

You may juggle the acid and alkali in the base, you may either use high or low steam pressure in making the mass, and thus take your choice of whether you want a lively effervescent salt, or one more dignified in reaction. A peculiar thing is that while we have been accustomed to effervescent salts for years, the majority of users seem to think it necessary to swallow the salt at its highest point of effervescence, thus filling the mouth and nose with carbon dioxide, and in some cases producing discomfort. An effervescent drink of this kind should be taken just when effervescence subsides, as then the drink is fully charged, without an overabundance of effervescence.

Concluding Remarks.—Now for exact and intimate information regarding details which are not published in our textbooks. The temperature of the room in which effervescent salts are made usually runs from 110° to 120° F. The operator should, therefore, equip himself with a two-piece garment, ordinarily known as shirt and overalls. The floor being hot it is necessary for him to wear shoes. His elimination will be perfect, as with his very active work in this temperature he will perspire profusely. A pair of leather-faced gloves are always held in reserve as it is impossible to handle these hot trays and dryers unless the hands are protected. After two or three years' training under these conditions a man is not only down to his best weight, but he has demonstrated that he is capable of standing considerable hardship, and the writer has noted that no actual effervescent salts maker who indulges in the work himself ever finds it necessary to take any of the bath treatments which are strongly recommended by many of our sanatoriums, and as many of the products he makes are similar to the analyses of well-known springs it has been noted that he never goes to any until he leaves this work and advances to a position of higher responsibility. Under these circumstances, do not envy the effervescent salts operator. His lot is not an easy one, and a last problem:—after all precautions in drying thoroughly the air in a room which is maintained at a temperature of 120° F., how can you keep the operators from generating considerable moisture in the form of profuse perspiration?

I rarely look at an operator when in full working condition that I do not think of the scriptural injunction—"In the sweat of thy face shalt thou eat bread."

SHALL WE REQUIRE FOUR YEARS OF HIGH SCHOOL STUDY?*

BY AUGUSTUS S. DOWNING.¹

The suggestion to amend the New York State pharmacy practice act so as to

* This important communication is reprinted from the August *Druggists' Circular*, p. 285, and is based on an inquiry addressed to Dr. Downing by the *Druggists' Circular* when it became known that he had expressed his opposition to any change in the New York State Pharmacy Law, which would make the completion of four years of high school study a prerequisite to pharmaceutical registration after July 1923. *The readers will understand that the personal references are made to the publication from which the communication is reprinted.*

Data relative to prerequisite legislation will be found on p. 500 *et seq.* (June issue *JOURNAL A. PH. A.*) in an article by Joseph W. England. Copies of Dr. Downing's communication have been sent to college deans; quite a number of replies are expected which the *Druggists' Circular* hopes to print as a symposium. The *JOURNAL A. PH. A.* has asked for replies from allied bodies of the American Pharmaceutical Association.—The Editor.

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require a severer prerequisite general education preliminary to the study of pharmacy has come to me from time to time, but I do not recall any occasion when I publicly announced myself as opposed to the suggested amendment. But I have no hesitation in voicing my opposition to the suggestion in your communication, namely, that the completion of four years of high school study shall be a prerequisite to pharmaceutical registration after 1923.

Moreover, if you regard this expression of my opposition worthy of place in your columns for consideration and helpful discussion, you are authorized to place this statement before the deans of the various schools holding membership in the American Conference of Pharmaceutical Faculties.

First, I am clear in the opinion that such requirements (*i. e.*, four years of high school study as a prerequisite after 1923) *if honestly administered* would place any state of the Union in a class by itself—there would be no applicants for registration after that date for some years, if not forever.

I base this opinion upon New York State's experience of which I have had close personal knowledge for more than a decade and accurate written records of the state's experience for more than a century.

It may not be known to you, but it is a fact that when the American Medical Association forced the deans of the schools holding membership in the Association of American Medical Colleges to require first one year of college work for entrance and then the very next year changed it to two years of college work, New York insisted that it was not for the best interests of the citizens of this state nor for the medical schools of this state to so far advance their entrance requirements. And we maintained our position of requiring the satisfactory completion of four years of high school work with the sciences (physics, chemistry and biology) for three or four years after the American Medical Association had announced that schools that did not accept the college entrance requirements would become Class B Schools. This did not, however, affect the schools of this state so far as admission of the graduates to the licensing examination was concerned; nor did it in any way affect those seeking admission to our medical schools.

As you well say, "New York has always been a pivot state in matters of this kind," and I may add New York has frequently been accused of advancing too rapidly, so we can properly risk the accusation that we are not up to date so long as we are protecting the better interests of the citizens of the state.

Second, the reasons that lead to the conclusion that we are protecting New York State's pharmaceutical interests through the determination to "go slow" are too many for the time and space available for their careful consideration.

When the questions which you have raised are discussed they should be discussed with the possibility of New York's representative going to New Orleans and defending principles based on facts which if unsuccessful would warrant the state in going it alone till such time as experience should demonstrate the accuracy of our conclusion.

Third, while the question you have raised deals primarily with the advancing of the general education preliminary to the study of pharmacy, there are two other even more important questions involving New York State's relation to the other states of the Union. Not only do we face in the next four years in addition to

our present minimum requirements the addition of two years of high school study, but one additional year also of college study, a total of three years, that is, a seventy-five percent increase over the present minimum of high school and college work. Does it not occur to you and your readers that this radical increase in requirements within the short period of four years is, to say the least, worthy of receiving most careful attention?

The syllabus committee has for years been steadily endeavoring to complete the outline of the third professional year and to prepare a rational syllabus thereon. The National Association of Boards of Pharmacy has been endeavoring for eight years to adjust their examinations to the requirements of the second edition of the syllabus with what result? And New York State has marked time while its syllabus committee has awaited the action of the national syllabus committee.

A committee of the New York State Board of Pharmacy has given careful study to the reciprocal relation existing between the board and the other state boards of the Union that form the national association. The recommendations of that committee to the Regents of the University of the State of New York are before me as I write. From this report it appears that there are now forty-four states having an active membership in the association, that our state maintains an associate membership on the theory that our standards are higher than those of most of the other states; that at the present time some of our best men are migrating to other states by means of the reciprocal action of the association; that no method exists for the entry into this state of fully qualified men except by proving that they have reached a position of conceded eminence and authority and that such proof is impossible by any person in the early years of professional practice; that on the other hand a few years from college renders an examination equally impossible.

I am informed that only fifteen of the states of the Union have a prerequisite law—that is, of the forty-four states having an active membership in the association less than one-third require any educational qualification for admission to the practice of pharmacy other than an examination. How many of the states in this minority meet the New York requirements for admission to their licensing examination—two years of high school preparation, followed by two years of professional instruction?

Let me in closing assure you of New York's continued desire to serve her sister states in advancement of higher professional attainments and of our earnest wish personally to share the labor and sacrifices of time and money for the closer coöperation of the schools, the boards and the associations, working for the benefit of our respective commonwealths, and the general welfare of our country.

MILITARY PHARMACY SYSTEMS IN EUROPE.

Pharmacist Fredrik Bergendorff of the Garrison hospital in Stockholm has recently returned from an official mission to France. It is proposed to reorganize the Swedish military pharmacies. Pharmacist Bergendorff is quoted in the Stockholm press as

saying that the French medical organization has experienced considerable development, and new reforms are contemplated; French military pharmacies are not considered as an economic burden—before the war it was found that their system resulted in an annual saving of about four million francs in the medicine and sanitary budget estimates, and figures are now higher.