

## SURGERY

# Hope for the Childless

Enlarging constricted heart valves permits women who formerly could not stand burdens of pregnancy to bear children safely. Operation cuts need for therapeutic abortions.

► AN OPERATION to enlarge constricted heart valve openings offers new hope to childless couples who have feared pregnancy because of rheumatic valvular disease in the wife, a team of Philadelphia physicians reported in the *Journal of the American Medical Association* (July 16).

Organic heart disease, usually rheumatic, accounts for about 25% of all maternal deaths today. The operation, mitral commissurotomy, gives promise of decreasing morbidity and mortality in the pregnant patient, the doctors said.

Drs. Robert P. Glover, Donald E. McDowell, Thomas J. E. O'Neill and O. Henry Janton, from the department of thoracic and cardiac surgery, Presbyterian, Episcopal, Lankenau and Hahnemann Hospitals and the Department of Cardiology, Presbyterian Hospital, made the report.

Use of the heart operation in cases where this treatment is indicated can decrease the necessity of induced abortions in pregnant women suffering from narrowing of the mitral valve opening, or mitral stenosis, also.

Cardiac cases account for 30% to 40% of therapeutic abortions now, they said, and about 85% of these are in cases of

pure mitral stenosis or combined lesions due to rheumatic infection, which are helped by the operation.

Pregnancy throws an increased burden on the heart, and by the 32nd week, the heart's output is 40% to 50% above normal, putting too great a strain on hearts already weak.

The doctors reported the cases of five mitral commissurotomies performed on pregnant women. One patient was operated on at one month of gestation, two at six weeks, one at three months and one at six and a half months. Two of the patients had suffered cardiac failure before the operation and two had mild attacks.

Since commissurotomy, none of them has had cardiac failure. One patient had a spontaneous abortion six weeks after the operation, but the other four safely delivered normal children.

From these cases the doctors conclude that mitral commissurotomy may be safely carried out during pregnancy without harm to mother or fetus. Further, the patients appear to be greatly benefited, and in each case, therapeutic abortion was avoided.

Science News Letter, July 23, 1955

## PSYCHOLOGY

# Play Is Psychic Vitamin

► PLAY IS a "psychic vitamin," a psychiatrist reported to the *American Journal of Psychiatry* (July).

Just as lack of vitamins in human nutrition causes deficiency disease, so lack of play in a child's life, he said, may cause a neurosis to develop.

Five kinds of neurosis can develop in children, reported Dr. F. Schneersohn, director of the Mental Hygiene Clinic, Tel Aviv, Israel. They are home neurosis, loneliness neurosis, school neurosis, street neurosis and stranger neurosis.

Children suffering from home neurosis (and adults, too) can control their abnormal behavior and conceal their neurosis when they are away from home or when strangers arrive. When home alone with the family, they are unconstrained and give full rein to their nervous irritability.

Children with school neurosis suffer the opposite condition. While alone with their family, they feel secure and relaxed and behave normally.

Any neurosis may develop if a child cannot play naturally. The neurosis tends to fill life's unbearable emptiness.

The remedy is to fill the child's day with needed play activity.

Dr. Schneersohn also suggested lack of the play vitamin may cause delinquency.

"Without play the child becomes depressed and indolent," Dr. Schneersohn said. "He does not know what to do with himself. Antisocial or morbid tendencies which he could normally subdue appear, unrestrained. Driven by an inner urge, the child now 'exploits' such antisocial inclinations in order to fill the intolerable vacuity."

Science News Letter, July 23, 1955

## AERONAUTICS

# Probe-and-Drogue Refueling Method

## See Front Cover

► A NORTH American AJ Savage tanker-aircraft refuels a Chance Vought F7U Cutlass in flight, using the probe-and-drogue method of refueling, in the photograph on the cover of this week's SCIENCE NEWS LETTER.

Refueling in air is used to extend an airplane's range. More than 142,000 air refueling hookups were made by the Strategic Air Command in 1954.

Science News Letter, July 23, 1955

# Questions

AGRICULTURE—What are the background of Russian farm leaders visiting the United States? p. 50.

ENGINEERING—How can many common household accidents be reduced? p. 54.

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PSYCHOLOGY—What actions are police advised not to take with mentally ill people? p. 52.

WILDLIFE—Why is an increase in whooping cranes still not assured? p. 53.

ZOOLOGY—What is the life expectancy of a caribou? p. 55.

Photographs: Cover, U. S. Air Force; p. 51, North American Aviation, pp. 50 and 53, British Information Services, Inc.; pp. 54 and 58, Fremont Davis; p. 64, Nuclear Instrument and Chemical Corporation.

## ENGINEERING

# Loud Speaker Without Vibrating Membrane

► ENGINEERS in Hanover, Germany, are perfecting a loud speaker that has no vibrating membrane. Instead, it uses a pocket of ionized air to obtain higher fidelity.

An ordinary loud speaker has a cone-shaped membrane that excites nearby air to create a sound. The inertia of this cone causes distortions in reproduction. The vibrating pocket of air in the new loud speaker, called the Ionophone, will create the sound without this setback, the designers say.

The Telefunken Company in Hanover hopes to develop a commercial model of the device, invented by M. S. Klein of Paris.

Science News Letter, July 23, 1955

# Understanding Yourself

By Dr. Ernest R. Groves

This inspirational book, now in its well-merited 8th printing, has helped thousands to live more wisely, more fully, more happily, more effectively—in the best sense, more profitably; for a thorough understanding of self is the very bedrock foundation on which to build for peace of mind and sound mental health.

"The attempt of the book is to provide means by which the reader can come to a better understanding of himself. All emphasis is on the utilization of one's mental and physical equipment in such a way that happiness and efficiency may be realized."

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