in such a short time, was beyond my fondest and most desired expectations. It only shows what can be done if properly supported."

Mr. Mittelbach was born in Boonville, Mo., April 2, 1856. His father was in the shoe business there for nearly fifty years. After graduating from the public schools in 1871, the son attended the state university from 1871–1873. After serving an apprenticeship under E. Roeschel, a German pharmacist, he entered the Philadelphia College of Pharmacy in 1877, graduating in 1879. He clerked in St. Louis, Mo. and Santa Fé, N. M. for about a year, after which he started in business for himself in Boonville. He was a life member of the AMERICAN PHARMACEUTICAL ASSOCIATION having joined at New Orleans in 1891, and served as its second vice-president in 1904–1905 and first vice-president in 1906–1907. In 1915, his *alma mater* conferred upon him the honorary degree of Master in Pharmacy.

His interest in civic affairs was great and he served as secretary of the Boonville Board of Education for over thirty years, also a term or two in the city council, and was city treasurer about ten years.

For 47 years, he was a member of the Missouri Pharmaceutical Association, and on the occasion of his thirty-third anniversary as treasurer of that body last July, a committee of about 20 pharmacists from all parts of the state made the trip to Boonville and presented him with a check for $500, together with a beautifully written resolution of appreciation, which he doubtlessly valued more than the money.

Thus Pharmacy mourns the loss of another of her important pioneers.

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## A FEW PROBLEMS IN THE EDUCATION OF A PHARMACIST.*

BY HENRY C. BIDDLE.[1]

There are many problems to-day affecting the matter of pharmaceutical education. Among these, however, we desire to consider briefly only three.

### 1. UNEQUAL AND INADEQUATE PREPARATION IN THE HIGH SCHOOL.

The majority of colleges of pharmacy now require a high school diploma as a condition of entrance. This presents, however, a certain element of uncertainty because of the varied training given many applicants in the lower school. Not infrequently the high school record offers a training so deficient in science or mathematics as seriously to handicap the student in his studies in the college.

At the California College of Pharmacy students, even though graduates of a high school, have been refused admission on account of their inadequate preparation. To ameliorate this condition of affairs our western college has recommended to principals and students of high schools that the training of prospective students of pharmacy should include the following subjects:

English, three years; history, one year; mathematics (algebra and plane geometry) two or two and one-half years; chemistry, one year; physics, one year, or mathematics (including trigonometry), three years; German or French, two years; Latin, two years; biology, one year.

### 2. THE QUESTION OF OUTSIDE ACTIVITIES—HALF-DAY VERSUS FULL-DAY DEVOTION TO STUDY.

The limitation of college work to a half-day seriously interferes with the educational development of the student. The varied arguments advanced to sup-

* Section on Education and Legislation, A. PH. A., Baltimore meeting, 1930.—No discussion.

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port the part-time program fail to recognize that the limited time does not afford sufficient opportunity for study, particularly when in certain cases the remaining half-day and part of the night may be given to clerking in a drug store. The division of interests tends to develop in the student a sponge-like attitude toward education in which he attempts to absorb the work without personal mental application. He thus fails to recognize what it really means to be a student.

To justify the division of activities during college work it has been urged that the state board requires the practical training. While we fully recognize the value of this training, attention is called to the fact that this argument is inapplicable, since credit is not ordinarily allowed by a state board for both educational work and outside practice carried on simultaneously.

The solution of the problem appears to be in following the accepted procedure of an academic college, requiring full-day devotion to the educational program.

3. THE QUESTION OF PROFESSIONAL IDEALISM—THE PHARMACIST AND HIS VISION.

Some time ago a dean in addressing a group of pharmacy students raised a question as to whether the objective before the student of pharmacy was simply the making of money. A few promptly responded in the affirmative.

One of the difficulties in pharmaceutical education has been a low level of an idealism for service. Not that anyone would decry an ambition for financial success. This is an entirely legitimate outlook. Every man is entitled to a proper recompense for his activities, and one of the duties which he owes both to society and himself is to win business success—the highest success he may honestly achieve.

Pharmaceutical education increases a man's earning capacity, but it should present an idealism beyond this in the development of a man's *value as a citizen.*

Pause for a moment to consider the problem presented. For what purpose are our activities, after all? A man may say that he is successful because he is earning money, but there is no normally balanced individual who would be willing to devote his life simply to the accumulation of wealth, if such action meant a miserly attitude toward life—simply the winning of wealth and nothing more. No, it is the zest and spirit of constructive action that drives men on. Without this the accumulation of wealth alone does not satisfy.

Several years ago in a small town near San Francisco, I was talking with a commercial traveller and in a moment of confidence he said to me, "The whole object we are working for in life after all is making money; we might as well be honest about it; that is the only end we have in view." God pity the man with an ideal like that.

Pharmaceutical education has before it the duty of presenting the ideal of good citizenship through service.

One of the personalities which has left its stamp upon this generation was the outstanding character of Theodore Roosevelt—a man whose sheer love of achievement through service swept him on to success. A similar character in many ways, but less widely known, is Francis J. Heney, who a number of years ago successfully devoted his efforts to cleansing a bad political situation in San Francisco.

At this time Dr. Benjamin I. Wheeler, then President of the University of California, extended to Mr. Heney an invitation to address the student body.

In his inimitable way of introducing a speaker, President Wheeler presented Mr. Heney to the large audience by saying, "Ladies and gentlemen, we to-day are to have the pleasure of listening to a man who attended the University for a time but never graduated; he graduated," added President Wheeler, "from the larger University of life's experience."

Then Mr. Heney stepped to the front and began to speak in a voice which is naturally a trifle harsh.

"Ladies and gentlemen," he said, "It is a great pleasure for me to be here to-day. I once attended the University, I was fired—fired for fighting—and it is of great interest to me that I am to-day invited to address this vast assemblage because I am fighting."

But Mr. Heney was invited to address the student body that day not simply because he was a fighter, but because he was fighting for civic righteousness in the City of San Francisco and was graduating in his activities from the larger University of life's experience—and that after all is the achievement that counts.

Citizenship through service is particularly open to the pharmacist.

Last year a successful pharmacist in one of the smaller towns of Southern California was named by a representative newspaper as a citizen especially worthy of mention, because of the outstanding courteous service which he was rendering the community in which he lived.

Across the bay from San Francisco are the progressive cities of Alameda, Oakland and Berkeley—the last being the site of the University of California. The position of mayor in two of these cities—Alameda and Berkeley—is to-day held by a member of the profession of pharmacy and in each case the position was awarded the incumbent because of his service value to the municipality.

One of the great responsibilities, indeed, resting upon present-day pharmaceutical education is stressing the vision of professional idealism in the higher fields of service.

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## DR. KARL LANDSTEINER WINS NOBEL PRIZE.

Dr. Karl Landsteiner, bacteriologist and pathologist on the staff of the Rockefeller Institute for Medical Research, New York, has been awarded the Nobel Prize for Medicine. Dr. Landsteiner was born in Vienna, he graduated at the University of Vienna in 1891, and was pathologist there from 1909 to 1919. He has been a member of the Rockefeller Institute for Medical Research since 1922. The prize amounts to about $48,000. The award was based on Dr. Landsteiner's research in connection with blood groups. He is known also for his research on infantile paralysis, paroxysmal hemoglobinuria and blood serum in relation to immunity. The only other American who has received the Nobel Prize for Medicine was Dr. Alexis Carrel, to whom it was awarded in 1912.

## SURGEON GENERAL IRELAND REAPPOINTED.

President Hoover, on recommendation of Secretary of War Hurley, has reappointed Gen. Merritte W. Ireland, surgeon general of the Army. This is the fourth appointment of Major General Ireland as surgeon general. In determining to permit him to finish his active army service in his present office, the President made an exception to the general rule against reappointments for the heads of branches and bureaus. General Ireland will reach the retiring age, May 31st. He was first appointed surgeon general of the Army, October 30, 1918. He had previously served as chief surgeon of the American Expeditionary Forces and also as surgeon general. He was reappointed surgeon general, October 30, 1922, and again, October 30, 1926.