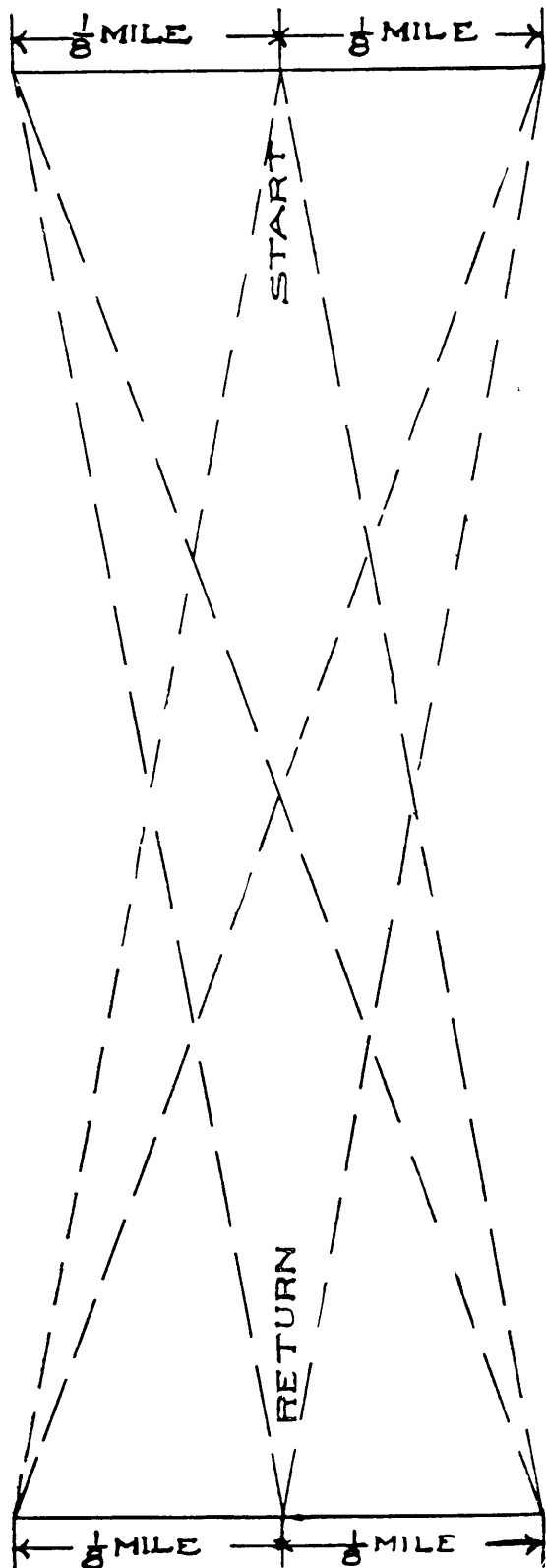


(b) For the longest time in the air, starting from the Exposition grounds.



PLAN OF COURSE FOR FLYING MACHINE NOT CARRYING OPERATOR.

(c) For landing nearest to the Washington Monument in the City of Washington, D. C.,

the start being made from the Exposition grounds, in St. Louis.

(d) For the longest distance travelled in one flight in any direction, starting from the Exposition grounds.

(e) Time—These four contests will take place on four different dates, to be announced by the jury at least six days before the dates, on which every contestant must start.

(f) In the race to Washington, D. C., each contestant may make as many subsequent trials as he may choose prior to the first day of November, 1904, at which time the prizes shall be awarded.

(g) Entry Fee—An entry fee of Two Hundred and Fifty Dollars (\$250.00) will be required in each of these four contests, the fee to be returned after the competitor takes possession of his space and is ready for the competition.

VI.

GENERAL REGULATIONS APPLYING TO ALL AËRONAUTIC CONTESTS.

(a) The conduct of the contests will be in the hands of an International Jury, to be hereafter constituted, but will be subject to these rules and regulations:

(b) No hot-air balloons will be permitted.

(c) The Exposition Company will provide suitable enclosure for the aëronautic grounds, and defray all necessary operating expenses connected therewith, but each competitor must provide any special structure or apparatus required by his exhibit, at his own expense.

(d) The Exposition will provide at cost price all gas and fuel that may be required by the competitors at the expense of the competitors, and no competitor will be allowed to provide his own fuel or manufacture his own gas.

(e) In case of unfavourable weather conditions on the dates set the judges may postpone the contests or order them to be repeated.

Obituary.

SIR FREDERICK ABEL, BART.

Though the late Sir Frederick Abel was a specialist and had the reputation of being the greatest living authority on explosives, he showed throughout his life that it is possible to be a specialist and yet extend sympathy to most varied departments of science. The loss of Sir Frederick Abel will be most keenly felt by

the scientific world generally, and more especially by those numerous scientific institutions to which he devoted himself with heart and soul.

Not only was Sir Frederick Abel a member of the Royal Society, but he was the recipient of a gold medal in 1887 from that illustrious body. For nearly half a century he had been actively connected with the Society of Arts. In 1868 he was elected on the Council; and as time went on, served as Vice-President and Chairman. In 1891 he was the recipient of the Albert Medal. In 1886 he was appointed organising Secretary of the Imperial Institute, though, subsequently, he gave up the remuneration of that office and became Honorary Secretary and Director.

But it is his connection with aërial matters that demands notice in this journal. It was the developments of electric balloon signalling that specially attracted the acute perceptions of Sir Frederick Abel. He at once realised that signalling at an altitude by making military signalling independent of the configuration of the country, gave it a new and important character. Almost immediately after Mr. Eric Stuart Bruce gave his first demonstration of his electrical signalling balloon at the Albert Palace in 1885, Sir Frederick Abel, being on the Government Committee which attended to these matters, urged that the invention should have the immediate attention of the Government, and obtained a Government grant for the inventor to carry on experiments for the War Office; experiments which resulted in orders from the British Government, an example quickly followed by several other Powers.

In his Presidential address before the British Association, he spoke of the flashing of incandescent electric lamps in mid-air from the ground as one of the triumphs of electricity. It was Sir Frederick Abel, too, who, on the occasion of the opening of the Yachting Exhibition at the Imperial Institute, personally conducted the King, then Prince of Wales, to the gallery, in which demonstrations were being given of the value of the signalling balloon in naval operations. Through his enterprise, too, was delivered the lecture at the Imperial Institute in 1897 on the adaptation of electric balloon signalling to Arctic exploration.

Side by side, with his scientific abilities, Sir Frederick Abel displayed sterling qualities. He acknowledged merit for merit's sake when he saw it, nor did he hesitate to speak of others the kind word where it could avail.

NOTES.

Professor Langley's New Experiments.—All interested in the progress of aërial navigation by bodies heavier than air will be glad to hear that Professor Langley is conducting experiments for the American Government. He is not prepared yet to make results of his experiments public; but during an interview with the Honorary Secretary of the Aëronautical Society of Great Britain last month in London, he said that he considered we are within measurable distance of a great advance in aërial navigation, and that in two years' time we might expect to witness important results. The Professor expressed his keen interest in the projected experiment of Dr. Barton, in which the latter intends to combine aëroplane and balloon. Though Professor Langley has hitherto himself been the Apostle of the body heavier than air, he considers that those inventors who employ the balloon in a subsidiary sense—as a lifebuoy, with the intention of reducing by degrees the balloon portion of the apparatus till only a body heavier than air remains, have reason on their side. He expressed his admiration for M. Santos Dumont, whom he described as a man of great ability. Speaking of the late M. Severo's death, incidentally, he remarked that though the navigable balloon had not been in his line of thought, he saw no reason against the view expressed by the author of one of the papers at the last meeting of the Aëronautical Society of Great Britain, that possibly the safest place for the motors in a navigable balloon might be the interior of the gaseous envelope.

The Journey of the Mellin Airship Across the Metropolis.—In the last number of this journal there appeared a description of the Mellin airship, which accomplished a journey from the Crystal Palace to Harrow on September 19. The journey reflects great credit on Mr. Stanley Spencer, who has redeemed Great Britain from the reproach that no one in this country had made a journey in a navigable balloon. It has now been claimed that Great Britain now holds the record in airship achievements, the aëronaut having estimated that taking into account his numerous evolutions he traversed 30 miles in his airship. But this opinion opens a controversy. In 1885 from Meudon took place the first return journey by Captains Krebs and Renard in their electrically-propelled balloon. They may claim