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THE

THINKING MACHINE

Being a True and Complete Statement of Several Intricate Mysteries which came under the Observation of Professor Augustus S. F. X. Van Dusen, PH.D., LL.D., F.R.S., M.D., etc.

BY

JACQUES FUTRELLE

Author of "The Chase of The Golden Plate," "The Haunted Bell," etc., etc.

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THE KINNEYS

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To

those two persons who made The Thinking Machine possible

J. L. E.,

who opened the way, and

L. M. F.,

who guided, advised and encouraged the hand that labored,
these tales are gratefully dedicated.

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THE PROBLEM OF CELL 13

I

PRACTICALLY all those letters remaining in the alphabet after Augustus S. F. X. Van Dusen was named were afterward acquired by that gentleman in the course of a brilliant scientific career, and, being honorably acquired, were tacked on to the other end. His name, therefore, taken with all that belonged to it, was a wonderfully imposing structure. He was a Ph.D., an LL.D., an F.R.S., an M.D., and an M.D.S. He was also some other things—just what he himself couldn't say—through recognition of his ability by various foreign educational and scientific institutions.

In appearance he was no less striking than in nomenclature. He was slender with the droop of the student in his thin shoulders and the pallor of a close, sedentary life on his clean-shaven face. His eyes wore a perpetual, forbidding squint—the squint of a man who studies little things—and when they could be seen at all through his thick spectacles, were mere slits of watery blue. But above his eyes was his most striking feature. This was a tall, broad brow, almost abnormal in height and width,

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crowned by a heavy shock of bushy, yellow hair. All these things conspired to give him a peculiar, almost grotesque, personality.

Professor Van Dusen was remotely German. For generations his ancestors had been noted in the sciences; he was the logical result, the master mind. First and above all he was a logician. At least thirty-five years of the half-century or so of his existence had been devoted exclusively to proving that two and two always equal four, except in unusual cases, where they equal three or five, as the case may be. He stood broadly on the general proposition that all things that start must go somewhere, and was able to bring the concentrated mental force of his forefathers to bear on a given problem. Incidentally it may be remarked that Professor Van Dusen wore a No. 8 hat.

The world at large had heard vaguely of Professor Van Dusen as The Thinking Machine. It was a newspaper catch-phrase applied to him at the time of a remarkable exhibition at chess; he had demonstrated then that a stranger to the game might, by the force of inevitable logic, defeat a champion who had devoted a lifetime to its study. The Thinking Machine! Perhaps that more nearly described him than all his honorary initials, for he spent week after week, month after month, in the seclusion of his small laboratory from which had gone forth thoughts that staggered scientific associates and deeply stirred the world at large.

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It was only occasionally that The Thinking Machine had visitors, and these were usually men who, themselves high in the sciences, dropped in to argue a point and perhaps convince themselves. Two of these men, Dr. Charles Ransome and Alfred Fielding, called one evening to discuss some theory which is not of consequence here.

"Such a thing is impossible," declared Dr. Ransome emphatically, in the course of the conversation.

"Nothing is impossible," declared The Thinking Machine with equal emphasis. He always spoke petulantly. "The mind is master of all things. When science fully recognizes that fact a great advance will have been made."

"How about the airship?" asked Dr. Ransome.

"That's not impossible at all," asserted The Thinking Machine. "It will be invented some time. I'd do it myself, but I'm busy."

Dr. Ransome laughed tolerantly.

"I've heard you say such things before," he said. "But they mean nothing. Mind may be master of matter, but it hasn't yet found a way to apply itself. There are some things that can't be *thought* out of existence, or rather which would not yield to any amount of thinking."

"What, for instance?" demanded The Thinking Machine.

Dr. Ransome was thoughtful for a moment as he smoked.

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"Well, say prison walls," he replied. "No man can *think* himself out of a cell. If he could, there would be no prisoners."

"A man can so apply his brain and ingenuity that he can leave a cell, which is the same thing," snapped The Thinking Machine.

Dr. Ransome was slightly amused.

"Let's suppose a case," he said, after a moment. "Take a cell where prisoners under sentence of death are confined—men who are desperate and, maddened by fear, would take any chance to escape—suppose you were locked in such a cell. Could you escape?"

"Certainly," declared The Thinking Machine.

"Of course," said Mr. Fielding, who entered the conversation for the first time, "you might wreck the cell with an explosive—but inside, a prisoner, you couldn't have that."

"There would be nothing of that kind," said The Thinking Machine. "You might treat me precisely as you treated prisoners under sentence of death, and I would leave the cell."

"Not unless you entered it with tools prepared to get out," said Dr. Ransome.

The Thinking Machine was visibly annoyed and his blue eyes snapped.

"Lock me in any cell in any prison anywhere at any time, wearing only what is necessary, and I'll escape in a week," he declared, sharply.

Dr. Ransome sat up straight in the chair, interested. Mr. Fielding lighted a new cigar.

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"And what is the third request?" asked Dr. Ransome.

"I should like to have my shoes polished."

Again the astonished glances were exchanged. This last request was the height of absurdity, so they agreed to it. These things all being attended to, The Thinking Machine was led back into the prison from which he had undertaken to escape.

"Here is Cell 13," said the warden, stopping three doors down the steel corridor. "This is where we keep condemned murderers. No one can leave it without my permission; and no one in it can communicate with the outside. I'll stake my reputation on that. It's only three doors back of my office and I can readily hear any unusual noise."

"Will this cell do, gentlemen?" asked The Thinking Machine. There was a touch of irony in his voice.

"Admirably," was the reply.

The heavy steel door was thrown open, there was a great scurrying and scampering of tiny feet, and The Thinking Machine passed into the gloom of the cell. Then the door was closed and double locked by the warden.

"What is that noise in there?" asked Dr. Ransome, through the bars.

"Rats—dozens of them," replied The Thinking Machine, tersely.

The three men, with final good-nights, were turning away when The Thinking Machine called:

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"What time is it exactly, warden?"

"Eleven seventeen," replied the warden.

"Thanks. I will join you gentlemen in your office at half-past eight o'clock one week from to-night," said The Thinking Machine.

"And if you do not?"

"There is no 'if' about it."

II

CHISHOLM PRISON was a great, spreading structure of granite, four stories in all, which stood in the center of acres of open space. It was surrounded by a wall of solid masonry eighteen feet high, and so smoothly finished inside and out as to offer no foothold to a climber, no matter how expert. Atop of this fence, as a further precaution, was a five-foot fence of steel rods, each terminating in a keen point. This fence in itself marked an absolute deadline between freedom and imprisonment, for, even if a man escaped from his cell, it would seem impossible for him to pass the wall.

The yard, which on all sides of the prison building was twenty-five feet wide, that being the distance from the building to the wall, was by day an exercise ground for those prisoners to whom was granted the boon of occasional semi-liberty. But that was not for those in Cell 13. At all times of the day there were armed guards in the yard, four of them, one patrolling each side of the prison building.

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By night the yard was almost as brilliantly lighted as by day. On each of the four sides was a great arc light which rose above the prison wall and gave to the guards a clear sight. The lights, too, brightly illuminated the spiked top of the wall. The wires which fed the arc lights ran up the side of the prison building on insulators and from the top story led out to the poles supporting the arc lights.

All these things were seen and comprehended by The Thinking Machine, who was only enabled to see out his closely barred cell window by standing on his bed. This was on the morning following his incarceration. He gathered, too, that the river lay over there beyond the wall somewhere, because he heard faintly the pulsation of a motor boat and high up in the air saw a river bird. From that same direction came the shouts of boys at play and the occasional crack of a batted ball. He knew then that between the prison wall and the river was an open space, a playground.

Chisholm Prison was regarded as absolutely safe. No man had ever escaped from it. The Thinking Machine, from his perch on the bed, seeing what he saw, could readily understand why. The walls of the cell, though built he judged twenty years before, were perfectly solid, and the window bars of new iron had not a shadow of rust on them. The window itself, even with the bars out, would be a difficult mode of egress because it was small.

Yet, seeing these things, The Thinking Machine

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was not discouraged. Instead, he thoughtfully squinted at the great arc light—there was bright sunlight now—and traced with his eyes the wire which led from it to the building. That electric wire, he reasoned, must come down the side of the building not a great distance from his cell. That might be worth knowing.

Cell 13 was on the same floor with the offices of the prison—that is, not in the basement, nor yet upstairs. There were only four steps up to the office floor, therefore the level of the floor must be only three or four feet above the ground. He couldn't see the ground directly beneath his window, but he could see it further out toward the wall. It would be an easy drop from the window. Well and good.

Then The Thinking Machine fell to remembering how he had come to the cell. First, there was the outside guard's booth, a part of the wall. There were two heavily barred gates there, both of steel. At this gate was one man always on guard. He admitted persons to the prison after much clanking of keys and locks, and let them out when ordered to do so. The warden's office was in the prison building, and in order to reach that official from the prison yard one had to pass a gate of solid steel with only a peep-hole in it. Then coming from that inner office to Cell 13, where he was now, one must pass a heavy wooden door and two steel doors into the corridors of the prison; and always there was the double-locked door of Cell 13 to reckon with.

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There were then, The Thinking Machine recalled, seven doors to be overcome before one could pass from Cell 13 into the outer world, a free man. But against this was the fact that he was rarely interrupted. A jailer appeared at his cell door at six in the morning with a breakfast of prison fare; he would come again at noon, and again at six in the afternoon. At nine o'clock at night would come the inspection tour. That would be all.

"It's admirably arranged, this prison system," was the mental tribute paid by The Thinking Machine. "I'll have to study it a little when I get out. I had no idea there was such great care exercised in the prisons."

There was nothing, positively nothing, in his cell, except his iron bed, so firmly put together that no man could tear it to pieces save with sledges or a file. He had neither of these. There was not even a chair, or a small table, or a bit of tin or crockery. Nothing! The jailer stood by when he ate, then took away the wooden spoon and bowl which he had used.

One by one these things sank into the brain of The Thinking Machine. When the last possibility had been considered he began an examination of his cell. From the roof, down the walls on all sides, he examined the stones and the cement between them. He stamped over the floor carefully time after time, but it was cement, perfectly solid. After the examination he sat on the edge of the iron bed and was lost

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in thought for a long time. For Professor Augustus S. F. X. Van Dusen, The Thinking Machine, had something to think about.

He was disturbed by a rat, which ran across his foot, then scampered away into a dark corner of the cell, frightened at its own daring. After awhile The Thinking Machine, squinting steadily into the darkness of the corner where the rat had gone, was able to make out in the gloom many little beady eyes staring at him. He counted six pair, and there were perhaps others; he didn't see very well.

Then The Thinking Machine, from his seat on the bed, noticed for the first time the bottom of his cell door. There was an opening there of two inches between the steel bar and the floor. Still looking steadily at this opening, The Thinking Machine backed suddenly into the corner where he had seen the beady eyes. There was a great scampering of tiny feet, several squeaks of frightened rodents, and then silence.

None of the rats had gone out the door, yet there were none in the cell. Therefore there must be another way out of the cell, however small. The Thinking Machine, on hands and knees, started a search for this spot, feeling in the darkness with his long, slender fingers.

At last his search was rewarded. He came upon a small opening in the floor, level with the cement. It was perfectly round and somewhat larger than a silver dollar. This was the way the rats had

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gone. He put his fingers deep into the opening; it seemed to be a disused drainage pipe and was dry and dusty.

Having satisfied himself on this point, he sat on the bed again for an hour, then made another inspection of his surroundings through the small cell window. One of the outside guards stood directly opposite, beside the wall, and happened to be looking at the window of Cell 13 when the head of The Thinking Machine appeared. But the scientist didn't notice the guard.

Noon came and the jailer appeared with the prison dinner of repulsively plain food. At home The Thinking Machine merely ate to live; here he took what was offered without comment. Occasionally he spoke to the jailer who stood outside the door watching him.

"Any improvements made here in the last few years?" he asked.

"Nothing particularly," replied the jailer. "New wall was built four years ago."

"Anything done to the prison proper?"

"Painted the woodwork outside, and I believe about seven years ago a new system of plumbing was put in."

"Ah!" said the prisoner. "How far is the river over there?"

"About three hundred feet. The boys have a baseball ground between the wall and the river."

The Thinking Machine had nothing further to

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say just then, but when the jailer was ready to go he asked for some water.

"I get very thirsty here," he explained. "Would it be possible for you to leave a little water in a bowl for me?"

"I'll ask the warden," replied the jailer, and he went away.

Half an hour later he returned with water in a small earthen bowl.

"The warden says you may keep this bowl," he informed the prisoner. "But you must show it to me when I ask for it. If it is broken, it will be the last."

"Thank you," said The Thinking Machine. "I shan't break it."

The jailer went on about his duties. For just the fraction of a second it seemed that The Thinking Machine wanted to ask a question, but he didn't.

Two hours later this same jailer, in passing the door of Cell No. 13, heard a noise inside and stopped. The Thinking Machine was down on his hands and knees in a corner of the cell, and from that same corner came several frightened squeaks. The jailer looked on interestedly.

"Ah, I've got you," he heard the prisoner say.

"Got what?" he asked, sharply.

"One of these rats," was the reply. "See?" And between the scientist's long fingers the jailer saw a small gray rat struggling. The prisoner brought it over to the light and looked at it closely. "It's a water rat," he said.

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"Ain't you got anything better to do than to catch rats?" asked the jailer.

"It's disgraceful that they should be here at all," was the irritated reply. "Take this one away and kill it. There are dozens more where it came from."

The jailer took the wriggling, squirmy rodent and flung it down on the floor violently. It gave one squeak and lay still. Later he reported the incident to the warden, who only smiled.

Still later that afternoon the outside armed guard on Cell 13 side of the prison looked up again at the window and saw the prisoner looking out. He saw a hand raised to the barred window and then something white fluttered to the ground, directly under the window of Cell 13. It was a little roll of linen, evidently of white shirting material, and tied around it was a five-dollar bill. The guard looked up at the window again, but the face had disappeared.

With a grim smile he took the little linen roll and the five-dollar bill to the warden's office. There together they deciphered something which was written on it with a queer sort of ink, frequently blurred. On the outside was this:

"Finder of this please deliver to Dr. Charles Ransome."

"Ah," said the warden, with a chuckle. "Plan of escape number one has gone wrong." Then, as an afterthought: "But why did he address it to Dr. Ransome?"

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"And where did he get the pen and ink to write with?" asked the guard.

The warden looked at the guard and the guard looked at the warden. There was no apparent solution of that mystery. The warden studied the writing carefully, then shook his head.

"Well, let's see what he was going to say to Dr. Ransome," he said at length, still puzzled, and he unrolled the inner piece of linen.

"Well, if that—what—what do you think of that?" he asked, dazed.

The guard took the bit of linen and read this:

"Epa cseot d'net niiy awe htto n'si sih. "T."

III

THE warden spent an hour wondering what sort of a cipher it was, and half an hour wondering why his prisoner should attempt to communicate with Dr. Ransome, who was the cause of him being there. After this the warden devoted some thought to the question of where the prisoner got writing materials, and what sort of writing materials he had. With the idea of illuminating this point, he examined the linen again. It was a torn part of a white shirt and had ragged edges.

Now it was possible to account for the linen, but what the prisoner had used to write with was another matter. The warden knew it would have been im-

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possible for him to have either pen or pencil, and, besides, neither pen nor pencil had been used in this writing. What, then? The warden decided to personally investigate. The Thinking Machine was his prisoner; he had orders to hold his prisoners; if this one sought to escape by sending cipher messages to persons outside, he would stop it, as he would have stopped it in the case of any other prisoner.

The warden went back to Cell 13 and found The Thinking Machine on his hands and knees on the floor, engaged in nothing more alarming than catching rats. The prisoner heard the warden's step and turned to him quickly.

"It's disgraceful," he snapped, "these rats. There are scores of them."

"Other men have been able to stand them," said the warden. "Here is another shirt for you—let me have the one you have on."

"Why?" demanded The Thinking Machine, quickly. His tone was hardly natural, his manner suggested actual perturbation.

"You have attempted to communicate with Dr. Ransome," said the warden severely. "As my prisoner, it is my duty to put a stop to it."

The Thinking Machine was silent for a moment.

"All right," he said, finally. "Do your duty."

The warden smiled grimly. The prisoner arose from the floor and removed the white shirt, putting on instead a striped convict shirt the warden had brought. The warden took the white shirt eagerly,

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and then and there compared the pieces of linen on which was written the cipher with certain torn places in the shirt. The Thinking Machine looked on curiously.

"The guard brought *you* those, then?" he asked.

"He certainly did," replied the warden triumphantly. "And that ends your first attempt to escape."

The Thinking Machine watched the warden as he, by comparison, established to his own satisfaction that only two pieces of linen had been torn from the white shirt.

"What did you write this with?" demanded the warden.

"I should think it a part of your duty to find out," said The Thinking Machine, irritably.

The warden started to say some harsh things, then restrained himself and made a minute search of the cell and of the prisoner instead. He found absolutely nothing; not even a match or toothpick which might have been used for a pen. The same mystery surrounded the fluid with which the cipher had been written. Although the warden left Cell 13 visibly annoyed, he took the torn shirt in triumph.

"Well, writing notes on a shirt won't get him out, that's certain," he told himself with some complacency. He put the linen scraps into his desk to await developments. "If that man escapes from that cell I'll—hang it—I'll resign."

On the third day of his incarceration The Think-

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ing Machine openly attempted to bribe his way out. The jailer had brought his dinner and was leaning against the barred door, waiting, when The Thinking Machine began the conversation.

"The drainage pipes of the prison lead to the river, don't they?" he asked.

"Yes," said the jailer.

"I suppose they are very small?"

"Too small to crawl through, if that's what you're thinking about," was the grinning response.

There was silence until The Thinking Machine finished his meal. Then:

"You know I'm not a criminal, don't you?"

"Yes."

"And that I've a perfect right to be freed if I demand it?"

"Yes."

"Well, I came here believing that I could make my escape," said the prisoner, and his squint eyes studied the face of the jailer. "Would you consider a financial reward for aiding me to escape?"

The jailer, who happened to be an honest man, looked at the slender, weak figure of the prisoner, at the large head with its mass of yellow hair, and was almost sorry.

"I guess prisons like these were not built for the likes of you to get out of," he said, at last.

"But would you consider a proposition to help me get out?" the prisoner insisted, almost beseechingly.

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"No," said the jailer, shortly.

"Five hundred dollars," urged The Thinking Machine. "I am not a criminal."

"No," said the jailer.

"A thousand?"

"No," again said the jailer, and he started away hurriedly to escape further temptation. Then he turned back. "If you should give me ten thousand dollars I couldn't get you out. You'd have to pass through seven doors, and I only have the keys to two."

Then he told the warden all about it.

"Plan number two fails," said the warden, smiling grimly. "First a cipher, then bribery."

When the jailer was on his way to Cell 13 at six o'clock, again bearing food to The Thinking Machine, he paused, startled by the unmistakable scrape, scrape of steel against steel. It stopped at the sound of his steps, then craftily the jailer, who was beyond the prisoner's range of vision, resumed his tramping, the sound being apparently that of a man going away from Cell 13. As a matter of fact he was in the same spot.

After a moment there came again the steady scrape, scrape, and the jailer crept cautiously on tiptoes to the door and peered between the bars. The Thinking Machine was standing on the iron bed working at the bars of the little window. He was using a file, judging from the backward and forward swing of his arms.

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Cautiously the jailer crept back to the office, summoned the warden in person, and they returned to Cell 13 on tiptoes. The steady scrape was still audible. The warden listened to satisfy himself and then suddenly appeared at the door.

"Well?" he demanded, and there was a smile on his face.

The Thinking Machine glanced back from his perch on the bed and leaped suddenly to the floor, making frantic efforts to hide something. The warden went in, with hand extended.

"Give it up," he said.

"No," said the prisoner, sharply.

"Come, give it up," urged the warden. "I don't want to have to search you again."

"No," repeated the prisoner.

"What was it, a file?" asked the warden.

The Thinking Machine was silent and stood squinting at the warden with something very nearly approaching disappointment on his face—nearly, but not quite. The warden was almost sympathetic.

"Plan number three fails, eh?" he asked, good-naturedly. "Too bad, isn't it?"

The prisoner didn't say.

"Search him," instructed the warden.

The jailer searched the prisoner carefully. At last, artfully concealed in the waist band of the trousers, he found a piece of steel about two inches long, with one side curved like a half moon.

"Ah," said the warden, as he received it from the

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jailer. "From your shoe heel," and he smiled pleasantly.

The jailer continued his search and on the other side of the trousers waist band found another piece of steel identical with the first. The edges showed where they had been worn against the bars of the window.

"You couldn't saw a way through those bars with these," said the warden.

"I could have," said The Thinking Machine firmly.

"In six months, perhaps," said the warden, good-naturedly.

The warden shook his head slowly as he gazed into the slightly flushed face of his prisoner.

"Ready to give it up?" he asked.

"I haven't started yet," was the prompt reply.

Then came another exhaustive search of the cell. Carefully the two men went over it, finally turning out the bed and searching that. Nothing. The warden in person climbed upon the bed and examined the bars of the window where the prisoner had been sawing. When he looked he was amused.

"Just made it a little bright by hard rubbing," he said to the prisoner, who stood looking on with a somewhat crestfallen air. The warden grasped the iron bars in his strong hands and tried to shake them. They were immovable, set firmly in the solid granite. He examined each in turn and found them all satisfactory. Finally he climbed down from the bed.

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"Give it up, professor," he advised.

The Thinking Machine shook his head and the warden and jailer passed on again. As they disappeared down the corridor The Thinking Machine sat on the edge of the bed with his head in his hands.

"He's crazy to try to get out of that cell," commented the jailer.

"Of course he can't get out," said the warden. "But he's clever. I would like to know what he wrote that cipher with."

. . . . .

It was four o'clock next morning when an awful, heart-racking shriek of terror resounded through the great prison. It came from a cell, somewhere about the center, and its tone told a tale of horror, agony, terrible fear. The warden heard and with three of his men rushed into the long corridor leading to Cell 13.

IV

As they ran there came again that awful cry. It died away in a sort of wail. The white faces of prisoners appeared at cell doors upstairs and down, staring out wonderingly, frightened.

"It's that fool in Cell 13," grumbled the warden.

He stopped and stared in as one of the jailers flashed a lantern. "That fool in Cell 13" lay comfortably on his cot, flat on his back with his mouth open, snoring. Even as they looked there came

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again the piercing cry, from somewhere above. The warden's face blanched a little as he started up the stairs. There on the top floor he found a man in Cell 43, directly above Cell 13, but two floors higher, cowering in a corner of his cell.

"What's the matter?" demanded the warden.

"Thank God you've come," exclaimed the prisoner, and he cast himself against the bars of his cell.

"What is it?" demanded the warden again.

He threw open the door and went in. The prisoner dropped on his knees and clasped the warden about the body. His face was white with terror, his eyes were widely distended, and he was shuddering. His hands, icy cold, clutched at the warden's.

"Take me out of this cell, please take me out," he pleaded.

"What's the matter with you, anyhow?" insisted the warden, impatiently.

"I heard something—something," said the prisoner, and his eyes roved nervously around the cell.

"What did you hear?"

"I—I can't tell you," stammered the prisoner. Then, in a sudden burst of terror: "Take me out of this cell—put me anywhere—but take me out of here."

The warden and the three jailers exchanged glances.

"Who is this fellow? What's he accused of?" asked the warden.

"Joseph Ballard," said one of the jailers. "He's

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accused of throwing acid in a woman's face. She died from it."

"But they can't prove it," gasped the prisoner. "They can't prove it. Please put me in some other cell."

He was still clinging to the warden, and that official threw his arms off roughly. Then for a time he stood looking at the cowering wretch, who seemed possessed of all the wild, unreasoning terror of a child.

"Look here, Ballard," said the warden, finally, "if you heard anything, I want to know what it was. Now tell me."

"I can't, I can't," was the reply. He was sobbing.

"Where did it come from?"

"I don't know. Everywhere—nowhere. I just heard it."

"What was it—a voice?"

"Please don't make me answer," pleaded the prisoner.

"You must answer," said the warden, sharply.

"It was a voice—but—but it wasn't human," was the sobbing reply.

"Voice, but not human?" repeated the warden, puzzled.

"It sounded muffled and—and far away—and ghostly," explained the man.

"Did it come from inside or outside the prison?"

"It didn't seem to come from anywhere—it was just here, here, everywhere. I heard it. I heard it."

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For an hour the warden tried to get the story, but Ballard had become suddenly obstinate and would say nothing—only pleaded to be placed in another cell, or to have one of the jailers remain near him until daylight. These requests were gruffly refused.

"And see here," said the warden, in conclusion, "if there's any more of this screaming I'll put you in the padded cell."

Then the warden went his way, a sadly puzzled man. Ballard sat at his cell door until daylight, his face, drawn and white with terror, pressed against the bars, and looked out into the prison with wide, staring eyes.

That day, the fourth since the incarceration of The Thinking Machine, was enlivened considerably by the volunteer prisoner, who spent most of his time at the little window of his cell. He began proceedings by throwing another piece of linen down to the guard, who picked it up dutifully and took it to the warden. On it was written:

"Only three days more."

The warden was in no way surprised at what he read; he understood that The Thinking Machine meant only three days more of his imprisonment, and he regarded the note as a boast. But how was the thing written? Where had The Thinking Machine found this new piece of linen? Where? How? He carefully examined the linen. It was white, of fine texture, shirting material. He took the shirt which he had taken and carefully fitted the two original

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pieces of the linen to the torn places. This third piece was entirely superfluous; it didn't fit anywhere, and yet it was unmistakably the same goods.

"And where—where does he get anything to write with?" demanded the warden of the world at large.

Still later on the fourth day The Thinking Machine, through the window of his cell, spoke to the armed guard outside.

"What day of the month is it?" he asked.

"The fifteenth," was the answer.

The Thinking Machine made a mental astronomical calculation and satisfied himself that the moon would not rise until after nine o'clock that night. Then he asked another question:

"Who attends to those arc lights?"

"Man from the company."

"You have no electricians in the building?"

"No."

"I should think you could save money if you had your own man."

"None of my business," replied the guard.

The guard noticed The Thinking Machine at the cell window frequently during that day, but always the face seemed listless and there was a certain wistfulness in the squint eyes behind the glasses. After a while he accepted the presence of the leonine head as a matter of course. He had seen other prisoners do the same thing; it was the longing for the outside world.

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That afternoon, just before the day guard was relieved, the head appeared at the window again, and The Thinking Machine's hand held something out between the bars. It fluttered to the ground and the guard picked it up. It was a five-dollar bill.

"That's for you," called the prisoner.

As usual, the guard took it to the warden. That gentleman looked at it suspiciously; he looked at everything that came from Cell 13 with suspicion.

"He said it was for me," explained the guard.

"It's a sort of a tip, I suppose," said the warden. "I see no particular reason why you shouldn't accept——"

Suddenly he stopped. He had remembered that The Thinking Machine had gone into Cell 13 with one five-dollar bill and two ten-dollar bills; twenty-five dollars in all. Now a five-dollar bill had been tied around the first pieces of linen that came from the cell. The warden still had it, and to convince himself he took it out and looked at it. It was five dollars; yet here was another five dollars, and The Thinking Machine had only had ten-dollar bills.

"Perhaps somebody changed one of the bills for him," he thought at last, with a sigh of relief.

But then and there he made up his mind. He would search Cell 13 as a cell was never before searched in this world. When a man could write at will, and change money, and do other wholly inexplicable things, there was something radically wrong with his prison. He planned to enter the cell at night

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—three o'clock would be an excellent time. The Thinking Machine must do all the weird things he did sometime. Night seemed the most reasonable.

Thus it happened that the warden stealthily descended upon Cell 13 that night at three o'clock. He paused at the door and listened. There was no sound save the steady, regular breathing of the prisoner. The keys unfastened the double locks with scarcely a clank, and the warden entered, locking the door behind him. Suddenly he flashed his dark-lantern in the face of the recumbent figure.

If the warden had planned to startle The Thinking Machine he was mistaken, for that individual merely opened his eyes quietly, reached for his glasses and inquired, in a most matter-of-fact tone:

"Who is it?"

It would be useless to describe the search that the warden made. It was minute. Not one inch of the cell or the bed was overlooked. He found the round hole in the floor, and with a flash of inspiration thrust his thick fingers into it. After a moment of fumbling there he drew up something and looked at it in the light of his lantern.

"Ugh!" he exclaimed.

The thing he had taken out was a rat—a dead rat. His inspiration fled as a mist before the sun. But he continued the search. The Thinking Machine, without a word, arose and kicked the rat out of the cell into the corridor.

The warden climbed on the bed and tried the steel

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bars in the tiny window. They were perfectly rigid; every bar of the door was the same.

Then the warden searched the prisoner's clothing, beginning at the shoes. Nothing hidden in them! Then the trousers waist band. Still nothing! Then the pockets of the trousers. From one side he drew out some paper money and examined it.

"Five one-dollar bills," he gasped.

"That's right," said the prisoner.

"But the—you had two tens and a five—what the —how do you do it?"

"That's my business," said The Thinking Machine.

"Did any of my men change this money for you —on your word of honor?"

The Thinking Machine paused just a fraction of a second.

"No," he said.

"Well, do you make it?" asked the warden. He was prepared to believe anything.

"That's my business," again said the prisoner.

The warden glared at the eminent scientist fiercely. He felt—he knew—that this man was making a fool of him, yet he didn't know how. If he were a real prisoner he would get the truth—but, then, perhaps, those inexplicable things which had happened would not have been brought before him so sharply. Neither of the men spoke for a long time, then suddenly the warden turned fiercely and left the cell, slamming the door behind him. He didn't dare to speak, then.

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He glanced at the clock. It was ten minutes to four. He had hardly settled himself in bed when again came that heart-breaking shriek through the prison. With a few muttered words, which, while not elegant, were highly expressive, he relighted his lantern and rushed through the prison again to the cell on the upper floor.

Again Ballard was crushing himself against the steel door, shrieking, shrieking at the top of his voice. He stopped only when the warden flashed his lamp in the cell.

"Take me out, take me out," he screamed. "I did it, I did it, I killed her. Take it away."

"Take what away?" asked the warden.

"I threw the acid in her face—I did it—I confess. Take me out of here."

Ballard's condition was pitiable; it was only an act of mercy to let him out into the corridor. There he crouched in a corner, like an animal at bay, and clasped his hands to his ears. It took half an hour to calm him sufficiently for him to speak. Then he told incoherently what had happened. On the night before at four o'clock he had heard a voice—a sepulchral voice, muffled and wailing in tone.

"What did it say?" asked the warden, curiously.

"Acid—acid—acid!" gasped the prisoner. "It accused me. Acid! I threw the acid, and the woman died. Oh!" It was a long, shuddering wail of terror.

"Acid?" echoed the warden, puzzled. The case was beyond him.

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"Acid. That's all I heard—that one word, repeated several times. There were other things, too, but I didn't hear them."

"That was last night, eh?" asked the warden. "What happened to-night—what frightened you just now?"

"It was the same thing," gasped the prisoner. "Acid—acid—acid!" He covered his face with his hands and sat shivering. "It was acid I used on her, but I didn't mean to kill her. I just heard the words. It was something accusing me—accusing me." He mumbled, and was silent.

"Did you hear anything else?"

"Yes—but I couldn't understand—only a little bit—just a word or two."

"Well, what was it?"

"I heard 'acid' three times, then I heard a long, moaning sound, then—then—I heard 'No. 8 hat.' I heard that twice."

"No. 8 hat," repeated the warden. "What the devil—No. 8 hat? Accusing voices of conscience have never talked about No. 8 hats, so far as I ever heard."

"He's insane," said one of the jailers, with an air of finality.

"I believe you," said the warden. "He must be. He probably heard something and got frightened. He's trembling now. No. 8 hat! What the——"

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V

WHEN the fifth day of The Thinking Machine's imprisonment rolled around the warden was wearing a hunted look. He was anxious for the end of the thing. He could not help but feel that his distinguished prisoner had been amusing himself. And if this were so, The Thinking Machine had lost none of his sense of humor. For on this fifth day he flung down another linen note to the outside guard, bearing the words: "Only two days more." Also he flung down half a dollar.

Now the warden knew—he *knew*—that the man in Cell 13 didn't have any half dollars—he *couldn't* have any half dollars, no more than he could have pen and ink and linen, and yet he did have them. It was a condition, not a theory; that is one reason why the warden was wearing a hunted look.

That ghastly, uncanny thing, too, about "Acid" and "No. 8 hat" clung to him tenaciously. They didn't mean anything, of course, merely the ravings of an insane murderer who had been driven by fear to confess his crime, still there were so many things that "didn't mean anything" happening in the prison now since The Thinking Machine was there.

On the sixth day the warden received a postal stating that Dr. Ransome and Mr. Fielding would be at Chisholm Prison on the following evening, Thurs-

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day, and in the event Professor Van Dusen had not yet escaped—and they presumed he had not because they had not heard from him—they would meet him there.

"In the event he had not yet escaped!" The warden smiled grimly. Escaped!

The Thinking Machine enlivened this day for the warden with three notes. They were on the usual linen and bore generally on the appointment at half-past eight o'clock Thursday night, which appointment the scientist had made at the time of his imprisonment.

On the afternoon of the seventh day the warden passed Cell 13 and glanced in. The Thinking Machine was lying on the iron bed, apparently sleeping lightly. The cell appeared precisely as it always did from a casual glance. The warden would swear that no man was going to leave it between that hour—it was then four o'clock—and half-past eight o'clock that evening.

On his way back past the cell the warden heard the steady breathing again, and coming close to the door looked in. He wouldn't have done so if The Thinking Machine had been looking, but now—well, it was different.

A ray of light came through the high window and fell on the face of the sleeping man. It occurred to the warden for the first time that his prisoner appeared haggard and weary. Just then The Thinking Machine stirred slightly and the warden hurried

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on up the corridor guiltily. That evening after six o'clock he saw the jailer.

"Everything all right in Cell 13?" he asked.

"Yes, sir," replied the jailer. "He didn't eat much, though."

It was with a feeling of having done his duty that the warden received Dr. Ransome and Mr. Fielding shortly after seven o'clock. He intended to show them the linen notes and lay before them the full story of his woes, which was a long one. But before this came to pass the guard from the river side of the prison yard entered the office.

"The arc light in my side of the yard won't light," he informed the warden.

"Confound it, that man's a hoodoo," thundered the official. "Everything has happened since he's been here."

The guard went back to his post in the darkness, and the warden 'phoned to the electric light company.

"This is Chisholm Prison," he said through the 'phone. "Send three or four men down here quick, to fix an arc light."

The reply was evidently satisfactory, for the warden hung up the receiver and passed out into the yard. While Dr. Ransome and Mr. Fielding sat waiting the guard at the outer gate came in with a special delivery letter. Dr. Ransome happened to notice the address, and, when the guard went out, looked at the letter more closely.

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"By George!" he exclaimed.

"What is it?" asked Mr. Fielding.

Silently the doctor offered the letter. Mr. Fielding examined it closely.

"Coincidence," he said. "It must be."

It was nearly eight o'clock when the warden returned to his office. The electricians had arrived in a wagon, and were now at work. The warden pressed the buzz-button communicating with the man at the outer gate in the wall.

"How many electricians came in?" he asked, over the short 'phone. "Four? Three workmen in jumpers and overalls and the manager? Frock coat and silk hat? All right. Be certain that only four go out. That's all."

He turned to Dr. Ransome and Mr. Fielding. "We have to be careful here—particularly," and there was broad sarcasm in his tone, "since we have scientists locked up."

The warden picked up the special delivery letter carelessly, and then began to open it.

"When I read this I want to tell you gentlemen something about how—— Great Cæsar!" he ended, suddenly, as he glanced at the letter. He sat with mouth open, motionless, from astonishment.

"What is it?" asked Mr. Fielding.

"A special delivery letter from Cell 13," gasped the warden. "An invitation to supper."

"What?" and the two others arose, unanimously.

The warden sat dazed, staring at the letter for a

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moment, then called sharply to a guard outside in the corridor.

"Run down to Cell 13 and see if that man's in there."

The guard went as directed, while Dr. Ransome and Mr. Fielding examined the letter.

"It's Van Dusen's handwriting; there's no question of that," said Dr. Ransome. "I've seen too much of it."

Just then the buzz on the telephone from the outer gate sounded, and the warden, in a semi-trance, picked up the receiver.

"Hello! Two reporters, eh? Let 'em come in." He turned suddenly to the doctor and Mr. Fielding. "Why, the man *can't* be out. He must be in his cell."

Just at that moment the guard returned.

"He's still in his cell, sir," he reported. "I saw him. He's lying down."

"There, I told you so," said the warden, and he breathed freely again. "But how did he mail that letter?"

There was a rap on the steel door which led from the jail yard into the warden's office.

"It's the reporters," said the warden. "Let them in," he instructed the guard; then to the two other gentlemen: "Don't say anything about this before them, because I'd never hear the last of it."

The door opened, and the two men from the front gate entered.

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"Good-evening, gentlemen," said one. That was Hutchinson Hatch; the warden knew him well.

"Well?" demanded the other, irritably. "I'm here."

That was The Thinking Machine.

He squinted belligerently at the warden, who sat with mouth agape. For the moment that official had nothing to say. Dr. Ransome and Mr. Fielding were amazed, but they didn't know what the warden knew. They were only amazed; he was paralyzed. Hutchinson Hatch, the reporter, took in the scene with greedy eyes.

"How—how—how did you do it?" gasped the warden, finally.

"Come back to the cell," said The Thinking Machine, in the irritated voice which his scientific associates knew so well.

The warden, still in a condition bordering on trance, led the way.

"Flash your light in there," directed The Thinking Machine.

The warden did so. There was nothing unusual in the appearance of the cell, and there—there on the bed lay the figure of The Thinking Machine. Certainly! There was the yellow hair! Again the warden looked at the man beside him and wondered at the strangeness of his own dreams.

With trembling hands he unlocked the cell door and The Thinking Machine passed inside.

"See here," he said.

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He kicked at the steel bars in the bottom of the cell door and three of them were pushed out of place. A fourth broke off and rolled away in the corridor.

"And here, too," directed the erstwhile prisoner as he stood on the bed to reach the small window. He swept his hand across the opening and every bar came out.

"What's this in the bed?" demanded the warden, who was slowly recovering.

"A wig," was the reply. "Turn down the cover."

The warden did so. Beneath it lay a large coil of strong rope, thirty feet or more, a dagger, three files, ten feet of electric wire, a thin, powerful pair of steel pliers, a small tack hammer with its handle, and —and a Derringer pistol.

"How did you do it?" demanded the warden.

"You gentlemen have an engagement to supper with me at half-past nine o'clock," said The Thinking Machine. "Come on, or we shall be late."

"But how did you do it?" insisted the warden.

"Don't ever think you can hold any man who can use his brain," said The Thinking Machine. "Come on; we shall be late."

VI

IT was an impatient supper party in the rooms of Professor Van Dusen and a somewhat silent one. The guests were Dr. Ransome, Albert Fielding, the warden, and Hutchinson Hatch, reporter. The

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meal was served to the minute, in accordance with Professor Van Dusen's instructions of one week before; Dr. Ransome found the artichokes delicious. At last the supper was finished and The Thinking Machine turned full on Dr. Ransome and squinted at him fiercely.

"Do you believe it now?" he demanded.

"I do," replied Dr. Ransome.

"Do you admit that it was a fair test?"

"I do."

With the others, particularly the warden, he was waiting anxiously for the explanation.

"Suppose you tell us how——" began Mr. Fielding.

"Yes, tell us how," said the warden.

The Thinking Machine readjusted his glasses, took a couple of preparatory squints at his audience, and began the story. He told it from the beginning logically; and no man ever talked to more interested listeners.

"My agreement was," he began, "to go into a cell, carrying nothing except what was necessary to wear, and to leave that cell within a week. I had never seen Chisholm Prison. When I went into the cell I asked for tooth powder, two ten and one five-dollar bills, and also to have my shoes blacked. Even if these requests had been refused it would not have mattered seriously. But you agreed to them.

"I knew there would be nothing in the cell which you thought I might use to advantage. So when the

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warden locked the door on me I was apparently helpless, unless I could turn three seemingly innocent things to use. They were things which would have been permitted any prisoner under sentence of death, were they not, warden?"

"Tooth powder and polished shoes, yes, but not money," replied the warden.

"Anything is dangerous in the hands of a man who knows how to use it," went on The Thinking Machine. "I did nothing that first night but sleep and chase rats." He glared at the warden. "When the matter was broached I knew I could do nothing that night, so suggested next day. You gentlemen thought I wanted time to arrange an escape with outside assistance, but this was not true. I knew I could communicate with whom I pleased, when I pleased."

The warden stared at him a moment, then went on smoking solemnly.

"I was aroused next morning at six o'clock by the jailer with my breakfast," continued the scientist. "He told me dinner was at twelve and supper at six. Between these times, I gathered, I would be pretty much to myself. So immediately after breakfast I examined my outside surroundings from my cell window. One look told me it would be useless to try to scale the wall, even should I decide to leave my cell by the window, for my purpose was to leave not only the cell, but the prison. Of course, I could have gone over the wall, but it would have taken me longer to

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lay my plans that way. Therefore, for the moment, I dismissed all idea of that.

"From this first observation I knew the river was on that side of the prison, and that there was also a playground there. Subsequently these surmises were verified by a keeper. I knew then one important thing—that anyone might approach the prison wall from that side if necessary without attracting any particular attention. That was well to remember. I remembered it.

"But the outside thing which most attracted my attention was the feed wire to the arc light which ran within a few feet—probably three or four—of my cell window. I knew that would be valuable in the event I found it necessary to cut off that arc light."

"Oh, you shut it off to-night, then?" asked the warden.

"Having learned all I could from that window," resumed The Thinking Machine, without heeding the interruption, "I considered the idea of escaping through the prison proper. I recalled just how I had come into the cell, which I knew would be the only way. Seven doors lay between me and the outside. So, also for the time being, I gave up the idea of escaping that way. And I couldn't go through the solid granite walls of the cell."

The Thinking Machine paused for a moment and Dr. Ransome lighted a new cigar. For several minutes there was silence, then the scientific jail-breaker went on:

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"While I was thinking about these things a rat ran across my foot. It suggested a new line of thought. There were at least half a dozen rats in the cell—I could see their beady eyes. Yet I had noticed none come under the cell door. I frightened them purposely and watched the cell door to see if they went out that way. They did not, but they were gone. Obviously they went another way. Another way meant another opening.

"I searched for this opening and found it. It was an old drain pipe, long unused and partly choked with dirt and dust. But this was the way the rats had come. They came from somewhere. Where? Drain pipes usually lead outside prison grounds. This one probably led to the river, or near it. The rats must therefore come from that direction. If they came a part of the way, I reasoned that they came all the way, because it was extremely unlikely that a solid iron or lead pipe would have any hole in it except at the exit.

"When the jailer came with my luncheon he told me two important things, although he didn't know it. One was that a new system of plumbing had been put in the prison seven years before; another that the river was only three hundred feet away. Then I knew positively that the pipe was a part of an old system; I knew, too, that it slanted generally toward the river. But did the pipe end in the water or on land?

"This was the next question to be decided. I

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decided it by catching several of the rats in the cell. My jailer was surprised to see me engaged in this work. I examined at least a dozen of them. They were perfectly dry; they had come through the pipe, and, most important of all, they were *not house rats, but field rats*. The other end of the pipe was on land, then, outside the prison walls. So far, so good.

"Then, I knew that if I worked freely from this point I must attract the warden's attention in another direction. You see, by telling the warden that I had come there to escape you made the test more severe, because I had to trick him by false scents."

The warden looked up with a sad expression in his eyes.

"The first thing was to make him think I was trying to communicate with you, Dr. Ransome. So I wrote a note on a piece of linen I tore from my shirt, addressed it to Dr. Ransome, tied a five-dollar bill around it and threw it out the window. I knew the guard would take it to the warden, but I rather hoped the warden would send it as addressed. Have you that first linen note, warden?"

The warden produced the cipher.

"What the deuce does it mean, anyhow?" he asked.

"Read it backward, beginning with the 'T' signature and disregard the division into words," instructed The Thinking Machine.

The warden did so.

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"T-h-i-s, this," he spelled, studied it a moment, then read it off, grinning:

"This is not the way I intend to escape."

"Well, now what do you think o' that?" he demanded, still grinning.

"I knew that would attract your attention, just as it did," said The Thinking Machine, "and if you really found out what it was it would be a sort of gentle rebuke."

"What did you write it with?" asked Dr. Ransome, after he had examined the linen and passed it to Mr. Fielding.

"This," said the erstwhile prisoner, and he extended his foot. On it was the shoe he had worn in prison, though the polish was gone—scraped off clean. "The shoe blacking, moistened with water, was my ink; the metal tip of the shoe lace made a fairly good pen."

The warden looked up and suddenly burst into a laugh, half of relief, half of amusement.

"You're a wonder," he said, admiringly. "Go on."

"That precipitated a search of my cell by the warden, as I had intended," continued The Thinking Machine. "I was anxious to get the warden into the habit of searching my cell, so that finally, constantly finding nothing, he would get disgusted and quit. This at last happened, practically."

The warden blushed.

"He then took my white shirt away and gave me a prison shirt. He was satisfied that those two pieces

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of the shirt were all that was missing. But while he was searching my cell I had another piece of that same shirt, about nine inches square, rolled into a small ball in my mouth."

"Nine inches of that shirt?" demanded the warden. "Where did it come from?"

"The bosoms of all stiff white shirts are of triple thickness," was the explanation. "I tore out the inside thickness, leaving the bosom only two thicknesses. I knew you wouldn't see it. So much for that."

There was a little pause, and the warden looked from one to another of the men with a sheepish grin.

"Having disposed of the warden for the time being by giving him something else to think about, I took my first serious step toward freedom," said Professor Van Dusen. "I knew, within reason, that the pipe led somewhere to the playground outside; I knew a great many boys played there; I knew that rats came into my cell from out there. Could I communicate with some one outside with these things at hand?

"First was necessary, I saw, a long and fairly reliable thread, so—but here," he pulled up his trousers legs and showed that the tops of both stockings, of fine, strong lisle, were gone. "I unraveled those—after I got them started it wasn't difficult—and I had easily a quarter of a mile of thread that I could depend on.

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"Then on half of my remaining linen I wrote, laboriously enough I assure you, a letter explaining my situation to this gentleman here," and he indicated Hutchinson Hatch. "I knew he would assist me—for the value of the newspaper story. I tied firmly to this linen letter a ten-dollar bill—there is no surer way of attracting the eye of anyone—and wrote on the linen: 'Finder of this deliver to Hutchinson Hatch, *Daily American*, who will give another ten dollars for the information.'

"The next thing was to get this note outside on that playground where a boy might find it. There were two ways, but I chose the best. I took one of the rats—I became adept in catching them—tied the linen and money firmly to one leg, fastened my lisle thread to another, and turned him loose in the drain pipe. I reasoned that the natural fright of the rodent would make him run until he was outside the pipe and then out on earth he would probably stop to gnaw off the linen and money.

"From the moment the rat disappeared into that dusty pipe I became anxious. I was taking so many chances. The rat might gnaw the string, of which I held one end; other rats might gnaw it; the rat might run out of the pipe and leave the linen and money where they would never be found; a thousand other things might have happened. So began some nervous hours, but the fact that the rat ran on until only a few feet of the string remained in my cell made me think he was outside the pipe. I had care-

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fully instructed Mr. Hatch what to do in case the note reached him. The question was: Would it reach him?

"This done, I could only wait and make other plans in case this one failed. I openly attempted to bribe my jailer, and learned from him that he held the keys to only two of seven doors between me and freedom. Then I did something else to make the warden nervous. I took the steel supports out of the heels of my shoes and made a pretense of sawing the bars of my cell window. The warden raised a pretty row about that. He developed, too, the habit of shaking the bars of my cell window to see if they were solid. They were—then."

Again the warden grinned. He had ceased being astonished.

"With this one plan I had done all I could and could only wait to see what happened," the scientist went on. "I couldn't know whether my note had been delivered or even found, or whether the mouse had gnawed it up. And I didn't dare to draw back through the pipe that one slender thread which connected me with the outside.

"When I went to bed that night I didn't sleep, for fear there would come the slight signal twitch at the thread which was to tell me that Mr. Hatch had received the note. At half-past three o'clock, I judge, I felt this twitch, and no prisoner actually under sentence of death ever welcomed a thing more heartily."

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The Thinking Machine stopped and turned to the reporter.

"You'd better explain just what you did," he said.

"The linen note was brought to me by a small boy who had been playing baseball," said Mr. Hatch. "I immediately saw a big story in it, so I gave the boy another ten dollars, and got several spools of silk, some twine, and a roll of light, pliable wire. The professor's note suggested that I have the finder of the note show me just where it was picked up, and told me to make my search from there, beginning at two o'clock in the morning. If I found the other end of the thread I was to twitch it gently three times, then a fourth.

"I began the search with a small bulb electric light. It was an hour and twenty minutes before I found the end of the drain pipe, half hidden in weeds. The pipe was very large there, say twelve inches across. Then I found the end of the lisle thread, twitched it as directed and immediately I got an answering twitch.

"Then I fastened the silk to this and Professor Van Dusen began to pull it into his cell. I nearly had heart disease for fear the string would break. To the end of the silk I fastened the twine, and when that had been pulled in I tied on the wire. Then that was drawn into the pipe and we had a substantial line, which rats couldn't gnaw, from the mouth of the drain into the cell."

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The Thinking Machine raised his hand and Hatch stopped.

"All this was done in absolute silence," said the scientist. "But when the wire reached my hand I could have shouted. Then we tried another experiment, which Mr. Hatch was prepared for. I tested the pipe as a speaking tube. Neither of us could hear very clearly, but I dared not speak loud for fear of attracting attention in the prison. At last I made him understand what I wanted immediately. He seemed to have great difficulty in understanding when I asked for nitric acid, and I repeated the word 'acid' several times.

"Then I heard a shriek from a cell above me. I knew instantly that some one had overheard, and when I heard you coming, Mr. Warden, I feigned sleep. If you had entered my cell at that moment that whole plan of escape would have ended there. But you passed on. That was the nearest I ever came to being caught.

"Having established this improvised trolley it is easy to see how I got things in the cell and made them disappear at will. I merely dropped them back into the pipe. You, Mr. Warden, could not have reached the connecting wire with your fingers; they are too large. My fingers, you see, are longer and more slender. In addition I guarded the top of that pipe with a rat—you remember how."

"I remember," said the warden, with a grimace.

"I thought that if any one were tempted to inves-

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tigate that hole the rat would dampen his ardor. Mr. Hatch could not send me anything useful through the pipe until next night, although he did send me change for ten dollars as a test, so I proceeded with other parts of my plan. Then I evolved the method of escape, which I finally employed.

"In order to carry this out successfully it was necessary for the guard in the yard to get accustomed to seeing me at the cell window. I arranged this by dropping linen notes to him, boastful in tone, to make the warden believe, if possible, one of his assistants was communicating with the outside for me. I would stand at my window for hours gazing out, so the guard could see, and occasionally I spoke to him. In that way I learned that the prison had no electricians of its own, but was dependent upon the lighting company if anything should go wrong.

"That cleared the way to freedom perfectly. Early in the evening of the last day of my imprisonment, when it was dark, I planned to cut the feed wire which was only a few feet from my window, reaching it with an acid-tipped wire I had. That would make that side of the prison perfectly dark while the electricians were searching for the break. That would also bring Mr. Hatch into the prison yard.

"There was only one more thing to do before I actually began the work of setting myself free. This was to arrange final details with Mr. Hatch through our speaking tube. I did this within half an hour after the warden left my cell on the fourth night of

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my imprisonment. Mr. Hatch again had serious difficulty in understanding me, and I repeated the word 'acid' to him several times, and later the words: 'Number eight hat'—that's my size—and these were the things which made a prisoner upstairs confess to murder, so one of the jailers told me next day. This prisoner heard our voices, confused of course, through the pipe, which also went to his cell. The cell directly over me was not occupied, hence no one else heard.

"Of course the actual work of cutting the steel bars out of the window and door was comparatively easy with nitric acid, which I got through the pipe in thin bottles, but it took time. Hour after hour on the fifth and sixth and seven days the guard below was looking at me as I worked on the bars of the window with the acid on a piece of wire. I used the tooth powder to prevent the acid spreading. I looked away abstractedly as I worked and each minute the acid cut deeper into the metal. I noticed that the jailers always tried the door by shaking the upper part, never the lower bars, therefore I cut the lower bars, leaving them hanging in place by thin strips of metal. But that was a bit of dare-deviltry. I could not have gone that way so easily."

The Thinking Machine sat silent for several minutes.

"I think that makes everything clear," he went on. "Whatever points I have not explained were merely to confuse the warden and jailers. These

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things in my bed I brought in to please Mr. Hatch, who wanted to improve the story. Of course, the wig was necessary in my plan. The special delivery letter I wrote and directed in my cell with Mr. Hatch's fountain pen, then sent it out to him and he mailed it. That's all, I think."

"But your actually leaving the prison grounds and then coming in through the outer gate to my office?" asked the warden.

"Perfectly simple," said the scientist. "I cut the electric light wire with acid, as I said, when the current was off. Therefore when the current was turned on the arc didn't light. I knew it would take some time to find out what was the matter and make repairs. When the guard went to report to you the yard was dark. I crept out the window—it was a tight fit, too—replaced the bars by standing on a narrow ledge and remained in a shadow until the force of electricians arrived. Mr. Hatch was one of them.

"When I saw him I spoke and he handed me a cap, a jumper and overalls, which I put on within ten feet of you, Mr. Warden, while you were in the yard. Later Mr. Hatch called me, presumably as a workman, and together we went out the gate to get something out of the wagon. The gate guard let us pass out readily as two workmen who had just passed in. We changed our clothing and reappeared, asking to see you. We saw you. That's all."

There was silence for several minutes. Dr. Ransome was first to speak.

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"Wonderful!" he exclaimed. "Perfectly amazing."

"How did Mr. Hatch happen to come with the electricians?" asked Mr. Fielding.

"His father is manager of the company," replied The Thinking Machine.

"But what if there had been no Mr. Hatch outside to help?"

"Every prisoner has one friend outside who would help him escape if he could."

"Suppose—just suppose—there had been no old plumbing system there?" asked the warden, curiously.

"There were two other ways out," said The Thinking Machine, enigmatically.

Ten minutes later the telephone bell rang. It was a request for the warden.

"Light all right, eh?" the warden asked, through the 'phone. "Good. Wire cut beside Cell 13? Yes, I know. One electrician too many? What's that? Two came out?"

The warden turned to the others with a puzzled expression.

"He only let in four electricians, he has let out two and says there are three left."

"I was the odd one," said The Thinking Machine.

"Oh," said the warden. "I see." Then through the 'phone: "Let the fifth man go. He's all right."

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I

THE THINKING MACHINE—Professor Augustus ir. F. Xi Van Dusen, Ph.D., LL.D., F.R.S., M.D., etc., scientist and logician—listened intently and without comment to a weird, seemingly inexplicable story. Hutchinson Hatch, reporter, was telling it. The bowed figure of the savant lay at ease in a large chair. The enormous head with its bushy yellow hair was thrown back, the thin, white fingers were pressed tip to tip and the blue eyes, narrowed to mere slits, squinted aggressively upward. The scientist was in a receptive mood.

"From the beginning, every fact you know," he had requested.

"It's all out in the Back Bay," the reporter explained. "There is a big apartment house there, a fashionable establishment, in a side street, just off Commonwealth Avenue. It is five stories in all, and is cut up into small suites, of two and three rooms with bath. These suites are handsomely, even luxuriously furnished, and are occupied by people who can afford to pay big rents. Generally these are young unmarried men, although in several cases they

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"Wonderful!" he exclaims, "it is a house of every modern service, hall boys, liveried ing."

"How did Mr. Henley get his corridors and all that. It has electricians?" asked. "Both electric systems of lighting. Ten-

"His father left it to use either or both.

The Thinking broker, Weldon Henley, occupies one "But handsomest of these suites, being on the second side of, in front. He has met with considerable success in the Street. He is a bachelor and lives there alone. There is no personal servant. He dabbles in photography as a hobby, and is said to be remarkably expert.

"Recently there was a report that he was to be married this Winter to a beautiful Virginia girl who has been visiting Boston from time to time, a Miss Lipscomb—Charlotte Lipscomb, of Richmond. Henley has never denied or affirmed this rumor, although he has been asked about it often. Miss Lipscomb is impossible of access even when she visits Boston. Now she is in Virginia, I understand, but will return to Boston later in the season."

The reporter paused, lighted a cigarette and leaned forward in his chair, gazing steadily into the inscrutable eyes of the scientist.

"When Henley took the suite he requested that all the electric lighting apparatus be removed from his apartments," he went on. "He had taken a long lease of the place, and this was done. Therefore he uses only gas for lighting purposes, and he usually keeps one of his gas jets burning low all night."

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"Bad, bad for his health," commented the scientist.

"Now comes the mystery of the affair," the reporter went on. "It was five weeks or so ago Henley retired as usual—about midnight. He locked his door on the inside—he is positive of that —and awoke about four o'clock in the morning nearly asphyxiated by gas. He was barely able to get up and open the window to let in the fresh air. The gas jet he had left burning was out, and the suite was full of gas."

"Accident, possibly," said The Thinking Machine. "A draught through the apartments; a slight diminution of gas pressure; a hundred possibilities."

"So it was presumed," said the reporter. "Of course it would have been impossible for——"

"Nothing is impossible," said the other, tartly. "Don't say that. It annoys me exceedingly."

"Well, then, it seems highly improbable that the door had been opened or that anyone came into the room and did this deliberately," the newspaper man went on, with a slight smile. "So Henley said nothing about this; attributed it to accident. The next night he lighted his gas as usual, but he left it burning a little brighter. The same thing happened again."

"Ah," and The Thinking Machine changed his position a little. "The second time."

"And again he awoke just in time to save himself," said Hatch. "Still he attributed the affair to

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accident, and determined to avoid a recurrence of the affair by doing away with the gas at night. Then he got a small night lamp and used this for a week or more."

"Why does he have a light at all?" asked the scientist, testily.

"I can hardly answer that," replied Hatch. "I may say, however, that he is of a very nervous temperament, and gets up frequently during the night. He reads occasionally when he can't sleep. In addition to that he has slept with a light going all his life; it's a habit."

"Go on."

"One night he looked for the night lamp, but it had disappeared—at least he couldn't find it—so he lighted the gas again. The fact of the gas having twice before gone out had been dismissed as a serious possibility. Next morning at five o'clock a bell boy, passing through the hall, smelled gas and made a quick investigation. He decided it came from Henley's place, and rapped on the door. There was no answer. It ultimately developed that it was necessary to smash in the door. There on the bed they found Henley unconscious with the gas pouring into the room from the jet which he had left lighted. He was revived in the air, but for several hours was deathly sick."

"Why was the door smashed in?" asked The Thinking Machine. "Why not unlocked?"

"It was done because Henley had firmly barred

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it," Hatch explained. "He had become suspicious, I suppose, and after the second time he always barred his door and fastened every window before he went to sleep. There may have been a fear that some one used a key to enter."

"Well?" asked the scientist. "After that?"

"Three weeks or so elapsed, bringing the affair down to this morning," Hatch went on. "Then the same thing happened a little differently. For instance, after the third time the gas went out Henley decided to find out for himself what caused it, and so expressed himself to a few friends who knew of the mystery. Then, night after night, he lighted the gas as usual and kept watch. It was never disturbed during all that time, burning steadily all night. What sleep he got was in daytime.

"Last night Henley lay awake for a time; then, exhausted and tired, fell asleep. This morning early he awoke; the room was filled with gas again. In some way my city editor heard of it and asked me to look into the mystery."

That was all. The two men were silent for a long time, and finally The Thinking Machine turned to the reporter.

"Does anyone else in the house keep gas going all night?" he asked.

"I don't know," was the reply. "Most of them, I know, use electricity."

"Nobody else has been overcome as he has been?"

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"No. Plumbers have minutely examined the lighting system all over the house and found nothing wrong."

"Does the gas in the house all come through the same meter?"

"Yes, so the manager told me. This meter, a big one, is just off the engine room. I supposed it possible that some one shut it off there on these nights long enough to extinguish the lights all over the house, then turned it on again. That is, presuming that it was done purposely. Do you think it was an attempt to kill Henley?"

"It might be," was the reply. "Find out for me just who in the house uses gas; also if anyone else leaves a light burning all night; also what opportunity anyone would have to get at the meter, and then something about Henley's love affair with Miss Lipscomb. Is there anyone else? If so, who? Where does he live? When you find out these things come back here."

. . . . .

That afternoon at one o'clock Hatch returned to the apartments of The Thinking Machine, with excitement plainly apparent on his face.

"Well?" asked the scientist.

"A French girl, Louise Regnier, employed as a maid by Mrs. Standing in the house, was found dead in her room on the third floor to-day at noon," Hatch explained quickly. "It looks like suicide."

"How?" asked The Thinking Machine.

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"The people who employed her—husband and wife—have been away for a couple of days," Hatch rushed on. "She was in the suite alone. This noon she had not appeared, there was an odor of gas and the door was broken in. Then she was found dead."

"With the gas turned on?"

"With the gas turned on. She was asphyxiated."

"Dear me, dear me," exclaimed the scientist. He arose and took up his hat. "Let's go see what this is all about."

II

When Professor Van Dusen and Hatch arrived at the apartment house they had been preceded by the Medical Examiner and the police. Detective Mallory, whom both knew, was moving about in the apartment where the girl had been found dead. The body had been removed and a telegram sent to her employers in New York.

"Too late," said Mallory, as they entered.

"What was it, Mr. Mallory?" asked the scientist.

"Suicide," was the reply. "No question of it. It happened in this room," and he led the way into the third room of the suite. "The maid, Miss Regnier, occupied this, and was here alone last night. Mr. and Mrs. Standing, her employers, have gone to New York for a few days. She was left alone, and killed herself."

Without further questioning The Thinking Ma-

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chine went over to the bed, from which the girl's body had been taken, and, stooping beside it, picked up a book. It was a novel by "The Duchess." He examined this critically, then, standing on a chair, he examined the gas jet. This done, he stepped down and went to the window of the little room. Finally The Thinking Machine turned to the detective.

"Just how much was the gas turned on?" he asked.

"Turned on full," was the reply.

"Were both the doors of the room closed?"

"Both, yes."

"Any cotton, or cloth, or anything of the sort stuffed in the cracks of the window?"

"No. It's a tight-fitting window, anyway. Are you trying to make a mystery out of this?"

"Cracks in the doors stuffed?" The Thinking Machine went on.

"No." There was a smile about the detective's lips.

The Thinking Machine, on his knees, examined the bottom of one of the doors, that which led into the hall. The lock of this door had been broken when employees burst into the room. Having satisfied himself here and at the bottom of the other door, which connected with the bedroom adjoining, The Thinking Machine again climbed on a chair and examined the doors at the top.

"Both transoms closed, I suppose?" he asked.

"Yes," was the reply. "You can't make any-

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thing but suicide out of it," explained the detective. "The Medical Examiner has given that as his opinion—and everything I find indicates it."

"All right," broke in The Thinking Machine abruptly. "Don't let us keep you."

After awhile Detective Mallory went away. Hatch and the scientist went down to the office floor, where they saw the manager. He seemed to be greatly distressed, but was willing to do anything he could in the matter.

"Is your night engineer perfectly trustworthy?" asked The Thinking Machine.

"Perfectly," was the reply. "One of the best and most reliable men I ever met. Alert and wide-awake."

"Can I see him a moment? The night man, I mean?"

"Certainly," was the reply. "He's downstairs. He sleeps there. He's probably up by this time. He sleeps usually till one o'clock in the daytime, being up all night."

"Do you supply gas for your tenants?"

"Both gas and electricity are included in the rent of the suites. Tenants may use one or both."

"And the gas all comes through one meter?"

"Yes, one meter. It's just off the engine room."

"I suppose there's no way of telling just who in the house uses gas?"

"No. Some do and some don't. I don't know."

This was what Hatch had told the scientist. Now

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together they went to the basement, and there met the night engineer, Charles Burlingame, a tall, powerful, clean-cut man, of alert manner and positive speech. He gazed with a little amusement at the slender, almost childish figure of The Thinking Machine and the grotesquely large head.

"You are in the engine room or near it all night every night?" began The Thinking Machine.

"I haven't missed a night in four years," was the reply.

"Anybody ever come here to see you at night?"

"Never. It's against the rules."

"The manager or a hall boy?"

"Never."

"In the last two months?" The Thinking Machine persisted.

"Not in the last two years," was the positive reply. "I go on duty every night at seven o'clock, and I am on duty until seven in the morning. I don't believe I've seen anybody in the basement here with me between those hours for a year at least."

The Thinking Machine was squinting steadily into the eyes of the engineer, and for a time both were silent. Hatch moved about the scrupulously clean engine room and nodded to the day engineer, who sat leaning back against the wall. Directly in front of him was the steam gauge.

"Have you a fireman?" was The Thinking Machine's next question.

"No. I fire myself," said the night man.

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"Here's the coal," and he indicated a bin within half a dozen feet of the mouth of the boiler.

"I don't suppose you ever had occasion to handle the gas meter?" insisted The Thinking Machine.

"Never touched it in my life," said the other. "I don't know anything about meters, anyway."

"And you never drop off to sleep at night for a few minutes when you get lonely? Doze, I mean?"

The engineer grinned good-naturedly.

"Never had any desire to, and besides I wouldn't have the chance," he explained. "There's a time check here,"—and he indicated it. "I have to punch that every half hour all night to prove that I have been awake."

"Dear me, dear me," exclaimed The Thinking Machine, irritably. He went over and examined the time check—a revolving paper disk with hours marked on it, made to move by the action of a clock, the face of which showed in the middle.

"Besides there's the steam gauge to watch," went on the engineer. "No engineer would dare go to sleep. There might be an explosion."

"Do you know Mr. Weldon Henley?" suddenly asked The Thinking Machine.

"Who?" asked Burlingame.

"Weldon Henley?"

"No-o," was the slow response. "Never heard of him. Who is he?"

"One of the tenants, on the second floor, I think."

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"Lord, I don't know any of the tenants. What about him?"

"When does the inspector come here to read the meter?"

"I never saw him. I presume in daytime, eh Bill?" and he turned to the day engineer.

"Always in daytime—usually about noon," said Bill from his corner.

"Any other entrance to the basement except this way—and you could see anyone coming here this way I suppose?"

"Sure I could see 'em. There's no other entrance to the cellar except the coal hole in the sidewalk in front."

"Two big electric lights in front of the building, aren't there?"

"Yes. They go all night."

A slightly puzzled expression crept into the eyes of The Thinking Machine. Hatch knew from the persistency of the questions that he was not satisfied; yet he was not able to fathom or to understand all the queries. In some way they had to do with the possibility of some one having access to the meter.

"Where do you usually sit at night here?" was the next question.

"Over there where Bill's sitting. I always sit there."

The Thinking Machine crossed the room to Bill, a typical, grimy-handed man of his class.

"May I sit there a moment?" he asked.

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Bill arose lazily, and The Thinking Machine sank down into the chair. From this point he could see plainly through the opening into the basement proper—there was no door—the gas meter of enormous proportions through which all the gas in the house passed. An electric light in the door made it bright as daylight. The Thinking Machine noted these things, arose, nodded his thanks to the two men and, still with the puzzled expression on his face, led the way upstairs. There the manager was still in his office.

"I presume you examine and know that the time check in the engineer's room is properly punched every half-hour during the night?" he asked.

"Yes. I examine the dial every day—have them here, in fact, each with the date on it."

"May I see them?"

Now the manager was puzzled. He produced the cards, one for each day, and for half an hour The Thinking Machine studied them minutely. At the end of that time, when he arose and Hatch looked at him inquiringly, he saw still the perplexed expression.

After urgent solicitation, the manager admitted them to the apartments of Weldon Henley. Mr. Henley himself had gone to his office in State Street. Here The Thinking Machine did several things which aroused the curiosity of the manager, one of which was to minutely study the gas jets. Then The Thinking Machine opened one of the front windows and glanced out into the street. Below fifteen feet

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was the sidewalk; above was the solid front of the building, broken only by a flagpole which, properly roped, extended from the hall window of the next floor above out over the sidewalk a distance of twelve feet or so.

"Ever use that flagpole?" he asked the manager.

"Rarely," said the manager. "On holidays sometimes—Fourth of July and such times. We have a big flag for it."

From the apartments The Thinking Machine led the way to the hall, up the stairs and to the flagpole. Leaning out of this window, he looked down toward the window of the apartments he had just left. Then he inspected the rope of the flagpole, drawing it through his slender hands slowly and carefully. At last he picked off a slender thread of scarlet and examined it.

"Ah," he exclaimed. Then to Hatch: "Let's go, Mr. Hatch. Thank you," this last to the manager, who had been a puzzled witness.

Once on the street, side by side with The Thinking Machine, Hatch was bursting with questions, but he didn't ask them. He knew it would be useless. At last The Thinking Machine broke the silence.

"That girl, Miss Regnier, *was murdered*," he said suddenly, positively. "There have been four attempts to murder Henley."

"How?" asked Hatch, startled.

"By a scheme so simple that neither you nor I nor the police have ever heard of it being employed,"

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was the astonishing reply. "*It is perfectly horrible in its simplicity.*"

"What was it?" Hatch insisted, eagerly.

"It would be futile to discuss that now," was the rejoinder. "There has been murder. We know how. Now the question is—who? What person would have a motive to kill Henley?"

III

THERE was a pause as they walked on.

"Where are we going?" asked Hatch finally.

"Come up to my place and let's consider this matter a bit further," replied The Thinking Machine.

Not another word was spoken by either until half an hour later, in the small laboratory. For a long time the scientist was thoughtful—deeply thoughtful. Once he took down a volume from a shelf and Hatch glanced at the title. It was "Gases: Their Properties." After awhile he returned this to the shelf and took down another, on which the reporter caught the title, "Anatomy."

"Now, Mr. Hatch," said The Thinking Machine in his perpetually crabbed voice, "we have a most remarkable riddle. It gains this remarkable aspect from its very simplicity. It is not, however, necessary to go into that now. I will make it clear to you when we know the motives.

"As a general rule, the greatest crimes never come

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to light because the greatest criminals, their perpetrators, are too clever to be caught. Here we have what I might call a great crime committed with a subtle simplicity that is wholly disarming, and a greater crime even than this was planned. This was to murder Weldon Henley. The first thing for you to do is to see Mr. Henley and warn him of his danger. Asphyxiation will not be attempted again, but there is a possibility of poison, a pistol shot, a knife, anything almost. As a matter of fact, he is in great peril.

"Superficially, the death of Miss Regnier, the maid, looks to be suicide. Instead it is the fruition of a plan which has been tried time and again against Henley. There is a possibility that Miss Regnier was not an intentional victim of the plot, but the fact remains that she was murdered. Why? Find the motive for the plot to murder Mr. Henley and you will know why."

The Thinking Machine reached over to the shelf, took a book, looked at it a moment, then went on:

"The first question to determine positively is: Who hated Weldon Henley sufficiently to desire his death? You say he is a successful man in the Street. Therefore there is a possibility that some enemy there is at the bottom of the affair, yet it seems hardly probable. If by his operations Mr. Henley ever happened to wreck another man's fortune find this man and find out all about him. He may be the man. There will be innumerable questions arising from this

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line of inquiry to a man of your resources. Leave none of them unanswered.

"On the other hand there is Henley's love affair. Had he a rival who might desire his death? Had he any rival? If so, find out all about him. He may be the man who planned all this. Here, too, there will be questions arising which demand answers. Answer them—all of them—fully and clearly before you see me again.

"Was Henley ever a party to a liason of any kind? Find that out, too. A vengeful woman or a discarded sweetheart of a vengeful woman, you know, will go to any extreme. The rumor of his engagement to Miss—Miss——"

"Miss Lipscomb," Hatch supplied.

"The rumor of his engagement to Miss Lipscomb might have caused a woman whom he had once been interested in or who was once interested in him to attempt his life. The subtler murders—that is, the ones which are most attractive as problems—are nearly always the work of a cunning woman. I know nothing about women myself," he hastened to explain; "but Lombroso has taken that attitude. Therefore, see if there is a woman."

Most of these points Hatch had previously seen—seen with the unerring eye of a clever newspaper reporter—yet there were several which had not occurred to him. He nodded his understanding.

"Now the center of the affair, of course," The Thinking Machine continued, "is the apartment

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house where Henley lives. The person who attempted his life either lives there or has ready access to the place, and frequently spends the night there. This is a vital question for you to answer. I am leaving all this to you because you know better how to do these things than I do. That's all, I think. When these things are all learned come back to me."

The Thinking Machine arose as if the interview were at an end, and Hatch also arose, reluctantly. An idea was beginning to dawn in his mind.

"Does it occur to you that there is any connection whatever between Henley and Miss Regnier?" he asked.

"It is possible," was the reply. "I had thought of that. If there is a connection it is not apparent yet."

"Then how—how was it she—she was killed, or killed herself, whichever may be true, and——"

"The attempt to kill Henley killed her. That's all I can say now."

"That all?" asked Hatch, after a pause.

"No. Warn Mr. Henley immediately that he is in grave danger. Remember the person who has planned this will probably go to any extreme. I don't know Mr. Henley, of course, but from the fact that he always had a light at night I gather that he is a timid sort of man—not necessarily a coward, but a man lacking in stamina—therefore, one who might better disappear for a week or so until the

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mystery is cleared up. Above all, impress upon him the importance of the warning."

The Thinking Machine opened his pocketbook and took from it the scarlet thread which he had picked from the rope of the flagpole.

"Here, I believe, is the real clew to the problem," he explained to Hatch. "What does it seem to be?"

Hatch examined it closely.

"I should say a strand from a Turkish bath robe," was his final judgment.

"Possibly. Ask some cloth expert what he makes of it, then if it sounds promising look into it. Find out if by any possibility it can be any part of any garment worn by any person in the apartment house."

"But it's so slight——" Hatch began.

"I know," the other interrupted, tartly. "It's slight, but I believe it is a part of the wearing apparel of the person, man or woman, who has four times attempted to kill Mr. Henley and who did kill the girl. Therefore, it is important."

Hatch looked at him quickly.

"Well, how—in what manner—did it come where you found it?"

"Simple enough," said the scientist. "It is a wonder that there were not more pieces of it—that's all."

Perplexed by his instructions, but confident of results, Hatch left The Thinking Machine. What possible connection could this tiny bit of scarlet

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thread, found on a flagpole, have with some one shutting off the gas in Henley's rooms? How did any one go into Henley's rooms to shut off the gas? How was it Miss Regnier was dead? What was the manner of her death?

A cloth expert in a great department store turned his knowledge on the tiny bit of scarlet for the illumination of Hatch, but he could go no further than to say that it seemed to be part of a Turkish bath robe.

"Man or woman's?" asked Hatch.

"The material from which bath robes are made is the same for both men and women," was the reply. "I can say nothing else. Of course there's not enough of it to even guess at the pattern of the robe."

Then Hatch went to the financial district and was ushered into the office of Weldon Henley, a slender, handsome man of thirty-two or three years, pallid of face and nervous in manner. He still showed the effect of the gas poisoning, and there was even a trace of a furtive fear—fear of something, he himself didn't know what—in his actions.

Henley talked freely to the newspaper man of certain things, but of other things was resentfully reticent. He admitted his engagement to Miss Lipscomb, and finally even admitted that Miss Lipscomb's hand had been sought by another man, Regnault Cabell, formerly of Virginia.

"Could you give me his address?" asked Hatch.

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"He lives in the same apartment house with me—two floors above," was the reply.

Hatch was startled; startled more than he would have cared to admit.

"Are you on friendly terms with him?" he asked.

"Certainly," said Henley. "I won't say anything further about this matter. It would be unwise for obvious reasons."

"I suppose you consider that this turning on of the gas was an attempt on your life?"

"I can't suppose anything else."

Hatch studied the pallid face closely as he asked the next question.

"Do you know Miss Regnier was found dead to-day?"

"Dead?" exclaimed the other, and he arose. "Who—what—who is she?"

It seemed a distinct effort for him to regain control of himself.

The reporter detailed then the circumstances of the finding of the girl's body, and the broker listened without comment. From that time forward all the reporter's questions were either parried or else met with a flat refusal to answer. Finally Hatch repeated to him the warning which he had from The Thinking Machine, and feeling that he had accomplished little, went away.

At eight o'clock that night—a night of complete darkness—Henley was found unconscious, lying in a little used walk in the Common. There was a bullet

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hole through his left shoulder, and he was bleeding profusely. He was removed to the hospital, where he regained consciousness for just a moment.

"Who shot you?" he was asked.

"None of your business," he replied, and lapsed into unconsciousness.

IV

ENTIRELY unaware of this latest attempt on the life of the broker, Hutchinson Hatch steadily pursued his investigations. They finally led him to an intimate friend of Regnault Cabell. The young Southerner had apartments on the fourth floor of the big house off Commonwealth Avenue, directly over those Henley occupied, but two flights higher up. This friend was a figure in the social set of the Back Bay. He talked to Hatch freely of Cabell.

"He's a good fellow," he explained, "one of the best I ever met, and comes of one of the best families Virginia ever had—a true F. F. V. He's pretty quick tempered and all that, but an excellent chap, and everywhere he has gone here he has made friends."

"He used to be in love with Miss Lipscomb of Virginia, didn't he?" asked Hatch, casually.

"Used to be?" the other repeated with a laugh. "He *is* in love with her. But recently he understood that she was engaged to Weldon Henley, a broker—you may have heard of him?—and that, I suppose,

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has dampened his ardor considerably. As a matter of fact, Cabell took the thing to heart. He used to know Miss Lipscomb in Virginia—she comes from another famous family there—and he seemed to think he had a prior claim on her."

Hatch heard all these things as any man might listen to gossip, but each additional fact was sinking into his mind, and each additional fact led his suspicions on deeper into the channel they had chosen.

"Cabell is pretty well to do," his informant went on, "not rich as we count riches in the North, but pretty well to do, and I believe he came to Boston because Miss Lipscomb spent so much of her time here. She is a beautiful young woman of twenty-two and extremely popular in the social world everywhere, particularly in Boston. Then there was the additional fact that Henley was here."

"No chance at all for Cabell?" Hatch suggested.

"Not the slightest," was the reply. "Yet despite the heartbreak he had, he was the first to congratulate Henley on winning her love. And he meant it, too."

"What's his attitude toward Henley now?" asked Hatch. His voice was calm, but there was an underlying tense note imperceptible to the other.

"They meet and speak and move in the same set. There's no love lost on either side, I don't suppose, but there is no trace of any ill feeling."

"Cabell doesn't happen to be a vindictive sort of man?"

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"Vindictive?" and the other laughed. "No. He's like a big boy, forgiving, and all that; hot-tempered, though. I could imagine him in a fit of anger making a personal matter of it with Henley, but I don't think he ever did."

The mind of the newspaper man was rapidly focusing on one point; the rush of thoughts, questions and doubts silenced him for a moment. Then:

"How long has Cabell been in Boston?"

"Seven or eight months—that is, he has had apartments here for that long—but he has made several visits South. I suppose it's South. He has a trick of dropping out of sight occasionally. I understand that he intends to go South for good very soon. If I'm not mistaken, he is trying now to rent his suite."

Hatch looked suddenly at his informant; an idea of seeing Cabell and having a legitimate excuse for talking to him had occurred to him.

"I'm looking for a suite," he volunteered at last. "I wonder if you would give me a card of introduction to him? We might get together on it."

Thus it happened that half an hour later, about ten minutes past nine o'clock, Hatch was on his way to the big apartment house. In the office he saw the manager."

"Heard the news?" asked the manager.

"No," Hatch replied. "What is it?"

"Somebody's shot Mr. Henley as he was passing through the Common early to-night."

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Hatch whistled his amazement.

"Is he dead?"

"No, but he is unconscious. The hospital doctors say it is a nasty wound, but not necessarily dangerous."

"Who shot him? Do they know?"

"He knows, but he won't say."

Amazed and alarmed by this latest development, an accurate fulfillment of The Thinking Machine's prophecy, Hatch stood thoughtful for a moment, then recovering his composure a little asked for Cabell.

"I don't think there's much chance of seeing him," said the manager. "He's going away on the midnight train—going South, to Virginia."

"Going away to-night?" Hatch gasped.

"Yes; it seems to have been rather a sudden determination. He was talking to me here half an hour or so ago, and said something about going away. While he was here the telephone boy told me that Henley had been shot; they had 'phoned from the hospital to inform us. Then Cabell seemed greatly agitated. He said he was going away to-night, if he could catch the midnight train, and now he's packing."

"I suppose the shooting of Henley upset him considerably?" the reporter suggested.

"Yes, I guess it did," was the reply. "They moved in the same set and belonged to the same clubs."

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The manager sent Hatch's card of introduction to Cabell's apartments. Hatch went up and was ushered into a suite identical with that of Henley's in every respect save in minor details of furnishings. Cabell stood in the middle of the floor, with his personal belongings scattered about the room; his valet, evidently a Frenchman, was busily engaged in packing.

Cabell's greeting was perfunctorily cordial; he seemed agitated. His face was flushed and from time to time he ran his fingers through his long, brown hair. He stared at Hatch in a preoccupied fashion, then they fell into conversation about the rent of the apartments.

"I'll take almost anything reasonable," Cabell said hurriedly. "You see, I am going away to-night, rather more suddenly than I had intended, and I am anxious to get the lease off my hands. I pay two hundred dollars a month for these just as they are."

"May I look them over?" asked Hatch.

He passed from the front room into the next. Here, on a bed, was piled a huge lot of clothing, and the valet, with deft fingers, was brushing and folding, preparatory to packing. Cabell was directly behind him.

"Quite comfortable, you see," he explained. "There's room enough if you are alone. Are you?"

"Oh, yes," Hatch replied.

"This other room here," Cabell explained, "is

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not in very tidy shape now. I have been out of the city for several weeks, and—— What's the matter?" he demanded suddenly.

Hatch had turned quickly at the words and stared at him, then recovered himself with a start.

"I beg your pardon," he stammered. "I rather thought I saw you in town here a week or so ago—of course I didn't know you—and I was wondering if I could have been mistaken."

"Must have been," said the other easily. "During the time I was away a Miss ——, a friend of my sister's, occupied the suite. I'm afraid some of her things are here. She hasn't sent for them as yet. She occupied this room, I think; when I came back a few days ago she took another place and all her things haven't been removed."

"I see," remarked Hatch, casually. "I don't suppose there's any chance of her returning here unexpectedly if I should happen to take her apartments?"

"Not the slightest. She knows I am back, and thinks I am to remain. She was to send for these things."

Hatch gazed about the room ostentatiously. Across a trunk lay a Turkish bath robe with a scarlet stripe in it. He was anxious to get hold of it, to examine it closely. But he didn't dare to, then. Together they returned to the front room.

"I rather like the place," he said, after a pause, "but the price is——"

"Just a moment," Cabell interrupted. "Jean,

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before you finish packing that suit case be sure to put my bath robe in it. It's in the far room."

Then one question was settled for Hatch. After a moment the valet returned with the bath robe, which had been in the far room. It was Cabell's bath robe. As Jean passed the reporter an end of the robe caught on a corner of the trunk, and, stopping, the reporter unfastened it. A tiny strand of thread clung to the metal; Hatch detached it and stood idly twirling it in his fingers.

"As I was saying," he resumed, "I rather like the place, but the price is too much. Suppose you leave it in the hands of the manager of the house——"

"I had intended doing that," the Southerner interrupted.

"Well, I'll see him about it later," Hatch added.

With a cordial, albeit pre-occupied, handshake, Cabell ushered him out. Hatch went down in the elevator with a feeling of elation; a feeling that he had accomplished something. The manager was waiting to get into the lift.

"Do you happen to remember the name of the young lady who occupied Mr. Cabell's suite while he was away?" he asked.

"Miss Austin," said the manager, "but she's not young. She was about forty-five years old, I should judge."

"Did Mr. Cabell have his servant Jean with him?"

"Oh, no," said the manager. "The valet gave

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up the suite to Miss Austin entirely, and until Mr. Cabell returned occupied a room in the quarters we have for our own employees."

"Was Miss Austin ailing any way?" asked Hatch. "I saw a large number of medicine bottles upstairs."

"I don't know what was the matter with her," replied the manager, with a little puzzled frown. "She certainly was not a woman of sound mental balance—that is, she was eccentric, and all that. I think rather it was an act of charity for Mr. Cabell to let her have the suite in his absence. Certainly we didn't want her."

Hatch passed out and burst in eagerly upon The Thinking Machine in his laboratory.

"Here," he said, and triumphantly he extended the tiny scarlet strand which he had received from The Thinking Machine, and the other of the identical color which came from Cabell's bath robe. "Is that the same?"

The Thinking Machine placed them under the microscope and examined them immediately. Later he submitted them to a chemical test.

"*It is the same,*" he said, finally.

"Then the mystery is solved," said Hatch, conclusively.

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V

THE THINKING MACHINE stared steadily into the eager, exultant eyes of the newspaper man until Hatch at last began to fear that he had been precipitate. After awhile, under close scrutiny, the reporter began to feel convinced that he had made a mistake —he didn't quite see where, but it must be there, and the exultant manner passed. The voice of The Thinking Machine was like a cold shower.

"Remember, Mr. Hatch," he said, critically, "that unless every possible question has been considered one cannot boast of a solution. Is there any possible question lingering yet in your mind?"

The reporter silently considered that for a moment, then:

"Well, I have the main facts, anyway. There may be one or two minor questions left, but the principal ones are answered."

"Then tell me, to the minutest detail, what you have learned, what has happened."

Professor Van Dusen sank back in his old, familiar pose in the large arm chair and Hatch related what he had learned and what he surmised. He related, too, the peculiar circumstances surrounding the wounding of Henley, and right on down to the beginning and end of the interview with Cabell in the latter's apartments. The Thinking Machine was silent for a time, then there came a host of questions.

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"Do you know where the woman—Miss Austin—is now?" was the first.

"No," Hatch had to admit.

"Or her precise mental condition?"

"No."

"Or her exact relationship to Cabell?"

"No."

"Do you know, then, what the valet, Jean, knows of the affair?"

"No, not that," said the reporter, and his face flushed under the close questioning. "He was out of the suite every night."

"Therefore might have been the very one who turned on the gas," the other put in testily.

"So far as I can learn, nobody could have gone into that room and turned on the gas," said the reporter, somewhat aggressively. "Henley barred the doors and windows and kept watch, night after night."

"Yet the moment he was exhausted and fell asleep the gas was turned on to kill him," said The Thinking Machine; "thus we see that *he was watched more closely than he watched.*"

"I see what you mean now," said Hatch, after a long pause.

"I should like to know what Henley and Cabell and the valet knew of the girl who was found dead," The Thinking Machine suggested. "Further, I should like to know if there was a good-sized mirror—not one set in a bureau or dresser—either in Hen-

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ley's room or the apartments where the girl was found. Find out this for me and — never mind. I'll go with you."

The scientist left the room. When he returned he wore his coat and hat. Hatch arose mechanically to follow. For a block or more they walked along, neither speaking. The Thinking Machine was the first to break the silence:

"You believe Cabell is the man who attempted to kill Henley?"

"Frankly, yes," replied the newspaper man.

"Why?"

"Because he had the motive—disappointed love."

"How?"

"I don't know," Hatch confessed. "The doors of the Henley suite were closed. I don't see how anybody passed them."

"And the girl? Who killed her? How? Why?"

Disconsolately Hatch shook his head as he walked on. The Thinking Machine interpreted his silence aright.

"Don't jump at conclusions," he advised sharply. "You are confident Cabell was to blame for this—and he might have been, I don't know yet—but you can suggest nothing to show how he did it. I have told you before that imagination is half of logic."

At last the lights of the big apartment house where Henley lived came in sight. Hatch shrugged his shoulders. He had grave doubts—based on what

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he knew—whether The Thinking Machine would be able to see Cabell. It was nearly eleven o'clock and Cabell was to leave for the South at midnight.

"Is Mr. Cabell here?" asked the scientist of the elevator boy.

"Yes, just about to go, though. He won't see anyone."

"Hand him this note," instructed The Thinking Machine, and he scribbled something on a piece of paper. "He'll see us."

The boy took the paper and the elevator shot up to the fourth floor. After awhile he returned.

"He'll see you," he said.

"Is he unpacking?"

"After he read your note twice he told his valet to unpack," the boy replied.

"Ah, I thought so," said The Thinking Machine.

With Hatch, mystified and puzzled, following, The Thinking Machine entered the elevator to step out a second or so later on the fourth floor. As they left the car they saw the door of Cabell's apartment standing open; Cabell was in the door. Hatch traced a glimmer of anxiety in the eyes of the young man.

"Professor Van Dusen?" Cabell inquired.

"Yes," said the scientist. "It was of the utmost importance that I should see you, otherwise I should not have come at this time of night."

With a wave of his hand Cabell passed that detail.

"I was anxious to get away at midnight," he ex-

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plained, "but, of course, now I shan't go, in view of your note. I have ordered my valet to unpack my things, at least until to-morrow."

The reporter and the scientist passed into the luxuriously furnished apartments. Jean, the valet, was bending over a suit case as they entered, removing some things he had been carefully placing there. He didn't look back or pay the least attention to the visitors.

"This is your valet?" asked The Thinking Machine.

"Yes," said the young man.

"French, isn't he?"

"Yes."

"Speak English at all?"

"Very badly," said Cabell. "I use French when I talk to him."

"Does he know that you are accused of murder?" asked The Thinking Machine, in a quiet, conversational tone.

The effect of the remark on Cabell was startling. He staggered back a step or so as if he had been struck in the face, and a crimson flush overspread his brow. Jean, the valet, straightened up suddenly and looked around. There was a queer expression, too, in his eyes; an expression which Hatch could not fathom.

"Murder?" gasped Cabell, at last.

"Yes, he speaks English all right," remarked The Thinking Machine. "Now, Mr. Cabell, will you

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please tell me just who Miss Austin is, and where she is, and her mental condition? Believe me, it may save you a great deal of trouble. What I said in the note is not exaggerated."

The young man turned suddenly and began to pace back and forth across the room. After a few minutes he paused before The Thinking Machine, who stood impatiently waiting for an answer.

"I'll tell you, yes," said Cabell, firmly. "Miss Austin is a middle-aged woman whom my sister befriended several times—was, in fact, my sister's governess when she was a child. Of late years she has not been wholly right mentally, and has suffered a great deal of privation. I had about concluded arrangements to put her in a private sanitarium. I permitted her to remain in these rooms in my absence, South. I did not take Jean—he lived in the quarters of the other employees of the place, and gave the apartment entirely to Miss Austin. It was simply an act of charity."

"What was the cause of your sudden determination to go South to-night?" asked the scientist.

"I won't answer that question," was the sullen reply.

There was a long, tense silence. Jean, the valet, came and went several times.

"How long has Miss Austin known Mr. Henley?"

"Presumably since she has been in these apartments," was the reply.

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"Are you sure *you* are not Miss Austin?" demanded the scientist.

The question was almost staggering, not only to Cabell, but to Hatch. Suddenly, with flaming face, the young Southerner leaped forward as if to strike down The Thinking Machine.

"That won't do any good," said the scientist, coldly. "Are you sure you are not Miss Austin?" he repeated.

"Certainly I am not Miss Austin," respondéd Cabell, fiercely.

"Have you a mirror in these apartments about twelve inches by twelve inches?" asked The Thinking Machine, irrelevantly.

"I—I don't know," stammered the young man. "I—have we, Jean?"

"*Oui,*" replied the valet.

"Yes," snapped The Thinking Machine. "Talk English, please. May I see it?"

The valet, without a word but with a sullen glance at the questioner, turned and left the room. He returned after a moment with the mirror. The Thinking Machine carefully examined the frame, top and bottom and on both sides. At last he looked up; again the valet was bending over a suit case.

"Do you use gas in these apartments?" the scientist asked suddenly.

"No," was the bewildered response. "What is all this, anyway?"

Without answering, The Thinking Machine drew

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a chair up under the chandelier where the gas and electric fixtures were and began to finger the gas tips. After awhile he climbed down and passed into the next room, with Hatch and Cabell, both hopelessly mystified, following. There the scientist went through the same process of fingering the gas jets. Finally, one of the gas tips came out in his hand.

"Ah," he exclaimed, suddenly, and Hatch knew the note of triumph in it. The jet from which the tip came was just on a level with his shoulder, set between a dressing table and a window. He leaned over and squinted at the gas pipe closely. Then he returned to the room where the valet was.

"Now, Jean," he began, in an even, calm voice, "please tell me *if you did or did not kill Miss Regnier purposely?*"

"I don't know what you mean," said the servant sullenly, angrily, as he turned on the scientist.

"You speak very good English now," was The Thinking Machine's terse comment. "Mr. Hatch, lock the door and use this 'phone to call the police."

Hatch turned to do as he was bid and saw a flash of steel in young Cabell's hand, which was drawn suddenly from a hip pocket. It was a revolver. The weapon glittered in the light, and Hatch flung himself forward. There was a sharp report, and a bullet was buried in the floor.

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VI

THEN came a fierce, hard fight for possession of the revolver. It ended with the weapon in Hatch's hand, and both he and Cabell blowing from the effort they had expended. Jean, the valet, had turned at the sound of the shot and started toward the door leading into the hall. The Thinking Machine had stepped in front of him, and now stood there with his back to the door. Physically he would have been a child in the hands of the valet, yet there was a look in his eyes which stopped him.

"Now, Mr. Hatch," said the scientist quietly, a touch of irony in his voice, "hand me the revolver, then 'phone for Detective Mallory to come here immediately. Tell him we have a murderer—and if he can't come at once get some other detective whom you know."

"Murderer!" gasped Cabell.

Uncontrollable rage was blazing in the eyes of the valet, and he made as if to throw The Thinking Machine aside, despite the revolver, when Hatch was at the telephone. As Jean started forward, however, Cabell stopped him with a quick, stern gesture. Suddenly the young Southerner turned on The Thinking Machine; but it was with a question.

"What does it all mean?" he asked, bewildered.

"It means that that man there," and The Thinking Machine indicated the valet by a nod of his head,

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" is a murderer—that he killed Louise Regnier; that he shot Weldon Henley on Boston Common, and that, with the aid of Miss Regnier, he had four times previously attempted to kill Mr. Henley. Is he coming, Mr. Hatch?"

"Yes," was the reply. "He says he'll be here directly."

"Do you deny it?" demanded The Thinking Machine of the valet.

"I've done nothing," said the valet sullenly. "I'm going out of here."

Like an infuriated animal he rushed forward. Hatch and Cabell seized him and bore him to the floor. There, after a frantic struggle, he was bound and the other three men sat down to wait for Detective Mallory. Cabell sank back in his chair with a perplexed frown on his face. From time to time he glanced at Jean. The flush of anger which had been on the valet's face was gone now; instead there was the pallor of fear.

"Won't you tell us?" pleaded Cabell impatiently.

"When Detective Mallory comes and takes his prisoner," said The Thinking Machine.

Ten minutes later they heard a quick step in the hall outside and Hatch opened the door. Detective Mallory entered and looked from one to another inquiringly.

"That's your prisoner, Mr. Mallory," said the scientist, coldly. "I charge him with the murder of Miss Regnier, whom you were so confident com-

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mitted suicide; I charge him with five attempts on the life of Weldon Henley, four times by gas poisoning, in which Miss Regnier was his accomplice, and once by shooting. He is the man who shot Mr. Henley."

The Thinking Machine arose and walked over to the prostrate man, handing the revolver to Hatch. He glared down at Jean fiercely.

"Will you tell how you did it or shall I?" he demanded.

His answer was a sullen, defiant glare. He turned and picked up the square mirror which the valet had produced previously.

"That's where the screw was, isn't it?" he asked, as he indicated a small hole in the frame of the mirror. Jean stared at it and his head sank forward hopelessly. "And this is the bath robe you wore, isn't it?" he demanded again, and from the suit case he pulled out the garment with the scarlet stripe.

"I guess you got me all right," was the sullen reply.

"It might be better for you if you told the story then?" suggested The Thinking Machine.

"You know so much about it, tell it yourself."

"Very well," was the calm rejoinder. "I will. If I make any mistake you will correct me."

For a long time no one spoke. The Thinking Machine had dropped back into a chair and was staring through his thick glasses at the ceiling; his finger tips were pressed tightly together. At last he began:

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"Will you tell how you did it or shall I?"

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"There are certain trivial gaps which only the imagination can supply until the matter is gone into more fully. I should have supplied these myself, but the arrest of this man, Jean, was precipitated by the attempted hurried departure of Mr. Cabell for the South to-night, and I did not have time to go into the case to the fullest extent.

"Thus, we begin with the fact that there were several clever attempts made to murder Mr. Henley. This was by putting out the gas which he habitually left burning in his room. It happened four times in all; thus proving that it was an attempt to kill him. If it had been only once it might have been accident, even twice it might have been accident, but the same accident does not happen four times at the same time of night.

"Mr. Henley finally grew to regard the strange extinguishing of the gas as an effort to kill him, and carefully locked and barred his door and windows each night. He believed that some one came into his apartments and put out the light, leaving the gas flow. This, of course, was not true. Yet the gas was put out. How? My first idea, a natural one, was that it was turned off for an instant at the meter, when the light would go out, then turned on again. This, I convinced myself, was not true. Therefore still the question—how?

"It is a fact—I don't know how widely known it is—but it is a fact that every gas light in this house might be extinguished at the same time from this

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room without leaving it. How? Simply by removing the gas jet tip and blowing into the gas pipe. It would not leave a jet in the building burning. It is due to the fact that the lung power is greater than the pressure of the gas in the pipes, and forces it out.

"Thus we have the method employed to extinguish the light in Mr. Henley's rooms, and all the barred and locked doors and windows would not stop it. At the same time it threatened the life of every other person in the house—that is, every other person who used gas. It was probably for this reason that the attempt was always made late at night, I should say three or four o'clock. That's when it was done, isn't it?" he asked suddenly of the valet.

Staring at The Thinking Machine in open-mouthed astonishment the valet nodded his acquiescence before he was fully aware of it.

"Yes, that's right," The Thinking Machine resumed complacently. "This was easily found out—comparatively. The next question was how was a watch kept on Mr. Henley? It would have done no good to extinguish the gas before he was asleep, or to have turned it on when he was not in his rooms. It might have led to a speedy discovery of just how the thing was done.

"There's a spring lock on the door of Mr. Henley's apartment. Therefore it would have been impossible for anyone to peep through the keyhole. There are no cracks through which one might see.

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How was this watch kept? How was the plotter to satisfy himself positively of the time when Mr. Henley was asleep? How was it the gas was put out at no time of the score or more nights Mr. Henley himself kept watch? Obviously he was watched through a window.

"No one could climb out on the window ledge and look into Mr. Henley's apartments. No one could see into that apartment from the street—that is, could see whether Mr. Henley was asleep or even in bed. They could see the light. Watch was kept with the aid offered by the flagpole, supplemented with a mirror—this mirror. A screw was driven into the frame—it has been removed now—it was swung on the flagpole rope and pulled out to the end of the pole, facing the building. To a man standing in the hall window of the third floor it offered precisely the angle necessary to reflect the interior of Mr. Henley's suite, possibly even showed him in bed through a narrow opening in the curtain. There is no shade on the windows of that suite; heavy curtains instead. Is that right?"

Again the prisoner was surprised into a mute acquiescence.

"I saw the possibility of these things, and I saw, too, that at three or four o'clock in the morning it would be perfectly possible for a person to move about the upper halls of this house without being seen. If he wore a heavy bath robe, with a hood, say, no one would recognize him even if he were seen, and be-

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