

SURGERY

Twin-Separating Surgery

Survival of the Siamese twins, who were born joined at their heads, through the 12 hours and 40 minutes of the separation operation is a credit to modern anesthetic methods.

► FOR THE fact that the Brodie Siamese twins survived the day-long separating operation itself, modern methods of inducing anesthesia will get a large share of the credit.

During the 12 hours and 40 minutes that a surgical team of 15 specialists of the University of Illinois College of Medicine in Chicago worked to cut the final tie between the heads of the two babies, the infants themselves were kept in an unconscious state just a little better than a light sleep. The operation was discontinued before the plastic repair of skulls and scalps because the surgeons and anesthesiologists did not want to give any more anesthetic.

In charge of this part of the operation was Dr. Max S. Sadove, anesthesiologist who, a little over a year ago, carried out dramatic experiments with human guinea pigs that led to adoption of a new method of giving artificial respiration.

For keeping the Brodie twins safely asleep all day while surgeons cut the brain covering and vein the twins had in common, Dr. Sadove juggled various modern anesthetics. These include sodium pentothal, one of the barbiturates which is given by injection into a vein; avertin, a chemical

given rectally; nitrous oxide, the gas used by dentists for tooth extraction as well as for other kinds of operations; and tetrachloroethylene, another gas or inhalant anesthetic related chemically to the trichloroethylene used for mothers in childbirth, among them Queen Elizabeth when she had her first baby.

Besides the anesthetics, a tube was put into the trachea, or windpipe, of each baby so that oxygen could be delivered directly into his lungs as needed.

Probably sharing honors for enabling the babies to survive the operation at all were the six quarts of blood transfused during the operation. All the blood in each baby's body was replaced two or three times, since a 15-month-old baby normally has only between 900 and 1,000 cubic centimeters, or about one quart, of blood. The six quarts were not equally divided. One infant got three and a half quarts and the other two and a half, approximately.

This tremendous quantity was needed because of the great blood loss when the sagittal sinus, or vein, in the brain covering was cut. This part of the operation gave unexpected trouble because it was not until surgeons got to it that they found there was only one of these sinuses for both twins.

Science News Letter, January 3, 1953

MEDICINE

Discover Way Cortisone Aids Allergic Disorders

► DISCOVERY OF the way cortisone, famous anti-rheumatism hormone, acts on body cells to relieve allergic disorders such as asthma, eye diseases and serum sickness was announced by Dr. Herbert R. Morgan of the University of Rochester, N.Y., School of Medicine and Dentistry at a meeting of the New York Academy of Medicine.

The hormone acts directly on allergic, or hypersensitive, cells to protect them from the substance that would poison the cells because they are oversensitive to it, Dr. Morgan found in studies with Robert H. Leahy, medical student.

Their study was made with cells growing in tissue culture outside the animal body. The cells selected for the study were from guinea pigs hypersensitive to tuberculin, used in skin tests for tuberculosis. Individual cells from these animals were subjected to tuberculin. Those that had first been treated with cortisone did not die although untreated cells did.

Science News Letter, January 3, 1953

Do You Know?

Prehistoric women used animal sinew for thread.

Microfilm enables libraries to conserve 95% of their storage space.

A fish known as the *grunion* swarms onto California beaches in unbelievable numbers to spawn at night during certain phases of the moon.

Tiny amounts of *elements* imbedded in the surface of a substance can be detected by a new machine that bounces a stream of protons off atoms in the sample.

INVENTION

Patented Coat Hanger Alarm Foils Thieves

► THAT "WATCH Your Coat" sign may disappear from the restaurants of the nation if an invention just patented comes into use.

It is a coat hanger with a built-in burglar alarm.

The alarm is a spring-operated device, actuated when the weight of the coat is removed from the hanger. A lock is provided so an authorized person can remove the coat without setting off the alarm.

The inventor, Juby E. Towler, Danville, Va., says the hanger would also be fine for stores with valuable garments and fur coats for sale. Patent number is 2,620,761.

Science News Letter, January 3, 1953

EUROPE ON A SHOESTRING

It probably costs much less than you think to see Europe. For one thing there are many low cost tours originating in Europe, the kind that economical Europeans buy for themselves. Some are as low as \$5 a day for hotels, meals, sightseeing, etc.

The book that describes these tours and many other ways to see Europe as nearly on a shoestring as possible is the 1953 edition of *Europe on a Shoestring*.

Here are facts galore on—

What to see from one end of Europe to the other, including England, France, Italy, Switzerland, Austria, Scandinavia, etc.

When it's cheaper to rent a car than take your own; how to buy and sell a car overseas.

How to get the most for your money when going via rail, bus, sightseeing coach, etc.

How to save on foreign exchange. This part of the book alone will pay for its cost many times over.

In short, it covers everything you want to know—from what to see to how to see it, with facts, facts, facts. There's a handy guide to "How to Say It in 7 European Languages" (that section alone is also worth the price of the book). Of course, it's specific about passports, visas, customs here and in Europe, clothing to take, etc.

"No traveler can afford to go to Europe without this book," writes a travel agent. "Your book saved me enough last year to bring home lots of gifts," writes a woman. "The intelligent traveler's guide to Europe," says the French Government travel office.

For two dollars you get this money-saving book, plus 2 supplements on where to stay, eat, and shop in England and France—more help on seeing Europe comfortably and at low cost.

Tear out ad, print name and address on sheet of paper, and mail with \$2 to HARIAN PUBLICATIONS, 4 ELLIS DRIVE, GREENLAWN (LONG ISLAND), NEW YORK.

Questions

ENTOMOLOGY—What solution can be added to rinse water to mothproof clothes? p. 12.

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MARINE BIOLOGY—What development promises a revolution in the fishing industry? p. 6.

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OPTICS—How can a mirage be made in the laboratory? p. 5.

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PHYSICS—What is the estimated age of the universe? p. 5.

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PLANT NUTRITION—How can broken glass help gardens to grow? p. 9.

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PUBLIC SAFETY—Why are tire chains important for winter driving safety? p. 8.

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RADIO—How did shortwave broadcasts come through in the past year? p. 9.

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Photographs: Cover and p. 5, University of Rochester; pp. 3 and 6, Consolidated Vultee Aircraft Corp.; p. 7, Marine Studios; p. 14, Philadelphia Electric Co.; p. 16, Chicago Photographers.