

young lady as ever set wildly throbbing that little organ over which bachelors of thirty pretend to have such control. It is not surprising, therefore that I should exert myself to appear agreeable to her, disregarding, with the most provoking indifference, the meaning glances my sister-in-law resorted to, in order to draw my attention from the piquant beauty, and transfer it to the dignified but accomplished Alice. Milly thought of her wager, no doubt, and I chuckled in anticipation of the amusement I should have in demanding the fulfilment of it.

The next few days were spent in uninterrupted enjoyment. Alice never alluded to our youthful flirtations, and I inwardly thanked her for her silence on a topic that would but have proved disagreeable to us both. My partiality for Rosa soon became evident, and as though divining my wishes, Milly and Alice often disappeared, leaving us tête-à-tête, the result of which may easily be imagined. I did not of course object to the delicacy which prompted them to leave us alone, but I felt sometimes as though Milly had some other object besides the gratification of my wishes. She was not a woman to relinquish easily a project she had once formed. She had wagered that I should fall in love with Alice, and instead of trying to win her wager she was evidently doing her best to lose it. I interrupted her in many a whispered consultation with the latter, and detected often the glances they exchanged when I was more than usually attentive to Rosa. My enquiries as to their meaning ended in a peal of laughter, and a hint not to pry into ladies' secrets. Thus rebuffed I abandoned the subject, and devoted myself to the bewitching Rosa.

Ere the fortnight had elapsed I was deeply in love. Rosa pretended to be indifferent to the passion which had been of so sudden a growth, but with the penetration of a lover I sometimes detected a flush of pleasure or a glance soft and sparkling which gave me hope to proceed. The evening preceding their departure, therefore, I entered the drawing-room, fully resolved to try the test of an avowal. Rosa was softly playing one of those old ballads which I loved so well. I glanced round the room; we were alone. A pleasant smile greeted my appearance, giving place the next moment to a deep blush as my earnest gaze met hers. In a few words I told her how dear she was to me, how necessary to my happiness. She did not speak, but the beautiful head drooped until it touched my shoulder, her hand was quietly laid in mine, and I caught her to my breast.

A few minutes afterwards Milly was heard approaching, and disengaging herself from my embrace Rosa flew out of the room.

"Milly, you have lost your wager," I said, as she entered the room.

"Have I?" she rejoined with a malicious twinkle in her eyes. "Where's Rosa?"

"Just left the room after having promised to be my wife."

A ringing laugh echoed through the room.

"My poor brother, Frank, how nicely we have duped you. Rosa Grantham has been engaged these two months. Do not start, here she is to corroborate my statement," as she whom I had all along taken for Alice entered the room. "You have fallen in love with the Alice of your youth after all, and I believe I have won the wager."

"You provoking little witch!" I exclaimed, as the truth dawned upon my mind.

The cousins, at Milly's request, had changed names in order to carry out her little plot. Alice had developed into such a beautiful captivating young woman that I had failed to recognize her. I loved her too well, however, to feel resentment at the deception practised upon me.

A few weeks afterwards my brother broke up his summer establishment, and returned to Montreal. The set of jewellery was immediately purchased, and the next month Miss Alice Grantham was Miss Alice Grantham no longer.

Montreal, October, 1865

G. H. H.

ANGER.—A noble anger at wrong makes all our softer feelings warmer, as a warm climate adds strength to poisons and spices.

THE YOUNG CHEMIST.

LESSON IX.

SILVER, LEAD, AND MERCURY, IN RELATION TO CHLORINE AND HYDROCHLORIC ACID.

Materials and tests required.—Nitric acid in stoppered bottle; hydrochloric acid in ditto, solution of common salt; quicksilver, lead, nitrate of lead, protonitrate of mercury, solution of nitrate of silver, solution of ammonia, a clean glass flask, chemical ring stand, spirit lamps, wine glasses, test tubes, &c.

Nitrate of lead may be procured of any chemist who deals in tests, or it may be made by adding some metallic lead to nitric acid, taking care to add more lead than the acid can dissolve, which will ensure a neutral solution.

Mercury or quicksilver also dissolves in nitric acid, forming one of two results, either the protonitrate or pernitrate of mercury, according to circumstances. It is as well not to puzzle the young chemist at present by explaining the differences between protonitrate and pernitrate, suffice it to say that the protonitrate of mercury is required for the coming experiment, and it can readily be made by adding an excess of mercury to weak nitric acid, that is, three parts of acid by measure to one of water. It is essential that more mercury should be added than the nitric acid can dissolve. Protonitrate of mercury and nitrate of lead have now been formed. It is presumed that some nitrate of silver has remained over from the preceding experiment.

In the first place call to mind two important characteristics of chloride of silver. It is very soluble in ammonia, but insoluble in both water and nitric acid.

Take now a solution of nitrate of lead, and throw into it a small portion of solution of common salt (chloride of sodium) or throw in a small quantity of hydrochloric acid (spirit of salt) in either case a white deposit, the chloride of lead, will result. Up to this point there would seem to be no difference between silver and lead, in relation to chlorine.

Divide the chloride of lead produced into two equal parts, and subdivide one of the parts into two others, call them A and B 1, B 2. To B 1, add ammonia, and remark that no solution takes place. To B 2, add nitric acid, when the chloride of lead will either dissolve at once, or will certainly dissolve on the application of heat. Each of these results would have been quite different if chloride of silver were concerned. But again chloride of lead is very far from being absolutely insoluble in water. In demonstration transfer the chloride of lead A to a glass flask and add about a wine glassful of distilled water, apply heat, and remark that the chloride entirely dissolves.

Hence our experiments have demonstrated three means of separating lead from silver, supposing both to be simultaneously in a solution combined with chlorine.

1st. By employing ammonia to dissolve out the chloride of silver from the chloride of lead.

2nd. By employing nitric acid to dissolve out the chloride of lead from the chloride of silver.

3rd. By employing water for the same purpose.

Take now a portion of the protonitrate of mercury solution; add to it common salt, or hydrochloric acid, in the same manner as nitrate of lead was treated, dividing the white precipitate resulting in the same way. Call the divisions A, and B 1 and B 2.

To B 1 add ammonia. Not only does the chloride remain undissolved, but it at once changes from white to black, a result sufficiently indicative of the presence of mercury.

To B 2 add nitric and hydrochloric acids, apply heat, and the chloride of mercury will be found to dissolve, though very slowly and with difficulty.

Put A into a flask, add a large amount of water, and apply heat. Not the slightest amount of solution will take place; in which characteristic chloride of mercury essentially differs from chloride of lead.

Hence supposing these three chlorides to exist in admixture, two methods of separating the chloride of mercury from the chlorides of silver and lead have been indicated.

First method, 1st. Boil the whole together in a large amount of water, which will remove the chloride of lead. 2nd. Treat the residue of chloride of silver and chloride of mercury with hot nitric and hydrochloric acids, to dissolve out the chloride of mercury.

Second method, 1st. Extract the chloride of lead as before by means of hot water.

2nd. Separate the chloride of silver from the chloride of mercury by means of ammonia.

(To be continued.) J. W. F.

DAWN OF CANADIAN HISTORY.

THE SAVAGES—THEIR MODES OF LIFE, MANNERS, CUSTOMS, AND GOVERNMENT.

The inhabitants of the country in which the Jesuit fathers had laboured, were people of a generous and not a spiteful disposition. They were possessed of tolerably intelligent minds as to the judgment they formed of things they could see, and things that were common; and deduced their conclusions very gracefully, always setting them off with some pretty comparison. They had very good memories as to corporeal things, as of having seen a person, as to the peculiarities of any place where they had been, as to what had been done in their presence twenty or thirty years before. But they could learn nothing by heart: nor was there any way of fixing in their memories a series of words.

As to their physical peculiarities, none of them except some of the more robust, wore beards, as they told Father Biard, over and over again, that at the commencement of their intercourse with the French they considered the latter to be very ugly. It was impossible to distinguish young boys from the young girls, except by the manner of wearing the girdle. Generally speaking, these people, as regarded thickness of body, were of less size than the French. There could not be found among them a big-bellied nor a hump-backed man, nor one deformed; and leprosy, gout, gravel, insanity, were things unknown. Those among the French who happened to have any blemishes, as a one-eyed, a squint-eyed, or a flat-nosed man, were very soon remarked, and behind backs were extensively ridiculed. They were merry rascals, and had the quip and the nickname at hand whenever they got a chance of making fun of the French. They held so great an opinion of themselves as to look down upon the French as inferior beings.

Their clothing was made of skins, which the women prepared and tanned on the rough side. They softened the skin of the elk on both sides, like the buff-skin coats of their visitors. They decorated these skins, thus prepared, in a very pretty manner, using ribbons to form devices. From these same skins they made shoes and gaiters. The males wore no breeches; they said they clogged them too much, impeded their movements, and made them look like vine-stakes.

In summer they were accustomed to use, to a considerable extent, the great cloaks of their visitors, and in winter the quilts which were sold to them by the French; they prepared these quilts by covering and lining them. The savages also very willingly made use of the hats, shoes, woollen caps, shirts, and linen which they procured from the French in exchange for furs.

When the Indians were on a journey, and when they wished to stop at any place, the first thing they did was to make a fire, and then erect their wigwams; this work was performed in an hour or two, often in half an hour. The females went into the woods and procured poles, and with these formed the frame-work of the tents. On the poles were thrown skins, mats, or pieces of bark, inside the hut, at the bottom of the poles, they placed their bags. The whole space round the fire was strewn with pine leaves, in order to neutralize the dampness of the ground; above the pine leaves they often threw mats, or seal-skins, the latter as soft as velvet. These preparations having been accomplished, the Indians would stretch themselves at full length round the fire, reposing their heads upon the bags; and so well was everything arranged that, even during the greatest inclemency of winter,