CHAPTER VII—Continued

—12—

We both spoke at once at that, disclaiming any offense, and the doctor, after a glance at his watch, concluded by asking him to sit down, and offering him a cigar. I very much hoped that both these invitations would be declined, for with that girl in the next room and Wilkins' knock momentarily expected at the door, it was rather too close quarters to be comfortable. But my chief seemed to be perfectly at ease.

"I'll confess," he began, lighting a cigar of his own, "that I'm a little curious to know what caused your change of heart; what it was that convinced you that Phelps and I aren't engaged in a conspiracy to thwart justice."

"I am afraid I am a self-convicted egoist," said Ashton. "It took an hour or more for the thought to occur to me that there are other people, besides myself, living in The Meredith, and that Jane Perkins might have given that place as her address, without any reference to me whatever, might have given it in perfectly good faith. So when I came home to dinner I made some inquiries, and was cool enough by that time not to be overwhelmed with surprise to find that the address was apparently given in good faith. At any rate, there is a housemaid named Jane Perkins living in this hotel."

The doctor simulated no surprise over this announcement. He merely nodded calmly, and said:

"You will not have seen her yet, I suppose."

"So you know about her, too!" exclaimed Ashton. "And you were ahead of me again. Well, that's not remarkable; you kept your temper and I didn't. But though I haven't seen her yet, I don't believe you have, either, because I have been given to understand that it's her evening out."

"I suppose," said the doctor, "that you have taken precautions for apprehending her when she comes back?"

"Yes," said Ashton; "there's a man on watch in her room now. She won't go far. I understand she's been ill the greater part of the week."

The doctor smiled and waved his hand toward the telephone. "You may as well tell your man to go home," he said; "the girl's here."

Ashton sprang right out of his chair. "What's that!" he demanded. "You've got here here; hiding her from me?"

"If I were hiding her from you, I shouldn't have told you. No, she's not in hiding at all. She's doing up the bedrooms in this apartment. She'll come when I call her, which I mean to do in a very few minutes. When she comes, I mean to make a little examination of her mind to determine her actual connection with the crime."

"I suppose," said Ashton rather sarcastically, "that you won't mind my asking permission to contribute a few questions of my own to that examination."

"Not at all," said the doctor quite simply. "You may ask her anything you like."

There was a little silence. Then Ashton said impatiently.

"Well, what are you waiting for?"

"I'm expecting another visitor. When I heard your knock, I thought that you were he. It's none other than our friend Wilkins."

Ashton laughed. "Wilkins!" he repeated. "What do you want of him?"

The doctor glanced at his watch.

"I fancy that he's coming now. Why, Wilkins knows this girl, who is a stupid creature and rather easily alarmed. She'd be almost sure to be panic-stricken at the sight of these instruments. All ignorant persons are the same way." He paused and shot a derisive smile at Ashton. "They put them in the category of black-art and hocus-pocus, and regard them with a mixture of contempt and terror. But she has confidence in Wilkins, and by his submitting to be harnessed in the same way we propose to harness her, which he has agreed to do, it will quiet whatever fears she may have."

Ashton looked dubious. Already Wilkins had tapped on the door.

"Stop a bit, Phelps," said my chief as I started toward the door. "Look here, Ashton! Use a little plain common sense for a minute. You don't half believe yourself that this girl has any guilty connection with the crime. Which way will you find out the most? By making this girl feel that there's nothing to be afraid of; that we're simply investigating, and not accusing her at all? Or by putting her through an old-fashioned 'third degree'?"

"All right," said Ashton; "have it your own way, only I'll have my way tomorrow."

"There won't be any need of that," said my chief. "The Oak Ridge mystery is going to be solved tonight, and in this room; solved down to the last detail. Open the door, Phelps."

I imagine that Ashton himself was not more surprised by the doctor's prophecy than I was. To be sure I had penetrated further into the mystery than Ashton had. I had shared with my chief the knowledge of Jane Perkins' strange other self. I knew that the mysterious, savage creature in fulfilling an oath, which to her must have possessed a religious sanctity, had committed what our more civilized society called a crime. And yet I felt sure that Doctor McAlister meant more than that when he had promised Ashton the whole solution of the mystery. The heart, the essence of the mystery was still unsealed. By some process of reasoning, or intuition, which I had not followed, my chief held that secret, still unsolved, in the hollow of his hand, and he meant to reveal it to us before the night was out.

I opened the door and told Wilkins to come in. I had an impression that he started a little at the sight of Ashton; and I didn't at all wonder, since I remembered the tacit understanding

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between ourselves and him, that this examination of the girl was to be for the purpose of shielding her against the district atorney, rather than of betraying her to him.

But I had very little leisure for reflecting on Wilkins' fears or misgivings, because, almost before I had closed the door behind him, I heard the doctor call out, "Perkins."

Well as I understood his experiments, and confident as I was in the success of them, I found it hard to go on breathing steadily while I waited for the response to the call that was to come from the inner room. Would it be Jane Perkins in her own proper person who would appear in the doorway in answer to the call, or would the occupant of her body prove to be that other, wilder soul?

When she answered, "Coming, sir," I drew in a deep breath of relief, for it was the voice of the girl who used and abused English as her mother-tongue. The next moment she was in the doorway. She was not Fanenna, not the girl who, with green, blazing eyes, had flung that defiant challenge back at the doctor only a few minutes before. And yet, she was not precisely Jane Perkins either, not the stodgy, thick-witted housemaid who had giggled with such unalloyed delight as she fished for the doctor's knife in the vase of water. The girl who stood there now looking at us had thoughtful, troubled eyes. Something—an elusive memory, a nameless emotion, a vague, fluid thing that would not crystallize was perplexing her. She was trying to think, which is something I am willing to wager that Jane Perkins had never done in her life.

Naturally, the first person I looked at when I withdrew my eyes from her was Ashton. He was looking straight into her face, and it was the same face, in a purely physical way, that he had seen the night he went to the hospital with us. It was not until I saw the look of blank indifference depicted upon his own that the realization was forced upon me that he would not recognize her any better than I had done. From him my gaze flashed round to the doctor, and on the way it took in Wilkins. Both of them were watching her, both, I guessed from their faces, had noted the same indefinable difference that had struck me. It was the doctor who spoke.

"Perkins," he said, "here is Mr. Ashton. He is one of the assistants to the district attorney, and he and I and Mr. Phelps here are interested in trying to find out something about the murder which took place at Oak Ridge a few nights ago."

"Murder!" she cried with a gasp. "I don't know nothin' about any murder, sir."

"No," said the doctor, "I'm quite sure you don't. But we think it possible that you know some things which will help us to find out who the murderer is. Are you willing to help us?"

She hesitated a moment, then turned quite frankly to Wilkins.

"Is it all right, Mr. Wilkins?" she asked. Then quickly turned back to the doctor. "I beg your pawdon, sir, for askin' such a question, but I know Mr. Wilkins, and if he says it's all right—"

"It's all right, Jane," he assured her. "I came up here a purpose so that there'd be nothing for you to worry about."

"All right, sir," she said, turning once more to Doctor McAlister. "I'll be glad to tell you anything I know, I'm sure, though I don't see how what I know can help much, unless—" She frowned and rubbed the back of one hand across her forehead.

"Unless what?"

"Nothin', sir. I seem to be thinkin' of all sorts of curious things, as if my mind was tryin' to wander like."

The doctor laughed. "We're all that way sometimes," he said. "Sit down in this big chair."

She obeyed a little reluctantly. Whether it was a half-memory of it that troubled her, or merely the instinctive hesitation of one of her class to make herself comfortable in our presence, I did not know.

The doctor busied himself with his instruments. The girl watched him rather nervously.

"I beg pawdon, sir," she said. "Are you goin' to do anything with those? I don't exactly like the looks of 'em, sir; all those queer lookin' machines. Is it anything like goin' to the dentist's?"

"Nothing in the world," laughed the doctor. "These machines don't hurt. Here, Wilkins, sit down in this chair beside her, and we'll harness you up, too."

He hung up before the girl one of the pair of little telephones that we had used in our association test on Harvey. Then he turned his attention to Wilkins, who had seated himself readily enough in the chair the doctor had designated.

"That's a very impressive looking machine, sir," the man commented. "May I ask what name it's called by?"

"Its name is just as impressive as it is," replied the doctor. "It is called a recording phonopneumosphygmograph."

Up to that moment Ashton had kept perfectly quiet, but at the sound of that portentous word he burst into a roar of laughter, which Wilkins decorously and respectfully echoed. I laughed frankly myself. What the purpose of the instrument might be, I had no idea, but the prodigious name which the doctor assigned to it struck me as nothing more than a flight of his rather grotesque fancy.

"Well, sir," said Wilkins, "it will have to accomplish a good deal to live up to that name."

That my chief had, by no means, exhausted his store of surprises, became evident when he began his examination of the girl. There was nothing psychological about it. He questioned her very much as Ashton would have done.

(TO BE CONTINUED.)

African Prickly Pear Has Its Good Points

The prickly pear is said to be so tenacious of life that a leaf or even a small portion of a leaf, if thrown on the ground, strikes out roots within a short time and becomes the parent of a fast-growing plant.

Mischievous though the African prickly pear may be, it is not without its good qualities. Its juicy fruit, though rather deficient in flavor, is delightfully cool and refreshing in the dry heat of summer, and a kind of treacle is made from it.

Great caution is necessary in peeling this curious fruit, the proper way being to impale the fruit on a fork or stick while one cuts it open and removes the skin. The person who undertakes to pluck this treacherous fruit with unguarded fingers meets with an experience he does not soon forget. Concentrated essence of stinging nettle seems all at once to assail hands, lips and tongue, and the skin wherever it comes in contact with the ill-natured fruit, is covered with a group of minute bristly hairs, apparently growing from it, and venomous and irritating to the last degree.

In dry weather these spiteful little stings do not even wait for the newly arrived victim, but fly about, light as thistle-down, ready to settle on anyone who has not learned by experience to give the prickly-pear a wide berth.

Ingredients for Jelly

Scientific study of the principles of jelly making has shown that three ingredients are required for the formation of a jelly, namely, sugar, acid and pectin; and these must be present in fairly definite proportions. Tart apples, cranberries, red currants and grapes, when collected at the proper stage of ripeness, contain pectin and acid in sufficient quantity to form a good jelly when cooked for a short time with the proper amount of sugar.

We put too much faith in systems and look too little to men.—Benjamin Disraeli.

POULTRY

ALL-MASH FEED GOOD FOR EGGS

Poultry keepers who have used the all-mash method of feeding chicks and growing pullets may continue the method for laying pullets. The plan has proved satisfactory for fall and winter egg production at the Ohio experiment station, and is being used by many successful poultrymen.

The only change in the all-mash for egg production, according to D. C. Kennard, station poultryman, is to increase the meat scraps from 5 to 10 per cent and decrease the corn from 70 to 65 per cent. Coarsely ground wheat may be used instead of middlings in the mash. And for best results, Mr. Kennard would also use milk in some form.

Success with all-mash feeding the laying pullets, especially for winter eggs, is largely determined by the kind of mixture and manner of feeding it. The mash should be as granular as possible rather than finely ground. A suitable type of feeder should provide 20 to 24 feet of eating space per 100 pullets. Fresh mash should be fed daily in the evening, the amount being about what will be consumed during the next 24 hours.

Electric lights may be used to advantage. A warm, moist mash fed in the evening, especially in cold weather, may prove beneficial.

Details relative to the all-mash method of feeding layers may be had by writing the Ohio experiment station at Wooster.

Laying Hens Must Have Ration Rich in Protein

During the course of twelve months a high-laying hen will produce from 18 to 25 or more pounds of eggs—or from four to seven or more times her own body weight, depending upon the weight of the hen. And it is a well-known fact that eggs are high in percentage of protein. Logically, therefore, it follows that laying hens must be fed a ration which is rich in protein if they are to turn out this amount of protein-rich product and still maintain the muscle, sinew and blood in their own bodies.

Home-grown grains, such as wheat, oats, barley and corn, while they all contain a certain proportion of protein, all rank as carbohydrate-rich feeds, necessary to maintain body flesh and provide heat and energy, but lacking in sufficient proportion of protein to meet the requirements of heavy egg production. Millfeeds, such as bran and shorts, contain proportionately more protein than do whole grains, but they, likewise, fail to supply the needed amount. If the ration fed to laying hens contains these feeds only, without the addition of some protein-rich supplement, the feeder cannot expect high egg production; the hen simply cannot produce eggs, but can only turn the carbohydrates into surplus body fat.

Specialist Tells How to Get Better Eggs

Care used in the mating of poultry and in the selection of hatching eggs will in a short time develop a flock that produces practically no inferior eggs, says L. M. Black, extension specialist in poultry husbandry, at the college of agriculture of Rutgers university.

Experiment has shown that certain characters are transmitted to future layers through the egg. The pullet that is hatched from any particular egg tends to lay the same type egg as that from which she came. Successful poultrymen take advantage of this fact and select only typical, large, uniformly colored eggs when setting the incubator. Since sires, too, exert an influence upon the type of egg laid by the pullets, males selected for the breeding pens are from ancestors that were noted for their heavy production of large, uniformly colored and shaped eggs.

There is an old German adage which when translated reads, "As the bird, so is the egg." It probably was not originated for poultrymen alone, but it holds great significance for them.

Vitamines for Fowls

Vitamines should not worry the good poultryman so much in summer as in winter. Green foods and sunshine supply the vitamines that are most apt to be lacking in the winter ration. During the early spring months these factors are apt to be lacking unless the poultryman takes special pains to see that the birds have green stuff and sunshine. Alfalfa leaves, when put in a rack where fowls may eat them, will help to supply the need for green material

Sunlight Helps Hens

Direct sunlight will help the hens to lay strong shelled eggs as well as eggs with a high degree of hatchability. If hens have been closed up they should be turned out into the sunshine on bright days. If it is necessary to keep them closed up, then the windows should be thrown open during the middle of the day so the direct rays of the sun may get in. Glass substitutes may also be used in place of some of the window glass to let in more.

DAIRY FACTS

PREPARING DAIRY FOR COLD WINTER

"The first thing to do in preparing for winter," says Dr. C. H. Eckles, chief of the dairy division of the University of Minnesota, "is to go over your feed situation. If you have silage on hand and legume hay in the barn it will be easy to fix up a suitable grain mixture. If you have corn and oats or barley you will not need to patronize the feed store unless you have some heavy milking cows to feed. If your cows are heavy milkers some concentrate high in protein is needed to balance the grain ration, and the amount needed for the winter should be purchased. It never pays to half feed live stock of any kind.

"Do not wait too long in the fall before beginning to house the cows at night and even during the day whenever the weather is bad. I believe that cows suffer more from cold on the average in November than during any other month. The owner likes to keep them out as long as possible to save labor and possibly in some states with the idea of saving feed. A cow compelled to stand outdoors in a cold raw wind or a cold rain is in no condition to make a profit. She will not hold up in milk like in May or June because she is uncomfortable.

"Housing fattening animals and dairy cows is quite a different proposition. The fat animal is well protected from the cold and does not mind it. The cow in milk is not protected by a layer of fat. She is giving off fat in place of putting it on. A barbed-wire fence is mighty poor shelter for a dairy cow either day or night during the winter."

Avoid Breeding Heifer Before Two Years Old

Experienced dairymen who have been breeding dairy cattle for some time appreciate the damage that is done to heifers if they are bred too young. Premature breeding usually results in undersized animals which have a reduced capacity for milk production. Continued breeding at an early age tends to weaken the vitality and vigor of the herd.

The larger breeds of dairy cattle, like the larger breeds of chickens, require more time to mature than the smaller breeds. This means that Holsteins must be allowed more time to grow than Jerseys. Even the smaller breeds should not be allowed to produce calves before they are two years old if they are to give the best results.

It is generally agreed that Holsteins should be from nineteen to twenty-one months old when bred; Ayrshires should be from eighteen to twenty-months; Guernseys from seventeen to nineteen months, and Jerseys from fifteen to seventeen months. This means that the heifers must not be allowed to run with the herd bull, for they will often come in heat many months before this age is reached.

Clean Stables Greatest Factor Against Disease

The greatest factor in the eradication of bovine tuberculosis is declared to be proper cleanliness of dairy barns. It is significant that one of the greatest troubles experienced in British Columbia during the testing for the establishment of a T. B. free area was to get farmers to properly clean up.

"Fortunately," says the Dairy Farmer, "our friend the sun has prodigious curative powers, and will help to kill off the germs of tuberculosis wherever he gets a chance to do so."

The farmers who are advocating open-air conditions for dairy cows have strong supporters in their claim that it is often the expensive coddled animal which develops T. B. and that the disease is comparatively unknown among cattle which run out practically all the time.

To properly keep clean a cow barn is so difficult that it is rarely done but the development of disease may be prevented by allowing the animals to exercise in the open rather than by coddling them in tight barns which, in fact, have been proved to be among the worst factors in the spread of T. B. among cows.

Ventilating Barn

When building a new barn or remodeling an old one, many factors and problems should be given the very closest consideration. The location of the barn with reference to drainage and its relation to other buildings cannot be given too much attention. The internal arrangement of the barn and the fixtures that are to be used should be designed to save labor. An abundance of light should be provided because sunlight is a very important factor.

Watch Young Calf

Too often dry pastures, flies and especially insufficient grain and water cause scrawny-looking calves that never develop into average-size cows. The calf should be eating some grain from the time it is three weeks old and at weaning time this should be slightly increased, especially if the pasture is short. If no pasture is available a little alfalfa hay will help materially. With good pasture, grain is not necessary more than two weeks after weaning.

Horticultural News

OIL SPRAY FOUND BEST FOR SCALE

San Jose scale, perhaps the worst orchard insect in the Middle West, can be controlled with miscible oils, lubricating oil emulsions and under certain conditions with lime-sulphur sprays, according to the findings of a group of entomologists who met at Vincennes to go over the experimental results of the past four years on this work in both Indiana and Illinois.

They found that oil spray has obtained complete control in southern Indiana when the infestations have been unusually severe and persistent. Growers in northern Indiana have been successful with lime-sulphur when applied thoroughly. The following statement was issued by the group:

"Experiments the past season corroborate former results. Rather general use of lubricating oil sprays recommended by Purdue has given results this year. For scale control on apple trees in Indiana and Illinois the oil sprays applied in the fall or spring when the trees are fully dormant and the temperature about 40 degrees Fahrenheit are recommended, spring treatments being preferable.

"The oil sprays found effective are the boiled lubricating oil emulsion, and all of the commercial miscible oils to be used at the rate recommended by the manufacturers and the lubricating oil emulsion at 2 per cent strength as recommended in the government and state publications. In heavy infestations a 3 per cent emulsion is recommended. The cold mixed oil emulsions have also proven effective but more difficulty has been experienced in making stable emulsions.

"For the control of the scale on peaches, the results of experiments to date show no injury to trees from dormant applications with 2 or 3 per cent lubricating oil emulsion. The oil sprays alone are ineffective as fungicides and although tests to date indicate the possible value of a combination oil and bordeaux spray for the control of scale and peach leaf curl, the results are not sufficiently conclusive to permit recommendations. If oil is used on peach the usual lime-sulphur applications for the peach leaf curl should be made in addition to assure complete control. Except where scale is threatening or increasing, lime-sulphur is preferable for peach trees, because it will usually control light infestations of scale and is effective for peach curl."

Fruit Men Take Action Against Tree Gnawers

With the advent of winter, many fruit growers are giving thought to the protection of their trees against rodents. Thorough inspections of the orchard are being made to find out whether or not meadow or pine mice are prevalent enough to warrant control measures. A common device for defense against meadow mice is screening the base of the trees. This, however, has been found ineffective for preventing damage by pine mice.

The pine mouse feeds mostly beneath the surface of the ground and his presence in an orchard can be detected by the tiny holes in the ground. For him, poison bait as described by the Farmers Bulletin 1392 is commonly used. This publication is obtained free by writing to the United States Department of Agriculture, Washington, D. C., or by asking the county agricultural agent for it.

As a protection against rabbits, some growers prune brush from the trees and leave it on the ground. It has been found that the trunk and lower limbs of young trees can be baited with a repellant made by mixing one pound of dry lime-sulphur with one quart of linseed oil. The mixture is put on the young trees with a brush, up to the first main branches.

Horticulture Notes

Many young trees are girdled each year by rabbits. Such loss is needless. Protectors made of heavy galvanized screen are effective.

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Many like to wait until the late winter or early spring to do the pruning. Where the acreage is large this practice is very bad, since it usually results in a good share of the pruning going undone.

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Remove all brush from the orchard and burn it. This will kill many insect and disease pests and prevent their spreading. When large limbs are cut off it is a good plan to paint the scar with a pure lead mixture.

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Plum trees may be pruned at any time during the winter or early spring before the buds start.

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As soon as the ground is well frozen, it is high time to mulch the strawberry bed.

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Weak trees usually suffer the most from winter injury. Whitewash is helpful only as it may help to reflect some of the sun's rays in winter and lessen some of the freezing and thawing.