f'LIGHT, 17 December 1954

The Aeronautical Bookshelf

THE REAL WRIGHT BROTHE
"The Papers of Wilbur and Orville Wright", edited by Marvin
W. McFarland, in Two Volumes. McGraw-Hill Book Company
Inc., New York. Illustrated. Price $25.00. (Price in England,
£10: McGraw Hill Publishing Co., Ltd., 95 Farringdon Street,
London, E.C.4.)

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XACTLY 51 years ago today, December 17th, Wilbur and Orville Wright sent a telegram to their father, Bishop Milton Wright of Dayton, Ohio. It stated simply:
"SUCCESS FOUR FLIGHTS THURSDAY MORNING ALL AGAINST TWENTY-ONE MILE WIND STARTED FROM LEVEL WITH ENGINE POWER ALONE AVERAGE SPEED THROUGH AIR THIRTY-ONE MILES LONGEST 5 7 SECONDS INFORM PRESS HOME CHRISTMAS."

Today diose four flights are recognized almost everywhere in
the world as the first proper controlled, sustained flights ever made by a piloted, powered aeroplane, despite the counter-claims of Mozhaisky, Ader and others. Yet it was not until 1942 that
rj?, the{Wrights' claims were accepted officially and fully by even their own countrymen, because of their long and unhappy dispute with the powerful Smithsonian Institution. Described in Volume Two of these Papers, it was responsible for the fact that the 1903 Wright biplane was for many years displayed in Britain. This dispute, together with the Wrights' reticence, contro-versial writings and unprecedented action in taking action for infringement of their patents against Glenn Curtiss in 1909, inevitably made it difficult for their contemporaries to assess their greatness impartially. They behaved at first as scientists working with little thought of reward; yet kept theuydesigns secret, drove a hard bargain and, in 1909, formed a company with a capital of no less than $1 million, turning over to it the disputed patent.
Their friends saw them as modest men. Yet in October 1906 they claimed that there was not "one chance in a hundred that anyone [else would] have a machine of the least practical useful-ness within five years" and that the rivalry of the Bleriots, Voisins and Santos-Dumonts of this world was not to be feared for a very long time.
Now, in these two volumes, the student of aviation history can decide for himself/the true measure of the greatness of these two cycle-makers of Dayton, for there is nothing that reveals a man's true character so much as his private letters.
Not all the Wrights' correspondence is contained even in this formidable work of more than 1,270 pages. A notable omission is Wilbur's letter to Arnold Fordyce on January 15th, 1906, in which he wrote: "Like all novices we began with the helicopter [in childhood] but soon saw that it had no future and dropped it. The helicopter does with great labor only what the balloon does without labor, and is no* more fitted than the balloon for horizontal flight. If its engine stops it must fall with deathly violence, for it can neither float like the balloon nor glide like the aeroplane. The helicopter is much easier to design than the aeroplane but it is worthless when done."

Nevertheless, the Papers have been edited magnificently by the Aeronautics Division of the Library of Congress, under Marvin

McFarland, and make quite clear what aviation experts all over the world now acknowledge—that the real achievement of Wilbur and Orville Wright lay not in flying 120ft in a frail stick-and-string biplane on December/17th, 1903, but in showing that the only true road to progress in aviation was through research.

Theirs was no headlong dash to be the first to fly. They read everything that was worth reading about the efforts of their pre-decessors, asked questions of those men whom they considered had any worthwhile knowledge—notably Octave Chanute—and then started experimenting with gliders. They decided to make their experiments at Kitty Hawk because the winds appeared to be consistently strong and there was "nothing but soft sand to strike on" in a crash. Even then, wrote Orville on October 18th, 1900: "We/ have not been on the thing (yet), but merely experi-ment with the machine alone (as a kite), sometimes loaded with seventy-five pounds of chains. We tried it with tail in front, behind, and every other way."
Those were the words of a scientist, not a would-be birdman; and in these Papers we can trace their steady progress. Their gliding flights in 1900 gave a first indication that Lilienthal's Tables of Normal and Tangential Pressures were probably wrong. Then, on October 6th, 1901, Wilbur wrote to Chanute: "We have made the experiment of balancing a curved surface against a plane surface 66 per pent as large, placed normal to the wind, and find that instead of 5° as called for in Lilienthal's table, an angle of 18° was required. The test was made by mounting the surfaces on a bicycle wheel turned over so that its axis was vertical. We found it impossible to get satisfactory results with a natural wind, so we mounted the wheel on a spar projecting in front of a bicycle and made tests in an almost perfect calm . . ."

Wind-tunnel tests followed; then another glider was built, and another. Their papers record successes, disappointments, doubts, doggedness, patience and, finally, confidence. / Their 1902 glider was a great success; so they designed and built an engine and fitted it to a new "machine" at Kitty Hawk. From there, on December 14th, 1903, Wilbur wrote to his father: "We gave machine first trial today with only partial success . . . The machinery all worked in entirely satisfactory manner, and seems reliable. There is now no question of final success."
Success was, to them, a logical result of research—as logical as the success of a modern multi-million-dollar programme to develop a new fighter. Yet their total investment in the historic Wright Flyer was probably under/a thousand dollars, including its transport to Kitty Hawk. (
It is, then, as scientists that we shall remember the Wrights in aviation history and, for that reason, these two volumes of their Papers are doubly valuable, for they contain 236 first-class illus-trations covering every aspect of the Wrights' early experiments and later flights throughout the world, as well as some of the other great pioneers and their aircraft. And, finally, there are detailed descriptions and G.A. drawings of almost every type of Wright aeroplane from the first gliders to the Model L scout
of 1916, and notes on all the Wright/engines. J. W. R. T.

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"Blue Wings to Bangkok" by Prince Birabongse of Siam. G. T. Foulis and Co., Ltd., 7 Milford Lane, London, W.C2. Illustrated. Price 18s 6d.

THE average British private pilot, who must make a littie flying

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go a long way, should derive a good deal -of vicarious pleasure from Blue Wings to Bangkok, in which racing-motorist "B. Bira" — Prince Birabongse of Siam—describes a 7,300-mile journey in a light aircraft from Lympne to Bangkok, his birthplace. The flight was made, late in 1952, ia-Gemini G-AJWH; Bira was the pilot and the passengers ^wfe his wife Chelita and their dog Tichiboo. On such a journey the occupants of the light aircraft, cruising at 120 m.p^l t fairly low altitudes and stopping fre-quendy for fuel awf rest, see a great deal more man the airline Passenger. Bupf book shows that he took advantage of every opportunityJdt sightseeing—on the ground and in the air. Some renders na y envy the author's villa in Cannes and his life of racing, fiy

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ng, altering, yachting and "various other sports"; but they will
t-v icede, having read this chatty, cheerful narrative, that Bira makes the most of his good fortune.

"Worlds in Space," by Martin Caidin. Sid&uick and Jackson, j-Jd

-> 44 Museum Street, London, Wj&r. Illustrated. Price

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| j ERE is a book which in terrn&'Sasi'y understood by the layman ' puts die case for a belie|4n the possibilities of interplanetary travel. The author begirafwith an account of die developments

in rocketry to date—or, at least, diose developments which have survived security screening—and continues with an appraisal of the many problems, particularly those of a physiological nature, that will need to be solved before space travel becomes practicable. After disposing of the worst foreseeable difficulties without recourse to any remedies which unduly tax the imagination, Mr. Caidin continues to oudine the probable course of events, includ-ing the construction of a apace station, leading to the first landing on die Moon and the establishment of a base there. He concludes with a descriptioa of the conditions assumed to exist on other members of the solar system.
Sixteen photographs and 48 drawings, all of full-page size, illustrate well the points brought out in the text.

"The Heart of the Storm," by David Beaty. Martin Seeker and Warburg, 7 John Street, London, W.C.I. Price 12s 6d.

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RE 22 hours of flying, without rest, too much for an airline pilot? That is die question that Mr. Veitch, manager of the ' Mid-Atlantic Line of British Empire Airways has to answer to the satisfaction of his own conscience and the demands of an economy-minded chairman. By cutting out a night-stop in die Azores,
he could make his line profitable, even with four none-too-reliable Marlborough aircraft; but he finds it difficult to forget that a fifth Marlborough disappeared widiout trace near Gibraltar.
Capt. Mark Kelston is convinced that a 22-hour stretch is too

much;Ibut Mr. Veitch knows that Kelston has a girl friend whom uv