

Engineers' Dreams

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area. If this does not kill the project outright, it results in a mountain of paperwork that is far harder to get out of the way than a real mountain of mere rock would be."

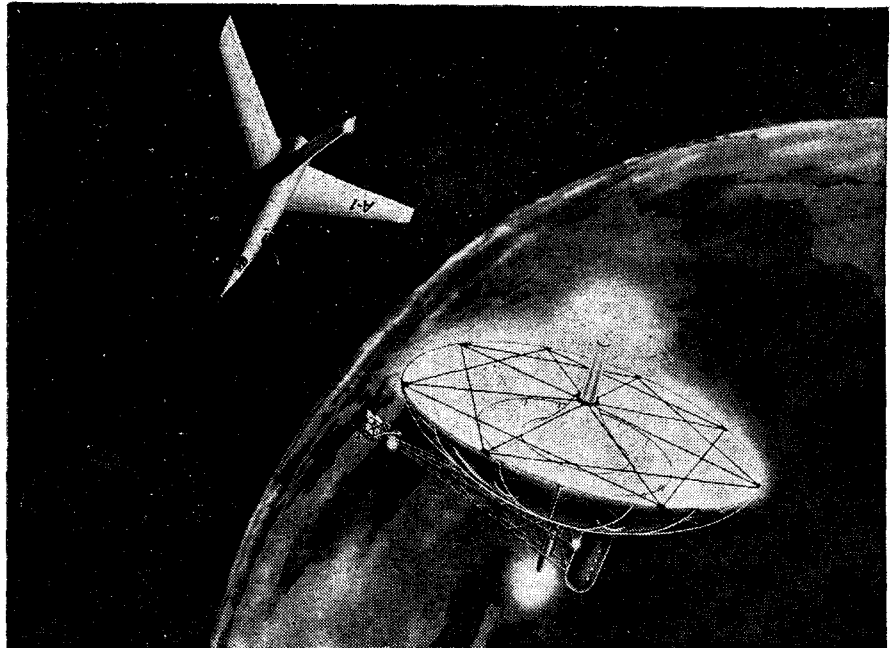
Such considerations apply in full measure to the ambitious and long-range Atlantropa scheme, proposed in 1928 by a Bavarian engineer named Herman Soergel. This is to dam the Straits of Gibraltar and the Dardanelles and to put locks in the Suez Canal. Without the inflow from the Atlantic and despite rainfall and flow of rivers, evaporation would cause the level of the Mediterranean to drop thirty-three feet in ten years and hydroelectric plants at the dams could produce huge amounts of power.

After a century, the level would have fallen 330 feet and a total of 90,000 square miles added to countries along the Mediterranean shore. Then comes the next step: two more dams, one across the now narrowed Strait of Messina, the other to close the small gap remaining between Tunis and Sicily. The western half of the reduced sea would then be kept at its current level by admitting more water from the Atlantic. The eastern half would be allowed, in another century, to sink another 330 feet, then its level would likewise be stabilized.

"In the Mediterranean area," says Mr. Ley, "the final result would be 220,000 square miles of new land and hydroelectric plants of virtually unlimited capacity in a number of places." And, incidentally, the water removed from the Mediterranean would raise the sea level everywhere else about three feet.

Most of these dreams are concerned largely with power, hardly surprising in view of the way our stores of fossil fuels are being depleted. Electrical energy may be obtained not only from water power but also from the Sun's radiation, from volcanic heat, from the winds, from the tides, even from the relatively small difference in temperature between air or water at the surface, and that in water at greater depths, which is cooler in the tropics and warmer in Arctic regions. All these sources have been used on an experimental scale, as Mr. Ley explains; perhaps some day they will supply a major part of the Earth's power needs.

Willy Ley is best known for his writings on space travel and rocketry, but his versatility, already shown in "Dragons in Amber" and "The Lungfish, the Dodo and the Unicorn," is demonstrated again in this fascinating volume.



—From "Worlds in Space."

The space-station. "155 inches of shelf space."

The Engineer Who Proses

"Slide Rule." by Nevil Shute (William Morrow, 240 pp. \$3.50), is an autobiographical account, by the popular British novelist, of the years before he took up writing, when he was concerned with constructing dirigible balloons and with building up a small aircraft manufacturing firm. Here it is reviewed by Henry Ladd Smith, journalism professor at the University of Wisconsin and author of "Airways" and other books.

By Henry Ladd Smith

THERE is a book lately published named "Slide Rule" that purports to be the autobiography of a noted novelist, but actually is the life story of an engineer named Norway who apparently never published a book before. The fact that Engineer Norway and Author Shute happen to wear the same face and body does not prove anything. They are as separate in entity as the precise mathematician, Charles Dodgson, and his alter ego, the whimsical Lewis Carroll, author of "Alice's Adventures in Wonderland."

Perhaps it takes a split personality to succeed both as an engineer and as a writer. The man who deals in the measurement and use of materials often has trouble measuring and expressing feeling, as required of a writer. Nevil Shute has written sixteen books, but his loyal following

will find little of him in this volume. This autobiography is confined to the slide rule side of Nevil Shute Norway. It has none of the spiritual overtones of Shute's last novel, "Round the Bend" (1951), or of "Chequer Board" (1947). It is so matter-of-fact that his marriage is barely mentioned, or even the name of his wife. It is exclusively the account of the earlier, and engineering, phase of a dual personality, and when the main character leaves his aircraft factory in 1938, the story ends then and there. Presumably Author Shute steps out of the wings at this point to take over the engineer's role.

Shute made good use of this engineering background in his writing. In "No Highway" (1948), one of his three best books, the author lets his little hero, an aeronautical researcher, talk knowingly of stresses and "metal fatigue," all of which is an integral part of the plot. On the other hand, Engineer Norway, in this autobiography, makes little of the tools successfully used by Author Shute.

Norway's first job was as a calculator for the famous aircraft designer, Geoffrey de Havilland (always spelled with one "l" in American records). That was during a period of aeronautical doldrums following World War I, when it took a sense of adventure to remain in the business. When the writer quit aviation, he was managing director of a small, but going, aircraft company he had helped establish around 1930.

Much of the book is devoted to his

work on the R.100, the dirigible balloon which carried him as a consultant on its famous Atlantic crossing in July 1930. It was a short-lived triumph, for after the disaster to the sister ship, R.101, the British turned their backs on lighter-than-air construction. Will Shute fans be interested in a matter-of-fact account of details in the building of an aircraft type long discredited on both sides of the Atlantic as a means of transportation? Will Shute's American followers care to share the tribulations in the birth, adolescence, and marriage (to an older company) of a little-known aircraft factory engaged primarily in the building of small carriers and twin-engine trainers? They may not. But as an insight into the other side of a famous storyteller, this book is entertaining and revealing.

Armchair Moonology

"Worlds in Space," by Martin Caidin (Henry Holt. 212 pp. \$4.95), is a synthesis of the latest thinking on rockets and space travel. Willy Ley, who reviews it below, is the author of "Engineers' Dreams," reviewed elsewhere in this issue.

By Willy Ley

A COLLECTION of all the books on rocket research and space travel published—not counting fiction, of course, but including the bound volumes of professional journals—requires a just measured 155 inches of bookshelf space. Of that about eight inches are in Russian, another seven inches in French, while the remaining 140 inches are about equally divided between books (and journals) in English and in German. Obviously there is not much one can say about space travel any more, unless the author has done new research, in the laboratory or with slide rule and handbooks, or else unless the author is a historian who has succeeded in digging up some forgotten facts of either engineering or military history. Since Martin Caidin has neither wielded a slide rule nor buried himself in the files of, say, the *Journal of the Royal Artillery*, or *l'Aérophile*, or the *Archiv für Offiziere der Ingenieurtruppe*, his new book, "Worlds in Space," does not bring anything that cannot be found in recent print.

But because of the large volume of existing literature this statement is by no means as harsh a criticism as it might seem to be at first glance. Few people will have read all the recent books and a rather large number of people will still have to start

Just Published

MANY of the books described below, which cannot be reviewed in this issue because of limitations of space, will be given more extended treatment in forthcoming numbers.

BENJAMIN FRANKLIN AND A RISING PEOPLE. By Verner W. Crane. Little, Brown & Co. \$3. A biography of big Ben from the cramped days in Boston to the king-size times in Europe, and of the workings during his lifetime of the American mind, a mechanism he had a lot to do with.

A CARAVAN TO CAMUL. By John Clou. Bobbs-Merrill Co. \$3.75. Hearts and swords in the days of Jenghiz Khan.

CHILDREN IN THE HOUSE. By Nan Fairbrother. Alfred A. Knopf. \$3.75. An account of a year the author spent in a country house (secret cupboards, a secret room) in England with her two children during the war.

THE FIRST AND LAST FREEDOM. By J. Krishnamurti. Harper & Bros. \$3.50. A selection of some of the writing and recorded talks of the Indian spiritual teacher who now resides at Ojai, California. There is a foreword by Aldous Huxley.

FRENCH STORIES AND TALES. Edited by Stanley Geist. Alfred A. Knopf. \$3.95. An anthology of sixteen not-so-well-known French stories, including the work of Jules Renard, Marcel Schwob, Gohineau, de l'Isle-Adam, Stendhal, Balzac, Flaubert, de Maupassant, Baudelaire, and Huysmans.

HAIL COLUMBIA. By George Sundborg. Macmillan Co. \$5.75. A kind of club sandwich biography dealing with (1) that single-minded river, the Columbia, (2) James O'Sullivan, self-educated lawyer, engineer, and contractor, who (3) helped build and keep the Grand Coulee Dam out of the hands of the public utility monopolies.

A HISTORY OF FLYING. By C. H. Gibbs-Smith. Frederick A. Praeger. \$4.95. A rundown of all of men's attempts to bird it, from the first use of the aerodynamic principles of the arrow to the successful use of planes in World War I.

THE LAST OF THE FATHERS. By Thomas Merton. Harcourt, Brace & Co. \$3.50. A study of the life and work of Saint Bernard, the preacher of the Crusades, who died in 1153, and of the eighth cen-

tenary Latin encyclical on Bernard issued last year by Pope Pius XII, which is translated and annotated in full here.

MADAME DE POMPADOUR. By Nancy Mitford. Random House. \$4.75. Miss Mitford, who writes English novels full of prickles and ice cubes, has here put together an affectionate picture of the French lady who kept Louis XV practising his *entrechats*.

MOSLEMS ON THE MARCH. By Friedrich Wilhelm Fernau. Alfred A. Knopf. \$5. A very large study of the Moslem world—its history, cultures, and place in the world today—that runs from Pakistan to Arabia to South Africa, by a German expert.

THE PAINTED KING. By Rhys Davies. Doubleday & Co. \$3.50. The whole life and death of one Guy Aspen, an English writer-producer-actor-director, who has a sympathetic mistress, an inability to do Shakespeare, and love-hate for his mother.

REBELLION ROAD. By Helen Topping Miller and John Dewey Topping. Bobbs-Merrill Co. \$3. A "whopping good story," according to the dust jacket, about a young, flat-stomached Confederate veteran, and Reconstruction days in and around the old homestead in Alabama.

THE SOCIAL FUNCTION OF ART. By Radhakamal Mukerjee. Philosophical Library. \$10. A kind of global study of the sociology of art—the artist's background, development, place in his culture, and place in relation to other cultures—by the head of the department of economics and sociology at Lucknow University.

STAR IN THE RIGGING. By Garland Roark. Doubleday & Co. \$3.95. In this, Mr. Roark's newest historical tureen, we are told the tale of one Captain Jeremiah Brown who, circa 1832, threw in his lot with the Mexican eagle and eventually became master of the *Invincible*.

THE TWELFTH PHYSICIAN. By Willa Gibbs Farrar. Straus & Young. \$3.50. The doings of a dedicated French doctor in the days of the Reign of Terror. Included are separation from a beloved wife and a year at that famous watering place, Devil's Island.

THE WORLD'S BEST SPY STORIES. Edited by Kurt Singer. Wilfred Funk. \$3.95. A raggedy bag collection of spy tales, including fact and fiction, and the work of such accomplished observers and creators as Rebecca West, J. Edgar Hoover, Joseph Wechsberg, T. E. Lawrence, Conrad, Eric Ambler, and the Old Party.

—WHITNEY BALLIET.

Your Literary I. Q.

Conducted by John T. Winterich

GENTLEMEN OF THE CLOTH

Ned Beatty Bartlow of Baton Rouge, Louisiana, offers the titles of twenty novels each of which has a clergyman for its protagonist. She asks you to name the twenty authors. Sixteen correct identifications should not be too difficult; seventeen will be cause for satisfaction, and eighteen or better should indicate a clear head and a clear conscience. Answers on page 39.

1. The Damnation of Theron Ware
2. The Gown of Glory
3. The Christian
4. The Chain
5. The Stickit Minister
6. The Inside of the Cup
7. The Warden
8. The Sky Pilot
9. The Son of Adam Wingate
10. The Cardinal
11. The Minister's Charge
12. Death Comes for the Archbishop
13. No Banner Before Him
14. The World, the Flesh, and Father Smith
15. Robert Elsmere
16. The Calling of Dan Matthews
17. The Minister's Wooing
18. John Ward, Preacher
19. The Little Minister
20. God's Good Man