

made whereby men with certain companies have been provided with means for development along research lines.

I feel that something should be said in regard to the teachers of chemistry in the various high schools over our country. A university professor of national reputation made the remark at a scientific meeting not long ago that some of the best material available for replenishing the staffs of various universities was to be found in the men who are teaching in the high schools. If this is the case, why not give these men a chance to earn a doctor's degree, which is now required to hold a position with most, if not all, of the foremost colleges and universities? Men in high schools who are heads of departments, especially in large cities, receive salaries ranging from \$3,000 to \$4,000 per year of 10 mos. In most cases they have their bachelor's and master's degrees, have done graduate work beyond this, and very often keep in touch with the chemistry department of some good university.

These men would like to go on and obtain the doctor's degree, but such a thing is impossible under present conditions, unless the applicant for the degree resigns his position in his school and spends a year or more at the university. Some compensation indeed may be obtained by instructing part time and devoting the remaining time to the problem at hand, but they have assumed responsibilities for which such compensation is inadequate, and few are going to relinquish salaries of \$3,000 a year and spend \$2,000 more per year to keep their families, in order to obtain the degree.

Why not offer some alternative? Permit them to use their spare time during the academic year in their own laboratories on some assigned problem, especially where library and laboratory facilities are quite complete, and then have them come to the university during the summer to continue the work and so on for the following years until all requirements for the degree are fulfilled. This suggestion, if followed, would eliminate some of the longer graduate courses, but certainly not all of the graduate courses.

If this, or some other plan, be adopted it would enable these men to go into college or university work when the degree was obtained, and there is no reason to believe that they would fall short of what is expected of them. When, in this way, they have become eligible for positions in a university at a salary even somewhat less than they are now receiving, the university would be able to replenish its corps with experienced teachers, instead of graduate students with no teaching experience. It is not necessary, however, that these men go into university work. They may remain where they are. It is a well-known fact that a great deal of research work has been done in other countries by men in secondary schools. Let it be so in this country. All that is needed is a little encouragement.

Personally, I feel that the time is coming when universities will make provision for these science men. When they do it certainly will stimulate every red-blooded man to put forth the best that is in him and will open a field rich in scientific workers which at present is practically inactive.

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January 5, 1920

W. R. TEETERS

THE QUESTION OF THE IDENTITY OF BALATA AND GUM CHICLE

Editor of the Journal of Industrial and Engineering Chemistry:

With reference to my paper on "Industrial and Agricultural Chemistry in British Guiana, with a Review of the Work of Prof. J. B. Harrison" [THIS JOURNAL, 11 (1919), 874], I have received several inquiries as to balata and whether or not it is the same substance as gum chicle. My impression had always been that

the two substances were derived from different trees but to be certain I referred the query to Professor Harrison, who writes as follows:

Balata and true gum chicle are not identical. Your impression that they are derived from different trees, the *Mimusops balata* and the *Sapota zapotilla*, respectively, is correct. But quite recently an export trade has arisen from Venezuela in what the Creoles call "white hya-hya" and the Venezuelans term "white balata," the impissated latex of the "milk" tree. This is being used either directly as chewing gum or else as an adulterant of chicle. The latex of certain ficus trees termed locally *douchalliballi* and *kumatraballi* is probably also being used as adulterants of chicle.

Balata and gum chicle are treated as synonymous terms in the Decennial Index of *Chemical Abstracts*, but as pointed out by Professor Harrison the two substances are not identical and they should, therefore, have been treated in the Index under separate headings.

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NEW YORK SUGAR TRADE LABORATORY, INC.
80 SOUTH STREET, NEW YORK, N. Y.
January 6, 1920

PLATINUM THEFT

On Monday morning, December 22, 1919, it was discovered that the vault of the Department of Agricultural Chemistry at the University of Missouri had been entered and the entire stock of platinum crucibles, amounting to some 2500 g., had been taken. The following list is a fairly accurate inventory of the material taken:

	Grams
18 plain crucibles.....	780.38
6 J. Lawrence Smith crucibles.....	
11 Gooch crucibles.....	1212.72
27 dishes.....	26
Foil.....	17
Wire.....	77
5 small, flat, sugar dishes.....	41.5
17 Gooch crucible caps.....	10.5
6 small caps.....	73
21 seamless filter cones.....	96
18 covers for crucibles.....	43
6 covers for dishes.....	12.5
2 spatulas.....	6.5
2 spoons.....	22.2
Scrap.....	

FIRE CAUSED BY YELLOW PHOSPHORUS

In the rubbish from a fire which occurred in the chemical stock shelves of the Organic Research Laboratory, a can was found partly filled with yellow phosphorus. This had been in stock for approximately five years. The cover had been forced open about one-sixteenth of an inch, and the bottom had numerous pinholes. Presumably these had been formed by corrosion with the result that the water leaked out very slowly. A slow oxidation of the phosphorus then took place, becoming more rapid as the temperature rose. Finally sufficient pressure was developed to force open the cover and the phosphorus then burst into flames. A close watch should be kept on stocks of yellow phosphorus in cans, or else the contents transferred to glass bottles and covered with water, the bottles then being securely stoppered. The manufacturers should attempt to find some better method of packing the substance.

HARRY LEB. GRAY

ORGANIC RESEARCH LABORATORY
EASTMAN KODAK COMPANY, ROCHESTER, N. Y.
December 23, 1919