

Let us in imagination follow out these changes and attempt to measure the results. Let us assume the establishment in every large university of a School of Chemistry to correspond with the Schools of Law, Medicine, Pharmacy, Dentistry and Engineering. For graduation from this school, let us suppose a course of study covering a period of four years leading to a specific degree which might be "B. S. in Chemistry" to correspond with the present engineering degrees. This course of study would be published in the catalogs of the institution and a student would be compelled to elect this course just as he elects any of the other professional courses, and to meet the requirements in the way of prerequisite credits. A year's additional work along the proper lines, accompanied by a thesis, possibly after the lapse of several years spent in practical chemical work, might then entitle him to a degree of "Master of Chemistry" or "Chemist." This could be followed by the usual graduate work leading to the Ph. D. degree, for which, however, the degree of "Doctor of Chemistry" might well be substituted. Let us suppose also that the directors of large laboratories were careful to restrict the use of the term "chemist" to those fulfilling such requirements, using the term "technician" for any others whom they might engage. Let us suppose that in all references in chemical literature, including the want ads in *Industrial and Engineering Chemistry*, these two terms were used with the proper distinction between them. Let us suppose further that the American Chemical Society appointed a committee of prominent members to inspect each year the Schools of Chemistry and to classify them into Grade A and Grade B schools. Let us also suppose that they examined the colleges offering work in chemistry and published a list of those whose prechemical work would be accepted as satisfactory, the committee to define and lay-out the course of study for those electing prechemical work. To carry out even in imagination such procedure, one must consider the possibility of securing the co-operation of Boards of Trustees, Presidents and other authorities responsible for the direction of our educational institutions. Such a process would require the lapse of a period of years, covering possibly generations, before the desired ends might be secured. Any educational reform requires time for its accomplishment. However, when such changes as suggested above have been finally made in our educational system, if that be conceivable, will not the problem as it exists today have been permanently solved? Is any remedy which falls short of this any thing except a vain attempt to lift ourselves by our own boot straps?

## The Colloid Chemist

I am the very pattern of a modern Chemist General—  
I've information vegetable, animal, and mineral.  
I am well up in physics, quote experiments historical,  
From Thales, Volta, Faraday, in order categorical.  
Equations both of integral and differential calculus,  
I use to plumb the vagaries of beings animal-culous—  
In fact, in matters vegetable, animal, and mineral,  
I am the very pattern of a modern Chemist General.

The filter-passing haze that spoils the very best analysis,  
Impurities that wreck your final product by catalysis,  
The clouds, and fogs, and rains that go to make the weather fair or foul,  
The mists a gas-mask won't adsorb, but make the soldiers swear or howl,  
And where the agates get their rings, and how the comet swings its tail,  
And how the pearly nautilus on tropic waters flings its sail—  
In all these questions vegetable, animal, and mineral,  
The colloid chemist shows he is the modern Chemist General.

If you would know how plants suck up their food by capillarity,  
The differences in grade of crops, the cause of their disparity,  
If you would use the messes that organic chemists cuss like sin,  
See lifelike ultramicros wriggle in a sol of protein,  
If you would know of dyeing rubber, leather, or linoleum,  
Of foods, flotation, brewing, soaps, glues, paper or petroleum,  
You'll find in matters vegetable, animal, and mineral,  
The colloid chemist proves he is the modern Chemist General.

JEROME ALEXANDER.

### TWO LABORATORY BALANCES FOR SALE

One of these is made by Chas. Voland & Sons for the Central Scientific Company, their serial No. 15375. This was in use for reference work for about two years but is in very good condition and shows scarcely any trace of even shelf wear. The only exception to this condition is that the spring that holds the stops under the scale pans is weak and does not properly support them.

The other scale was purchased from Eimer & Amend, New York, and is about the same grade as the one described above, but cannot be exactly identified in their catalog. It looks like a late model of their No. 216 listed on page 12A, catalog C-1913. We had that for about two months before closing the laboratory, but it looks absolutely new.

The Cutler-Hammer Mfg. Co., Milwaukee, Wis.