

Notes and Queries.

New Subscriber.—BORAX.—You are wrong in supposing the principal source of this salt to be *tinca*; the greater proportion is, at present, prepared artificially. As long as the supplies of commerce were dependent on native borax, the price was quite high, being three or four shillings, sterling, per pound for refined. About the year 1815, Payen and Curtier succeeded in producing an artificial salt, in large crystals, by saturating boracic acid with carbonate of soda, and this is the method pursued at the present time. At first, a considerable prejudice existed against the article, from the fact that the edges of the crystals were sharp and unbroken, while the old Dutch borax, to which people had been accustomed, was considerably broken, and otherwise bore the evidence of long transport. This difficulty was overcome by shaking or rolling the artificial borax in casks, by which a generally used-up and travelled appearance was given to it. The artificial product is purer than that prepared from native borax, and, for most purposes, is preferable. The boracic acid for this manufacture is obtained from the waters of the lagoons of Tuscany. The acid region extends over the surface of thirty miles of this volcanic and rugged country. The lakes are situated on gradually rising ground, and are continually sending out dense volumes of vapor and gases, which are projected, in heated columns, from fissures in the rocks beneath. The rustics of the district formerly regarded this part of the country as the location of one of the principal entrances, or exits, of the infernal regions. By the passage of the vapors, called *suffioni*, the water of the little lakes becomes charged with boracic acid, and by appropriate means, is conveyed from one lagoon to another until saturated as far as possible; it is then run into vessels in order to deposit, and is ultimately evaporated to the crystallizing point in large, shallow, leaden pans, which are heated by the vapor of some *suffioni*, which is conducted there for the purpose. The whole operation is conducted, therefore, with but trifling expense.

The ordinary variety of borax contains ten equivalents of water of crystallization, (about 47 per cent). This can be got rid of by fusion at a red heat, and in this state it is most useful as a flux.

S. J.—BLACK INK.—The following form is recommended as yielding a tolerable cheap and very black ink. Its durability has been satisfactorily determined—at least, as far as twenty-five years time has demonstrated:—

- Soft water..... 4 gals.
- Bruised galls..... 3 lbs.

Let stand a day, and add:

- Copperas..... 1 1/4 li.
- Gum Arabic..... 1 1/2 lb.
- Ol. Caryoph..... 5 drops.

Macerate for two weeks, stirring once a day.

Pharmacist.—WATER TIGHT TROUGHS.—A trough which will answer your purpose, and may also be used, in some cases, as a crystallizing tank, may be made thus.—A strong wooden box of the requisite size must be provided; it should be tongued and grooved together, all the joints being previously covered with a coating of stiff white lead, instead of glue; if necessary it may be fastened with screws. Give it now a perfect coat, both inside and out, with Brunswick black, diluted with an equal volume of turpentine; after allowing this to dry, give it two or three additional coats of the undiluted Brunswick black. A tank of this kind will last for years, and any leak may be quickly stopped by a fresh coat of paint. To prevent bursting by frost, a piece of india rubber tube, about an inch bore, corked at one end, may be put into the tub—the corked end down, and the open end above the surface of the water. In case of frost the sides of the tube will be pressed together, and thus the tub will be relieved from pressure.

James R.—GRANULATION OF METALS.—Zinc, lead, tin and bismuth, are best granulated by pouring into water from a depth of five or six feet. Finer granulation may be effected by allowing the stream to pass through an ordinary corn broom. In order to procure the metal in bell-shaped pieces, and not in drops, it will be necessary to avoid a heat much above the melting point. Considerable depth of water will be required, or else the feathered metal will form into masses.

To make GRAIN TIN, the metal must be melted and poured into a tight wooden box, which must be vigorously shaken until the granulation is effected.

G. McIntyre, D. H. B. Welland and others,—The prices of the works of which you inquire will be found in the list which is appended:—

Roscoe's Elementary Chemistry.....	\$1 25
Attfield's Chemistry.....	4 50
Fownes' Chemistry.....	4 50
Wittstein's Pharmaceutical Chemistry.....	1 50
Parrish's Pharmacy.....	4 50
Royle's Materia Medica.....	2 70
Garrod's Materia Medica.....	3 60
Pareira's Materia Medica (condensed edition).....	6 30
Lindley's Descriptive Botany.....	0 30
Pareira's Prescription Book.....	1 25

G. McJ.—Madder Compound.—To give you the form for this article is more than we can do, as nearly every dyer, and manufacturer, have special proportions of the ingredients which they think best; a difficulty, therefore, lies in selection; a very good form is:—

- Hydrochloric acid... 3 parts by measure.
- Nitric acid..... 1 do. do.
- Water..... 1 do. do.

Add feathered tin, in very small portions at a time, until about two ounces to the pound of the mixture, are dissolved. The temperature must be kept down, or a per salt of tin will be formed, which is not the intention.

The *Chemists' and Druggists' Almanac* will be forwarded, in a few days, to those who have ordered them, we are sorry that any delay should have occurred. We are not, however, to blame.

Changes.

The business carried on by — McCallum, St. Mary's, has been purchased by A. Stoddart.

J. McLean has fitted up a new store at St. Mary's.

A. H. Joseph is about commencing business in Toronto.

H. H. Morton, St. Thomas, assigned.

Trade Report.

The past month's transactions have been unmarked by anything special, or noteworthy. Sales have been numerous, but small, while payments have been rather better than for some time past.

In our price list we have few changes to note; the only ones of any importance being in Cantharides, Quinine and Mace. These articles have been tending upwards for a considerable time. Cantharides we hardly think will go any further. Quinine we think from information received as far back as the spring of 1869, is likely to be still higher, as it has only been the fact of large stocks on hand, which has kept it down so long. Mace has probably reached its highest point, as, for the next few months, the demand is likely to be less.

Spts. Turpentine and Seal Oils are both higher.

R. C. JAMIESON & Co.,

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R. C. J. & Co., have business connexions throughout the Dominion of Canada.

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MONTREAL, June, 1868.

3-6mo