

# The CZAR'S SPY

The Mystery of a Silent Love  
By Chevalier WILLIAM LE QUEUX  
AUTHOR OF "THE CLOSED BOOK," ETC.  
ILLUSTRATIONS BY C. D. RHODES

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SYNOPSIS.

The yacht *Lola* narrowly escapes wreck in Leghorn harbor. Gordon Gregg, locum tenens for the British consul, is called upon by Hornby, the *Lola's* owner, and since aboard with him and his friend, Heston Chatter. Although the yacht is accidentally seen a room full of arms and ammunition and a torn photograph of a young girl. That night the consul's safe is robbed and the *Lola* puts suddenly to sea. The police find that Hornby is a fraud and the *Lola's* name a false one. Gregg visits Capt. Jack Durnford of the marines aboard his vessel, and is surprised to learn that Durnford knows, but will not reveal, the mystery of the *Lola*. "It concerns a woman." In London Gregg is trapped nearly to his death by a former servant, Ollinto, who repents in time to save him, but not to give a reason for his treachery. Visiting in Durnford Gregg meets Muriel Leithcourt, who is strangely affected at the mention of the *Lola*. Hornby appears. Muriel introduces Hornby as Martin Woodroffe, her father's friend.

### CHAPTER IV.—Continued.

"Of course. They've been engaged nearly a year, but he's been abroad until quite lately. He is rather close about his own affairs, and never talks about his travels and adventures, although one day Mr. Leithcourt declared that his halfbrother escapes would make a most exciting book if ever written."

"Leithcourt and he are evidently most intimate friends."

"Oh, quite inseparable!" she laughed. "And the other man who is always with them is that short, stout, red-faced old fellow standing over there with the lady in pale blue, Sir Ughtred Gardner. Mr. Woodroffe has nicknamed him 'Sir Putrid.' And we both laughed. 'Of course, don't say I said so,' she whispered. 'They don't call him that to his face, but it's so easy to make a mistake in his name when he's not within hearing. We women don't care for him, so the nickname just fits.'"

And she gossiped on, telling me much that I desired to know regarding the new tenant of Rannoch and his friends, and more especially of that man who had first introduced himself to me in the consulate at Leghorn.

Half an hour later my uncle's carriage was announced, and I left with the distinct impression that there was some deep mystery surrounding the Leithcourts. Whatever the reason, I had become filled with grave apprehensions. The mystery grew deeper day by day, and was inexplicable.

During the week that followed I sought to learn all I could regarding the new people at the castle.

"They are taken up everywhere," declared my aunt when I questioned her. "Of course, we knew very little of them, except that they had a shoot up near Fort William two years ago, and that they have a town house in Green street. They are evidently rather smart folks. Don't you think so?"

"Judging from their house party, yes," I responded. "They are about as gay a crowd as one could find north of Carlisle just at present."

"Exactly. There are some well-known people among them, too," said my aunt. "I've asked them over tomorrow afternoon, and they've accepted."

"Excellent!" I exclaimed, for I wanted an opportunity for another chat with the dark-eyed girl who was engaged to the man whose alias was Hornby. I particularly desired to ascertain the reason of her fear when I had mentioned the *Lola*, and whether she possessed any knowledge of Hylton Chater.

The opportunity came to me in due course, for next afternoon the Rannoch party drove over in two large brakes, and with other people from the neighborhood and a band from Durnford's, my aunt's grounds presented a gay and animated scene.

As I expected, Woodroffe did not accompany the party. Mrs. Leithcourt, a slightly fussy little woman, apologized for his absence, explaining that he had been recalled to London suddenly a few days before, but was returning to Rannoch again at the end of the week.

"We couldn't afford to lose him," she declared to my aunt. "He is so awfully humorous—his droll sayings and antics keep us in a perfect roar each night at dinner. He's such a perfect mimic."

I turned away and strolled with Muriel, pleading an excuse to show her my uncle's beautiful grounds, not a whit less picturesque than those of the castle, and perhaps rather better kept.

"I only heard yesterday of your engagement, Miss Leithcourt," I remarked presently when we were alone.

"Allow me to offer my best congratulations. When you introduced me to Mr. Woodroffe the other day I had no idea that he was to be your husband."

She glanced at me quickly, and I saw in her dark eyes a look of suspicion. Then she flushed slightly, and laughing uneasily said, in a blank, hard voice:

"It's very good of you, Mr. Gregg, to wish me all sorts of such pleasant things."

"And when is the happy event to take place?"

"The date is not exactly fixed—early next year, I believe," and I thought she sighed.

"And you will probably spend a good deal of time yachting?" I suggested, my eyes fixed upon her in order to watch the result of my pointed remark. But she controlled herself perfectly.

"Mr. Woodroffe has gone up to town, your mother says."

"Yes. He received a wire, and had to leave immediately. It was an awful bore, for we had arranged to go for a picnic to Dundernann abbey yesterday."

"But he'll be back here again, won't he?"

"I really don't know. It seems quite uncertain. I had a letter this morning which said he might have to go over to Hamburg on business, instead of coming up to us again."

There was disappointment in her voice, and yet at the same time I could not fail to recognize how the man to whom she was engaged had fled from Scotland because of my presence.

"Oh, yes, he was always fond of walking. He used to take me with him when we first came here, but he always went so far that I refused to go any more."

She never once mentioned Woodroffe. I allowed her plenty of opportunity for doing so, chaffing her about her forthcoming marriage in order that she might again refer to him. But never did his name pass her lips. I understood that he had gone abroad—that was all.

Often when alone I reflected upon my curious adventure on that night when I met Ollinto, and of my narrow escape from the hands of my unknown enemies. I wondered if that ingenious and dastardly attempt upon my life had really any connection with that strange incident at Leghorn. As day succeeded day, my mind became filled by increasing suspicion. Mystery surrounded me on every hand. Indeed, by one curious fact alone it was increased a hundredfold.

Late one afternoon, when I had been out shooting all day with the Rannoch party, I drove back to the castle in the Perth cart with three other men, and found the ladies assembled in the great hall with tea ready. A welcome log fire was blazing in the huge old grate, for in October it is chilly and damp in Scotland and a fire is pleasant at evening.

Muriel was seated upon the high padded fender—like those one has at clubs—which always formed a cozy spot for the ladies, especially after dinner. When I entered, she rose quickly and handed me my cup, exclaiming as she looked at me:

"Oh, Mr. Gregg! What a state you are in!"

"Yes, I was after snipe, and slipped into a bog," I laughed. "But it was early this morning, and the mud has dried."

"Come with me, and I'll get you a brush," she urged. And I followed her through the long corridors and upstairs to a small sitting-room which was her own little sanctuary, where she worked and read—a cozy little place with two queer old windows in the colossal wall, and a floor of polished oak, and great black beams above. As my eyes wandered around the room they suddenly fell upon an object which caused me to start with profound wonder—a cabinet photograph in a frame of crimson leather.

The picture was that of a young girl—a duplicate of the portrait I had found torn across and flung aside on board the *Lola*!

The merry eyes laughed out at me as I stood staring at it in sheer bewilderment.

"What a pretty girl!" I exclaimed quickly, concealing my surprise. "Who is she?"

My companion was silent a moment, her dark eyes meeting mine with a strange look of inquiry.

"Yes," she laughed, "everyone admires her. She was a schoolfellow of mine—Elma Heath."

"Heath!" I echoed. "Where was she at school with you?"

"At Chichester."



The Picture Was That of a Young Girl.

course she told me nothing of her own feelings or affections, yet I recognized in both her words and her bearing a curious apathy—a want of the real enthusiasm of affection. Woodroffe, much her senior, was her father's friend, and it therefore seemed to me more than likely that Leithcourt was pressing a matrimonial alliance upon his daughter for some ulterior motive. She was perplexed; she longed to confide and seek advice of someone, yet by reason of some hidden and untoward circumstance her lips were sealed.

I tried to question her further regarding Woodroffe, of what profession he followed and of his past, but she evidently suspected me, for I had unfortunately mentioned the *Lola*.

Martin Woodroffe did not rejoin the house party at Rannoch. Although I remained the guest of my uncle much longer than I intended, indeed right through the shooting season, in order to watch the Leithcourts, yet as far as we could judge they were extremely well-bred people and very hospitable. We exchanged a good many visits and

### SONG OF THE NIGHTINGALE

One Need Not Go Far From the Haunts of Man to Hear Bird's Sweet Strains.

One of our great American naturalists once went to England in hope to hear the nightingale. Although he wandered for many miles over Surrey and Hampshire, his search was well-nigh fruitless. Had he gone no farther than the outskirts of London, he might have fared better. There are still certain spots in the suburbs to which the nightingale returns year after year.

One of them is Wimbledon Common, where the bird sings every spring, often, however, quite unrecognized by those who hear him. It is commonly believed that because, as all the world knows, the nightingale sings by night, he keeps silence during the day. Never was delusion more ill-founded. It might be in part accounted for if the bird were of a particularly timid and fearful nature. But he is not; in fact, nightingales are, as a rule, least shy

### HAD CONFIDENCE IN PEOPLE

California Newsboy Lost Nothing by Trusting to the Honesty of His Customers.

Most people are honest; so, at least, reasons a newsboy in a California town, and he has clear justification for his confidence. The reporter of the following incident was in a downtown drug store when a stranger came in with a copy of a newspaper, and asked change for a dime. He said that he wanted to pay for his newspaper. Someone remarked that for his part he let the newsboys find their own change.

"This newsboy cannot do it," said the man with the newspaper. "Come

where they are most accustomed to man's presence.

Not only does this much misunderstood bird (some nightingales, of course, more than others) sing at intervals all day long, but he appears at times to take delight in singing to a crowd.

"Gone to Sunday school for one hour. If you want a paper, take one, and put your nickel in the can."

The can and pile of newspapers stood unprotected on the walk for more than an hour, while their little owner was at Sunday school. Men who passed by and were attracted by the rather odd little news stand would stop, read the sign, pick up a paper and put a nickel—and sometimes a dime—into the little tin can. When the boy returned from Sunday school he found all his newspapers gone, and more nickels in the tin can than there were papers when he left.

Simple.

If thy hyphen offend thee, pluck it out.—Columbus State.

dinner, and while my uncle several times invited Leithcourt and his friends to his shoot with al fresco luncheon, which the ladies joined, the tenant of Rannoch always invited us back in return.

Thus I gained many opportunities of talking with Muriel, and of watching her closely. I had the reputation of being a confirmed bachelor, and on account of that it seemed that she was in no way averse to my companionship. She could handle a rook rifle as well as any woman, and was really a very fair shot. We often found ourselves alone tramping across the wide open moorland, or along those delightful glens of the Nithsdale, glorious in the autumn tints of their luxurious foliage.

Her father, on the other hand, seemed to view me with considerable suspicion, and I could easily discern that I was only asked to Rannoch because it was impossible to invite my uncle without including myself.

His pronounced antipathy towards me caused me to watch him surreptitiously, and more closely than perhaps I should otherwise have done. He was a man of gloomy mood, and often he would leave his guests and take walks alone, musing and brooding. On several occasions I followed him in secret, and found to my surprise that although he made long detours in various directions, yet he always arrived at the same spot at the same hour—five o'clock.

The place where he halted was on the edge of a dark wood on the brow of a hill about three miles from Rannoch. Leithcourt never went there direct, but always so timed his walks that he arrived just at five, and remained there smoking cigarettes until half-past, as though awaiting the arrival of some person he expected.

In my youth I had sat many a quiet hour there in the darkening gloom and knew the wood well, and was able to watch the tenant of Rannoch from points where he least suspected the presence of another. Once, when I was alone with Muriel, I mentioned her father's capacity for walking alone, whereupon she said:

"Oh, yes, he was always fond of walking. He used to take me with him when we first came here, but he always went so far that I refused to go any more."

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"What a pretty girl!" I exclaimed quickly, concealing my surprise. "Who is she?"

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"Yes," she laughed, "everyone admires her. She was a schoolfellow of mine—Elma Heath."

"Heath!" I echoed. "Where was she at school with you?"

"At Chichester."

"Long ago?"

"A little over two years ago."

"She's very beautiful!" I declared, taking up the photograph and discovering that it bore the name of the same well-known photographer in New Bond street as that I had found on the carpet of the *Lola* in the Mediterranean.

"Yes. She's really prettier than her photograph. It hardly does her justice."

"And where is she now?"

"Why are you so very inquisitive, Mr. Gregg?" laughed the handsome girl. "Have you actually fallen in love with her from her picture?"

"I'm hardly given to that kind of thing, Miss Leithcourt," I answered with mock severity. "I don't think even my worst enemy could call me a flirt, could she?"

"No. I will give you your due," she declared. "You never do flirt. That is why I like you."

"Thanks for your candor, Miss Leithcourt," I said.

"Only," she added, "you seem smitten with Elma's charms."

"I think she's extremely pretty," I remarked, with the photograph still in my hand. "Do you ever see her now?"

"Never," she replied. "Since the day I left school we have never met. She was several years younger than myself, and I heard that a week after I left Chichester her people came and took her away. Where she is now I have no idea. Her people lived somewhere in Durham. Her father was a doctor."

"Then you have heard absolutely nothing as to her present position or whereabouts—whether she is married, for instance?"

"Ah!" she cried mischievously. "You betray yourself by your own words."

over a wide moor full of treacherous bogs and pitfalls for the unwary.

My gun over my shoulder, I had walked on for about three-quarters of an hour, and had nearly traversed the wood, at that hour so dark that I had considerable difficulty in finding my way, when—of a sudden—I fancied I distinguished voices.

I halted. Yes. Men were talking in low tones of confidence, and in that calm stillness of evening they appeared nearer to me than they actually were.

I listened, trying to distinguish the words uttered, but could make out nothing. They were moving slowly together, in close vicinity to myself, for their feet stirred the dry leaves, and I could hear the boughs cracking as they forced their way through them.

Of a sudden, while standing there not daring to breathe lest I should betray my presence, a strange sound fell upon my eager ears.

Next moment I realized that I was at that place where Leithcourt so persistently kept his disappointed trust, having approached it from within the wood.

The sound alarmed me, and yet it was neither an explosion of fire arms nor a startling cry for help.

One word reached me in the darkness—one single word of bitter and withering reproach.

Headless of the risk I ran and the peril to which I exposed myself, I dashed forward with a resolve to penetrate the mystery, until I came to the gap in the rough stone wall where Leithcourt's habit was to halt each day at sundown.

There, in the falling darkness, the sight that met my eyes at the spot held me rigid, appalled, stupefied.

In that instant I realized the truth—a truth that was surely the strangest ever revealed to any man.

### CHAPTER V.

#### Contains Certain Confidences.

As I dashed forward to the gap in the boundary wall of the wood, I nearly stumbled over a form lying across the narrow path.

So dark was it beneath the trees that at first I could not plainly make out what it was until I bent and my hands touched the garments of a woman. Her hat had fallen off, for I felt it beneath my feet, while the cloak was a thick woolen one.

Was she dead, I wondered? That cry—that single word of reproach—sounded in my ears, and it seemed plain that she had been struck down ruthlessly after an exchange of angry words.

I felt in my pocket for my vestas, but unfortunately my box was empty. Yet just at that moment my strained ears caught a sound—the sound of someone moving stealthily among the fallen leaves. Seizing my gun, I demanded who was there.

There was, however, no response. The instant I spoke the movement ceased.

It seemed evident that a tragedy had occurred, and that the victim at my feet was a woman. But who?

Of a sudden, while I stood hesitating, blaming myself for being without matches, I heard the movement repeated. Someone was quickly receding—escaping from the spot. I sprang through the gap, straining my eyes into the gloom, and as I did so could just distinguish a dark figure receding quickly beneath the wall of the wood.

In an instant I dashed after it. Down the steep hill to the Scarwater I followed the fugitive, crossing the old footbridge near Penpoint, and then up a wild winding glen towards the Cairnmore of Deugh. For a couple of miles or more I was close behind, until, at a turn in the dark wooded glen where it branched in two directions, I lost all trace of the person who fled from me. Whoever it was they had very cleverly gone into hiding in the undergrowth of one or other of the two glens—which, I could not decide.

I stood out of breath, the perspiration pouring from me, undecided how to act.

Was it Leithcourt himself whom I had surprised?

That idea somehow became impressed upon me, and I suddenly resolved to go boldly across to Rannoch and ascertain for myself. Therefore, with the excuse that I was belated on my walk home, I turned back down the glen, and half an hour afterward entered the great well-lighted hall of the castle where the guests, ready dressed, were assembling prior to dinner.

I was welcomed warmly, and just then Leithcourt himself joined his guests, ready dressed in his dinner jacket, having just descended from his room.

"Hullo, Gregg!" he exclaimed heartily, holding out his hand. "Had a long day of it, evidently. Good sport with Carmichael—eh?"

"Very fair," I said. "I remained longer with him than I ought to have done, and have got belated on my way home, so looked in for a refresher."

"Quite right," he laughed merrily. "You're always welcome, you know. I'd have been annoyed if I knew you had passed without coming in."

(TO BE CONTINUED.)

### FRANCIS JOSEPH VERY SPRY

Aged Emperor of Austria Equal to the Situation, Extreme Though It Must Be Admitted.

Francis Molnar, war correspondent in the Carpathians of Az Est, gives an interview with an officer of high rank, who had had an audience of Emperor Francis Joseph a few days previously in Vienna. The officer said:

"I spent half an hour in the working room of his majesty, and found him to be much more lively and agile than at any time during the last years when I saw him. During the audience the emperor walked up and down the room. He was always noted for his excellent memory, but what I saw in regard to this now was really marvelous. His majesty knows the name of the commander of every regiment, and even now is well informed as to changes taking place in commanders of brigades and regiments."

"He is informed every day as to the work being done by all the war ministerial factories. On the table in his

study lies an immense map with small flags indicating the position of the fighting forces.

"Cordial relations exist between his majesty and the heir apparent. The emperor speaks highly of the young king, speaks very highly of the young heir, and is extremely proud and fond of him."

"His medical advisers do not willingly consent to his drives out, though he asks them daily to allow him to visit the wounded soldiers in the hospitals. The few visits he has paid to the hospitals have been small victories over the doctors."

No "Fixed Star."

The phrase "fixed star" is a misnomer. There is no such thing. All the millions of stars one sees in the vault of the sky, and millions, vastly more millions, revealed by telescope and photography, with undoubted uncountable other millions of millions, of billions, in the universes of the infinite beyond, have their movements whether in groups or whether by single suns each, with its retinue of suns and its few known planets.

object should be to produce as many as possible of the same general well-fixed characteristics: uniformity of size, style, conformation, general qualities and color markings. The nearer a lot of animals conform to the same ideal the higher price they will command.

Just to give an example of a poor selection of a sire, I will cite a case I saw recently. It was a herd of swine numbering over two hundred. There were ten brood sows—no two alike in any respect, color not excepted, as black, red, white and black spotted, as well as some red and white spotted. Let us look at the sire. He was of the nondescript class—neither a bacon nor a large hog, with long nose, long legs, rainbow back and large ears. What would you be willing to pay for such pigs? I can give you the sizes, as I saw several six-month-old pigs weighed by the butcher who had purchased them. They averaged 53 pounds! Just think of it! One weighed 61 pounds, and it was not from lack of feed, for they were well fed twice a day.

This shows the influence the sire has on the herd. Had this breeder kept a good sire, he would have raised an entirely different lot of pigs and some in which a profit could be anticipated over and above the expense of raising.



I Listened, Trying to Distinguish the Words Uttered.

Good Sire Headed the Herd in Which This Animal Was Raised.

(By WILLIAM G. CHRISMAN.)

The selecting of the head of a herd is a question which deserves much more thought and consideration than the average farmer thinks when the subject first presents itself; and yet it is one of the most important questions with which the breeder has to deal. Why?

Because the sire is the foundation upon which the herd is built; just as no good structure can be erected without a firm foundation, neither can a good herd be established without a good sire at its head.

In selecting a head for your herd, the record must be closely examined, not only of this particular animal, but also the record of his sire and dam for generations. If he is an animal of good type, possessing the characteristics peculiar to his breed, and has well-established blood lines, you can feel pretty well assured that he will transmit these characteristics to his offspring.

Since the male represents exactly one-half of the foundation of the herd, it is much cheaper, from a business standpoint, to purchase and maintain one good animal that represents so much blood of the herd and has such a marked power or influence upon the characteristics of such a large number of animals.

In raising animals of any kind one

### ESSENTIAL TO KEEP ALL PIGS THRIFTY

One of Most Important Things is to Stop Leaks and Get Rid of the Boarders.

A large part of the profits in hog raising depends on the thrift and health of the herd. The pig that is stunted never is so profitable as the one that is kept thrifty and growing. One of the most important problems hog growers have to solve is to stop the leaks and get rid of the boarders, lice and worms, says Farmers' Mail and Breeze. Going out of the hog business is not the remedy. It may prevent direct losses in an occasional year such as the past one has been, but it will not utilize the feed grown on the farm and keep up the soil fertility.

Failure to use the feeds available to the best advantage is one of the biggest leaks in the hog business. It is poor policy to try to raise and fatten hogs on pasture without grain. The successful farmer will provide pasture for his hogs every month in the year if possible, and he will feed enough grain in addition to the pasture to keep his breeding hogs in good condition. The grain fed ought to be as fat-forming material. Loss often is due to a failure to recognize the fact that the fattening period of most hogs is but a continuation of the growing period, and that the greatest difference in the rations used during the two periods should be in the amount rather than in the kind of feed fed.

### LEGUMES ARE GOOD NITRATE PRODUCERS

On Average Farm Such Crops Should Be Depended Upon to Act as Soil Benefactors.

"The legumes as a source of nitrate are rather too slow in action to give real immediate profits when used to produce great money crops." This is the statement made by an advocate of the use of nitrate of soda on American soils.

Such a statement should not lead anyone away from the main fact that legumes grown with other crops in a field benefit those other crops the first year. The second year the soil itself is much better from having grown the legumes than if nitrate of soda had been used and no legumes grown.

Legumes are our natural nitrate producers. The nitrogen is cheaper, too, when furnished us in this form. And yet we should remember sodium nitrate for its value in getting quick results. It is beneficial to almost every crop when applied in the right amounts and at the right time. For quick results when starting a pasture on poor land, as an application to orchard soil for hastening fruit, in market gardens where crops demand much nitrogen, and in many other places sodium nitrate is indispensable. Such crops as potatoes, garden and truck crops grown in colder sections need quick-acting nitrates in addition to legume nitrogen to push the crops before the organic source is ready.

But on the average extensive farm let us depend largely upon the legume

### ERADICATE INSECTS IN POULTRY FLOCK

Pests Live on Production of Skin and Fragments of Feathers—Recipe for Powder.

It does not take long for lice to give a flock of hens something to think about besides laying eggs. The offspring from a single pair of lice will in eight weeks amount to 125,000.

These pests live on the production of the skin and fragments of feathers. It is not so much what they get as nourishment from the fowl that hurts, as the violent itching and pain they cause. They spread rapidly as they breed. The lice from one hen may spread through the entire flock. Lice spread most rapidly in poorly ventilated quarters and on poorly fed, weak stock. The bird that looks sickly is the one most likely to be infested.

Provide the flock with a dust bath and apply the following homemade powder: To one part of crude carbolic acid and three parts of gasoline, add enough plaster of paris to take up the liquid and mix thoroughly. Spread out and dry. If it is too lumpy run through a sieve. Store away in tight cans. Work this powder well into the feathers, especially in the fluff and under the wings. Repeat in ten days and make a thorough job of it.

### UNNECESSARY LOSS IN MANURE HEAPS

Escape of Nitrogen Through Heating Where Piles Are Deep Is Considerable.

City manure can be bought more cheaply in some seasons of the year than in others. It is common practice to throw the carloads of manure in large piles to wait for use later on.

The chief losses come through heating and leaching when manure is left exposed. The amount of loss depends upon the conditions under which the manure is kept.

Heaps may be made so deep that there is relatively small loss from leaching, but in such case the escape of nitrogen through heating is very great. Under average barnyard conditions a loss from 25 to 60 per cent is expected from piles of manure exposed for a few months.

Even at the best, when manure is kept under a roof and is hard packed and is supplied with the right amount of moisture to prevent heating, the loss is supposed to be 10 per cent.

Keep Cows Clean.

Send your cows to the pasture with clean flanks instead of leaving them incrustated with dried manure. And then watch the result.

Cause of Breachy Animals.

Poor pasture makes "breachy" animals. Fix the fence up good and strong, but see that the animals have plenty of feed.

Humility's Friend.

He who plants a fruit tree or a berry bush, or an ornamental shrub, is humility's friend.

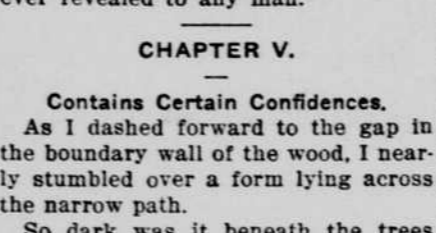
Cause of Thick Neck.

Don't throw the dirt up around onions when cultivating them or you will have a lot of thick necks.

Francis Joseph Very Spry

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### FOUNDATION UPON WHICH HERD IS BUILT

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In raising animals of any kind one

### ESSENTIAL TO KEEP ALL PIGS THRIFTY

One of Most Important Things is to Stop Leaks and Get Rid of the Boarders.

A large part of the profits in hog raising depends on the thrift and health of the herd. The pig that is stunted never is so profitable as the one that is kept thrifty and growing. One of the most important problems hog growers have to solve is to stop the leaks and get rid of the boarders, lice and worms, says Farmers' Mail and Breeze. Going out of the hog business is not the remedy. It may prevent direct losses in an occasional year such as the past one has been, but it will not utilize the feed grown on the farm and keep up the soil fertility.

Failure to use the feeds available to the best advantage is one of the biggest leaks in the hog business. It is poor policy to try to raise and fatten hogs on pasture without grain. The successful farmer will provide pasture for his hogs every month in the year if possible, and he will feed enough grain in addition to the pasture to keep his breeding hogs in good condition. The grain fed ought to be as fat-forming material. Loss often is due to a failure to recognize the fact that the fattening period of most hogs is but a continuation of the growing period, and that the greatest difference in the rations used during the two periods should be in the amount rather than in the kind of feed fed.

### LEGUMES ARE GOOD NITRATE PRODUCERS

On Average Farm Such Crops Should Be Depended Upon to Act as Soil Benefactors.

"The legumes as a source of nitrate are rather too slow in action to give real immediate profits when used to produce great money crops." This is the statement made by an advocate of the use of nitrate of soda on American soils.

Such a statement should not lead anyone away from the main fact that legumes grown with other crops in a field benefit those other crops the first year. The second year the soil itself is much better from having grown the legumes than if nitrate of soda had been used and no legumes grown.

Legumes are our natural nitrate producers. The nitrogen is cheaper, too, when furnished us in this form. And yet we should remember sodium nitrate for its value in getting quick results. It is beneficial to almost every crop when applied in the right amounts and at the right time. For quick results when starting a pasture on poor land, as an application to orchard soil for hastening fruit, in market gardens where crops demand much nitrogen, and in many other places sodium nitrate is indispensable. Such crops as potatoes, garden and truck crops grown in colder sections need quick-acting nitrates in addition to legume nitrogen to push the crops before the organic source is ready.

But on the average extensive farm let us depend largely upon the legume

### ERADICATE INSECTS IN POULTRY FLOCK

Pests Live on Production of Skin and Fragments of Feathers—Recipe for Powder.

It does not take long for lice to give a flock of hens something to think about besides laying eggs. The offspring from a single pair of lice will in eight weeks amount to 125,000.

These pests live on the production of the skin and fragments of feathers. It is not so much what they get as nourishment from the fowl that hurts, as the violent itching and pain they cause. They spread rapidly as they breed. The lice from one hen may spread through the entire flock. Lice spread most rapidly in poorly ventilated quarters and on poorly fed, weak stock. The bird that looks sickly is the one most likely to be infested.

Provide the flock with a dust bath and apply the following homemade powder: To one part of crude carbolic acid and three parts of gasoline, add enough plaster of paris to take up the liquid and mix thoroughly. Spread out and dry. If it is too lumpy run through a sieve. Store away in tight cans. Work this powder well into the feathers, especially in the fluff and under the wings. Repeat in ten days and make a thorough job of it.

### UNNECESSARY LOSS IN MANURE HEAPS

Escape of Nitrogen Through Heating Where Piles Are Deep Is Considerable.

City manure can be bought more cheaply in some seasons of the year than in others. It is common practice to throw the carloads of manure in large piles to wait for use later on.

The chief losses come through heating and leaching when manure is left exposed. The amount of loss depends upon the conditions under which the manure is kept.

Heaps may be made so deep that there is relatively small loss from leaching, but in such case the escape of nitrogen through heating is very great. Under average barnyard conditions a loss from 25 to 60 per cent is expected from piles of manure exposed for a few months.

Even at the best, when manure is kept under a roof and is hard packed and is supplied with the right amount of moisture to prevent heating, the loss is supposed to be 10 per cent.

Keep Cows Clean.

Send your cows to the pasture with clean flanks instead of leaving them incrustated with dried manure. And then watch the result.

Cause of Breachy Animals.

Poor pasture makes "breachy" animals. Fix the fence up good and strong, but see that the animals have plenty of feed.

Humility's Friend.

He who plants a fruit tree or a berry bush, or an ornamental shrub, is humility's friend.

Cause of Thick Neck.

Don't throw the dirt up around onions when cultivating them or you will have a lot of thick necks.