

MEDICINE

# Rare Operation Gives Lye Burn Victim Artificial Esophagus

## 16-Year-Old Girl Swallows Water and Other Liquids Directly Into Stomach for First Time Since Age of Two

**A** 16-YEAR-OLD girl, Louise Dodson of Baltimore, whose esophagus was closed by lye burns when she was a baby, is swallowing water and other liquids directly into her stomach for the first time in 13 years as a result of an operation which has only once before been successfully performed in the United States.

The operation, or series of them, which gave Miss Dodson an artificial esophagus to carry food and water from her mouth to her stomach was reported by Dr. John Staige Davis and Dr. Edward S. Stafford, of the Johns Hopkins Medical School, at the meeting of the Johns Hopkins Medical Society.

To make the artificial esophagus, Dr. Davis devised a new method of creating a tube of skin by rolling together skin from her chest and covering it with more skin grafted from her back and flanks. This skin tube runs in front of her chest from her left collar bone almost to her stomach. It lies outside of her ribs but beneath the skin, so that, with the graft method specially devised to reduce scarring and deformity, Miss Dodson's appearance is not marred by her artificial esophagus.

The skin tube is connected at the upper end to the remaining natural esophagus. At the lower end it is connected with the stomach by a segment of jejunum, which Dr. Stafford cut out of its place in the small intestine. After sewing together the remaining pieces of intestine, the segment of jejunum was brought carefully up inside the abdomen to the end of the stomach near the heart and there one end was attached to the stomach. The upper end of this segment of intestine was brought through the abdominal wound, drawn beneath the skin of the abdomen and sewed to the lower end of the skin tube Dr. Davis made.

The connecting link between the skin tube and the stomach was made from jejunum, instead of skin, Dr. Stafford explained, because the tissues of this part of the intestinal tract can stand the acidity of the stomach juice far better than does skin.

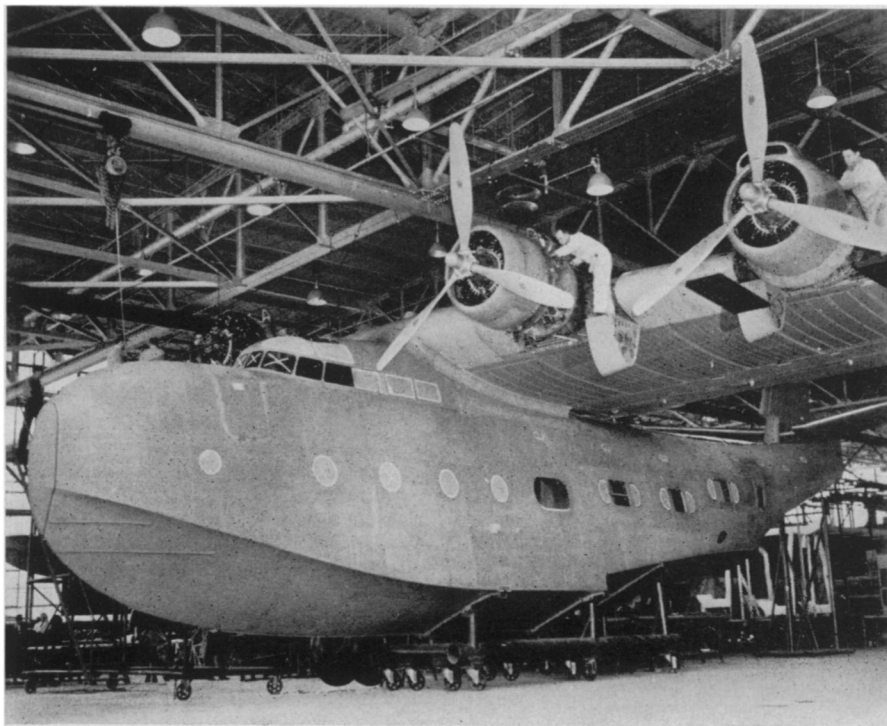
Construction of the artificial esophagus was delayed until Miss Dodson had reached her full growth, because no one knew whether an artificial esophagus would grow in length as its young owner grew taller. From the time in 1928 when she swallowed a quantity of lye, at the age of two years and 11 months, until last month (Oct., 1941), Miss Dodson had lived entirely on food poured through an artificial mouth cut into her stomach. Most of this time was spent at the hospital or at Happy Hills, a convalescent home near Baltimore. She has spent a total of 2,036 days, or five years and nine months, in the Johns Hopkins Hospital, and has had a general anesthetic, usually ether, on 67 occasions.

Cost to the hospital of her care to date has been \$9,912.

During the first year or two following the swallowing of the lye, Miss Dodson had pneumonia repeatedly, twice with empyema. This was because saliva, which could not be swallowed into the stomach, would get sucked into her lungs. During this period, although she was being fed through the tube into her stomach-mouth, she gained no weight for nearly 18 months.

Convinced that Louise's esophagus would never again be useful and that she could not survive many more attacks of pneumonia, Dr. Davis began the long series of operations which have resulted in the successful artificial esophagus reported upon. First step was the cutting of a hole between the upper end of her esophagus and the skin of her neck through which saliva and fluid swallowed was expelled. After this Miss Dodson, then not quite five years old, began to gain weight rapidly and had no further attacks of pneumonia.

Only other successful case of complete reconstruction of an esophagus reported in American medical literature was performed in 1934 by Dr. Alton Ochsner,



**FLYING SHIP**

*This is the first of a fleet of four-engine flying ships built to carry passengers non-stop across the Atlantic for American Export Airlines. The ship, which has a wing-span of 124 feet, is expected to have a top speed of 235 miles per hour, cruising speed with full load of 175 miles per hour, maximum range of over 6,000 miles. It will carry 40 passengers.*