road, the motor's song a fault scream, a curious blurbing sound of air gurgling like a brook over rocks as it passed the car. Somewhere behind, and rapidly falling farther behind, a police siren warned them to slower speed as a police speedster tried vainly to reach them. The wind howled protest, and the speedometer quivered at one hundred and fifty.

They slowed rapidly, swerved into the low-speed lane, across to the circle, and turned back again on the overpass to the Quincy lanes.

"It seems Gardner has other systems as well," said Kennedy dryly.

"What will they try next?" asked Donovan wonderingly.

"Well, we don't sleep in this bullet-proof car, and even it isn't proof against a good big truck. Also, if we take that plane up they can feel sure it

isn't coated with armor plate as this machine was—by accident."

"If I were you two," said Wainwright unhappily, "I'd take that plane and go so high in the sky I couldn't be seen, and I'd move out of this town, and get lost. I'd lots rather have my life and the several millions you already have than to lose the one, and have the other mean nothing to me.

"Anyway, you can leave me here with Thompson. I'll take a train back. They might try again."

Half an hour later, Donovan's plane had been relicensed, and with the necessary papers, Kennedy and his friend started back to Boston. But they circled out, swung well to one side, taking back roads and finally coming into the city from the direction of Newton. They used Donovan's thorough knowledge of the infinitely complex network of cow-path engineered streets, and twisted through the hundreds of one-way streets toward the airfield. It was midnight when they arrived, and Donovan agreed with Wainwright that Boston was not a healthy city for them.

They displayed their papers, the plane was wheeled out of the hangar, and the Field Manager gave them the take-off signal. Instantly the propeller spun into whirring, vibrationless life; the plane leaped across the ground with a startling suddenness and pulled forward with utter quietness. Its landing and running lights flared brilliantly

on the ground for a moment, then almost before they knew it, the high-lift stratosphere plane was winging its way steeply aloft, the tremendously powerful motor dragging it upward.

"Great guns, Bruce, this motor pulls like a rubber band. It's so smooth you can't feel it, there's no sensation of moving, only a steady pull—and this one thousand horsepower of yours is way off. It must be three thousand. I have it cut way down, and she's still ready to pull the bolts out." Donovan was ecstatic.

"One thousand electric horse is 'something else.' A gasoline or oil engine gives one thousand horsepower, when the cylinder is exploding, and runs on momentum for a while. This gives one thousand horse every instant."

"Another plane taking off," said Donovan, smiling. "Let's give them a race up."

As a matter of fact, the instant the two men had appeared on the field and started for their plane, a crew of five men started for a powerful two-place racer. The racer was rushed out into the open, two men took their places in the cockpit, and one at each wing-tip, while the fifth quickly wheeled an electric starting truck into place at the nose. The powerful electric motor whined as the ratchet gripped the propeller hub, and the engine spun slowly. It was a gasoline plane, faster at the lower levels without supercharger, faster at higher levels, for it was lighter. The engine caught, barked into roaring life, and the starting truck was hauled away.

But here the plane lost out. For five full minutes it rested, its wheels chocked, its wings held while the engine warmed up. The electric plane leaped into the air gracefully while they waited, and the lights shrank into the skies.

The gasoline plane was designed for a ceiling of but thirty thousand feet, and was therefore far faster than the stratosphere plane, with its enormously larger wings and far greater pitch. The gasoline plane rose from the field

with a roaring engine barking occasionally in misfires, the exhaust darting back in red flames. It climbed steeply and swiftly, the slots in its wings open, as it nearly stood on its tail and let the motor drag it up by the nose.

Two men in the plane: one a pilot, skilled in the daredevil stunts of pursuit and fighting, the other a little sleek-haired man with cold, black eyes, smoking a cigarette he could not taste in the backward sweep of a biting windstream. Nestled against his shoulder was a curiously heavy rifle, with wide flanges along its barrel, and a drum-

magazine built into the heavy stock. A broad plate on the stock distributed the shock of the kick across the entire right shoulder. It spit viciously a few times in trial bursts, the sound drowned in the roar of the great X-type motor, its twenty-four cylinders barking rhythmically now.

It climbed swiftly, far more swiftly than the heavy stratosphere plane with its weighty, air-tight cabin built for five. Twelve hundred horsepower flowed out the propeller shaft and fought the rapidly chilling air. The pilot waved a hand, and the gunner behind slipped a headset over his ears.

"We'll catch 'em, Mug. They got somethin' new, I hear. A Diesel doesn't take the warmin' these gas buggies do, but even they can't take off cold, the way that bird did. I heard somebody say they had a thousan'-horse motor. We got twelve hundred, and a lot lighter plane. They've got a couple minutes start—and twenty thousand feet to go before they hit our ceilin'."

The gunner nodded. He didn't realize, as the pilot did but did not mention, that the stratosphere plane would gain rapidly in climbing speed after they left the denser air below twenty thousand, while the power of the gasoline plane would be rapidly sapped by the scant air, and the wings, designed for lower altitude than the larger machine, would begin to lose the advantages they held now.

The gas plane rose swiftly, and above the electric plane drew rapidly nearer. The gravitational altimeter was rising rapidly. Presently the gunner tried a few rounds in the direction of the plane. The tremendously high-velocity bullets, moving more than two miles a second and little larger than a thick pencil lead, moved upward and sang swiftly into the night.

Donovan was concentrating all his attention on his instruments now, while Kennedy read the indicators that told the conditions within the cabin. The soft, gentle snore of the electric motor, the louder scream of the twirling propeller, alone sounded as they climbed.

"Batteries working perfectly, Bruce," said Donovan briefly.

"How's that other plane?" asked Kennedy. "The air and temperature normal?"

"Gaining on us. Low-altitude plane, I guess, and gets better speed than we can hope to."

"Try more—oww! What the—" Kennedy cried in pain and surprise and looked at his leg. A trickle of blood oozed from a tiny puncture

in his calf, the muscle was exceedingly sore, and a second tiny puncture on the other side showed something had passed completely through the flesh.

Quickly Ms eyes sought the metal wall, and he saw two minute holes in the sheet duraluminum. "Bob, I've been shot! That plane is shooting at us! A pencil-bullet went through my leg clean, and passed right through the plane!

Use all the power!"

"What!" Donovan looked quickly down and saw the sudden intermittent flashes from the machine below. "Right—machine gun. I'm afraid of this power here—but I'll have to!" He pulled the rheostat control back smoothly, and the gentle hum of the motor mounted swiftly to a driving, tearing whine as the controller reached its limit. The heavy plane tugged forward with a sudden acceleration, and the entire fabric of the all-metal plane creaked under the strain of the great power.

"A thousand electric isn't a thousand gas, or Diesel either, Brace. She's pulling," said Donovan. Bruce Kennedy was busy already with an iodine solution bottle and a bandage. The minute punctures caused by the clean, swift-moving bullet had closed up already, and the bleeding had stopped.

The plane below was falling behind now, as the larger plane pulled viciously under the great motor. The speed was still rising, though the power from the batteries remained the same; the hum rose to a scream as the motor ran swifter.

Kennedy listened critically. "Bob-that propeller! It's all right for one thousand gas or internal combustion power, but remember an electric motor can, like a man or a steam engine, dig in its toes and heave, so to speak. A gas engine, like any explosive power, works the first time or not at all. That thing's going too fast. One can exert enormous power for a few seconds—the other has no such reserve."

It was, and Donovan cut the power slightly; still the pitch rose, and more rapidly now. Suddenly it seemed to shoot swiftly up the scale; the shriek of the propeller became a terrible roar, an ear-shattering, threshing blast.

"Shut it off!" roared Kennedy—uselessly, for his voice could not be heard. Donovan had already done it, and yet the mad propeller continued to shriek.

With the suddenness of a brake, the thing stopped whirling madly, and an instant later the white-faced Donovan threw on the motor again.

"Too much—reached the speed of sound, and simply went faster than the air could flow in. The plane below gained a sort of carita-tion."

The dark silhouette of the other machine stood out nearer against the lights of the city. Pulling with all the power the metal blades could handle, the other machine still gained.

"Fast—and light. About twenty-five- to thirty-five-thousand ceiling. We're at fifteen thousand now; when we reach twenty we should be able to pull up," said Donovan.

Kennedy merely reached over and pulled the master light switch. The lights of the machine died, and a starry sky, moonless, alone shed light on them. "Let's not advertise. The bullets have no ceiling."

The plane shot on, riding higher, while the dark mass below circled more blindly now. There were occasional very high clouds, and it was hard for the pilot to keep track now.

His hand waved again, and the gunner took up his headset. "Fool! You hit and warned them. I can't follow them easily now till we get above 'em, and can see 'em against the city lights. They can spot us, though."

"Aww—maybe I punctured their tanks. If they lose the engine juice they won't climb high. Anyway, I mighta got one of 'em."

They continued silently fighting for altitude, while the pilot wondered vainly what had happened. For a moment the heavy plane had pulled away from him readily, then there came a terrific roar such as he had heard only once before, when somebody put gasoline in the fuel oil tanks of a Diesel plane, and the engine exploded. Yet after a moment the roar stopped, and the machine continued unharmed, faster than before, but still slower than he climbed.

Now he was following blindly, for only occasionally could he make out the form against the skies.

He looked anxiously at the luminous altimeter dial. Eighteen thousand. The heaters in their suits and gloves were on now, and the engine was losing power. A dribble of oxygen kept his head clearer. He had to catch them soon—or not at all. He had never seen such a plane as this. It took off cold, flew perfectly, and without trouble. The high-altitude propeller handicapped its power here, and the high-altitude wings didn't help. Yet the power of the other had not diminished a whit. The engine of even the stratosphere plane should have lost somewhat. But it hadn't.

And the noise! What had that been?

Suddenly he saw the plane again, five hundred feet above and climbing easily, faster now. The pilot saw he would never gain now. The plane was entering its own element, and he was approaching his ceiling. The altimeter quivered at twenty-one thousand.

His hand went up three times quickly. The plane vibrated sharply, and the wings stood out suddenly in reddish light. The roar of the engine drowned the crackle of the machine gun, but he knew it was working. The dark shape above did not falter, and through the headset he heard a thin crackle of curses. The light on the wings nickered steadily for a long time, and the pilot himself cursed softly and started down. The fool gunner had gotten himself thoroughly drunk on oxygen. His first trip so high, and when he should have used a mere trickle to steady his nerves and muscles, he was using it straight. No normal man would have held the fire steady, for no man could hold down the barrel of that viciously kicking little rifle.

He glanced around, and saw the barrel of the gun pointing and wavering widely. It walked up steadily as the thing kicked, and the gunner jerked it down savagely, then it walked up again—.

The pilot cursed softly to himself, cut the engine, and circled slowly toward lower levels. The fool!

CHAPTER VIII

"It looks like they gave up, Bruce," said Donovan, as he watched the plane circling downward. Their machine steadily wound itself higher and higher, above the clouds, out and up till the stars began to shine in steady flame, and the twinkling of the atmosphere was cut off. There was scarcely any atmosphere at these altitudes.

"Yes, that plane had to go back, but that doesn't mean that friend Gardner will give up. We're out of his reach now, but we have to come down again, remember. And he will probably be looking for us."

"How about coming down up at Happy Days? The island is well out into that

lonely little lake up in Maine, and it would be some time before even gangspies could locate us up there. The nearest town is Makeaho, and they don't even have a telephone in the town."

"Good idea. Stay way up, and they won't be able to see us. We can come down almost straight, and land on the island itself," agreed

Kennedy. "The big field has a few stones, but I think this boat can land safely. At sea level the landing speed is most remarkably low."

The ship was still climbing steadily, and was nearly up to the fifty-thousand-foot level. Donovan was now keenly watching the instruments and Kennedy with equal fascination. "Still going strong, Bob," he said softly.

"I turned on a little more power, cut out some resistance. The propeller seems to take a heavier pull in thinner air. The batteries haven't shown signs of weakening yet."

But finally, at an altitude of seventy thousand feet the batteries did show they could work no further.

The plane skimmed along northward now, and the speed mounted swiftly to well over three hundred and fifty miles an hour. In far less time than they had spent climbing, they were over the spot on which they had intended to land, and the machine began circling noiselessly down.

With slight bumps it came to rest under a row of giant trees at the lower end of a slightly sloping field. Years before, some frugal, hardworking New Englander had pulled most of the rocks from this field, but now the winter frosts were shoving them up again, and the surface was bumpy. The great, soft airwheels rode them easily through, and they stopped safely. A low hum of the motor, the rustle of air, and the machine wheeled steadily about the locked left wheel and came into position at the proper place.

"We can move right into the cabin," said Donovan in a low voice. "I was up here in July for a while, and was called away in a hurry. The boat's in the shed, below, and there's food stored in the larders for several weeks. Remember those trick storehouses we built?" He smiled faintly, stretching stiff legs on the grassy meadow land. "Come in handy; even the bread will be fresh."

"Yes, old hermit, you may think you can isolate yourself in this lonely backwoods place, but all the same, said telegraph at Makeaho is going to be used by the Fuel Battery Company, much as we disapprove of the fact. We've got to tell Montgomery where we are."

"I think we'd best give up this whole game till we settle with Gardner somehow, sometime," said Donovan mournfully. "I think we ought to fight back the way he fights us."

Donovan produced a key as he spoke and unlocked the door of the cabin. An oil lamp stood on the table, its reservoir still full. A moment later the little cabin was brightly lit as the mantle glowed white.

Kennedy seemed to be thinking seriously. Finally he spoke again. "Bob, Montgomery's got your power of attorney, and he knows in general what our plans are. With the boat we can call down shore at Makeaho easily enough, but they know us there. That plane is conspicuous. Let's get a good secondhand Ford and park it somewhere near the lake shore. We can call at some town where we aren't known, reaching the car by the boat. Then at least they'll have some

trouble finding us, and in the meantime I think I can prepare a warm welcome."

"Can Montgomery handle the stuff, and get the things you need-the right machines?"

"He merely has to tell certain companies that already have plans to go ahead and make the machines. I have already got plants to give me estimates on the cost of making the machines and have left plans with them."

"We'll do it," nodded Donovan. "Only one thing I don't like. I have plenty of money to get that Ford, all right. Too much. I'm still carrying sixty-five thousand I got and didn't have time to reinvest."

"Stick it in the flour barrel, and come to sleep," Kennedy advised with a grin.

CHAPTER IX

Gardner was looking angrily at the sleek, black-haired Cazoni, and Cazoni looked surly and uncomfortable.

"And so first he runs away from you in a bullet-proof automobile, and then escapes in a bullet-proof airplane?" Gardner smiled, a grimace. "I've heard of bullet-proof automobiles, and bullet-proof glass, but no bullet-proof glass I ever heard of failed to show the cracks! And I never heard of a bullet-proof airplane. You know as well as I that an airplane, to be proof against even the bullets of a revolver, would be so heavy with its metal plates that it couldn't lift off. And to be proof against the bullets from that little machine rifle, it would need one-inch armor plate, as you know perfectly well. No plane could fly with that. Did you use the same gun on the automobile?"

"Naw, they used an old Tommy. You can't silence a Weemar gun. Too damn many cars can make one hundred and thirty now to get away, so we used a silenced Tommy."

"Well, they might armor a car against Tommy bullets, but you

know and I know they simply shot all over the lot as usual. You said those windows didn't even crack!"

"Chief, I shot some myself, and I know I hit that window, but it didn't phase it. That bird's clever, an' I'll bet he's got somethin' new.

"An' I told you Gunner was the best man we could get in Boston. That damn town never was no good, they haven't any organization there. Just a lot o' squabblin' kid gangs. But Gunner is there because he ain't feelin' happy in Chi. He's good, but the damn nut don't know nothin' about goin' up. Charlie flew him, and he said Gunner got drunk. He said he got drunk on ox-eye or somethin' like that, an' I asked him what that was and he says air. How the hell can a guy get drunk on air?

"Anyway, Charlie said he was so plastered he couldn't see straight, but when he came down he was cold sober and didn't have any breath at all. He swore up an' down he hadn't had a drop, only Charlie says he got ahold of some of this ox-eye somewhere."

Gardner cursed softly. "Oxygen, Cazoni, oxygen. It is in air, and you can get drunker on oxygen than on a gallon of white mule. But you sober right away, and you have no breath, of course.

"So he got drunk. No wonder they didn't hit that plane. Well, trace him, Cazoni. And here's a hint. They've gotten scared and left Boston, their business is in the hands of that lawyer they visited, and they'll have to communicate. See if you can't grease a few palms and find out where they are."

Three days later Kennedy was busily working with a peculiar batch of apparatus. There were two large tubs, one filled with a peculiar, clear viscid fluid, a second with a slightly muddied waterlike liquid. Kennedy was drawing a long thin copper ribbon through first one tub and then through the second, moving it slowly and steadily, and finally draping it artistically over the limbs of a young oak nearby. The clear, clean copper came out of its bath with a slightly greenish, glassy look, and rapidly dried on the tree. The ribbons, each about one hundred feet long, when dry were laid on the grass of the meadow.

He worked all morning at this, and finally had several thousand feet of half-inch-wide ribbons of copper, coated with a thin, exceedingly tough insulating layer of a special cellulose closely allied to rayon and cellophane. He stopped when his copper was exhausted and went into the cabin, returning with a powerful pair of glasses,

with which he inspected the lake. Then he went in, and presently smoke began to rise from the chimney. By the time Donovan came up in the small motorboat and began unloading the materials he had brought, Kennedy leaned out of the door with a cheerful "Come an' get us!"

"I have got the things you wanted, Brace," returned Donovan, "but I'll be hanged if I see what connection two enameled tubs, five thousand feet of copper ribbon, fifty pounds of absorbent cotton, a complicated nonperm alloy tube, and the various other things have."

"Ah, you got the three tubes?"

"I did. Will you kindly dissolve the mystery as I dissolve this fodder?"

"Not till I'm sure of myself. Did you also get a package by express?"

"One package, express. Weight three hundred pounds, I'll have you know. You son of a gun, you said there was a 'little box for you.' How did you expect me to get that into the boat from the car?"

"That was somethin' I hadn't been able to figure out. How did you do it? I was darned interested to see if you could figure out a way," said Kennedy, looking up.

"Why you— Well, anyway, I used the tow rope, and the car for power, with a handy tree as the derrick mast."

"Well, that's fine. And now, Bob, I hope we have given them enough clues."

"Enough clues—enough for what?" demanded Donovan in surprise. ,,

"To find us, of course. Did you send that last message to Monty?"

"Yes, and now please explain." •

"I promised I would. And thanks for your faith in me, Bob. That was in a code Monty can get, but no one else can, because the thing is based on a sentence that he memorized, and it is not written anywhere. I told him to lift the secrecy somewhat, just give hints.

"We can't fight Gardner openly." Kennedy's face took on a cold grimness. "And so we are fighting the murdering crook in his own way. I have some more work, and you're going to help. Then you'll see what I mean. The clues I mentioned Gardner could follow back to us. I'm afraid we can't hide, and do any work."

"So we have to leave again?"

"No, that's just the point, Bob, we aren't leaving." Kennedy

looked long and steadily at his friend. A slow smile of understanding came over Donovan's face.

"And now, perhaps, I see the connection between copper ribbons and the magnetically inactive nonperm tubes," he said at last, softly.

CHAPTER X

The heavy, pounding beat of the powerful engine shook the plane, even though the sound of it had been muffled and hushed to practical silence. Beside it two much smaller planes flew. It was dusk now, and darkening rapidly on the earth, far below, but here in the high strata, the sun still shone.

"You—you're sure they have no weapons?" demanded Gardner.

"Hell, no. They'd a used 'em before if they did," grunted Cazoni. Cazoni was unhappy. He was airsick. "An' they didn't get any in either. They got a lot o' junk, some stuff on their machine, I guess. Lotta cotton an' some chemicals, an' a big box full of somethin' heavy, but it came from the Framingham Iron and Steel Company, and it wasn't a gun. That came yesterday morning, and nothin' came since."

"Are you sure they haven't left?"

"Their car's still there, an' the boat. They were there this morning."

Gardner smiled to himself. "Cazoni, you certainly have done a fine job. And they have helped a lot. I'll give you this paper, which Kennedy must sign. If he doesn't—why—eh—leave this other one as I suggested."

"Wanta burn the plane an' so forth or not?"

"Why—I'm afraid it wouldn't have anything to burn. You see it doesn't use fuel, and it's an all-metal structure."

"O.K." Cazoni pocketed the two papers and listened miserably to the pounding and creaking of the plane, and he felt miserable as it heaved in the air pockets.

The coast fell rapidly behind, and the sun set below them. Maine lay beneath them now, and under the bright light of a full moon a silvery dot, like a luminous comma with a slight defect, appeared on the dark surface, sprinkled here and there with lights. A tiny clump of lights on one side of the luminous comma marked Makeaho; a spot of light on the black defect in the shining surface marked Happy Days camp. Tonight, Gardner thought, it would not be so happy for

him. He felt he would like this Happy Days himself, but thought a good Indian name much better. The tiny log cabin must be replaced by a real house that he could bring his friends to—

The light below winked out.

"Gone to bed, I guess," said Cazoni.

But they had not gone to bed. They had gone up. Since darkness had begun to fall, Kennedy and Donovan had been taking turns at a small amplifier set. A huge inverted cone of canvas reached upward, and at its bottom was a tiny thing no larger than a wrist watch. But it had heard the peculiar shriek of the air about the airplanes while they were still many miles off. Since then the two men had been very busy. They left the cabin now, and went down to the plane, changed since it landed, for now it was coated with a dull, lusterless black, a black like an eggshell dipped in india ink.

Noiselessly the plane rose into the air, rising almost instantly as the tremendous power whirled the propeller, a new, larger propeller, and the wide wings gripped the dense surface air. A faint hum carried the plane swiftly up at a steep angle. At a thousand feet it leveled off and darted across a narrow neck of water to the mainland's black background. It continued to climb.

"Think they saw us?" asked Kennedy quietly, braced behind a thing that resembled a long black telescope, mounted rigidly into the plane's structure, poking its nose through a hole in the roof of the machine.

"No can tell," replied Donovan. "They did," he added a minute later. "They're diving."

The plane pulled sharply, and the fabric creaked as Donovan threw an overload on the super-powerful motor. The great propeller bit and tugged. The machine rose steeply.

A black form came sharply down beside them, and something like a flickering red lightning snapped from its side. Kennedy swung to a second telescopelike machine that pointed downward. Suddenly it rattled viciously on its heavy frame, and a shrill whine came from it.

A terrible rending crack, a stifled scream of agony from the black shadow, and two black shadows appeared, each smaller than the first. Something tumbled from the one, and an instant later a parachute glistened in the moonlight.

"My God! They've got a gun!" gasped Gardner.

"I don't think so. No gun shoots without some light, and it ain't a gun that cuts a machine in two," said Cazoni.

"Let's go home," wailed Gardner. The plane turned upward and rapidly started back to the south under his orders. The second small plane was flashing down at the climbing black thing, barely visible now against the forest. He lost it for a time, and when he found it again, it was above him; it crossed the moon. He himself was a shining, glistening thing now in the trim plane. His machine gunner stuttered out a few rounds of ammunition. Then something screamed through the night, a glistening sheet that moved across and swept toward their plane. Like a shimmering knife of silver light it passed resistlessly through one wing, angled forward and pelted on the heavy motor. With a roar the motor blew up and fell from the plane. The machine twisted and fell over as the wing fell off, hanging by a few guy wires.

Two shining silken umbrellas fell free.

The black machine of death swept south in swift pursuit of the fleeing plane.

Rapidly it overtook it, and as they came nearer, a machine gun chattered from the larger transport.

"The black paint's working, Bob," said Kennedy calmly. "They can't see us well enough to shoot straight in this moonlight." He pulled down a lever and aimed one of the telescope tubes toward the plane slightly ahead and above. A meter flopped over on the scale before him, and the mechanism, the whole plane, jarred under a heavy hammering. A silvery sleet flew out and caught the larger plane just ahead of the tail and ran its length, finally tearing out the motor. The fuel tanks burst into flame, and with a peculiar puff the plane flew into a thousand blazing parts.

"That's the end, I think," said Kennedy. Then he began to tremble, and his face went white. "God forgive me, there were men on that plane," he muttered.

CHAPTER XI

M. C. GARDNER DEAD IN AIR CRASH

FINANCIAL HEAD KILLED WITH COMPANIONS

AS PLANE MYSTERIOUSLY EXPLODES

Makeaho, Me. Late last night the people of this town were startled by the appearance of a battered, scratched man in an aviation suit, who told the itory of Mr. Chas. Gardner's death. Gardner, in a five-passenger gasoline-

powered plane, was flying north on business, when for some undiscovered reason his large plane exploded in midair, dropping burning parts at the two smaller, speedier planes accompanying him. The man who brought the news was James K. Terrence, pilot of one of the smaller planes, which was destroyed by the explosion of the greater. Terrence escaped by parachute. Several others also escaped from the smaller planes, but none were able to live through the explosion of the "flying office," as Gardner entitled his large plane.

Kennedy looked up at Donovan, and rested back in his comfortable chair. They were in Boston now, for they felt the danger was gone. "Convenient account, wasn't it?"

"Very," agreed Donovan. "What are we going to do, rush the fuel battery plant now?"

Kennedy looked very thoughtful as he answered slowly, "No, Bob, I don't think so.

"Do you realize what would happen if we did? If even a substantial rumor got out, American Power, all the big oils, the big motor stocks too, would be pressed down to nothing. How many millions of people would be ruined by that? Would it be worth it to the world?"

Donovan looked at his friend steadily for some moments. "But— how can you help it? Unless you suppress the invention?"

"I own the patents outright. Can't I lease the household power-battery rights to the American Power Company, let them scrap their plant gradually as they build and sell these batteries? Their investments in power-generating equipment will immediately be written off as worthless—but even the big traders will see that the power-battery rights they have are fully as valuable. The stock will fluctuate madly— and gradually reach a steady valuation.

"The oil companies can buy the rights to manufacture smaller batteries, for automobiles, airplanes, trains perhaps. It will have to be worked out, but, Donovan, think of the misery it would inflict on the world to sell those things through a brand new company. Would it be fair?"

"It would not. I agree absolutely.

"Now there's just one more question I want to ask. What was the thing you cut up those planes with? I thought you were making a sort of machine gun."

Kennedy chuckled. "It was, Bob, it was. It was simply a long solenoid that threw little steel bullets, but it didn't use powder, it used

electric power. Remember, there was practically no mechanical apparatus about it, only electrical contacts made by the bullet itself, as it was drawn through the tube by the magnetic force. The lack of mechanism meant it could fire as fast as bullets could go through the barrel; no waiting while the thing was cocked and the used cartridge removed. When the bullet reached the muzzle, it automatically turned on the current that started the next one. The bullet was then traveling about twelve thousand feet a second. The result was that the machine gun shot something like thirty thousand times a minute. It acted like a huge bandsaw, each bullet being a tooth that moved better than two miles a second.

"Any wonder it cut through the ships, motor and all?" Kennedy smiled and rose from his chair. "And now, Bob, I think we'd better see Montgomery and tell the news." He smiled dryly. "I'll do my talking to the engineers of the companies. Financial geniuses seem to be disbelieving folk."

We were acting in true self-defense. It was they or we. But it is a sad load to carry—the loss of a human life.