death will be deplored by all systematic botanists, as well as by all who knew his genial personality."

Dr. Ferdinand Braun, of Germany, who shared the Nobel Prize in 1905 with Guglielmo Marconi, for distinguished achievements in the invention of improved methods of wireless telegraphy, died on April 14 at a Brooklyn hospital. Death was caused by a heart attack induced by an overdose of morphine, which Dr. Braun is alleged to have taken before arriving at the hospital, to ease pain from an intestinal disorder from which he had been suffering for three years. Dr. Braun was born in Fulda, Germany, in 1850. He came to this country in 1914 as a witness in litigation between the Marconi Wireless Company and the German company which built and operated the wireless station at Sayville, L. I.

Mr. H. J. Helm, formerly deputy-principal chemist of the British Government Laboratory, has died at the age of seventy-nine years.

UNIVERSITY AND EDUCATIONAL NEWS

Mr. J. C. Lincoln has presented to Oberlin College the Mary McKenzie Lincoln Scholarship Fund, to be used in paying the term bill of some young woman, a student in Oberlin, who desires to continue her studies at the summer school of the Marine Biological Laboratory at Woods Hole.

Through the will of the late Henry Janeway Hardenbergh, of New York, Rutgers College has received Mr. Hardenbergh's library in architecture and the sum of $20,000. Mr. Hardenbergh designed and erected Geological Hall and the Kirkpatrick Chapel, and two years ago carried out the remodelling of the chapel.

Announcement has been made that President Wilson has directed the War Department to establish an infantry unit, senior division, of the Reserve Officers' Training Corps at Columbia University.

At the University of Buffalo medical school, Dr. Edward W. Koch has been appointed professor of pharmacology and Dr. Wayne J. Atwell, professor of anatomy, both on a full-time teaching and research basis.

Miss Phyllis M. Borthwick, lecturer in physics at the Ladies' College, Cheltenham, has been appointed assistant-professor of physics and chemistry at the Lady Hardinge Medical College for Women, Delhi.

DISCUSSION AND CORRESPONDENCE

NOTE ON A REVERSE CONCENTRATION CELL

In the Nernst theory of the concentration cell the solution tension of both electrodes is assumed to be the same, but the electrode in the more concentrated part of the electrolyte is supposed to have its rate of solution retarded by the back "osmotic pressure" of its own ions.

Another possible way of regarding the phenomenon is to suppose that the electrode in the solution of higher specific inductive capacity always goes into solution faster than the other, and hence becomes the anode. From this point of view, the solution of metallic salts in water lowers the specific inductive capacity of the water, and hence the electrode in the more concentrated solution of the concentration cell becomes the cathode.

A concentration cell for demonstration purposes is often made by pouring water carefully upon a concentrated solution of stannous chloride, so that the two liquids do not mix, and placing a rod of tin in the two solutions. The tin will rapidly dissolve in the dilute solution at the top, and crystals of tin will be deposited from the concentrated solution at the bottom.

If, instead of pouring water upon the concentrated solution, a solution of stannous chloride in ether be poured upon it and the two solutions be shaken together, most of the salt in solution will go into the water and only a little will remain in the ether and water at the top. Thus the tin ions are highly concentrated in the water and are very dilute in the ether, and their "osmotic pressure" is correspondingly greater in the water than in the ether. Notwithstanding this difference of concentration, if the tin rod be placed in the two solutions, ions will dissolve off it in the

concentrated solution of its own ions at the bottom, and small crystals of tin will form upon it in the dilute solution at the top.

The specific inductive capacity of the water solution must be much higher than that of the ether solution, even after being decreased by the ions in solution, since that of pure water at room temperature is more than 75 while that of ether is less than 4.5.

The results are quite as striking when lead acetate is dissolved in the water and ether and a lead wire is used for the electrode as the tin with stannous chloride. No doubt any salt that is slightly soluble in ether may be used just as successfully as those named above.

FERNANDO SANFORD

STANFORD UNIVERSITY

HERING'S CONTRIBUTIONS TO PHYSIOLOGICAL OPTICS

TO THE EDITOR OF SCIENCE: In your issue of April 19, page 388, you announce the death of Professor Dr. Ewald Hering and refer to him as "the eminent physiologist." Permit me to add that his chief work, for which he became well known, was in physiological optics and more especially the perception of color by the eye; his work in this direction is well-known and has been frequently referred to in literature in which it was coupled with that of the famous Helmholz, with whom he was for a time a contemporary.

Early in 1911 he was knighted, at the same time that Professor Roentgen was, by having conferred upon him the decoration of the Order "Pour le Mérite" for his creditable work and scientific researches. A description of his collection of experiments demonstrating phenomena in physiological optics, some of which the writer has had the pleasure of seeing in his own laboratories in Liepzig and Prague, would make very interesting and instructive reading and ought to be published.

In one of these a band of light was thrown on a screen, which every one without hesitation would acknowledge was a bright green when, as a matter of fact, there was absolutely no green present; the sensation of green light was a purely physiological effect due to a neighboring band of its complementary color. This peculiar phenomenon has suggested to the writer that there might perhaps be some way of utilizing it to advantage in supplying an additional color to colored moving pictures.

CARL HERING

PHILADELPHIA,

REFORM OF THE WORLD'S CALENDAR

TO THE EDITOR OF SCIENCE: In SCIENCE of April 19 appears a paper advocating "A Common Sense Calendar," by Professor Howard C. Warren of Princeton University. The changes proposed by Professor Warren would certainly prove a great improvement over the present highly archaic calendar that the world is burdened with as a heritage from our remote ancestors. But Professor Warren's scheme could be farther simplified.

The subject of a reform in the calendar was agitated quite widely some half dozen years ago; and about five years ago an international commission charged with the consideration of this subject was located in Berne, Switzerland. This commission sent out invitations to all who cared to do so, to submit suggestions upon the question of reforming the calendar, and this writer had the temerity to offer a scheme for a new calendar.

This scheme embodies one very radical change, which if accepted would reduce the problem to the last degree of simplicity, to wit, the division of the year into thirteen lunar months of four complete weeks, or twenty-eight days each. It was proposed to intercalate a thirteenth month (with the suggested name of Sol) between July and August of the existing calendar.

The extra day in each year should be disposed, as suggested by Professor Warren, that is, inserted between the last day of the old and the first day of the new year. The year might be made to begin on a day more in accord with nature's harmonies, that is, in the beginning of spring instead of the middle of winter; but that is not a vital matter. The extra day to be dealt with every fourth year, to be called "Leap Day," might be conveniently inserted bewteen two of the summer months.