DARKEST RUSSIA

BY H. GRATTAN DONNELLY.

CHAPTER XI—Continued.

Olga sighed. She was deeply touched by the words of Alexis.

After an effort she spoke again. "I have not told you all," she said, and there was a pause as if for strength. Then after a moment she added: "I am no longer Olga Karsicheff—I am Olga Barosky. We were marriedly secretly three days ago."

Alexis sat gazing at the girl in amazement. He had never dreamed that it had gone as far as this.

"You will keep our secret?" pleaded Olga.

"Sacredly," said Alexis. Then, as the thought occurred to him, he added, "Does the countess, your mother, suspect that your affections were given elsewhere?"

"My mother suspect? No! If she did she would kill me." Then, as the peril of her position again occurred to her, she turned pleadingly to Alexis. "What can we do?' she asked; "what must be done?"

Alexis sat deep in thought for a moment.

"There is one thing that must be done, and at once," at length he said. "I will write a letter to the countess, releasing you from our engagement."

"But the cause?" eagerly asked Olga.

"I will say that my affections are centered on another."

"Oh, Alexis!" exclaimed Olga, her face brightening for the first time since she spoke. "You have anticipated my wish. That will save me from my mother. Oh, Alexis, how can I thank you—you good, noble, generous fellow!"

Ilda had told the story of the attack on Alexis in her own way, and as Ivan listened his face deepened into a frown of anger. "Oh, fools, fools!" he exclaimed. "Cowards that they were. And these are the men with whom I am compelled to associate in the effort to free our beloved Russia."

During the time when she was speaking, Ilda kept her eyes fixed on Alexis and Olga, and then, wonderingly, she looked to Ivan for an explanation of the presence of the stranger. In a few hurried words, promising to tell her at length in the future, Ivan explained all, and as he finished Alexis and Olga came and joined them.

The meeting between the two girls was marked with mutual affection. Their interview was necessarily brief.

"And you will love me as a sister?" said Olga, after they had been speaking.

"With all my heart," was Ilda's reply as she embraced her.

In the meantime Ivan and Alexis had gone apart and Alexis had listened to Ivan's passionate disavowal of the aims and actions of Oraminsky and his followers. "I leave them tonight and forever," said Ivan. "But the letter to the countess."

"I will write it at the earliest moment," said Alexis.

Ivan urged that there be no delay, and producing pen and ink he handed a sheet of paper to Alexis, begging him to write at once, so that the letter would be in the hands of the countess before Olga's return home.

Alexis consented, and, sitting down at once, wrote to the countess a formal renunciation of Olga's hand: "My affections being irrevocably given to another," ran the letter, "I must decline the honor of an alliance with Mlle. Karsicheff, for whom, while entertaining sentiments of the most profound regard and esteem, I have at no time felt the love that a man should have for the woman he asks to become his wife."

Alexis signed the letter, and handing it open to Ivan, rejoined Ilda, while Olga was made acquainted with the terms of the letter to her mother.

In impassioned words he poured

"I LOVE HIM SO. . !"

forth his gratitude to Ilda, and begged her to become his wife. "I offer you my love, my name, the life you have saved. This place, these surroundings, fill me with horror at finding you, by whatever circumstance, here. Give me the right to cherish, to protect you—let there be no further delay—be mine—my wife!"

Before Ilda could reply, Ivan said that the time had come to leave the place, and before they could anticipate his action he had given the signal that summoned the conspirators. Slowly the doors revolved, and Oraminsky and his people came forth. They took their places about the room, waiting, wondering at Ivan's strange display of bravado.

Ivan was very pale. He first called one of the men, to whom he gave the letter addressed to the countess. The man departed, and the door was again fastened. Then Ivan spoke in low, earnest tones: "Do you think," he said, "that I, who have done so much for the cause of Russia, could stoop so low as to bring here a spy? Shame upon you, Oraminsky. You should have known me better; you should have trusted me more!"

Oraminsky was silent.

Among the others there was an ominous murmur. "You should have told us—we knew nothing."

Ivan turned like a flash in the direction in which the voice came. "I am a leader; you should have faith in your leader. But enough. To-night's work ends my connection with you forever. Henceforth I am no longer a member of the revolutionary body to which you give allegiance."

"You must satisfy us that your friend is not here to betray us. We run no risks," said Oraminsky.

"I will answer for his honor. He is my friend—my brother."

"Our brother too?" asked somebody, with a sneer.

"God forbid!" said Alexis. Then turning to Ivan: "Let us go."

"Wait!" The voice was that of Oraminsky; the word was given in a tone of peremptory command. "You cannot leave here until you have sworn secrecy!"

"That is right!" came the simultaneous expressions of Oraminsky's followers.

Ivan spoke: "One moment! Hear me! Colonel Nazimoff is here as my friend. I am responsible for his actions with my life, if need be. But as he is here, I recognize that you have a right to exact a promise from him that he will not reveal anything of what he has seen to-night. You will give that promise?" asked Ivan, turning to Alexis.

"Since you desire it—yes. I am a soldier of Russia, owing allegiance to our imperial master, the czar."

There was a murmur of dissent.

Alexis continued: "But I am no spy, and while I know what you are, it is not my business to betray you. I will not divulge what I have seen to-night."

"I answer for his truth and honor," said Ivan.

"And I too, if necessary," said Ilda, moving toward the door.

"It is not enough—he must be sworn!" The words came with ominous solemnity from the lips of Oraminsky, and at a signal from him two or three of the conspirators placed themselves near the foot of the stairs.

"You have his word—he is a soldier of Russia—he wears the uniform of the fatherland—he need not be sworn," said Ivan.

"He wears the livery of the tyrant!" said another.

"Come," interrupted Ivan, giving his arm to Olga, who stood pale and trembling, throughout the scene. "Come, we have had enough of this!" Then turning to Alexis, who had thrown one arm protectingly around Ilda, he added: "Come, we have finished!"

Oraminsky stepped before Ivan.

"But we have not!" he said. There was an unmistakable menace in the tone. "You have brought strangers here—here within a place sacred to our cause, known only to ourselves. We know them not. All else here are sworn members of our order—all else here are of us, and with us. Your friend—your brother, as you call him, has refused to take the oath of secrecy. Very well! He must do more than that; our safety demands it. He must become a member—a sworn member of our brotherhood—and so," pointing to Olga, "and so must she."

"Never! by Heaven, never!" It was the voice of Alexis, and it rang out like the notes of a trumpet.

"They must not leave here alive!" said Hersy. "Let us have their blood!"

The word again wrought up the conspirators to frenzy.

"Blood!" and the word ran through their ranks.

"Stand together!" said Alexis, drawing his sword.

Ivan drew a pistol. "I will put a bullet through the brain of the first of you who advances a single step;" and he leveled the weapon.

There was a pause, a painful silence for a second. The conspirators were evidently collecting their strength and preparing for a rush.

"Down with them all!" shouted Oraminsky as he gathered himself for a spring.

"Down with the traitors, all!" and the words rang out.

Ivan had the pistol leveled, finger on trigger.

Alexis had his sword drawn.

Suddenly there was a tremendous crash. The door burst open by a blow from a sledge hammer, stood quivering in splintered ruins on its broken hinges. The wooden shutters fell crashing from the windows into the cellar below.

Soldiers—soldiers with rifles leveled, covering all in the room, appeared at doors and windows!

And there, commanding them all, was an officer in the full uniform of the dreaded police.

He uttered but one sentence:

"Surrender, traitors, in the name of the czar!"

CHAPTER XII.

The Results of the Letter.

General Karsicheff, minister of police, had struck the blow!

He had at last "done something."

From early dawn troops of soldiers, guarding the vans in which were being conveyed the suspects caught the night before, were galloping up and down the city, and St. Petersburg awoke to find that by a concerted movement some hundreds of those suspected of being concerned in the Nihilist conspiracy had been arrested and were either on their way to, or securely within, the grim and gloomy walls of the great prison which frowns on the Neva. For in making the arrests the police had orders not to confine themselves to the list of the one hundred and sixty-three friends of Russia, which, by great good fortune, had fallen—no one suspected how—into the hands of the police authorities. No matter where they were found, those nearest and dearest to the suspected Nihilists were caught in the same net.

For Karsicheff knew that the number on the list was but a small fraction of the whole, and he had made lice, in the full uniform of his rank, strode up and down the apartment in his mansion sacred to affairs of his official duty. He was flushed with ex-

"....Be mine—my wife!"

citement, and feverish with expectation.

up his mind to impress upon all concerned the strength and vigor and thoroughness of his purpose by filling the prisons at one fell swoop. So it was that old and young, rich and poor, guilty and innocent were alike included, and that all St. Petersburg was awe-struck by the magnitude of the police raid. People whispered of it to each other, but every man was careful that he knew the opinions of his neighbor before he ventured an expression of his own.

The prisons were crowded; and until further accommodations could be secured, many of those arrested were held under guard in their own houses by troops or police, until the vans came to take them away to a place of confinement.

Reports from trusted agents were coming to Karsicheff every few minutes, and his face lighted up with joy as he heard that the number of those already in the toils was rapidly rising to a thousand. But the culmination of his delight was reached when he received the news that the headquarters of the Nihilists had been discovered, and that the police had found a printing press with the sheets of a revolutionary proclamation which foreshadowed the death of the czar. They had found, moreover, a tunnel along which was a wire, and the batteries and dynamite bombs all ready for an explosion, that would have killed the czar had he passed on his way to the railway station on that day, according to the programme of his intentions announced the day before.

(To be continued.)

Met His Match.

The clever Dr. Ritchie of Edinburgh met with his match while examining a student.

He said: "And you attended the class for mathematics?"

"Yes."

"How many sides has a circle?"

"Two," said the student.

"What are they?"

What a laugh in the class the student's answer produced when he said: "An inside and an outside."

But this was nothing compared with what followed. The doctor said to the student: "And you attend the moral philosophy class also?"

"Yes."

"Well, you would hear lectures on various subjects. Did you ever hear one on cause and effect?"

"Yes."

"Does an effect ever go before a cause?"

"Yes."

"Give me an instance."

"A man wheeling a barrow."

The doctor then sat down and proposed no more questions.

Trials of the Thespian.

"Yes, Bilkins and the rest of the company walked all the way on the railroad track from Bingville to Oshkosh with the thermometer at four below."

"It must have been an eventful trip."

"Yes, it was. And peculiar, too. The leading man was always at the end of the straggling line, the villain proved the most unselfish in the bunch, the first walking gentleman had to be carried, the heavy tragedian was the life of the party, and the first comedian grew so dismal that he tried to commit suicide."

Number of Cars in Use.

This country's traffic makes use of 37,000 passenger cars and 1,600,000 for freight.

SCIENCE and INVENTION

Novel Umbrella Support.

The man who braves all the sarcasm about the suburbanite and settles himself in a quiet country home soon finds that the pleasure to be had in the open air, with pure water, and fresh vegetables from his own garden, repay him for the ride back and forth to his work in the city every day, and comparatively few who make the experiment are content to settle down to city life again, especially in the summer time. In the winter and in stormy weather the country resident finds life not so enjoyable, and many a jest made at his expense comes home to his mind as he trudges

Designed for the Suburbanite.

along through the rain or snow, with his arms full of purchases he has made in town.

This seems to be the plight of the man in the picture. At first glance one would pick him out for a resident of the suburbs, from his load and general appearance. But this man should have cause to rejoice, even in the storm, for he is not troubled with his umbrella. It is difficult to say what he would do with it, were it not for the arrangement with which he is provided to support it for him, as both his hands are already in use. It is so often the case that the suburbanite finds himself thus loaded that his umbrella holder may be destined to become one of his constant companions. In this device there is no central ring as on the ordinary umbrella, but two vertical supports are provided, having slits for the passage of the braces. These supports are strapped to the body, and hold the framework rigidly in position, and when not in use occupy no more space than the ordinary handle.

William A. Feazell of Ferrum, Va., is the patentee.

Iron Turned Into Copper.

A curious find was recently made in one of the copper mines at El Cobre, Cuba. These mines, once among the richest in the world, have been abandoned for over thirty years because during the Cuban insurrection of 1868 the coal supply was cut off by the insurgents, and consequently pumping became impossible, so that the mines filled with water. After the Spanish war an American company bought the mines and proceeded to pump out the water. In one of the shafts thus made accessible was found what once represented an iron pickaxe as well as some crowbars. The metal in these implements had, however, turned to copper.

Wonderful as this may appear, there is a simple scientific explanation. The water filtering through the rocks and the copper ore veins dissolved some of the copper, the solution containing sulphate of copper. As soon as the sulphuric acid in this solution touched the iron it at once dissolved that metal and deposited copper in its place, for sulphuric acid has a greater affinity for iron than for copper. In the process certain impurities which had existed in the iron were left behind undisturbed. The wooden handle of the axe was in good condition. The metal was porous and irregular in shape, but in the general outlines preserved the form of the axe somewhat enlarged in size.

To Lessen Smoke Nuisance.

Prevention of the smoke which pours out of chimneys at each "firing up" is made practicable by a recent simple invention attached to the door of the firebox. Opening the door to add fuel moves a lever raising a weighted piston in an auxiliary steam cylinder, allowing steam to be sprayed into the furnace. It also allows air to pass from the ashpit up over the top of the fire, thus giving both steam and heated air to assist in burning the gases coming from the fresh coal. The dropping of the piston, slowly falling of its own weight, gradually shuts off both steam and air openings, so that when the combustion of the smoke from the fresh coal is completed the draft is suited to the depth of fire under ordinary conditions.

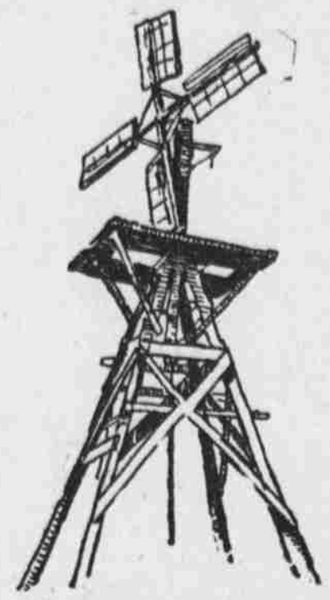
Are Soils Exhausted or Poisoned?

Horticulturists and fruit growers have long known that grasses are injurious to young apple trees, but it seems that they were wrong in attributing the injury to interference with the air, the water and the food supply of the trees. Carefully conducted experiments and observation at the Wodburn experimental farm, in England, have shown, however, that there is some direct or indirect product of grass growth that has an actively poisonous effect on the roots of the trees. It is suggested that the so-called exhaustion of the soil by certain plants, preventing the subsequent growth of other plants in the same ground, may be due really to some poisonous product left by the first plants.

GOOD WINDMILL FOR FARM.

Recommended by Authorities of the University of Nebraska.

The windmill represented in the accompanying illustration is described in bulletin No. 59, issued by the University of Nebraska. It is known as the Dutch or Holland mill. The windmill of this form is used to pump water for a town herd of cows varying from 60 to 100 head near Grand Island, Neb. Mills of this style are mounted on tall slender towers or upon milk houses, sheds or barns. For the four fans covered with duck, are often substituted six fans of thin lumber. The smallest of them are ten to twelve feet in diameter, the largest being about thirty-six feet



A Dutch Windmill.

across. The canvas sails are fitted with brass eyelets and fastened on with rope. The sails are removed or furled when in disuse.

Re-Seeding Sod Land.

D. A. S.—I wish to break up a five-acre field of gravelly soil, which has grown hay for a number of years, and seed it down afresh. What would be the best fertilizer to use?

What gravelly soil is most in need of is humus, and to produce this a green crop should be grown and plowed down. As early as possible after the hay is taken off the sod should be plowed and well harrowed. It should then be seeded with a quick growing crop, such as rape or buckwheat. If rape is chosen, about five pounds of seed should be applied. While the crop is growing the sod will be rotting, and by autumn the green crop should be plowed under. If a light dressing of stable manure could be plowed in along with the green crop so much the better. Next spring the field should be sown with barley or a light strawed variey of oats, and seeded with red clover and timothy. The grain should be sown not thicker than five pecks per acre. The grass and clover seed should be sown at the rate of about six pounds of each per acre. When the grain is harvested a fairly long stubble should be left and no stock should be allowed to graze in the field after harvest.

Growing Tulips From Seed.

W. S.—Tulips are producing seed, which I shall allow to ripen. How should the seed be planted and treated afterwards?

You may sow the tulip seed as soon as ripe in shallow boxes, using soil containing a large proportion of sharp sand and covering the seed to the depth of one inch. These boxes should be placed in frames or otherwise protected in order that they do not become dry. If the seed germinates quickly, the boxes will require good protection next winter and through the following summer. The small bulbs may be planted out in the fall, the ground around them mulched with coarse litter and cultivation given each summer until they bloom, which will be from five to six years from time of sowing seed. Tulip bulbs are usually very cheap and except for "the fun of the thing" it does not pay to raise them from seed.—C E. H.

Soiling or Pasturing Cows.

F. H. H.—I have two acres of a small kind of clover and one-quarter of an acre of winter rye. Would it be better to pasture the cows on these plots, or keep them in the stable and cut the feed for them?

Provided the clover is not too short to mow, soiling would no doubt be the more economical, as injury to the crop by tramping would be avoided. By the time the rye is used the clover will be about ready to cut; the rye would then produce a light second growth, which would provide a change of food while the last of the clover is being fed. It would be well to allow the cows a few hours of exercise in the open air each day or night. It would be advisable to cut the rye for the cows in any case, as if it is pastured a good deal of the feed would be wasted.

Destroying Porcupines.

R. A. C.—How can I destroy porcupines? They eat young grafts one and two years old in the orchard.

I have had no experience with this trouble, but should think traps at the foot of the trees would answer the purpose, or perhaps it would be easier to shoot them, as they are slow moving animals and do not seem to take much trouble to get out of one's way.

AGRICULTURE

Skill in Draining Land.

It is only in modern times that land drainage has been reduced to a science and the drainage engineer has put in an appearance. Previously to this time it was thought that any fool knew enough to dig a ditch in the soil and line it with stones or drain pipe and fix it so the water would run through it. This was very nearly true in sections of New England when land drainage came into vogue, for the reason that the ditch dug was large and the drain was made of stones. The flat ones were laid for a cover over the wall of smaller ones, and frequently the drain itself was a foot wide and more than that high. It was difficult to stop up a drain like that by the sediment that ordinarily came in with the drainage water. Then, too, the fall was generally so great that the water would push itself through anyway, carrying the sediment along with it. But when agriculture extended to the plains of the west the proposition was a different one. The great prairies were so flat that it was difficult often to discover in which way the natural fall lay. Then, too, the stones were absent and the drain tile had to be made out of clay. This gave rise to a business that was new to the country, that of making drain tile. The farmers, of course, did not want to buy drain tile a foot in diameter on account of the cost. So the smaller sizes were used, and at one time the practice was to put in tile only two and a half inches in diameter. This has now increased again to four inches, which is generally conceded to be small enough for the desired results, when properly laid.

But with tile came a new problem, that of making the ditch so perfect that the tile would lie even everywhere. The flow of the water being languid required to be unobstructed. The current in the tile would seldom have enough force to wash out the sediment and if there was a low place in the whole length of tile that would soon become stopped up. The novice tried to lay some of these drains and did so. But in a few years many of these drains became stopped up, so that they ceased to work. They had then to be dug up or the land left in the condition it was in before the tile was put in. After a good many expensive experiences of this kind the farmers began to employ civil engineers to run their lines and superintend the laying of the tile. This has been found to be the only safe way in the prairie states. There are some farmers now that think they are smart enough to do their own drainage work, but the attempt often proves very costly and will continue to do so at times. We cannot advise this sort of economy. It is cheaper to pay a drainage engineer to do the work properly than it is to have a drainage system that will not work or one that has to be dug out and reconstructed.

Wheat Scab.

From the Farmers' Review; We enclose two heads of wheat gathered in this county. They show blasted spots upon them. The farmers in the western half of the county are complaining that their wheat crops are badly damaged in this way. What is the cause of this?—Sallee Brothers, Pulaski County, Kentucky.

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We submitted the heads of wheat to Professor Garman of the Kentucky station, who replied as follows:

The heads of wheat enclosed by your correspondents are affected with what is known as wheat scab, a disease due to the attacks of a pinkish or yellowish fungus, described long ago by an English botanist under the name Fusisporium culmorum. The disease has at times been complained of by Indiana and Ohio farmers, but is not common in Kentucky, this being the first complaint that has come to me from this state. The rather cold, damp spring just closing has encouraged such diseases and probably other Kentucky farmers have suffered from the same trouble, but failed to recognize it.

The fungus attacks the chaff and seed from the outside, causing them to change in color, and the seed finally shrivels. Often only the terminal portion of a head is affected, but frequently the injury begins at the middle, where it may at first affect only a single seed and its glumes.

It is doubtful if any treatment that can be considered practicable would help the affected wheat, and it seems probable anyway that the disease is one of those that are not to be controlled, because very largely the result of weather conditions.

Many a farmer applies the wrong kind of fertilizer to his fields and loses the use of the money so spent. What is the use of adding to an element that may be so abundant in the soil that it will last for hundreds of years?

Agriculture is becoming very popular with the people in the cities, and a large number of well-to-do men are preparing their sons to enter the agricultural colleges of the country.

A continual weeding out should be practiced in the dairy. Successful farming is largely the keeping of weeds out of the growing crops. Successful dairying is keeping the poor cows out of the dairy herd. There are other things to be done, but this is one of the more important.