## WATERLESS TOILETS FOR RURAL SCHOOLS.

For the information of school trustees we quote the following from the Thirty-Fourth Annual Report of the Board of Health of Ontario, page 111, which details a test by F. W. Ward, B. A. Sc. (See Bulletin No. 4, Experimental Station) of a Non-Flush Chemical Closet made by the Kaustine Company (Limited), of Toronto, Ontario.

"The abolishment of out-door privies for schools and other public places and the substitution of chemical closets therefor is to be recommended. Various forms of non-flush closets are being put on the market to satisfy the demand of those who desire sanitary conveniences in their homes and are unable to instal flush closets. A non-flush chemical closet (supplied by the Kaustine Company) was installed at the Experimental Station for investigation and proved eminently satisfactory.

"The outfit consists of a white porcelain bowl, a cylindrical iron tank of 100 gallons capacity, sufficient white enamel pipe for ventilation purposes and 30 lbs. of Kaustine. The illustration shows the system as installed.

"The bowl is so constructed that solids do not strike the bowl, but fall directly into the tank below. The chemical charge of Kaustine was thirty pounds. On analysis the Kaustime proved to be an electrolytic caustic soda. A series of experiments showed that twenty-four hours after the addition of faecal matter all traces of bacterial life had disappeared, the solids had been digested and only a small amount of floculent sludge was left out of the solution. During the reaction a small amount of ammonia gas was given off, but the efficient ventilation prevented the escape of any odor into the room.

"The solution in the tank contained a certain percentage of potash, phosphoric acid and nitrogen which are valuable fertilizers. Analysis of the solution in the tank showed that in 100 gallons of the mixture there were:—

 $\frac{1}{3}$  pound of potash as K<sub>2</sub>O.  $\frac{1}{3}$  pound of phosphorous as P<sub>2</sub>O<sub>5</sub>.  $\frac{1}{3}$  pound of Nitrogen.

"These were all in a form immediately available for plant food and should prove extremely valuable as a fertilizer after the caustic solution had been neutralized either by exposure to the air or by the use of acid.