

SURGERY-PHYSICS

# Mutes Given Natural Speech By Improved Voice Box

Artificial Larynx Removes Dread of Loss of Speech Following Operation for Cancer of the Throat

**A**N ARTIFICIAL voice box which works so perfectly that it gives the effect of natural speech to a listener in an adjoining room has been devised by Dr. Charles Sheard of the Mayo Foundation. The instrument is used by persons who have lost their natural voice box, or larynx.

The artificial larynx is said to give better results and to be more easily used than any of the previously devised ones. It even permits of some modulation of the voice.

The instrument is a voice-saving device for sufferers from cancer of the throat who have undergone a life-saving operation. The operation is radical and often destroys the vocal apparatus. After this operation, the patient must breathe through an opening in the neck, and is unable to speak.

In the early stages of the disease, when the radical operation offers a practical certainty of cure, sufferers have often hesitated because they dreaded the loss of their voices. Delay has usually allowed the disease to progress to a point where cure is impossible. With the fear of future silence removed, sufferers are apt to submit to operation early, while there is still a chance of cure.

The artificial larynx is strapped over the opening in the neck made during the operation. It receives air which it sets into vibrations similar to those caused by the vocal chords. This vibrating column of air is carried to the mouth by a small tube and there modified into human speech by the lips and tongue.

Difficulties in modulating the pitch and tone-intensity have been eliminated in the instrument devised by Dr. Sheard. The vibrating reed is made of thin, hard rubber and is removable. This is a great advantage, enabling easy and quick replacement in case the reed is broken, Dr. Sheard pointed out. The tone of the reed is regulated by its length.

"This ensemble is such that the user can carry the artificial larynx in a pocket so that he can at will pick it up, apply

to the neck and use for speech," Dr. Sheard said in describing the apparatus.

Fortunately few persons require an artificial larynx. Cancer of the throat, the only condition requiring removal of the vocal apparatus, is of relatively rare occurrence.

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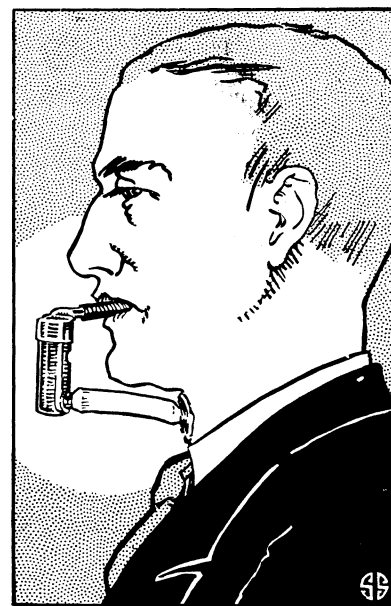
ORNITHOLOGY

## Twin Albino Robins Hatched With Normal Bird

See Front Cover

**T**WO ALBINO ROBINS, highly interesting and rather rare oddities in the bird world, have been watched from hatching to early maturity at the home of H. D. Shaw of Grinnell, Iowa, and had their pictures taken by Miss Cornelia Clarke, nature photographer.

"The nest was built high up on the ledge of the porch where it was sheltered and partly hidden by the vines," Miss Clarke writes. "There were three



### MUTES SPEAK MECHANICALLY

*A man who would otherwise remain dumb all his life is enabled to talk with this mechanical larynx.*

eggs in the nest. Two hatched the albinos and the third an ordinary brown robin. The parents were normal in every respect except that the mother robin had two white tail feathers that were plainly visible when she was in flight. It is a curious circumstance that a white robin was seen near the Shaw home for several weeks the summer before the albinos were hatched."

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PHYSIOLOGY

## Would Explain Deafness by Study of Ears After Death

**A** PLEA to save the ears of deafened persons for scientific study after death, in the hope of learning more about deafness, its cause and possible cure or prevention, was made by Dr. E. W. Hagens of Chicago at the meeting of the American Federation of Organizations for the Hard of Hearing.

"Certain types of deafness, certain changes in the ear have been and still are very imperfectly understood," Dr. Hagens said. "It is easily seen how difficult it is to study these changes that are going on in the temporal bone during life. We cannot see into the depths of the inner ear as the eye may be examined, nor can this part of the ear be

operated on or removed except its function be destroyed."

Study of the anatomy both of normal ears and of ears that have lost the hearing function in various degrees will, it is hoped, teach scientists exactly what changes occur in certain types of deafness, what the causes are, and possibly how the condition may be relieved or prevented.

Material for such study is much more easily obtained in Europe than in the United States, Dr. Hagens pointed out. However, such investigations are being made in at least three universities in this country, Chicago, Northwestern, and Johns Hopkins.

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