

is done at present; but there could be more of it done, especially on the Sixth Avenue lines as far as Fifty-eighth Street, and on the Third Avenue line, say as far as Forty-second Street. To give an example, a few years ago, a car starting from Fifty-eighth Street for the downtown journey, arrived at Forty-second Street with ample capacity for taking on the Forty-second Street passengers; while to-day these cars are almost as crowded as those that have come down from Harlem. Yet the interval between cars at Forty-second Street is amply sufficient to allow of doubling the number of trains that are started from Fifty-eighth Street even in the rush hours. This is but one instance, which doubtless could be duplicated at other points on the elevated system. Considerable relief would follow the construction of a third track on the Third Avenue Elevated and the running of express trains on the Second Avenue line.

The management of the Metropolitan Street railways have complained, and with very good reason, that a prolific cause of the crowding of the cars on the main thoroughfares is the interference of trucking with the running of cars. Nobody can deny that this is to-day a most serious obstruction on such a thoroughfare as Broadway. To prove the point it is merely necessary to imagine Broadway cleared of all trucks, and it is easy to see that instead of crawling along at an average speed, below Fourteenth Street, of say three miles an hour, the cars would readily make from nine to twelve miles an hour, and the increased speed would mean, of course, an increased number of cars passing a given point in a given time. It is not an uncommon sight to see a truckman leisurely driving his team on the car tracks with four or five cars held up behind him, and holding to these tracks until he reaches some particular street down which he wishes to turn. The Merchant Associations have requested that there should be proper police regulation of trucking and traffic on all car line streets. We do not know what the limits of authority of the police are at present, but if they can be extended, they should be to the very limit. Truckmen, cabmen and other drivers should be liable to penalty if they monopolize the street car tracks longer than is absolutely necessary for passing around a stationary or slower-moving vehicle in front. Moreover, as far as is consistent with the necessities of merchants living on Broadway, trucking should be restricted by law to the adjacent streets on either side. While we do not for a moment suppose that restrictions of this kind will entirely solve the difficulty, they will unquestionably assist in easing the congestion. Indeed, as regards the whole question affecting Manhattan in general, it may be said that relief is to be sought rather in a multitude of minor changes than in any panic legislation, which might be liable to defeat the very object at which it is aimed. Meanwhile we repeat the warning which was published in these columns a week or two since to the effect that unless *immediate* steps are taken for the construction of other Subway lines, north and south of Manhattan, we shall be confronted within three or four years with a congestion compared with which the present troubles will be mild indeed. In conclusion it must be admitted that in view of the present deadlock, the question of the construction of additional express elevated structures on the extreme eastern and western avenues of the city demands serious attention.

THE GERMAN-AMERICAN WAR GAME.

How thoroughly the various navies of the world study, and keep in touch with, the naval situation in other countries than their own, is shown in the latest events of the German-American conflict, which is now being played under the rules of the naval war game by officers of the British navy. In the last meeting, as described in the current issue of the SUPPLEMENT, a most important feature of the naval situation was that the American fleet in European waters was on its way, by the Suez Canal route, to the protection of the Philippines, with a more powerful German fleet bound hot-foot for the same destination. In view of the superior power of the German fleet, the admirals representing the American navy wished to dispatch the powerful North Atlantic squadron to join the European squadron in the Philippines, so as to present a combined force superior to that which Germany could gather. The umpires of the game, however, disallowed the move, and insisted upon the North Atlantic squadron being maintained off the Atlantic coast for the defense of the Atlantic coast cities. When the admirals of the American fleet protested, urging that it would be good strategy to make the move, the umpires replied that the force of American public opinion, particularly in the seaport cities, in favor of retaining the North Atlantic squadron for their defense would be so powerful that the Atlantic fleet would be kept in home waters, at least until the monitors could be suitably placed for their defense. Evidently the umpires had studied the conditions that existed during the Spanish-American war, when our Atlantic cities were clamoring so loudly for protection, that the old iron monitors of civil war

times were resuscitated and distributed for seacoast defense. The umpires decided that at least three weeks must elapse from the opening of the war before the North Atlantic fleet should be allowed to sail for the Philippines. The necessity for maintaining it on the home station was found in the existence of a German home squadron composed of the "Brandenburg" coast defense battleships, and some powerful battleships of the "Kaiser Wilhelm" type.

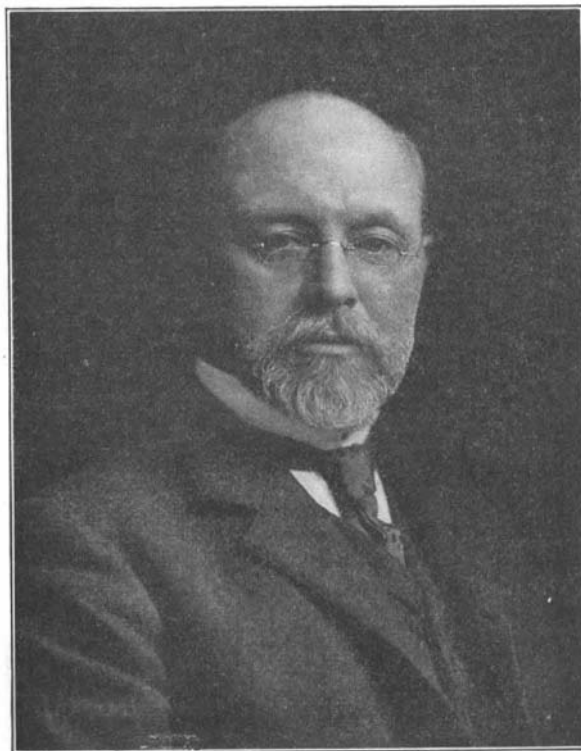
PROF. IRA REMSEN, PRESIDENT OF THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

BY MARCUS BENJAMIN, PH.D.

For the first time since the civil war, the American Association for the Advancement of Science has held a winter meeting. This meeting was the fifty-second meeting of the Association and was held in Washington. The retiring President, Professor Asaph Hall, famous for his discovery of the moons of Mars, at that gathering yielded the chair to one who has been honored by the Association in consideration of his researches in the domain of chemistry.

Ira Remsen was born in New York city on February 10, 1846. He studied for a time at the College of the City of New York, and then entered the medical department of Columbia University, where he was graduated in 1867. He then went to Germany and entered the University of Munich, where he devoted his attention chiefly to the study of chemistry, and a year later passed to the laboratory in Göttingen, where, in 1870, he received the degree of Ph.D. On the invitation of Professor Rudolph Fittig he went to Tübingen, and for two years continued as assistant in the chemical laboratory of that university.

He returned to the United States in 1872, and was promptly called to the chair of chemistry and physics



Ira Remsen

in Williams College, remaining there four years. On the organization of the Johns Hopkins University in 1876, he was invited to the chair of chemistry of the new university, and has since continued in that place. He organized the chemical department, and since, with facilities that are not excelled in the United States, has directed the many chemical researches that have emanated from the Johns Hopkins laboratory.

Notwithstanding the very great amount of executive work that has devolved upon him, he has nevertheless still found time to do much original work himself, which may be summarized as follows:

1. Oxidation of Aromatic Substitution Products.—This investigation showed that the position of an oxidizable group in an aromatic substitution product has much to do with the effect of oxidizing agents upon it. When such a group is in the ortho position with reference to some negative group that is not oxidizable, it is not materially changed by the action of acid oxidizing agents; while the same group in the meta or para position is easily changed by such agents. This protective influence of negative groups in the ortho position was tested in a large number of cases, and although a few apparent exceptions were brought to light, the influence was clearly established. Later work by Victor Meyer showed a similar effect in the case of esterification, and still later work in the laboratory of the Johns Hopkins University showed that a similar protective influence is exerted in the action of hydrolyzing agents on acid amides.

2. The Sulphinides.—These bodies form a new class of compounds with interesting chemical and physical

properties. The best known member of the class is the substance that is popularly known as saccharin. This has come into extensive use on account of its intensely sweet taste. Some members of the class are extremely bitter. Others are both bitter and sweet. The chemical properties of the substances have also been shown to be of considerable interest.

3. Double Halides.—These were for many years regarded as molecular compounds. The investigations on this subject have made it clear that they are analogous to oxygen salts, and that in them two halogen atoms acting together play the same part as an oxygen atom in the oxygen salts. This relationship is now recognized by all who have occupied themselves with investigations in this field, and by chemists generally.

4. Decomposition of Diazo Compounds by Alcohol.—This series of investigations led to conclusions at variance with those that had been previously held. The alcohols have been shown to act in much the same way as water in most decompositions of diazo compounds, the normal product being in each case a phenol ether, though in some cases, which are exceptional, hydrogen is substituted for the diazo group. This was formerly supposed to be the normal reaction in such cases.

His scientific attainments have frequently led to his services being sought for as an expert in cases of unusual importance. In 1881, he was invited by the city council of Boston to look into a particular condition of the city water, which was unfit for use, owing to a disagreeable taste and odor. Dr. Remsen showed that the trouble was due to a large quantity of fresh-water sponge in one of the artificial lakes from which the water was drawn. He was also intrusted with special researches by the National Board of Health, including "An Investigation of the Organic Matter in the Air" and "On the Contamination of Air in Rooms Heated by Hot-Air Furnaces or by Cast-Iron Stoves."

The exceptional ability shown by him in the care of the department under his supervision led to his being appointed vice-president of the university, and frequently, during the absence of Dr. Gilman, he served as acting president. In June, 1901, he was chosen to the presidency of the Johns Hopkins University, in succession to Dr. Gilman, which place he still holds.

Dr. Remsen founded the American Chemical Journal in 1879, and has edited that periodical ever since. He has also found time to prepare a valuable series of text books. These began with his translation of Fittig's "Organic Chemistry" (Philadelphia, 1873), which was followed by "The Principles of Theoretical Chemistry" (1877); "Introduction to the Study of the Compounds of Carbon, or Organic Chemistry" (1885); "Introduction to the Study of Chemistry" (1886); "The Elements of Chemistry" (1887); "A Laboratory Manual" (1889); and "Chemical Experiments" (1895). Of nearly all of these several editions have appeared, and translations into German and Italian have been made of them.

The degree of LL.D. was conferred upon him by Columbia in 1893, and by Princeton in 1896, and since 1882 he has been a member of the National Academy of Sciences, of which organization he is now foreign secretary. He is also a foreign member of the Chemical Society of London, and an honorary member of the Pharmaceutical Society of Great Britain. A year ago the American Chemical Society, recognizing him as a worthy successor to Draper, Lawrence Smith, Genth, Chandler, and other distinguished chemists, chose him as their president, and this year he will deliver a retiring address before that body.

His connection with the American Association began with his election at the Portland meeting in 1873. Two years later he was made a fellow, and in 1879 he presided over the chemical section at the Saratoga meeting, presenting on that occasion, as his retiring address, a strong appeal for the study of organic chemistry, in which he contended that in the educational institutions in this country the pursuit of that branch of chemistry had been sadly neglected. Since then he has been a frequent attendant at the meetings, and his interest in science was recognized at the Pittsburg meeting by his elevation to the presidency of the largest of the American scientific organizations.

Further Marconi Transatlantic Messages.

On December 28 Marconi published the text of some messages sent across the Atlantic between Table Head and Poldhu. The messages were addressed to the Queen of Italy, Sir John Lane, Heniker Heaton, and the Italian Minister of Marine. They were all New Year's greetings.

The first allotment of grants by the Carnegie Institution, which has been endowed by a gift of \$10,000,000 from Andrew Carnegie, has been made to Prof. Atwater to enable him to continue his investigations with the Wesleyan calorimeter. The trustees of the Carnegie Institution have also made awards to Yale University. The departments of the university which are to be benefited are those of paleontology and psychology. The work of Prof. Marsh in the former and of Prof. Scripture in the latter has undoubtedly done much for Yale.