

Clipping, April 25, 1903

Wash 4/25/03 T PROF. BELL'S AIRSHIP Kite Structure Which May Solve the Problem. DESCRIPTION OF INVENTION

National Academy of Sciences Treated to the First Public Exposition of the Principal of the Tetrahedral Kite as Improved by the Professor—Results of the Professor's Experiments.

The feature of yesterday's session of the National Academy of Science, at the National Museum, was an informal lecture by Prof. Alexander Graham Bell, upon the subject of the new kite that he recently invented, and upon which he has been conducting a series of experiments for some time past at his Washington laboratory.

In fact this is the first time Dr. Bell has given any definite announcement of the results he has attained in aerial science, and for the first time displayed models of his new kite, which, without doubt, comes nearer being a flying machine than anything ever invented.

At the outset of his paper, Dr. Bell stated that he had observed that in the old Hargrave box kite, and all subsequent kites and flying machines of the same order, that they were defective in two ways.

First: The box kite is braced in a horizontal and vertical direction, but not otherwise, so that cross supports have to be introduced in the frame which increases the weight without adding to the flying power, and at the same time operate as an obstacle to the wind.

Second—But the chief defect of the box kite, of which Bob Langley's aeroplane is an elaboration, is that the weight increases with the cube as rapidly as the lifting power does with the square, so that the larger the kite, the less it will lift in proportion.

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The Tetrahedron Kite.

In view of these facts, he had been led, he said, to construct a kite, the frame of which would present the form of a triangle no matter what side one viewed it. In other words, the frame was a perfect tetrahedron, and in experimenting with the same, found, as he had expected, that it was self braced in every direction, and, moreover, that the lifting power increased at a greater ratio than the increase in weight. He was, furthermore, surprised at the facility with which such a kite could be managed.

By combining a great number of these kite tetrahedrons he had recently built up an immense kite, with which he successfully lifted not only a man, but a weight of 200 pounds, showing the vast improvement of this over all previous machines of the same order.

Prof. Bell displayed the models and photographs taken at his laboratory of the large flying machine built up of a great number of tetrahedron kites.

Prof. Bell explained that one beauty of tetrahedron kites was that they could be grouped into any form desired, just as a person can build any form of house. In this way he had constructed an airship capable of lifting a 200-pound weight. This statement created quite a stir among the gentlemen of science, as it is without doubt the latest advance in aerostatics, and that, too, of quite a notable character. It was apparent on all sides that the idea advanced by Prof. Bell was a new one to science.

Air Velocities Out at Sea.

Apropos of his own experimenting, he called attention to some recent experiments in towing kites attached on the end of lines of great length to the sterns of Atlantic liners. Instruments for measuring air velocity, &c., had been attached to these kites, and some important observations recorded of the upper air currents in midocean.

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Prof. Theodore Gill, curator of zoology of the Smithsonian Institution, read the next paper, a biographical memoir on Dr. J. E. Holbrook, one of the first writers on the American herpetology and ichthyology.

Dr. Holbrook was born in England, came to this country while young, and settling at Charleston, S. C., married a lady of one of the first families of that State. This was in the late twenties. Holbrook was a physician, but was devoted to the study of reptiles and fishes, and was the first to arrange and classify the snakes, chelonious and batrachians of America, until then in utter confusion. He was, according to Dr. Gill's memoir, a man of strange and eccentric habits. In the hospital, when he gave a patient a dose of medicine and the latter showed signs of vomiting, he was in the habit of dashing a glass full of cold water in their faces. The chill, surprise and anger of the patient, following such treatment, caused them to forget all about vomiting, and hence, were enabled to retain the medicine he had administered.

Prof. A. L. Day read a brief paper on the "Melting Point of a Simple Glass," of considerable interest to chemists.

Election of Officers.

At the morning session Dr. Ira Remsen, president of Johns Hopkins University, was elected vice president of the academy, and Prof. Simon Newcomb, of this city, foreign secretary; Prof. J. S. Billings, of New York; H. P. Bowditch, of Boston; G. J. Brush, of New Haven, Conn.; C. D. Walcott, of Washington; W. H. Welch, of Baltimore, and G. E. Hall, of Williams Bay, Wis., were elected additional members of the Academy Council.

The following gentlemen of science were elected members of the academy: Thomas C. Chamberlain, Chicago; M. James, Cambridge, Mass.; Arthur G. Webster, Worcester, Mass.; Horace L. Wells, New Haven, Conn.; Edward L. Mark, Cambridge, Mass.

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In addition to other business transacted yesterday, a committee of the academy called upon Secretary Hay, with whom the gentlemen of the committee conferred relative to the preservation and restoration of old and valuable manuscripts.

Secretary Hay and Librarian Allen, of the State Department, are deeply interested in this matter, having given it considerable study since the fading away of some of the very old state documents, and the interview was quite satisfactory.

At the conclusion of Dr. Gill's paper at 4 p. m. yesterday, the academy adjourned, to meet in Chicago some time next fall, probably in November, President Agassiz stating that the date would be announced later.

Just before adjournment was taken President Agassiz also announced that the papers by Prof. Osborn, who could not attend, and his own, entitled "The Nomenclature of the Topography of the Bottom of the Oceans," would be postponed, to be read at the Chicago meeting.