

hood, when seeing a shadow just like this he had thought it a ghost in very truth and had run for the house like a rabbit! How terribly real that fright had been! The recollection suddenly became so vivid in his mind, that as though a veil had been lifted he felt the living presence here, close by his side, of a small barefoot mountain lad, clothed in sober homespun gray, but filled with warm desires, dreams and curiosities, exploring upon every hand, now marching boldly forward, now stealing up so cautiously, now galloping away like mad! "I was once a child." To most of us these are mere words. To few is it ever given to attain so much as even a glimpse into the warm and quivering soul of that little stranger of long ago. We do not know how we were made. "I moulded you, my little son. And as I have been to you, so you will be to our children. In their lives, too, we shall be there."

Darker, darker grew the copse and the chill of the night descended. But to Roger's eyes there was no gloom. For he had seen a vision.

CHAPTER XV.

On his return to the city, Roger found that Deborah's school had apparently swept all other interests out of her mind. Baird hardly ever came to the house, and she herself was seldom there except for a hasty dinner at night. The house had to run itself more or less; and though Annie the cook was doing her best, things did not run so smoothly. Roger missed little comforts, attentions, and he missed Deborah most of all. When he came down to his breakfast she had already left the house, and often she did not return until long after he was in bed. She felt the difference herself, and though she did not put it in words her manner at times seemed to beg his forbearance. But there were many evenings when her father found it difficult to hold to the resolve he had made, to go slowly with his daughter until he could be more sure of his ground. She was growing so intense again. From the school authorities she had secured a still wider range and freedom for her new experiment, and she was working day and night to put her ideas into effect.

"It's only too easy," she remarked, "to launch an idea in this town. The town will put it in headlines at once, and with it a picture of yourself in your best bib and tucker, looking as though you loved the whole world. And you can make a wonderful splurge, until they go on to the next new thing. The real trouble comes in working it out."

And this she had set out to do. Many nights in the autumn Roger went down to the school, to try to get some clear idea of this vision of hers for children, which in a vague way he could feel was so much larger than his own, for he had seen its driving force in the grip it had upon her life. At first he could make nothing of it at all; everywhere chaos met his eyes. But he found something formless, huge, that made to him a strong appeal.

The big building fairly hummed at night with numberless activities. Fathers, mothers and children came pouring in together and went skurrying off to their places. They learned to speak English, to read and write; grown men and women scowled and toiled over their arithmetic. They worked at trades in the various shops; they hammered and sawed and set up type; they cooked and sewed and gossiped. "The Young Galician Socialist Girls" debated on the question: "Resolved that woman suffrage has worked in Colorado." "The Caruso Pleasure Club" gave a dance to "The Garibaldi Whirlwinds." An orchestra rehearsed like mad. They searched their memories for the songs and all the folk tales they had heard in peasant huts in Italy, in hamlets along rocky coasts, in the dark old ghettos of crowded towns in Poland and in Russia. And some of these songs were sung in school, and some of these tales were dramatized here. Children and parents all took part. And speakers emerged from the neighborhood. It was at times appalling, the number of young Italians and Jews who had ideas to give forth to their friends on socialism, poverty, marriage and religion, and all the other questions that rose among these immigrants jammed into this tenement hive. But when there were too many of these self-appointed guides, the neighborhood shut down on them.

"We don't want," declared one in-

dignant old woman, "that every young loafer should shout in our face!"

Roger was slowly attracted into this enormous family life, and yielding to an impulse he took charge of a boys' club which met on Thursday evenings there. He knew well this job of fathering a small jovial group of lads; he had done it before, many years ago, in the mission school, to please his wife; he felt himself back on familiar ground. And from this point of vantage, with something definite he could do, he watched with an interest more clear the school form steadily closer ties with the tenements that hedged its round, gathering its big family. And this family by slow degrees began to make itself a part of the daily life of Roger's house. Committees held their meetings here, teachers dropped in frequently, and Roger invited the boys in his club to come up and see him whenever they liked.

His most frequent visitor was Johnny Geer, the cripple. He was working in Roger's office now, and the two had soon become close friends. John kept himself so neat and clean, he displayed such a keen interest in all the details of office work, and he showed such a beaming appreciation of anything that was done for him.

"That boy is getting a hold on me lately almost like a boy of my own," Roger said one evening when Allan Baird was at the house. "He's the pluckiest young un I ever met. I've put him to work in my private office, where he can use the sofa to rest, and I've made him my own stenographer—partly because he's so quick at dictation and partly to try to make him slow down. He has the mind of a race horse. He runs at night to libraries until I should think he'd go insane. And his body can't stand it, he's breaking down—though whenever I ask him how he feels, he always says, 'Fine, thank you.' Here Roger turned to Allan. "I wish you'd take the boy," he said, "to the finest specialist in town, and see what can be done for his spine. I'll pay any price."

"There won't be any price," said Allan, "but I'll see to it at once."

He had John examined the same week. "Well?" asked Roger when next they met.

"Well," said Baird, "it isn't good news." "You mean he's hopeless?" Allan nodded.

"It's Pott's disease, and it's gone too far. John is eighteen. He may live to be thirty."

"But I tell you, Baird, I'll do anything!"

"There's almost nothing you can do. If he had been taken when he was a baby, he might have been cured and given a chance. But the same mother who dropped him then, when she was full of liquor, just went to the druggist on her block, and after listening to his advice she bought some patent medicine, a steel jacket and some crutches, and thought she'd done her duty."

"But there must be something we can do!" retorted Roger angrily.

"Yes," said Baird, "we can make him a little more comfortable. And meanwhile we can help Deborah here to get hold of other boys like John and give 'em a chance before it's too late—keep them from being crippled for life because their mothers were too blind and ignorant to act in time." Baird's voice had a ring of bitterness.

"Most of 'em love their children," Roger said uneasily. Baird turned on him a steady look.

"Love isn't enough," he retorted. "The time is coming very soon when we'll have the right to guard the child not only when it's a baby but even before it has been born."

Roger drew closer to John after this. Often behind the beaming smile he would feel the pain and loneliness, and the angry grit which was fighting it down. And so he would ask John home to supper on nights when nobody else was there. One day late in the afternoon they were walking home together along the west side of Madison Square. The big open space was studded with lights sparkling up at the frosty stars, in a city, a world, a universe that seemed filled with the zest and the vigor of life. Out of these lights a mighty tower loomed high up into the sky. And stopping on his crutches, a grim small crooked figure in all this rushing turmoil, John set his jaws, and

with his shrewd and twinkling eyes fixed on the top of the tower, he said.

"I meant to tell you, Mr. Gale. You was asking me once what I wanted to be. And I want to be an architect."

"Do, eh," grunted Roger. He, too, looked up at that thing in the stars, and there was a tightening at his throat. "All right," he added, presently, "why not start in and be one?"

"How?" asked John alertly.

"Well, my boy," said Roger, "I'd hate to lose you in the office—"

"Yes, sir, and I'd hate to go." Just then the big clock in the tower began to boom the hour, and a chill struck into Roger.

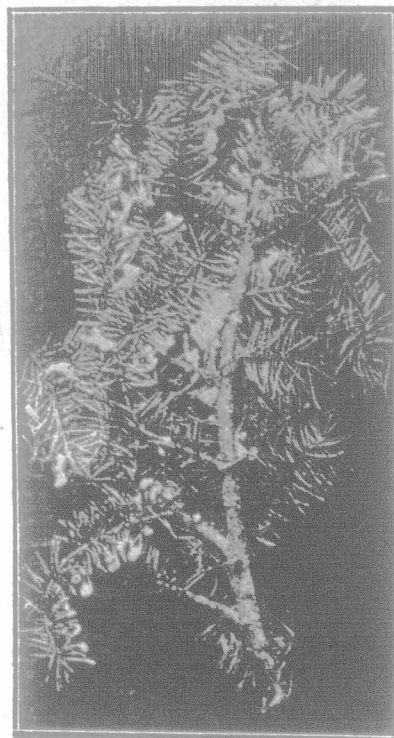
"You'd have to," he said gruffly. "You haven't any time to lose! I mean," he hastily added, "that for a job as big as that you'd need a lot of training. But if it's what you want to be, go right ahead. I'll back you. My son-in-law is a builder at present. I'll talk to him and get his advice. We may be able to arrange to have you go right into his office, begin at the bottom and work straight up." In silence for a moment John hobbled on by Roger's side.

"I'd hate to leave your place," he said.

"I know," was Roger's brusque reply, "and I'd hate to lose you. We'll have to think it over."

A few days later he talked with Bruce, who said he'd be glad to take the boy. And at dinner that night with Deborah, Roger asked abruptly,

"Why not let Johnny come here for a while and use one of our empty bedrooms?"



Sugar Crystals on the Fir Tree.

With a quick flush of pleased surprise, Deborah gave her father a look that embarrassed him tremendously.

"Well, why not?" he snapped at her. "Sensible, isn't it?"

"Perfectly."

And sensible it turned out to be. When John first heard about it, he was apparently quite overcome, and there followed a brief awkward pause while he rapidly blinked the joy from his eyes. But then he said, "Fine, thank you. That's mighty good of you, Mr. Gale," in as matter of fact a tone as you please. And he entered the household in much the same way, for John had a sense of the fitness of things. He had always kept himself neat and clean, but he became immaculate now. He dined with Roger the first night, but early the next morning he went down to the kitchen and breakfasted there; and from this time on, unless he were especially urged to come up to the dining room, John took all his meals downstairs. The maids were Irish—so was John. They were good Catholics—so was John. They loved the movies—so did John. In short, it worked out wonderfully. In less than a month John had made himself an unobtrusive and natural part of the life of Roger's sober old house. It had had to stretch just a little, no more.

To be continued.

A Sugar-Producing Tree.

BY FRANCIS DICKIE.

THE Douglas fir has long been the pride of the people of the Pacific Coast. It produces most excellent lumber; from it have been made two of the highest flagpoles in the world, and some staunch and mighty cargo carriers. But not even the most sanguine individual on the Pacific coast ever dreamed that the Douglas fir would add to its merits and abilities that of producing sugar—sugar from a coniferous tree seems indeed absurd! The idea was so ridiculous that it never entered any white man's mind. Yet, nevertheless, it is true. For centuries Douglas fir in certain regions have been producing a white sugar of the rarest kind, a sugar that contains a variety of pure and rare trisaccharide in greater abundance than any other plant today known to man. But though the white man has just recently learned of it, and examined this remarkable phenomenon, the Indians knew of it long before he came, and gathered it for food probably for hundreds of years. The bears, too, knew of it and broke down branches to get it. Strangely enough, in view of its unusualness, none of the early missionaries, explorers, or later surveyors, seem to have observed this phenomenon. As far as the compiler of this article knows no mention has been made in early writings of British Columbia, and he has examined a lot of them. The following facts here given are at last made possible as the result of the research and investigation of Professor John Davidson, F.L.S., F.B.S.E., Botanist in charge of the University of British Columbia, who, assisted by James Teit, a man with a life-time spent in the interior and intimately acquainted with the Indians and the country, travelled into the interior of British Columbia, and made the first complete botanical study of the Douglas sugar fir, and from his investigations learned how and why this sugar was produced. The result of his work is here-with made known for the first time outside of purely scientific treatises, and given in simple language understandable and interesting even to one not botanically inclined. The sugar-producing fir is chiefly found in the hottest part of the dry belt region of British Columbia between parallels 50 to 51 and longitude 121 to 122. It is also reported in the eastern portion of the State of Washington. The accompanying photo of a fir branch, gives an idea of how the sugar appears in irregular masses, ranging from a quarter of an inch to two inches in diameter and in small white flakes. The sugar is exceedingly sweet to the taste, giving a flavor like a very high grade of a refined commercial sugar. On first being taken into the mouth, it forms momentarily a sticky paste. This, however, quickly and entirely dissolves.

The investigator after much research and careful study and covering a wide range of territory in the dry belt in the interior of British Columbia, found that trees growing on northern and eastern slopes were the chief bearers of sugar. Trees on southern and western slopes, did not generally yield sugar. Neither did trees in the dense fir forests of the coastal regions. The explanation of the sugar's forming proved to be a phenomenon largely depending on certain atmospheric and soil conditions and excessive sun. The trees on the eastern and northern slopes were fairly well apart, so that a greater portion of their leaves received sun in much greater quantity and over wider area than did the closely-standing trees in the dense forests of the coast. There was also a better air circulation and the ground got just the right amount of warmth from the sun. It is part of the regular order of the workings of nature that trees exposed to a plentiful supply of sunlight gather on their leaves carbohydrates. Ordinarily these are at night taken into the plant to supply storage and tissue-growing cells. In the dry belt, however, an abnormal amount of carbohydrates accumulates on the leaves. At the same time the soil, warmed by the sun, increases the root activity so much that the root-pressure was greatly heightened, and the roots' work was carried on through the night, in this region where the nights are warm and dry and very short. As a result of greatly heightened root-pressure and cessation of transpiration, the leaves become gorged with water. This water exudes from the leaf tips in drops con-