an unofficial auxiliary agent by which the provisions of its committee on freedom of science teaching (several members of which are also members of the Science League) may be carried out. Our activities in this direction have been hampered by lack of adequate financial support, but we have already accomplished a good deal.

Mr. Cantrell was sent north as an emergency substitute when I became ill in the course of a series of debates with Dr. Riley, executive secretary of the World's Christian Fundamentalist Association. These debates were arranged for the purpose of proving to the enlightened portion of the populace the strength and menace of fundamentalism on the Pacific Coast; and having achieved this object, no more will be held under our auspices.

I can not believe that Mr. Cantrell made any attempt to reconcile the Bible with evolution, and from my long acquaintance with him I am sure that any newspaper statements to this effect were misrepresentations. We have made every effort in all our spoken and written utterances not to touch on this point, and to approach the question purely from the standpoint of the scientific validity of the theory of evolution and the necessity of preserving the freedom of teachers to make known the findings of science.

Incidentally, I may say that our unwillingness to argue such reconciliation has been the means of losing us many members—notably members of the American Association for the Advancement of Science. For one letter we have received taking the viewpoint of Mr. Cardiff, we have had ten insisting that we come out openly for the reconcilement of Genesis and evolution. This we have not done and shall not do, which makes Mr. Cardiff's attack all the more unfair.

A failure to present our reply to his attack would not only mark an irreparable harm to the Science League, which, poorly supported and against tremendous odds, has struggled for a year to build up a working organization against the fundamentalist attacks on freedom in science teaching; but would also injure materially the whole defense of the teaching of evolution, especially on the Pacific Coast, where the situation is already acute and is daily becoming more so. We are now organized formally in several cities, and have a membership-at-large of scientists and educated laymen in 42 states, D. C. and Hawaii, and in the faculties of 49 colleges and universities. We are just beginning to get to the organization and actively educational stage, and we need the help and the informed counsel of every member of the American Association for the Advancement of Science. In fairness to us and to the cause we represent, will you not be good enough to publish this letter in SCIENCE?

MAYNARD SHIPLEY, *President*

THE NAME N IN COS NT

REFERRING to note under this title in SCIENCE for June 5, the writer wishes to make another suggestion. Since the equation is usually used in physics and engineering to represent harmonic motion of some kind, and the term NT represents the phase of the oscillation, it is seen that the coefficient N represents the radians of phase passed through in unit time. It seems that "phase velocity" would be a phrase that would be nearly self-explanatory and does not lend itself to the criticism of using an old term in a new sense, as would be the case if we adopted the terms, *speed, rapidity, frequency* or *pulsation,* which are already established with other and definite meanings. It appears to the writer that *circular frequency, pulsatance* and *π-frequency* do not convey as much intrinsic meaning as "phase velocity" and are thus less suited from the teacher's standpoint. The fundamental unit of phase is the radian, and time, the second, so the natural unit of phase velocity would be radians per second, entirely in keeping with its use in the expression cos NT. The writer has used the above expression for a number of years in courses in Electrical Engineering and has found no difficulty on the part of the students in grasping the meaning of the expression.

JESSE L. BRENNEMAN
KANSAS STATE AGRICULTURAL COLLEGE

PROFESSOR ROBINSON'S TRIBUTE TO ASA GRAY

THE tribute to Asa Gray in the July 17, 1925, issue of SCIENCE struck a responsive chord in my heart.

It was my good fortune to meet Asa Gray the first time at a meeting of the American Association for the Advancement of Science, at Dubuque, I think, in 1872. I went to Dubuque to report the meeting for the *Indianapolis Journal.* I, of course, was interested in science and was a member of the association, but this was the first meeting I had ever attended.

During this meeting we had an excursion up the river. A large party of scientific men was walking along the bank, among them Asa Gray. We came across a pool of still water connected with the river, in which there were some beautiful water lilies, very large. Professor Gray pointed to a mass of flowers which were particularly beautiful, growing near the edge, but too far from shore to be reached, and expressed a desire to possess them. I, at that time, was not afraid of getting wet, so I plunged into the pool, plucked the lilies and presented them to him. He expressed to me his very great joy in having them.

I think that this meeting with Asa Gray was the deciding factor in my going to Harvard the next year for a special course in chemistry. Professor Gray be-

longed to that group of great men mentioned by Professor Robinson, composed of Longfellow, Norton, Agassiz, James Russell Lowell and Oliver Wendell Holmes. It was my good fortune within a year or two of my meeting with Asa Gray to meet all these worthies. I greatly appreciate the tribute paid to Asa Gray by Professor Robinson.

H. W. WILEY

QUOTATIONS

INTELLECTUAL LEADERSHIP OF THE TIMES, THE POST AND THE TRANSCRIPT

Wireless to the New York Times, August 26, and printed on the front page.

PROFESSOR CHARLES HENRY of the Sorbonne [Minerva does not record a Professor Charles Henry at the Sorbonne or elsewhere], one of the leading mathematicians of France, declared that he had proof of the scientific, mathematical certainty that "nobody dies entirely."

"That 'something' which is called a soul continues to radiate," he said, and, referring to the belief of some that when a man is dead he is dead forever, buried, finished and not to be talked of any more, he continued:

"What a mistake is theirs! In order to recognize their error it is necessary only to carry out certain experiments accessible to anybody knowing how to manipulate the essential apparatus 'ad hoc.' The apparatus exists."

Saying religions had sought to explain the phenomenon of death and to promise the infinite prolongation of life, Professor Henry went on:

"But I have acquired a certitude, and that by purely scientific methods, that the originators of these religions were in reality the precursors of science possessed by intuition of the truth.

"Among scientists there are means for measuring the radiation of all substances—for every substance body emanates radiation. Your lamp, your stove, your cherry tree are warmed by the sun's rays.

"Calculate that radiation which is due to heat, due to electro-magnetic elements and due to the attraction of our globe. If you make the calculations conscientiously you will with anguished surprise find yourself up against something unknown, some force which is neither one nor the other of these."

Associated Press dispatch printed on the front page of the New York Evening Post, August 21.

Sound waves from a human brain have been picked up by a radio receiver on a four to ten meter wave length.

The experiment is described by Professor Ferdinando Cazzamali [Minerva does not record a Professor Cazzamali at Milan or elsewhere], heard of the department of neurology and psychiatry at the University of Milan, in an article prepared for the forthcoming issue of *Revue de Metphysique.*

As a result Professor Cazzamali foresees the transmission of sound waves from one brain to another.

He says he operated with highly excited persons or those suffering from nervous diseases as well as the noted Italian medium, Signora Maggi. The patient was shut up in a perfectly insulated cabinet.

The sounds he heard through the receiver ranged from signals akin to ordinary wireless signals to whistling and soft violin or cello notes.

Similar results were obtained, he declares, from persons under hypnosis. In every case, however, the emanations stopped when the subject resumed a normal and peaceful frame of mind.

From an editorial article in the Boston Evening Transcript, August 21.

Science has performed so many wonders that it sometimes presumes on achievement that is far beyond its reach. But fundamentally there seems to be no fact that militates against the Milan professor's theory, to say the least. That the "wave theory" governs or applies to the nervous impulses, or the cerebral control over the nervous centers, is altogether likely. What may eventually be done in the way of measuring, determining or controlling the "waves" of the brain no one can say in the present state of knowledge.

The suggestion that the brain impulses may thus be harnessed and coded like wireless telegraphy is a startling one. It seems to foreshadow not only a wonderful means of communication, but also the removal of the veil that hangs in front of the operations of the human mind. Conceivably it projects our race into a Palace of Truth, where each individual may read the thoughts of his neighbor. It unfolds to our gaze a rather uncomfortable world. It seems to make a goldfish in a globe out of every human being. Somehow one rather hopes that the complete development of Professor Cazzamali's discovery—if there is anything in it—will be left to the next generation.

SCIENTIFIC BOOKS

Medicine, An Historical Outline. By MAJOR M. G. SEELIG. Baltimore: Williams and Wilkins.

A CHARMINGLY characteristic foreword by Lieutenant Colonel F. H. Garrison precedes this work of Seelig's, which consists of eight lectures which were delivered at the Washington University in St. Louis.