

taken a course of lectures nor passed an examination. The Council by their recent action, I consider, have taken a step towards securing for the student the best possible value for his money, and also of assuring to their constituents a thorough education for those that may choose to follow in their tread. Further down Mr. Douglass asks who should receive certain credits, &c. I will ask him a question and from his answer to it let him find one to his own. A customer purchased from Mr. Douglass' clerk an article that gives the utmost satisfaction. To whom is the credit due of selling only first-class drugs, to Mr. Douglass or his employee? Again, Mr. Douglass may have in his employ an assistant whose knowledge of drugs, &c., is profound, who is a first-class chemist, salesman, &c., but he does all in his power to injure his employer, he uses the means placed in his hands of injuring his business, &c. A change must be made. Who vacates, Mr. Douglass or his employee? The answer is plain. I, as an ex-student of the college cannot impugn the work done by the faculty. The principal is a gentleman towards whom I entertain feelings of the deepest respect, and to whom I am indebted for an insight into the mysteries and privileges of pharmacy and pharmaceutical chemistry. When I entered the college I knew practically nothing of these subjects, and after a short term—there were not two terms then—I passed fairly creditable examinations, making on these subjects and two others not less than 92 per cent., and on one as high as 98 per cent. Of Dr. Avison I can say nothing, he being a more recent graduate and teacher in the college, but I believe him to be a gentleman and a student. I am not disparaging either Mr. Shuttleworth nor Dr. Avison when I say the college can exist without them; they have not a monopoly of the brains of the profession (as some of our recent graduates would have us believe). They themselves will agree with me in saying that there are scores of men capable of teaching and lecturing in our college with acceptance, and from whom they may with profit take notes and learn.

It is somewhat amusing (especially as we have been there ourselves) to read the views of these students who, knowing nothing of any other Pharmacy College, imagine that because they have sat under Mr. Shuttleworth and Dr. Avison, they are in a position to dictate to the more experienced business men of the profession—a trifle fresh and more than a trifle verdant.

The concluding paragraph is worthy of just a passing notice. The eight members of the Council who, according to Mr. Douglass, are willing to barter honor and principle for the sake of a petty spite, are gentlemen every one of them, and hold honored positions of trust in the gift of their fellow citizens.

Since writing the above I have been credibly informed that Mr. Douglass is not responsible for what appears over his

name, but that it emanated from Toronto—it is needless to say from whom. Is it possible that such is the case? And the same with a more recent article supposed to have been written by students in Quebec?

Trusting that I have not trespassed on your valuable space,

I am, yours, etc.,

AN EX-STUDENT.

London, Nov. 10th, 1890.

Improved Manufacture of Quinine.

Gammie's production of sulphate of quinine is a process which has received much attention from chemists, on account of its simplicity as well as perfect result. Briefly the bark is reduced to powder by means of a disintegrator, and passed through a scalper, the sieves of which are silk and have 120 meshes to the linear inch. This extremely fine powder in the proportion of 100 parts is mixed with eight parts of commercial caustic soda dissolved in 500 parts of water, and there are then added 600 parts of a mixture of fusel oil one part and kerosene oil four parts. Slake lime may be used instead of caustic soda, 15 parts of it being intimately mixed with the powdered bark before the water. The whole mixture is thoroughly agitated in barrels for four hours, then allowed to rest, and the oily layer drawn off from the top, this oil is again agitated for five or ten minutes with water acidulated with hydrochloric or sulphuric acid, the alkaloids being thus dissolved out from the oil; separation is again effected, the oil being transferred to the bark mixture and agitated with it for two or three hours, and is again drawn off and washed as before in the same acidulated liquor. This process is repeated a third or fourth time, or until it is found, by testing a small quantity of oil, that the bark has been thoroughly exhausted of its alkaloids. If the bark contains 4 per cent. of alkaloids, about two pounds of sulphuric acid mixed in 20 gallons of water are sufficient. In the after treatment of the acidulated solution of alkaloids, the solution is first neutralized with ammonia or soda and set aside to crystallize; and crystals are collected on a cloth and drained, then dissolved in about 50 times their weight of boiling water, and filtered hot through animal charcoal; on cooling after filtration, the crystals again form, and are separated as before from the mother liquor by filtration. The crystalline mass obtained is then placed in small lumps on sheets of white blotting paper stretched on slabs of plaster of Paris, and finally dried on blotting paper in a room heated ten degrees warmer than the open air.—*Pacific Druggist*.

Infusion of digitalis, according to Einar Larsen, assistant at the chemical laboratory of the University of Christiania, when completely sterilized and properly preserved will retain its full medicinal value indefinitely.

Colored Fires.

Chemists are frequently applied to for colored fires; the following will be found useful and good:

CRIMSON.

Take of

Sulphur.....	8 parts.
Carbonate of strontia.....	12 "
Chlorate of potash.....	30 "

Mix.

YELLOW.

Take of

Sulphur.....	9 parts.
Common soda (dried).....	12 "
Chlorate potass.....	3 "

Mix.

BLUE.

Take of

Burnt alum.....	6 parts.
Carbonate of copper.....	6 "
Sulphur.....	8 "

Mix.

ORANGE.

Take of

Chlorate of potass.....	20 parts.
Sulphur.....	7 "
Chalk.....	16 "

Mix.

GREEN.

Take of

Boracic acid.....	5 parts.
Sulphur.....	8 "
Chlorate of potass.....	35 "

Mix.

WHITE.

Take of

Nitre.....	30 parts.
Sulphur.....	10 "
Charcoal.....	1 "

Mix.

PURPLE.

Take of

Chlorate of potass.....	30 parts.
Sulphur.....	8 "
Chalk.....	12 "

Mix.

NEW GREEN.

Take of

Chloride of barium.....	12 parts.
Chloride of thallium.....	4 "
Resin.....	2 "

Mix.

The best plan to use these fires is to make them into small cones, inserting a small piece of touch paper in the apex. In making colored fires powder each material separately, and dry them separately; mix them with the hand or a card. Each ingredient must be perfectly dry.

Colored fires are liable to spontaneous combustion, therefore never keep a stock far in advance, and what you have put in tins.—*J. C. A. in R. & C. Druggist*.

The British Museum is in possession of a whole collection of ancient Greek advertisements, which were dug up in the island of Kuidos, in the year 1758.

Euxanthone, the coloring principle of the very expensive yellow Indian dye known as piuri, has been artificially prepared by M. Groebe, a Swiss chemist.