

AERONAUTICS

Scientists Calculate How Man May Fly Like Bird

► **MAN MAY** some day be able to fly by flapping a set of artificial wings, two Chilean scientists assert.

Drs. E. Guerra and B. Gunther of the University of Chile, Valparaiso, say it can be done simply by using the mechanical, biological, electrodynamic and aerodynamic similarities of birds and flying insects as a basis for calculation.

A 154-pound man equipped with 66 pounds of flight accessories would need wings about 10 feet long with a flight surface of 60 square feet. To maintain a speed of 45 to 50 miles per hour, he should flap his wings 35 times a minute or a little faster than once every two seconds.

The up-and-down speed of the wing tip should be 15 to 20 miles per hour or about 10 feet per second. The force of a single wing beat would be 45 pounds.

The man would be working about as hard as if he walked up 30 steps a minute. Under the right conditions, a man would be able to keep up this pace for from five to 30 minutes.

Since birds get along so well with a different density from that of man, the man-powered flying apparatus should be constructed to approximate the density of birds, the scientists report in *Nature*, 187:421, 1960.

Birds sense just how well the flight is going by pressures on the wings as well as the body. The scientists suggest something be done to give a flying man the same advantage.

Drs. Guerra and Gunther conclude that "manpowered flight is possible and should be tested experimentally, because new hypothesis and materials (both metals and plastics) are available which can be used to solve some of the engineering problems involved."

• Science News Letter, 78:102 August 13, 1960

MEDICINE

Lifesaving Differs For Laryngectomees

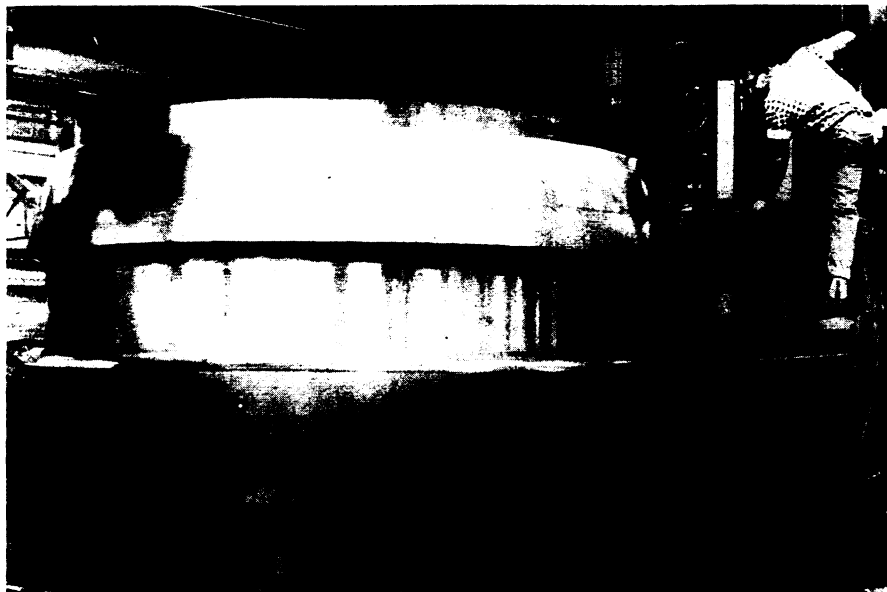
► **THE INTERNATIONAL ASSOCIATION** of Laryngectomees, a group of men and women who have lost their voice boxes to cancer, urged at its St. Louis convention that the public-at-large note "as a matter of life or death" the physical difference between laryngectomees and others:

They breathe through an air hole (stoma) at the base of the neck and not through the nose or mouth. Thus, mouth-to-mouth artificial respiration must not be used. A laryngectomee should be revived by breathing into his stoma.

Most laryngectomees carry with them at all times an emergency card, bracelet or necklace with first aid instructions.

The IAL also has a program to educate community first aid and rescue squads, police and fire departments about their members' special needs. Rehabilitation includes the teaching of speech. Only one-half of the laryngectomees have re-learned speech.

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SEAT OF "BIG DISH"—The inner spherical seat for the main pintle bearing assembly on which the Navy's 600-foot radio telescope, "Big Dish," will turn nears completion at Baldwin-Lima-Hamilton Corp.'s Industrial Equipment Division, Eddystone, Pa. Its partial-sphere shape will assure positive seating of the bearing regardless of the position of the telescope, which will rotate through 360 degrees and scan from horizon to zenith.

LINGUISTICS

Meeting Uses Interlingua

► **ALL PROGRAMS** and advance abstracts of symposium lectures, round table discussions and papers at the First International Congress of Endocrinology, held in Copenhagen, were written in the international language, Interlingua. The abstracts totaled about 300,000 words, the equivalent of a good-sized book.

Interlingua utilizes the major European languages in such a manner that a person with only basic knowledge of them can read it without difficulty.

Dr. Alexander Gode, chief of the SCIENCE SERVICE Interlingua Division, New York, translated many of the papers for the Congress into Interlingua. Bjarner Svejgaard, a Danish scientist with the National Geodetic Institute, and Poul Moth, a biological scientist and a language teacher and translator, translated part of the material into Interlingua.

Mr. Moth said that the scientists at the Congress who had some language background found Interlingua easy for anyone to read. He said the scientists were also very interested in Interlingua.

However, Mr. Moth said, the press had written very little about it and paid only slight attention to it.

At the Interlingua booth, among the exhibits, a complete exhibit of textbooks in Interlingua was displayed. Included was a new Scandinavian-Interlingua dictionary by Mr. Moth.

In this dictionary Mr. Moth tried to arrive at a common language for all Scandinavian people, then translated it into Interlingua.

The dictionary consists of about 4,000 words.

One Interlingua textbook consists of translations from six languages, English, French, German, Spanish, Italian and Scandinavian, to Interlingua.

There was also a textbook on translating Danish to Interlingua, and a new Concise English-Interlingua Dictionary.

An associate of Mr. Moth at the exhibit, Joergen Kofod-Jensen, a civil engineer who is interested in Interlingua as a hobby, said there are plans under way for using resumes in Interlingua in the English language edition of *Ugeskrift for Laeger* (Weekly Medical Journal), the main organ for Danish physicians.

This was the eighth international congress in the field of medicine that, since 1954, has used Interlingua to make unnecessary the issuance of summaries in a multiplicity of national languages. Subjects of the other congresses were dermatology, venereal diseases, rheumatic diseases, cardiology, blood transfusion and blood banks, hematology and pediatric research.

Twenty-three medical journals, including the *Journal of the American Medical Association*, are regularly publishing in Interlingua abstracts of their original papers. Although used principally in medical journals, Interlingua is useful in general and other scientific journals that have international circulation.

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