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EDITORIAL COMMENT.

The Wright Wings.

The year 1908 has been made memorable by the victory of the Wrights in the great flying competition of the world's aviators. They were not the first to take a flying machine into the air. But they are the first to fly with stability enough for long flights. No one has approached them in the distance of their flights or in the variety of their evolutions. Of them, it may be said with certainty, that they have added the flight of the bird to the achievements of man. Moreover, they were the first to begin the study of the type of flyer, as well as to carry it to systematic success. It is now beyond doubt that when Santos Dumont was astounding the Parisian world with his flights of yards, in one of which he attained the "phenomenal" distance of 300, the Wright Brothers at Dayton had made many flights counted by miles, in one of which they had travelled almost twenty-five. After long waiting they have come to the front, their aeroplane has been accepted by two Governments, and the aviator Delagrangé, who had surpassed Dumont, and Farman, who surpassed Dumont like a true sportsman, handsomely acknowledged their superiority. It is the beginning of a new epoch in the annals of human locomotion. The air has been mastered by man.

These prizemen, to give them their right designation, are not alone in their feat. Others have conquered the air with them, but not with the same degree of mastery. Delagrangé, and Farman, and Dumont are

at the head of a number of bold aeronauts in Paris who have all made progress and are studying the problem of increasing their efficiency. In America the Wrights, who have two rivals for the favour of the American Government, and the veteran engineer Chanute, with the aeronaut Langley, who formulated one of the principal laws of the new scientific art, and flew the first aerodrome made, are also at the head of a most intelligent and enterprising coterie of devotees thirsting for glory. In Canada there are aviators almost by the score, at the head of whom stands the celebrated and most ingenious Doctor Graham-Bell, who hopes to repeat with a type of flyer the degree of success he achieved long years ago with the telephone; who, moreover, has as a guarantee of his success the guidance and material help he gave to Langley, one of the inspirers of the Wrights. In Italy there are inventors all keenly practising, planning, and studying. Russians are finding time to spare, from the horrors of social revolution, to fly and make flying machines, the leader of the adventurous band being the famous aeronaut Tartarinoff. In England there are many devotees and many sceptics. At the head of the latter stands Rankin Kennedy, the famous and very able engineer, who is committed to the theory that aviation is impossible with the heavier-than-air type, but must now realise that there are more things in heaven and earth—and especially the firmament of heaven when a Wright aeroplane goes soaring—than are dreamt of even in his natural philosophy. Of models they have legions; of their makers there are hosts; and their theories are numerous as the sands of the sea. From all these countries there will be a tremendous development for the new art. Man progressed slowly at first. After waiting for thousands of years Montgolfier started with the round gas bag and almost a century elapsed before the first dirigible appeared. A quarter of a century later the first aeroplane flew a little, and within the first decade of the present century, the Wrights brought the art of flying to sureness of stable and rapid flight. After this the progress may be expected to be vastly accelerated. The world has got hold of the secret of the bird, and all defects may be regarded as certain to disappear rapidly before his developed intelligence.

Much has yet to be learnt about the recent flights. How firm is the stability, how far can a gallon of petrol drive, what weight may be supported beyond what is carried now, what are the supports of the

new aeroplane, while on the ground, for there are no wheels, and apparently no power of rising again after flight until carried back to the starting contrivance; these are important questions. Also what is the capacity of the machine without motive power? Does it comprise anything like the soaring of the eagle or the majestic motionless flight of the albatross? Before these questions are answered it is impossible to speculate as to the uses to which the new art may be put. It will be time enough to do that when the answers reach us. In the meantime, it is pretty certain that the Wrights will try to win the *Daily Mail* £10,000 for a flight of 183 miles, to Manchester, from London. That will throw considerable light on the question of the petrol carrying capacity. The hope, we think, of all aviators, is, of course, that the petrol carried may be considered on occasion in the light of a reserve, and that the wind may be made to do the work for the aviator, just as it is made to do it for the bird. When that albatross travelled his 3150 miles, as mentioned in one of our first articles on the subject of aviation, it was pretty clear that he had no motor, and that he travelled that great distance, with added roamings for food, on motionless wings, in the short time of twelve days, averaging eleven miles an hour. If an aeroplane can remain in the air for an hour, why can it not sail from here to Sydney, a little more than a third the distance that bird flew? The petrol uncertainty at once obtrudes itself, barring the way. But if the air can be used effectually as it is used by the albatross, and probably also by the homing pigeon who expends but little motive power in his extraordinary flights, which reach up to eighty miles per hour, only twenty short of the measured flight of an eagle, the petrol problem would be considerably lessened. These considerations lend a vast interest to the rapidly developing solution of this tremendous problem which has creased the ingenuity of men for many centuries.

Great Salt Lake, the American Dead Sea, is slowly drying up. Scientists are now generally of the opinion that this mysterious body of water, situated 4200 feet above sea level, and 1000 miles inland, which has but a single rival—the Dead Sea of Palestine—is certain to disappear altogether within the course of half a century.

The hardest Japanese wood is the kiyaki. It resembles oak in fibre, takes a high polish, and is used for fine work and frames of ships, but is becoming very scarce.

A swallow's speed has often been stated to be sixty miles an hour. Recent experiments prove that a swallow in a hurry can travel at the rate of 128½ miles an hour.