



ROARING NORTHEASTER

MEDICINE

Thyroid Removal Gives Relief To Heart Disease Sufferers

COMPLETE removal of the normal thyroid gland is a new method used by a group of physicians and surgeons in Boston to relieve certain types of heart disease. In eleven of thirteen cases the results so far have been successful.

The method has been used in cases of congestive heart failure and dreaded angina pectoris. It was devised by Drs. H. L. Blumgart, S. A. Levine, and D. D. Berlin of Boston, Mass. The theory of the operation is to lessen the load of the overworked heart or weakened arteries in pumping and carrying the mass of blood to the tissues. The amount of work the heart must do depends primarily on the call of the tissues all over the body for oxygen. This in turn is governed by the thyroid gland which determines the rate at which body processes requiring oxygen go on.

Partial removal of the thyroid has helped patients suffering from heart disease due to thyroid disorder. The Boston investigators argued that removal of the gland should also be helpful to patients whose hearts were overworked or strained from other causes. But in order to get permanent relief, the entire gland must be removed, for if any is left it will enlarge and proceed again to speed up the metabolic rate and increase the heart's work.

Complete removal of the thyroid gland is an exceedingly delicate opera-

tion, points out Dr. J. H. Means in an editorial comment on the new method in the *Annals of Internal Medicine*. Dr. Berlin has devised a successful and safe method but Dr. Means warns that only surgeons who have given it special study should undertake this operation.

After the operation, the patients must be given small doses of thyroid regularly to prevent development of serious symptoms of thyroid deficiency, such as gross overweight and sluggishness of mind and body. However, this dosage may be nicely adjusted so as to avoid development of this condition at the same time that the heart is spared from much of its load of work.

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ENGINEERING

Synthetic Waves May Tell How To Save Coasts

WITH SYNTHETIC storms created in a miniature ocean contained in a concrete tank, Prof. Kenneth C. Reynolds of the Massachusetts Institute of Technology hopes soon to be able to tell how to design sea walls that will hold real storm waves at bay and prevent millions of dollars of damage to waterfront property.

The Institute's laboratory ocean, believed to be the first of its kind, is 20

feet long and 6 feet wide. A wedge-shaped plunger moving up and down at one end creates the miniature waves. From the moment they start rolling shoreward to break upon a sandy beach and hurl themselves against the tiny seawall, their behavior is observed. As they break against the seawall and toss spray several feet high, which is equivalent to from 25 to 60 feet in the majestic scale of nature, they carry sand and pebbles beyond the wall just as the sea does on innumerable Atlantic seaboard beaches.

The experiment continues for a time and then the amount of sand which has been carried over can be measured. With the same storm conditions a different height of wall or a change in shape of the face may be tried until the best design for a given beach section can be obtained. Waves from various directions and for different high tides will be imitated so as to thoroughly investigate the entire subject.

In the tests thus far made, the sand often has become undermined near the wall just as it does in nature. Methods for remedying this are to be investigated as well as the effect of breakwaters or other forms of offshore protection.

The best design in the miniature having been found, the results will be transferred to nature, thus eliminating the great waste now involved in trying out and altering this or that expensive scheme.

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AERONAUTICS

British Sky-Writing Done With Frozen Smoke

SKY-WRITING at 20,000 feet with frozen smoke is the latest advertising scheme in England.

Powerful airplanes having a high ceiling and a fairly high speed will write at twice the former height, almost out of the region of "bumps" and cross currents which previously caused the message to be smeared before it could be completed.

At this altitude it will be necessary for the pilots to wear electrically heated flying suits but it is these low temperatures that will improve the clarity of the message by half-freezing the smoke.

At night the advertising will be continued by means of huge searchlights mounted on tall buildings which will project colored patterns against the clouds above.

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