

at present. Georges Claude is engaged in an attempt to utilize ocean heat economically. Tidal energy has been sought on a large scale, the most important current proposal being the Bay of Fundy plant which would yield over a half billion kilowatts. The photoelectric cell, still in its infancy as a commercial proposition, is expected to add further to this enormous store of energy which may some day entirely relieve mankind of the necessity of providing for its own economic welfare.

Science News Letter, August 12, 1933

CHEMISTRY

Unpleasant Smell of Rubber May be Eliminated

THE PECULIAR odor of rubber goods may be diminished by the addition of certain chemicals.

Drs. H. P. Stevens and E. J. Parry, research chemists for the British Rubber Growers Association, have found that the addition of zinc carbonate will counteract the odors produced by nitrogen-containing quickening agents or accelerators used in the process of manufacture.

Rubber raincoats have a distinctive smell that is due to certain petroleum and coal-tar products used in their manufacture, and the less pronounced odor of solid rubber articles is derived from the sulfur used in the vulcanizing process. Steaming the finished goods has been found to be a useful temporary remedy, but permanent removal of the smell can only be effected where pure latex and pure materials have been employed.

Odorless rubber would be extensively used for lining food containers, vats and rubber hose used by brewers, and for other purposes from which it is at present excluded.

Science News Letter, August 12, 1933

The Front Cover

THIS IS a moonlight photograph of the 400-watt electric lamp on the top of Mt. Washington. When flashed recently in visibility tests conducted by the Mt. Washington Polar Year observers, it was noticed as far away as Boothbay Harbor, Me., 95 miles distant, and at many other points in New England.

Current for the light was supplied by a portable gasoline power plant.

MEDICINE

Acid Stomach in Old Age May Be Index to Long Life

VERY ACID condition of the stomach seems to go with youth and when found in old age is an index to a long life, it appears from a study reported by Drs. Zachary Sagal, Jerome A. Marks and John L. Kantor of New York City to the American Gastro-Enterological Association and published in *Annals of Internal Medicine*.

These physicians made 6,679 determinations of the amount of hydrochloric and other acids in the stomachs of nearly that number of patients having symptoms of digestive disorders. The patients were of all ages and came from many different walks of life. Here are some of the other interesting findings of this study, some of which confirm observations by other scientists:

There are several constitutional types with regard to gastric acidity, as well as with regard to other conditions.

After constitutional predisposition, age is the dominating factor in gastric acidity. The greatest percentage of high stomach acidities was found in the fifth decade of life. This is the period when all bodily functions begin to decline, including stomach secretion, Dr. Sagal and associates pointed out. Diminishing amount of acid in the stomach may be considered one of the indications of approaching old age, such as loss of hair and teeth, diminishing activity of the glands of internal secretion and hardening of the arteries.

Sex is also a factor, men having higher degree of stomach acidity at all

ages than women.

Certain diseases are known to be associated with certain ranges of stomach acidity; for example, the acidity is high in duodenal ulcer, while hydrochloric acid is absent in pernicious anemia and cancer of the stomach. These acid levels seem to precede the disease, however, and Drs. Sagal, Marks and Kantor believe that the degree of acidity, which is a constitutional factor, predisposes to a certain disease, rather than that the disease produces the change in acidity.

Regular determinations of the acid in a person's stomach, therefore, are recommended in order to watch for predisposing signs of disease, and also as a guide to treatment.

For example, persons with a tendency to have too much acid in the stomach should avoid spicy and other foods that stimulate stomach secretion. Low acidity, on the other hand, calls for an entirely different diet.

In many cases of heartburn the New York doctors found little or even no acid in the stomach, and they point out that medicinal treatment should be guided accordingly. It would seem that baking soda, favorite home remedy for heartburn, may be all wrong in some cases. If the condition in a given case were due to too little acid, the soda, by neutralizing what acid there was in the stomach, would exaggerate the condition and aggravate rather than relieve the symptoms.

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