picks up free electrons only) but not the value of the electron-charge nor any way of measuring the electron-mass—unless I have carelessly overlooked something. The electron thus remains rather vague, and little is said about the atom-model, except for one brilliant simile which affords a welcome relief from the sun-and-planet's image: Bragg compares the model with "someone's head with a cloud of mosquitoes around it."

The chapters on motors, dynamos and electrical supply are interesting, informative and not always easy. We learn from the preface that "I have tried to judge how deeply I might go into the various subjects by remembering the questions I was asked after the lectures. If parts of this book seem unduly difficult, it is because these questions gave me so high an opinion of the intelligence of the rising generation." This being the case, I should think that mathematical formulae need not have been entirely avoided. If, however, formulae must be avoided, I doubt whether alternating-current phenomena can be better treated than they are in Bragg's book. The descriptions of such types of apparatus as the dynamo, the alternating current meter and the Creed teleprinter are well done. I hope, however, that the rising generation does better by the interpretation of contact potential difference than I have. I do not venture to comment on the chapters on telephony and radio, lest my comments be thought to be based on fuller knowledge than I possess.

The illustrations, both sketches and photographs, are numerous and excellent. The book is well printed and pleasant to read. Misprints are remarkably scarce, and the only confusing passage I have found is that on page 143, where "sheet" is used to designate sometimes one and sometimes the other of two electrodes. The style is conversational, not to say chatty, and now and then delightfully jocular. "Why do electrons [enable metals to reflect light]? Because they are electrified particles and react to light according to certain laws. Why do electrified particles obey these laws? At this stage we are reduced to saying in an exasperated way: *Because they jolly well do.*" "... Our description of the flow of current is just the opposite to the actual flow of electrons. Perhaps the following analogy will clear up the puzzle. Suppose I take the spare cash in my pocket and hand it over to you. Ought I to say that a current of riches has passed from me to you, or that a current of poverty has passed from you to me? (Unfortunately in the case of the electric current it was as if everyone agreed to say the current of poverty passed from you to me.)" "When we remark 'It wasn't what he said but the nasty way he said it,' we are unconsciously distinguishing speech on the one hand from the larynx noise on the other hand, which latter is largely responsible for conveying emotion apart from words."

KARL K. DARROW

BELL TELEPHONE LABORATORIES
NEW YORK

SOCIETIES AND MEETINGS

ACTIVITIES OF THE PHOENIX LOCAL BRANCH OF THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE

THE Phoenix Local Branch brought to a close its third year of activities on the fifteenth of April, with its twentieth lecture of the season.

A meeting of the board of councilors was held on September 20, at the Arizona Museum. The nominating committee presented its list of candidates, and ballots were sent out accordingly. The officers elected for the ensuing year were: A. L. Flagg, *President;* Dr. John A. Lentz, *Vice-president;* with Professor J. W. Hoover, Claude E. McLean, J. E. Thompson and Odd S. Halseth as members of the board to serve for four years.

The branch was without a secretary nearly the entire year, as Mr. Halseth, the second secretary, resigned at the September board meeting. The board has recently prevailed upon Mr. Alfred E. Knight, a past president of the American Institute of Science of New York City, to act as secretary-treasurer. Mr. Knight brings to the Phoenix Branch his wide experience in doing successfully the things we hope to do in Phoenix. We are very fortunate to have him cooperate with us.

The series of lectures sponsored by the Phoenix Local Branch during the season just closed was well received. The total attendance at twenty lectures amounted to 1,194. A wide range of subjects was covered: Archeology, astronomy, chemistry, geology, geography, mineralogy, ornithology, physics, plant pathology and zoology. Some lectures were illustrated. The attendance of students from the high school and junior college should be mentioned, for it is from these sources that the future workers in the fields of science must come. The interest shown in the whole lecture series indicates clearly that there is a demand for such programs and the active members feel encouraged to continue this work.

Qualified speakers are within reach. Our experience has shown that appreciative audiences will attend scientific lectures if proper publicity is given. Therefore, we look forward to a better ordered and more successful year of service to the community during the season 1937–1938.

A. L. FLAGG,
President, Phoenix Local Branch