Octave Chanute.

Some Notes on "The Father of Aeronautics."

If anyone living has the right to be called "The Father of Aeronautics," it is Octave Chanute, who is spending the evening of his days in honoured peace in Chicago, albeit Chicago does not strike one as the place to spend a quiet evening. Professor Chanute is recognised as the inventor of the biplane, or multiplane type of flying machine, for on a glider built on the multiplane method he made thousands of flights when the Wright Bros. were little boys in knickerbockers. The personal friend of Professor Otto Lilienthal and the leading aeronautic scientists of that day, he lives, happily, to see their dreams realised, and to be the aeronautic father of the pioneers of the power-driven flying machine.

If there is one phase of Professor Chanute's character which strikes one more than another, it is his kindliness to the younger generation. When the Wrights were making their early trials with gliders seven years ago, young and unknown, it was Chanute, a recognised scientist and a leading engineer, who spent weeks with them in out-of-the-way spots, giving them advice from his vast store of experience, and he is still just as ready to let any promising beginner draw on that same store.

His notes on soaring are to-day the basis of all knowledge on the subject, and we earnestly wish that Professor Chanute would gather together all his fugitive writings on the subject of flying, and would publish them in one volume for the benefit of the rising generation.

We give below a brief resumé of Professor Chanute's career, for the facts of which we are indebted to Mr. H. Chadwick Hunter, a writer in our American contemporary *Fly*.

Octave Chanute was born in Paris on February 18th, 1832. At the age of six he went to the United States with his parents, who settled in New York, where he received his education in private schools, and was fitted for the brilliant professional career in which he achieved the greatest distinction. Later he went to the country of the Mississippi, where, in the early fifties, there was a demand for competent engineers in the building of the great railroads of the newly opened West. The success of his early efforts placed him in the position of engineer-in-chief to the Chicago and Alton R.R. in 1863; and until 1873 he was still closely identified with the railroads of Kansas and other sections of the middle-west. In 1873 he was appointed chief engineer of the Erie Railway, and held that position for ten years, when he became the president of the Chicago Tie Preserving Company.

Dr. Chanute has been vice-president of the American Society of Civil Engineers, president of the Western Society of Engineers, and is a fellow of the American Association for the Advancement of Science. He holds honorary membership in the Canadian Society of Civil Engineers, and in the Institution of Civil Engineers of Great Britain. He is also a member of the Century Club of New York. Such associations as these prove that he is worthy of the highest tribute a country can pay to genius.

Dr. Chanute's contributions to knowledge are to be found in the engineering journals of his time, but "The Kansas City Bridge," published in one volume, is certainly one of his most widely discussed papers. It is, however, from another point of view that our readers are interested in Dr. Chanute. During the pursuit of the engineering profession, in which he made a name as well as a living, he found time, like Langley, to devote himself to the subject of aeronautics, in spite of the universal disbelief in the possibility of flying. His book "Progress of Flying Machines," first appeared serially in *The Railroad and Engineering Journal* (later known as *The American Engineer*). The first instalment appeared in October, 1891, and continued through twenty-seven issues of the journal, earning for him the title of "The Father of Aeronautics."

In the preface to "Progress in Flying Machines," he states the object to be: "First, to satisfy himself whether with our then existing mechanical knowledge (1891) and appliances, more particularly the light motors recently developed, men might reasonably hope eventually to fly through the air. He thought the question could be answered in the affirmative. Second, to save the waste of effort on the part of experimenters involved in trying again devices which have already failed, and to point out as much as may be the cause of such failures. To this end an earnest effort was made to gather all the experimental records which were accessible, and to obtain a thorough understanding of them so as to bring out clearly the reason of failure. Third, to furnish an account of those recent achievements which render it less chimerical than it was a few years ago to experiment with a flying machine, and to give such an understanding of the principles involved and of the results thus far accomplished as to enable an investigator to distinguish between an adequate proposal, sure to fail, and a reasonable design, worthy of consideration, and perhaps (after due investigation and preliminary trial) of experiment upon an adequate scale."

It could be seen that up to that date very little had been done toward correlation of the facts of early experiment, and a comprehensive review of the work of investigators in the field of aerial navigation. Dr. Chanute realised that if progress was to be made, the necessity existed for a comprehensive list of the many failures on the part of early experimenters, believing that the time had come for earnest effort and that much profit might be derived from the story of failure if properly set forth. We can now appreciate his work fully, in light of recent achievements, and can congratulate ourselves that so celebrated an engineer should have directed his energies toward what was then believed to be a field of investigation embraced by people regarded by their fellowmen as crazy, and in a class with the perpetual motion cranks. Dr. Chanute had at an earlier date prepared a volume on the subject of aerial navigation, but had restricted himself to ballooning, without attempting to discuss heavier-than-air machines.

The Wrights have acknowledged fully their great debt to Dr. Chanute for his generous aid and co-operation in all their years of early effort, and in his trials at Fort Meyer, upon the occasion of his first visit, Orville Wright had no companion so interested and engrossed as the venerable and distinguished Chanute, whose sensations may be imagined in observing his pupil soaring through the air demonstrating to the world a new art, and to Chanute that his efforts had not been in vain, but that he had fathered a means of locomotion which the great Professor Simon Newcomb had "proved" mathematically to be impossible.

At a meeting of the Board of Regents of the Smithsonian Institution in the lecture hall of the United States National Museum, December 3rd, 1906, to commemorate the life and services of Professor S. P. Langley, Dr. Chanute credited Langley with being the chief inspiration of the Wrights. In a private letter to Dr. Chanute, the Wrights said: "The knowledge that the head of the most prominent scientific institution of America believed in the possibility of human flight was one of the chief influences that led us to undertake the preliminary investigation that preceded our active work."

It may be assumed in addition that since Professor Langley was "one" of the influences, Dr. Chanute was the other. It is seen, too, how closely we must associate the names Chanute, Langley, and Wright in writing the history of aeronautics.

Mr. A. V. Roe is back again in London, this time at Wembley Park, where he is tuning up his new 20 h.p. Avroplane which he recently constructed. He has already made a few successful short flights, and is also making some very interesting experiments in the controlling of planes, curvatures, etc.

A report from Warsaw states that on the 16th of November that good sportsman Baron de Caters flew on his Voisin machine in a strong wind, accompanied by snow. The aviator rose 105ft. and manœuvred in the air for about four minutes. The spectators were greatly delighted with the performance.