barely made a living. Shuttling between New York and California, he wrote scripts for Broadway and Hollywood in addition to more serious works, such as *The Ways of White Folks* (1934), a volume of short stories.

Rampersad's superb first volume takes Hughes to World War II, when—bankrupt, ailing, a victim of red-baiting—he saw his literary eminence challenged by Richard Wright and his 1940 novel, *Native Son*.

Science & Technology

WILBUR AND ORVILLE: A Biography of the Wright Brothers by Fred Howard Knopf, 1987 446 pp. \$24.95



Civil engineer Octave Chanute said in 1890 that one man could not invent the airplane. How, he wondered, could anyone be simultaneously inventor, mechanical engineer, mathematician, practical mechanic, and "a syndicate of capitalists?"

"Chanute was right," says Howard, a former aeronautics specialist at the Library of Congress. One man could not have had the required expertise. But *two* could, if they were Wilbur (1867–1912) and Orville (1871–1948) Wright.

The Wright brothers' career as Ohio bicycle manufacturers proved to be ideal for aircraft pioneers. They were practical builders and their successful business enabled them to test flying machines without outside backers.

Open-hearted as well as talented, the brothers published their research even before they made the first successful sustained flight (59 seconds) by a powered aircraft at Kill Devil Hills, four miles from Kitty Hawk, North Carolina, in December 1903. If the European press did not always report their progress accurately (France's *Le Pays* referred to glider flights by "Monsieur Wilbug Bright"), European inventors scrambled frantically to match the Wrights' achievements.

Yet it was years before the airplane became a commercial success. In 1905, the U.S. War Department refused to buy a Wright Flyer, claiming it was "far from a stage of practical operation." Only in 1909, after a test at Fort Myer, Virginia, witnessed by 7,000 people (including President William Howard Taft), did the Wrights sell a craft to the government. The price? Better builders than bargainers, the brothers first sought \$100,000, but wound up accepting \$30,000.