

SANITARY ENGINEERING

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Treatment of Laundry Wastes.—The principles of the clarification of laundry wastes are: 1. Correct alkalinity and adjust with acid to pH 2.6 for lime or pH 7.0 for alum. 2. Precipitate with lime or alum. 3. Settle; run off clear supernatant liquor. 4. Draw off sludge and dry on sludge bed. 5. Iron sulphate and lime may be used in place of acid and lime. 6. Comparative costs of clarifying chemicals per 1000 gallons of waste are: acid lime method, 28 cents; iron lime method, 24 cents and acid alum method, 7.3 cents.—F. E. Daniels, *Public Works*, 54:6, 190, June 1923.



Beccari System of Garbage Disposal.—Demonstration plant installed at Paterson, New Jersey. System consists of fermentation cells constructed in groups of two or four to a unit. Functioning depends upon action of bacteria developed in the fermenting mass. The cell has a double floor, the bottom one impervious to moisture and inclined so as to lead the drainage from the well, while the upper floor is formed of cement gratings upon which the garbage rests. The fermentation cycle usually requires from 35 to 45 days, when the material, which is now practically odorless and with comparatively little moisture, is removed through a door in one wall of the cell.—*Public Works*, 54:6, 197, June 1923.



Operation of Gloversville Sewage Disposal Plant.—Data for the year 1922 of plant treating sewage with high percentage of tannery wastes, using fine screens, Dortmund tanks and trickling filters.—H. J. Hanmer, *Public Works*, 54:6, 199, June 1923.



Chlorine to Assist Coagulation.—Experiences at the purification plant at Exeter, N. H. In 1913, by treatment with alum alone, coagulation was poor; mud balls were troublesome and the color was reduced insufficiently. Chlorine in the form of bleaching powder was mixed with alum and fed through the same apparatus. Liquid chlorine and alum are now added to raw water and soda, to prevent corrosion, is added to filter effluent. Apparently the addition of chlorine decreases the pH values without lowering the alkalinity and saturates organic compounds, thereby

changing their physical state, and thereby making them more easily precipitated by metallic hydrates.—Sobert Spur Weston, *Canadian Engineer*, 45:1, 116, July 3, 1923.



Revolving Screens for Low-lift Pumping Station, Detroit Filters.—Primary mission of the screens was to intercept all floating or slush ice and prevent the permanent formation of frazil or needle ice on the surface of the screens, but they also serve to prevent the passage of fish and all floating debris. Adhering matter flushed into trough leading to sewer.—Theodore A. Leisen, *Eng. News-Record*, 91:1, 14, July 5, 1923.



Boston Metropolitan Planning Commission Created.—Commission has comprehensive duties in the way of investigations, reports and advice on transportation in all its phases and in its various relations to local and metropolitan planning.—*Eng. News-Record*, 91:1, 15, July 5, 1923.



Berlin Sewage Farms in Use Fifty Years.—The only change since the irrigation fields were put in use in 1873 has been the enlargement of the settling tanks so that nearly all suspended matter in the sewage is removed before the sewage is applied to the land. Effluent from irrigated areas is perfectly clear and increases fish population of the river into which it is discharged. Volume of sewage pumped to farms is 132 m.g.d. Area irrigated is some 27,000 acres.—*Eng. News-Record*, 90:26, 1120, June 28, 1923.



Methods of Sewage Disposal.—Discussion on present methods of disposal and the inadvisability of turning raw sewage into streams, thereby placing entire load on a water purification plant below. Cost of direct oxidation process.—Col. George A. Johnson, *Canadian Eng.*, 44:26, 640, June 26, 1923.

Bile Media for the Study of B. Coli in Water.—Presence of bile in culture medium favors development of the colon type group and inhibits other types. To confirm above assumption, the authors tried out the following media for colon growth.

1. *Bile peptone lactose*—Fresh beef bile, one per cent peptone and one per cent lactose.

2. *Glucose bile* (medium of Grysez and Peret).

3. *Taurocholate of sodium* (Mac Conkey).

Results: Comparison of the bile media, in water analysis, with phenolic peptones indicates the sensitiveness and ease of use of the bile preparations.—D. R. and Et. R., *Revue d'Hygiene*, 45: 1, 60, January 1923.



No Town Too Small for City Planning.—City plan for a small community, like the training of a growing child, has a two-fold object. It makes the life of to-day happier and more harmonious and it makes more certain the greater and nobler future that ought to be.—*American City*, 29: 1, 1, July 1923.



The What, Why and How of Town Planning.—Town planning is the application to social conditions of the principles of preventive medicine. Lack of town planning has been bad for domestic economy, industrial efficiency and the health and moral welfare of the people. Town planning is the art and science of arranging beforehand for the extension of towns and the protection of the country.—*American City*, 29: 1, 2, July 1923.



Comparison of Cost of Purchasing and Installing Meters and of Additional Water Supply, Part I.—Selling water by volumetric measurement is the only fair and logical way as it eliminates gross inequalities and discrimination between consumers, and it restricts waste. Flat rate tends to increase the capital outlay for water improvements, as well as to increase the operating expense of the water department.—Nicholas S. Hill, Jr., *American City*, 29: 1, 8, July 1923.



The Principles Underlying the Movement of Bacillus Coli in Ground-Water, with Resulting Pollution of Wells.—Summary of results in experimental pollution of ground-water. Ultimate distance to which pollution will be carried is dependent on wet and dry weather, resulting in rise and fall of ground-water, length of each of these periods, rate of flow of ground-water, pH, food supply, etc.—W. C. Stiles and Harry R. Crohurst, *Public Health Reports*, 38: 24, 1350, June 15, 1923.

Garbage and Ash Collection Costs in Dayton, Ohio.—Figures and comparisons of the work of the Street Department in Dayton in the collection of garbage and ashes during first two months of this year.—*American City*, 29: 1, 31, July 1923.



Housing a Sewage Disposal Plant.—Oriskany, N. Y., recently completed the housing of its disposal plant, consisting of two Imhoff tanks, grit channels, screen chamber and sludge well. Cost of buildings, \$1,300, will soon be repaid by saving on repairs and insurance against meddling and accidents.—C. M. Niles, *American City*, 29: 1, 35, July 1923.



Sanford Secures Wide Powers in City Planning and Zoning.—Bill drawn by chamber of commerce giving legislative authority to city of Sanford, Fla., to appoint "City Planning Commission" was recently signed by governor.—R. W. Pearman, Jr., *American City*, 29: 1, 77, July 1923.



City Planning and Zoning Adopted.—As result of continued efforts of chamber of commerce, Appleton, Wis., adopts city planning and zoning ordinance.—Hugh G. Corbett, *American City*, 29: 1, 77, July 1923.



Typhoid Fever in Paris and the Cultivation of Vegetables on Sewage Farms.—A brief study of the seasonal distribution of typhoid fever in Paris, with particular reference to the possible rôle of sewage-fertilized vegetables in the transmission of this disease. The following conclusions are presented by the author:

1. The nature of certain practices during the month of May 1922, the period of inspection, on sewage irrigated farms might have resulted in compromising the public health. The regulations of the city of Paris cover only 3600 acres of such farm land, while 6400 acres are privately operated without much supervision or restriction as to the control of application of sewage.

2. The present system of delegation of control over such fields to local authorities, rather than regulation by central agency at Paris, is not satisfactory.

3. The law should prescribe restrictions as to the nature of crops which should be cultivated on sewage irrigated fields.—M. E. Marchoux, *Revue d'Hygiene*, 45:4, 300, April 1923.