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In our fancied security against scientific criminals, do we ever visualize the hopeless panic that would attend the appearance of a machine controlled by a ruthless enemy against society? Our well-known artist, Ruger, has pictured such a scene on the cover of this issue, in which a robot attacks the home of Inspector Gibbons, who is trailing the robot's master. This exciting story, THE ROBOT TERROR, by Melbourne Huff, starts on page 216.

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**Now On Sale**
"Joe!"

"Oh, Ethel, please let me finish this chapter!"

It happens almost every evening. No matter where we are going he will stand or sit with one shoe in his hand, his neckties half tied—or untied—and devour those last few words. . . . But I can’t blame him. A movie or a waiting host—even the departure of a train—seem unimportant when one is swallowed up in the action of a story or the startling revelations of a vivid biography.

"What are you doing?" I’ll call if he is out of sight when he should be dressing.

"Umph," is usually the first answer.

"Joe. You’re reading."

He gives that accusation twice as much consideration: "Um—humph."

"Put up your book; we’re late!"

Then: "Just let me finish this chapter!"

But our alibi for tardiness at parties is always sufficient excuse. "The Guild book just came and Joe had to start it. I was lucky to get him out of the house at all."

Joe’s side of the situation is almost as dark. "Oh," he says, "blame me for being late. I was doing the reading. Well, this time, maybe. But how about They Stopped to Pray? And Queen Elizabeth. Every time I tuned in on the fights at the Garden she would say, ‘Joe, please shut off the radio.’ Oh, I’m not the only Guild fan in our house. We looked for Magic Island three days last spring—and finally found it under the cook’s pillow."

The Guild Appeal Is Universal

Wherever mail can be delivered, the arrival of the Guild Book is THE event of the month. First, every member of the family is anxious to see what it is. Before the mailman is out of the yard, the box is open, the title page scanned, the binding examined. And WINGS is almost as popular as the selection of the Editorial Board.

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Science and the Criminal Mind
By Hugo Gernsback

It may be said as an axiom that crime is an abnormal condition. By this, we mean that crime is not a usual human behavior, but rather a most unusual one. If we believe this, we should also treat crime—and particularly the criminal mind—as an unusual phenomenon, rather than take it for granted.

Many scientific investigators have come to the conclusion that our present treatment of criminals belongs to the prehistoric ages. In treating ordinary diseases the physician of scientific methods is always more concerned with the cause than with effect. If a doctor can find out what produces a disease, the battle is practically won and the problem comes near to solution. Formerly, we waited until a disease appeared; and then treated the disease as well as we knew how, usually with little result. Nowadays we prevent diseases; to mention only one of many preventatives—vaccination, which is performed simply to ward off smallpox. It is much simpler, more economical and, of course, more productive from a scientific standpoint to ward off the approach of disease, rather than treat a disease after it has gotten under way.

If our axiom is right, and we contend as we do that crime is an abnormal condition, we should not wait till the crime has been committed—and then show our ignorance by condemning the criminal, and either putting him in jail or sentencing him to death, as the case may be.

And it is here that, during the next hundred years, civilization will no doubt be greatly benefited by the research scientist, whose mission it will be to forestall crime, rather than wait till the crime has been committed. Today, we are as yet uncertain what produces crime, although we have a faint inkling what the underlying causes are.

It is quite possible that we may always have with us crimes, such as, for instance, those committed under the urge of passion, which come under the classification of unpremeditated crimes. But practically all other phases of crime are, without doubt, purely mental conditions that can and will be combated by science.

Such a simple thing as a fall from a chair by an infant may be the direct cause of (Continued on page 284)
From the observatories of science to the inquiries of a detective: the utility of the seismograph is demonstrated by the famous scientific detective, Craig Kennedy.

CAN ghosts walk? And if they do, can their footsteps be recorded on a machine? And are the spirits of the phantom world subject to the same physical phenomena as our human bodies? These are tantalizing questions which arise during the thrilling and complex mystery into which Craig Kennedy and Jameson are plunged without warning.

As usual, Craig foresees potentialities and possibilities unrecognized by ordinary minds, and with his profound knowledge of applied sciences, is able to approach the enormous tasks confronting him from a new and scientific angle. This is one of the finest, as well as scientific, of Arthur B. Reeve’s stories.

“Dr. James Hanson, Coroner’s Physician, Criminal Courts Building,” read Craig Kennedy, as he held a visitor’s card in his hand. Then to the visitor he added, “Take a chair, Doctor.”

The physician thanked him and sat down. “Professor Kennedy,” he began, “I have been referred to you by Inspector O’Connor of the Detective Bureau. It may seem an impertinence for a city official to call on you for assistance, but—well, you see, I’m completely floored. I think, too, that the case will interest you. It’s the Vandam case.”

If Dr. Hanson had suddenly turned on the current of an induction coil and I had been holding the handles I don’t think the thrill I received could have been any more sudden. The Vandam case was the sensation of the moment, a triple puzzle, as both Kennedy and myself had agreed. Was it suicide, murder, or sudden death? Every theory, so far, had proved unsatisfactory.

“I have read only what the newspapers have published,” replied Craig to the doctor’s look of inquiry. “You see, my friend Jameson here is on the staff of the Star, and we are in the habit of discussing these cases.”

“Very glad to meet you, Mr. Jameson,” exclaimed Dr. Hanson at the implied introduction. “The relations between my office and your paper have always been very satisfactory, I can assure you.”

“Thank you, Doctor. Depend on me to keep them so,” I replied, shaking his proffered hand.

“Now, as to the case,” continued the doctor slowly. “Here is a beautiful woman in the prime of life, the wife of a very wealthy retired banker considerably older than herself—perhaps nearly seventy—of very fine family. Of course you have read it all, but let me sketch it so you will look at it from my point of view. This woman, apparently in good health, with every luxury money can buy, is certain within a very few years, from her dower
"See, I release this lever—now, let no one in the room move."

Seismograph Adventure

rights, to be numbered among the richest women in America. Yet she is discovered in the middle of the night by her maid, seated at the table in the library of her home, unconscious. She never regains consciousness, but dies the following morning.

"The coroner is called in, and, as his physician, I must advise him. The family physician has pronounced it due to natural causes, the uremic coma of latent kidney trouble. Some of the newspapers, I think the Star among them, have hinted at suicide. And then there are others, who have flatly asserted it was murder."

The coroner's physician paused to see if we were following him. Needless to say Kennedy was ahead of him.

"Have you any facts in your possession which have not been given to the public yet?" asked Craig.

The Death Capsule

"I'm coming to that in a moment," replied Dr. Hanson. "Let me sketch the case first. Henry Vandam had become—well, very eccentric in his
old age, we will say. Among his eccentricities none seems to have impressed the newspapers more than his devotion to a medium and her manager, Mrs. May Popper and Mr. Howard Farrington. Now, of course, the case does not go into the truth or falsity of spiritualism, you understand. You have your opinion, and I have mine. What this aspect of the case involves is merely the character of the medium and her manager. You know, of course, that Henry Vandam is completely under their control.”

He paused again, to emphasize the point.

“You asked me if I was in possession of any facts which have not been given to the press. Yes, I am. And just there lies the trouble. They are so very conflicting as to be almost worse than useless, as far as I can see. We found near the unfortunate woman a small pill-box with three capsules still in it. It was labelled ‘One before retiring’ and bore the name of a certain druggist and the initials ‘Dr. C. W. H.’ Now, I am convinced that the initials are merely a blind and do not give any clue. The druggist says that a maid from the Vandam house brought in the prescription, which of course he filled. It is a harmless enough prescription—contains, among other things, four and a half grains of quinine and one-sixth of a grain of morphine. Six capsules were prepared altogether.

“Now, of course my first thought was that she might have taken several capsules at once and that it was a case of accidental morphine poisoning, or it might even be suicide. But it cannot be either, to my mind, for only three of the six capsules are gone. No doubt, also, you are acquainted with the fact that the one invariable symptom of morphine poisoning is the contraction of the pupils of the eyes to a pin-point—often so that they are unrecognisable. Moreover, the pupils are symmetrically contracted, and this symptom is the one invariably present in coma from morphine poisoning and distinguishes it from all other forms of death.

“The other hand, in the coma of kidney disease one pupil is dilated and the other contracted—they are unsymmetrical. But in this case both the pupils are normal, or only a very little dilated, and they are symmetrical. So far we have been able to find no other poison than the slight traces of morphine remaining in the stomach after so many hours. I think you are enough of a chemist to know that no doctor would dare go on the stand and swear to death from morphine poisoning in the face of such evidence against him. The veriest tyro of an expert toxicologist could too easily confute him.”

Kennedy nodded. “Have you the pill-box and the prescription?”

“I have,” replied Dr. Hanson, placing them on the table.

Kennedy scrutinised them sharply. “I shall need these,” he said. “Of course you understand I will take very good care of them. Is there anything else of importance?”

“Really, I don’t know,” said the physician dubiously. “It’s rather out of my province, but perhaps you would think it important. It’s mighty uncanny anyhow. Henry Vandam, as you doubtless know, was much more deeply interested in the work of this medium than was his wife. Perhaps Mrs. Vandam was a bit jealous—I don’t know. But she, too, had an interest in spiritualism, though he was much more deeply influenced by Mrs. Popper than she.

“Here’s the strange part of it. The old man believes so thoroughly in rappings and materializations that he constantly keeps a notebook in his pocket in which he records all the materializations he thinks he sees and the rappings he hears, along with the time and place. Now it so happened that on the night Mrs. Vandam was taken ill, he had retired—I believe in another part of the house, where he has a regular séance-room. According to his story, he was awakened from a profound sleep by a series of rappings. As was his custom, he noted the time at which they occurred. Something made him uneasy, and he said to his ‘control’—at least this is his story: “John, is it about Mary’?

“A Ghostly Message

THREE raps answered ‘yes,’ the usual code.

“What is the matter? Is she ill?”

“The three answering raps were so vigorous that he sprang out of bed and called for his wife’s maid. The maid replied that Mrs. Vandam had not gone to bed yet, but that there was a light in the library and she would go to her mistress immediately. The next moment the house was awakened by the screams of the maid calling for help, that Mrs. Vandam was dying.

“That was three nights ago. On each of the two succeeding nights Henry Vandam says he has been awakened at precisely the same hour by a rapping, and on each night his ‘control’ has given him a message from his dead wife. As a man of science, I attribute the whole thing to an overwrought imagination. The original rappings may have been a mere coincidence with the fact of the condition of Mrs. Vandam. However, I give this to you for what it is worth.”

Craig said nothing, but, as was his habit, shaded his eyes with the tips of his fingers, resting his elbows on the arms of his chair. “I suppose,” he said, “you can give me the necessary authority to enter the Vandam house and look at the scene of these happenings?”

“Certainly,” assented the physician, “but you will find it a queer place. There are spirit paintings and spirit photographs in every room, and Vandam’s own part of the house—well, it’s creepy, that’s all I can say.”

“And also I suppose you have performed an autopsy on the body and will allow me to drop into your laboratory to-morrow morning and satisfy myself on this morphine point?”
“Certainly,” replied the coroner’s physician, “at any time you say.”

“At ten sharp, then, to-morrow I shall be there,” said Craig. “It is now eight-thirty. Do you think I can see Vandam to-night? What time do these rappings occur?”

“Why, yes, you surely will be able to see him to-night. He hasn’t stirred from the house since his wife died. He told me he momentarily expected messages from her direct when she had got strong enough in her new world. I believe they had some kind of a compact to that effect. The rappings come at twelve-thirty.”

“Ah, then I shall have plenty of time to run over to my laboratory before seeing Mr. Vandam and get some apparatus I have in mind. No, Doctor, you needn’t bother to go with me. Just give me a card of introduction. I’ll see you tomorrow at ten. Goodnight—oh, by the way, don’t give out any of the facts you have told me.”

“Jameson,” said Craig, when we were walking rapidly over toward the university, “this promises to be an uncommonly difficult case.”

“As I view it now,” I said, “I have suspicions of everybody concerned in it. Even the view of the Star, that it is a case of suicide due to overwrought nerves, may explain it.”

“It might even be a natural death,” Craig added. “And that would make it a greater mystery than ever—a case for psychical research. One thing that I am going to do to-night will tell me much, however.”

At the laboratory he unlocked a glass case and took out a little instrument which looked like two horizontal pendulums suspended by fine wires. There was a large magnet near each pendulum, and the end of each pendulum bore a needle which touched a circular drum driven by clock-work. Craig fussed with and adjusted the apparatus, while I said nothing, for I had long ago learned that in applying a new apparatus to doing old things Craig was as dumb as an oyster, until his work was crowned with success.

Spirit Rappings

We had no trouble in getting in to see Mr. Vandam in his séance-room. His face was familiar to me, for I had seen him in public a number of times, but it looked strangely altered. He was nervous, and showed his age very perceptibly.

It was as the coroner’s physician had said. The house was littered with reminders of the cult, books, papers, curious daubs of paintings handsomely framed, and photographs; hazy over-exposures, I should have called them, but Mr. Vandam took great pride in them, and Kennedy quite won him over by his admiration for them.

They talked about the rappings, and the old man explained where and when they occurred. They proceeded from a little cabinet or closet at one end of the room. It was evident that he was a thorough believer in them and in the messages they conveyed.

Craig carefully noted everything about the room and then fell to admiring the spirit photographs, if such they might be called.

“The best of all I do not display, they are too precious,” said the old man. “Would you like to see them?”

Craig assented eagerly, and Vandam left us for a moment to get them. In an instant Craig had entered the cabinet, and in a dark corner on the floor he deposited the mechanism he had brought from the laboratory. Then he resumed his seat, shutting the box in which he had brought the mechanism, so that it would not appear that he had left anything about the room.

Artfully he led the conversation along lines that interested the old man until he seemed to forget the hour. Not so, Craig. He knew it was nearing half-past twelve. The more they talked the more uncanny did this house and room of spirits seem to me. In fact, I was rapidly reaching the point where I could have sworn that once or twice something incorporeal brushed by me. I know now that it was purely imagination, but it shows what tricks the imagination can play on us.

Rap! rap! rap! rap! rap!

Five times came a curiously hollow noise from the cabinet. If it had been possible I should certainly have fled, it was so sudden and unexpected. The hall clock downstairs struck the half-hour in those chimes written by Händel for St. Paul’s.

Craig leaned over to me and whispered hoarsely, “Keep perfectly still—don’t move a hand or foot.”

The old man seemed utterly to have forgotten us. “Is that you, John?” he asked expectantly.

Rap! rap! rap! came the reply.

“Is Mary strong enough to speak to me tonight?”

Rap! rap!

“Is she happy?”

Rap! rap!

“What makes her unhappy? What does she want? Will you spell it out?”

Rap! rap! rap!

Then, after a pause, the rapping started slowly and distinctly to spell out words. It was so weird and uncanny that I scarcely breathed. Letter after letter the message came, nineteen raps for “s,” eight for “h,” five for “e,” according to the place in the alphabet, numerically, of the required letter. At last it was complete:

“She thinks you are not well. She asks you to have that prescription filled again.”

“Tell her I will do it to-morrow morning. Is there anything else?”

Rap! rap! came back faintly.

“John, John, don’t go yet,” pleaded the old man earnestly. It was easy to see how thoroughly he believed in “John,” as perhaps well he might after the warning of his wife’s death three nights before. “Won’t you answer one other question?”

Fainter, almost imperceptibly, came a rap! rap!
Craig’s Apparatus

For several minutes the old man sat absorbed in thought, trance-like. Then, gradually, he seemed to realize that we were in the room with him. With difficulty he took up the thread of the conversation where the rappings had broken it.

“We were talking about the photographs,” he said slowly. “I hope soon to get one of my wife as she is now that she is transfigured. John has promised me one soon.”

He was gathering up his treasures preparatory to putting them back in their places of safe-keeping. The moment he was out of the room Craig darted into the cabinet and replaced his mechanism in the box. Then he began softly to tap the walls. At last he found the side that gave a noise similar to that which we had heard, and he seemed pleased to have found it, for he hastily sketched on an old envelope a plan of that part of the house, noting on it the location of the side of the cabinet.

Kennedy almost dragged me back to our apartment, he was in such a hurry to examine the apparatus at his leisure. He turned on all the lights, took the thing out of its case, and stripped off the two sheets of ruled paper wound around the two revolving drums. He laid them flat on the table and studied them for some minutes with evidently growing satisfaction.

“At last he turned to me and said, “Walter, here is a ghost caught in the act.”

I looked dubiously at the irregular up-and-down scrawl on the paper, while he rang up the Homicide Bureau of the Central Office and left word for O’Connor to call him up the first thing in the morning.

Still eyeing with satisfaction the record traced on the sheets of paper, he lighted a cigarette in a matter-of-fact way and added: “It proves to be a very much flesh-and-blood ghost, this ‘John.’ It walked up to the wall back of that cabinet, rapped, listened to old Vandam, rapped some more, got the answer it wanted, and walked deliberately away. The cabinet, as you may have noticed, is in a corner of the room with one side along the hallway. The ghost must have been in the hall.”

“But who was it?”

“Not so fast, Walter,” laughed Craig. “Isn’t it enough for one night that we have found out that much?”

Fortunately I was tired, or I certainly should have dreamed of rappings and of “John” that night. I was awakened early by Kennedy talking with someone over the telephone. It was Inspector O’Connor.

Of course I heard only one side of the conversation, but as near as I could gather Kennedy was asking the inspector to obtain several samples of ink for him. I had not heard the first part of the conversation, and was considerably surprised when Kennedy hung up the receiver and said:

“Vandam had the prescription filled again early this morning, and it will soon be in the hands of O’Connor. I hope I haven’t spoiled things by acting too soon, but I don’t want to run the risk of a double tragedy.”

“Well,” I said, “it is incomprehensible to me. First I suspected suicide. Then I suspected murder. Now I almost suspect a murder and a suicide. The fact is, I don’t know just what I suspect. I’m like Dr. Hanson—floored. I wonder if Vandam would voluntarily take all the capsules at once in order to be with his wife?”

Poison?

“One of them alone would be quite sufficient if the ‘ghost’ should take a notion, as I think it will, to walk in the daytime,” replied Craig enigmatically. “I don’t want to run any chances, as I have said. I may be wrong in my theory of the case, Walter, so let us not discuss this phase of it until I have gone a step further and am sure of my ground. O’Connor’s man will get the capsules before Vandam has a chance to take the first one, anyhow. The ‘ghost’ had a purpose in that message, for O’Connor tells me that Vandam’s lawyer visited him yesterday and in all probability a new will is being made, perhaps has already been made.”

We breakfasted in silence and later rode down to the office of Dr. Hanson, who greeted us enthusiastically.

“I’ve solved it at last,” he cried, “and it’s easy.”

Kennedy looked gravely over the analysis which Dr. Hanson showed into his hand, and seemed very much interested in the probable quantity of morphine that must have been taken to yield such an analysis. The physician had a text-book open on his desk.

“Our old ideas of the infallible test of morphine poisoning are all exploded,” he said, excitedly beginning to read a passage he had marked in the book.

“I have thought that inequality of the pupils, that is to say, where they are not symmetrically contracted, is proof that a case is not one of narcotism, or morphine poisoning. But Professor Taylor has recorded a case of morphine poisoning in which the unsymmetrical contraction occurred.”

“There, now, until I happened to run across that in one of the authorities I had supposed the symmetrical contraction of the pupils of the eyes to be the distinguishing symptom of morphine poisoning. Professor Kennedy, in my opinion we can, after all, make out our case as one of morphine poisoning.”

“Is that case in the book all you base your opinion on?” asked Craig with excessive politeness.

“Yes, sir,” replied the doctor reluctantly.

“Well,” said Kennedy quietly, “if you will investigate that case quoted from Professor Taylor, you will find that it has been proved that the patient had one glass eye!”
"Then my contention collapses and she was not poisoned!"

"No, I do not say that. All I say is that expert testimony would refute us as far as we have gone. But if you will let me make a few tests of my own I can readily clear up that end of the case, I now feel sure. Let me take these samples to my laboratory."

I was surprised when we ran into Inspector O'Connor waiting for us in the corridor of the Criminal Courts Building as we left the office of the coroner's physician. He rushed up to Kennedy and shook into his hand a pill-box in which six capsules rattled. Kennedy narrowly inspected the box, opened it, and looked thoughtfully at the six white capsules lying so innocently within.

"One of these capsules would have been worth hundreds of thousands of dollars to 'John'," said Craig contemplatively, as he shut the box and deposited it carefully in his inside vest pocket. "I don't believe I even said good morning to you, O'Connor," he continued. "I hope I haven't kept you waiting here long. Have you obtained the samples of ink?"

Laying the Bait

"YES, Professor. Here they are. As soon as you telephoned this morning I sent my men out separately to get them. There's the ink from the druggist, this is from the Vandum library, this is from Farrington’s room and this is from Mrs. Popper's apartment."

"Thank you, Inspector. I don't know what I'd do without your help," said Kennedy, eagerly taking four small vials from him. "Science is all right, but organization enables science to work quickly. And quickness is the essence of this case."

During the afternoon Kennedy was very busy in his laboratory, where I found him that night after my hurried dinner, from which he was absent.

"What, is it after dinner-time?" he exclaimed, holding up a glass beaker and watching the reaction of something he poured into it from a test tube.

"Craig, I believe that when you are absorbed in your work, you would rather work than eat. Did you have any lunch after I left you?"

"I don’t think so," he replied, regarding the beaker and not his answer. "Now, Walter, old fellow, I don’t want you to be offended with me, but really I can work better if you don’t constantly remind me of such things as eating and sleeping. Say, do you want to help me—really?"

"Certainly. I am as interested in the case as you are, but I can’t make heads or tails of it," I replied. "Then, I wish you would look up Mrs. Popper to-night and have a private séance with her. What I want you to do particularly is to get a good idea of the looks of the room in which she is accustomed to work. I’m going to duplicate it here in my laboratory as nearly as possible. Then I want you to arrange with her for a private ‘circle’ here to-morrow night. Tell her it is with a few professors at the university who are interested in psychological research and that Mr. Vandum will be present. I'd rather have her come willingly than to force her to come. Incidentally watch that manager of hers, Farrington. By all means he must accompany her."

That evening I dropped casually in on Mrs. Popper. She was a woman of great brilliance and delicacy, both in her physical and mental perceptions, of exceptional vivacity and cleverness. She must have studied me more closely than I was aware of, for I believe she relied on diverting my attention whenever she desired to produce one of her really wonderful results. Needless to say, I was completely mystified by her performance. She did spirit writing that would have done credit to the immortal Slade, told me a lot of things that were true, and many more that were unverifiable or hopelessly vague. It was really worth much more than the price, and I did not need to feign the interest necessary to get her terms for a circle in the laboratory.

Of course I had to make the terms with Farrington. The first glance aroused my suspicions of him. He was shifty-eyed, and his face had a hard and mercenary look. In spite of, perhaps rather because of, my repugnance we quickly came to an agreement, and as I left the apartment I mentally resolved to keep my eye on him.

Craig came in late, having been engaged in his chemical analyses all the evening. From his manner I inferred that they had been satisfactory, and he seemed much gratified when I told him that I had arranged successfully for the séance and that Farrington would accompany the medium.

The Workshop of Magic

As we were talking over the case a messenger arrived with a note from O'Connor. It was written with his usual brevity: "Have just found from servants that Farrington and Mrs. P. have key to Vandum house. Wish I had known it before. House shadowed. No one has entered or left it to-night."

Craig looked at his watch. It was a quarter after one. "The ghost won't walk to-night, Walter," he said as he entered his bedroom for a much-needed rest. "I guess I was right after all in getting the capsules as soon as possible. The ghost must have flitted unobserved in there this morning directly after the maid brought them back from the druggist."

Again, the next morning, he had me out of bed bright and early. As we descended from the Sixth Avenue "L," he led me into a peculiar little shop in the shadow of the "L" structure. He entered as though he knew the place well; but, then, that air of assurance was Kennedy's stock in trade and sat very well on him.

Few people, I suppose, have ever had a glimpse
of this workshop of magic and deception. This little shop of Marina's was the headquarters of the magicians of the country. Levitation and ghostly disappearing hands were on every side. The shelves in the back of the shop were full of nickel, brass, wire, wood, and papier-maché contrivances, new and strange to the eye of the uninitiated. Yet it was all as systematic as a hardware shop.

"Is Signor Marina in?" asked Craig of a girl in the first room, given up to picture post-cards. The room was as deceptive as the trade, for it was only an anteroom to the storeroom I have described above. This storeroom was also a factory, and half a dozen artisans were hard at work in it.

Yes, the signor was in, the girl replied, leading us back into the workshop. He proved to be a short man with a bland, open face and frank eyes, the very antithesis of his trade.

"I have arranged for a circle with Mrs. May Popper," began Kennedy, handing the man his card. "I suppose you know her?"

"Indeed yes," he answered. "I furnished her séance-room."

"Well, I want to hire for to-night just the same sort of tables, cabinets, carpets, everything that she has—only hire, you understand, but I am willing to pay you well for them. It is the best way to get a good sitting, I believe. Can you do it?"

The little man thought a moment, then replied: "Sì, signor—yes—very nearly, near enough. I would do anything for Mrs. Popper. She is a good customer. But her manager—"

"My friend here, Mr. Jameson, has had séances with her in her own apartment," interposed Craig. "Perhaps he can help you to recollect just what is necessary."

"I know very well, signor. I have the duplicate bill, the bill which was paid by that Farrington with a check from the banker Vandam. Leave it to me."

"Then you will get the stuff together this morning and have it up to my place this afternoon?"

"Yes, Professor, yes. It is a bargain. I would do anything for Mrs. Popper—she is a fine woman."

Late that afternoon I rejoined Craig at his laboratory. Signor Marina had already arrived with a truck and was disposing the paraphernalia about the laboratory. He had first laid a thick black rug. Mrs. Popper very much affected black carpets, and I had noticed that Vandam's room was carpeted in black, too. I suppose black conceals everything that one oughtn't to see at a séance.

A cabinet with a black curtain, several chairs, a light deal table, several banjos, horns, and other instruments were disposed about the room. With a few suggestions from me we made a fair duplication of the hangings on the walls. Kennedy was manifestly anxious to finish, and at last it was done.

After Marina had gone, Kennedy stretched a curtain over the end of the room farthest from the cabinet. Behind it he placed on a shelf the apparatus composed of the pendulums and magnets. The beakers and test-tubes were also on this shelf.

The Test Night

He had also arranged that the cabinet should be so situated that it was next to a hallway that ran past his laboratory.

"To-night, Jameson," he said, indicating a spot on the hall wall just back of the cabinet, "I shall want you to bring my guests out here and do a little spirit rapping—I'll tell you just what to do when the time comes."

That night, when we gathered in the transformed laboratory, there were Henry Vandam, Dr. Hanson, Inspector O'Connor, Kennedy, and myself. At last the sound of a car was heard, and Mrs. Popper drove up in a taxi, accompanied by Farrington. They both inspected the room narrowly and seemed satisfied. I had, as I have said, taken a serious dislike to the man, and watched him closely. I did not like his air of calm assurance.

The lights were switched off, all except one sixteen-candle-power lamp in the farthest corner, shaded by a deep-red globe. It was just light enough to see to read very large print with difficulty.

Mrs. Popper began immediately with the table. Kennedy and I sat on her right and left respectively, in the circle, and held her hands and feet. I confess to a real thrill when I felt the light table rise first on two legs, then on one, and finally remain suspended in the air, whence it dropped with a thud, as if someone had suddenly withdrawn his support.

The medium sat with her back to the curtain of the cabinet, and several times I could have sworn that a hand reached out and passed close to my head. At least it seemed so. The curtain bulged at times, and a breeze seemed to sweep out from the cabinet.

After some time of this sort of work Craig led gradually up to a request for a materialisation of the control of Vandam, but Mrs. Popper refused. She said she did not feel strong enough, and Farrington put in a hasty word that he, too, could feel that "there was something working against them." But Kennedy was importunate and at last she consented to see if "John" would do some rapping, even if he could not materialize.

Kennedy asked to be permitted to put the questions.

"Are you the 'John' who appears to Mr. Vandam every night at twelve-thirty?"

Rap! rap! rap! came the faint reply from the cabinet. Or rather it seemed to me to come from the floor near the cabinet, and perhaps to be a trifle muffled by the black carpet.

"Are you in communication with Mrs. Vandam?"

Rap! rap! rap!

"Can she be made to rap for us?"

Rap! rap!
“Will you ask her a question and spell out her answer?”

Rap! rap! rap! Rap!

Craig paused a moment to frame the question, then shot it out point-blank: “Does Mrs. Vandam know now in the other world whether anyone in this room substituted a morphine capsule for one of those ordered by her three days before she died? Does she know whether the same person has done the same thing with those later ordered by Mr. Vandam?”

“John” seemed considerably perturbed at the mention of capsules. It was a long time before any answer was forthcoming. Kennedy was about to repeat the question when a faint sound was heard.

Rap!—

Suddenly came a wild scream. It was such a scream as I had never heard before in my life. It came as though a dagger had been thrust into the heart of Mrs. Popper. The lights flashed up as Kennedy turned the switch.

A Ghost Revealed

A MAN was lying flat on the floor—it was Inspector O’Connor. He had succeeded in slipping noiselessly, like a snake, below the curtain into the cabinet. Craig had told him to look out for wires or threads stretched from Mrs. Popper’s clothing to the bulging curtain of the cabinet. Imagine his surprise when he saw that she had simply freed her foot from the shoe, which I was carefully holding down, and with a backward movement of the leg was reaching out into the cabinet behind her chair and was doing the rapping with her toes.

Lying on the floor he had grasped her foot and caught her heel with a firm hand. She had responded with a wild yell that showed she knew she was trapped. Her secret was out.

Hysterically Mrs. Popper began to upbraid the inspector as he rose to his feet, but Farrington quickly interposed.

“Something was working against us to-night, gentlemen. Yet you demanded results. And when the spirits will not come, what is she to do? She forgets herself in her trance; she produces, herself, the things that you all could see supernaturally if you were in sympathy.”

The mere sound of Farrington’s voice seemed to rouse in me all the animosity of my nature. I felt that a man who could trump up an excuse like that when a person was caught with the goods was capable of almost anything.

“Enough of this fake séance,” exclaimed Craig. “I have let it go on merely for the purpose of opening the eyes of a certain deluded gentleman in this room. Now, if you will all be seated I shall have something to say that will finally establish whether Mary Vandam was the victim of accident, suicide, or murder.”

With hearts beating rapidly we sat in silence. Craig took the beakers and test-tubes from the shelf behind the curtain and placed them on the little deal table that had been so merrily dancing about the room.

“The increasing frequency with which tales of murder by poison appear in the newspapers,” he began formally, “is proof of how rapidly this new civilization of ours is taking on the aspects of the older civilizations across the seas. Human life is cheap in this country; but the ways in which human life has been taken among us have usually been direct, simple, aboveboard, in keeping with our democratic and pioneer traditions. The pistol and the bowie-knife for the individual, the rope and the torch for the mob, have been the usual instruments of sudden death. But when we begin to use poisons most artfully compounded in order to hasten an expected bequest and remove obstacles in its way—well, we are practising an art that calls up all the memories of sixteenth century Italy.

“In this beaker,” he continued, “I have some of the contents of the stomach of the unfortunate woman. The coroner’s physician has found that they show traces of morphine. Was the morphine in such quantities as to be fatal? Without doubt. But equally without doubt analysis could not discover and prove it in the face of one inconsistency. The usual test which shows morphine poisoning failed in this case. The pupils of her eyes were not symmetrically contracted. In fact they were normal.

The Deadly Powder

“NOW, the murderer must have known of this test. This clever criminal also knew that to be successful in the use of this drug where others had failed, the drug must be skilfully mixed with something else. In that first box of capsules there were six. The druggist compounded them correctly according to the prescription. But between the time when they came into the house from the druggist’s and the time when she took the first capsule, that night, someone who had access to the house emptied one capsule of its harmless contents and refilled it with a deadly dose of morphine—a white powder which looks just like the powder already in the capsules.

“Why, then, the normal pupils of the eyes? Simply because the criminal put a little atropine, or belladonna, with the morphine. My tests show absolutely the presence of atropine, Dr. Hanson,” said Craig, bowing to the physician.

“The best evidence, however, is yet to come. A second box of six capsules, all intact, was discovered yesterday in the possession of Henry Vandam. I have analyzed the capsules. One contains no quinine at all—it is all morphine and atropine. It is, without doubt, precisely similar to the capsule which killed Mrs. Vandam. Another night or so, and Henry Vandam would have died the same death.”

The old man groaned. Two such exposures had shaken him. He looked from one of us to another (Continued on page 281)
The Power Ray

By Jack Barnette

For over twenty years electrical engineers and research workers have sought to control and direct the energies of ethereal oscillations. Just recently enormous strides have been made both in this country and Germany; as instanced by the beam system of radio transmission.

In this story, our author takes us one step further and presents a picture of a very near future. As he has combined a vivid description of scientific progress with a mysterious death, you will find this story as thrilling as it is instructive and educational.

If the radio set I had just completed had brought in the broadcast music as efficiently as it sent forth squeals; and if my next-door neighbor had not pounded on my door and vehemently predicted the sudden demise of myself and my new radio set,

this tale might never have been told.

However, these things did happen and, after due consideration as to the probability of my neighbor's intention to back up his rather heated statements, I decided that I might be a better reporter than I
Grim, instantaneous death strikes a scientist—yet the witnesses of his demise can find no clue to his murder. Charley Wright is called in to solve the mystery and finds . . .

“As his hand approached the faucet, there was a flash of sparks; Schmitt seemed to stiffen and then crumbled to the floor.

Illustrated
By
RUGER

was a radiotrician (though the city editor will assure you that it is impossible to find a worse reporter). Having reached this momentous conclusion after a great deal of mental labor, I packed my radio set into a suitcase, advised the other ninety percent of the matrimonial partnership as to where I was going, and hied me over to Charley Wright's to get some expert assistance and information.

Charley, besides being the wife's cousin, is a confirmed radio fan and a mighty good radiotrician. He was just beginning a promising career as an electrical engineer, when an obliging uncle died—leaving Charley enough cold cash and stock to make it possible for him to live on a modest scale without ever working again. It happened that Charley had always had a lot of suppressed desires, so he promptly quit his job, committed matrimony, and purchased a beautiful home with an overgrown basement. Into one-tenth of this basement he crowded the furnace and water heater, the rest of it becoming Charley's workshop and laboratory. Here he reigns supreme and, according to "Mrs. Charley", "lives between meals." Here, digging into the morgue where he keeps discarded pieces of apparatus and remnants of former experiments, I found him and explained the reason for my visit.

Charley hooked the set up, and after he had changed several connections, expressed his uncomplimentary opinion of my set, and balanced the
condenser and coupler, several local stations began
to come in with tremendous volume. A few more
minutes spent at balancing and WCAO, in Balti-
more, was coming in fine—then we were inter-
rupted.

Charley’s latest visitor was a tall, broad-
shouldered, ruddy-faced man whom he introduced
as Mike O’Fallon, Detective Lieutenant.

“Charley,” said O’Fallon, as soon as the intro-
duction was finished, “I think perhaps I’ve got a
job for you. At least I have a story to tell you
and I want your opinion.

“About two hours ago, headquarters received a
call from the laboratory of Doctor August Schmitt.
We found Schmitt dead. His daughter and two
assistants were in the laboratory with him and his
daughter had been talking to him when he died.
All three of them were standing beside a table
about fifteen feet from Schmitt when he died.
He had been performing an experiment at this table
and explaining it to the three of them while he worked.
He had stepped away from the table to rinse a
large beaker in a sink built against the wall, and
had continued talking to them. According to their
story, the daughter was asking him a question
when he finished rinsing the beaker, held it up to
the light to see if it was clean, then turned again
to fill it with water. As his hand approached the
faucet there was a flash of sparks; Schmitt seemed
to stiffen and then crumpled to the floor.

“His daughter rushed toward him, but one of
the assistants grabbed her and the other one rushed
to the ‘phone and called the police—though he
swears that he intended to call for an ambulance.
Schmitt’s body remained just as it had fallen and
I did nothing more than ascertain that he was
dead. One of my men called the coroner, Doctor
Jones, who arrived shortly and examined the body
and said that Schmitt had been killed by electricity.
Schmitt’s right hand still gripped the neck of the
shattered beaker and his left hand, the one with
which he had been about to grasp the faucet accord-
ing to the story told by his daughter and the two
assistants, was badly burned. On his right shoulder
a spot a little larger than a silver dollar was burnt
and black.

“The highest voltage in the laboratory is the
two hundred and twenty volt line that enters
the switch box located at the opposite end of the room
from where Schmitt was killed. The nearest light
wire was the lamp cord to the light suspended over
the table where the three were standing. The coro-
ner’s verdict was death by an electrical shock from
an unknown source.

“Now, Charley, I got a hunch that this thing
would bear a lot of investigating—provided I knew
where to start the investigation. What I’d like to
know is where the electricity that killed Schmitt
came from, how, and whether or not there is a
possibility of similar accidents occurring at some
future time. Lightning is the only reasonable ex-
planation that I can think of—and there has been
no lightning tonight. What do you make of it?”

“I don’t know just what to think, Mike,” replied
Charley slowly. “I hardly think that lightning is
the explanation. Could we run over to the labora-
tory and look over the scene of the accident?”

“Sure! I happen to have a key and the Chevy’s
outside. Let’s go.”

I don’t believe that Charley said a single word
on the way over to the laboratory. He chewed on a
cigar and appeared to be thinking very hard. The
laboratory was on the top floor of a small building
that housed the offices of a chemical company of
which Schmitt had been an official. It was a big
place, taking up the whole top floor. Its walls
were mostly windows, several of which were open
when we entered the laboratory.

Once inside the laboratory, Charley strolled
around, peeped into the switch box, looked long and
intently at the electric light wiring and the various
electrical appliances around the room. He frowned
intently at the sink where Schmitt had been killed.
Placing himself approximately where Schmitt had
been standing he turned his back to the sink and
walked as straight across the room as the furnish-
ings would permit. He brought up at one of the
large open windows through which he stood gazing
out into the darkness.

The Strange Glow

ABOUT two blocks away was another building
about the same height as the one which we were
in. The top floor of this building was brightly
illuminated and several people could be seen mov-
ing around. One man came to a window and stood
a few moments as if watching us. Then the lights
at the rear half of the floor winked out and the man
at the window hurried away.

A faint bluish glow became visible in the dark-
ened windows and almost instantaneously gave way
to brilliant lightning-like flashes that were visible
through one window but which faintly illuminated
the large room until the flickering bluish-white
light could be seen through all the windows.

“What the devil might that be?” inquired Char-
ley of O’Fallon, when the lights came on again.

“Hard to tell. That’s the Kurtz Experimental
Electrical Laboratories that we are watching. They
test and develop electrical equipment for the In-
tercity Power Company that supplies this city and
the surrounding towns with electricity. They do
quite a bit of experimental work too.”

“Then what we just witnessed was probably a
high voltage insulator breakdown test. Spectacu-
lar enough and—say, I wonder if—”

“You wonder what?” inquired O’Fallon.

“Nothing. Find out all you can about that
Kurtz Company and about Schmitt. Ascertain
from the Power Company if there are any high
voltage lines hereabout and if so who uses the
current from them. Come around to the house late
tomorrow afternoon and maybe we can confirm
your hunch and find out where the current came from that killed Schmitt."

We then went to our homes and I never missed my radio set until the "Boss" inquired for it when I was going to bed.

The next afternoon about four-thirty I started for Charley's and met O'Fallon on the way. The morning and afternoon papers had both carried short accounts of the death of Schmitt, attributing it to an electrical shock from an unknown source. Two sensational murders left no time or space to devote to the death of a mere scientist. I, of course, had given nothing to the paper—partly because I had nothing definite to go on and partly because I had promised Charley and O'Fallon that I would keep quiet about their little investigation and this I did gladly because I was hoping that this might prove to be that golden dream of the newspaper man, a scoop, and I had no desire to spoil it.

O'Fallon had gathered a mass of information regarding The Kurtz Company and Kurtz himself. Charley seemed greatly interested when O'Fallon told him that Kurtz was an authority on ultraviolet rays, had made several important discoveries in this field and held three patents that had to do with ultra-violet projection apparatus. The detective gave a great deal of data about Kurtz, his work, his business, and his social connections. He had interviewed Miss Schmitt and learned that she knew Kurtz but not intimately. O'Fallon learned from her that Schmitt had graduated from a famous German university and had come to this country with Gustav Schwartz, who is now a professor in Blankton College in this city.

From Professor Schwartz, O'Fallon learned that Schmitt and Kurtz had been members of the same class in college, but that they were sworn enemies though he did not know the reason, as their quarrel evidently antedated their entry into the university. He recalled one flare-up in which they were both threatened with expulsion from school; also an occasion when Kurtz had risked his own life to save Schmitt from drowning.

Schmitt and Schwartz had come to America immediately upon finishing their work at the university. Kurtz had remained in Germany until after the war, had risen high in his profession and had been decorated for his war work. He had come to America in 1921 and had organized the company and built the plant which we had observed the night before. He and Schmitt had fought each other in scientific and financial circles since his arrival and Schmitt, whose reputation in this country was firmly established, had succeeded in blocking Kurtz in several of his ventures and on two occasions had him tottering on the brink of financial ruin.

Schwartz displayed no personal animosity toward Kurtz, O'Fallon said, but it was plain that he had sided strongly with Schmitt. He was very much distressed by the death of his friend but could offer no suggestions as to how Schmitt had been killed.

"Mike," said Charley when O'Fallon had finished. "I am almost positive that I could tell you how Schmitt was killed. However, I want to be sure. Wait until I can make a 'phone call."

Charley called the general manager of the Intercity Power Company and requested that he make an appointment with Kurtz for him at seven-thirty that same evening. Charley was a heavy stockholder in the Intercity—part of the fortune left him by his uncle. He held the line while the manager called Kurtz and made the appointment over another 'phone.

O'Fallon and I had dinner with Charley and talked about television as Charley refused to discuss the Schmitt case, only promising us a surprise before long.

We arrived at the Kurtz laboratory about seven-fifteen, were taken to Doctor Kurtz's office and the Doctor was called from the laboratory. Kurtz was a big, broadshouldered man with the bearing of an officer. His face seemed vaguely familiar to me until I noticed a picture of Von Bismarck, the Iron Chancellor, that hung behind Kurtz's desk. There was a striking resemblance between the scientist and the soldier.

Charley, having introduced himself, introduced us as "Mr. O'Fallon and Mr. Reeder of the Daily News." Kurtz having acknowledged the introductions, Charley continued—"Doctor Kurtz, my friend Mr. Reeder came to me for material for an article on ultra-violet rays for his paper. I know next to nothing about this subject so I had Mr. Wilde, of the Intercity, make this engagement. Since you are a well known authority on the subject and have, I believe, lately made some amazing discoveries in this field, I hope that you will accommodate both myself and my friends from the newspaper by telling us a little regarding the ultra-violet rays and about your work along this line."

Kurtz bowed an assent and asked us to accompany him into the laboratory. Here we were given chairs beside a short tripod which was mounted on large insulators and which supported a large black bakelite cube about three feet square. On one side of this cube was what appeared to be a barrel lens such as is used in projection machines. Heavily insulated wires, suspended from large insulators set into the ceiling, entered the cube from above, while around the bottom were a myriad little adjustment wheels with insulated rims.

The tripod stood about eight feet from a window and on the wall beside the window was a big switchbox. A merry little canary in a gilded cage beside the window turned his head to one side and chirped saucily at us. Several men were busy at the far end of the room passing back and forth into the room in which we had seen the flashes of light the night before.

Kurtz sprawled himself comfortably in a chair, passed us cigars and lit one himself. He then in-
quired just what we wished to know. I replied that what we had in mind was a strictly nontechnical discussion of his work and discoveries as they applied to the average man and in language that the average man could understand.

"Well—I have always guarded my secrets very closely in the past but since I am about ready to announce my discoveries to the scientific world, I don't suppose that I should be adverse to a little advance publicity. Suppose I try to envision for you the future city, applying to it a few of my fond dreams which the ultra-violet ray may turn to concrete facts."

"Yes," said Charley before I could answer Kurtz, "that would be about what my friend would like. Tell us something of the future uses of ultra-violet light as it will affect us and our children. I recall an Associated Press article about the work of Doctor Donald Stockbarger, that I read some time ago, that interested me greatly. It had to do with the transmission of the human voice over a beam of ultra-violet light and the use of this invisible light on automobiles of the future."

"Ah, yes! Stockbarger's work is very well known to me—though I never could conceive any great value in the voice transmission experiment except as an experiment. There are entirely too many possibilities of interruption of conversations over a beam of violet light. I hardly think that it will ever be as practical or as trustworthy as the radio."

"However, I want you gentlemen to picture the cities of the future. You have seen artist's conceptions of these great piles of steel, glass and concrete; connected by airy bridges and surrounded by airplanes and airships of every description. Pictures have been drawn for you by well known artists to illustrate the articles and stories of better known authors in which moving sidewalks and double decked streets are prophesied for the future. You have all read articles such as these. They break out like an epidemic in the Sunday papers every few months and we read them and promptly forget them. Many of these prophecies are absurd to my way of thinking. A well known author in two of his stories tells of a London of the distant future. It is a machine city in which practically all of the work is done by electrical machinery that gets its power from generators operated by wind vanes located on the roof of glass that covers the entire city. Other cities of this type are located in other parts of the world, and intercourse between them is maintained by giant airplanes with wings that are separate tiers hundreds of feet wide and a narrow body in which the passengers sit in swinging seats. The lower stories of the buildings in this city were without sunlight, constantly illuminated by electric light and inhabited only by the poorest classes, who direct and care for the machinery. Of course these stories were written some years ago and if this author were to re-write them now I have no doubt but what he would portray a much different community. Nevertheless, the majority of the readers of these stories still picture the future city to be a place such as this writer described in those stories written over twenty years ago."

"The present trend seems to contradict the probability of any such development. Cities are widening their streets. Modern buildings are built with due regard to having plenty of daylight in every room, even to using the new glass that allows the passage of the health giving ultra-violet rays in the sunlight. The multi-winged planes of the stories could hardly be as efficient as the present day monoplane and biplane air liners that carry twenty or more passengers in pullman car comfort that could scarcely be afforded in the 'plane with the skeleton body and the swinging seats. I feel sure that these queer dragon-fly shaped planes would seem silly if placed beside the big Dornier metal flying boat now under construction and which is to carry fifty passengers, or if compared to the giant R-100, the big British dirigible that carries one hundred passengers and twenty-seven tons of freight and is a veritable flying hotel."

The City of the Future

"EVEN today the ever increasing inclination of the city dweller to move to the suburbs has become noticeable. The business districts are being restricted to certain areas, and speedy transportation is constantly making it possible for the man in the city to live at a greater distance from his place of employment. This is true of all classes. The era of air transportation has just dawned and the next few years will see the business man commuting by airplane from his country home a hundred miles away from his office in the city. The city will in time become merely a place where business can be conducted and will exist only because the transaction of business is expedited when the various enterprises are in close touch with each other. The future city as I see it will be a central, restricted business district where massive skyscrapers will tower high in the air; around this area will be the apartment district and then will come the district of homes with their little lawns and flower and vegetable gardens. Factories will be grouped outside the city. The narrow streets of today will have become broad thoroughfares, with restricted areas for slow moving traffic, where sixty miles an hour will not be considered excessive."

"The mechanical age in which we are living is demanding power in ever increasing quantity. This increased power will probably continue to be electricity as it is the cleanest, most convenient and most adaptable energy that we control. The production of the super power of the future will be in great central stations that may use water power, the waste power of the tides or the energy of the solar rays if they can be harnessed, or the energy
of the atom which scientists are striving to release and which, if they are successful, will provide an unlimited source of power to drive the great generators. Given the power, the next problem is the cheap distribution of it and that is the problem I have solved.

"I have given you a brief résumé of the popular idea of the city of the future—also my own, which is not so popular. Pardon just a little more of this discussion of the future while I demonstrate my theories and discoveries." Kurtz rose as he finished speaking and began manipulating several of the adjustment wheels at the base of the cube, watching as he did this a circular scale and pointer at the top of the tripod upon which the cube rested. The cube turned slowly until its lens pointed toward the open window. Another wheel was spun and the lens pointed upward as the tube tilted slightly.

"Now, gentlemen, Doctor Stockbarger told in his article of the possibility of using the ultra-violet light to illuminate the highways. The theory being that all objects on the highway would be treated with a radioactive substance that would glow when the ultra-violet rays impinged upon them. This machine is my new ultra-violet ray projector in which I have incorporated all of my discoveries and which is the result of years of experiment and research. It is a giant of its kind as present day projectors go, and with it I will now demonstrate the future lighting system 'a la Stockbarger'. I have just adjusted the projector so that it is trained on a huge sign-board built on top of the Intercity Building which is about a half mile from here. Of course this setting was found by experiment some time ago. The projector is equipped with a lens of my own invention that enables me to focus the rays on any particular spot or to cause them to flood a large area, as I shall do in this experiment. The lens are made of pure quartz as glass does not pass ultra-violet rays.

"Now if Mr. Wright will take these field glasses and train them on that blank space just to the right of the power company's flashing electric sign and tell us what he sees—we will begin the experiment."

Charley stepped to the window, O'Fallon and I crowding beside him. Kurtz threw a switch in the box beside the window, then, back at his projector, he slowly turned one of the little adjusting knobs.

"I see nothing," said Charley. "Yes, there is a very small twinkling spot in the center of the dark space. It is growing larger and is very brilliant. The spot is of many colors and is rapidly growing larger. I can see portions of fiery red letters but I cannot make out the words yet."

By this time O'Fallon and I could see plainly the brilliant circle and distinguish the letters. Kurtz was rapidly turning the little knob that controlled the lens adjustment and soon the circle expanded until the word "INTERCITY" stood out in letters of flaming red against a background that seemed to be of jewels. Charley lowered his glasses and Kurtz came to the window.

"It is," he said, "a sign painted with radioactive material that glows under the influence of the ultra-violet light. You are looking at a sign-board of the future, and a very near future at that. The rays from this projector are perfectly harmless. Look!"

Kurtz stepped back to the projector and spun a wheel that caused the projector to turn slowly until it pointed toward the canary. The little fellow actually seemed saucier than ever. He bounced around in his cage, stopping at intervals to allow a torrent of song to burst forth from his tiny throat. Kurtz pulled the switch that supplied power to the ray projector and called to one of the men working at the rear of the rooms, speaking rapidly in German while he motioned for us to resume our seats. Then, lighting another cigar, he continued his lecture.

"You have just seen a sign of the future. Returning to our city of the future, imagine the houses, the walls, sidewalks and streets painted with, or containing in their composition, radioactive materials. Great ray projectors will diffuse the ultra-violet rays without being visible as are the street lamps of the present. There will be no lights—yet all will be light. In place of spots of intense brilliance, there will be a soft restful glow over all. The city of the future will probably be a city without shadows, excepting, of course, all places not treated with the radioactive material. But let me return to the subject of supplying power to the future metropolis.

"Let us suppose that such a city as I have described has become a reality. Let us then picture several steel towers located on top of the highest buildings in the business district. Atop these towers are two copper plates about eighteen inches square. These plates are insulated from the tower and from each other and are set about ten feet apart. From these plates insulated cables lead to transformers at the foot of the tower. Electricity would be distributed to the surrounding buildings from the transformers atop the various skyscrapers. In the residential sections the towers would rise high above the surrounding buildings and would serve a larger area than the towers in the business district. At the central generating station batteries of ultra-violet projectors hurl twin beams of invisible violet light to the distant towers that radiate from the super power station like spokes from the hub of a wheel. These towers will be equipped with the familiar square plates of the distributing towers in the city, but in addition they will have two violet ray projectors that will project their beams to the next tower.

"At the central tower the high voltage current (50,000 to 100,000 volts) will be impressed upon the violet ray from the projectors and will pass over them to the next tower upon whose plates the projectors are trained. From this tower it will pass to the next over the rays from the tower pro-
jectors. These projectors will take the current necessary to operate them from the incoming current, stepped down, of course, by suitable transformers. Thus the current from the central station would pass on beams of light across the countryside to the consumer. In mountainous country the towers would be placed on high peaks and the beams would leap across the valley to the next peak. The trouble and expense of installing a cross country power line would be almost eliminated.

“When the current has reached its destination, another battery of projectors would distribute the stepped down current to the receiving towers in the different parts of the city, from which it would go by wire to the homes and offices and factories. We might go even further and equip these distributing towers with two broad bands of copper and let each office building, factory, apartment building and home be equipped with its own small twin ray projector which would have one ray trained on each band on the tower and thus could receive its current direct from the distributing tower.

“These could also be utilized for the direction of the air traffic which is sure to come. I might add that it would probably be found necessary to impress some sort of color ray upon the conductor rays so that aircraft might avoid them, for should an airplane in flight cut these rays the current would be shorted through the body of the airplane and its passengers would escape electrocution only by a miracle.

The Power Beam

“Now, gentlemen, I shall demonstrate the transmission of power over a beam of light. I have had my assistant place on the testing apparatus a large insulator that will break down under a current of about forty-five thousand volts. I am going to subject it to a strain of fifty thousand volts. At one terminal of the insulator he has placed the fifty thousand volt connection and at the other end a copper rod which ends in the square white plate that you see above the apparatus. The plate has been treated with radioactive material so that we can locate the ultra-violet beam when we extinguish the light in the other room. This experiment is a bit more spectacular when viewed thus.”

We crowded around Kurtz as he began to manipulate the wheels that turned the great cube-like projector on its tripod. When it pointed toward the open doorway of the room containing the testing apparatus, Kurtz extinguished the lights in the testing room and switched on the projector—spinning the lens adjustment until a square of brilliance seemed to be hanging in the darkness of the test room. The ultra-violet rays were flooding the doorway of the chamber. Kurtz then began concentrating the rays and at the same time adjusting the projector until it was trained on the exact center of the plate where the rays were concentrated in a small spot of brilliance a little larger than a silver dollar, but with a serrated edge.

O’Fallon and I were almost bursting with questions, but we took our cue from Charley, who was letting Kurtz do all the talking, and said nothing.

“No,” said Kurtz, “we are ready to proceed. I mentioned before that one terminal of the high voltage line was connected to the test apparatus, the other is in the collar-like appliance that fits around the lens and serves to impress the high tension current on the beam of ultra-violet light.”

Kurtz walked to the switch box and, indicating the switches as he talked, said:

“This switch controls the projector power supply. This one beside it operates a relay which in turn operates the switch controlling the high voltage line. The projector is already in operation and all that is now necessary is to throw this switch. Watch the insulator testing apparatus. Wait—perhaps I had better warn you to stay clear of the space in front of the projector. Should you step into the path of what—for want of a more accurate term—I call my ‘Power Ray’, you would probably be killed instantly. Remember that the beam of ultra-violet light that is passing between the projector and the copper plate in the next room will be carrying fifty thousand volts of electricity.”

Kurtz then threw the switch. Instantly there came a crackling and snapping as streamers and pulsating bands of blue-white sparks danced along the surface of the insulator. As we watched the test apparatus beyond the open doorway, Kurtz switched the current on and off several times. Other than the sparks around the insulator there was no indication that a current was passing. The projector made no sound and gave off no visible light. Finally, Kurtz opened both switches and we again resumed our seats.

“I thank you gentlemen for refraining from asking questions until I had finished. I shall be glad now to try to answer any questions that you may desire to ask.”

Charley opened his mouth but for once I beat him to it.

“Doctor Kurtz, I should like to know if your power ray would be capable of penetrating a heavy fog? It seems to me that a dense fog or a storm-cloud passing between two of the towers of your proposed power supply system would intercept the passage of the ultra-violet rays and prevent passage of current until the fog or cloud had passed.”

“That is something that can be decided only by experiment. However, I have succeeded in illuminating the sign on top of the Intercity building through a heavy fog and during a heavy downpour of rain. I do not believe that fog would offer much of an obstacle to the passage of the rays.”

Charley was ready this time and as soon as the doctor had answered my question he asked:

“Doctor Kurtz—you mentioned once that some method of impressing a color ray upon the power rays would probably be necessary in order that aircraft might avoid the rays. You also warned
us against approaching the front of the projector while you were demonstrating your method of transmitting power, telling us that instant death would probably be the result should we come in contact with the rays from the transmitter. Now would it not be possible to use this power ray as a weapon of warfare? Couldn’t you kill a man or a number of men at a great distance?"

"Such a use of my discovery never occurred to me—it seems possible though that it could be used to combat troops moving ‘en masse’ by sweeping the ray along the lines of marching men. It is also possible that it could be used to combat aircraft. I imagine that the passage of high tension current through the frame work of an airplane would work havoc with the ignition system even though it did not injure the occupants of the airplane. It might be interesting to experiment along these lines, though since the ending of the World war, the very thought of war, or of weapons of warfare, is sickening to me. As to the possibility of killing a man—I assure you that the power ray would be far deadlier than a rifle, though it would be extremely hard to aim it quickly and accurately. For war purposes it would be necessary to equip the projectors with some sort of telescopic sight with a cross hair arrangement so that the operator might know just where the beam was striking. If it proved practical for war purposes it would provide an extremely deadly, yet noiseless and invisible weapon."

"Another thing, Doctor Kurtz—I fear that your power ray will provide another lethal weapon for the murderously inclined. After what you have told and shown us—if I should in the future hear of a case where a man was killed by electricity, but where there was no current powerful enough to cause death, I shall be inclined to accuse you, or some of your fellow scientists who work with the ultra-violet rays, of murder."

Kurtz’s face twisted in a wry smile at this and he replied:

"You would almost be justified in feeling thus, Mr. Wright. Still I do not believe that, unless such a city as I have tried to picture for you becomes a reality, the power ray will ever be used as a murderer’s weapon because it is too costly, requires a complicated installation, is not easily transported and cannot be concealed. The user of such an apparatus must perform obtain his power from some outside source or install a large generating plant of his own. Certainly no one but a scientist would ever use such a weapon."

Charley thanked Kurtz very much for the information that he had given and we left the laboratory. It did not take Charley and O’Fallon long to decide that they had found the man who had killed Schmitt. Having so decided they hurried down to headquarters and related their story to the magistrate who concurred in their view of the matter and issued a warrant for the arrest of Kurtz. An officer was sent up to take him into custody.

It was not long, possibly fifteen minutes or so, before the officer arrived with Kurtz, who was thoroughly mad. It took the desk sergeant almost five minutes to cool him down to the point where lie was coherent. Finally, however, Kurtz recovered control of his temper and inquired why he was accused of killing Professor Schmitt and when he was supposed to have killed him. The magistrate indicated that Charley was to answer him.

"It would” said Charley after a momentary hesitation, “be best, perhaps, to answer all your questions by telling you just what leads us to accuse you of causing Schmitt’s death.

"Last night at eight-fifteen one of Professor Schmitt’s assistants called police headquarters. Detective O’Fallon and two other officers answered the call. Professor Schmitt had been killed before the eyes of three witnesses—his daughter and his two assistants. These three witnesses saw sparks flash between Schmitt’s left hand and a faucet for which he was reaching. The coroner’s examination disclosed a round burn slightly larger than a silver dollar on Schmitt’s right shoulder. His left hand was burnt badly. The coroner’s verdict was death by an electric shock from an unknown source."

"Lieutenant O’Fallon asked me to assist him in ascertaining where the electricity that killed Schmitt came from so that the cause of Schmitt’s death might be learned and future tragedies of like nature prevented.

"Examination of Schmitt’s laboratory revealed that the highest voltage in the laboratory was two hundred and twenty volts. There were no electric wires near the place where Schmitt met his death."

"While examining the laboratory we witnessed, through the window, what we took to be an insulator breakdown test here in your laboratory."

"Investigation provided us with the information that you had available a plentitude of power at voltages that would kill. We learned from the power company that your laboratory was the only place near Schmitt’s laboratory that had anywhere near that amount of power available. We also learned that you were an authority on ultra-violet light. Searching for a way in which the current could have bridged the space between the laboratories I remembered having read of Stockbarger’s experiments and concluded that your laboratory had succeeded in transmitting a heavy voltage over a beam of ultra-violet rays."

“You, yourself, have confirmed all of our suppositions. You have told us that your power ray is far deadlier than a rifle. You have said that only a scientist would use such a weapon. You have demonstrated your ability to transmit power, in sufficient quantity to cause death, for a considerable distance. You have shown us that your projector can throw its rays for at least one half mile and we are led to believe that the power ray would be effective at that distance. Schmitt’s laboratory

(Continued on page 281)
The Robot Terror

Luckily for the peace of the world, crime and war are still limited by human susceptibility to clubs and bullets. But, if a way is discovered to nullify these limitations, what will become of us?

To what extent are we, presumably the highest development on earth, mere mechanical creatures which can be duplicated in the scientist’s work-shop? At this time of writing, an American scientist has manufactured a machine that will obey vocal commands, light a kitchen stove, put on the eggs to boil, take them from the pot when sufficiently cooked, and serve them ready to eat.

The mechanical stoker, advertised under the name of The Iron Fireman, is employed by thousands of householders to relieve them of the necessity of looking after the household heating apparatus. This machine keeps the furnace filled with coal, watches the temperature, attends to the draft, and generally performs the work of a $28-a-week janitor.

In this extraordinary story, our author has merely carried the preceding ideas a few steps further: anticipating future developments.

One of the most practical applications of science is the “humanizing” of machines; which is rapidly reaching a startling degree of efficiency.
INSPECTOR GIBBONS, veteran Post Office detective, tossed aside his morning paper and arose from his desk, sending an agitated whirl of cigar smoke ceilingward. He turned toward me:

"The reporter who wrote that story was either drunk or dreaming. It's ridiculous!"

"But Inspector," I ventured, "this is a scientific age and practically nothing is impossible."

"What? You believe that newspaper nonsense?"

Since I was only a student lawyer and, incidentally, the fiancé of Inspector Gibbon's daughter, Claire, it was poor policy to oppose him. Yet, I too, had read the bizarre story of the robbery at Johnson's Jewelry Shoppe and, although the details were very strange, I thought the incident quite plausible.

According to accounts of the incident given by the newspapers, the robbery was staged at a late hour while employees of the establishment were preparing to close. Officials of the company had
barred the front entrance and were placing trays of diamonds in a vault when a rear door opened and a low whirring noise was heard.

They were terrified at what they saw. It was described as being "a huge iron mass that resembled a man." Brilliant-colored blazes raced over the hideous giant. Brilliant red lights glowed where its eyes should have been. The thing had arms and legs. It stood erect, turned its head from side to side in a monotonous manner with a mechanical leer on its metallic features.

The salesmen were paralyzed with fear as it stalked down the aisle of the store. Its feet were shod with rubber, apparently; for when it moved there were no noises other than a slight grinding whirr.

According to the Daily Bulletin, it walked, or rather glided, to the vault, reached into the trays, and scooped up a handful of blue diamonds. Depositing them in a concealed pocket, it turned toward the employees who were huddled together in a corner, and—spoke!

"Gentlemen," it began slowly and in a harsh phonographic tone, "you have received me quite cordially this evening. It is well, for 'Monarch' is very irritable and most dangerous. As you can perceive, I am a most unusual person. 'Monarch' bids you adieu."

One of the clerks present swore that the iron man bowed before it disappeared through the door. Within a few seconds the spell of fear was broken and the employees poured into the street to seek frantically and availing themselves for their unusual visitor.

"Of course, Inspector," I pointed out, "this is a most unusual case, but you must admit science has developed many almost unbelievable contrivances within the past several years. Why not a mechanical man who walks and talks?"

The inspector was more calm now and content to listen, but I thought he considered the conversation superfluous. I had worked on the sidelines with him in a number of intricate mysteries, and had seen them unraveled so neatly and thoroughly that my admiration for this man was very high indeed.

"The police seem to be having a tough time with this affair," I continued: "The chief says his men could find nothing tangible. They picked up a printed note outside the jewelry store signed, 'Monarch,' but could find nothing in it except a warning that persons who attempted to interfere with him would be 'disposed of.' I'd like to know the full meaning of that note."

"I believe I can put you wise, sonny," Gibbons said. "This so-called mechanical man is a half-cocked yegg who wears a strange outfit to his job merely for a new wrinkle. They're constantly trying to pull something different."

"You forget that several persons saw the thing and all swear it wasn't human," I parried.

"Oh well, the case doesn't interest me. At any rate it's up to the police to handle it. The affair is out of my jurisdiction."

I was preparing to leave when the telephone rang. "Come over for dinner this evening, sonny," the inspector invited me, before answering the ring: "I'd like a game of chess and I think Claire is baking a cake she wants to try out on you," he added. I accepted his hasty invitation, and had reached the door, when Gibbons cried out suddenly, "What? Murdered!"

I ran back to the desk.

"Killed one of my men, did he? I'll be right over."

Grabbing his hat and gun, Gibbons made for the door. I stopped him as he was brushing past me.

"What's happened?"

"Perry has been murdered in the mail room! Strangled!"

A Terrible Visitor

I FOLLOWED him to the sidewalk and we began running toward the mail room, in the rear of the Federal Building. The scream of a siren shrieked in our ears, and the next instant a queer-looking car darted from the mail runway through an alley and into the street, leaving a trail of fire and smoke.

"It's 'Monarch'!" I shouted.

A few minutes later, a dozen guards returned to the runway, half-blinded and choking from the effects of gas. They told of their wild chase of a flame-covered car carrying the mysterious murderer. They told how the strange car sped through the street and roared through alleys as though it were bewitched. Its weird siren warned autoists and pedestrians to clear a path. Gas-laden smoke which spewed from the car grew so intense that the guards were forced to slacken their pursuit. The car and its unusual passenger disappeared in a cloud of smoke on the outskirts of the city.

Inspector Gibbons leaned over Perry's still body. It lay crumpled against a pile of mail sacks. A broken revolver was clamped in his hand.

"This is strange," the inspector remarked: "I can't see through it all. It's got me." He removed the gun from the lifeless hand. "Clashed like a leaf," he said, "and this man is not only strangled. His neck is broken as though he had been gripped by a steel vise. That fiery car—metal figure—may be there's something to it after all."

The inspector was speaking slowly, and thinking deeply. He had never failed to get his man. But, in this case, was it a man he wanted? Was this seemingly unreal creature flesh and blood? Or must he deal with a supernatural monster?

Beads of perspiration formed on the inspector's wrinkled brow. He couldn't understand. Was he dreaming? Was it real? Had Perry really been crushed to death, and had he himself actually seen the thing he thought absurd only a few minutes before?
An automobile rolled into the runway. The coroner had arrived.

"Heard you lost a man, Inspector?" The coroner was speaking. He examined the body: "Neck broken, eh? What got him?"

"We don't know, and I am afraid it will be hard to find out," the inspector replied. The coroner was amazed but incredulous when he was told what had happened.

"Appalling!" he ejaculated. "Round up all the employees in this section of the building. Let no one leave without permission," he ordered.

One by one, he questioned them. Descriptions of the iron assassin, given by the witnesses, varied so much, that hearing of the testimony would have been ludicrous but for the tragic occasion. Its height, they said, varied from five to twelve feet. One mail-clerk was positive the thing had wings.

"This isn't getting anywhere, Inspector. Apparently the murderer approached unseen. He attempted to get away with a bag of mail when Perry spied him. You know the rest. I suppose those who saw it were frozen in their tracks. By the way, is any of the mail missing?"

Gibbons ordered the clerks to make a check. One bag of registered mail was missing.

"Iron man or not, he has brains", the coroner blurted. "He knew what he wanted. This begins to look like a job for a magician to solve".

The coroner was preparing to leave when a loud groan was heard.

"What's that?" Gibbons asked.

"Sounds like it's coming from the mail separator", a clerk whispered: "Someone might be caught in the machinery".

He ran to the big machine and looked into a separator pit from which the groans were growing louder. A quick look, and his smile broke out and grew into a broad grin:

"Come take a look, boys. It's that janitor".

Adolphus was curled up with his head buried in his arms.

"Don't git me, mistah debil", the darky wailed: "I'se aint neber done nothin', and I'se jes a black chile".

"It's safe now, 'Delphus. This isn't Judgment Day. Come on out".

"Mistah Inspector, I'se sho glad yo' is heah. Whar did de debil go? I seed him comin'. He had big eyes and dere wuz fire comin' frum dem. I seed him get Mistah Perry and den he made fo' me. Whar did he go?"

Adolphus was questioned fruitlessly for several minutes by the coroner.

"The further I go the less I learn. Looks like your toughest case, Inspector. Let me know if anything turns up".

The Clue in the Mail

The following day I again met Gibbons at his office. He was in a troubled mood, and considerably upset over the events of the day before.

"There's a stack of mail a foot high on my desk", he grumbled: "Enough work to keep me busy a week, and I have the biggest case in my life before me".

He didn't know, until nearly an hour later, that within the pile of mail nestled a very important clue. It was a clue that broke the screens around the "Monarch" case and one that nearly led to disaster. I shudder yet to think of it.

"Well, Inspector, what have you done on the case?" I asked.

"Nothing. There's no starting place. No prints. No weapon, and all the witnesses are terrible".

"Not such a bright outlook, then."

"It's darker than any I've ever known of. I'll let you know if I learn anything."

I turned to go, but was reminded of a conversation that later was to prove vitally important:

"Incidentally, Inspector, I have been talking over the case with a friend, Professor Carlton, dean of science at Marbury College. He is intensely interested in the affair, and I believe he can help you. He has completed a number of minor experiments with mechanical men, and he seems to think it highly probable that Perry's murderer is really a robot".

Gibbons Is Sceptical

"I MUST be old-fashioned," Gibbons said, decisively, "but I can't see this mechanical man theory at all".

Later in the afternoon, while I was preparing briefs in my office, Gibbons called me on the telephone.

"What's up, Inspector?"

"Plenty", he answered and there was a triumphant note in his booming voice.

"You haven't caught——"

"Wait a minute. Hold on. Not so fast. However, I've found something that might be interesting a little later."

"Hot clue?"

"Might be. Can't say anything about it now. Gotta handle this affair carefully. Must walk softly."

"You have my curiosity aroused."

"No doubt," he answered, "and what's more, that cat-killer of yours will be aroused to even a higher pitch at what's coming next."

"What is it?"

"I want to talk to your college professor friend tonight."

"Why, of course. Professor Carlton will be delighted to see you."

"Fine. Then arrange to come with him over to my home shortly before midnight. Guess I'd better sign off. There's lots to be done."

Professor Carlton and I arrived at the Gibbons home at 11:40 p.m. The Inspector had an eager twinkle in his eyes when he shook hands with the English scientist:
"A most disconcerting situation—or this bally 'Monarch' case, I take it, Inspector?"

"Right you are, professor, and I believe you can help clear things up".

"Well, well!" Carlton laughed: "I cawn't imagine myself a sleuth".

"No, but you have scientific knowledge which might prove valuable to me in this case".

"To be sure. Of course I will gladly assist you. You are indeed flattering, to call upon me for advice. Are there any questions at present?"

"Yes. I want to know something about robots".

"Aha! Then you do believe this Monarch chappel is artificial?"

"No. I won't say that. I never jump at conclusions and in running down a case I must consider every detail. But in view of the unusual circumstances of Perry's murder and the diamond robbery, I dare not overlook this mechanical man idea".

"My dear inspector, the principles of the various types of robots are extremely complicated and I fear the average layman would find descriptions quite technical".

"Well, explain it as simply as possible, professor. All I want is a rough idea. I'd like to know before midnight".

"Bless me, this is beginning to be quite mysterious", Carlton exclaimed: "Briefly", he pursued, "a 'robot' is a machine which resembles somewhat a man in its forms. It will obey commands. It can walk, speak, hear, and has the use of artificial hands. Its limbs are connected with systems of wheels, pulleys and motors which are operated by tiny automatic electrical contacts. America has made little progress in this particular type of experimentation; but England and Germany have developed several amazing robots. Their movements are almost unbelievable".

"No doubt, professor," Gibbons interrupted, "but here's what I want to know—what controls these robots?"

"There are several different methods", Carlton replied: "The newly-developed European robots are controlled through radio".

The inspector leaped from his chair.

"So that's it, eh? Radio! Then that probably explains this letter I received today, and confirms my suspicions".

He drew a square envelope from his pocket. It had a black border along the edges.

"It had me puzzled for a while; but I believe I see through it all now".

Inspector Gibbons looked at his watch and turned to Carlton and me. Then he made a most startling announcement:

"Gentlemen, in about half a minute we will listen to the voice of 'Monarch'".

We looked quizzically at the smiling inspector. Had he gone mad?

"Really, I'm quite astounded", Carlton gasped: "This is most weird".

Gibbons walked to a radio receiving set nearby and began turning the dials. There was a slight crashing sound accompanied by heterodyne disturbances; then an announcer's voice:

"Good evening, ladies and gentlemen of the radio audience", he began. "This is amateur station WGERIC broadcasting from the McMunsey Asylum for the Insane"

There was a malicious smile on the inspector's face. I had a strange feeling in my throat. My English friend was casting furtive glances from Gibbons to the radio set. His monocle had dropped and his mouth was open.

"Marvelous work, Inspector", Carlton exclaimed: "It is indeed most wonderful. I quite understand it all now. Yes, quite. And really I——"

"Wait", interrupted Gibbons: "He's speaking again".

"Our program this evening will be featured by an address by Dr. Richard R. McMunsey, superintendent of the institution, who will speak on, 'Hallucinations and Insanity.' His address will be preceded by broadcasting of late news bulletins".

The Recorded Voice

INSPECTOR Gibbons left the room hurriedly. He reappeared several seconds later with a dictaphone which he placed near the set.

"Wouldn't hurt to have a permanent record of this radio fellow's voice", he said: "I think those clerks at Johnson's and several mail men will recognize it. I expect old black 'Dolphus will swear 'it's de debil done come back'," he chuckled.

The radio announcer began reading news bulletins.

"Oh I say, Inspector", Carlton whispered: "This must be a new station. I've never heard of it before. What is its connection with the insane asylum?"

"It seems that one of the inmates, known as 'Eric, the Wireless Man', was at one time a learned scientist. Some say he was an inventor. At any rate, he became insane and was placed in the institution. He was a raving maniac while confined in a cell, but doctors discovered he was harmless when his tattered mind was occupied with subjects pertaining to science. Equipment was moved from his laboratory to the asylum, where he conducted experiments for several months. He constructed a radio broadcast set which was installed on the attic floors. I found that officials have given him several attic rooms to carry on his experiments and conduct radio programs. He was granted a license and a wavelength was assigned to him recently by the Radio Commission. He has been left alone and is considered now a harmless patient. It is my theory, however," Gibbons asserted, "that he is not only a genius but a murderer".

He drew the black-bordered letter from his pocket again.

"But Eric—or 'Monarch,' as he styles himself—was not genius enough to murder one of my men
and get away with it. In fact, he showed signs of dementia praecox by sending me this letter. Although he omitted to include his address, less than two hours’ work was required to trace the sender. Unless something goes wrong, ‘Monarch’ will fall within twenty-four hours”.

“I’m curious to know the letter’s contents”, I remarked.

Gibbons opened the envelope and handed the letter to me. It was written in a bold intelligent hand. I could not detect the least sign of paranoia in the handwriting.

“Most worthy inspector”, it began, “I gather from newspaper accounts of the very very mysterious pranks of ‘Monarch,’ you have started an investigation of the affair. Just a word of warning, sir—your investigation will lead to nothing but tragedy. Your feeble efforts to apprehend ‘Monarch’ might prove disastrous to you—and others.

“I understand you have a very beautiful daughter and I like the name ‘Claire’ immensely. Suppose ‘Monarch’ were to pay her a visit—take her for a ride in his little car—. Surely ‘Monarch’ would be pleased. This could happen. Allow me to suggest you call off your dogs. ‘Monarch’ does not brook interference. He is very irritable—and dangerous”.

The letter was unsigned.

“My God, Inspector. What is this reference to Claire?” I gasped.

“It’s obvious. Please don’t mention it to her. She must not know . . .”

“But, Inspector, we must do something quick. This is horrible. If any harm should come to Claire—”

“Everything will be all right”, Gibbons interrupted. “Unless there is a hitch this Monarch thing will be destroyed within a few days”.

“But he may strike first?” I warned. “You know how I feel toward Claire. God knows, she means more to me than the world. Please, let’s go after him now”, I begged.

“Do you not realize we must face a master criminal?” Gibbons reminded me: “This is no ordinary crook. What good would guns and nerve be? Nothing”.

“Then what do you intend to do?”

“I have a plan and I’ll need your help—and Professor Carlton”, he almost whispered. “Tomorrow we—”

He was interrupted by Carlton.

“Listen! The announcer is reading a news bulletin on the ‘Monarch’ case”.

From the loud speaker came the strange voice of the insane Eric. It was an excited voice, pitched in a high tone of elation.

“Friends of the radio audience,” he said, “special attention is called to reports in the Daily News-Herald regarding the Perry murder case. Latest bulletins are as follows:

“All efforts of Federal detectives to trace down the murderer of Deputy Inspector Rayburn Perry and solve the strange enigma of crimeland’s iron-clad fiend have resulted in failure. The mysterious murder, robbery of a bag of registered mail and the Johnson Jewelry Company hold-up remained unsolved late tonight, leaving city and Federal sleuths completely baffled.

A Weird Call

“Inspector Gibbons, superior officer of the slain deputy, stated every effort is being made to apprehend the murderer and declared no stones will be left unturned until the crime is cleared up.”

Reaching this part of the bulletin, the announcer began laughing hysterically. There was the sound of a scuffle; it sounded as though someone were trying to pull Eric away from the microphone. Gibbons, Carlton and I leaned toward the receiving set, struggling to catch every sound.

“Let me alone”, came a muffled voice. Then more weird laughter. “I’m not crazy or ill”, the voice screamed: “I have brains. My brains built this station. And that’s not all. My brains built something else. Remarkable!” the voice of Eric cried out: “But I can’t tell. I can’t tell. It’s too remarkable. No one shall ever know. No stones unturned. No stones! No stones!”

The station was cut off abruptly. I was about to speak, when again Station W6ERIC was back on the air as suddenly as it had been cut off. A different voice was heard:

“Ladies and gentlemen, this is Dr. Munsey at the microphone. We regret the program was interrupted in such a deplorable manner. Our announcer, who is an inmate of this institution, became violently ill and suffered a momentary attack. Because of this regrettable occurrence, we regret that the program must be concluded. This is Station W6ERIC signing off”.

For several seconds there was complete silence. No one moved. Then Carlton rescued his monocle and adjusted it to his eye.

“Astonishing!” he said: “Beyond all words”. Gibbons switched off the radio and removed the dictaphone record.

“I think I’ll have a look at the asylum and its peculiar broadcast station tomorrow”, he muttered: “I’d like to have both of you go with me”.

The following day, Gibbons, Carlton and I were riding on a lonely road some twenty miles from the city.

“Most desolate place, isn’t it?” remarked the professor: “It makes me feel creepy”.

The car rolled into a stone driveway. The walls of the asylum were dull gray. They had stood for many years; vines and moss clung to the cracks.

We were ushered into a musty lobby by a squat old man. Patients were scattered about the lobby. Some were chattering incoherently. Others sat and stared, eyeing us suspiciously. Visitors were evidently unusual.

Presently, a tall thin individual, with small bead-
like eyes, and dressed in a long black cloak, approached us.

"I am Dr. McMunsey, gentlemen."

We arose and Carlton introduced us.

"May I ask your business here, gentlemen?" he inquired.

"Well, er, you see, Doctor," Gibbons explained blandly, "the Professor and I are interested in the study of the human mind, and we feel it would be of inestimable benefit for us to look through the asylum."

The meager excuse served its purpose.

"Oh yes, of course," the doctor agreed smoothly: "I will cooperate with you in any way I can. Please follow me to my office and I will prepare passes and summon an attendant."

He led us into a spacious study.

"Be seated, please", he invited.

The doctor wrote three passes and handed them to us.

"If you gentlemen will excuse me at this time, I will find someone to show you about the building", he said with a pre-occupied demeanor.

The doctor had hardly closed the door when Gibbons leaned forward in his chair and examined his pass closely beneath a desk lamp.

"Something strange here", he whispered.

He reached into his pocket and started to speak again when the door opened. Dr. McMunsey re-entered the room, accompanied by a small frightened-looking man.

"José will show you about the institution", the doctor indicated.

José bowed and then looked at his employer. I was startled to catch a weird cold glimmer in the man's eyes. It seemed like a warning, the nature of which I could not guess. Our guide turned slowly toward the door and beckoned us to follow. He led us through a corridor into a courtyard where he pointed out various patients lolling and gibbering.

"They're crazy", José whispered mysteriously: "And so am I", he added quickly.

I glanced at the inspector but he motioned me to keep quiet. José led us from the courtyard through another door, and to the bottom of a flight of stairs.

"Oh, my kind fellow", Gibbons addressed our guide: 'Would you mind showing us the asylum's wonderful radio station?"

The Little Door of Death

The guide glanced around cautiously before answering:

"It is not safe, sir."

"What dangers would we encounter, my good man?" Gibbons asked.

"It would not be safe", was the only answer.

"We will risk it", the inspector replied as he pulled a tempting note from his pocket. José grinned sheepishly and, with another furtive look toward the rear, he bade us follow him up the stairs. On the fourth floor, which was in reality a semi-attic, he stopped and listened. Then he pushed open a door over which was shining a dim green light.

In the room was a complete broadcast set. We began inspecting the equipment. I could not keep from fingering the microphone.

"Don't touch," José warned: "Eric is very particular about his things. He would roar like a lion if anyone disturbed his apparatus."

"What kind of a person is Eric?" Gibbons asked.

José carefully closed the door and crept close to the inspector.

"He is a strange man—and deadly. He fears only one", the guide whispered. "He allows nobody to go into his laboratory just beyond that little door", he said pointing to a tiny niche near a chimney which was built in the wall. José raised a shade covering a dirty colored window, and pointed toward two mounds of fresh dirt below.

"They tried to go through the little door", he said: "The doctor said they died of fits."

"How do you know all this?" Gibbons inquired.

José eyed the inspector from head to foot. "They put me in here ten years ago because I was insane. I know I am crazy. Yes, I am sure of it; but I have noticed a number of things here that have impressed me so much I can't forget. I am afraid sometimes. I might go the same way those two down there went. I might die of fits. I know too much. I should keep a tight mouth. Yet, I can't keep from telling things now. It has been a great burden for me to know so much all this time and it relieves me to tell it", mumbled the poor man.

"Have no fear", Gibbons said. "You are safe with us. I represent the United States Government. Tell me everything."

The little man glanced around the room suspiciously before putting his lips to the inspector's ear. Then he talked rapidly for a few minutes; while we stood round him in amazement.

* * * *

The following day a startling story appeared in the Daily News-Herald. It was headed by glaring banner lines.

"The criminal career of 'Monarch,' strange mechanical man who has been terrorizing the city, was ended abruptly last night with the arrests of Dr. Richard McMunsey, superintendent of the McMunsey Asylum for the Insane, and an inmate of the asylum known as 'Eric-the-radio-man.'"

"Solution of the mysterious case of crimeland's murderous robot is credited to P.O. Inspector Gibbons, who with two friends, narrowly escaped death."

"Intricate details of how the robot was operated through radio waves by remote control apparatus hidden away in an attic of the asylum were explained today by Professor Guy Carlton of Marbury College, who accompanied Inspector Gibbons on his dangerous mission.

(Continued on page 279)
How Good a Detective Are You?

Here is your chance to sharpen your senses.

This is the third number in the fascinating series of detective-tests published for your entertainment.

These tests, which appear in SCIENTIFIC DETECTIVE MONTHLY every issue, are exactly similar to ones used, not only by universities, but many police departments. Detectives are chosen for their fitness and ability to remember essentials concerning crimes on which they are working. YOU, too, may test YOURSELF in the exact manner that applicants for detective appointments are tested in many Continental countries.

Before you proceed, be sure to read the following:

This third memory test is technically called: "MEMORY TEST: IMMEDIATE RECALL." Take out your watch and study the illustration for exactly two minutes. Try to take in and memorize every detail. Imagine that you have come upon a scene of a hold-up similar to the one pictured below. Later on you are asked to testify as to what you saw. That is the test.

At the end of the two minutes, turn to page 269, and answer the thirty-five questions entirely from memory.

Under no circumstances must you refer back to this page while answering the questions. When you have answered all you can, check your answers by referring to the picture.

If you answer the entire thirty-five questions correctly, your score will be 100, and you may be said to have great detecting abilities. If you can answer only half of the questions, the score will be 50, etc.

You will find it a lot of fun and amusement to test members of your family and your friends by means of this scientific test, and you will be astonished at the wide variations of the abilities of people to score in this most absorbing game.
The Achievements of LUTHER TRANT, The MAN in the ROOM

From concealed clues and minute evidence, Luther Trant relentlessly chases a criminal genius.

Deep in our subconscious mind, the truth is often hidden, secreted away behind a barrier of conscious inhibitions and unrecognized complexes. The psychopathologist, delveing into the innermost soul, can reveal to ourselves, and if necessary, to others, the things we try to hide. In this amazing, yet accurately scientific story, Luther Trant probes the subconscious mind of a woman by utilizing a well-known psychological formula in conjunction with a clever timing device. You will learn more from reading this exciting tale, than a whole volume of academic psychology would give you.

Amazing, Trant.

"More than merely amazing! Face the fact, Dr. Reiland, and it is astounding, incredible, disgraceful! After five thousand years of civilization, our police and court procedures recognize no higher knowledge of men than the first Pharaoh put into practice in Egypt before the pyramids!"

Young Luther Trant pushed impatiently back from Reiland's breakfast table and crossed one muscular leg awkwardly over the other. Awkwardly, and with the same rebellious impatience, he pushed his fingers through his thick red hair. His queerly mismated eyes—one more gray than blue, the other more blue than gray—flashed at his older companion earnestly. And under his right eye (the bluer one) a tiny birth-scar, usually almost indistinguishable, glowed dimly pink in his intenseness. On his knee Trant held the Chicago Record-Herald, and, as he went on, his finger followed the paragraphs.

"Listen! 'A man's body found in Jackson Park'; six suspects seen near the spot have been arrested. 'The Schlaack's abduction or murder'; three men under arrest for that since last Wednesday. 'The Lawton trial progresses'; with the likelihood that young Lawton will be declared innocent; eighteen months he has been in confinement—eighteen months of indelible association with criminals! And here's the big one: 'Sixteen men are
Psychological Detective

A dead man lies under the stigma of double guilt. Can his name be cleared?

By
EDWIN BALMER
and
WILLIAM B. MACHARG

“Books!” Trant said. “Library!” answered the girl, now able to associate the different words, and in her minimum time of two and a half seconds.

held as suspected of complicity in the murder of Bronson, the prosecuting attorney.‘ Did you ever hear of such a carnival of arrests? And put beside that the fact that for ninety-three out of every one hundred homicides no one is ever punished!”

The old professor turned his ruddy face, surmounted by the bald dome of his cranium, patiently toward his young companion. For some time Dr. Reiland had noted uneasily the growing restlessness of his brilliant but hot-headed young aid. But till he had to let him go, Dr. Reiland meant to hold him in his psychological laboratory.

“Five thousand years of being civilized,” Trant burst on, “and we still have the ‘third degree’! We still confront a suspect with his crime, hoping he will ‘flush’ or ‘lose color,’ ‘gasp’ or ‘stammer.’ And if in the face of this crude test we find him prepared or hardened so that he can prevent the blood from suffusing his face, or too noticeably leaving it; if he inflates his lungs properly and controls his tongue when he speaks, we are ready to call him innocent. Is it not so, Sir?”
"Yes," the old man nodded, patiently. "It is so, I fear. What then, Trant?"

"What, Dr. Reiland? Why, you and I and every psychologist in every psychological laboratory in this country and abroad have been playing with the answer for years! For years we have been measuring the effect of every thought, impulse and act in the human being. Daily I have been proving, as mere laboratory experiments to astonish a row of staring sophomores, that which—applied in courts and jails—would conclusively prove a man innocent in five minutes, or condemn him as a criminal on the evidence of his own uncontrollable reactions. And more than that, Dr. Reiland! Teach any detective what you have taught to me, and if he has half the persistence in looking for the marks of crime on men that he had in tracing its marks on things, he can clear up half the cases that fill the jail in three days."

"And the other half within the week, I suppose, Trant?" The older man smiled at the other's enthusiasm.

"Dr. Reiland," returned Trant, more soberly, "you have taught me the use of the cardiograph, by which the effect upon the heart of every act and passion can be read as a physician reads the pulse chart of his patient, the pneumograph, which traces the minutest meaning of the breathing; the galvanometer, that wonderful instrument which, though a man hold every feature and muscle passionless as death, will betray him through the sweat glands in the palms of his hands. You have taught me—as a scientific experiment—how a man not seen to stammer or hesitate, in perfect control of his speech and faculties, must surely show through his thought associations, which he cannot know he is betraying, the marks that any important act and every crime must make indelibly upon his mind—"

"Associations?" Dr. Reiland interrupted him less patiently. "That is merely the method of the German doctors—Freud's method—used by Jung in Zurich to diagnose the causes of adolescent insanity."

"Precisely," Trant followed with his eyes the old professor who had risen and moved toward the window. "Merely the method of the German doctors! The method of Freud and Jung! Do you think that I, with that method, would not have known eighteen months ago that Lawton was innocent? Do you suppose that I could not pick out among those sixteen men the Bronson murderer? If ever such a problem comes to me I shall not take eighteen months to solve it. I will not take a week."

In spite of himself Dr. Reiland's lips curled at this arrogant assertion. "We meet no such problems here, Trant," he said. He looked out into the quiet street of the university town. "The biggest questions we can give you to solve are such as this"—he pointed—"Why is a delicate girl like Margaret Lawrie running out at her front door a little after seven o'clock on this frosty morning without either hat or jacket for protection?"

"And that, too, I could solve," answered Trant. "But it will be unnecessary, since she seems to be coming here, and herself will tell us."

It was characteristic of him that before the door bell had stopped ringing or the servant had had time to answer, Trant had opened the door. On the girl's forehead, very white under the mass of her dark hair, in her wide gray eyes and in the tense lines of her straight mouth and rounded chin, he read at once the nervous anxiety of a highly-strung woman.

"Professor Reiland," she demanded, in a quick voice, "do you know where my father is?"

"My dear Margaret," the old man took her hand, which trembled violently, "you must not excite yourself this way."

"You do not know!" the girl cried excitedly. "I see it in your face. Dr. Reiland, father did not come home last night! He sent no word."

Reiland's face went blank. No one knew better than he how great was the break in Dr. Lawrie's habits that this fact implied, for the man was his dearest friend. Twenty years Dr. Lawrie had been treasurer of the university. In that time only three events—his marriage, the birth of his daughter, and his wife's death—had been allowed to interfere with the stern and rigorous routine into which he had welded his lonely life. So Reiland paled, and drew the trembling girl toward him.

"When did you see him last, Miss Lawrie?" Trant asked gently.

"Dr. Reiland, last night he went to his university office to work," she replied, as though the older man had spoken. "Sunday night. It was very unusual. All day he had acted so strangely. He looked so tired."

"Professor Reiland and I are just going to the campus," Trant spoke quickly, as the girl helplessly broke off. "We will stop at his office. Harrison can tell us what has called him away. There is not one chance in a thousand, Miss Lawrie, that anything has happened to him."

"Trant is right, my dear," Reiland had recovered himself. "Go home, and don't worry." He was slipping on his overcoat.

The Strange Leak

THE tower clock of University Hall had just gone seven; and in front of them the building itself lifted its broad shape with its fifty windows on the east glimmering like great eyes in the early morning sun. Only, on three of these eyes the lids were closed—the shutters of the treasurer's office were fastened. Trant could not remember that ever before he had seen shutters closed on University Hall. They had stood open until, on many, the hinges had rusted solid. He glanced at Dr. Reiland, who shuddered, but straightened again, stiffly.

"There must be a gas leak," Trant commented, sniffing, as they entered the empty building. But
the white-faced man beside him paid no heed, as they sped down the corridor.

On both sides of them were doors with high, ground-glass transoms, and as they advanced toward the corridor door of Dr. Lawrie’s office the smell of gas grew stronger. Dr. Reiland tried it; but Trant stooped to the keyhole and found it plugged with paper. He caught the transom bar, set his foot upon the knob and, drawing himself up, pushed against the transom. It resisted; but he pounded it in, and, as its glass panes fell tinkling, the fumes of illuminating gas burst out and choked him.

“A foot,” he called down to his trembling companion, as he peered into the darkened room—“Some one on the lounge!”

Dropping down, he threw his strong shoulder vainly against the door. Reiland hurried to a recitation room across the corridor and dragged out a heavy table. Together they drove a corner of this against the lock; it broke, and as the door whirled back on its hinges, the fumes of gas poured forth, stiffing them and driving them back. Head lowered, Trant rushed in, threw up the three windows, one after the other, and beat open the shutters. He leaped upon the flat-topped desk under the gas fixtures in the center of the room and turned off the four jets from which the gas was pouring. darting across the hall, he opened the windows of the room opposite.

At once the strong morning breeze eddied through the building, clearing the gas before it. It set doors swinging, and, unnoticed at the moment while Dr. Reiland with tears streaming from his eyes knelt by the body of his lifelong friend, it lifted from a metal tray upon the desk scores of fragments of charred paper which scattered over the room, over the floor and furniture, over even the couch where the still figure lay, with its white face drawn and contorted.

Reiland arose and touched his old friend’s hand, his voice breaking. “He has been dead for hours. Oh, Lawrie!”

Through the open windows the view embraced a dozen recitation halls and laboratories. The great buildings, so silent now, in a very few moments would be echoing to the tread of hundreds of students.

As the two men stood beside the dead body of him in whose charge had been all finances of this great institution, their eyes met, and in those of Trant was a silent question. Reddening and paling by turns Reiland answered it, “No, Trant, nothing lies behind this death. Whether it was of purpose or by accident, no secret, no disgrace, drove him to it. That I know.”

The young man’s oddly mismatched eyes glowed into his, questioningly. “We must get President Joslyn,” he said.

While he was at the telephone Dr. Reiland swept the fragments of glass across the sill, and closed the door and windows with shaking hands.

Already feet were sounding in the corridors; and the rooms about were fast filling before Trant made out the president’s thin figure, an overcoat across its shoulders, bending against the wind as he hurried across the campus.

Dr. Joslyn’s swift glance as Trant opened the door to him—a glance which, in spite of the student pallor of his high-boned face, marked the man of action—considered and comprehended all.

“Who laid Lawrie there?” he asked sharply after an instant.

“He laid himself there,” Reiland softly replied. “It was there we found him.”

Trant put his finger on a scratch on the wall paper made by the sharp corner of the davenport longue; the corner was still white with plaster. Plainly, the lounge had been violently pushed out of its position, scratching the paper.

Dr. Joslyn’s eyes passed on about the room, passed by Reiland’s appeal, met Trant’s direct look and followed it to the smaller desk beside the dead treasurer’s. He opened the door to his own office.

The Burnt Papers

“WHEN Mr. Harrison comes,” he commanded, “tell him I wish to see him. The treasurer’s office will not be opened this morning.”

“Harrison is late,” he commented, as he returned to the others. “He usually is here by seven-thirty.” Harrison was Dr. Lawrie’s secretary and assistant.

“Now give me the particulars,” the president said, turning to Trant.

“They are all before you,” Trant replied briefly. “The room was filled with gas. These four outlets of the fixture were turned full on. And besides,” he touched now with his fingers four tips with composition ends to regulate the flow which lay upon the table, “these tips had been removed, probably with these pincers that lie beside them. Where the nippers came from I do not know.”

“They belong here,” Joslyn answered, absently. “Lawrie had the tinkering habit.” He opened a lower desk drawer, filled with tools and nails and screws, and dropped the nippers into it.

“The door was locked inside?” inquired the president.

“Yes, it is a spring lock,” Trant answered.

Dr. Joslyn straightened, and his eyes met Reiland’s almost sternly.

“Reiland,” he demanded, “you have been closer to Lawrie than any other man. What was the cause of this?”

“I have been close to him,” the old man answered bravely. “You and I, Joslyn, were almost his only friends. We at least should know there can have been no—real reason. Lawrie’s life has been open as noonday.”

“Yet he had been burning papers,” the president pointed to the metal tray. Dr. Reiland winced.
“Some one had been burning papers,” Trant softly interpolated.

“Some one?” The president looked up sharply.

“These ashes were all in the tray, I think,” Trant contented himself with answering. “They scattered when I opened the windows.”

Joslyn lifted a stiletto letter-opener from the desk and tried to separate, so as to read, the carbonized ashes left in the tray. They fell into a thousand pieces.

Trant’s eyes had registered all the room and now measured Joslyn and Dr. Reiland. They had ceased to be trusted men and friends of his as he incorporated them as elements in the problem. Suddenly he stooped before the couch, slipped his hand under the body, and drew out a crumpled paper. It was a recently canceled note for twenty thousand dollars drawn on the university regularly by Dr. Lawrie as treasurer.

“What is the matter, Joslyn?” Dr. Reiland started up.

“A note. I cannot recollect its circumstances.”

The president stared at the paper. Suddenly his face whitened. “Where are Lawrie’s keys?” He opened the desk drawer; but Trant went straight to the couch and took the keys from Lawrie’s pocket.

Dr. Joslyn unlocked the vault at the foot of the couch and took the top one from a pile of books within.

“Reiland,” he said, pitifully, “the trustees authorized this note for two thousand dollars, not twenty.”

“But it has been canceled. See, he paid it! And these,” he motioned to the ashes in the tray, “if these, too, were notes—raised, as you clearly accuse—he must have paid them. They were returned.”

“Paid? Yes!” Dr. Joslyn’s voice rang accusingly. “Paid from the university funds! See, Lawrie himself had entered them for their face amounts as he paid them. Here,” he turned back a few pages swiftly, “they are entered for the amounts we authorized a few months ago. The total discrepancy exceeds one hundred thousand dollars!”

“Hush!” Reiland was upon him. “Hush.”

The morning was advancing. The halls resounded with the tread of students passing to recitation rooms.

“Who filled this note out?” Trant had picked up the paper and asked this question suddenly.

“Harrison. It was the custom. The signature is Lawrie’s, and the note is regular. Oh, there can be no doubt, Reiland!”

“No, no!” the old man objected. “James Lawrie was not a thief!”

“How else can it be? The tips taken from the fixture, the keyhole plugged with paper, the shutters—never closed before for ten years—fastened within, the door locked! Burned notes, the single one left signed in his own hand! Do you forget that the trustees meet to-morrow night and he then would have had to present his books? We must face it, Reiland; a suicide—a hundred thousand dollars short in his account!”

“Luther!” The old professor turned, stretching out his hands to his young assistant. “Do you, too, believe this? It is not so! Oh, my boy, just before this terrible thing, you were telling me of the new training which could be used to clear the innocent and prove the guilty. I thought it bragadocio. I scoffed at your ideas. But if your words were truth, now prove them. Take this shame from this innocent man.”

The young man sprang to his friend as he tottered. “Dr. Reiland, I shall clear him!” he promised wildly. “I shall prove, I swear, not only that Dr. Lawrie was not a thief, but—he was not even a suicide!”

“What madness is this, Trant,” the president demanded impatiently, “when the facts are so plain before us?”

The Single Note

“So plain, Dr. Joslyn? Yes,” the young man rejoined, “very plain indeed—the fact that before the papers were burned, before the gas was turned on or the tips taken from the fixture, before that door was slammed and the spring lock fastened it from the outside—Dr. Lawrie was dead and was laid upon that lounge!”

“What? What—what, Trant?” Reiland and the president exclaimed together. But the young man addressed himself only to the president.

“You yourself, sir, before we told you how we found him, saw that Dr. Lawrie had not himself lain down, but had been laid upon the lounge. He is not light; some one almost dropped him there, since the edge of the lounge cut the plaster on the wall. The single note not burned lay under his body, where it could scarcely have escaped if the notes were burned first; where it would most surely have been overlooked if the body already lay there. Gas would not be pouring out during the burning, so the tips were probably taken off later. It must have struck you how theatrical all this is, that some one has thought of its effect, that some one has arranged this room, and, leaving Lawrie dead, has gone away, closing the spring lock—”

“Luther!” Dr. Lawrie had risen, his hands stretched out before him. “You are charging murder!”

“Wait!” Dr. Joslyn was standing by the window, and his eyes had caught the swift approach of a Lincoln automobile which, with its plate glass shimmering in the sun, was taking the broad sweep into the driveway. As it slowed before the entrance, the president swung back to those in the room.

“We two,” he said, “were Lawrie’s nearest friends—he had but one other. When you telephoned me this morning I called up Branower, simply asking him to meet me at the treasurer’s office at once. He is coming now. Go down and prepare
him, Trant. His wife is with him. She must not come up.”

Trant hurried down without comment. Through the window of the car he could see the profile of a woman, and beyond it the broad, powerful face of a man with piercing eyes and clean shaven jawls. Branower was the President of the Board of Trustees of the university, an office in which he had succeeded his father. At least half a dozen of the surrounding buildings had been erected by the elder Branower, and practically his entire fortune had been bequeathed to the university.

“Well, Trant, what is it?” the trustee asked. He had opened the door of the Lincoln and was preparing to descend.

“Mr. Branower,” Trant replied, “Dr. Lawrie was found this morning dead in his office.”

“Dead? This morning?” A muddy grayness appeared under the flush of Branower’s cheeks.

“Why! I was coming to see him— even before I heard from Joslyn. What was the cause?”

Asphyxiated

“THE room was filled with gas.”

“Asphyxiation!”

“An accident?” the woman asked, leaning forward. Even as she whitened with the horror of this news, Trant found himself wondering at her beauty. Every feature was so perfect, so flawless, and her manner so sweet and full of charm that, at this first close sight of her, Trant found himself excusing and approving Branower’s marriage. She was an unknown American girl, whom Branower had met in Paris and who had brought back to reign socially over this proud university suburb where his father’s friends and associates had had to accept her and—criticise.

“Dr. Lawrie asphyxiated,” she repeated, “accidentally, Mr. Trant?”

“We—hope so, Mrs. Branower.”

“There is no clew to the perpetrator?”

“Why, if it was an accident, Mrs. Branower, there was no perpetrator.”

“Coro!” Branower ejaculated.

“How silly of me!” She flushed prettily. “But Dr. Lawrie’s lovely daughter; what a shock to her!”

Branower touched Trant upon the arm. After his first personal shock, he had become at once a trustee—the trustee of the university whose treasurer lay dead in his office just as his accounts were to be submitted to the board. He dismissed his wife hurriedly. “Now, Trant, let us go up.”

President Joslyn met Branower’s grasp mechanically and acquainted the president of the trustees, almost curtly, with the facts as he had found them.

“Short one hundred thousand dollars, Joslyn? It is suicide?” the president of the trustees was revolving at the charge.

“I can see no other solution,” the president replied, “though Mr. Trant——”

“And I might have saved this!” The trustee’s face had grown white as he looked down at the man on the couch. “Oh, Lawrie, why did I put you off to the last moment?”

He turned, fumbling in his pocket for a letter. “He sent this Saturday,” he confessed, pitifully. “I should have come to him at once, but I could not suspect this.”

Joslyn read the letter through with a look of growing conviction. It was in the clear hand of the dead treasurer. “This settles all,” he said, decidedly, and he reread it aloud:

DEAR BRANOWER: I pray you, as you have pity for a man with sixty years of probity behind him facing dishonor and disgrace, to come to me at the earliest possible hour. Do not, I pray, delay later than Monday, I implore you.

JAMES LAWRIE.

Dr. Reiland buried his face in his hands, and Joslyn turned to Trant. On the young man’s face was a look of deep perplexity.

“When did you get that, Mr. Branower?” Trant asked, finally.

“He wrote it Saturday morning. It was delivered to my house Saturday afternoon. But I was motoring with my wife. I did not get it until Monday. I returned late Sunday afternoon.”

“Then you could not have come much sooner.”

“No; yet I might have done something if I had suspected that behind this letter was hidden not merely disgrace, but suicide.”

“Disgrace, perhaps, but not suicide, Mr. Branower!” Trant interrupted curtly.

“What?”

“Look at his face. It is white and drawn. If asphyxiated, it would be blue, swollen. Before the gas was turned on he was dead—struck dead——”

“Struck dead? By whom?”

“By the man in this room last night! By the man who burned those notes, plugged the keyhole, turned on the gas, arranged the rest of these theatricals, and went away to leave Dr. Lawrie a thief and a suicide to—protect himself! Two men had access to the university funds. One lies before us; and the man in this room last night, I should say, was the other——” he glanced at the clock—“the man who at the hour of nine has not yet appeared at his office!”

“Harrison?” cried Joslyn and Reiland together.

“Yes, Harrison,” Trant answered, stoutly. “I certainly prefer him for the man in the room last night.”

“Harrison?” Branower repeated, contemptuously. “Impossible!”

“How impossible?” Trant asked, defiantly.

“Because Harrison, Mr. Trant,” the president of the trustees rejoined, “was struck senseless at Elgin in an automobile accident Saturday noon. He has been in the Elgin hospital, scarcely conscious, ever since.”

“How did you learn that, Mr. Branower?”
“I have helped many young men to positions here. Harrison was one. Because of that, I suppose, he filled my name on the ‘whom to notify’ line of a personal identification card he carried. The hospital doctors notified me just as I was leaving home in my car. I saw him at the Elgin hospital that afternoon.”

Young Trant stared into the steady eyes of the president of the trustees. “Then Harrison could not have been the man in the room last night. Do you realize what that implies?” he asked, whitening. “I preferred, I said, to fix him as Harrison. That would keep both Dr. Lawrie from being the thief and any close personal intimate of his from being the man who struck him dead here last night. But with Harrison not here, the treasurer himself must have been conscious of this crime,” he struck the canceled note in his hand, “and been concealing it for—that close friend of his who came here with him. You see how very terribly it simplifies our problem? It was some one close enough to Lawrie to cause him to conceal the thing as long as he could, and some one intimate enough to know of the treasurer’s tinkering habits, so that, even in great haste, he could think at once of the gas nippers in Lawrie’s private tool drawer. Gentlemen,” the young assistant tensely added, “I must ask you which of you three was the one in this room with Dr. Lawrie last night?”

“What?” The word in three different cadences burst from their lips—amazement, anger, threat.

Suicide or Murder?

He lifted a shaking hand to stop them.

“I realize,” he went on more quickly, “that, after having suggested one charge and having it shown false, I am now making a far more serious one, which, if I cannot prove it, must cost me my position here. But I make it now again, directly. One of you three was in this room with Dr. Lawrie last night. Which one? I could tell within the hour if I could take you successively to the psychological laboratory and submit you to a test. But, perhaps I need not. Before to-morrow night I hope to be able to tell the other two, for which of you Dr. Lawrie concerned himself with this crime, and who it was that in return struck him dead Sunday night and left him to bear a double disgrace as a suicide.”

Without a backward look he burst from the room, and, running down the steps, left the campus.

At five o’clock that afternoon, when Trant rang the bell at Dr. Joslyn’s door, he saw that Mr. Branower and Dr. Reiland had been taken into the president’s private study before him.

“Dr. Reiland and Mr. Branower have come to hear the coroner’s report to me,” Joslyn explained. “Lawrie did not die from asphyxiation. An autopsy to-morrow will show the cause of his death. Obviously another person was in the room.”

“Not Harrison,” Trant replied. “I have just come from Elgin, where, though I was not allowed to speak with him, I saw him in the hospital.”

“You doubted he was there?” Branower asked.

“I have traced the notes, too,” the young man continued. “All were made out as usual, signed regularly by Dr. Lawrie and paid by him personally, upon maturity, from the university reserve. So I have made only more certain that the man in the room must have been one of Dr. Lawrie’s closest friends. I came back and saw Margaret Lawrie.”

Reiland’s eyes filled with tears. “This terrible thing has prostrated poor Margaret,” he said.

“I found it so,” Trant rejoined. “Her memory is temporarily destroyed. I could make her comprehend little. Yet she has been told only of her father’s death. Does that seem sufficient cause for such prostration? More likely it points to some guilty knowledge of her father’s trouble and whom he was protecting. If so, her very condition makes it impossible for her to conceal those guilty associations under examination.”

“Guilty associations?” Dr. Reiland rose, nervously.

“Yes; which I mean to discover in this case by the simple association of words—Freud’s method.”

“How? What do you mean?” Branower and Joslyn exclaimed.

“It is a method for getting at the concealed causes of mental disturbance. It is especially useful in diagnosing cases of insanity or mental breakdown from insufficiently known causes.”

“We have a machine, the chronoscope,” Trant continued, as the others waited, interrogatively, “which registers the time to a thousandth part of a second, if necessary. The German physicians merely speak a series of words which may arouse in the patient ideas that are at the bottom of his insanity. Those words which are connected with the trouble cause deeper feeling in the subject and are marked by longer intervals of time before the word in reply can be spoken. The nature of the word spoken by the patient often clears the causes for his mental agitation or prostration.”

“In this case, if Margaret Lawrie had reason to believe that any one of you were closely associated with her father’s trouble, the speaking of that one’s name or the mentioning of anything connected with that one, must betray an easily registered and decidedly measurable disturbance.”

“I have heard of this,” Joslyn commented.

“Excellent,” the president of the trustees agreed, “if Margaret’s physician does not object.”

“I have already spoken with him,” Trant replied. “Can I expect you all at Dr. Lawrie’s to-morrow morning when I test Margaret to discover the identity of the intimate friend who caused the crime charged to her father?”

Dr. Lawrie’s three dearest friends nodded in turn.

(Continued on page 270)
as if not knowing in whom he could trust. But Kennedy hurried on to his next point.

"Who was it that gave the prescription to Mrs. Vandam originally? She is dead and cannot tell. The others won't tell, for the person who gave her that prescription was the person who later substituted the fatal capsule in place of the harmless. The original prescription is here. I have been able to discover from it nothing at all by examining the handwriting. Nor does the texture of the paper indicate anything to me. But the ink—ah, the ink.

"Most inks seem very similar, I suppose, but to a person who has made a study of the chemical composition of ink they are very different. Ink is composed of ink-tanate, water, and gum. Sunlight gives the black of writing. The original pigment—say blue or blue-black ink—is placed in the ink, to make the writing visible at first, and gradually fades, giving place to the black of the tanate which is formed. The dark color is shaded to a fainter color. The color of the commercial inks of to-day vary in colour from pale greenish blue to indigo and deep violet. Two give identical reactions—at all events not when mixed with the iron tanate to form the pigment in writing.

"It is owing to the difference in these provisional coloring matters that it is possible to distinguish between writing written with different kinds of ink. I was able easily to obtain samples of the inks used by the Vandams, by Mr. Farrington, by Mr. Popper, and by the druggist. I have compared the writing of the original prescription with a color scale of my own construction, and I have made chemical tests. The druggist's ink conforms exactly to the writing on the prescription. The ink on the prescription. One of the other three inks conforms by test absolutely to the ink in that prescription signed 'Dr. C. W. H.' as a blind. In a moment my chain of evidence against the owner of that bottle of ink will be complete."

The Pendulums

I could not help but think of the two pendulums on the shelf behind the curtain, but Craig said nothing for a moment to indicate that he referred to that apparatus. We sat down. Farrington seemed nervous and ill at ease. Mr. Popper, who had not recovered from the hysterical condition of her exposure, with difficulty controlled her emotion. Vandam was crushed.

"I have not only arranged this laboratory so as to reproduce Mrs. Popper's ill at ease. It is necessary," said Mr. Popper, who had not recovered from the hysterical condition of her exposure, with difficulty controlled her emotion. Vandam was crushed.

"Have you made a reproduction of this cabinet? I was asked. It was exactly the same size and shape as the one in the Vandam's private sitting-room in the Vandam mansion."

"One night, Mr. Jameson and myself were visiting Mr. Vandam. At precisely twelve-thirty we heard most unaccountable rattlings from that cabinet. I particularly noted the position of the cabinet. Back of it ran a hallway. That is duplicated here. Back of this cabinet is a hallway. I had heard of these rattlings before we went, but was afraid that it would be impossible for me to catch the ghost red handed. There is a limit to what you can do the first time you enter a man's house, and, besides, that was no time to arouse suspicion in the mind of anyone. But science has a way out of every dilemma. I determined to learn something of these rattlings."

Craig paused and glanced first at Farrington, then at Mrs. Popper, and then at Mr. Vandam.

"Mr. Jameson," he resumed, "will escort the doctor, the inspector, Mr. Farrington, Mrs. Popper, and Mr. Vandam into my imitation hall of the Vandam mansion. I want each of you in turn to run your hand down the wall indicated on the back of the cabinet, and strike that spot several sharp blows with your knuckles."

"I did as Craig instructed, tipoeoeing up myself first so that they could not mistake my meaning. The rest followed suit, and after a moment we returned silently in suppressed excitement to the room.

Craiggwas still standing by the table, but now the pendulums with the magnets and needles and drums worked by clockwork were before him.

"Another person outside the Vandam family had a key to the Vandam mansion," he began gravely. "That person, by the way, was the one who waited, night by night, until Mrs. Vandam took the fatal capsule, and then when she had taken it. I have apprised the old man of the fact and strengthened an already blind faith in the shadow world."

"You could have heard a pin drop. In fact you could almost have felt it drop. That other person who, unobserv- ed, had free access to the house," he continued in the breathless stillness, "is in this room now."

He was looking at O'Connor as if for corroboration. O'Connor nodded.

"Information derived from the butler," he murmured.

The Seismograph

"I did not know this until yesterday," Kennedy continued, "but I suspected that something of the sort existed when I was first told by Dr. Hanson of the rappings. I determined to hear those rappings, and make a record of them. So, the night Mr. Jameson, the night Mr. Vandam, I carried this little instrument with me."

Almost lovingly he touched the pendulums on the table. They were now at rest and kept so by means of a lever that prevented all vibration whatever.

"See, I release this lever—now, let no one in the room move. Watch the needles on the paper as the clockwork revolves the drums. I take a step—over so lightly. The pendulums vibrate, and the needles trace a broken line on the paper on each drum. I stop; the lines are practically straight. I take another step and another, ever so lightly. See the delicate pendulums vibrate? See, the lines they trace are jagged lines."

He stripped the paper off the drums and laid it flat on the table before him, with two other similar pieces of paper.

"Just before the time of the rapping I placed this instrument in the corner of the Vandam cabinet, just as I placed it in this cabinet after Mr. Jameson conducted you from the room. In neither case were suspicions aroused. Everything in both cases was perfectly normal—I mean the ghost was in ignorance of the presence of the very existence of this instrument.

"This is an improved seismograph," he explained, "one after a very recent model by Dr. Galitzin of the National Academy of Petrograd. The seismograph, as you know, was devised to record earthquakes at a distance. This one not only measures the size of a distant earthquake, but the actual direction from which the earth-tremors come. That is why there are two pendulums and two drums."

"The magnetic arrangement is to cut short the vibrations set up in the instruments, the magnets, and the pendulums continuing to vibrate after the first shock. Thus they are ready in an instant to record another tremor. Other seismographs continue to vibrate for a long time as a result of one tremor. Besides, they give little indication of the direction from which the tremors come."

"I think you must all appreciate that your tipoeoeing up the hall must cause a far greater disturbance in this delicate seismograph than even a very severe earthquake thousands of miles away, which it was built to record."

He paused and examined the papers sharply.

"This is the record made by the ghost's walk the other night," he said, holding up two of them in his left hand. "Here on the table, on two other longer sheets, I have records of the vibrations set up by those in this room walking tonight."

"Here is Mr. Jameson's—he is not a bit like the ghost's. Nor is Mr. W. hardly at all. Least of all is Mr. Jameson's and Inspector O'Connor's, for they are heavy men."

"Now here is Mr. Farrington's—he bent down closely—he is a light man, and the ghost was light."

(Continued on page 270)
OUT of the pages of fiction, the scientific detective has stepped into real life. The murderer may break out of prison walls, but he cannot escape the thin glass of the test-tube. The burglar may leave no fingerprints, but the psychologist will identify him. The counterfeiter may reproduce exact replicas of U. S. currency, but the spectrophotometer will disclose his forgeries. The laboratory has taken the place of the third degree; brains in the head of the detective have replaced the billy in his hand; while, more often than not, the sleuth who solves a baffling murder mystery never sees the man whom the irrefutable evidence of science sends to the "hot seat".

The criminal may so change his appearance that "his own mother cannot recognize him"; but the applied laws of biology, chemistry, physics and psychology will accurately identify him. From the now-numbered hairs of his head to the soles of his shoes, even the cleverest criminal fairly shouts his identity to the white-aproned, mild-mannered, unarmed man in the laboratory. From his physical appetite to his secret thoughts, the criminal's life-history is laid bare by the silent hand of science, often before the crook knows that he is suspected, and long before he stands in the dock.

Three men held up and robbed a Southern Pacific train, killing one of the trainmen. The total clues were three grains of coarse salt, a minute piece of...
finger-nail, and a tiny piece of hair. These were placed in the hands of Dr. E. O. Heinrich, of Berkeley, California, one of the foremost exponents of the new science of crime detection in the laboratory. All three men, with an accomplice, were caught, convicted and sent to the penitentiary. No human suspicion had pointed to them; but the cold eye of the microscope identified the salt as taken from a certain “lick” in the mountains, near the scene of the robbery, and used exclusively in the feeding of a herd of cattle. It was learned that a cabin on this

August Vollmer, head of new department of Criminology of the University of Chicago, and one of the first police chiefs of the United States to take up the scientific detection of crime.

range had been used as a camp by the four men in question shortly before the hold-up. Similar salt was found in this cabin. The three grains—which were rescued from a discarded pair of overalls, hidden in the brush near the railroad track—were stuck to a minute piece of human finger-nail. The men were arrested, samples of finger nail parings taken, and that from the hand of the leader of the quartet found to be the same as the almost microscopic paring found with the salt. Microscopic search of a pocket in the garment revealed a single strand of human hair, less than one-quarter of an inch long. It was identified as from the head of the same man. He had scratched his head while carrying the three grains of salt under his finger nail, and had put his hand in his pocket, leaving there the salt, bit of nail, and tiny piece of hair. (Cont. on pg. 283)
DRUKKER seemed not to notice the action.
"I can't understand it," he said vaguely. "May I see the notation?"
Markham complied at once with his request. After studying the paper a moment Drukker handed it back; and his little eyes narrowed malevolently.

"Have you asked Arnesson about this? He was discussing this very subject with Sprigg last week."

"Oh, yes," Vance told him carelessly. "Mr. Arnesson recalled the incident, but couldn't throw any light on it. We thought perhaps you could succeed where he had failed."

"I regret I can't accommodate you." There was the suggestion of a sneer in Drukker's reply. "Any one might use the tensor. Weyl's and Einstein's works are full of it. It isn't

The fearful shadow of sudden death is spreading wider. Will Vance be in time to save the next victim?"
It is an axiom of crime detection that the detective should be able to place himself in the criminal's place, visualize the problems the latter has to contend with, and follow the processes of reasoning and action the criminal employs to meet these problems.

If the criminal happens to be a homicidal maniac with a highly-developed brain, it follows that only a detective who is on a par with him, both culturally and mentally, can hope to compete with him and halt his activities. Such a detective we find in Philo Vance, who has set a new mark for all detectives of fiction to shoot at. We see today that Philo Vance already has his imitators, even as Sherlock Holmes had his; but there is only one Vance, and S. S. Van Dine is his biographer.

"Stand back, you chaps!" he ordered, holding one hand to his nose and mouth.

Is it coincidence that the victims of this gruesome series of murders are named after nursery-rhyme characters? You will read the secret in this issue.

Copyrighted..." He leaned over a revolving book case and drew out a thin octavo pamphlet. Here it is in Minkowski's 'Relativitätssprinzip,' only with different symbols—a T for the B, for instance; and Greek letters for the indices." He reached for another volume. "Poincaré also uses it in his 'Hypothèses Cosmogoniques,' with still other symbolic equivalents." He tossed the books on the table con-
What Has Gone Before

Phil Vance, an amateur detective of high social standing, is helping District Attorney Markham and Sergeant Heath solve a peculiar murder case. Joseph Cochrane Robin, who was in love with Belle, Professor Dillard's niece, is found lying on the archery range of the Professor's house with an arrow between his ribs.

The arrow, which is the arrow of the Professor's, whose window greets the range, is questioned and replies evasively. His son Adolph swears that he entered the house about the time of the murder, and heard a scream from his mother's room.

A note is received from an unknown source, signed by the BISHOP. It reads: "Joseph Cochrane Robin is dead. Who killed Cobb Robin? Sporting means sparrow?"

Raymond Speeling, a friend of Belle and an acquaintance of Robin, is questioned by the police and admits the murder. But Vance deduces that he is in the same house, and apprehends Belle, under the impression that she had killed Robin because he attacked her.

In the meantime, a second murder is committed while Speeling is in prison. A young student of Archery named Drukker, a student of Robin's and the head of a 32-caliber bullet. The BISHOP sends letters to the newspapers calling attention to the nursery rhyme which runs: "There was a little man and he had a little gun—he shot 'The Manky Sprig through the middle of his eye."

The association between nursery rhymes and the murders leads Vance to think that a perversion of these rhymes. He decides to question Mrs. Drukker again, in the hope that she may confess seeing the first murderer from her window. Now read on from here.

Characters of the Book

PHILO VANCE
JOHN F. X. MARKHAM, District Attorney of New York County, ERNEST HEATH, Sergeant of the Homicide Bureau.
PROFESSOR BERTRAND DILLARD, a famous physical anthropologist, BELLE DILLARD, his niece. SIGURD ARNESSON, his adopted son; an associate professor of mathematics. PYNE, the Dillard butler. BEEDLE, the Dillard cook. ADOLF DRUKER, scientist and author.
MRS. MARY DRUKER, his mother. GRETE MENZEL, the Drucker cook. JOHN PARTEE, mathematician and chess expert; inventor of the Pardee gambit. J. C. ROBIN, sportsman and champion archer.
RAYMOND SPEELING, civil engineer.
JOHN E. SPRING, senior at Columbia University. DR. WHITNEY BARSTEAD, an eminent anatomist. QUINAN, police reporter of the World.
MADDELLE, the Professor's secretary.
CHARLES inspector of O'Brien, of the Police Department of New York City.
GUILFOYLE, detective of the Homicide Bureau.
SNITZER, detective of the Homicide Bureau.
HENNESSY, detective of the Homicide Bureau.
EMERY, detective of the Homicide Bureau.
BURKE, detective of the Homicide Bureau.
CAPTAIN DOUBIS, fingerprint expert.
DR. EMANUEL DOREMUS, Medical Examiner.
O'WAC, Secretary of the District Attorney.
CURRIE, Vance's valet.

Before we could speak she said in a strained terrified voice: "I knew you would come—I knew you were not through torturing me. . . ."

"To think of Mrs. Drukker," returned Vance softly, "is the farthest thing from our thoughts. We merely want your help."

Vance's manner appeared to alleviate her terror somewhat, and she studied him calculatingly.

"If only I could help you!" she muttered. "But there's nothing to be done—nothing . . ."

"You might tell us what you saw from your window on the day of Mr. Robin's death," Vance suggested kindly.

"No—no!" Her eyes stared horribly. "I saw nothing—I wasn't near the window that morning. You may kill me, but my dying words would be No—no!—"

Vance did not press the point. "Because," he told her, "that you often rise early and walk in the garden."

"Oh, yes!" The words came with a significant relief. "I don't go out in the mornings. I often wake up with dull aching pains in my spine, and the muscles of my back feel rigid and sore. So I go out into my yard whenever the weather is mild enough."

The Woman in the Shoe

"Beedle saw me in the yard yesterday morning."

The woman nodded absently. "And she also saw Professor Dillard with you."

Again she nodded, but immediately afterward she shot Vance a combative inquisitive glance. "He sometimes joins me," she hastened to explain. "He feels sorry for me, and he adores Adolph; he thinks he's a great genius. And he is a genius! He's a great man—great as Professor Dillard—if it hadn't been for his illness . . . And it was all my fault. I let him fall when he was a baby . . . . A dry sob shook her emaciated body, and her fingers worked spasmodically.

After a moment Vance asked: "What did you and Professor Dillard talk about in the garden yesterday?"

A sudden will.ess crept into the woman's manner.

"About Adolph mostly," she said, with a too obvious attempt at unconcern. "Did you see any one else in the yard or on the archery range?" Vance's indolent eyes were on the woman.

"No!" Again a sense of fear pervaded her. "But somebody else was there, wasn't there?—somebody who didn't wish to be seen." She nodded her head eagerly. "Yes! Some one else was there—and they thought I saw him. Why? Oh, merciful God, I didn't! . . . She covered her face with her hands, and her body shook convulsively, "If only I could help you, I would. But it wasn't Adolph—it wasn't my little boy. He was asleep—thank God, he was asleep!"

Vance went close to the woman.

"Why do you thank God that it wasn't your son?" he asked gently.
She looked up with some amazement.

"Surely, don't you remember? A little man shot Johnny Sprigg with a little gun yesterday morning—the same little man that killed Cock Robin with a bow and arrow. It's all a hallucination, from the old woman who lived in a shoe..."

"Come, come, Mrs. Drukker. Vance forced a consoling smile. "Such thoughts are never far from one's mind, when matters prey on your mind. There's a perfectly rational explanation for everything. And I have a feeling that you yourself can help us find that explanation."

"No! I can't! I mustn't! I don't understand it myself. She took a deep, resolute inspiration, and completed her lips.

"Why can't you tell us?" persisted Vance.

"Because I don't know." she cried. "I wish to God I did! I only know that something horrid is going on here—that some awful curse is hanging over this house..."

"How do you know that?"

The woman began to tremble violently and her eyes roamed distractedly about the room.

"Because her voice was barely audible—because the little man came here—because the little man shot Johnny Sprigg... A chill passed up my spine at this statement, and I heard even the unperturbable Sergeant's sharp intake of breath. Then Vance's calm voice sounded.

"How do you know he was here, Mrs. Drukker? Did you see him?"

"No, I didn't see him; but he tried to get into this room—by that door. She pointed unsteadily toward the entrance to the hallway through which we had just come. You must tell us about it," said Vance. "I have been sworn to conclude that you manufactured the story."

"Oh, but I didn't manufacture it—my own experiences too! There could be no doubt whatever of the woman's sincerity. Something had occurred which filled her with mortal fear. "It was lying in bed, awake. The little clock on the mantel had just struck midnight; and I heard a soft rustling sound in the hall outside. I turned my head toward the door—there was a faint dim-light shining under the heavy door. Then I saw the door-knob turn slowly—silently—as if some one were trying to get in without waking me. I shut the door, Mrs. Drukker," interrupted Vance. "Do you always lock your door at night?"

"I've never locked it until recently—after Mr. Robin's death. I've something to say for that, since then—I can't explain why."

"I quite understand. Please go on with the story. You say you saw the door-knob move—what then?"

"Yes—yes. It moved softly—back and forth. I lay there in bed, frozen with terror. But after a while I managed to call out—I don't know how loud; but suddenly the door-knob ceased to turn, and I heard footsteps moving rapidly away—down the hall. Then I managed to get up. I was so afraid—so afraid for Adolph. And I could hear those soft footsteps descending the stairs—"

"Shut the door."

"At the rear—leading to the kitchen. Then the door of the screen porch shut, and everything was silent again... I knelt with my ear to the door. Feeling... feeling... waiting. But nothing happened, and at last I rose. Something seemed to tell me I must open the door. I was in deadly terror—and I knew I had no choice. "A shudder swept her body. "Softly I turned the key, and took hold of the knob. As I pulled the door slowly inward, the object which had been poised on the outside knob fell to the floor with a clatter. There was a light burning in the hall—I always keep one burning at night—and I tried not to look down; I tried—I tried—but I couldn't keep my eyes away from the floor. And there at my feet—oh, God in Heaven!—there lay something that lay on the floor, Mrs. Drukker?"

With difficulty the woman rose and, bracing herself for a moment at the foot of the bed, went to the dressing-table. Pulling out a small drawer she reached inside and fumbled among its contents. Then she extended her open hand to us. On the palm lay a small chessman weighing black against the whiteness of her skin. It was the bishop!

CHAPTER XIII

In the Bishop's Shadow

(Tuesday, April 12; 11 a.m.)

Vance took the bishop from Mrs. Drukker and slipped it into his coat pocket.

"It would be dangerous, madam," he said, with impressive solemnity, "if that happened last night became known. Should the person who played this joke on you find out that you had informed the police, other attempts to frighten you might be made. Therefore, not one word of what you have told us must pass your lips."

"May I not even tell Adolph? the woman asked distractedly.

"No. You must maintain a complete silence, even in the presence of your son."

I could not understand Vance's emption on this point. But before many days had passed it was all too clear to me. The reason for his advice was revealed with tragic force; and I realized that even at the time of Mrs. Drukker's blossomings in my mind had worked out an uncannily accurate rationalization, and foreseen certain possibilities unsuspected by the others.

We took our leave a few moments later, and descended the rear stairs. The staircase made a sharp turn to the right at a landing eight or ten steps below the second floor, and led into a small dark passageway with two doors—one on the left, opening into the kitchen, and another, diagonally opposite, giving on the screen porch.

We stepped out immediately to the porch, now flooded in sunshine, and then engaged in a quiet and sober shake off the atmosphere cast about us by Mrs. Drukker's terrifying experience.

Markham was the first to speak.

"Do you believe, Vance, that the person who shot Sprigg turned in here last night is the killer of Robin and Sprigg?"

"There can be no doubt of it. The presence of his midnight visit is hideously clear. It is impossible to escape what has already come to light."

"It strikes me merely as a ruthless practical joke," Markham rejoined, "the act of a drunken fiend."

Vance shook his head.

"It's the only thing in this whole nightmare that doesn't qualify as a piece of insane humor. It was a dead certainty. There was no escape. The devil himself is never so solemn as when covering his tracks. Our particular devil's hand was forced, and he made a bad job of it. The devil, gentlemen, if he were to prefer his jovial mood to the one that prompted him to break in here last night. However, we now have something definite to go on."

There was a moment's ill-advised theorizing, quickly picked up this last remark.

"And what might that be, sir?"

"Imprima, we may assume that our assailant was thoroughly familiar with the plan of this house. The night-light in the upper hall may have cast its gleam down the rear stairs as far as the landing, but the rest of the way must have been in darkness. Moreover, the arrangement of the rear of the house is somewhat complicated. Therefore, unless he knew the layout he couldn't have found his way into our nursery in the dark. Obviously, too, the visitor knew in which room Mrs. Drukker slept. Also, he must have known that the midnight caller in last night, for he wouldn't have chanced making his call unless he had felt sure that the coast was clear."

"Then don't help us much," grumbled Heath. "We've been going up the theory right along that the murderer was wise to everything connected with these two houses."

"True. But one may be fairly intimate with a family and still know at what hour each of its members rises on a certain night, or just how to effect a surreptitious entry to the house. Furthermore, the midnight caller was some one who knew that Mrs. Drukker was in the habit of leaving her door unlocked at night, and had every intention of entering her room. His object wasn't merely to leave his little memento outside and then depart. The silent stealthy way he tried the knob proves that."

"He may simply have wanted to waken Mrs. Drukker so she would find it at once," suggested Markham.

"Why did he turn the knob so carefully as if he was turning it with any one? A rattling of the knob, or a soft tapping, or even throwing the chessman against the door, would have answered that purpose much
better... No, Markham; he had a far more sinister object in mind; but when he found himself thwarted by the locked door and heard Mrs. Drukker cry of fright, he placed the bishop where she would find it, and fled.

The Unlocked Door

"Still and all, sir," argued Heath, "any one mighta known she left her door unlocked at night; and any one coulda learned the lay of the house so's to find their way around in the dark.

"But who, Sergeant, had a key to the rear door? And who could have used it at midnight last night?" Vance asked.

"I don't know," he groaned. "I called him at half past eight, but he didn't answer, and I tried the door... . It wasn't locked and—Du lieber Gott! He's gone.

"When did you next see him?" asked Vance quietly.

"At nine. I went up-stairs again to tell him it was ready. He was at the study—at his desk—working like mad, and all excited. He told me to go away.

"Did he come down to breakfast?"

"Ja—ja. He came down—half an hour later.

The woman leaned heavily against the drain-board of the sink, and Vance took a long pull at his cigar. He wiped his mouth and glared at her ferociously. "So! You were holding out on me, he bellowed, thrusting forward his fist. "You lied to me when I questioned you the other day. Obstructing justice, were you?"

She gave Vance a look of frightened appeal. "Menzel, Sergeant," he said, "had no intention of obstructing justice. And now that she has told us the truth, I think we may overlook her natural deception in the matter." Then before Heath had time to reply he turned to the woman and asked in a matter-of-fact tone: "Do you lock the door leading to the second floor every night?"

"Ja—every night." She spoke listlessly; the reaction from her fright had left her apathetic.

"You are sure you locked it last night?"

"At half past nine—when I went to bed. Vance stepped across the little passegway and inspected the lock. "It's a snap-lock," he observed, on returning. "Who has a key to the door?"

"I have a key. And Mrs. Drukker—she has one, too."

"You're sure no one else has a key?"

"No one except Miss Dillard... ."

"Miss Dillard?" Vance's voice was suddenly resonant with interest. "Why should she have one?"

"She's had it for years. She's like a member of the family, over here two and three times a day. When I go out I lock the back door; and her having a key saves Mrs. Drukker the trouble of coming down and letting her in."

"Quite natural," Vance murmured. Then: "We shan't bother you any more, Mrs. Menzel. He strolled out over the little rectangle.

When the door had been closed behind us he pointed to the screen door that opened into the yard.

You'll note that this wire mesh has been torn away from the frame, permitting one to reach inside and turn the latch. Either Mrs. Drukker's key or Miss Dillard's—probably the latter—was used to open the door of the house.

Heath nodded: this tangible aspect
of the case appealed to him. But Markham was not paying attention. He stood in the background smoking with angry detachment. Presently he turned resolutely and was about to rush out the house when Vance caught his arm.

"No—no, Markham! That would be abominable technique. Curb your ire. You’re so dashed impulsive, don’t you know?"

"But, damn it, Vance!" Markham shook off the other’s hand. "Drukker lied to us about going out the Dillard gate before Robin’s murder."

"Of course he did. I’ve suspected him all along. The account he gave me of his movements that morning was a bit fanciful. But it’s useless to go upstarts now and hector him about it. He’ll simply say that the cook is mistaken.”

**Markham Is Doubtful**

Markham was unconvinced.

"But what about yesterday morning? I want to know where he was when the cook called him at half past eight. Why should Mrs. Drukker be so anxious to have us believe he was asleep?”

“She, too, probably went to his room and saw that he was gone. Then when she heard of Sprigg’s death her fear became intense over whether she proceeded to invest him with an alibi. But you’re only inviting trouble when you plan to chivy him about these vagaries of his.”

"I’m not so sure. Markham spoke with significant gravity. "I may be inviting a solution to this hideous business.”

Vance did not reply at once. He stood gazing down at the quivering shadows cast on the lawn by the willow trees. At length he said in a low voice:

"We can’t afford to take that chance. If what you’re thinking should prove to be true, and you should reveal the information you’ve just imparted, the blasted wretch will escape. We might here last night might prowl about the upper hall again. And this time he might not be content to leave his chessman outside the door.”

A look of horror came into Markham’s eyes.

"You think I might be jeopardizing the cook’s safety if I used her evidence against him at this time?”

"The terrible thing about this affair is that, until we know the truth, we face danger at every turn.” Vance’s voice was heavy with discouragement.

"Then we must proceed with caution.”

The door leading to the porch opened, and Drukker appeared on the threshold, his little eyes blinking in the sunlight. His gaze rested on Markham, and a crafty, repulsive smile contorted his mouth.

"I trust I am not disturbing you,” he apologized, with a menacing sneer. "Somebody has informed me that she told you she saw me enter here by the rear door on the morning of Mr. Robin’s unfortunate death.”

"That’s my aunt!” murmured Vance turning away and busying himself with the selection of a fresh cigarette. "That tears it.”

Drukker shot him an inquisitive look, and drew himself up with a kind of cynical fortitude.

"And what about it, Mr. Drukker?” demanded Markham.

"I merely desired to assure you,” the man replied, "that the cook is in error. She has obviously confused the date, and the murder was not, as you suggested, often by this rear door. On the morning of Mr. Robin’s death, as I explained to you, I left the range by the 76th Street gate, and after a brief visit to the store, returned home by the front way. I have convinced Grete that she is mistaken.”

Vance had been listening to him closely. Now he turned and met the other’s smile with a look of bland in genuineness.

"Did you convince her with a chessman, by any chance?”

Drukker jerked his head forward and sucked in a rasping breath. His twisted features became taut; the muscles about his eyes and mouth began to twitch; and the ligaments of his neck stood out like whipcord. For a moment I thought he was going to lose his balance, but with a great effort he steadied himself.

"I don’t understand you, sir.”

"There was the vibrancy of an intense anger in the words. "What has a chessman to do with it?”

"Chessmen have various names,” suggested Vance softly.

"Are you telling me about chess?” A venal smile crept Drucker’s manner, but he managed to grin.

"Various names, certainly. There’s the king and queen, the rook, the knight, the bishop—" He broke off. "The bishop!...” He laid his head against the casement of the door and began to cackle mirthlessly. "So! That’s what you mean! The bishop!... You’re a lot of imbecile children playing a nonsense game.”

"We have excellent reason to believe,” said Vance, with impressive calmness, "that the game is being played with the chess bishop as the principal symbol.”

Drukker sobered.

"Don’t take my mother’s vagaries too seriously. "Here my imagination often plays tricks on her.”

"Ah! And why do you mention your mother in this connection?”

"You’ve just been talking to her, haven’t you? And your comments, I must say, sound very much like some of her harmless hallucinations.”

"On the other hand,” Vance rejoined mildly, "your mother may have very profitably good grounds for her beliefs.”

Drukker’s eyes narrowed, and he looked swiftly at Markham.

"Right.”

"Ah, well,” sighed Vance; "we shan’t debate the point.” Then in an altered tone he added: "It might help us though, Mr. Drukker, if we knew whether you were up at eight and nine yesterday morning.”

The man opened his mouth slightly as if to speak, but quickly his lips closed again, and he stood staring the inquisitive man in the eyes. Then he answered in a high-pitched insistent voice.

"I was working—in my study—from six o’clock until half past nine.” He paused, but evidently felt that further explanation was desirable. "For several months I’ve been working on a modification of the ether-string theory to account for the interference of light which the ether-string theory is unable to explain. Dillard told me I couldn’t do it;—a fanatical light came into his eyes—but I awoke early yesterday morning with certain flashes of the answer; and I got up and went to my study...”

"So that’s where you were.” Vance spoke carelessly. "It’s of no great importance. Some other day we’ll discuss it with you today.” He beckoned with his head to Markham, and moved toward the screen door. As we stepped upon the range he turned back and, smiling, said almost dulcetly: "Mrs. Menzel is under our protection. It would pain us deeply if anything should happen to her.”

Drukker looked after us with a sort of hypnotised fascination.

The moment we were out of hearing Vance moved to Heath’s side.

"Sergeant,” he said in a troubled voice, "that fellow—” "Vance, that fellow—” "as a young man has…haunted me and his…girlfriend…a Madame Hausfrau may have put her head unwittingly in a noose. And—my word!—I’m afraid. You’d better have a good man watch the Drukker house tonight—from the rear, and through the willow trees. And tell him to break in at the first scream or call..." I’ll sleep better if I know there’s a fellow guarding Frau Menzel’s slumber’s."”

"I get you, sir.” Heath’s face was grim. "There won’t be no chess players worrying her to-night.”

**CHAPTER XIV**

A Game of Chess

(Tuesday, April 12; 11.30 a.m.)

A s we walked slowly toward the Dillard house it was decided that immediate inquiries should be made regarding the whereabouts the night before of every person connected in any way with this gruesome drama.

"We must be careful, however, to drop no hint of what befell Mrs. Drukker,” warned the young house-director. "Our mid-night bishop-bearer did not extend that we should learn of his call. He believed that the poor lady would be too frightened to tell us.”

"I’m inclined to think,” objected Markham, "that you’re attaching too much importance to the episode.”

"Oh, my dear fellow!” Vance stopped short and put both hands on the other’s shoulder. "You’re much too effete—that’s your great shortcoming. You don’t feel—you are no child of nature. The poetry of your soul runs dry. Now I, on the other hand, give my imagination full sway; and I tell you that the leaving of that bishop at Mrs. Drukker’s door was no Hallow’e’en prank, but the deliberate act of a mad man. It was meant as a warning.”

"You think she knows something?”

Vance thought she saw Robin’s body placed on the range. And I think she saw something else—something that would give her life not to have seen.”

In silence we moved on. It was our intention to pass through the wall
gate into 75th Street and present cur- ses at the Dillard’s front door; but as we passed the archery-room the basement door opened, and Belle Dillard confronted us anxiously.

"I saw you coming down the road, sir," she said eagerly, addressing her words to Markham. "For over an hour I’ve been waiting to get in touch with you—phoning your office, too. He’s new, see, and I’m reac- tivated. "Something strange has happened. Oh, it may not mean anything... but when I came through the archery-room here the other day, I had to call on Lady Mae, some impulse made me go to the tool-chest again and look in the drawer,—it seemed so—so queer that the little revolver should have been there. And there lay a pair of pliers, nothing—nothing—just the other pistol!" She caught her breath. "Mr. Markham, some one returned it to the drawer last night.

This information acted electrically on Heath.

"Did you touch it?" he asked excitedly.

"Why no... ."

He brushed past her unceremoniously and, going to the tool-chest, yanked open the drawer. There, beside the larger automatic that we had seen the day before, lay a small pearl-handled .32. The Sergeant’s eyes glinted as he ran his pencil through the trigger-guard and lifted it gingerly. He held it to the light and sniffed at the end of the barrel.

"One empty chamber," he announced, with satisfaction. "And it’s been shot on recently... . You ought get us there somewhere!" He wrapped the revolver tenderly in a handkerchief and placed it in his coat pocket. "I’ll get Dubois busy on this for finger-prints; and I’ll have Cap Hagedorn* check up on the bullets.

"Really now, Sergeant," said Vance banteringly; "do you imagine that the gentleman we’re looking for would walk away clean and then leave his digital monogram on a rev- olver?"

"I hasn’t got your imagination, Mr. Vance," said Heath, straight faced. "So I’m going ahead doing the things that oughta be done.

"You’re quite right," Vance smiled with good-natured admiration at the other’s dogged thoroughness. "For give me for trying to damp your zeal.

He turned to Belle Dillard.

"I can come here primarily to see the professor and Mr. Arnesson. But there’s also a matter we’d like to speak about to you.—We understand you have a key to the rear door of the Dillard house.

She gave him a puzzled nod.

"Yes; I’ve had one for years. I run back and forth so much; and it saves Lady Mae a lot.

"Our only interest in the key is that it might have been used by some one who had no right to it."

"But that’s impossible. I’ve never let any one have it in my hand-bag."
some surprise, but made no comment. He said merely: "That information is very interesting. To what members do you refer?"

"To no member specifically," Vance hastened to assure him. "I was merely writing a report."

"He took out his old meerschaum pipe and began filling it. "Belle and Sigurdr and I had dinner alone at six o'clock. At half past seven, Drucker and Pardee went away. I myself turned in shortly after eleven, after locking up the house—I'd let Pyne and Beedle go to bed early. And that's about all I can tell you.""

"Do I understand that Miss Dillard and Mr. Arnesson went to the theatre together?"

"Yes. Sigurdr rarely patronizes the theatre, but whenever he does he takes Belle along. He attends Ibsen's plays, for the most part. He's a devout disciple of the Norwegian school, American upbringing hasn't in the least tempered his enthusiasm for things Norwegian. At heart he's quite loyal to his native country. He's an expert on the Norwegian literature, as any professor at the University of Oslo; and the only music he really cares for is Grieg's. When he goes to concerts or the theatre you're pretty sure to find that the programs are liberally Norwegian."

"It was an Ibsen play, then, he attended last night?"

"Rosmersholm," I believe. There's a revival of Ibsen's dramas at present in New York."

Vance nodded. "Walter Hampden's doing them.—Did you see either Mr. Arnesson or Miss Dillard after they returned from the theatre?"

"No; they came in rather late, in fact. Belle told me this morning they went to the Plaza for supper after the play. However, Sigurdr will be here by two o'clock, and you can learn the details from him." Though the professor spoke with patience, it was plain that he was annoyed by the apparently irrelevant nature of the interrogation.

"Will you be good enough, sir," pursued Vance, "to tell us the circumstances connected with Mr. Drucker's and Mr. Pardee's visit here after dinner?"

"There was nothing unusual about their call. They dropped in during the evening. The object of Drucker's visit was to discuss with me the work he had done on his modification of the quantum theory; but when Pardee appeared the discussion was dropped. Pardee is a good mathematician, but advanced physics is beyond his depth."

"Have you spoken to Mr. Drucker or Mr. Pardee since Miss Dillard before she went to the theatre?"

Professor Dillard took his pipe slowly from his mouth, and his expression became resentful.

"I must say," he replied testily, "that I can see no valid object in my answering such questions. However," he added, in a more indulgent tone, "if the domestic trivia of my house...

hold can be of any possible assistance to you, I will of course be glad to go into the details."

"Yes, both Drucker and Pardee saw Belle last night. All of us, including Sigurdr, were together in this room at the time, and we can all remember the time and the event. There was even a casual discussion about Ibsen's genius, in which Drucker annointed Sigurdr's work by maintaining Hauptmann's superiority.

"Then at eight o'clock, I gather, Mr. Arnesson and Miss Dillard departed, leaving you and Mr. Pardee and Mr. Drucker here."

"That is correct."

"And at half past ten, I think you said, Mr. Drucker and Mr. Pardee went away. Did they go together?"

"They went down-stairs together," the professor answered, with more than a suggestion of tartness. "Drucker, I believe, went home; but Pardee had an appointment at the Manhattan Chess Club."

"It seems a bit early for Mr. Drucker's chess, doesn't it?"

"Especially as he had come to discuss an important matter with you and had had no adequate opportunity to do so up to the time of his departure."

"Drucker is not well," the professor's voice was again studiously patient. "As I told you, he was ill. And last night he was unusually played out. In fact, he complained to me of his fatigue and said he was going immediately to bed."

"Yes, quite true," murmured Vance. "He told us a little while ago that he was up working at six yesterday morning."

"I'm not surprised. Once a problem has posed itself in his mind he works on it incessantly. Unfortunately he has no normal reactions to counterbalance his consuming passion for mathematics. There have been times when I've feared for his mental stability."

"Vance, for some reason, steered clear of the subject."

"You spoke of Mr. Pardee's engagement at the Chess Club last night," he said, when he had carefully lighted a fresh cigarette. "Do you mention the nature of it to you?"

Professor Dillard smiled with patronizing Felix."

"He talked about it for fully an hour. It appears that a gentleman named Rubinstein—a genius of the chess world, I understand, who is now visiting this country—had taken him on for the past three weeks. Last time was yesterday. It began at two o'clock, and was postponed at six. It should have been played off at eight, but Drucker had the lion of some dinner downtown; so the hour set for the play-off was eleven. Pardee was on tenter-hooks, for he had lost the first game and drawn the second. But he had won last night's game; he would have broken even with Rubinstein. He seemed to think he had an excellent chance according to his estimate, which stood out six o'clock; although Drucker disagreed with him. . . . He must have gone directly from here to the club, as it was fully half past ten when he and Drucker went out."

"Rubinstein's a strong player," observed Vance. "A new note of interest, which he strove to conceal, had come into his life, a game of one of the grand masters of the game. He defeated Capablanca at San Sebastian in 1911, and between 1907 and 1912 was recognized for the world's title held by Doctor Lasker. . . . Yes, it would have been a great feather in Pardee's cap to have the含有, but as a matter of fact, I recall that when he was engaged with the chessmen at the table over there and Drucker stepped up to look on, Pardee held out his hand for no advice. The discussion of the position took some time later, and was kept entirely to generalities. I doubt whether he has mentioned of any specific line of play."

"Vance Analyzes A Game"

"Vance leaned slowly forward and cranked up the thin puffs of tobacco. His face was taut with concentration. I had long since come to recognize as a sign of repressed excitement. Then he rose carelessly and moved to the chess table in the corner. He stood there, one hand resting on the exquisite marquetry of the alternating squares."

"You say that Drucker expressed a certain position on this board when Mr. Drucker came over to him?"

"Yes, that is right." Professor Dillard spoke with forced politeness. "Drucker said down fronting him and studied the layout. He started to make some remark, and Pardee requested him to say nothing. A quartermaster handed him a glass of water. Robbinet smacked the glass against the men away; and it was then that Drucker told him that his game was lost—that he had worked himself into a position which, though exposed, he had no good weak..."
Vance had been running his fingers aimlessly over the board; and he had taken two or three of the men from the box and tossed them back, as if toying with them.

"Do you remember just what Mr. Drukker said?" he asked without looking up.

"I didn't pay very close attention—the subject was not exactly one of burning moment to me." There was an unescapable note of irony in the answer. "But, as nearly as I can recall, Drukker said that Pardee could have won provided it had been a rapid-transit game, but that Rubinstein was a notoriously slow and careful player and would inevitably find the weak spot in Pardee's position."

"Did Pardee resent this criticism?" Vance now strolled back to his chair and selected another cigarette from his case; but he did not sit down again.

"He did—very much. Drukker has an unfortunately antagonistic manner, and I became the subject of his chess. The fact is, he went white with anger at Drukker's strictures. But I personally changed the subject; and when they went away the incident had apparently been forgotten."

We remained but a few minutes longer. Markham was profuse in his apologies to the professor and sought to make amends for the patent annoyance our visit had caused him. He was not pleased with Vance for his seemingly garrulous insistence on the darknesses of that game when we had descended to the drawing-room he expressed his displeasure.

"I could understand your questions relating to the whereabouts of the various occupants of this house last night, but I could see no excuse for your harping on Pardee's and Drukker's disagreement over a game of chess. We have other things to do besides gossip."

"A hate of gossip parlance also crown'd Tennyson's Isabel thro' all her triumphs, and Vance returned puckishly. "But—my word, Markham!—our life is not like Isabel's. Speakin' seriously, there was method in my gossip. I prattled—and I learned something."

"You learned what?" Markham demanded sharply.

With a cautious glance into the hall Vance leaned forward and lowered his voice.

"I learned, my dear Lyeurgus, that a black bishop is missing from that set in the library, and that the chessman in which Drukker's queen matches the other pieces up-stairs!"

CHAPTER XV

An Interview With Pardee

(Tuesday, April 12; 12.30 p.m.)

T HIS piece of news had a profound effect on Markham. As was his habit when agitated, he rose from his pacing-back and forth and his hands clasped behind him. Heath, too, though slower to grasp the significance of Vance's revelation, puffed vigorously on his cigar—an indication that his mind was busy with a difficult adjustment of facts.

Before either had formulated any comment the rear door of the hall opened and light footsteps approached the drawing-room. Belle Dillard, returning from Mrs. Drukker's, appeared at the entrance. Her face was troubled, and letting her eyes rest on Markham, she asked:

"What did you say to Adolph this morning?"

Vance replied: "I asked him what he had done.

"He's going about testing all the door-locks and window-catches as if he feared burglars; and he has frightened poor Grete by telling her to go away at night.

"Ah! He has warned Mrs. Menzel, has he?" mused Vance. "Very interesting."

The girl's gaze turned swiftly to him.

"Yes; but he will give me no explanation. He's excited and mysterious. And the strangest thing about his attitude is that he refuses to go near his mother... What does it mean, Mr. Vance? I feel as though something terrible were impending."

"I don't know just what it means," Vance spoke in a low, disinterested voice. "And I'm afraid even to try to interpret it. If I should be wrong... He became silent for a moment. "We must wait and see. Tonight perhaps we'll be able to discover the reason. But there's no cause for alarm on your part, Miss Dillard." He smiled comfortably. "How did you find Mrs. Drukker?"

"She seemed much better. But there's still something worrying her; and I think it has to do with Adolph, for she talked about him the whole time. I was there when she kept asking me if I'd noticed anything unusual in his manner lately."

"That's quite natural in the circumstances," Vance returned. "But you mustn't let her morbid attitude affect you. And now, to change the subject: I understand that you were in the library for half an hour or so last night before you went to the theatre. Tell me, Miss Dillard: where was your hand-bag during that time?"

The question startled her; but after a momentary hesitation she answered: "When I came into the library I placed it there with my wrap on the little table in the corner."

"It was the lizard-skin bag containing the key?"

"Yes. Sigurd hates evening dress, and when we go out together I always wear my wrap and carry my bag.

"So you left the bag on the table during that half-hour, and then kept it with you the rest of the evening.—And what about this morning?"

"I went out for a walk before breakfast and carried it with me. Later I put it on the hat-rack in the hall for an hour or so; but when I started for Lady Mae's at about ten I took it with me. Then I thought that the little pistol had been returned, and I postponed my call. I left the bag downstairs in the archery-room until Mrs. Markham came and I've had it ever since."

Vance thanked her whimsically.

"And now that the perigeneations of the bag have been thoroughly traced, please try to forget all about it." She was on the point of asking a question, but he anticipated her curiosity and said quickly: "You went to the Plaza for supper last night, your uncle told us. You must have been late in getting home."

Vance rose from the sofa late when I go anywhere with Sigurd," she answered, with a maternal note of complaint. "He has a constitutional dislike of the sight of life; and I begged him to stay out longer, but he looked so miserable I hadn't the heart to remain. We actually got home at half past twelve.

Vance rose with a gracious smile.

"You've been awfully good to bear with our foolish questions so patiently... Now we're going to drop in on Mr. Pardee and see if he has any illuminating suggestions to offer. He's generally in at this time, I believe."

"I'm sure he's in now," the girl replied. "The girl walked with us to the hall. "He was here only a little while before you came, and he said he was returning home to attend some correspondence."

We were about to go out when Vance paused.

"Oh, I say, Miss Dillard; there's one point I forgot to ask you about. When you came home last night with Miss reporters how did you know it was just half past twelve? I notice you don't wear a watch."

"Sigurd told me," she explained. "I wear another one." She smiled. "I brought me home so early, and as we entered the hall here I asked him spitfully what time it was. He looked at his watch and said it was half past two."

At that moment the front door opened and Arnesson came in. He stared at us in mock astonishment; then he caught sight of Belle Dillard.

"Hallo, sis," he called to her pleasantly. "In the hands of the gendermerie, I see." He flashed us an amused look. "Why the conceave? This case is becoming a regular police state. Hunting for clews of Sprigg's murderer? Ha! Bright youth done away with by his jealous proponent and saved for the police? Oh... Hope you chaps haven't been putting Diana the Huntress through a third degree."

A Social Call

"Nothing of the kind," the girl spoke up. "They've been most considerate. And I've been telling them what an old foggy you are—bringing me home at half past twelve. I think I indulged," grinned Arnesson. "Much too late for a child like you to be out.

"It must be terrible to be soiled and—" She mathematically inclined—she retorted with some heat, and ran upstairs.

Arnesson shrugged his shoulders and looked after her until she had disappeared. Then he fixed a cynical eye on Markham.

"Well, what glad tidings do you bring? Any news about the latest victim? He led us back by way to the drawing-room. "You told us you had that lad. He'd gone far. rotten shame he had to be named Johnny Sprigg. Even 'Peter Piper' would have been safer. Nothing happened to Peter Piper aside from the pepper..."
episode; and you couldn't very well work that up into a murder. ... By the way, Arnesson, Arnesson, Markham broke in, nettled by the man's flippancy. "The situation remains unchanged."

"You're up for a social call, I presume. Staying for lunch?"

"We reserve the right," said Markham coldly, "to investigate the case in whatever manner we deem advisable, and we are accountable to you for our actions."

"So! Something has happened that irks you, Arnesson. Spoke with sarcasm, I thought I had been accepted as a condutor; but I see I am to be turned forth into the darkness." He sighed elaborately and took out his pipe. "Dropping it, pilot!—Bismark at your window!"

Vance had been smoking dreamily near the archway, apparently oblivious of Arnesson's complaining. Now he leaped into the room.

"Really, y'know, Markham, Mr. Arnesson is quite right. We agreed to keep him posted; and if he's to be of any help to us he must know all the facts."

"It was you yourself," protested Markham, "who pointed out the possible danger of mentioning last night's occurrence."

"True. But I had forgotten at the time our promise to Mr. Arnesson. And I'm sure his discretion could be relied on. Then Vance, related in detail Mr. Drucker's experience of the night before.

Arnesson listened with rapt attention. I noticed that his sarcastic expression had disappeared, and that in its place came a look of calculating somberness. He sat for several minutes in contemplative silence, his pipe in his hand.

"That's certainly a vital factor in the problem," he commented at length. "It changes our constant. I can see that this thing has got to come from a new angle. The Bishop, it appears, is in our midst. But why should he come to haunt Lady Mae?"

"I've been told to report to them at the exact moment of Robin's death."

"Aha!" Arnesson sat up. "It grasps your implication. She saw the Bishop from her window on the morning of Cock Robin's dissolution, and later he returned and perched on her door-knob as a warning for her to keep mum."

"Something like that, perhaps. . . . Have you enough integers now to work out your formula?"

"I would like to have an eye on this black bishop. Where is it?"

Vance reached in his pocket, and held out the chesman. Arnesson took it eagerly. His eyes glittered for a moment. He turned the piece over in his hand, and then gave it back.

"You seem to recognize this particular bishop, sain..."

"I have seen it before. It was borrowed from your chess set in the library."

Arnesson nodded a slow affirmative. Suddenly he turned to Markham, and an ironic leer came over his lean features. "Was that why I was to be kept in the dark? Under suspicion, am I? Shades of Pythagoras! What penalty attaches to the wrong time of distributing chessmen among one's neighbors?"

Markham got up and walked toward the hall.

"You're not under suspicion, Arnesson," he answered, with no attempt to conceal his ill-humor. "The bishop was left at Mrs. Drucker's at exactly midnight."

"And I was half an hour too late to qualify. Sorry to have disappointed you."

"Let us hear if your formula works out properly. Mr. Dillard is out eating at the front door. We've a little visit to pay to Mr. Pardee now."

"Pardee? Oho! Calling in a chess expert on the subject of bishops, eh? see your reasoning—it at least has the virtue of being simple and direct. . . ."

He stood on the little porch and watched the heavy drizzle gargoyle, as we crossed the street.

Pardee received us with his customary quiet courtesy. The tragic, frustrated look was a part of his personality, but the more pronounced than usual; and when he drew up chairs for us in his study his manner was that of a man whose interest in the game had been merely going through the mechanical motions of living.

"We have come here, Mr. Pardee," Vance began, "to learn what we can of Mr. Drucker's murder in Riverside Park yesterday morning. We have excellent reasons for every question we are about to ask you."

Pardee nodded resignedly.

"I shall not be offended at any line of interrogation you take. After reading the papers I realize just how unusual a problem you are facing."

"First, then, please inform us where you were yesterday morning between seven and eight."

A faint flush overspread Pardee's face, but he answered in a low, even voice.

"I was in bed. I did not rise until nearly nine."

"Is your habit to take a walk in the park before breakfast?"

(I knew this was sheer guesswork on Vance's part, for the subject of Pardee's habits had not come up during the investigation.)

"That is quite true," the man replied, without a moment's hesitation. "But yesterday I did not go—I had worked late the night before."

"When did you first hear of Sprigg's death?"

"At breakfast. My cook repeated the gossip of the neighborhood. I read the paper, and the tragedy in the early edition of the evening Sun."

And you saw the reproduction of the ante-bellum picture. In this morning's affair.—What is your opinion of the affair, Mr. Pardee?"

The Tensor Again

"I hardly know. For the first time his lacklustre eyes showed signs of animal excitement. The mathematical chances are utterly opposed to such a series of interrelated events being coincidental."

"Yes," Vance concurred. "And speaking of mathematics: are you at all interested in the Riemann-Christoffel tensor?"

"I know of it," the man admitted. "Drukker uses it in his book on world lines. Mr. Dillard is a real mathematician and not of the physicist's type. Had I not become enamored of chess—" he smiled sadly—"I would have been an astronomer. Next to maneuvering the facsimile of a real solar system, the greatest mental satisfaction one can get, I think, is plotting the heavens and discovering new planets. We even keep a 6-inch equatorial telescope in pen-house on my roof for amateur observations."

Vance listened to Pardee with close attention; and for several minutes discussed Dillard's work with Pickering's recent determination of the trans-Neptunian O. Much to Markham's bewilderment and to the Sergeant's annoyance. At length he brought the conversation back to the tensor formula.

"You were, I understand, at the Dillard's last Thursday when Mr. Arnesson was there. Was he discussing his tensor with Drukker and Sprigg?"

"Yes, I recall that the subject came up then."

"How well did you know Sprigg?"

"Only casually. I had met him with Arnesson once or twice."

"Sprigg, also, seems, was in the habit of walking in Riverside Park before breakfast."

"The man's eyelids quivered slightly, and his habitual twine was wavering."

"Never," he said finally.

Vance appeared indifferent to the denial. He rose and, going to the front window, looked out.

"I thought one might be able to see into the archery range from here. But I note that the angle cuts off the view entirely."

"The range is quite private. There's even a vacant lot opposite the wall, so that no one can see over it. . . . Were you thinking of a possibility?"

"That and other things." Vance returned to his chair. "You don't go in for archery, I take it."

"It's a trifle too strenuous for me. Miss Dillard, I must confess, interested me in the sport, but I was not a very promising acolyte. I've been to several tournaments with her, however."

"Unusually soft-nosed. Vance turned to Pardee's voice, and for some reason which I could not exactly explain I got the feeling that he was fond of Belle Dillard. Vance, too, must have received the Sergeant's suggestion, for after a brief pause he said:

"You will realize, I trust, that it is not our intention to pry unnecessarily into the affairs of the girl."

"I know. But the question of the two murders we are investigating still remains obscure, and as Robin's death was at first superficially attributed to suicide, thanks to the Sergeant's evidence,

Vance, but the question of motive in the two murders we are investigating still remains obscure, and as Robin's death was at first superficially attributed to suicide, thanks to the Sergeant's evidence, it might help us to know, in a general way, what the true situation is concerning the young lady's preference. As a friend of the family..."

*While this discussion took place Professor Pickering was perturbed from the perturbations of Uranus, two other outer planets beyond Neptune: P and S.*
you probably know; and we’d appreciate your confidence in the matter.” Pardee’s gaze traveled out of the window, and the suggestion of a sigh escaped him.

“I’ve always had the feeling that she and Arnesson would some day be married. But that is only conjecture. She once told me quite positively that she was not going to consider matrimony unless and until thirty. One could easily guess in what connection Belle Dillard had made this pronouncement to Pardee. His emotional, as well as his intellectual life, had apparently been marred with failure.)

“You do not believe then,” pursued Vance, “that her heart is seriously concerned with young Sperling?”

“I didn’t say that. I only said,” he qualified, “martyrdom such as he is undergoing at present has a tremendous sentimental appeal for women.”

“Will Dillard tells me you called on her this morning.”

“I generally drop over during the day.” He was obviously uncomfortable, and I thought, a little embarrassed.

“Do you know Mrs. Druker well?” Pardee gave Vance a quick, inquisitive look.

“I’ve seen her, particularly,” he said. “I’ve naturally met her several times.”

“You’ve called at her house?”

“On many occasions, but always to see Druker. I’ve been interested for years in the application of mathematics to chess. . . .” Vance nodded.

The Game

“How did your game with Rubinstein come out last night, by the way? I didn’t see the paper this morning.”

“I resigned on the forty-fourth move.” The man spoke hopefully.

“Rubinstein found a weakness in my attack which I had entirely overlooked when I sealed my move at the adjournment.”

“Druker, Professor Dillard tells us, foresaw the outcome when you and he were discussing the situation last night.”

I could not understand why Vance referred so pointedly to this episode, knowing as he did how sore a point it was with him. It was often frowned at what appeared to be an unforgivable tactless remark on Vance’s part.

Pardee colored, and shifted in his chair.

“Druker talked too much last night.” The statement was not without venom. “Though he’s not a tournament player, he should know that such discussions are taboo during unfinished games. Frankly, though, I put little stock in his prophecy. I thought my sealed move had taken care of the situation, but Druker saw farther ahead than I did. His analysis was uncannily profound. There was the jealousy of self-pity in his tone, and I felt that he hated Druker. I often saw a seemingly mild nature would permit.”

“How long did the game last?” Vance asked casually.

“It was over a little after one o’clock. There were only fourteen moves in last night’s session.”

“Were there many spectators?”

“An unusually large number, considering the late hour.” Vance put out his cigarette and got up. When we were in the lower hall on our way to the front door he lighted one of his characteristic half-minute cigars. “In fact, as far back as I can remember,” said Pardee with a gaze of sardonic amusement, “Y’know, the black bishop was at large again last night around midnight.”

His words produced an astonishing effect. Pardee drew himself up as if he had been struck in the face; and his eyes widened to the size of white. For a full half-minute he stared at Vance, his eyes like live coals. His lips moved with a slight tremor, but no word came from them. Then, as if it were some secret, he turned swiftly away and went to the door. Jerking it open he held it for us to pass out.

As we walked up Riverside Drive to the District Attorney’s car, which had been left in front of the Druker house in 76th Street, Markham questioned Vance sharply in regard to the incident afterward, but Pardee did not answer.

“I was in hopes,” explained Vance, “of surprising some look of recognition or understanding from him. But, for some reason I didn’t detect any effect like the one I produced. Astonishin’ how he reacted. I don’t grasp it—I don’t at all grasp it . . .”

He became engrossed in his thoughts. But as the car swung into Broadway at 72nd Street he roused himself and directed the chauffeur to the Sherman Square Hotel.

“I have no idea what it is I wanted to know more of that chess game between Pardee and Rubinstein. No reason for it—sheer vagary on my part. But the idea has been workin’ in me ever since the professor mentioned it. . . . From eleven until past one—that’s a deuced long time to play off an unfinished game of only forty-four moves. We had given up to the curb at the corner of Amsterdam Avenue and 71st Street, and Vance disappeared into the Manhattan Chess Club. It was full five minutes before he returned. In his hand he carried a sheet of paper filled with notations. There was, however, no sign of jubilation in his expression.

“My far-fetched but charmin’ theory,” he said with a grimace, “has run aground on base prosaic facts. I just talked to the secretary of the club, and last night’s session consumed two hours and nineteen minutes. It seems to have been a coruscatin’ battle, full of esoteric quirks and strategic soul-searchin’. About all one can look at is the genii had Pardee picked for the winner; but Rubinstein then staged a masterly piece of sustained analysis, and put Pardee’s opening’s tactics to smithereens—just as Druker had prognosticated. Astonishin’ mind, Druker’s . . .”

It was plain that even now he was not entirely satisfied with the solution that he had learned; and his next words voiced his dissatisfaction.

“I thought while I was at it I’d take a page from the Senator’s book, so to speak, and in a sort of routine thoroughness. So I borrowed the score sheet of last night’s game and copied down the moves. I may run over the game some day when time hangs heavy.”

And, with what I thought unusual care, he folded the score and placed it in his wallet.

CHAPTER XVI

Act Three (Tuesday, April 12—Saturday, April 16.)

After lunch at the Elks’ Club Markham and Heath continued down-town. Vance accompanied them. Markham’s routine work had accumulated; and the Sergeant, having taken on the Sprigg case in addition to the Robin investigation, had to view, to co-ordinate all his reports, answer innumerable questions from his superiors, and attempt to satisfy the voraciousness of an army of reporters. Vance and I went to an exhibition of modern French art at Knoedler’s, had tea at the St. Regis, and met Markham at the Stuyvesant Club for dinner.

Vance and I joined us at half past eight for an informal conference; but though it lasted until nearly midnight nothing of a tangible nature came out of it.

Nor did theכתבך indicating anything but discouragement. The report from Captain Dubois stated that the revolver given him by Heath contained no signature of a fingerprint.

Captain Hagedorn identified the weapon as the one used in the shooting of Sprigg; but this merely substantiated our already positive belief. The newspapers were everywhere, and the Druker residence spent an uneventful night. No one had entered or departed from the house; and by eleven o’clock every window had been dark. Nor had a sound or any kind come from the house until the next morning when the cook set about her chores for the day. Mrs. Druker had not appeared until eight; and at half past nine Druker went out the front door and sat for two hours in the park reading.

A watch was kept on the Dillard house, but Pardee was put under strict surveillance; and a man was stationed each night under the willow trees behind the Druker house. But nothing unusual happened; and, despite the Sergeant’s tireless activities, all promising lines of investigation seemed to be auto-matically closed. Both Heath and Markham were convinced that the newspapers were ousting themselves in gaudy rhetoric; and the inability of the Police Department and the district attorney’s office to make the slightest headway against the mystery of the two spectacular murders was rapidly growing into a political scandal.

Vance called on Professor Dillard and discussed the case along general lines. He also spent over an hour on Thursday afternoon with Arnesson in the检事’s office. He was working out of the proposed formula he had brought; some detail that could be used as a starting-point for speculation. But he was dissatisfied with the inter-pretation, the mere inclusion of Arnesson had not been wholly frank with him. Twice he dropped in at the
think lately; and I've naturally gone over in my mind all that happened that morning. I don't know just how it all happened, but things have become a lot clearer now. Certain—what you might call impressions—have come back to me. . . ."

He paused and looked down at the carpet. Then lifting his head, he went on:

"One of these impressions has to do with Mr. Drukker—and that's why I stayed in the sitting room after the coast was clear. You see, I was—well, sort of pretending I was in the archery-room again, talking to Robin; and all of a sudden the picture of the rear window flashed across my mind. And I remembered that when I had glanced out of the window that morning to see how the weather was for my trip, I had seen Mr. Drukker sitting in the arbor behind the house. . . ."

"At what time was this?" Markham demanded brusquely.

"Only a few seconds before I went to see to the traps," Drukker answered.

"Then you imply that Mr. Drukker, instead of leaving the premises, went to the arbor and remained there until you walked up to him?"

"That looks very, sir," Sperling was reluctant to make the admission. "You're quite sure you saw him?"

"Yes, sir. I remember distinctly now. The man was the peculiar kind he had his legs drawn up under him,"

"You would swear to it," asked Markham gravely, "knowing that a man's life might rest on your testimony?"

"I'd swear to it, sir," Sperling returned simply.

When the sheriff had excused his presence in the vicinity, Markham looked at Vance.

"I think that gives us a foothold," he said. "The cook's testimony was of little value, since Drukker merely denied it; and she's the type of loyal, stubborn German who'd back up his denial if any real danger threatened him. Now we're armed with an effective line of attack."

"It seems to me," Markham said, after a few moments of speculative silence, "that we have a good circumstantial case. Vance, let's take off. For the present, we was in the Dillard yard only a few seconds before Robin was killed. He could easily have seen when Sperling went away; and, as he had recently come from Professor Dillard, he knew that the other members of the family were out. Mrs. Drukker denied she saw any one from her window that morning, and I am inclined to think of Robin's death and then went into a panic of fear when we came to question Drukker. She even warned him against us and called us the same name. She saw Drukker returning home immediately after Robin's body had been placed on the range.—Drukker was not in his car at the time the body was killed. Both we and Mrs. Drukker have been at pains to cover up the fact. He has become excited whenever we broached the subject of the murders, and has exhibited the most extraordinary conduct. In fact, many of his actions have been highly suspicious. Also, we know he is abnormal and unbalanced, and that he is given to playing children's games. It's quite possible—in view of what Doctor Barstead told us—that he has confused fantasy and reality, and perpetrated these crimes in his imagination."

The tensor formula is not only familiar to him, but he may have associated it in some crazy way with Sprigg as a result of Arnesson's discussion with the witness. And perhaps the tensor was borne out by the actual appearance of a chess bishop on his mother's door. He may have feared that she saw him then, and thus sought to silence her without openly admitting to her that he was guilty. He could easily have slammed the screen-door from the inside, without having had any notion of the impression the bearer of the bishop had entered and departed by the rear door. Furthermore, it would have been a matter of no consequence for him to take the bishop from the chess board. So far as I know, the night Pardee was analyzing his game.

In Drukker's room.

Markham continued for some time building up his case against Drukker. He was thorough and detailed, and his summation accounted for practically all of the evidence that had been adduced. The case seemed airtight in every way in which he pieced his various factors together was impressively convincing; and a long silence followed his resumé.

Vance at length stood up, as if to break the tension of his thoughts, and walked to the window.

"You may be right, Markham," he admitted. "But more about it. Your conclusion is that the case against Drukker is too good. I've had him in mind as a possibility from the start; but I thought he acted the more the indications pointed toward him, the more I felt inclined to dismiss him from consideration. Besides, I've suspected that she seemed abominable murders is too strong, too devilishly shrewd, to become entangled in any such net of circumstantial evidence as you've drawn about Drukker. Drukker has an amazing mentality—his intelligence and intellect are superhuman, in fact; and it's difficult to conceive of him getting away, leaving so many loop-holes."

"The law," returned Markham with acerbity, "can hardly be expected to throw out cases because they're too complex for the evidence.

"On the other hand," pursued Vance, ignoring the comment, "it is quite obvious that Drukker, even if not guilty, knew something that has a direct bearing on the case; and my humble suggestion is that we attempt to prise this information out of him. Sperling's testimony is given to further the police purpose. . . . I say, Mr. Arnesson, what's your opinion?"

"Haven't any," the man answered. "I'm a disinterested onlooker. I'd hate, however, to see poor Adolph in

*Colonel Benjamin Hazen, commanding officer of the Detective Division attached to the District Attorney's office.
CHAPTER XVII
An All-Night Light
(Saturday, April 16; 9:30 a.m.)

When Heath had got rid of Quinan with promises such as would have gladdened any reporter's heart, there were several minutes of tense excitement in the office. The Bishop, who had been at his gristy work again, and the case had now become a terrible triple-trap affair, with the solution apparently in sight. It was not, however, the insobriety of these incredible crimes that primarily affected us; rather was it the inherent horror that emanated, like a mirage, from the acts themselves.

Vance, who was pacing somberly up and down, gave voice to his troubled emotions.

"It is a damned Markham—it's the essence of unutterable evil... Those children in the park—up early on their holiday in search of dreams... busy with their play and make-believe... and then the title reality—the awful, overpowering disillusion... Don't you see the wickedness of it? Those children found a dead baby in the thicket—Humpy Dumpty, with whom they had played—lying dead at the foot of the famous wall—a Humpy Dumpty they could touch and weep over, broken..."
and twisted and never more to be put together..."

He paused by the window and looked out. The mist had lifted, and a wraith seemed to float up from the east, to turn itself into a cloudy mist. The golden eagle on the New York Life Building glistened in the distance.

"What play; one simply mustn’t get sentimental," he remarked with a forced smile, turning back to the room. "It decomposes the intelligence and stu-"[rest of text is not visible]
We drove up-town immediately, called for Barstead, and proceeded at once to the Drukker house. Our ring was answered by Mrs. Menzel, whose face and voice were clearly not that of Drukker’s death. Vance, after one glance at her, led her into the drawing-room away from the stairs, and asked in a low tone:

"Has Mrs. Drukker heard the news?"

"Not yet," she answered, in a frightened, quavering voice. "Miss Wall has just arrived, but I told her the mistress had gone out. I was afraid to let her up-stairs. Something’s wrong..."

He began to tremble violently.

"Has Mrs. Menzel?"

Vance placed a quieting hand on her arm.

"I don’t know. But she hasn’t made a sound all morning. She didn’t come down for breakfast... and I’m afraid to go and call her."

"When did you hear of the accident?"

"Early—right after eight o’clock. The paper boy told me; and I saw all the people down on the Drive."

"Don’t be frightened," Vance consoled her. "We’ll wait for you here, and we’ll attend to everything."

He turned back to the hall and led the way upstairs. When we came to Mrs. Drukker’s room he knocked softly and was answered by the door opened the door. The room was empty. The night-light still burned on the table, and I noticed that the bed had not been slept in.

Without waiting Vance retraced his steps down the hall. There were only two other main doors, and one of them, we knew, led to Drukker’s study. The other was the step-stair door to the other and opened it without knocking. The window shades were drawn, but they were white and semi-transparent, and the gray daylight mingled with the yellow radiation from the old-fashioned chandelier. The lights which Guilfoyle had seen burning all night had not been extinguished.

Vance halted on the threshold, and I saw Markham, who was just in front of me, give a start.

"Mother o’ God!" breathed the Sergeant, and crossed himself.

On the foot of the narrow bed lay Mrs. Drukker, fully clothed. Her face was ash white; her eyes were set in a hideous stare; and her hands were clutching her breast.

Barstead sprang forward and leaned over. After touching her once or twice he straightened up and shook his head violently.

"She’s gone. Been dead probably most of the night. He bent over the body again and began making an examination. You know, she’s suffered from a chronic nephritis, arteriosclerosis, and hypertrophy of the heart. Some sudden shock brought on an acute dilatation. Yes, I’d say right here, the same time as Drukker... round ten o’clock."

"A natural death?" asked Vance.

"Oh, undoubtedly. A shot of adrenaline in the heart might have saved her if I’d been here at the time...

"No signs of violence?"

"None. As I told you, she died from dilatation of the heart brought on by shock. A clear case—true to type in every respect."

CHAPTER XVIII

The Wall in the Park

(Saturday, April 16; 11 a. m.)

When the doctor had straightened Mrs. Drukker’s body on the bed and covered it with a sheet, we returned down-stairs. Barstead took his departure at once after promising to write to the Sergeant within an hour.

"It’s scientifically correct to talk of natural death from shock," said Vance, when we were alone; "but our duty is to prove or disprove the theory, not to ascertain the cause of that sudden shock. Obviously it’s connected with Drukker’s death. Now, I wonder..."

Turning impulsively, he entered the drawing-room Mrs. Menzel was sitting there, and we had left her, in an attitude of horrified expectancy. Vance went to her and said kindly:

"Gott geb’ ihr die ewige Ruh!" the woman murmured piously. "Ja, it ist best..."

The end came at about ten o’clock—by you awake at that time, Mrs. Menzel?"

"All night I was awake." She spoke in a low, awed voice.

Vance contemplated her with eyes half shut.

"Tell us what you heard?"

"Someone came here last night?"

"Yes, some one came at about ten o’clock—by the front door. Did you hear him enter?"

"No; but after I had gone to bed I heard voices in Mr. Drukker’s room."

"Was it unusual to hear voices in his room at ten o’clock at night?"

"But it wasn’t him! He had a high voice, and this one was low and wheezy. In the woman looked up in bewildered fright. "And the other voice was Mrs. Drukker’s... and she never went in Mr. Drukker’s room at night."

"How could you hear so plainly with your door shut?"

"My room is right over Mrs. Drukker’s," she explained. "And I was worried—what with all these awful things going on; so I got up and listened at the top of the steps."

"I can’t blame you," said Vance.

"What did you hear?"

"At first I thought it was the butler, but I suddenly saw something strange took place there that needs explaining; and now perhaps she’ll tell us the secret that has been locked up in her heart. Moreover, she hasn’t heard of Drukker’s death, and with all the rumor and gossip in the neighborhood, word of some kind is sure to leak through to her before long."

What do you say to my phoning him?"

Markham assented, and Vance briefly explained the situation to the doctor.
just like that!” A new horror came into the woman’s expression. “And Mr. Drukker fell from the wall last night…!”

“Did you hear anything else, Mrs. Menzel?” Vance’s matter-of-fact voice interrupted her confused correlation of Drukker’s death to the verse she had heard.

Slowly she shook her head.

“No. Everything was quiet after that.”

“Did you hear any one leave Mr. Drukker’s room?”

She gave Vance a panic-stricken nod.

“A few minutes later some one opened and shut the door, very soft; and I heard steps moving down the hall in the dark. Then the stairs creaked, and pretty soon the front door shut.”

“I listened a little while, and then I went back to bed. But I couldn’t sleep….”

“It’s all over now, Mrs. Menzel,” Vance told her comfortingly. “There’s nothing for you to fear. You’d best go to your room and wait till we need you.”

Reluctantly the woman went upstairs.

“I think now,” said Vance, “we can make a pretty close guess as to what happened here last night. The murderer took Drukker’s key and let himself in by the front door. He knew Mrs. Drukker’s quarters were at the rear, and he no doubt counted on accomplishing his business in Drukker’s room and departing as he had come. But Mrs. Drukker heard him. It may be she associated him with ‘the little man’ who had left the black bishop at her door, and feared that her son was in danger. At any rate, she went at once to Drukker’s room. The door may have been slightly open, and I think she saw the intruder and recognized him. Startled and apprehensive, she stepped inside and asked him why he was there. He may have answered that he had come to inform her of Drukker’s death—which would account for her moans and her hysterical laughter. But that was only a prelude to his part—-a part for time. He was devising some means of meeting the situation—he was planning how he would kill her! Oh, there can be no doubt of that. He couldn’t afford to let her leave that room alive. Maybe he told her so in as many words—-he spoke ‘angry-like,’ you recall. And then he laughed. He was torturing her now—perhaps telling her the whole truth in a burst of insane egotism; and she could say only ‘Oh God—oh God!’ He explained how he had pushed Drukker between his lips for a moment, he added subtilly: ‘There’s several people around here, I’m thinking, that could do some high-class explaining.’

Markham halted before the Sergeant.

“The first thing we’d better do is to find out what your men know about the movements of the various persons hereabouts last night. Suppose you bring them here and let me question them.—How many were there, by the way?—and what were their posts?”

The Scene of Death

The Sergeant had risen, alert and energetic.

There were three, sir, besides Gullfoyle. Emery was set to tail Pardee; Snittkin was stationed at the Drive and 75th Street to watch the Dillard house; and Hennessy was posted on 75th Street up near West End Avenue.—They’re all waiting down at the place where Drukker was found. I’ll get ‘em up here pronto.”

He disappeared through the front door, and in less than five minutes returned with the three detectives. I recognized them all, for each had worked on one or more of the cases in which Vance had figured. Markham questioned Snittkin first as the one most likely to have information bearing directly on the previous night’s affair. The following points were brought out by his testimony:

Pardee had emerged from his house at 6.50 and gone straight to the Dillard’s.

At 8.30 Belle Dillard, in an evening gown, had got into a taxi and

*Hennessy had kept watch with Doctor Drum at the Grove mansion from the Narrows Flats, in the Greene murder case. Snittkin also had taken part in the Greene investigation, and had played a minor role in both the Reno’s and the Canavan case. TheDeclare Emery was the detective who had unearthed the cigarette ashes from beneath the fire-logs in Alvin Reno’s living-room.
been driven up West End Avenue. (Arneson had come out of the house with her and helped her into the taxi-cab, but had immediately returned indoors.)

At 9.15 Professor Dillard and Drukker had left the Dillard house and walked slowly toward Riverside Drive. They had crossed the Drive at 74th Street, and turned up the bridle path.

At 9.30 Pardee had come out of the Dillard house, walked down to the Drive, and turned up-town.

At a little after 10.00 Professor Dillard had returned to his house alone, re-crossing the Drive at 74th Street.

At 10.20 Pardee had returned home, coming from the same direction he had taken when going out.

Belle Dillard had been brought home at 12.30 in a limousine filled with young people.

Hennessey was interrogated next; but his evidence merely substantiated Snitkin’s. No one had approached the Dillard house from the direction of West End Avenue; and nothing of a suspicious nature had happened.

Markham then turned his attention to Emery, who reported that, according to Santos whom he had relieved at six, Pardee had spent the early part of the afternoon at the Manhattan Chess Club and had returned home at about four o’clock.

“Then, like Snitkin and Hennessey said,” Emery continued, “he went to the Dillards” at half past six, and stayed till half past nine. When he came out I followed, keeping half a block or so behind him. He walked up the Drive to 74th Street, crossed to the upper park, and walked round the big grass bowl, past the rocks, and on up toward the Yacht Club. . . .”

“Did he take the path where Sprigg was shot?” Vance asked.

“He had to. There ain’t any other path up that way unless you walk along the Drive.”

“How far did he go?”

“The fact is, he stopped right about where Sprigg was bumped off. Then he came back the same way he’d gone and turned into the little park with the playground on the south side of 79th Street. He went slowly down the walk under the trees along the bridle path; and as he passed along the top of the wall under the drinking fountain, who should he run into but the old man and the hunchback, resting up against the ledge and talking.”

“You say he met Professor Dillard and Drukker at the very spot where Drukker fell over the wall?” Markham leaned forward hopefully.

“Yes, sir. Pardee stopped to visit with them; and I naturally kept on going. As I passed ‘em I heard the hunchback say: ‘Why ain’t you prae-

no warm balmy evening. And it was on account of there being nobody around that I went as far ahead as I did. Pardee’s nobody’s fool, and I’d already caught him looking at me twice, as though he suspected I was tailing him.”

“How long was it before you picked him up again?” Emery shifted his position.

“I was figuring I’d see him on the way out the next morning, so I did. Good last night,” he confessed, with a weak grin. “Pardee musta gone back the way he came and recrossed the Drive at 74th Street—by eight o’clock or so later I saw him heading home in front of the apartment-house light on the corner of 75th Street.”

“But,” interposed Vance, “if you were at the 74th Street entrance to the park until a quarter past ten you must have seen Professor Dillard pass you. He returned home about ten o’clock by that route.”

“Sure, I saw him. I’d been waiting for Pardee about twenty minutes when the professor came strolling along all alone, crossed the Drive, and went home. I naturally thought Pardee and the hunchback were still gabbing,—that’s why I took it easy and didn’t go back to check up.”

“Then, as I understand, about fifteen minutes after Professor Dillard passed you, you saw Pardee returning home from the opposite direction along the Drive.”

“That’s right, sir. And, of course, I took up my post again on 75th Street.”

“You realize, Emery,” said Markham gravely, “that it was during the time you waited at 74th Street that Drukker fell over the wall.”

“Yes, sir. But you’re not blaming me, are you? Watching a man on a foggy night on an open path when there ain’t nobody around to screen you, is no easy job. You gotta take a few chances and do a little figuring if you don’t want to get spotted.”

“I realize your difficulty,” Markham told him; “and I’m not criticizing you.”

The Sergeant dismissed the three detectives gruffly. He was obviously dissatisfied with their reports.

“The farther we go, he complained, “the more gummied up this case gets.”

“Supram corda, Sergeant,” Vance exhaled. “Let not dark despair o’ercome you. When we have Pardee’s and the Professor’s testimony as to what took place while Emery was watchfully waiting beneath the tango, 74th Street, he may be able to fathom some very interesting bits together.”

As he spoke Belle Dillard entered the front hall from the rear of the house. She saw us in the drawing-room and came in at once.

“Where’s Lady Mae?” she asked in a troubled voice. “I was here an hour after we got to the Great House. She was out. And she’s not in her room now.”

Vance rose and gave her his chair.

“Mrs. Drukker died last night of heart failure,” you know where earlier Mrs. Menzel was afraid to let you go up-stairs.”

The girl sat very quiet for some time. Presently the tears welled to her eyes.
"Perhaps she heard of Adolph's terrible accident."

"Possibly. But it's not quite clear what happened here last night. Doctor Barstead thinks Mrs. Drucker slipped on a banana peel."

"Almost the same time Adolph died," she murmured. "It seems too terrible. . . ." Fyne told me of the accident when I came down to breakfast. The matter was very much on my mind that morning."

There's something very strange about Adolph's death. . . ."

"What do you mean by that, Miss Dillard?" Vance stood by the window watching the snowflakes dance down.

I—don't know—what I mean," she answered brokenly. "But only yesterday afternoon Lady Mae spoke to me about Adolph and the—wall. . . ."

"Oh, did she, now?" Vance's tone was more indolent than usual, but every nerve in his body was on alert."

"She came out of the library—just as you were about to go to the tennis courts," the girl went on, in a low, hushed voice, "I walked with Lady Mae along the bridle path above the playground. . . ."

"I was with you then. I was in the same car with you. . . ."

"There was no one about. Miss Dillard was watching Adolph playing with the children, and we stood for a long time leaning over the stone balustrade of the wall. A group of children were gathered around Adolph; he had a toy airplane, and was showing them how to fly it."

And the children seemed to regard him as one of themselves; they didn't look upon him with awe. Lady Mae was very happy and proud about it. She watched him with shining eyes, and then said to me: 'They're not afraid of him, Belfy, because he's a Punch-and-Judy show.'"

"Suppose, Belfy—suppose that Adolph should ever fall off of this wall—the way the real Humpty Dumpty did! I was almost afraid myself; but I forced myself to laugh and to be foolhardy. It didn't do any good, though. She shook her head and gave me a look that sent a chill through me. 'I'm not foolish,' she said. '

"Robin and Spring were playing with a bow and arrow, and wasn't Johnny Sprig shot with a little gun—right here in New York?" The girl turned a frightened gaze toward the table. 'He cut his finger, didn't he—just as she foresaw?"

"Yes, it happened,' Vance nodded. "But we mustn't be mystical about it. Mrs. Drucker's imagination was abnormally marked; all manner of wild conjectures went through her tortured mind; and these two other Mother-Goose deaths so vivid in her memory, it's not remarkable that she should have turned the children's sobriquet for her son into tragic speculation of that kind. That he should have actually been killed in the manner she fears is nothing more than a coincidence. . . ."

He paused and drew deeply on his cigarette.

"I remember, Miss Dillard," he asked negligently; "did you, by any chance, repeat your conversation with Mrs. Drucker to any one yesterday?"

She regarded him with some surprise before answering.

"I mentioned it at dinner last night. It worried me all the afternoon, and—somehow—I didn't want to keep it to myself."

"Were any comments made about it?"

Uncle told me I shouldn't spend so much time with Lady Mae—that she was unhealthily morbid. He said the situation was very tragic, but that there was no need for me to share Lady Mae's suffering. Mr. Pardee agreed with him, but he was very sympathetic, and asked if something could not be done to help Lady Mae's mental condition."

"And Mr. Arnesson?"

"Oh, he never takes anything seriously—I hate his attitude sometimes. He laughed as though it was a joke; and all he said was: 'It would be a shame if Adolph took his tumble before he got his new quantum problem worked out.'"

"Is Mr. Arnesson at home now, by the by?" asked Vance. "We want to talk to him about certain arrangements in regard to the Druckers."

"He went to the university early this morning; but he'll be back before lunch. He'll attend to everything, I am sure. We were about the only friends Lady Mae and Adolph had. I'll take charge in the meantime and see that Grettie gets the house in order."

A few minutes later we left her and went to interview Professor Dillard."

Chapter XIX

The Red Note-Book

(Saturday, April 16; noon)

The professor was plainly perturbed when we entered the library that noon. He sat in an easy chair with his back to the window, a glass of his peculiar port on the table beside him.

"I've been expecting you, Markham," he said before we had time to speak. "I have no patience with dissemblers." Druker's death was no accident. I'll admit I felt inclined to discount the insane implications arising from the deaths of Robin and Spring; but the circumstances of Druker's fall I realized that there was a definite design behind these deaths; the probability of what would happen was incalculable. You know it, as well as I; otherwise you wouldn't be here."

"Very true." Markham had seated himself facing the professor. "We are confronted by a terrible problem. Moreover, Mrs. Drucker died of shock last night at almost the same time her son was killed."

"That, at least," returned the old man after a pause, "may be regarded as a blessing. It's better she didn't survive him—her mind unquestionably would have collapsed." He looked up as though the thought had just occurred to him.

"You were probably the last person, with the exception of the actual murderer, to see Drucker alive; and we would like to know everything you saw or heard of us, or about us, before that last night."

Professor Dillard nodded.

"Druker came here after dinner—about eight. He talked with us for a while, and then said he was going to his lodge, and he dined with us; and Druker was annoyed at finding him here—in fact, he was openly hostile. Arnesson twitted him good-naturedly about his irresponsibility—which only made him more irritable; and, knowing that Druker was anxious to thrash out a problem with me, I finally suggested that he and I stroll down to the park. . . ."

"You were not gone very long," suggested Markham.

"No. An unfortunate episode occurred. We walked up the bridle path a little way. I don't even understand, the poor fellow was killed. We had been there for perhaps half an hour, leaning against the stone balustrade of the wall, when Pardee and I turned to go out. He started to speak to us, but Druker was so antagonistic in his remarks that, after a few minutes, Pardee turned and walked away in anger. He started to speak to me, but Druker was so much upset, and I suggested we postpone the discussion. Furthermore, a damp mist had fallen, and I was beginning to get some twinges in my foot. Druker strongly wanted to go indoors; and he didn't care to go indoors just yet. So I left him alone by the wall, and came home."

"Did you mention the episode to Arnesson?"

"I didn't see Sigurd after I got back. I imagine he's gone to bed." Later, as we drove to Markham's, Vance asked casually: "Can you tell us where the key to the alley door is kept?"

"I know nothing about it, sir," the professor replied irritably, but added in a more equable tone: "However, as I remember, it used to hang on a nail by the archery-room door."

From Professor Dillard we went straight to Pardee, and were received at once in his study. His manner was rigid and detached, and even after we had seated ourselves he remained standing by the window, staring at us with open hostility.

"Do you know, Mr. Pardee," asked Markham, "that Mr. Druker fell from the wall in the park at ten last night, just after you stopped and spoke to him?"

"I heard of the accident this morning," the man's pallor became more noticeable, and he toyed nervously with his watch chain. "That was very unusual for a while on Markham. "Have you asked Professor Dillard about it? He was with Druker—yes, he just came from him," interrupted Vance. "He said there was a ruffled atmosphere between you and Mr. Druker last night."
Pardee slowly walked to the desk and sat down stiffly. 

"Drukker was displeased for some reason to find me at the Dillard's where he came over after dinner. He hadn't the good taste to hide his displeasure, and created somewhat an embarrassing situation. But, knowing him as I did, I tried to pass the matter over, however, Professor Dillard took him out for a walk."

"You didn't remain long afterward," observed Vance indolently.

"Yes, I did. She hesitated and looked back at Vance."

"Mr. Arnesson is right," he nodded. "We'll carry on for the present."

"Just one question before you go. Did you always keep the key to the alley door hanging in the archery-room?"

"Yes-always. Why? Isn't it there now?"

"It was Arnesson who answered, with burlesque irony.

"Genie! Disappeared!—Most tragic! Some eccentric key-collector has evidently gone "round.""

"What, in the name of all that's unholy, has a rusty key to do with the ...?"

"Perhaps nothing," said Vance carelessly. "Let's go to the drain-room. It's more comfortable there."

"He led the way down the hall, which I wanted to see what you can about last night."

"Arnesson took an easy chair by the front window, and drew out his pipe. Last night, oh, yes! Well, Pardee came to dinner—it's a sort of habit with him on Fridays. Then Drukker, in the throes of quantum speculation, dropped in to pump the professor with Pardoe presence, called him. Showed his feelings too, by Gad! No control. The professor broke up the contretemps by taking Drukker for an airing for fifteen minutes or so, while I tried to keep awake. Then he had the goodness to depart. I looked over a few test pages, and finally lightered his pipe. "How does that thrilling recital explain the end of poor Drukker?"

"It doesn't," said Vance. "But it's not without interest.—Did you hear Professor Dillard when he returned home?"

"Hear him," Arnesson chuckled. "When he hobbes about with his gouty foot, thumping his stick down and shaking the banisters, there's no mistake his arrival on the scene. Fact is, he was unusually noisy last night."

"Offhand, what do you make of these new developments?" asked Vance, after a short pause."

"I'm somewhat foggy as to the details. The professor has not exactly phosphorescent. Sketchy, in fact. Drukker fell from the wall, like Humpty Dumpty, round ten o'clock, and was discovered by an hour of an hour, that is all plain. But under what conditions did Lady Mae succumb to shock? Who, or what, shocked her? And how?"

Blind Tracks

"The murderer took Drukker's key and came here immediately after the crime. Mrs. Drukker caught him in her son's room. There was a scene, according to the cook, who listened from the head of the stairs; and during it Mrs. Drukker died from dilatation of the heart."

"Thereby relieving the gentleman of the bother of killing her."

"That seems clear enough," agreed Vance. "But the playing card that the murderer's visit here is not so lucid. Can you suggest an explanation?"

"Arnesson puffed thoughtfully on his pipe."

"Incomprehensible," he muttered at length. "Drukker had no valuables, or no compromising documents. Straightforward sort of cuss—not the kind to mix up in such business. No possible reason for any one prowling about his room."

"Vance lay back and appeared to relax.

"What was this quantum theory Drukker was working on?"

"Ha! Big thing!" Arnesson became animated. "He was on the path of science, and by the way of the theory of radiation with the facts of interference, and of overcoming the inconsistencies inherent in Einstein's hypothesis. His research had already linked him to an abandonment of casual space-time coordination of atomic phenomena, and to its replacement by a statistical description. ... Would him to want to make him famous. Shame he was told off before he'd put his data in shape."

"Do you happen to know where Drukker kept the records of these communications?"

"In a loose-leaf note-book—all tabulated and indexed. Methodical and neat about everything. Even his charts, graphs and like copiapotes made him famous. Shame he was told off before he'd put his data in shape."

"You know then, what the note-book looked like?"

"I ought to. He showed it to me often enough. Red limp-leather cover—this yellow flag for or three clips on every sheet holding notations—his name gold-stamped in large letters on the binding. ... Poor devil!"

"Where would this note-book be now?"

"One of two places—either in the drawer of his desk in the study or else in the escritoire in his bedroom. In the daytime, of course, he worked in the study; but he tossed day and night when wrapped up in a problem. Kept an escritoire in his bedroom, where he put his current records when he retired, in case he got an inspiration to monkey with 'em during the night. Then, in the morning, he'd throw them in study. Regular machine for system."

"Vance had been gazing lazily out of the window as Arnesson rambled on. The expression on his face was that he had scarcely heard the description of Drukker's habits; but presently he and fixed Arnesson with a languid look.

"You see," he drawled; "would you mind toddling upstairs and fetching Drukker's note-book? Look in both the study and the bedroom."

An important step toward the solution of these various puzzles proved to be the one that 5 years later by the de Broglie-Schrödinger theory as laid down in de Broglie's "Ondes et Mouvements" and Schrödinger's "Abhandlungen zur Wellenmechanik."
I thought I noticed an almost imperceptible hesitation on Arnesson's part; but straightway he rose.

"Good idea. Too valuable a document to be left lying around." And he strode from the room.

Markham began pacing the floor, and Heath revealed his uneasiness by puffing more energetically on his clay. The door which led into the little drawing-room as we waited for Arnesson's return. Each of us was in a state of expectancy, though I do not know what we hoped. Perhaps feared would have been difficult to define.

In less than ten minutes Arnesson returned and set the clock. He shrugged his shoulders and held out empty hands.

"Gone!" he announced. "Looked in every likely place—couldn't find it. He threw himself into a chair and relighted his pipe. "Can't understand it. . . . Perhaps he hid it."

"Perhaps," murmured Vance.

CHAPTER XX
The Nemesis
(Saturday, April 16; 1 p. m.)
It was past one o'clock, and Markham, Vance and I rode to the Stuyvesant Club. Heath remained at the Drukker house to carry on the routine work, to draw up his report, and to see to it that only those who would be swarming there shortly.

Markham was booked for a conference with the Police Commissioner and at two o'clock Vance and I walked to Stiegilts's Intimate Gallery and spent an hour at an exhibition of Georgia O'Keeffe's floral abstractions. Later we dropped in at Aeolus tea, and after a visit to the gallery we walked to the Metropolitan Museum. There were some Cézanne water-colors at the Montross Galleries; but by the time we reached them the lights had come on. We left them and walked through the late-afternoon traffic of Fifth Avenue until the light had begun to fail, and Vance ordered the chauffeur to the Stuyvesant Club, where we joined Markham.

"I feel so youthful, so simple, so innocent," Vance complained lugubriously. "So many things are happening and they're being manipulated so ingeniously that I can't grasp 'em. It's very disconcertin', very confusing. I don't like it—I don't at all like it. Most wearin'!" He sighed drearily and sipped his tea.

"Your sorrows leave me cold," retorted Markham. "You've probably spent the afternoon inspecting archeological portions of the Metropolitan. If you'd had to go through what I've suffered—"

"Now, don't be cross," Vance reprimanded him. "There isn't a man too much in the world. Passion is not going to solve this case. Cerebration is our only hope. Let us be calm and thoughtful!" His mood became serious. "Markam's word is the very near-Sung, being the perfect crime. Like one of Morphy's great chess combinations, it has been calculated a score of moves ahead. There are no mistakes; and even if there had been we'd probably point in the wrong direction. And yet. . . . and yet there's something that's tryin' to break through. I feel it: sheer intuition—that is to say, nerves. There's an inarticulate voice that wants to speak, and can't. A dozen times I've sensed the presence of some struggling force, like an invisible ghost in the dark, hovering without revealing its identity."

Markham gave an exasperated sigh.

"Very helpful. Do you advise calling a medium?"

"There's something we've overlooked," Vance went on, disregarding the sarcasm. "The case is a cipher, and before we solve it, we don't know us, but we don't recognize it. 'Torn my soul, it's dashed away. . . . Let's be orderly. Neatness—that's our dearest."

"First, Robin in the cellar?

"Then, spiggot."

"Then Drukker is frightened with a black bishop. After that, Drukker is shoved over a wall. Makin' four distinct episodes in the murderer's extravaganza."

"Three of 'em were carefully planned. One—the leaving of the bishop at Mrs. Drukker's door—was forced on the murderer, and was therefore decided on with a certain care.

"Clarify your reasoning on that point."

"Oh, no deceit there! The context of the black bishop was obviously setting in self-defense. An unexpected danger developed along his line of campaign, and he took this means of thwarting it. Just before Robin's death Drukker was sent from the archery room and installed himself in the arbor of the yard, where he could look into the archery-room through the window. A little later he saw some one in the room talking to Robin. He returned to his house, and at that moment Robin's body was thrown on the range. Mrs. Drukker saw the arrow she probably saw Drukker. She screamed—very natural, what? Drukker heard the scream, and told us of it later in an effort to establish an alibi for himself. He didn't know. But he wasn't taking any chances. He went to her room at midnight to silence her, and took the bishop to leave beside her body as a sign that the game was over. He locked, and left the bishop outside, by way of warning her to say nothing on pain of death. He didn't know that the poor woman suspected her own son."

"But why didn't Drukker tell us whom he saw in the archery-room with Robin?"

"We can only assume that the person didn't want her husband to conceive of as being guilty. And I'm inclined to believe he mentioned the fact to this person and thus sealed his own fate."

The Unprepared Episode

"Assuming the correctness of your theory, where does it lead us?"

To the one episode that wasn't clairvoyant, to the end of the game. And when there has been no preparation for a covert act there is pretty sure to be a weakness in one or more of the details. We'll determine what the time of each of the three murders any one of the various persons in the drama could have been present. No one had an alibi. That, of course, was cleverly calculated: the murderer chose an hour when all of the actors were, so to speak, waiting in the wings. But that midnight visit! Ah! That was a different matter. There exists a witness, Mr. Black, but because of circumstances—the menace was too immediate. And what was the result? Drukker and Professor Dillard were, apparently, the only persons on hand. And Professor Dillard and Belle Dillard were supping at the Plaza and didn't return home until half past twelve. Pardee was horned. Drukker was in his chess-board from eleven to one. Drukker is now of course eliminated. . . . What's the answer?"

"I could remind you," returned Markham irritably, "that the alibis of the others have not been thoroughly checked."

"Well, well, so you could. Vance lay back indolently and sent a long regular series of smoke-rings toward the ceiling. Suddenly his body tensed, and with meticulous care he leaned over and put out his cigarette. Then he looked at the wall clock and ticked off his fingers. He fixed Markham with a quizzical look.

"Allons, mon vieux. It's not yet six. Here's why Arnesson makes himself useful."

"What now?" expostulated Markham.

"Upon our suggestion," Vance replied, taking him by the arm and leading him toward the door. "We're going to check Pardee's alibi."

"Half an hour later we were seated with Mr. Pardee and Mr. Arnesson in the Dillard library."

"We've come on a somewhat unusual errand," explained Vance; "but it may have a vital bearing on our investigation." He took out his wallet, and unfolded a sheet of paper.

"Here's a document. Mr. Arnesson, I wish you'd glance over. It's a copy of the official scoresheet of the chess game between Pardee and Rubinstein. Very interesting. I've toyed with it a bit, but I'd like your expert analysis of the first part of the game. It is usual enough, but the play after the adjournment rather appeals to me."

Arnesson took the paper and studied it with cynical amusement.

"Ah! The inglorious record of Pardee's Waterloo, eh?"

"What's the meaning of this, Markham?" asked Professor Dilliam contemptuously. "Do you hope to run a murderer to earth by dilly-dallying over a chess game?"

"Mr. Vance hoped something could be learned from it."

"The professor poured himself another glass of port and, opening a book ignored us completely. Arnesson was absorbed in the notation of the chess game."

"Something a bit queer here," he muttered. "The time's askew. Let's see. . . . The scoresheet shows that, up to the time of adjournment, White Pardee had led Black Rubinstein one hour and forty-five minutes and Black, or Rubinstein, one hour and fifty-eight minutes. So far, so good. Then comes the corresponding time at the end of the game, when Pardee resigned, totals two hours and thirty minutes for White, and three hours and thirty-two minutes for Black—which means that, during the
second session of the game, White consumed only forty-five minutes whereas Black used up one hour and thirty-four minutes.

Vance nodded.

"There were two hours and nineteen minutes of play beginning at 11 a.m., which carried the game to 1:19 a.m. And Rubinstein's move took just five
nine minutes longer than Pardee's. Can you make out what happened?"

Arnesson pursed his lips and squinted at the notations.

"It's not clear. I need time." "Suppose," Vance suggested, "we set up the game in the adjourned position and play it through. I'd like your opinion."

Arnesson rose jerkily and went to the little chess table in the corner.

"Good idea." He emptied the men from the box. "Let's see now... Oh! A black bishop is missing. When do I get it back, by the way?"

He gave Vance a plaintive leer. "Never mind. We don't need it here. One of our bishops is en prise." He proceeded to arrange the men to accord with the position of the game at the time of adjournment. Then he sat down and studied the set-up.

"It's a particularly unfavorable position for Pardee," ventured Vance.

"Me either. Can't see what the lost the game. Look like dramed to me." After a moment Arnesson referred to the scoreheets. "We'll run through the play and find out where the trouble lay." He made half a dozen moves, a few to each side, and after a moment's study, gave a grunt. "Ha! This is rather deep stuff of Rubinstein's. Amazing combination he began working up. Subtle, by Gad! As I know Rubinstein, it took him a long time to figure it out. Slow, plodding chap.

"It's possible, isn't it?" suggested Vance. "That the working out of that combination explains the discrepancy in time between Black and White?"

"Oh, undoubtedly, Rubinstein must have had a lot of thought put into it so as to have made the discrepancy greater. Planning the combination took him all of forty-five minutes—or I'm a duffer."

"At what hour, approximately?"

"As nearly as I can recall, 'd Rubinstein use up that forty-five minutes?"

Check

"Well, let's see. The play began at eleven: six moves before the combination, say, suggests a time between half past eleven and half past twelve... Yes, just about. Thirty moves before the adjournment: six moves at a go—en passant makes thirty-six: then on the forty-four move Rubinstein moved his pawn to Bishop-Q7, and Pardee resigned... Yes, the working out of the combination was between eleven-thirty and twelve-thirty."

Vance regarded the men on the board, which were now in the position they occupied at the time of Pardee's resignation.

"Out of curiosity," he said quietly, "I played the game through to the checkmate the other night. I say, Mr. Arnesson; would you mind doin' the same. I could bear to hear your comments about it."

Arnesson studied the position closely for a few minutes. Then he turned his head slowly and lifted his eyes to Vance. A sardonic grin overspread his face.

"I grasp the point. Gad! What a situation! Five moves for Black to win through. And an almost unheard-of finale in the way. Can't recall similar instance. The last move would be Bishop to Knight-7, mating. In other words, Pardee was beaten by the bishop himself incredible!"

Professor Dillard put down his book.

"What's this?" he exclaimed, joining us at the chess table. "Pardee was defeated by the bishop? He gave Vance a shrewd, admiring look. "You evidently had good reason, sir, for investigating that chess game. Pray how about Black's temper."

He stood gazing down at the board with a sad, puzzled expression.

Markham was frowning with deep perplexity.

"You say it's unusual for a bishop alone to mate?" he asked Arnesson.

"Never happens—almost unique situation. And that it should happen to Pardee's is incomprehensible!" He gave a short ironic laugh. "Inclines one to believe in a nemesis. You know, the bishop has been Pardee's bête noir for twenty years. In fact, his life. Poor fool! The black bishop is the symbol of his sorrow. Fate, by Gad! It's the one chesman that defeated the Pardee gambit, the bishop to Knight-5 always broke up his calculations—doubled the pet theory—made a hussing and a mocking of his life's work. And with a chance to break even with the great Rubinstein, the bishop crows up again and drives him back into obscurity."

A few minutes later we took our departure in a taxi to West End Avenue, where we hailed a taxicab.

"It's no wonder, Vance," commented Markham, as we rode downtown. "I see this is the other afternoon when you mentioned the black bishop's being at large at midnight. He probably thought you were deliberately insulting him—throwing his life's failure in his face."

"Perhaps..." Vance gazed dreamily out into the gathering shadows. "Dashed unfortunate, this incubus who haunts his dreams."

"How much do you know about this black incubus all these years. Such recurring discouragements affect the strongest minds sometimes; create a desire for revenge on the world, with the causation excited by a fit Gesture excited to an Astral symbol."

"It's difficult to picture Pardee in a vindictive role," objected Markham. "Then, after all, what is your point about the discrepancy in time between Pardee's and Rubinstein's playing? Suppose Rubinstein did take forty-five minutes or so to work out his combination. The game wasn't over until after one. I don't see that your visit to Arnesson put us ahead in any way."

"That's because you're unaccustomed to the habit of chess players. In a clock game of that kind no player sits at the table all the time his opponent is figuring out moves. He goes back, stretches his muscles, takes the air, ogle the ladies, imbibe ice-water, and even indulges in food. At the Manhattan Square Masters Tournament last year there were three empty chairs, and it was a common sight to see as many as three empty chairs at one time. Pardee's a nervous type. He wouldn't sit through Rubinstein's protracted mental speculations."

Vance lighted a cigarette slowly. "Markham, Arnesson's analysis of that game reveals the fact that Pardee had three-quarters of an hour to himself around midnight."

CHAPTER XXI

Mathematics and Murder

(Saturday, April 16; 8:30 p.m.)

Little was said about the case during dinner, but when we had settled ourselves in a secluded corner of the club lounge-room Markham again broached the subject.

"I can't see," he said, "that finding a loophole in Pardee's alibi helps us very much. It merely complicates an already intolerable situation."

"True. A sad and depressin' world. Each step appears to tangle us a little more. And the amazin' part of it is, the truth is starin' us in the face; only, we can't see it."

"There's no evidence pointing to any one. There's not even a suspect against whose possible culpability reason doesn't revolt."

"I wouldn't say that, don't y' know. It's a mathematician's crime; and the landscape has been fairly cluttered with mathematicians."

"Their investigation no one had been indicated by name as the possible murderer. Yet each of us realized in his own heart that one of the persons with whom we had talked was guilty; and so hideous was this knowledge that we instinctively shrank from admitting it. From the first we had clutched our true thoughts and fears with generalities."

"A mathematician's crime?" repeated Markham. "The case strikes me as a series of senseless acts committed by a tedious being amuck."

Vance shook his head.

"Our criminal is supersane, Markham. And his acts are not senseless: they hideously logical and precise. True, they have been conceived with a grim and terrible humor, with a tremendously cynical attitude; but within themselves they are exact and rational."

Markham regarded Vance thoughtfully.

"How can you reconcile these Moth- erHubbard criminological mathematical mind?" he asked. "In what way can they be regarded as logical? To me they're nightmares, unrelated to sanity."

Vance settled himself deeper in his
chair, and smoked for several minutes. Then he began an analysis of the case, which not only clarified the seemingly madness of the crimes themselves, but brought all the events and things into a uniform focus. The accuracy of this analysis was brought home to us with tragic and overwhelming force before many days had passed.

"In order to understand these crimes," he began, "we must consider the stock-in-trade of the mathematician, for all his speculations and conjectures tend to emphasize the relative insignificance of this planet and the unimportance of human life.

—Regard, first, the mere scope of the mathematician's field. On the one hand he attempts to measure infinite space in terms of parsecs and light-years, and, on the other, to measure the electron which is so infinitely small that he has to invent the Ruthenberg unit of the micron. His vision is one of transcendental perspectives, in which this earth and its people sink almost to the vanishing point. Another star-nomad, such as Arcturus, Canopus and Betelgeuse—which he regards merely as minute and insignificant units, are many times more massive than our entire galaxy. Albrecht Seyffert's estimate of the diameter of the Milky Way is 300,000 light-years; yet we must place 10,000 Milky Ways together to get the diameter of the universe—which we know it, is content a thousand million times greater than the scope of astronomical observation. Or, to put it relatively in other terms—the sun's weight is 324,000 times greater than the weight of the earth; and the weight of the universe is postulated as that of a trillion—i.e., a million times a million—suns. . . . Is it any wonder that for such enormous magnitudes we sometimes lose all sense of earthly proportions?"

A Mathematical Detective

Vance made an insignificant gesture.

"But these are elementry figures—the every-day facts of journeyman carpentry! Vance was here using the English connotation of "trillion," which is the third power of a million, as opposed to the American and French system of numeration which regards a trillion as a mere million millions.

Vance settled himself more deeply in his chair. "To grasp the simple idea of infinity is enough to unnerve the average man's mind. But what of the well-known proposition of modern mathematical physics: that there exists a straight path into space without returning to our point of departure? This proposition holds, in brief, that we may go straight to Sicheng and then immediately return without changing direction, but we can never leave the universe; we at last return to our starting-point from the opposite direction! Would you say, Markham, that this idea is not conducive to what we quaintly call normal thinking? But however paradoxical and incomprehensible it may seem, it is almost rudimentary when compared with other advances in mathematical physics. Consider, for example, what is called the problem of the twins. One of two pairs of twins is born with a gene that is, with accelerated motion in a gravitational field—and, on returning, discovers that he is much younger than his brother. If, on the other hand, one twin is born with a gene that is, with accelerated motion in a gravitational field—and, on returning, discovers that he is much younger than his brother. If, on the other hand, one twin is born with a gene that is, with accelerated motion in a gravitational field—and, on returning, discovers that he is much younger than his brother. If, on the other hand, one twin is born with a gene that is, with accelerated motion in a gravitational field—and, on returning, discovers that he is much younger than his brother. If, on the other hand, one twin is born with a gene that is, with accelerated motion in a gravitational field, then the other twin is a Galilean and that they are therefore travelling with uniform motion relative to each other, then each twin will find that his brother is much older than himself. . . . These are not paradoxes of logic, Markham; they're only paradoxes of feeling. Mathematics accounts for them logically and scientifically. The point, however, is that things which seem inconsistent and even absurd to the lay mind, are consonant with the mathematical intelligence. A mathematico-physicist like Einstein would announce that the diameter of space—is mind-you—is 100,000,000 light-years, or 700 trillion miles; and considers the calculation absurd. If we imagine it going beyond this diameter, the answer is: 'There is no beyond: there are all the limitations include everything.' To wit, infinity is finite! Or, as the scientists say, space is unbounded but finite.

Let your mind meditate on this idea for half an hour, Markham, and you'll have a sensation that you're going mad."

He paused to light a cigarette.

Space and Murder

"Space and matter—that's the mathematician's notional territory. Eddington conceives matter as a characteristic of space—a bump in nothingness; whereas Wells conceives space as a characteristic of matter. All the mathematico-physicists are at odds with each other. Thus Kant's numenon and phenomenon become interchangeable; and even philosophy loses all significance. But when we come to consider the practical conception of finite space all rational laws are abrogated. De Sitter's conception of the shape of space is globular, or spherical. Einstein's..."

* Vance requested me to mention here A. d'Albre's recent scholarly work, "The Evolution of Scientific Thought," in which there is an excellent discussion of the paradoxes associated with space-time.
space is cylindrical; and matter approaches zero at the periphery, or 'boundary' condition. Weyl's space, however, is 'infinite' and is 'saddle-shaped'... Now, what becomes of nature, of the world we live in, of human existence, when we weigh them against such conceptions? Edible, sensible contemplation is the illusion that there are no natural laws—namely, that nature is not amenable to the law of sufficient reason. Alas, poor Schopenhauer! And Bertrand Russell vouched for the provability of modern physics by suggesting that matter is to be interpreted merely as a group of occurrences, and that matter itself need not be existent!... Do you see what it all adds up to? If the world is non-causative and non-existent, what is a mere human life—or the life of a nation—or, for that matter, existence itself?

Vance looked up, and Markham nodded dubiously.

"So far I follow you, of course," he said. "But your point seems vague—" he swung away.

"Is it surprising," Vance asked, "that a man dealing in such colossal, incommensurable concepts, wherein the individuals of human society are infinitesimal, might in time lose all sense of the visible things about him? Perhaps there would be a sadistic element in his attitude; for cynicism is a form of sadism."

"But deliberate, planned murder!" objected Markham.

"Let's consider the psychological aspects of the case. With the normal person, who takes his recreations daily, a balance is maintained between the conscious and the unconscious activities: the one enables the other to function. Delusions, on the other hand, are not allowed to accumulate. But with the abnormal person who spends his entire time in intense mental concentration and who rigorously suppresses all his emotions, the loosening of the subconscious is apt to result in a violent manifestation. This long inhibition and protracted mental application, without recreation, frequently leads to a mental explosion which often assumes the form of deeds of unspeakable horror. No human being, however intellectual, is free of these results. The mathematician who repudiates nature's laws is nevertheless amenable to those laws. Indeed, his rapt absorption in hyperphysical problems might be interpreted as the suppression of denied emotions. And outraged nature, in order to maintain her balance, produces the most grotesque fulminations—reactions which, in their turn, suggest other psychological phenomena."

Vance took several deep inhalations on his cigarette.

"Markham, there's no escaping the fact: these fantastic and seemingly incredible events are no more than a mathematician as forced outlets to a life of tense abstract speculation and emotional repression. They fulfill all the indicated requirements: they may be positively fruitfully worked out, with every minute factor fitting snugly in place. No loose ends, no remainders, apparently no motive. And aside from their highly imaginative and abstract attributes, the point unmistakably to an abstruse concep tion on the loose—a devotee of pure science having his fling."

"But why their grisly humor?" asked Markham. "How do you reconcile the Mother-Goose phase of them with your theory?"

"The existence of inhibited impulses," explained Vance, "always produces monstrosities. Just as Dugas designates humor as a 'détente'—a release from tension; and Bain, following Spencer, calls humor repressive restraint the most fertile field for the manifestation of humor lies in accumulated potential energy—what Freud calls Beesetzungsenergie—which in time demands a free discharge. In these Mother-Goose phases there are the mathematician reacting to the most fantastic or frivolous acts in order to balance his superserious logical speculations. It's as if he were saying cynically: 'Behold! This is the world that you take so seriously because you know nothing of the infinitely larger abstract world. Life on earth is a man's child's imagination is not big enough to make a joke about. And such an attitude would be wholly consistent with psychology; for after any great prolonged mental strain one's emotions will take the form of rebellions—that is to say, the most serious and dignified will seek an outlet in the most childish games. Here, incidentally, you have the explanation for the practical joker with his sadistic instincts."

"Moreover, all sadists have an infantile complex. And the child is totally amoral. A man, therefore, who experiences these infantile psychologications is beyond good and evil. Many modern mathematicians even hold that all convention, duty, morality, good, and the like, could not exist except for the fiction of free will. To them, the science of ethics is a field haunted by conceptual ghosts; and they even arrive at the disintegrating doubt as to whether truth itself is merely a figment. In the light of these considerations the sense of earthly distortion and the contempt for human life which might easily result from the speculations of higher mathematics, and you have a perfect set of conditions for the type of crimes with which we are dealing."


* I do not know whether Vance was here referring to "Mars and Its Canale" or "Mars as the Abode of Life."
ing every spectator at that chess game, and making a door-to-door canvass between the Manhattan Chess Club and the Drukker house. If we can find some one who actually saw Pardee in the vicinity of the Drukkers’ around midnight, then we’ll have a very suspicious piece of circumstantial evidence against him.”

“Yes,” agreed Vance; “that would give us a definite starting-point. Pardee would have considerable difficulty in explaining why he was six blocks away from the club during his set-to with Markham at the exact hour that a black bishop was being left at Mrs. Drukker’s door... Yes, yes. By all means have Heath and his minions tackle the problem. It may lead us forward.”

But the Sergeant was never called upon to check the alibi. Before nine o’clock on the following morning Markham called at Vance’s house to inform him that Pardee had committed suicide.

CHAPTER XXII
The House of Cards
(Sunday, April 17; 9 a.m.)

The astounding news of Pardee’s death had a curiously disturbing effect on Vance. He stared at Markham with a blank, expressionless face, as though he were staring at some one else. When he spoke, it was as though he had been laid aside, leaving an open space in front of the body; and in this cleared area rose a tall and beautifully constructed house of playing cards. Four arrows marked the boundaries of the yard, and match-sticks had been laid side by side to represent the garden walks. It was a reproduction that would have delighted a child’s heart; and even Markham had said the night before about serious minds seeking recreation in children’s games. There was something unutterably horrid in the juxtaposition of this juvenile card structure and violent death.

Vance stood looking down at the scene with sad, troubled eyes.

“HisMULT John Pardee,” he murmured, with a sort of reverence. “And this is the house that Jack built... a house of cards...”

He stepped forward as if to inspect it more closely; but as his body struck the edge of the table there was a slight jar, and the flimsy edifice of cards toppled over.

Markham drew himself up and turned to Heath.

“Have you notified the Medical Examiner?”

“Sure,” replied Heath. The Sergeant seemed to find it difficult to take his eyes from the table. “And Burke’s coming along, in case we need him.”

He went to the windows and threw up the shutters to let in the bright daylight. Then he returned to Pardee’s body and stood regarding it appraisingly. Suddenly he knelt down and leaned forward. “That looks to me like the 88 that was in the tool chest,” he remarked.

“Undoubtedly,” nodded Vance, taking out his cigarette-case. “Heath was going to the chest, inspected the contents of its drawer. ‘I guess that’s it, all right. We’ll get Miss Dillard to identify it after the doc has had a look at the body.’”

At this moment Arnesson, clothed in a brilliant red-and-yellow dressing-gown, burst excitedly into the room.

“By all the witches!” he exclaimed. “Pyne just told me the news.” He came to the table and stared at Pardee, his eyes wide with wonder. “But why didn’t he choose his own home for the performance? Damned inconsiderate of him to mess up some one else’s living quarters like a chess player.” He lifted his eyes to Markham. “Hope this won’t involve us in more unpleasantness. We’ve had enough notoriety. Distracts the mind. When’ll you be able to take the beggar’s remains away? Don’t want Belle to see him.”

“The body will be removed as soon as the Medical Examiner has seen it,” Markham told him in a tone of frosty relief. “And there will be no necessity to bring Miss Dillard here.”

The Butler Again
“Good.” Arnesson still stood staring at the dead man. Slowly a look of cynical wistfulness came over his face. “Poor devil! Life was too much for him. Hypersensitive—no psychic stamina. Took things too seriously. Brood over his misfortunes since his gambit went up in smoke. Couldn’t find any other diversion. The black bishop haunted him; probably tipped his mind from its axis. By God! Wouldn’t be surprised if the idea drove him to self-destruction. Might have imagined he was a chess bishop—trying to get back at the world the way a beggar would.”

“Clever idea,” returned Vance. “By the by, there was a house of cards on the table when we first saw the body.”

“Ha! I wondered what the cards were doing there. Thought he might have sought solace in solitude during his last months. . . . A card game, eh? Sounds foolish. Do you know the answer?”

“Not all of it. The house that Jack built might explain something.”

I see, Arnesson looked owlish. “Playing children’s games to the end—even on himself. Querous notion.” He yawned cavernously. “Guess I’ll get some clothes on.” And he went upstairs.

Professor Dillard had stood watching Arnesson with a look at once disinterested and paternal. Now he turned to Markham with a gesture of annoyance.

“Sigurd’s always protecting himself against his emotions. He’s ashamed of his feelings. Don’t take his careless attitude too seriously.”

Weary Markham gave a slight nod. “Pyne wrote to me. You are? He sent me a reply Pyne ushered Detective Burke into the room; and Vance took the opportunity of questioning the butler about his discovery of Pardee.

“How did it happen you entered the archery-room this morning?” he asked.

“Just a bit close in the pantry, sir,” the man returned, “and I opened the door at the foot of the stairs to get a little more air. Then I noticed that the shades were down—”

“Why not cut them at the top at night, then?”

“No, sir—not in this room.”

“How about the windows?”

“I always leave them slightly open from the top at night.”

“Were they left open last night?”

“Yes, sir.”

“Very good. And after you opened the shutters this morning?”

“I started to put out the lights, thinking Miss Dillard had forgotten to turn the switch last night; but just then I saw the poor gentleman there at the window, and I came up and informed Professor Dillard.”

“Does Beeble know about the tragedy?”

“I told her of it right after you gentlemen arrived.”
There are two flights of stairs, the entire length of the lower hall and a passageway, and three heavy doors between. Moreover, the walls of this old house are very thick and solid." 

"And my young friend Vance, "could have heard the shot from the street, for the archery-room windows were carefully closed."

The group nodded and gave him a searching look.

**Why Were the Windows Shut?**

"That is true. I see you, too, noticed that—no, it's not an instance. I don't quite understand why Pardoe should have shut the windows."

The idiosyncrasies of suicides have never been satisfactorily explained. Vance casually. Then, after a short pause, he asked: "What were you and Mr. Pardoe talking about during the hour preceding his departure?"

"We talked very little. I was more or less engaged with a new paper of Millikan's in the Physics Review on alkali doublets, and I tried to interest him in it. He was interested, I've said. He was noticeably preoccupied, and he amused himself at the chess-board for the best part of the hour."

"And did he, now? That's most interesting!"

Vance glanced at the board. A number of pieces were still standing on the squares, and he rose quickly and moved across the room to the little table. After a moment he came back and re-seated himself.

"Most curious," he murmured, and deliberately lighted a cigarette. "Here we are wondering whether the end of his game with Rubinstein just before he went down-stairs last night. The pieces are set up exactly as they were at the time he resigned the contest—with the inevitable black-bishop mate only five moves off."

Professor Dillard's gaze moved to the chess table wonderingly.

"The game was played in a low tone. "Could that have been what he was preparing on his mind last night? It seems unbelievable that so trivial a thing could affect him so disastrously."

"Don't say that," Vance reminded him, "that the black bishop was the symbol of his failure. It represented the wreckage of his hopes. Less potent factors have driven men to take their own lives."

A few minutes later Burke informed us that the Medical Examiner had arrived. Taking leave of the professor we descended again to the archery-room. Vance and Doremus was busy with his examination of Pardoe's body. He looked upon us entered and waved one hand perfunctorily. His usual jovial manner was gone.

"When's this business going to stop?" he grumbled. "I don't like the atmosphere round here. Murders—death from shock—suicides. Enough to turn any one of the crops, I'm going to get a nice uneventful job in a slaughter house."

"We believe," said Markham, "that is the end."

Doremus linked. "So! That's it, is it?—the Bishop suicides after running the town ragged. Sounds reasonable. Hope you're right." He again bent over the body, and, unflexing the fingers, tossed the revolver to the table.

"For your armory, Sergeant." Heath dropped the weapon in his pocket.

"How long's he been dead, doc?"

"Oh, since midnight, or thereabouts. Maybe earlier, maybe later.—Any other fool questions, Sergeant?"

"There's no more of it about being suicide?"

Doremus glared passionately at the Sergeant.

"What does it look like?—black-hand inhabitants. Then he became professional. "The weapon was in his hand. Powder marks on the temple. Hole the right size for the gun, and in the right place. Position of the body natural. Can't see anything suspicious.—Why? Got any doubts?"

It was Markham who answered.

"To the contrary, doctor. Everything from our angle of the case points to suicide."

"It's suicide, all right, then. I'll check up a little further, though.—Here, Sergeant, give me a hand."

While Heath and Vance left Pardoe's body to the divan for a more detailed examination, we went to the drawing-room where we were joined shortly by Arnesson.

"What can the chap want?" he asked, dropping into the nearest chair. "I suppose there's no question that the chap committed the act himself."

"Why should you raise the point, Mr. Arnesson?" Vance parried.

"No reason. An idle comment. Lots of queer things going on hereabouts."

"Oh, obviously." Vance blew a wreath of smoke upward. "No; the Medical Examiner seems to think there's no doubt in the matter. Did Pardoe, by the by, impress you as bent on self-destruction last night?"

"There was a convenient gun in the archery-room," suggested V a n c e.

"And that reminds me: Sergeant Heath would like to have Miss Dillard take the weapon, as a matter of form."

"That's easy. Where is it?"

Heath handed it to him, and he started from the room.

"Also—Vance hailed him—"you might ask Miss Dillard if she kept playing cards in the archery room."

Arnesson returned in a few minutes and informed us that the gun was the one kept in the bow-case drawer, and that not only were playing cards kept in the table drawer of the archery-room but that Pardoe knew of their presence.

Doctor Doremus appeared soon afterwards and reiterated his conclusion that Pardoe had shot himself.

"That'll be my report," he said. "Can't see any way out of it. To be
THE BISHOP MURDER CASE

sure, lots of suicides are fakes—but that's your province. Nothing in the least suspicious here.

Markham nodded with undisguised satisfaction.

"No good reason to question your findings, doctor. In fact, suicide fits perfectly with what we already know. It brings this whole Bishop orgy to a logical conclusion. He got up like a man who had purchased a great burden had been lifted. "Sergeant, I'll leave you to arrange for the removal of the body for the autopsy; but you'd be doing me a great service if you'd delay it till tomorrow. Thank Heaven today is Sunday! It gives us time to turn around."

Too Easy!

That night at the club Vance and Markham and I sat alone in the lounge room. Heath had come and gone, and a careful statement had been drawn up for the press announcing Pardée's suicide. Markham and I sat in the lounges and the case was thereby closed. Vance had said little all day. He had refused to offer any suggestion as to the wording of his statement, and it appeared almost to discuss the new phase of the case. But now he gave voice to the doubts that had evidently been occupying his mind.

"There's a good head—much too easy. There's an aroma of speciousness about it. It's perfectly logical, d'ye see, but it isn't satisfying. I can't exactly picture our Bishop terminating in a gesture of this sort. It's the merest banal fashion. There's nothing witty in blowin' one's brains out—it's rather commonplace, don't y'know. Shows a woeful lack of originality. It's not worthy of the antennae of the Mother-Goose murderers."

Markham was disgruntled.

"You yourself explained how the crimes accorded with the psychological possibilities of Pardée's mentality; and to me it appears highly reasonable that, having perpetrated his gruesome jokes and come to the end of his rope, he would have done away with himself."

"You're probably right," sighed Vance. "I haven't any coruscatin' arguments to combat you with. Only, I'm disappointed. Markham is a savior for climaxes, especially when they don't jibe with my idea of the dramatist's talent. Pardée's death at this moment is too deuced neat—it clears things up too tidily. There's too much utility in it, and too little imagination."

Markham felt that he could afford to be tolerant.

"If his imagination was exhausted on the murders. His suicide might be regarded merely as a lowering of the curtain when the play was over. In any event, it was by no means an ignominious way to pay a marvellous research and appointment and encouragement—a thwarting of all one's ambitions—have constituted cause for suicide since time immemorial."

"Exactly. We have a reasonable motive, or explanation, for his suicide, but no motive for the murders."

"Pardée was in love with Belle Dillard," argued Markham; "and he probably knew that Robin was a savior for her hand. Also, he was intensely jealous of Drukker."

"And Sprigg's murder?"

"We have no data on that point," Vance shook his head. "We can't separate the crimes as to motive. They all sprang from one underlying impulse: they were actuated by a single hatred in a single thought."

Markham sighed impatiently.

"Even if Pardée's suicide is unrelated to the murders, we're at a dead end, figuratively and literally."

"Yes, we're at a dead end. Very dissatisfactory. Consol'n for the police, though. It lets them out—for a while, anyway. But don't misinterpret my vagaries. Pardée's death is unreasonably related to the murders. Rather intimate relationship, too, I'd say."

Markham took his cigar slowly from his mouth and scrutinized Vance for several moments.

"Is there any doubt in your mind," he asked, "that Pardée committed suicide?"

Vance hesitated before answering.

"I could bear to know," he drawled, "why that house of cards collapsed so readily when I deliberately leaned against the table—"

"Yes—and why it didn't topple over when Pardée's head and shoulders fell forward on the table after he'd shot himself."

"Nothing to that," said Markham. "The first jar may have loosened the cards—"

Sudden eyes narrowed.

"Are you implying that the card-house was built after Pardée was dead?"

"Oh, my dear fellow! I'm not indulgin' in implications. I'm merely givin' tongue to my youthful curiosity, don't y'know."

CHAPTER XXIII

A Starling Discovery

(Monday, April 25; 8.30 p.m.)

Eight days went by. The Drukker funeral was held in the little house on 76th Street, attended only by the Dillards and Arnesson and a few men from the police. Vance was given to understand that it was a last tribute of respect to a scientist for whose work they had a very genuine admiration.

Vance and I were at the house on the morning of the funeral when a little girl brought a small cluster of spring flowers she had picked herself, and asked Arnesson to give them to Drukker. I almost expected a cynical response from him, and was surprised when he took the flowers gravely and said in a tone almost tender:

"I'll give them to him at once, Madeleine. A small Dumpy Dumptee thanks you for remembering him."

When the child had been led away by her governess, he turned to us. "She was Drukker's favorite. . . Funny fellow. Dr. Drukker was a traveller. His only recreation was entertaining youngsters."

I mention this episode because, in spite of its seeming unimportance, it was to prove one of the most vital links in the chain of evidence that eventually cleared up, beyond all question of doubt, the problem of the Bishop murders. The death of Pardée had created a situation almost unique in the annals of modern crime. The statement given out by the District Attorney's office had only intimated that there was a possibility of Pardée's being guilty of the murders. Whatever Markham may have personally believed, he was far from honorable and just to cast such direct doubt on another's character without overwhelming proofs. But the wave of terror arising from these strange murders had reached such proportions that the duty he owed to the community, refrain from saying that he believed the case to be closed. Thus, while no open indication of guilt was made against Pardée, the Bishop murders were no longer regarded as a source of menace to the city, and a sigh of relief went up from all quarters.

Markham and I at a certain Chess Club there was probably less discussion of the case than anywhere else in New York. The members felt perhaps that the club's honor was in some way involved. On the other hand, many of them were loyal to a man who had done as much for chess as Pardée. But whatever the cause of the club's avoidance of the subject, it was obvious that its members attended, almost to a man, Pardée's funeral. I could not help admiring this tribute to a fellow chess player; for, whatever his personal character, Pardée was one of the sustaining patrons of the royal and ancient game to which they were devoted."

Markham's first official act on the day of Pardée's death was to cancel Sperring's release. The same afternoon the Police Department moved all its records of the Bishop murders to the file marked "shelved cases," and Vance and I went to the club house. Vance protested mildly against this latter step; but, in view of the fact that the Medical Examiner's postmortem report had substantiated in every particular the theory of suicide, there was little that Markham could do in the matter. Furthermore, he was thoroughly convinced that the death of Pardée had settled the case and he scoffed at Vance's wavering doubts.

During the week following the finding of Pardée's body Vance was restive and more distrait than usual. He attempted to interest himself in various matters, but without any marked success. He showed signs of irritability; and his almost miraculous equanimity seemed to have deserted him. I got the impression that he was waiting for something to happen. His manner was not exactly exacting, but there was a restless questing in his attitude amounting at times almost to restlessness.

On the day following the Drukker funeral Vance called on Arnesson, and on Friday night accompanied him to the New York Chess Centre for a game in a play which, I happened to know, he disliked. He learned that Belle Dillard had gone away for a month's visit to the home of a relative in Albany. When Arnesson explained, he had begun to show the effects of all she had been through, and needed a change of scene. The man was plainly unhappy over her...
absence, and confided to Vance that they had planned to be married in June. Vance also learned from him that Mrs. Drukker’s will had left everything to Belle Dillard and the professor in the event of her son’s death—a fact which appeared to interest Vance unduly.

April 25th

Had I known, or even suspected, what astounding and terrible things were hanging over us that week, I doubt if I could have stood the strain. For I was the Bishop’s murderer and the case was not ended. The climactic horror was still to come; but even that horror, terrific and staggering as it proved, was only a shadow of what it might have been had I known and mentally alert to the two separate conclusions, only one of which had been disposed of by Pardee’s death. It was this other possibility, as I learned later, that had kept him in New York, apparently so insistent.

Monday, April 25, was the beginning of the end. We were to dine with Markham at the Bankers Club and go afterwards to a performance of Die Meistersinger in the Metropolitan. I did not witness the triumphs of Walther that night. I noticed that when we met Markham in the rotunda of the Equitable Building he seemed troubled; and when we returned to the club and mentally alert, by the dinner call when he told us of a phone call he had received from Professor Dillard that afternoon.

"I have a task to do, and I want to see him tonight," Markham explained; and when I tried to get out of it he became urgent. He made a point of the fact that Arnesson would be at the Met that evening, and that a similar opportunity might not present itself until it was too late. I asked him what he meant by that; but he refused to explain, and insisted that I should be present. He even said to the club clerk, when we entered, that I’d let him know if I could make it."

Vance had listened with the intense interest.

"I think we’d better go there, Markham. I’ve been rather expecting a call of this kind. It’s possible we may at last find the key to the truth."

"The truth about what?"

"Pardee’s guilt."

Markham said no more, and we ate our dinner in silence.

At half past eight we rang the bell of the Dillard house, and were taken by Pyne direct to the library.

The old professor greeted us with nervous reserve.

"It’s good of you to come, Markham. It would have been the entire evening, and I was upstairs aching and light a cigarette. I want to talk to you—and I want to take my time about it. It’s very difficult...."

His voice trailed off as he began filling his pipe.

We settled ourselves and waited. A sense of expectation invaded me for no apparent reason, except perhaps that I was getting the radiations of the professor’s obvious excitement."

"I don’t know just how to broach the subject," he began; "for it has to do, not with physical facts, but with the invisible human consciousness. I’ve struggled all week with certain vague ideas, certain shadows, certain dim images that rose up before me—and I see no way to rid myself of them but by talking with you."

He looked up hesitantly.

"I preferred to discuss these ideas with you when Sigurd was not present, and as he has gone to-night to see Ibsen’s "Pretenders"—his favorite play, by the way—I took the opportunity to ask you here."

"What do these ideas concern?" asked Markham.

"Nothing specifically. I can say, they’re very vague; but they have nevertheless, got a certain persistence... So insistent, in fact," he added, "that I thought it best to send Belle away for a while. It’s true that she was in a tortured state of mind as a result of all these tragedies; but my real reason for shipping her north was that I was beset by intangible doubts."

"Doubts? Markham leaned forward. "What sort of doubts?"

Professor Dillard did not reply at once.

"Let me answer that question by asking another," he countered presently. "Are you not wholly satisfied in your mind that the situation in regard to Pardee is exactly as it appears?"

"You mean the authenticity of his suicide?"

"That and his presumptive culpability."

Markham settled back contemplatively.

"No, you not wholly satisfied?"

"I can’t answer that question." Professor Dillard spoke almost curtly. "You have no right to ask me. I am not in a position to answer. The authorities, having all the data in their hands, were convinced that this terrible affair was a closed book." A look of deep concern came over his face.

"If I had more at my command I could help me to repulse the vague misgivings that have haunted me day and night for the past week."

"And if I were to say that I am not satisfied?"

The old professor’s eyes took on a distant, distressed look. His head fell slightly forward, as if some burden of sorrow had suddenly weighed him down. After several moments he lifted his shoulders and drew a deep breath.

"The most difficult thing in this whole matter is, I say, "is to control where one’s duties lie; for duty is a mechanism of the mind, and the heart is forever stepping in and playing havoc with one’s resolutions." Perhaps I did not express myself clearly, after all. I have only mystic suspicions and nebulous ideas to go on. But there was the possibility that my mental unaniiness was based on some deep hidden foundation of that existence I was unaware... Do you see what I mean?"

Evasive as were his words, there was no doubt as to the disturbing men of the shadowy image that lurked at the back of his mind.

Markham nodded sympathetically.

"There is no reason whatever to question the findings of the Medical Examiner." He made the statement in a forced matter-of-fact voice. "I can understand how the proximity of these tragedies might have created an atmosphere conducive to doubts. But I think you need have no further misgivings."

"I sincerely hope you’re right," the professor murmured; but it was clear he was not satisfied. "Suppose, Markham—"

he began, and then stopped. "Yes, I hope you’re right," he repeated.

Vance had sat through this unsatisfactory discussion smoking placidly; but he had been listening with unentoment concentration, and now he spoke.

"Tell me, Professor Dillard, if there has been anything—no matter how indefinite—that may have given birth to your uncertainty."

"No—nothing. The answer came quickly, with a wave of spirit. I have merely been wondering—testing every possibility. I dared not be too sanguine without some assurance. Pure logic is all very well for princi- ple, but I have to look after the physical side of things. But where one’s own safety is con- cerned the imperfect human mind de- mands visual evidence."

"Ah, yes, Vance looked up, and I thought I detected a flash of under- standing between these two disparate men.

The Key to the Mystery

Markham rose to make his adieu; but Professor Dillard urged him to re- main a while.

"Sigurd will be here before long. He’s very sensitive, you know. As said, he’s at "The Pretenders, but I’m sure he will come straight home... By the way, Mr. Vance," he went on, turning from Markham; "Sigurd tells me that you are a friend of his last week. Do you share his enthuisiasm for Ibsen?"

A slight light of Vance’s eyebrows told me that he was somewhat puzzled at this question. When he answered there was no hint of per-plexity in his voice.

"I have read Ibsen a great deal; and there can be little doubt that his is a creative genius of a high order, al- though I’ve failed to find in him either the aesthetic form or the philosophic depth that characterizes Goethe’s "Faust," for instance."

"I can see that you and Sigurd would have a permanent basis of dis- agreement."

Markham declined the invitation to stay longer, and a few minutes later we were walking down West End Avenue in the brisk April air.

"You will please take note, Mark- ham old dear," observed Vance, with a touch of gravity, as we made our way into 72nd Street and headed for the park. "that there are others than your modest collaborator who are nag-riders and do not touch us to the joy of Pardee’s taking-off. And I might add that the professor is not in the least satisfied with your assurances."

"His suspicious state of mind is quite understandable," said Markham. "These murders have touched his house pretty closely."

"That’s not the explanation. The
old gentleman has fears. And he knows something which he will not tell us."

"I can't say that I got that impression," Vance said. "What's there to suggest that he was telling the truth?"

"Oh, Markham—my dear Markham! Weren't you listening closely to his halting, reluctant tale? It was as if he were trying to convey some suggestion to us without actually putting it into words. We were supposed to guess. Yes! That was why he insisted that you visit him when Arnesson was safely away at an Ibensere vessel."

Vance ceased speaking abruptly and stood stock-still. A startled look came in his eyes.

"Oh, my aunt! Oh, my precious aunt! So that was why he asked me about Ibens! . . . My world! How unutterably dull I've been!" He started at Markham, and the muscles of his jaw tightened. "The truth at last! No need to waste time with impromptu softness. And it is neither you nor the police nor I who has solved this case; it is a Norwegian dramatist who has been dead for twenty years. In Ibens is the key to your mystery!"

Markham regarded him as though he had suddenly gone out of his mind; but before he could speak Vance hailed a cab.

"I'll show you what I mean when we reach home," he said, as we rode east through Central Park. "It's unbelievable, but it's true. And I should have guessed a long ago, but the concomitant of the signature on those notes was too clouded with other possible meanings."...

"If it were midsummer instead of spring," commented Markham wraithfully, "I'd suggest that the heat had affected you."

"I knew from the first there were three possible guilty persons," commented Vance. Each was psychologically capable of the murders, provided the impact of his emotions had upset his mental equilibrium. So there was nothing to do but wait for some indication that would focus suspicion. Drukker was one of my three suspects, but he was murdered; and that left two. Then Pardee to all appearances committed murder, but in reality he had not been involved. His death made reasonable the assumption that he had been the guilty one. But there was an eroding doubt in my mind. His death was not conclusive; and that house of cards troubled me. We were stalemated. So again I waited, and watched my third possibility. Now I know that Pardee was innocent, and that he did not shoot himself. Drukker and the other murder was murdered—murdered, his death was another grim joke. He was a victim thrown to the police in the spirit of diabolical jest. And the murderer has been chuckling at our gullibility ever since."

"By what reasoning do you arrive at so fantastic a conclusion?"

"The evidence has been here within arm's reach all the time."

He went to the shelves where he kept his dramas, and took down Vol-

ume II of the collected works of Hen-

rik Ibsen. The book contained "The Vikings at Helgeland" and "The Pretenders"; but with the first of these plays Vance was not concerned. Turn-

ing to "The Pretenders" he found the pages of the dramatis personae were given, and laid the book on the table before Markham.

"Read the cast of characters of Ar-

nesson's play straight to you."

Markham, silent and puzzled, drew the volume toward him; and I looked over his shoulder. This is what we saw:

Haakon Haakonsson, the King

elected by the Birchlegs.

Inga of Varteig, his mother.

Earl Skule.

Lady Ragnhild, his wife.

Sigurd Svane's sister,

Margrete, his daughter.

Guthorn Ingesson.

Sigurd Ribbungen.

Nicholas Arnesson, Bishop of Oslo.

Dagfinn the Peasant, Haakon's

marshal.

Ivar Bodde, his chaplain.

Vargh Vardad, one of his guards.

Gregorius Jonsson, a noble-

man.

Paul Fliida, a nobleman.

Ingeborg of Andres Brindar-

band's wife.

Peter, her son, a young priest.

Sira Villam, Bishop Nicholas's

chaplain.

Master Sigur of Brabant, a

physician.

Jatgir Skald, an Icelander.

Bard Bratte, a chief from the

Trondheims district.

But I doubt if either of us read beyond the line:

Nicholas Arnesson, Bishop of

Oslo.

My eyes became riveted on that name with a set and horrified fascination. And then I remembered . . . Bishop Arnesson was one of the most diabolical villains in all literature. . . ."

"And you instantly knew that there were only three possible persons who could have committed the crimes—parroted from the notes of the plays," said Markham.

"Yes! I've seen the child." Vance rose

most wish we had access today to the thumbscrew and the rack."

Vance and I arrived at his office a few minutes after nine the next morning. Swacker intercepted us and asked us to wait in the reception room for a little while. Markham, he explained, was engaged for the moment. We had no more than seated ourselves when the door opened, a grim, pugno-

cious and sullen.

"I gotta hand it to you, Mr. Vance," he proclaimed. "You sure got a line on the situation. But what good is going to do us I don't see. We can't arrest a guy because his name's in a book."

"We may be able to force the issue somehow," Vance rejoined. "In any event, we now know where we stand."

Ten minutes later Swacker beckoned to us and indicated that Markham was free.

"Sorry to have kept you waiting," Markham apologized. "I had an unexpected visitor." His voice had a despairing ring. "More trouble. And, curiously enough, it's connected with the very same persons and the very same park where Drukker was killed. However, there's nothing I can do about it."

"He drew some papers before him.

"Now to business."

"What's the new trouble in Riverside Park?" asked Vance casually.

Markham frowned.

"Nothing that need bother us now. A kidnapping, in all likelihood. There's a new case, and we've got to close it first."

"I detest the reading the papers."

Vance spoke blandly, but with an insinuation that puzzled me. "What hap-

pened?"

Markham drew a deep breath of impatience.

"A child disappeared from the playground yesterday after talking with an unknown man. Her father came here to solicit my help. But it's a job for the Bureau of Missing Persons; and I told him so.—Now, if your case is any way connected with it—"

"Oh, but it isn't," persisted Vance. "I simply must hear the details. That section of the park fascinates me strangely."

Markham shot him a questioning glance through lowered lids.

"Very well," he acquiesced. "A five-year-old girl, named Madeleine Moffat, was playing with a group of children at about half past five last evening. She crawled up on a high mound near the retaining wall, and a little later, when her grandmother went to get her, thinking she might have climbed over the other side. The child was nowhere to be found. The only suggestive fact is that two of the other children say they saw a man talking to her shortly before the disappearance, but they can give no description of him. The police were notified, and are investigat-

arging. And that's all there is to the case so far."

"Madeleine." Vance repeated the name musingly. "I say, Markham; do you know if this child knew Drukker?"

"Yes!" Markham sat up a little straighter. "Her father mentioned that she often went to parties at his house. . . ."

CHAPTER XXIV

(The Last Act)

(Tuesday, April 26; 9 a.m.)

With this astounding revelation the Bishop murder case entered its final and most terrible phase. Heath had been informed of Vance's discovery; and it was arranged that we should meet in the District Attorney's office early the following day for a council of war.

Markham, when he took leave of us that night, was more composed and deeper in eyete than I had ever seen him.

"I don't know what can be done," he said hopefully. "There's no legal evi-
dence against the man. But we may be able to devise some course of action that will give us the upper hand. . . ."

* Vance's set was the William Archer copyright edition, published by Charles Scribner's Sons.
and stood, hands in pockets, gazing down at the floor. "An adorable little creature . . . golden curls. She brought a handful of flowers for Drukker the morning of his funeral. . . . And now she has disappeared after having been seen talking with a strange man. . . ."

"What's going on in your mind?" demanded Markham sharply.

Vance appeared not to have heard the question.

"Why should her father appeal to you?"

"I've known Moffat slightly for years—he was at one time connected with the city administration. He's frantic—groping at every straw. The proximate affair to the Bishop murders has made him morbidly apprehensive. . . . But see here, Vance; we didn't come here to discuss the Moffat child's disappearance."

Vance lifted his head; there was a look of startled horror on his face.

"Don't speak—oh, don't speak. . . ." He began pacing up and down, while Markham could only watch and mumble in amazement. "Yes—yes; that would be it," he mumbled to himself. "The time is right . . . it all fits. . . ."

The Last Steps

He swung about, and going to Markham, said:

"Come—quickly! It's our only chance—we can't wait another minute."

He fairly dragged Markham to his feet and led him toward the door.

"If I'm fearing something like this all week—"

Markham wrenched his arm free from the other's grip.

"I won't move from this office, Vance, until you explain."

"It's another act in the play—the last act! Oh, take my word for it."

There was a look in Vance's eyes I had never seen before. "It's 'Little Miss Muffet' now. The name isn't identical, but that doesn't matter. It's near enough for the Bishop's jest; he'll explain it all to the press. He probably beckoned the child to the tufted, and sat down beside her. And now, she's—frightened away."

Markham moved forward in a sort of daze; and Heath, his eyes bulging, leaped to the door. I have often wondered what went on in their minds during those few seconds of Vance's irrupting urgences. Did they believe in the Bishop's jest? Did they see the Dillard-Farnsworth suggestion? Or were they merely afraid not to investigate, in view of the remote possibility that another, hideous joke had been perpetrated by the Bishop? Whatever their intentions or doubts, they accepted the situation as Vance saw it; and a moment later we were in the hall, hastening toward the elevator. One of Vance's suggestions had placed us in the office building, and it was unwise to delay. Our different emotions had already been perceived by the tenant. At three o'clock we emerged from the Franklin-Street entrance, and in a few minutes were on our way uptown in the District Attorney's car, breaking speed regulations and ignoring traffic signals. Scarcely a word was spoken on that momentous ride; but as we swung through the tortuous passages of Central Park Vance said:

"I may be wrong, but we will have to risk it. If we wait to see whether the papers get a note, it'll be too late. We're not supposed to know yet; and that's our chance.

"What do you expect to find?"

Markham's tone was husky and a little uncertain.

Vance shook his head despondently.

"Oh, I don't know. But it'll be something devilish."

When the car drew up with a lunch in front of the Dillard house Vance got out and said some blank places of us. Pyne answered his insistent ring.

"Where's Mr. Arnesson?" he demanded.

"At the university, sir," the old butler replied; and I imagined there was fright in his eyes. "But he'll be home for an early lunch."

"Then take us at once to Professor Dillard."

"I'm sorry, sir," Pyne told him; "but the professor is also out. He went to the Public Library—"

"Are you sure?"

"Yes, sir. Beadle's gone to market."

"So much the better. Vance took hold of the butler and turned him toward the rear stairs. "We're going to search the house, Pyne. You lead the way."

Markham came forward.

"But, you can't do that!"

Vance wheeled round.

"I'm not interested in what you can do or can't do. I'm going to search this house. . . . Sergeant, are you with me? There was a strange look on his face.

"You bet your sweet life!" (I never liked Heath as much as at that moment.)

The search was begun in the basement. Every hallway, every closet, every cupboard and waste space was inspected. Pyne, completely cowed by Heath's vindictiveness, acted as guide. He brought keys and opened doors and let us in to see the place; and he might otherwise have overlooked the Sergeant had thrown himself into the hunt with energy, though I am sure with him he had only a vague idea as to its object. Markham followed us disapprovingly; but he, too, had been caught in the sweep of Vance's dynamic purposefulness; and he must have had some of that tremendous justification for his rash conduct.

Gradually we worked our way upward through the house. The library and Arnesson's room were gone over carefully. Belle Dillard's apartment was scrutinized, and close attention was given to the unused rooms on the third floor. Even the servants' quarters were torn open and thumped over. But nothing suspicious was discovered. Though Vance suppressed his eagerness I could tell what a nerve-straining he was under by the tireless haste with which he pushed the search.

Eventually we came to a locked door at the rear of the upper hall.

"Where does that lead?" Vance asked Pyne.

"To a little attic room, sir. But it's locked."

"Unlock it."

The man fumbled for several moments with his bunch of keys.

I don't seem to find the key, sir. It's supposed to be there."

"When did you have it last?"

"I couldn't say, sir. To my knowledge no one's been in the attic for years."

Vance stepped back and crouched.

"Stand aside, Pyne."

When the butler had moved out of the way Vance hurled himself against the door with terrific force. There was a cracking, quick straining of wood; but the lock held.

Markham rushed forward and caught him round the shoulders. "Are you mad!" he exclaimed.

"You're breaking the law."

"The law! There was scathing irony in Vance's retort. "We're dealing with a monster who sneers at all laws. You may case him with the law, but I'm going to search that attic if it means spending the rest of my life in jail.—Sergeant, open that door!"

The New Rhyme

Again I experienced a thrill of liking for Heath. Without a moment's hesitation he poised himself on his toes and sent his shoulders crashing against the door's panel just above the lock. The window was a splintering of wood as the lock's bolt tore through the moulding. The door swung inward.

Vance, freeing himself from Markham's hold, ran stumbling up the steps with the rest of us at his heels. There was no light in the attic, and we paused for a moment at the head of the stairs to acclimatize our eyes to the darkness. Then Vance struck a match and, groping forward, sent up the window shade with a clatter. The sunlight poured in, revealing a small room, a square, cluttered with manner of discarded odds and ends. The atmosphere was heavy and stifling, and a thick coating of dust lay over everything. I fancied nothing could have disturbed him, and an expression of disappointment came over his face.

"This is the only place left," he remarked, with the calmness of desperation.

After a more careful scrutiny of the room, he stepped to the corner by the little window and peered down at the floor. He had crossed him lay, or on his side against the wall. I noticed that it was unlatched and that its straps hung free. Leaning over he threw the cover back.

"Here! At least, is something for you, Markham."

We crowded about him. In the suitcase was an old Corona typewriter. A small piece of paper was in the inkwell. On it had already been typed, in pale blue elite characters, the two lines:

Little Miss Muffet
Sits on a tuft. . . .

At this point the typist had evidently been interrupted, or for some other reason had not completed the Mother-Goose rhyme.
"The new Bishop note for the press," observed Vance. Then reaching into the suite-case he lifted out a pile of blank paper and envelopes. At the same time, one of the machines, lay a red-leather note-book with thin yellow leaves. He handed it to Markham with the terse announcement:

"Drukker's calculations on the quantity of poison..."

But there was still a look of defeat in his eyes; and again he began inspecting the room. Presently he went to an old service door which stood against the wall opposite to the window. As he bent over to peer behind it he suddenly drew back and, lifting his head, sniffed several times. At the same moment he popped sight of something on the floor at his feet, and kicked it toward the centre of the room. We looked down at it with astonishment. It was a gas-mask of the kind used by chemists.

"Stand back, you chaps!" he ordered; and holding one hand to his nose and mouth he swung the dressing-case. When he walked directly behind it was a small cupboard door about three feet high, set into the wall. He wrenched it open and looked inside, then slammed it shut immediately.

Brief as was, my view of the interior of the cupboard, I was able to glimpse its contents clearly. It was fitted with two shelves. On the lower one were several books lying open. On the upper shelf stood an Erlenmeyer flask clamped on an iron support, a spirit-lamp, a condenser tube, a glass beaker, and two small bottles. Vance turned and gave us a dispairing look.

"We may as well go: there's nothing more here."

We returned to the drawing-room, leaving Tracy to guard the door to the lattice.

"Perhaps, after all, you were justified in your search," acknowledged Markham, studying Vance gravely. "I don't like such methods, however. If we hadn't found the typewriter..."

"Oh, that!" Vance, preoccupied and restless, went to the window overlooking the archery ground. "Drukker is a typewriter—or the note-book, either. What do they matter?" His chin fell forward on his breast, and his eyes closed in a kind of lethargy of defeat. "Everything's gone wrong—my logic has failed. We're too late."

"I don't pretend to know what you're grumbling about," said Markham, "but I bet you've supplied me evidence of a sort. I'll now be able to arrest Arnnesson when he returns from the university."

"Arrest Arnnesson! But I wasn't thinking of Arnnesson, or the arrest of the culprit, or the triumph of the District Attorney's office. I was hoping..."

He broke off and stiffened.

Vance Gets Closer

"We're not too late! I didn't think far enough. . . ."

He went swiftly to the archway. "It's the Drukker house we must search. . . . Hurry!" He was already half-running down the hall, Heath behind him, and Markham and I bringing up the rear.

We followed down the rear stairs, across the archer-y, and out into the garden, where an uncanny, almost unearthly, silence reigned. And I doubt if any of us even guessed, what was in his mind; but some of his inner excitation had been communicated to us, and we realized that our blood urgency could have shaken him so completely out of his usual attitude of disinterest and calm.

When we came to the screen-porch of the back door, he reached through the broken wire-netting and released the catch. The kitchen door, to my astonishment, was unlocked; but Vance seemed to expect this, for he unhesitatingly turned the knob and threw it open.

"Wait!" he directed, pausing in the little rear hallway. "There's no need to search, the entire house. The most likely place. . . . Yes! Come along . . . up-stairs . . . somewhere in the centre of the house . . . a closet most likely . . . where no one could hear. . . ."

He led the way up the rear stairs, past Mrs. Drukker's room and the study, and thence to the third floor. There were but two rooms, one at the extreme end, and a smaller door set midway in the right wall.

Vance went straight to the latter. There was a key protruding from the lock, and, turning it, he drew open the door. Only a shadowy blackness met our eyes. Vance was on his knees in a second, groping inside.

"Quick, Sergeant. Your flashlight."

Almost before he had uttered the words a luminous circle fell on the floor of the closet. What I saw sent a chill of horror over me. A choked exclamation burst from Markham; and a soft whistle told me that Heath too was appalled by the sight. Before us, in a limp, silent heap, lay the little girl who had brought flowers to her broken Humpty Dumpty on the morning of his funeral. Her golden hair was still unvelled; her face was dead pale, and there were streaks down her cheeks where the futile tears had welled forth and dried.

Heath obeyed with alacrity, and Vance stepped out on the sidewalk.

"Go to the Dillard's and wait for me there. I will return by the front stairs. Heath preceded him, flashing his light all the way so there would be no chance of his stumbling. In the main lower hall he paused.

"Unlock the doors, Sergeant. Heath obeyed with alacrity, and Vance stepped out on the sidewalk. Go to the Dillard's and wait for me there. I will return by the front stairs. Heath preceded him, flashing his light all the way so there would be no chance of his stumbling. In the main lower hall he paused."

CHAPTER XXV

The Curtain Falls

(Tuesday, April 26; 11 a. m.)

TWENTY minutes later Vance rejoined us in the Dillard drawing-room.

"She's going to be all right," he announced, sinking into a chair and lighting a cigarette. "She was only unconscious, had fainted from shock and fright; but she was quickly revived."

His face darkened. "There were bruises on her little wrist. She probably struggled in that empty house when she failed to find Humpty and, when the breeze forced her into the closet and locked the door. No time to kill her, d' ye see. Furthermore, killing wasn't in the plan. Little Miss Mattie's killed—merely frightened away. She'd have died, though, from lack of air. And he was safe; no one could hear her crying. . . ."

Markham's eyes rested on Vance affectionately.

"I'm sorry I tried to hold you back," he said simply. (For all his conventionally legal instincts, there was a fundamental bigness to his nature.) "You were right in forcing the issue, Vance. . . . And you, too, Sergeant. We owe a great deal to your determination."

Heath was embarrassed.

"Oh, that's all right, sir. You see, Mr. Vance had me all worked up about the kid. And I like kids, sir. Markham turned an inquisitive look on Vance.

"You expected to find the child alive, then?"

"Yes; but drugged or stunned perhaps. I didn't think of her as dead, for that would have contravened the Bishop's joke. It had been pondering some troublesome point."

"What can't I get through my head," he said, "is why this Bishop, with so many troubles about everything else, should leave the door of the Drukker house unlocked."

"We were expected to find the child," Vance told him. "Everything depended on the identity of the Drucker's file; the recreation of the Bishop, what? But we weren't supposed to find her till tomorrow—after the papers had received "The Miss Moffet notes. They were to have been broken. But we anticipated the gentleman."

"But why the notes sent yesterday?"

"It was no doubt the Bishop's original intention to post his poetry last night; but I imagine he decided it was best for his purpose to let the child's disappearance attract public attention first. Otherwise the relationship between Madeleine Moffet and little Miss Moffet might have been obscured."

"Yeh!" snarled Heath through his teeth. "And by to-morrow the kid would have been dead. No chance then of her identifying him."

Markham looked at his watch and rose with determination.

"There's no point in waiting for Arnnesson's return. Let me arrest him the better. He was about to give Heath an order when Vance intervened.

"Don't force the issue, Markham. You haven't any real evidence against the man. It's too delicate a situation for aggression. We must go carefully or we'll fail."

"I insist that the finding of the typewriter and the note-book is not
His voice held a tragic paternal note. But presently his features hardened; a vindictive light shone in his eyes; and his hand tightened over the knob of his stick. "However, I can’t consider my own feelings now. Come; I will do what I can."

On reaching the library he paused by the sideboard and poured himself a glass of port. When he had drunk it he turned to Markham with a look of apology.

"Forgive me. I’m not quite myself. I drew forward the little chess table and placed glasses on it for all of us. “Please overlook my discourtesy.” He filled the glasses and sat down.

We drew up chairs. There was none of us, I think, who did not feel the need of a glass of wine after the harrowing events we had just passed through.

When we had settled ourselves the professor lifted heavy eyes to Vance, who had taken a seat opposite to him.

"Tell me everything," he said.

"Don’t be so stiff," said Markham.

Vance drew out his cigarette-case.

"First, let me ask you a question. Where was Mr. Arnesson between five and six yesterday afternoon?"

"I say, are you shy?" was a reductio in the words. "He had tea here in the library; but he went out about half past four, and I didn’t see him again until dinner time.

Vance regarded the other sympathetically, for he felt that the professor was new here. "We’ve found the typewriter on which the Bishop notes were printed. It was in an old suit-case hidden in the attic.

The professor showed no sign of being startled.

"You were able to identify it?"

"Beyond any doubt. Yesterday a little girl named Madeleine Moffat disappeared from the playground in the park. There was a sheet of paper in the machine, and on it had already been typed "Little Miss Moffat sat on a tet.

Professor Dillard’s head sank forward.

"Another insane atrocity! If only I had shifted till last night to warn you!"

"No great harm has been done," Vance hastened to inform him. "We found the child in time: she’s out of danger now."

"Ah!"

"She had been locked in the hall-closet on the top floor of the Drukker house, but Mr. Vance has found the thing that was disturbing you. After we left here he showed me a copy of The Pretenders.

"What can this have to do with the case?"

"The examination was like a sign of relief. "For days that play has been in my mind, poisoning every thought..." He looked up fearfully.

"What does it mean?"

Vance answered the question.

"It means, sir, that you’ve led us to the truth. We’re waiting now for Mr. Arnesson.—And I think it would help if we had a talk with you in the meantime. You may be able to help us."

The old man hesitated.

"I hoped not to be made an instrument in the boy’s conviction."

"But the identification by the child—"

"Oh, man of feeling! What weight would a jurat attach to the frightened five-year-old girl’s identification without powerful contributory evidence? A clever lawyer could nullify it in five minutes. And you presumably can’t make the identification hold, what would it boot you? It wouldn’t connect Arnesson in any way with the Bishop murders. You could only prosecute on an attempted kidnap—" the child’s unharmed, remember. And if you should, through a legal miracle, get a doubtful conviction, Arnesson would receive at most a suspended sentence. "That wouldn’t end this horror.... No, no. You mustn’t be precipitate."

Reluctantly Markham resumed his seat. He saw the force of Vance’s argument.

"But we can’t let this thing go on," he declared ferociously. "We must stop this maniac some way."

Vance began pacing the room restlessly. "We may be able to wangle the truth out of him by subterfuge: he doesn’t know yet that we’ve found the child. . . . It’s possible that the Dillard case could assist us—" He halted and stood looking down at the floor. "Yes! That’s our one chance. We must confirm everything he knows."

The situation is sure to force an issue of some kind. The professor now will do all in his power to help convict Arnesson."

"You believe he knows more than he told us?"

"Undoubtedly. I’ve told you so from the start. And when he hears of the Little-Miss-Muffet episode, it’s not unlikely he’ll supply us with the evidence we need."

"It’s a long chance." Markham was pessimistic. "But it can do no harm to try. In any event, I shall arrest Arnesson before I leave here, and hope for the best."

Again Dillard

A few moments later the front door opened and Professor Dillard appeared in the hall opposite the archway. He scarcely acknowledged Markham’s greeting—he was scanning our faces as if trying to read the meaning of our unexpected visit. Finally he put a question.

"You have, perhaps, thought over what I said last night?"

"Not only have we thought it over," said Markham, "but Mr. Vance has found the thing that was disturbing you. After we left here he showed me a copy of The Pretenders."

"What more have you to tell me?"

"Drukker’s note-book containing his recent quantum researches was stolen from his room the night of his death. We found this note-book in the attic with the typewriter."

"He stopped even to that?" It was not a question, but an exclamation of incredulity. "Are you sure of your facts? I thought you made no suggestion last night—hadn’t sowed the seed of suspicion. . . ."

"There can be no doubt," declared Vance softly. "Mr. Markham intends to arrest Mr. Arnesson when he returns from the university. But to be frank with you, sir: we have practically no legal evidence, and it is a question in Mr. Markham’s mind whether or not the law can hold him. The most we can hope for is a conviction for attempted kidnapping through the child’s identification."

"Ah, yes... the child would know."

A broad smile, careless of Arnesson’s eyes. "Still, there should be some means of obtaining justice for the other crimes."

"You’re smoking pensively, his eyes on the wall beyond. At last he spoke with quiet gravity.

"If Mr. Arnesson were convinced that our case against him was a strong one, he might choose suicide as a way out. That perhaps would be the most humane solution for every one."

Markham was about to make an indignant protest, but Vance anticipated him.

Suicide?

"Suicide is not an indefensible act per se. The Bible, for instance, contains many accounts of heroic suicide. What finer example of courage than Rhazis’, when he threw himself from the city walls to save the city of Persepolis?"

"Dismatius?" There was gallantry, too, in the death of Saul’s sword-bearer, and in the self-hanging of Anthophel. And surely the suicides of Samson and Judas Iscariot had virtue. "His history is filled with notable suicides—Brutus and Cato of Utica, Hannibal, Lucius, Cicopatra, Seneca. Such acts would fall into the hands of Otho and the Pretorian guards. In Greece we have the famous self-destruction of Demosthenes; and Empedocles threw himself in the crater of Etna. Aristotle was the first great thinker to advance the dictum that suicide is an anti-social act, but, according to tradition, himself committed the suicide of Alexander. And in modern times let us not forget the sublime gesture of Baron Nogi..."

"All that is no justification of the act, sir. Markham is a firm man for law."

"Ah, yes—the law. In Chinese law every criminal condemned to death has the option of suicide. The Codex does not say, in the Fa Angelica Bible, but in the second book of Maccabees in the Apocrypha..."
rose and walked the length of the room and back, his face dark with anxiety. When he sat down again he looked at Vance a long while, his fingers drumming with nervous indecision on the table.

"The innocent, of course must be considered," he said in a voice of discouragement. "As morally wrong as suicide is, I can see your point that at least it may be theoretically justified."

(Knowing Markham as I did, I realized what this concession had cost him; and I realized, too, for the first time, how truly he felt as he felt in the face of the scourge of horror which it was his duty to wipe out.)

The old professor nodded understandingly.

"Yes, there are some secrets so hideous that it is well for the world not to know them. A higher justice may often be achieved without the law taking its toll."

As he spoke the door opened, and Arnesson stepped into the room.

"Well, well. Another conference, eh?"

He regarded Vance with an actual leer, and threw himself into a chair beside the professor. "I thought the case had been adjudicated, so to speak. Didn't Pardon's suicide put an end to the affair?"

Vance looked straight into the man's eyes.

"We found little Miss Muffet, Mr. Arnesson."

The other's eyebrows went up with sardonic amusement.

"Sounds like a charade. What am I supposed to do about a little Jack Horner's thumb? Or, should I inquire into the health of Jack Sprat?"

Vance did not relax his steady gaze.

"We found her in the Drukker house, locked in a closet," he amplified, in a low, even tone.

Arnesson became serious, and an involuntary frown gathered on his forehead. "What happened to Miss Muffet was only transient. Slowly his mouth twisted into a smirk."

"You policemen are so efficient. Vance? Miss Muffet is safe, isn't she?"

"Soon. Remarkable." He wagged his head in mock admiration. "However, sooner or later it was to be expected."

And what, may I ask, is to be the next move?"

"We also found the typewriter," pursued Vance, ignoring the question. "And Drukker's stolen note-book."

Arnesson was still on guard.

"Did you really?" He gave Vance a canny look. "Where were these tell-tale objects?"

"Up-stairs in the attic, I think," volunteered a juror of the panel. "Something like that."

"Withal," said Arnesson, "I can't see that you have a cast-iron case against anyone. Not even one who looks like a suit of clothes that fits only one person. And who can say how Drukker's note-book found its way into our attic? You must do better than that, Mr. Markham."

The Bishop at Last

"There is, of course, the factor of opportunity. The Bishop is a person who could have been on hand at the time of each murder."

"That is the filthiest of contributory evidence, the man countered."

"It would not help much toward a conviction."

"We might be able to show why the murderer chose the sobriquet of Bishop."

"Ah, That unquestionably would help." A cloud settled on Arnesson's face, and his eyes became reminiscent. "I'd thought of that, too."

"Oh, had you, now?" Vance watched him closely. "And there's another piece of evidence I haven't mentioned. Little Miss Muffet will be able to identify the man who led her to the Drukker house and forced her into the closet."

"So! The patient has recovered?"

"Oh, quite. Doing nicely, in fact. We found her, d'ye see, twenty-four hours before the Bishop intended us to."

Arnesson was silent. He was staring down at his hands which though folded were working nervously. Finally he spoke.

"And if, in spite of everything, you were wrong."

"I assure you, Mr. Arnesson," said Vance quickly, "that I know who is guilty."

"You positively frighten me! The man had got a grip on himself, and he refused his alibi to the end."

"If, by any chance, I myself were the Bishop, I'd be inclined to admit defeat. ... Still, it's quite obvious that it was the Bishop who took the chance to kill me," added Drukker at midnight; "and I didn't return home with Belle until half past twelve that night."

"So you informed her. As I recall, you locked at your watch and told her what time it was.—Come, now: what time was it?"

"That's correct—half past twelve."

"Vance sighed and tapped the ash from his cigarette."

"I say, Mr. Arnesson; how good a chemist are you?"

"One of the best," the man grinned. "Matters of that sort?"

"When I was searching the attic this morning I discovered a little wall-closet in which some one had been distilling hydrocyanic acid from potassium cyanide. There was a chemist's gas-mask on hand, and all the paraphernalia. Bitter-almond odor still lurking in the vicinity."

"Quite a treasure-trove, our attic. A sort of haunt of Loki, it would seem."

"It was just that," returned Vance gravely, "the den of an evil spirit."

"Or else the laboratory of a modern Doctor Faustus. But why the cyanide, do you think?"

"Precaution, I'd say. In case of trouble the Bishop could step out of the picture painlessly. Everything in readiness, don't you know?

"Are we sure?"

"Quite a correct attitude on his part. Really decent of him, in fact. No use putting people to unnecessary trouble if you're cornered. Yes, very correct."

Professor Dillard had sat during this sinister dialogue with one hand pressed to his eyes, as though in pain. Now he turned sorrowfully to the man he had fathered for so many years.

"Many great men, Sigurd, have justified suicide—" he began; but Arnesson cut him short with a cynical laugh.

"Faugh! Suicide needs no justification. Nietzsche laid the bugaboo of voluntary death. 'Auf eine stolze Art und Weise' is nicht mehr möglich ist, auf eine stolze Art zu leben. Der Tod unter den verächtlichsten Bedingungen, ein unfreier Tod, ein Tod zu unerwähltem Zeit ist ein Denker-Tod. Der Dichter nicht in der Hand, zu verkünden, geboren zu werden: aber wir können diesen Fehler—denn bloß die ist es ein Fehler—noch einmal machen. Erst nachdem sich abschließt, tut man die achtungswürdigste Sache, die es gibt: man verödnet, man verödnet beinahe, zu leben."

Memorized that passage from 'Gotzen-Danneel' in my youth. Never forgot it. A sound doctrine."

"Nietzsche had many famous predecessors who also upheld suicide," supplemented Vance. "Zeno the Stoic left us a passionate diathyramb defending voluntary death. And Tacitus, Epictetus, Marcus Aurelius, Cato, Kant, Fichte, Diderot, Voltaire, and Rousseau have all extolled the agonies for suicide. Schopenhauer protested bitterly against the fact that suicide was regarded as a crime in England. He laid it down that no trial of the subject can be formulated. Somehow I feel that it's too personal a matter for academic discussion."

"The professor agreed sadly.

"No one can know what goes on in the human heart in that last dark hour."

During this discussion Markham had grown very pink, and now it was too easy; and Heath, though at first rigid and watchful, had begun to unbend. I could not see that Vance had made the slightest progress; and I was driven to the conclusion that he had failed signally in accomplishing his purpose of ensnaring Arnesson. However, he did not appear in the least disconcerted. I began to wonder if he was satisfied with the way things were going. But I did notice that, despite his outer calm, he was intensely alert. The man's face had cleared and every muscle in his body was taut. I began to wonder what the outcome of this terrible conference would be. What could possibly go wrong?"

A Glass of Port

"This port. . . Ah yes," Arnesson glanced at our glasses, and turned it. "One should die proudly when it is no longer possible to live proudly. The death which takes place in the most contemptible circumstances, the death that is not free, is the most fearful occurring in the death of a coward. We have not the power to prevent ourselves from being born; but this error—nor sometimes it is an error—can be rectified if we choose. The man who does away with himself, performs the most estimable of deeds; he almost deserves to live for having done so."
an injured look on the professor. "Since when have I been a teetotaler, sir?"

The other gave a start, hesitated, and rose.

"I'm sorry, Sigurd. It didn't occur to me... you never drink in the forenoon." He went to the sideboard and, filling another glass, placed it, with an unsteady hand, before Arnesson when he refilled the other glasses.

No sooner had he resumed his seat than Vance uttered an exclamation of surprise. He had half risen and was leaning forward when a sense of shock swept over him like an avalanche. His eyes fixed with astonishment on the mantel at the end of the room.

"My word! I never noticed that before. ... Extrordin'ry!"

So unexpected and startling had been his action, and so tense was the atmosphere, that involuntarily we swung about and looked in the direction of his fascinated gaze.

"A Cellini plaque!" he exclaimed. "The Nymph of Fontainebleau! Berenson told me it was destroyed in the seventeenth century. I've seen its companion piece in the Louvre. . . ."

A red flush of angry indignation mounted to his face. He was thinking for myself I must say that, familiar as I was with Vance's idiosyncrasies and intellectual passion for rare antiques, I had never before known him to express such intense feeling. But taste. It seemed unbelievable that he would have let himself be distracted by an objet-d'art in such a tragic hour.

Professor Dillard frowned at him with consternation.

"You've chosen a strange time, sir, to indulge your enthusiasm for art," was his scathing comment.

Vance appeared abashed and chagrined. He sank back in his seat, scowling; his eyes, and began turning the stem of his glass between his fingers.

"You are quite right, sir," he murmured. "I owe you an apology."

"The plaque, incidentally," the professor added, by way of mitigating the severity of his rebuke, "is merely a copy of the Louvre piece."

Vance, as if to hide his confusion, raised his wine to his lips. It was a high eco, an unpleasant moment; everyone's nerves were on edge; and, in automatic imitation of his action, we lifted our glasses too.

Vance gave a swift glance across the table and, rising, went to the front window where he stood his back to the room. So unaccountable was his hasty departure that I turned and watched him wonderingly. Alonzo, perceiving the edge of the table was thrust violently against my side, and simultaneously there came a crash of glassware.

I kept to my feet and gazed down with horror at the inert body sprawled before me, one arm and shoulder flung across the table. A short silence of dismay and bewilderment followed. Each of us seemed momentarily paralyzed. Markham stood like a graven image, his eyes fastened on the table; and Heath, staring and speechless, clung rigidly to the back of his chair.

"Go on." It was Arnesson's astonished ejaculation that snapped the tension.

Markham went quickly round the table and bent over Professor Dillard's chair.

"Call a doctor, Arnesson," he ordered.

Vance turned wearily from the window and sank into a chair.

"Not until after him," he said, with a deep sigh of fatigue. "He prepared for a swift and painless death when he distilled his cyanide.—The Bishop they've got is over."

Markham was glaring at him with dazed incomprehension.

"Oh, I've half-suspected the truth ever since Fardee's death, Vance went on, in answer to the other's unspoken question. "But I wasn't sure of it until last night when he went out of his way to hang the guilt on Mr. Alonzo."

"Eh? What's that?" Arnesson turned from the telephone.

"Oh, yes," nodded Vance. "You were to pay the penalty. You'd been chosen as the victim. He even suggested the possibility of your guilt to us."

Arnesson did not seem as surprised as one would have expected.

"I know the professor hated me," he said. "He was intensely jealous of my interest in Belle. And he was losing his intellectual grip—I've seen that in his writing all the work on his new book, and he's resented every academic honor paid me. I've had an idea he was back of all this devilsity; but I didn't think, but he'd try to send me to the electric chair."

Vance got up and, going to Arnesson, held out his hand.

"The motive of that. . . . And I want to apologize for the way I've treated you this past half hour. Merely a matter of tactics. You see, we hadn't any real evidence, and I was hoping to get more."

Arnesson grinned slyly.

"No apology necessary, old son. I knew you didn't have your eye on me. When you began riding me I saw it was only technique. Didn't know what you were up to, followed your cues the best I could. Hope I didn't bungle the job."

"No, no. You turned the trick."

"Did I?" Arnesson frowned with deep perplexity. "But what I don't understand is why you should have taken the cyanide when he thought it was you suspected."

"That particular point we'll never know," said Vance. "Maybe he feared the girl's identification. Or he may have seen through my deception. Perhaps he suddenly revolted at the idea of shouldering you with the onus. . . . As he himself said, no one knows what goes on a human heart during the last dark hours."

Arnesson did not move. He was looking straight into Vance's eyes with penetrating shrewdness.

"Oh, well," he said at length; "we'll let it go at that. . . . Anyway, thanks!"

CHAPTER XXVI

Heath Asks A Question
(Tuesday, April 26; 4 a.m.)

When Markham and Vance and I departed from the Dillard house an hour later, I thought the Bishop affair was over. And it was over as far as the public was concerned. But there was another danger: that it was, in a way, the most astounding of all the facts that had been brought to light that day.

Heath joined us at the District Attorney's office after lunch, for there were certain delicate official matters to be discussed; and later that afternoon Vance reviewed the entire case, explaining many of its obscure points.

"The most startling of the motives for these insane crimes," he began. "The professor knew that his position in the world of science was being usurped by the younger man. His mind had known too long the force and penetration; and he realized that his new book on atomic structure was being made possible only through his son's help. And when he saw that the son, who grew up in him for his foster son; Arnesson became in his eyes a kind of monster whom he himself, like Frankenstein, had created, and with whom his hatred and resentment was doubled in intensity."

"The motive is understandable," said Markham. "But it does not explain the crimes."

"The motive acted as a spark to the dry powder of his pent-up emotions. In looking for a means to destroy Arnesson, he hit upon the idea of using cyanide in murders. These murders gave relief to his repressions; they met his psychic need for violent expression; and at the same time they kept the question in his mind how he could dispose of Arnesson and keep Belle Dillard for himself."

"But why," Markham asked, "didn't he merely murder Arnesson and have done with it?"

"You overlook the psychological aspects of the situation. The professor's mind had disintegrated, and long intense rage against Nature was demanding an outlet. And it was his passionate hatred of Arnesson that brought the pressure to an explosion point. The two impulses were thus combined. In committing the murders he was not only relieving his inhibitions, but he was also venting his wrath against Arnesson who saw the crime and paid the penalty."

Such a revenge was more potent, and hence more satisfying, than the mere killing of the man who would have been,—the greater minds of the lesser jokes of the murders themselves. . . ."

"However, this fiendish scheme had one great disadvantage, though the professor did not see it clearly. It laid the affair open to psychological analysis;
and at the outset I was able to postulate a mathematician as the criminal agent. The difficulty of naming the murderer lay in the fact that nearly every possible suspect was a mathematician. I knew one I knew to be innocent was Arronsson, for he was the only one who consistently maintained a psychic balance—that is, who consistently distinguished between his reasoning from his protracted abstruse speculations. A general sadistic and cynical attitude that is volubly expressed, and a violent homicidal outburst is psychologically equivalent. Giving full rein to one’s cynicism as one goes along produces a normal outlet and maintains an emotional equilibrium. Cynical, scoffing men are always the way that the apparently sane and stolid exterior is always liable to dangerous fulminations. This is why I knew Arronsson was incapable of the Bishop murders and why I suggested you should investigate your man with the budget. As it happened, he suspected the professor; and his request to assist us was, I believe, accepted by a desire to keep us from interfering. We went to look for Bello Dillard and himself in case his suspicions should prove correct.

"That sounds reasonable," ascended Markham. "Then Dillard gets his fantastic ideas for the murders?"

"The Mother-Goose motif was probably suggested to him when he heard Arronsson jestingly tell Robin to beware of an arrow from Sperring’s bow. He saw in that remark a means of venting his hatred against the man who had made it; and he bided his time. The opportunity to stage the crime came shortly after. When he saw Sperring pass up the street that morning, he knew that Robin was asleep in his room, as he usually went below, engaged Robin in conversation, struck him over the head, drove a shaft into his heart, and shoved him out on the range. He then fled, dressed, dressed the cloth, posted his notes at the corner, put one in the house letter-box, returned to the library, and called up this office. One unforeseen factor cropped up, however: Pyne was in Arronsson’s room when the professor said he went out on the balcony. But no harm came of it, for though Pyne knew what had happened, he did not catch the professor lying, he certainly didn’t suspect the old gentleman of being a murderer. The crime was a decided success."

Why the Arrow?

"Still and all," put in Heath, "you guessed that Robin had been shot with a bow and arrow."

"Yes. I saw from the battered condition of the neck of the arrow that it had been hammered into Robin’s body. I inferred that the chap had been killed indoors, after having first been stunned with a bow on the head. That was why I assumed that the bow had been thrown to the range for they were not aware that the professor was guilty. The bow of course was never on the range. But the evidence on which I based my deductions cannot be held as an error or oversight on the professor’s part. As long as his Mother-Goose joke was accompanied, the rest didn’t matter to him."

"What instrument do you think he used?" Markham put the question.

"His own. You may have noticed it has a monstrous gold knob perfectly constructed as a lethal weapon. Incidentally, I’m inclined to think he exaggerated his guilt by appearing very much inclined to shift any possible suspicion from himself."

"And the suggestion for the Sperry murder?"

"After Robin’s death he may have deliberately looked for Mother-Goose material for another crime. In any event, Sperry visited the house the Thursday night preceding the slaughter, and it was at that time I imagine, that the idea was born. On the day chosen for the gruesome business he rose early and dressed, waited for Pyne’s knock at half past seven, then went down to the park—probably through the archery-room and by way of the alley. Sperry’s habit of taking daily walking walks may have been casually mentioned by Arronsson, or even by the lad himself."

"But how do you explain the tensor formula?"

"The professor had heard Arronsson talking to Sperry about it a few nights before; and I think he placed it under the body to call attention—through association—to Arronsson. Moreover, the formula speaks subtly expressed the psychological impulse beneath the crimes. The Riemann-Christoffel tensor is a statement of the infinity of space—the negation of it is a premise that life on this earth; and subconsciously it no doubt satisfied the professor’s perverted sense of humor, giving added meaning and conceivability to the conception. The moment I saw it I sensed its sinister significance; and it substantiated my theory that the Bishop murders were the acts of a mathematician. And the tensor is a somewhat abstruse and incomprehensible."

Vance paused to light another cigarette, and after a moment’s thought continued.

"We come now to the midnight visit to the Drukker house. That was a grim en^{racte} forced on the murderer by the report of Mrs. Drukker’s screams. The woman had seen Robin’s body thrown to the range; and when, on the morning of Sperry’s murder, she had been in the yard and met him returning from the kill, he was so worried they had been together that she would put two and two together. No wonder he tried to prevent our questioning her! And at the earliest opportunity he attempted to silence her for all time. He took the key from Bello Dillard’s handbag before the theatre that night, and resealed it.

"It is discovered later that the large weighted gold handle, which was nearly eight inches long, was so strong and could be easily removed from the stick. The handle weighed nearly two pounds and, as Vance had observed, constituted a highly efficient "black jack." Whether or not it had been used for the purpose to which it was put, is of course wholly a matter of conjecture. Placed it the next morning. He sent Pyne and Beadle to bed early; and at half past ten Drukker complained of fatigue and went home. At midnight he figured that the coast was clear for his grisly visit to Bello Dillard, where the black bishop as a symbolic signature to the contemplated murder was probably suggested by the chess discussion between Pardee and Drukker. Then again, for it was known that Arronsson was intriguing with Pardee, and I even suspect him of telling us of the chess discussion to call attention to Arronsson’s chess set in case we thought the black bishop should fall into our hands."

"Do you think he had any idea of involving Pardee at that time?"

"Oh, no. He was genuinely surprised when Arronsson’s analysis of the Pardee-Rubinstein game revealed the fact that the bishop had long been Pardee’s nemesis. . . And you were undoubtedly right about Pardee’s reaction to my theory, no doubt the bishop the next day. The poor chap thought I was deliberately ridiculing him as a result of his defeat at Rubinstein’s hands."

Vance leaned over and tapped the ashes from his cigarette.

"Too bad," he mumbled regretfully. "I owe him an apology, don’t y’know. He’s about ready to be considered slightly, and, settling back in his chair, took up his narrative. "The professor got his idea for Drukker’s murder from Mrs. Drukker herself. She had complained that she feared Drukker, who repeated them at dinner that night; and the plan took shape. There were no complications to its execution in minutes. Then he calmly walked past Esmery and went home with Drukker’s note-book under his coat. . . ."

"But why," interposed Markham, "if you were sure that Arronsson was innocent, did you make such a point of locating the key to the alley door? Only Arronsson could have used the key on the night of Drukker’s death. Dillard and Pardee both went out by the front door."

"I wasn’t interested in the key from the standpoint of Arronsson’s guilt. But if that key was gone, d’ ye see, it would have meant that someone had taken it in order to throw suspicion on Arronsson. How simple it would have been for Arronsson to slip down the back alley, take the Drive to the little path and attack Drukker after the professor had left him . . . And, Markham, that is what we were supposed to think. It was, in fact, a suggestively explanatory description of Drukker’s murder."

The Spurious Suicide

"What I can’t get through my head, though," complained Heath, "is why
the old gent should have killed Par-
dee, instead of sending him to be pun-
ished on Arnesson, and it made it look like Par-
dee was guilty and had got dis-
gusted and croaked himself."

"That spurious suicide, Sergeant, was the professor's most fantastic job. You're not in the least ironical and con-
temptuous; for all during that
comic interlude plans were being made for
Arnesson's destruction. And, of-
course, the fact that we possessed a pia-
issimo culprit had the great advan-
tage of relaxing our watchfulness
and causing the guards to be removed
from the house. The murder, I
imagine, was conceived rather spone-
taneously. The killers threw some excuse to accompany Pardee to
the archery-room, where he had al-
ready closed the windows and drawn
the shades. Then, perhaps pointing
out an article in a magazine, he shot
his unsuspecting guest through the
temple, placed the gun in his hand,
and, as a bit of sardonic humor, built
the house of cards. On his return to
the room, he picked up the card to give the impression that Pardee had been brooding over the black bishop.

"But, as I say, this piece of grim
grotesquerie was only a side-issue.
The main episode is how the new
will be the dénouement; and it was
thoroughly planned so as to bring the
heavens crashing down on Arnesson.
The professor was at the Drucker
house, the children were there, the
town was full, the house of cards,
when Madeleine Moffat brought the
flowers for Humpty Dumpty; and he
doubtedly knew the child by name
—she was Drucker's favorite and had
been to the house on numerous oc-
casions. The Mother-Goose idea being
now firmly implanted in his mind, like
a hideous obsession, he very
naturally associated the name Moffat
with Drucker. It was highly
likely that Drucker or Mrs. Drucker
had called the child 'Little Miss Muf-
fet' in his presence. It was easy for
him to attract her attention and make
her pass him a waterous by the win-
der the trees by the bridle path, thence across the
Drive, and through the alley between
the apartment houses. No one would
have noticed them, for the Drive is
teenings with children at that time.
Then last night he planted in us the
seed of suspicion against Arnesson,
believing that when the Little-Miss-
Muffet notes reached the press we
would talk to the child and find her,
death from lack of air, in the Drucker
house. . . . A clever, devilish plan!"

"But did he expect us to search the
attic of his own home?"

"Oh, yes; but not until to-morrow.
Then he would have cleaned out the
closet, and perhaps the unwritten
more conspicuous place. And he
would have removed the note-book,
for there's little doubt that he inten-
ded to appropriate Drucker's quantum
reward after the inglorious scene was
too soon, and upset his calculations."

Markham smoked moddily for a
time.

"You say you were convinced of
Dillard's guilt last night when you
remembered the character of Bishop
Arnesson. . . ."

"Yes—oh, yes. That gave me the
motive. At that moment I realized
that it was no use to shoulder Arnesson with the guilt,
and that the signature to the notes
had been chosen for that purpose."

"He waited a long time before he
called, 'Pretenders,'" commented Markham.

"The fact is, he didn't expect to
have to do it at all. He thought we'd
discover the name for ourselves. But
we were dumber than he anticipated;
and at last, in desperation, he sent
for you and beat cleverly round the
bush, accentuating 'The Pretenders.'"

Markham did not speak for several
minutes. He sat frowning reproach-
fully, his fingers tapping a tattoo
on the blotter.

"Why," he asked at length, "did
you not tell us last night that the pros-
perous and not Arnesson was the Bishop?
You let us think—"

"My dear Markham! What else
could I do? In the first place, you
wouldn't have known it; and secondly,
most likely have suggested another
ocean trip, what? Furthermore, it was
essential to let the professor think
we suspected Arnesson. Other-
wise, you might have been forced to
force the issue as we did.
Subterfuge was our only hope; and I knew that
if you and the Sergeant suspected
him you'd be sure to give the game
away. We didn't have to dissemble; and lo! it all worked out
beautifully."

The Sergeant, I noticed, had, for
the past half hour, been regarding
Vance with a look of perplexed
uncertainty; but for some reason he had seemed reluctant
to give voice to his troubled thoughts.
Now, suddenly, he raised his glasses
and, taking his cigar slowly from his
mouth, asked a startling
question.

Evasion

"I ain't complaining about your not
putting us wise last night, Mr. Vance,
but what I would like to know is:
why, when you hopped up and pointed
at that plate on the mantel, did you
switch Arnesson's and the old gent's
glasses?"

Vance sighed deeply and gave a
hopeless wave of the hand.

"I must have known that nothing
could escape your eagle eye, Ser-
gant."

Markham thrust himself forward
cravenly and peered at Vance with
angry bewilderment.

"What's this?" he spluttered, his
usual self-restraint deserting him.

"You changed the glasses? You de-
liberately did it?"

"Oh, I say!" pleaded Vance. "Let
not your wrathful passions rise."

He turned to Heath with mock reproach.

"Behold what you've got me in for,
Sergeant."

"This is no time for evasion."

Markham's voice was cold and inex-
orable. "I want an explanation."

Vance made a resigned gesture.

"Oh, well. Attend. My idea, as
I've explained, was to fall in with the
professor's plans to appear to
suspect Arnesson. This morning
I purposely let him see that we had
no evidence, and that, even if we
arrested him, it would not be
enough to hold him. I knew that, in
the circumstances, he would take some ac-
 tion—that he would try to meet
the situation in some heroic way—for
the collection of prizes and the
appearance of the profile of death
would destroy Arnesson utterly. That
he would commit some overt act and
give his hand away, I was confident.
What it would be I didn't know. But
we'd be watching him closely.
He fell into the trap, and attempted
to poison Arnesson and make it appear like suicide. I saw
him surreptitiously empty a small
phial of colorless fluid into Arnes-
son's glass, and then poured it into
the wine. My first intention
was to halt the murder and have the
wine analyzed. We could have
searched him and found the phial, and
I might have known. But I saw
that I saw him poison the wine. This
evidence, in addition to the identifica-
tion by the child, might have answered
the purpose. But at the last moment,
after he had refilled all our glasses,
I decided on a simpler course—"

"And so you diverted our attention
and switched the glasses?"

"Yes. I figured that a man should be willing to drink
the wine he pour for another."

"You took the law in your own hands?"

"I took it in my arms—it was help-
less. . . . But don't be so righteous.
Do you bring a rattlesnake to the bar
of justice? Do you give a mad dog
his day in court? I felt no more com-
mon moral responsibility than did
Dillard into the Beyond than I would
have in crushing out a poisonous rep-
tile in the act of striking."

"But it was murder!" exclaimed
Markham in derision.

"Oh, doubtless," said Vance cheer-
fully. "Yes—of course. Most repre-
rensible. . . . I say, am I by any
chance under arrest?"

The "suicide" of Professor Dillard
terminated the famous Bishop
murder case, and automatically cleared
Pardee's reputation of all suspicion.
The following year Arnesson and
Belle Dillard were married quietly
and sailed for Norway, where they
made their home. Arnesson had ac-
cepted the chair of applied mathema-
tics at the University of Oslo; and it
will be remembered that two years
afterward he was awarded the Nobel
prize for his work in physics. The old
Dillard house in 75th Street was torn
down, and on the site now stands a
modern apartment house on whose
facade are two huge biscuit medallions
strongly suggestive of archery
targets. I have often wondered if the architect was deliberate in his
choice of decoration.

The END.
How Good A Detective Are You?

See Instructions on Page 223

1—Had the man been shot? .................................................. 19—On what street was the body found?
2—Was he lying on street or sidewalk? .............................. 20—In front of what number?
3—Was he well-dressed? .................................................... 21—What was the name of the intersecting street?
4—Where had he been shot? .............................................. 22—Was this a high-class neighborhood?
5—Was he lying on his back? ............................................. 23—Would you say it was in the slums?
6—Was his clothing torn? .................................................. 24—Was the corner store a butcher shop or a laundry?
7—Was the motive robbery? .............................................. 25—Was some business conducted in the cellar?
8—Was there a bag near-by? ............................................. 26—What was it?
9—Was it empty? ............................................................ 27—Name the proprietor
10—Did the man have anything in his hand? ......................... 28—who owned the laundry?
11—Were there a watch and chain on the street? .................. 29—Was there a clerk to be seen?
12—Was there a pair of spectacles nearby? ......................... 30—What time was it?
13—Was there a pistol in the street? ................................ 31—A.M. or P.M.?
14—Any empty shells? ...................................................... 32—Was the building on the other corner a garage?
15—How many? ............................................................... 33—What was the name of it?
16—What was in the box on the sidewalk? ......................... 34—Were there trolley tracks on the street?
17—Did you see a hat? ...................................................... 35—Was there anyone in sight?
18—Was this a lonely neighborhood? ............................... 36—

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After you have the idea, try to improve upon it by shortening the slogan and making it sound more euphonious; but always remember that it is the idea which counts. The cleverer the slogan, and the better it expresses the ideas for which this magazine stands the easier it will be for you to win the prize.

No great amount of time need be spent in the preparation of slogans. Start thinking right now and jot down your thoughts. Also, tell your friends about it, and get them to submit slogans of their own, or compose one in partnership with them.

Here are a couple of sample slogans, which are given as mere suggestions, and not to be used as entries:

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"AN ENCYCLOPEDIA OF SCIENCE THRILLS"

Rules for the Contest

(1) The slogan contest is open to everyone except members of the organization of Scientific Detective Monthly and their families.
(2) Each contestant may send in only one slogan; no more.
(3) Slogans must be written legibly or typed on the special coupon published on page 277 of this magazine. (If you do not wish to cut the magazine, copy the coupon on a sheet of paper exactly the same size as the coupon.) Use only ink or typewriter; penciled matter will not be considered.
(4) Each slogan must be accompanied by a letter stating in 200 words, or less, your reasons for selecting this slogan.
(5) In case of duplication of a slogan, the judges will award the prize to the writer of the best letter; the one which, in their opinion, gives the most logical reasons for the slogan.

This contest closes on May 1, 1930, at which time all entries must be in this office; and the name of the winner will be announced in the July, 1930, issue of Scientific Detective Monthly, on publication of which the prize will be paid.

Because of the large number of entries, which may be expected, the publishers cannot enter into correspondence regarding this contest.

Address all communications to:

Editors, Slogan Contest,  
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Craig was playing with his victim like a cat with a mouse.

The Final Link

Suddenly I felt something brush by me, and with a swirl of air and of garments I saw Mrs. Popper fling herself wildly at the table that bore the incriminating records. In another instant Farrington was on his feet and had made a wild leap in the same direction.

It was done so quickly that I must have acted first and thought afterward. I found myself in the midst of a mêlée with my hand at his throat and his at mine. O'Connor with a fujitsu movement bent Farrington's other arm until he released me with a cry of pain.

In front of me I saw Craig grasping Mrs. Popper's wrists as in a vise. She was glaring at him like a tigress.

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The Man in the Room
(Continued from page 270)

repeated them. President Joslyn moved again.
"Cannot you proceed, Trant?" he asked.
"Not unless we can make her understand again, sir," the young man answered. "But I think, Dr. Joslyn, if you would show her what we mean—not merely try to explain again—we might go on. I mean, when I say the next word, will you take the mouthpiece from Dr. Reiland and speak into it some different one?"

"Very well," the president agreed, impatiently, "if you think it will do any good."

"Thank you!" Trant replaced his mouthpiece. "October!" He named the month just ended. The pointer started. "Recitations!" the president of the university answered in one and nine-tenths seconds.

"Thank you. Now for Miss Lawrie, Dr. Reiland!"

"Steal!" he tried; and the girl associated “iron” in two and seven-tenths seconds.

"Good!" Trant exclaimed. "If you will show her again, I think we can go ahead. "Fourteenth!" he said to the president.

Joslyn replied “fifteenth” in precisely two seconds and passed the drum back. All watched Miss Lawrie. But again Trant rasped carelessly his chair upon the floor and the girl merely repeated the next words. Reiland was unable to make her understand. Joslyn tried to help.

Branower shook his head skeptically. But Trant turned to him.

"Mr. Branower, you can help me, I believe, if you will take Dr. Joslyn’s place. I beg your pardon, Dr. Joslyn, but I am sure your nervousness prevents you from helping now."

A Mind Is Analyzed
Branower hesitated a moment, skeptically; then, smiling, acquiesced and took up the drum. Trant replaced his mouthpiece.

"Blow!" he said. "Wind!" Branower answered, quietly.

Trant mechanically noted the time, two seconds, for all were intent upon the next trial with the girl.

"Books!" Trant said. "Library!" said the girl, now able to associate the different words and in her minimum time of two and a half seconds.

"I think we are going again," said Trant. "If you will keep on, Mr. Branower. Strike!" he exclaimed, to start the pointer. "Labor trouble," Branower returned in just under two seconds; and again he guided the girl. For “trouble," she answered "blip!" at once. Then Trant tested rapidly this series:

Margaret, conceal—2.6—hide.
Branower, fall—2.1—autumn.
Margaret, thief—2.9—silver.
Branower, twenty-fifth—4.6—twentieth-sixth.

"Joslyn!" Trant tried an intelligible test word suddenly. He had just suggested “thief” to the girl; now he

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named her father’s friend, the president of the university. But “friend” she was able to associate in two and six-tenths seconds. Trant sank back and wrote this series without comment:

Margaret, Joslyn—2.0—friend.
Branower, wife—4.4—Cora.
Margaret, secret—2.7—Alice.

Trant glanced up, surprised, considered a moment, but then bowed to Mr. Branower to guide the girl again, saying, “wound,” to which he wrote the reply “no,” after four and six-tenths seconds. Immediately Trant made the second direct and intelligible test.

“Branower!” he shot, suggestively, to the girl; but “friend” she was again able to associate at once. As the moment before the president of the trustees had glanced at Joslyn, now the president of the university nodded to Branower. Trant continued his list rapidly:

Margaret, Branower—2.7—friend.
Branower, letter-opener—4.9—desk.

“Father!” Trant tried next. But from this there came no association, as the emotion was too deep. Trant, recognizing this, nodded to Mr. Branower to start the next test, and wrote:

Margaret, father—no association.
Branower, Harrison—5.2—Cleveland.
Margaret, university—2.5—study.
Branower, married—2.1—wife.
Margaret, expose—2.6—camera.
Branower, brother—4.9—sister.
Margaret, sink—2.7—kitchen.
Branower, collapse—4.8—balloon.

“Relief!” Trant said to the girl at last. It was as if he had put off the trial for his own old friend as long as he could. Yet if anyone had been watching him, they would have noted the quick flash of his mistoned eyes. But all eyes were upon the swinging pointer of the chronoscope which, at the mention of her father’s best and oldest friend in that way, Margaret was unable to stop. One full second it swung, two, three, four, five, six.

The young assistant in psychology picked up his papers and arose. He went to the door and called in the nurse from the next room. “That is all, gentlemen,” he said. “Shall we go down to the study?”

“Well, Trant?” President Joslyn demanded impatiently, as the four filed into the room below, which had been Dr. Lawrie’s. “You act as if you had discovered some clue. What is it?”

Trant was closing the door carefully, when a surprised exclamation made him turn.

“Cora!” Mr. Branower exclaimed; “you here? Oh! You came to see poor Margaret!”

“I couldn’t stay home thinking of you torturing her so this morning!” The beautiful woman swept their faces with a glance of anxious inquiry.

“I told Cora last night something about our test, Joslyn,” Branower explained, leading his wife toward the door. “You can go up to Margaret now, my dear.”
She seemed to resist. Trant fixed his eyes upon her, speculatively.

"I see no reason for sending Mrs. Branower away if she wishes to stay and hear with us the results of our test which Dr. Reiland is about to give us." Trant turned to the old professor and handed him the sheets upon which he had written his record.

"Now, Dr. Reiland, please! Will you explain to us what these tell you?"

Dr. Joslyn's hands clenched and Branower drew toward his wife as Reiland took the papers and examined them earnestly. But the old professor raised a puzzled face.

Association of Ideas

"Luther," he appealed, "to me these show nothing! Margarete's normal association-time for innocent words, as you established at the start, is about two and one-half seconds. She did not exceed that in any of the words with guilty associations which you put to her. From these results, I should say, it is scientifically impossible that she even knows her father is accused. Her replies indicate nothing unless—we be paid, perhaps, because she could associate nothing with my name you consider that implies—"

"That you are so close to her that at your name, as at the name of her father, the emotion was very deep, Dr. Reiland," the young man interrupted.

"But do not look only at Margarete's associations! Tell us, instead, what Dr. Joslyn's and Mr. Branower's show!"

"Dr. Joslyn's and Mr. Branower's?"

"Yes! For they show, do they not—unconsciously, but scientifically and quite irrefutably—that Dr. Joslyn could not possibly have been concerned in any way with those notes, part of which were due and paid upon the fourteenth of October; but that Mr. Branower has a far from innocent association with them, and with the twenty-fifth of the month, on which the rest were paid!"

He swung toward the trustee. "So, Mr. Branower, you were the man in the room Sunday night! You, to save the rascal Harrison, your wife's brother and the real thief, struck Dr. Lawrie dead in his office, burned the raised notes, turned on the gas and left him to seem a suicide and a thief!"

For the second time within twenty-four hours, Trant held Dr. Reiland and the president of the university astounded before him. But Branower laughed ugly.

"If you could not spare me, you might at least have spared my wife this last avenging accusation! Come, Cora!" he commanded.

"I thought you might consider yourself, Mr. Branower," Trant returned. "And when I saw your wife wished to stay I thought I might keep her to convince even President Joslyn. You see?" he quietly inquired Mrs. Branower as she fell, white and shaking, into a chair. "Do not think that I would have told it in this way if these facts were new to her. I was sure the only surprise to her would be that we knew them."

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NEW YORK, N. Y.
Branower bent to his wife; but she straightened and recovered.

"Mr. Branower," Trant continued then, "if you will excuse chance errors, I will make a fuller statement.

"I should say, first, that since you kept his relationship a secret, this Harrison, your wife's brother, was a ras-
cal before he came here. Still you procured him his position in the treasurer's office, where he soon began to -
It was very easy. Dr. Lawrie merely signed notes; Harrison made them out. He could make them out in ter-
asible ink and raise them after they were signed, or, in any other simple way. Suffice it that he did raise them and stole one hundred thousand dol-

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not even once present a false statement. In our argument his heart gave out—I did not know it was weak—and he collapsed in his chair—dead."

Dr. Reiland groaned, wringing his hands.

"Oh, Professor Reiland!" Mrs. Branower cried now. "He has not told everything. I—I had followed him!"

"You followed him?" Trant cried.

"Ah, of course!"

"I thought—I told him," the wife burst on, "this had happened by Providence to save David!"

The Truth Revealed

"Then it was you who suggested to him to leave the stiletto letter opener in Lawrie's hand as an evidence of suicide!"

Branower and his wife both stared at Trant in fresh terror.

"But you, Mr. Branower," Trant went on, "not being a woman with a precious brother to save, could not think of making a wound. You thought of the gas. Of course! But it was inexusable in me not to test for Mrs. Branower's presence. It was her odd mental association of a perpetra-tor with the news of the suspected suicide that first aroused my suspicions."

He turned as though the matter were finished; but met Dr. Joslyn's perplexed eyes. The end attained was plain; but to the president of the universi-ty the road by which they had come was dark as ever. Branower had taken his wife into another room. He returned.

"Dr. Joslyn," said Trant, "it is scientifically impossible—as any psycholog-ist will tell you—for a person who associates the first suggested idea in two and one-half seconds, like Margaret, to substitute another without almost doubling the time interval."

"Observe Margaret's replies. 'Iron' followed 'steel' as quickly as 'east' followed 'dog.' 'Silver,' the thing a woman first thinks of in connection with burglary, was the first association she had with 'thief.' No possible guilty thought there. No guilty secre-tet connected with her father prevented her from associating, in her regular time, some girl's secret with Alice Seaton next door. I saw her innocence at once and continued questioning her merely to avoid a more formal examination of the others. I rapped my chair over the floor to disturb her nerves, therefore, and got you into the test.

"The first two tests of you, Dr. Joslyn, showed that you had no association with the notes. The date half of them came due meant nothing to you. 'O'chette' suggested only recitations and 'fourteenth' permitted you to as-sociate simply the succeeding day in an entirely unsuspicious time. I substi-tuted Mr. Branower. I had explained this system as getting results from persons with poor memory and resistance. I had not mentioned it as even surer of results when the person tested is in full control of his faculties, even suspicious and trying to prevent betraying himself. Mr. Branower clearly thought he could guard himself.

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from giving me anything. Now notice
his replies.

Trant Succeeds
"The twenty-fifth, the day most of the
notes were due, meant so much that it
took double the time, before he
could drive out his first suspicious
answer, "No, sir, I can't do it!"
"I told you I suspected his wife was at
least cognizant of something wrong. It
took him twice the necessary time to
tell the story after 'wife' was mentioned.
He gave the first association, but the
chronoscope required never to
believe that he had to think it over. 'Wound'
then brought the remarkable association
'no' at the end of four and six-
tenths seconds. There was no wound;
but something had made it so that he
had to think it over to see if it was sus-
picious. When I first saw that dagger
letter opener on Dr. Lawrie's desk, I
thought that if a man were trying to
make it seem suicide, he must at least
have thought of using the dagger be-
fore the gas. Now note the next test,
'Harrison.' Any innocent man, not
overdoing it, would have answered at
once the name of the Harrison imme-
diately in all our minds. Mr. Bran-
ower, thought of Harrison, and
could have answered in two sec-
onds. To drive out that and think of
President Harrison so as to give a
seemingly innocent association,
'Cleveland,' took him over five seconds.
I then went for the hold of this Harri-
son, probably, upon Mrs. Branower.
I tried for it twice. The second trial,
'broad,' made him think again for
five seconds, practically, before he
could decide that this word was a
guilty word to give. As the first
words 'blow' only brought 'wind' in
two seconds and 'strike' suggested
'labor' at once, I knew he could not
have struck Dr. Lawrie a blow; and
now these words showed, indeed, that
Lawrie probably collapsed before him.
And I was done."

Dr. Joslyn was pacing the room with
rapt steps. "It is plain. Branower,
you offer nothing in your defense?"
"There is nothing."

"There is much. The university
owes a great debt to your father. The
autopsy will show conclusively that
Dr. Lawrie died of heart failure. The
other facts are private with ourselves.
You can restore this money. Its ab-
sence I will reveal only to the trustees.
I shall present them at the same
time your resignation from the board."

He turned to Trant. "But this
statement—that your man depressed you
of the reputation you might have
gained through the really remarkable
method you used through this investi-
gation."

"It makes no difference." Trant an-
swered, "if you will give me a short
leave from the university. As I men-
tioned to Dr. Reiland yesterday, the
prosecuting attorney of Chicago was
murdered two weeks ago. Sixteen
members of the city council were
held; but the criminal cannot be
picked among them. I wish to try the
scientific psychology again. If I suc-
cess, I shall resign and keep after
crime—in the new way!"

Till End
The Robot Terror
(Continued from page 222)

"The following story of the affair is related by Inspector Gibbons in an exclusive interview with a "News-Herald" reporter:

"We gained entrance to Eric's laboratory through a trap door revealed by an inspection of the asylum. After examining the equipment, we secreted ourselves in a dark corner of the room—the professor and I—while Charles Stanley slipped out to return to the city and bring reinforcements.

"Just before noon, a bald, bespectacled, middle-aged man climbed through a door leading from the broadcast room. After turning on several dim lights on a peculiarly shaped instrument board a low whirring noise pervaded the room. A television-scanning disc began revolving, and through the screen we saw the iron robot, sitting in an armored car. We later discovered this machine had been concealed in the cellar of an old house, situated near the asylum.

"Drawing my pistol, I handed another to Professor Carlton, and whispered to him to be ready to control the madman. As we prepared to leap a cold voice warned us to "sit still". I looked around into the muzzle of a large revolver and made out the thin figure of Dr. McMunsey standing near the secret entrance. Carlton and I dropped our weapons at his command. Watching us like an eagle, he kicked our guns out of reach and switched on a light.

""I insist that you note the uncanny ability of Eric's servant", he said: "Watch him closely".

"I looked into the screen again. The robot was gliding along my front walk. He lumbered awkwardly up the steps of my home! I prayed the doors were locked. They were, but no use. "Monarch" plunged through them as though the house were made of tissue.

"Tense and overwhelmed as I was, I could not bear to think of what might happen to my daughter. I lunged beneath McMunsey's gun and grasped his legs. As we rolled over, I saw Carlton reach for Eric. A shot was fired, and I heard a groan from Carlton. Then I received a terrific blow on my head, stunning me. When I recovered, my arm was shackled to Carlton's with my own handcuffs and the doctor was standing above us. Carlton was unconscious, and blood was streaming from his shoulder. Several minutes passed before I could pull myself together. My eyes went back to the screen.

"There was my daughter in full view. She was clinging to a pillow and I could hear her screaming. It was too horrible. McMunsey was standing near the foot of Claire's bed. I tried to drag myself toward Eric; but, with Carlton bound tightly to my arm, I could not move. Eric adjusted the microphone. Placing his lips close to the apparatus, he began to speak:

---

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"I came to carry you away", he said. The voice came back to the laboratory through the amplifier. I heard Claire scream, "Go away, go away!"

"Eric turned a dial and "Monarch" stepped toward Claire. The door was flung open wildly and I could see my daughter's fiancé through the screen standing in the door holding a gun. Without hesitating, he emptied its contents at the steel giant.

"Stop that young fool before those bullets reach a tube!

McMunsey stormed at Eric. "Charles, my future son-in-law, brandished his pistol at "Monarch" and dashed toward the laboratory. She had fainted. Lifting her in his arms, he dashed toward the door. Defly, Eric moved the robot into their path and forced them to retreat to a corner. Charles slipped in a clip and again emptied his automatic at the robot, but failed to stop it. McMunsey was bellowing madly at Eric. With his steel arms stretched lengthwise, "Monarch" continued close in upon the helpless pair. I made another effort to drag myself forward. McMunsey leveled his revolver. I realized his deadly intention.

"I saw the hammer move and heard a click, and helplessly awaited death. Just in that instant, like a thunderbolt, a dark figure leaped through the trap door and, before I could ascertain what was happening, a pair of chains wrapped about McMunsey's throat. The doctor's gun rattled to the floor. Quick as a flash, the dark figure swept the weapon from the floor and ordered McMunsey to hold up his hands. With the gun menacingly close to Eric's head, he commanded him to turn the robot around. I glanced again at the screen. "Monarch" was turning.

"Make him walk away", he commanded. "Monarch" walked to the opposite side of the room. The newcomer—had saved our lives stepped into the light of a glowing tube. He was smiling triumphantly. It was the insane patient, José, who had guided the laboratory.

"I'm not as crazy as you thought, eh, Dr. McMunsey?" he said. "I'll get you for this", McMunsey retorted: "Get back to your cell!

"José laughed. "Not after this", he said: "Instead, it's you who will get in a cell. The police are on the way."

"That was a close call. My daughter's fiancé was speaking: "I wonder what saved us". His voice was coming through the amplifier. "Monarch" could be seen standing motionless in the room.

José spoke into the microphone: "I did it. You are safe now."

"The couple heard the voice and apparently understood. For they took their eyes away from the hideous giant and seemed to fear him no longer. They started to embrace, but suddenly remembered the world might be watching through the eyes of "Monarch."

THE END

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SD-3
The Power Ray
(Continued from page 215)

is less than two blocks from yours and its interior would easily be visible, through its windows, from the window through which you sent the rays to illuminate the sign. With your field glasses it would have been very easy to identify any one in the laboratory.

"Lastly we learned from Professor Gustav Schwartz that you and Schmitt had been enemies since before the two of you entered the university in Germany, and, though he did not mention your enmity, he informed us that you and Schmitt had carried your personal enmity into business and had fought each other constantly since you came to this country.

Friendly Enemies

When Charley finished talking, Kurtz was silent for a few moments, then speaking very slowly he answered Charley's accusation.

"It is true that we have not associated with each other to any great extent but that had nothing to do with the rivalry between us. It was just that I found Terrent tastes and I think our work led us to associate with different groups of people.

"I have always said that we had nothing to do with the death of Professor Schmitt."

"From what Mr. Wright has told me, I would judge that Professor Schmitt was killed between eight and eight-fifteen yesterday evening. I was not in my laboratory between noon yesterday and nine o'clock this morning. I spent the afternoon in the library of the Research Club and ate dinner in the Cell there. I left the club about seven-thirty to keep an eight o'clock engagement with Mr. Wilde of the Intercity Company at his office in the Intercity Building.

On my way across town in a ca motorcycle I was picked up for trying to beat a traffic light.

"You can easily verify this by calling Mr. Wilde and the sixteenth precinct station house. I believe the officer who arrested me was named Sullivan."

The police magistrate verified Kurtz's story by phone and Officer Sullivan came over from the sixteenth precinct and identified Kurtz as the man he had arrested and corroborated Kurtz's testimony as to the time, place and reason for his arrest.

The elimination of Kurtz left Schmitt's death still shrouded in mystery. The detectives and the forensic experts were wondering just what the next line of investigation might be.

Kurtz—who had been very decent about his being arrested—was also spending time to the cause of his cousin's death, when he suddenly ejaculated—"Ach, Gott! It must have been! Let us hurry to my laboratory—and I fear that I know how my cousin died. Hurry! I must get to the laboratory before my chief assistant leaves. He is making a series of experiments and has been working late these last few evenings."

We caught a taxi and rushed to Kurtz's laboratory. Haffer—his chief assistant—was clearing up his workbench preparatory to going home. He was an elderly man, short and fat, and he peered at us through thick-rimmed glasses with an accent, very little of which I shall try to imitate. Kurtz explained that he wished him to operate the projector and illuminate the sign for him while we watched this Haffer readily agreed to do and we moved to the other end of the laboratory to where the projector stood, Kurtz stopping at a large switchboard and following us after a moment.

Once again the four of us were seated around the table and we watched Haffer as he crossed to the window, opened the switch box, closed the two switches next to the window and then turned again to the projector. Kurtz's face had taken on a strained look as his assistant closed both switches and he watched Haffer intently as he returned to the projector. Haffer spun the lens adjustment a bit and then he began to manipulate the position adjustments until, through the open window, we could see a corner of the sign sparkle into a well remembered brilliancy. A few more turns on the horizontal control, a twist of the lens adjustment and the sign stood out clearly against the velvety blackness of the night sky.

"Thank you, Herr Haffer, but why did you not use the written directions that I gave you yesterday morning. They would have made it unnecessary for you to have to hunt for the sign with the beam of the projector."

"Ach, Herr Doktor, dose direkshuns blew py der window owt, vom monkpeck off, Ja! Put I remember dose direkshuns. Close dose direkshuns, swich der next py der window, und der kontrols vom der lenses und oberate der proktoer. I find dot sign chust like ve found it der virte dime tree weeks went.

"That will be all, Herr Haffer. I will turn the projector off."

"Goot Nacht." said Haffer as he left us, stopped to get his hat and then went out of the laboratory.

Kurtz sat watching him as he left and as the door closed behind Haffer he turned to us.

"There goes the man who killed Professor Schmitt—but he does not know it."

"When I left here at noon yesterday—" I told him that I wanted him to illustrate the sign for me eight-thirty last night, as Mr. Wilde and I wished to examine it at closed.
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range while it was illuminated. It was for this purpose that I was rushing across town when I was arrested. I gave Haffer written directions as to how to operate the projector. These included the position indicator settings and specifically stated that he was to close the first switch next the window but was not to touch the second switch. He evidently read the directions once and having lost them attempted to operate the projector from memory and in so doing confused the terms of my instructions to mean that he was to close both switches. Three weeks ago he helped me to locate the sign, which I did by swinging the beam just as though it were a searchlight until I struck the sign. I then made a record of the position as shown by the two position-indicating scales at the base of the projector. The Intercity sign is visible over the top of the building that housed my cousin’s laboratory, and in using the method of swinging the projector until the beam struck the sign by chance Haffer must have swept the beam across an open window of Schmitt’s laboratory and the beam struck him just as his hand approached the water faucet. It is probably very fortunate that I arrived at the Intercity Building after Haffer had turned off the projector and gone home, as I called my laboratory to have him illuminate the sign again but one of the other assistants informed me that Haffer had just left and I was afraid to have any of the others attempt to operate it. Had Mr. Wilde and I been on the roof when Haffer was swinging the ray back and forth across the sky, we would in all probability have been killed.

"Haffer killed my cousin accidentally and he does not know it. He might have killed others tonight had I not taken the precaution of removing a fuse back at the main switchboard that rendered the relay inoperative and prevented it from turning on the high voltage current.

"Schmitt’s death was purely accidental as it was only through an accident that Haffer lost the directions and therefore made the mistake of closing the second switch. I suggest that we let the matter rest here. It would only cause Haffer much distress to know that he had accidentally taken a man’s life and it could do Schmitt no good. I assure you that I will take every necessary precaution to prevent the recurrence of such an accident.”

And there it rested! Haffer, which is not his real name, does not know that he has killed a man. Schmitt left everything to his daughter in his will and he named Kurtz as his executor. Kurtz and Charley have become fast friends and, with the backing of the Intercity Power Company, hope to soon construct the first beam transmission line. The only remaining obstacle to their success is the impressing of the color ray upon the power ray to warn aircraft of the proximity of the dangerous high voltage current.

THE END

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Scientists Activity
(Continued from page 233)

A Fortune Saved

An estate, valued at more than $100,000,000, had been legally distributed to 217 heirs at San Francisco. Suddenly there appeared on the scene a man with a later will, leaving this large estate to some four or five heirs only. The newly-presented document was turned over to Chauncey McGovern, who looks like a college professor, has seen only two or three of the scores of crooks he has outwitted and sent to the penitentiary, and says that no "perfect crime" ever has been, or will be, committed.

McGovern put the "will" in front of a camera containing a process film, copied the document slowly, and enlarged the resulting negative until the "will" was nearly 10 feet square. By revealing irregularities in the edges, invisible to the human eye, the camera told him: first, that the paper had been cut from a larger sheet; and secondly, that the paper was very old, of a peculiar kind, not made today, but manufactured in a limited amount in a certain southern state, fifty years ago. This state proved to be the one from which the claimant of the estate admitted he had come.

Thirdly, the camera showed that the paper had been folded before the supposed will had been written on it. Not only were the creases visible to the lens, but also the minute, almost microscopic, fold marks. From the fold marks it was evident where the pen had been moved across these folds, thus scratching the sizing or surface, and admitting the fluid to the fiber. Fourth, the enlargement presented—dim and gray, but imbedded in the basic fiber of this old paper—other writing which had been erased with an acid solution, prior to the writing of the "will." These gray letters appeared everywhere except under the signature.

In other words," said the camera to Dr. McGovern, "this paper was once a letter, written by the owner of this $100,000,000 estate, and the signature is genuine. But the text of that letter has been removed, and the "will" substituted."

The findings of the lens were laid before the new claimant, who disappeared the following day. As a matter of curiosity, Dr. McGovern worked over this document until he had deciphered the original letter, which was a note to an employee of the wealthy man, instructing him to dispose of ten head of cattle.

THE END
the generation of a criminal later on. But not all criminals need be mentally deranged, or have a physical defect somewhere in their brain, although a large percentage probably are "defec-
tive" without knowing it. Even a simple pressure on some part of the brain may cause criminal tendencies. This has actually been shown in a number of cases.

No doubt, during the next few generations, detailed studies will be made of the physical conditions of criminals in order to find out exactly what the physical characteristics of criminals are, and how they can be prevented, by this means, for teachers of schools to get a pretty fair inkling as to which of their pupils have such tendencies; or

the case of the PEOPLE vs. SCIENTIFIC DETECTIVE MONTH-
LY has gone to the jury. The verdict of the jury are now assembled in the Court Room of Public Opinion, the judge, Honorable Court Critic is sitting on the bench and is ready to render the verdict.

This is an idea of the grandeur and importance of the jury, to render your opinion in writing, addressing them to the Editorial Chief of the SCIENTIFIC DETECTIVE MONTHLY. It makes no difference to the judge whether your letter is complimentary, critical, or whether you are ready to shout the Editorial Chief on sight—all letters are equally welcome. All letters of interest, as many as space will allow, will be published in the benefit of the entire jury.

GALVANOMETER OR GAVEL?

Editorial Chief, SCIENTIFIC DETECTIVE MONTHLY:
I have followed with interest your work since soon after you began editing Amazing Stories. For that reason I am glad to lend you my hearty en-
dorsement, with check enclosed, to the new SCIENTIFIC DETECTIVE MONTHLY. You may use this letter in making new friends, if it will be of any service to you. My sympathy is with you as an editor; for, while at the University of North Carolina, I was editor of the Carolina Magazine. There, too, in my work in legal psy-
chology while completing my law course, I be-
came exceedingly interested in psychology and the courtroom.

Legal educators are storming from the house-
top the value of legal analysis as the in-
structure of our modern legal difficulties. However, I am
more thoroughly convinced than ever that our
salvation lies in the laboratory rather than the jury box, in the galvanometer rather than the gavel. There is a light ahead before the labora-
ory will be brought into the court room. How-
ever, yours is a splendid work in speeding the
day. The law must revise its antiquated for-
mulae inherited from the old common law and work out a system that recognizes the human organism as it is, and its method of functioning as shown (and will be further shown) by modern science. Here’s to the day when Craig Kennedy will be about in our daily life, when the car-
dio-pneumo-psychogram will be cited rather than the dog’s-eared Blackstone of feudal Eng-
lisland; when the spirogramanometer will give the lie to the ranting oyster before the jury.

DILLARD S. GARDNER,
Attorney at Law, Reidville, N. C.

(Continued from page 285)
Reader's Verdict (Continued from page 284)

PROFESSIONALS BARRED

Editorial Chief,
Scientific Detective Monthly:

Enclosed is my first one-year's subscription to the new magazine of science fiction you are putting out. Permit me to make a few suggestions. Use the same quality paper that you printed your copyright issue of the magazine on. Don't use out-of-print readers has correctly termed, "blotting paper." Print all new stories. Don't make reprints of stories which have appeared elsewhere; for the chances are that those really interested in that type of literature have already read them. Stories as the case may be: for example: you printed one installment of S. S. Van Dine's "The Bishop Murder Case." Now I'll bet that most of the subscribers to your new magazine have already read it. Don't print it or any others. It just wastes that much of your magazine to many readers.

And another thing: Why don't you have a few contests which are in the way of your readers, your amateur readers, may compete? Make it a rule that no person who has had a story printed in any of your magazine may compete; for a prize, anyway. When they do enter, it is unfair to others who are comparatively inexperienced.

And lastly: you are now publishing three monthly science-fiction magazines. I suggest that instead of mailing them out all at the same time or closely following each other, that you mail them out at equal spaced intervals over the whole month. Thus those who subscribe to all three of your magazines (and they are many) will receive them almost as a weekly. And those who take only one or two will not be inconvenienced in any way.

With best wishes for your new magazines, I close, asking that in the stories appearing in your new publication, that the methods of detection continue to follow science.

Yours sincerely,
J. ALFRED WARDNER
Hobart, Oklahoma.

(Mr. Wardner raises three interesting questions we solicit further opinions upon. As to the publishing dates: Science Wonder Stories comes out on the first of the month; Airs Wonder Stories Weekly; while Scientific Detective Monthly is published on the 15th—Editorial Chief.)

WHAT THE SERGEANT MAJOR SAIl!

Editorial Chief,
Scientific Detective Monthly:

For heaven's sake cut out S. S. Van Dine. He talks too much. And if Archer B. Reeve is your Commissioner, then all I have to say is in the words the sergeant major said to the recruit in the novel, "This is something we have a navy," I say, if you have only authors like these I have mentioned, thank something we have Dr. Keller, and Ralph Wilkins.

Now for a question I hope you have time to answer. In France the only country to have a scientific criminal service, apart from the U. S.知 know now that we are improving in this dis- reception, though I was ignorant of any facts re- lating to American criminology until I read your magazine. Are other countries are ahead in this branch of police work?

JOHNNY SWARTZ,
Air Base Park, N. J.

(In Germany, in Berlin, Dresden, Munich and elsewhere, great educational institutions have been founded. In Czechoslovakia, university schools of criminology and scientific police have been established in Prague and Bratislava. In South America, a change is the start of organizations have been created which have enlarged the field of criminology by including four members within its scope. Then there is the Division of Police Technique of Ot- tolenberg's Institute in Rome, the Institute of Scientific Police in Lusanne, the Bureau of Identification of the late Bertillon in Paris, Lo- carl's Institute of Police Technique in Lyons, and indeed nearly every country in the world is represented in this modern attack on crime.

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THE PRESSURE GAUGE MURDER, by F. W. B. Linsingen, 214 pages; size 5" by 7½"; stiff cloth covers. Published by E. P. Dutton, Inc., New York. Price $2.00.

Under the burning noonday sun of the South African veldt, a man lay murdered in his car on a lonely road. The murder remained an unsolved mystery to Vaughan, the detective of the story, until a curious pressure gauge for testing tires began to make its appearance around the diamond country of Johannesburg.

This is a Dutton Prize Mystery Novel, well developed and carefully written. There are some patches, it is true, that a resident in "Jo'burg" (as the old town is called locally) might quail with. Also we agree with the Commissioner, who objects to the detective's em-bracing statement that "murderers don't get drunk.

Detective writers of the present day are all too apt to lay down particular theories, from which their detectives reason, and which the readers are expected to take as fact. But in this, the author errs no more than ninety-nine out of a hundred in this field; and so I would be foolish to quarrel with him on this account.


This book comes recommended to readers by a committee headed by N. A. Miles, H. C. Bailey and Father Knox. Consequently we may expect it to be rather better than the average mystery novel, which are, in quite a hundred cases, becoming less and worse.

Surely, fearfully, a convict is escaping in the fog from Georgetown Gaol on the Moor. Later, a man is found nearly, murdered, and with his outer clothes removed. Of course, reasons the hunk of criminals—the convict took the resources of the little cells; which con-"course reasoning leads to the center of the mind of a madman.

The author covers his ground slowly and me-thodically; a policy which certainly helps to produce a satisfactory plot. The characterization in the book are by no means poor in a mystery story.

CRIME IN INK, by Claire Carvalho and Boydon Sparks. Illustrated. 296 pages; 5½" by 8½"; stiff cloth covers. Published by Charles Scribner's Sons, New York and London. Price $2.50.

Mr. Carvalho was one of the greatest detectives. He played a decisive part in the famous Molyneux case, and even in so remote a case as that of the Captain Dry-fus; but the clues he followed were all in ink.

He was a handwriting expert. His daughter, Claire Carvalho, was in his confidence; and so he discussed all his famous cases with her, step by step, describing his methods and explain-ing how he was able to say with certainty that this crucial bit of writing was by a certain man or not.

The book, therefore, which is plentifully illustrated by facsimiles of manuscript, genuine or forged, upon which the famous and fortune-hung, is one of the most fascinating studies of crime that has ever been made, and is wholly different from the usual mystery novels. It is a real educa-tional value, besides its narrative interest.

THE STORY OF CRIME, by Judge Louis Harris. 344 pages; size 4½" by 7¾"; stiff cloth covers. Published by The Stratford Company, Boston, Mass. Price $2.50.

In the pages that follow, the story of crime throughout the ages, from the birth of this planet to the present day. The story tells of murder, plus other crimes; how plants kill plants; how beasts devour beasts—and men destroy men.

The author has attempted a large task and one which requires a wide knowledge, both practical and theoretical, to work out satisfactorily, but he has produced an interesting treatise.

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A Doctor Who Takes His Own Medicine

Many say that any form of exercise is good, but this is not true. I have seen men working in the factories and mills who literally killed themselves with exercise. They ruined their hearts or other vital organs, ruptured themselves or killed off what little vitality they possessed. I was a frail weakling myself in search of health and strength. I spent years in study and research, analyzing my own defects to find out how I could improve. After many tests and experiments, I discovered a secret of progressive muscle development, my own way of seven and a half inches, my neck three inches and other parts of my body in proportion. I decided to become a public benefactor and impart this knowledge to others. Physicians and the highest authorities on physical culture have tested my system and pronounced it to be the most successful system of acquiring perfect health. Do you crave a strong, well proportioned body and the abundance of health that goes with it? Are you true to yourself? If so, send a pleasant half hour in learning how to attain it. The knowledge is yours for the asking.

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