

The other end is loosely plugged with cotton, the chamois wrapped over, and the whole held with a wooden clamp to prevent the hand from being frost-bitten. The gas is turned on lightly, frost forms on the glass cylinder, then a column of "snow" rapidly fills it from distal end downward. The cotton in the end prevents too rapid passage of gas. Entire closure would cause reverse pressure, a leak at the nozzle end, and no "snow" would form. The chamois is now wrapped around the cylinder for protection of the fingers, the cotton is removed and the column of "snow" (molded to fine point with finger and thumb if needed) is pushed down with the syringe piston onto the area to be treated. For large areas a hollow wooden cylinder $\frac{1}{2}$ inch to 1 inch in diameter and one inch long is set close on the nozzle of the drum, the junction being made with adhesive plaster and the open end closed with cotton and wrapped with chamois skin. "Snow" is obtained quickly and can be pressed down, using a round bottle of the proper size or a piece of wood as a piston.

Marked simplicity over other methods justifies its publication.
M. B. HUTCHINS, M.D., Atlanta, Ga.

"Mrs. Potter's Pure Walnut-Juice Hair-Dye"—Another Case of Poisoning

To the Editor:—You may be interested to hear that "Mrs. Potter's Pure Walnut-Juice Hair-Dye" is as effective in Boston as in Omaha. About two weeks ago, by courtesy of Dr. J. T. Sherman, of Dorchester, I saw an elderly woman who presented exactly the same picture as Dr. Schalek's patient, described in THE JOURNAL, Feb. 13, 1909, page 557. She stated that this was her second attack, she having been cured of the first about four weeks before at a hospital in the neighborhood of Boston. Her hair had obviously been dyed, and, when questioned, she produced the original bottle, saying that it was to her a new preparation and had been highly recommended. Each of her attacks followed the application of the dye and each responded promptly to treatment.
WILLISTON W. BARKER, Dorchester, Mass.

Benzoate of Soda

To the Editor:—I feel that your editorial on the question of benzoate of soda was timely and well taken. It seems to me that a test of small doses of this drug on healthy men, under hygienic surroundings, with all facilities for recreation and diversion, means little. It will not be the healthy people in good surroundings who will consume canned goods, but most frequently men, women and children in isolated localities who are wholly dependent on such forms of food, and from the latter circumstance alone it very frequently happens that one has to deal with an appetite and digestion that is not up to the standard.
HARPER PEDDECORD, St. Paul, Minn.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish name or address will be faithfully observed.

FREEZING DOES NOT PURIFY ICE

To the Editor:—Please cite authorities, or reports from cities that have investigated the question, showing that freezing does not purify ice.
J. H. MACKAY, M.D., Norfolk, Neb.

ANSWER.—That ice may contain a considerable variety of living and virulent bacteria has been shown by a number of researches. Notter (Treatise on Hygiene, 2d ed., p. 11) refers to investigations made by the State Board of Health of Massachusetts which showed that "there were 81 per cent. as many bacteria in the snow ice as in the waters; 10 per cent. as many in all other ice, and 2 per cent. as many in the clear ice as in the waters. It is therefore much safer to use for drinking water, and for placing in contact with food, that portion of the ice which is clear.

P. Sacerdote (Composition of Ice, *Presse Medicale*, xiv, No. 56; abstracted in THE JOURNAL, Sept. 8, 1906, p. 813) found that whatever the character of the water used, the water obtained by melting

the outer clear parts is almost perfectly pure, while that from the central opaque part contains the impurities. The bacteria do not escape this law, he adds, but will be found congregated in the central part of the cake of ice. Park states that, according to the investigation of Dr. North, the bottom ice, the last to be frozen, contained but 2 per cent. of the number of bacteria in the water.

Harrington cites a case in which a number of French lieutenants developed typhoid from drinking champagne cup made with polluted ice. Most authors, however, agree that the danger of the communication of typhoid by ice is slight.

The State Board of Massachusetts, in its report concerning the bacterial content of the domestic supply, states: "In not one instance of the still freezing of ordinarily polluted water . . . have we been able to find *B. coli*." (Report for 1900.) W. H. Park found no bacilli living at the end of 22 weeks in ice frozen from water containing before freezing 2,560,410 typhoid bacilli per cubic centimeter. At the end of five weeks only 0.1 per cent. of the bacteria were living.

We may conclude then that while infection from recently frozen, polluted ice may occur, it is not likely to do so if the ice is clear and has been frozen for a long time.

The following references may be consulted:

- Fränkel, Ueber den Bakteriengehalt des Eises, *Zeitsch. f. Hygiene*, I.
Prudden: Bacteria in Ice, *Medical Record*, New York, Mar. 26 and Apr. 2, 1887.
Sedgwick and Winslow: Abstract in *Revue Scientifique*, April 28, 1900.
Park, W. H.: *Jour. Boston Society of Med. Sci.*, iv, p. 213.
Hill, H. W.: *Boston Medical and Surgical Journal*, Nov. 21, 1901.
Notter, J. L.: Ice and Snow Water, "Treatise on Hygiene," 2d ed., p. 11.
Harrington, C.: "Practical Hygiene," 2d ed., p. 393.
Park, W. H.: The Importance of Ice in the Production of Typhoid Fever, "Pathogenic Bacteria and Protozoa," 3d ed., p. 306.
Park, W. H.: The Importance of Ice in the Production of Typhoid Fever, THE JOURNAL, Aug. 31, 1907, p. 731.

The Public Service

Army Changes

Memorandum of changes of stations and duties of medical officers, U. S. Army, week ending Feb. 27, 1909:

- Reynolds, F. P., major, ordered to St. Paul, Minn., for temporary duty as chief surgeon.
Miller, E. W., capt., granted leave of absence for two months.
McIntyre, H. B., lieutenant, granted an extension of one month to his leave of absence.
Edie, G. L., lieutenant-col., relieved from treatment at Hot Springs, Ark., and ordered to return to his proper station.
Ashburn, P. M., major, granted leave of absence for one month.
Lambie, J. S., Jr., lieutenant, ordered from Fort Monroe, Va., to duty at Camp St. Asaph's, Va.
Frick, E. B., major, granted leave of absence for ten days.
Chamberlain, W. P., major, detailed to represent the medical department of the army at the meeting of the American Society of Tropical Medicine at Washington, D. C., April 10, 1909.
Webber, H. A., major, ordered to Fort Niagara, N. Y., for duty on relief from treatment at Hot Springs, Ark.
Truby, W. F., major, granted leave of absence for three months.
Adair, G. W., col., retired from active service, on account of physical disability, Feb. 25, 1909.
Hess, L. T., major, granted leave of absence for three months.
Boak, S. D., dental surg., ordered to Vancouver Barracks, Wash., for duty on return from Cuba.
Craig, E. J., dent. surg., ordered to Fort Omaha, Neb., for twenty days, and thence to Fort Crook, Nebr., for one month.
Ryan, E. P. R., dent. surg., ordered to Fort Robinson, Nebr., for one month, and thence to Fort Meade, S. D., for one month.
Wheate, J. M., M. R. C., ordered to Fort Snelling, Minn., for temporary duty.
Patterson, E. W., M. R. C., arrived at San Francisco, Cal., on the transport *Buford* and ordered to Fort Sam Houston, Texas, for duty.
Parkman, W. E., M. R. C., granted leave of absence to March 7, 1909.
Peck, L. B., M. R. C., relieved from duty at Fort Andrews, Mass., and ordered to Fort Banks, Mass.
Tyler, G. T., M. R. C., relieved from duty at Fort Porter, N. Y., and ordered to Plattsburg Barracks, N. Y., for duty.
Sabin, W. E., M. R. C., relieved from duty in the Philippines division; will proceed on first available transport to San Francisco, for orders.

Navy Changes

Changes in the Medical Corps, U. S. Navy, for the week ending Feb. 27, 1909:

- Old, E. H. H., P. A. surgeon, detached from the navy yard, Washington, D. C., and ordered to temporary duty at the Naval Training Station, Newport, R. I.