

Drummer Boys of Naziland

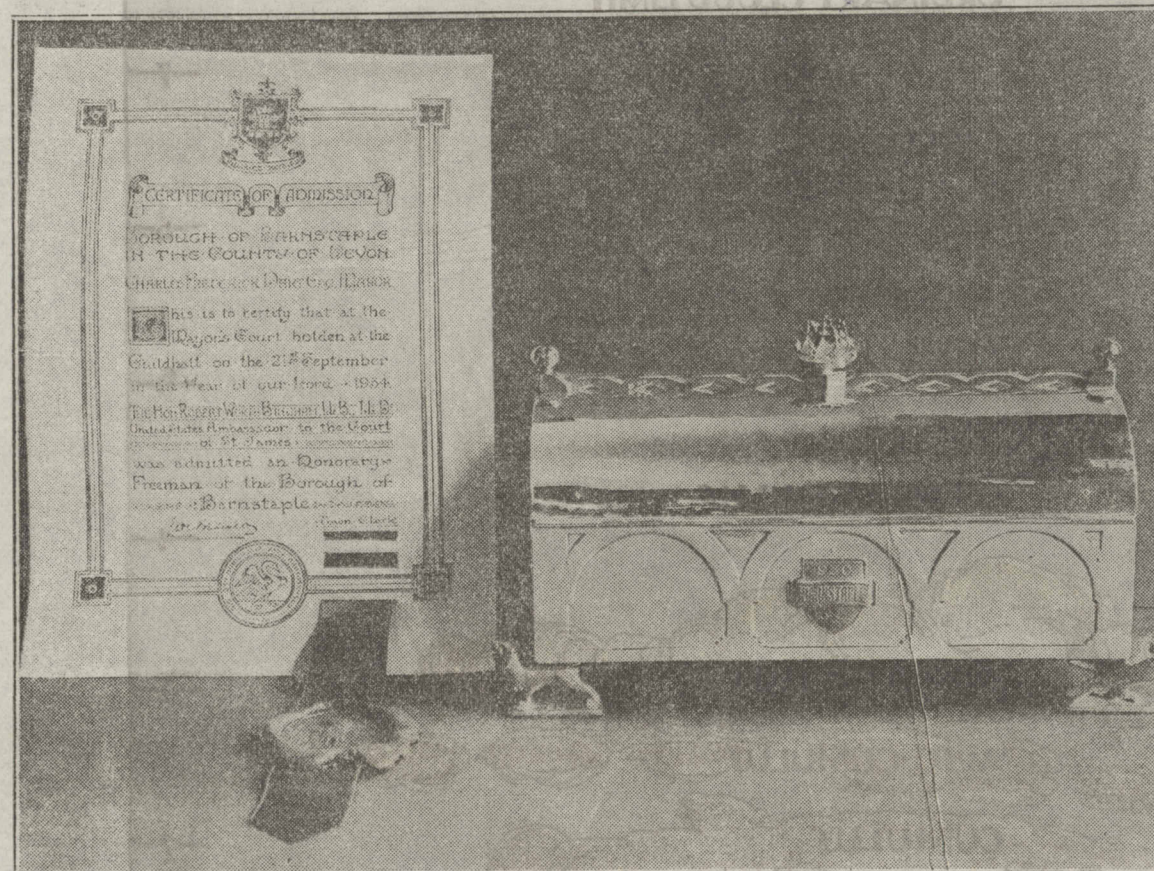


(Associated Press photo.)

REGIMENTATION begins early in Germany, as this photograph of young Nazi drummer boys attests. They were among 60,000 children gathered recently at Nuremberg to hear political speeches and to take part in drills and games. The massed drills and physical culture exercises performed by these boys made a stirring spectacle, which was reviewed

by Hitler and his official staff. All of the children were in the uniform prescribed by the political party of the dictator. In addition to hundreds of drummer boys, marching and playing in unison, there were groups of buglers, lending another touch of the martial atmosphere which today characterizes most of the big mass meetings in Germany.

English 'Adopt' U. S. Ambassador



(Aerme photo.)

ROBERT WORTH BINGHAM, United States ambassador to England, recently was honored by the Borough of Barnstaple, one of the most ancient of English royal boroughs. The scroll attests that the borough has conferred on the ambassador the title of "Honorary Freeman of the Borough of Barnstaple."

The casket at the right is the container for the scroll. Barnstaple is located near the north coast of Devonshire. It formerly was important as the center of the woolen trade, but its industrial activity has declined. There is a small harbor for coasting vessels, and a lace and a glove factory.

Science Finds New Water Purifier in Silver

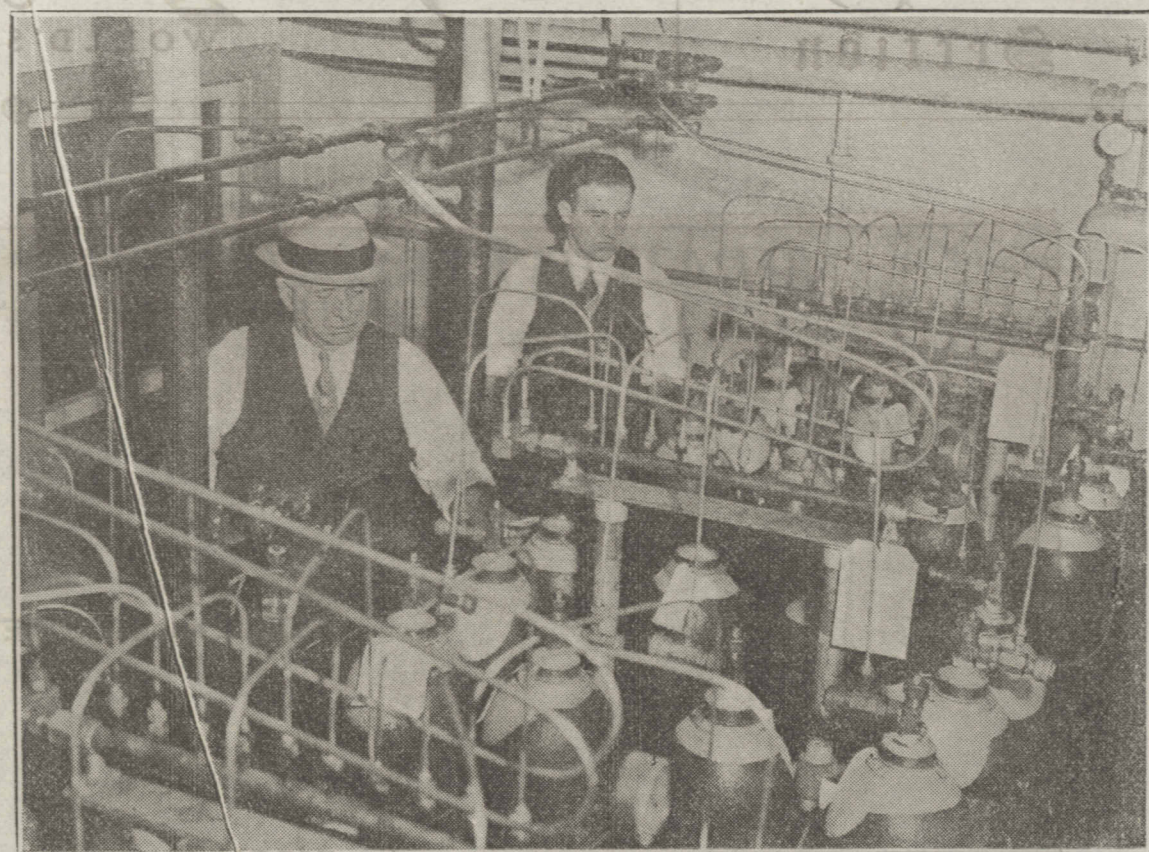
By Thomas M. Beck

STRANGE custom persists in India. It is the ambition of every devout Hindu to make at least one pilgrimage to the holy but exceedingly unsanitary River Ganges. There he bathes his worn and ailing body, and then proceeds to drink deeply of the foul and turbid river water. He does this because he believes it will make him a better man, a belief that is not shared by the public health authorities of India.

If he should happen to be an especially thoughtful Hindu, he fills a copper jug with Ganges water and packs it along home with him, where he does it out to his friends and relatives as a special treat, after the manner of a hospitable Kansan returning from Missouri with a quart of bourbon. The unusual fact is that this water has been found to be quite sterile and harmless after having been carried around in the copper jug for a few days, because of the reason that a small trace of copper has dissolved, sufficient to destroy most harmful bacteria, but not enough to poison human beings.

It has long been known that certain metals, notably copper and silver, possess this property of dissolving in water in almost immeasurably small amounts, and that the resulting solution is both nontoxic and also mildly antiseptic. And of these two metals silver is the more effective. The small amount of silver that will actually sterilize water is rather startling. For example, if the amount of the metal in a dime were to be spread throughout ten thousand gallons of water, the water usually would be sufficiently pure for drinking purposes.

Recently attempts have been made, chiefly in Great Britain and Germany, to apply this principle to the commercial purification of



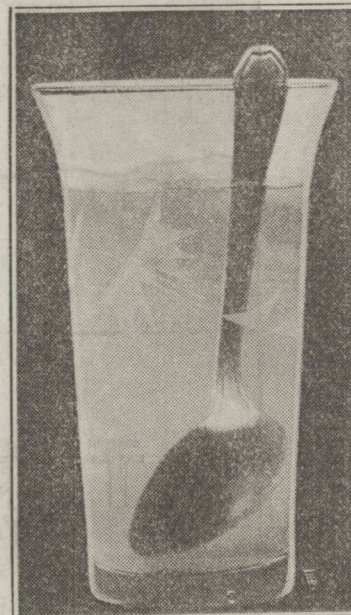
Chlorinator of a Chicago water department pumping station. In the foreground is the station supervisor, Timothy Faherty, who is checking to find out how much chlorine is being added to the water.

water, both for drinking purposes and for swimming pools. A similar sterilization plant has been set up at the Congressional Country club at Washington to purify the water for the club's swimming pool, perhaps on the theory that it would be safer to try out such new methods on congressmen before inflicting them on the general public.

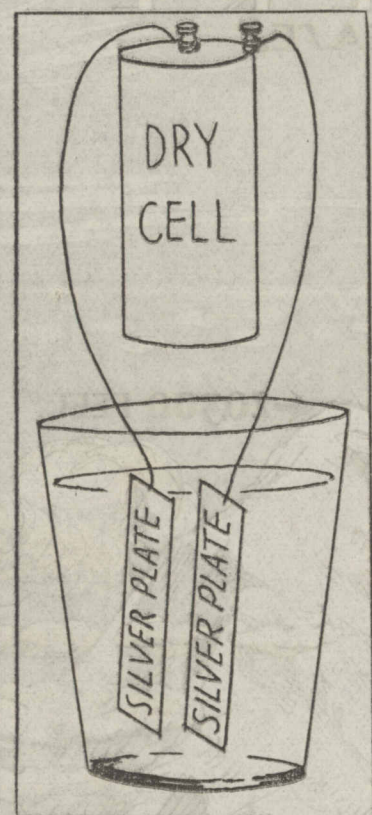
The simplest arrangement for sterilizing water by means of silver consists of placing a well polished silver spoon in a glass of water and letting it stand for a day or so. But since the prospective drinker would become quite thirsty while waiting this time, the method is of little practical value.

equipment necessary for this consists chiefly of two separate silver plates held a short distance apart, between which the water is allowed to flow. A small direct current voltage is set up between the plates, and the set-up then works more or less automatically.

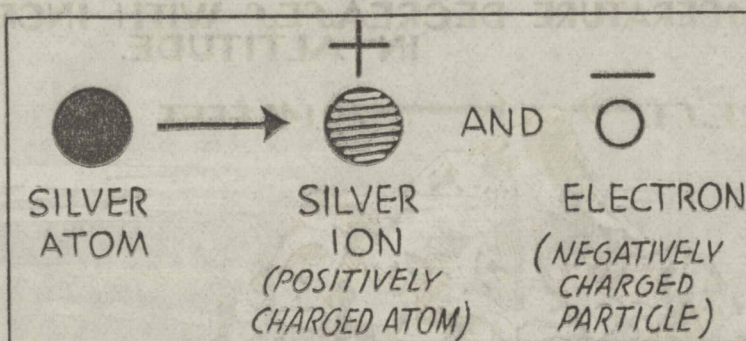
Of course, this method will not result in the immediate abandonment of existing water purification systems. It is still in the status of a noble experiment. Its enthusiastic backers claim that it is just as effective as any method, and, because of the very small amount of silver and electric power required, just as cheap. Its principal advantage is that it does not give the



A silver spoon will purify a glass of water.



Another diagram showing silver plates attached to a battery.



However, this time element has been done away with by taking advantage of the fact that when the silver dissolves it does so in the form of silver ions, or atoms carrying a charge of positive electricity. Presumably a silver atom in dissolving gets this positive charge by dropping off a negatively charged electron. Now, by the simple process of removing these surplus electrons from the field of action, or, in other words, of supplying positive electricity to the silver, the rate of solution can be speeded up enormously. The

treated water an unpleasant taste, as does chlorine. Its opponents claim that there are a number of complications involved which make its operation rather troublesome, and some of them have expressed doubts as to the hygienic wisdom of giving the citizens a daily internal dose of silver, even in such minute quantities. So it would appear that, for the present at least, most of us will continue to enjoy the delicate bouquet of chlorine in our drinking water.

Other uses have been suggested for this property of silver. These

are chiefly in the treatment of fermentation products, such as wine or vinegar. Perhaps the most fascinating of these suggested applications is one that has been tried out in the whisky industry. It has been claimed by certain investigators that raw whisky, when shaken up with a little silver, will age much more quickly than similar untreated whisky. Whether or not this is true in all cases is a question that will require further investigation. But perhaps it should be pointed out to the layman that a special form of spongy silver is required to do this trick. Mere contact for a few seconds with the inside of a silver cocktail shaker is certainly not sufficient to make new whisky old.

Science Queries Answered

Mr. Beck will be glad to answer questions of scientific nature. Address Thomas M. Beck, Graphic Section, Chicago Tribune. For personal reply, inclose stamped, addressed envelope.

Is there any difference between cane and beet sugar? If so, which is the better food?—M. C. M., Chicago.

Both sugars are the same chemical compound, and therefore are equal in food value. Any slight difference in appearance is due to somewhat different means of preparation.

What is the source of the mustard gas used in the war?—O. R., Chicago.

Mustard gas is rather badly named. It is not made from mustard, and it is not a gas. It is an oil, and is made by combining a gas, ethylene, with sulphur chloride. It probably gets its name from some fancied similarity between its smell and that of mustard.

What is fusel oil?—R. R. S., Buffalo, N. Y.

Fusel oil is a mixture of certain compounds that are formed, to a small extent, during alcoholic fermentation. From a chemical standpoint, it resembles alcohol, except that it boils somewhat higher. Distilled liquors owe their characteristic bouquets, to some extent, to small amounts of fusel oil present. It is rather poisonous when imbibed straight; but, for that matter, so is alcohol.

At a Triplet Party



(Associated Press photo.)

IT WAS a real party recently when the three Isom baby girl triplets were hostesses at a birthday fete in honor of three other sets of Oakland, Cal., triplets. All of the babies went to sleep before the party was over, but their parents ate the rest of the cake and ice cream. The children in this picture, taken at the height of the festivities, are: Left to right, front row, John Joseph, James Edward, and Jane Catherine Cox; second row, Jane, Joan, and Jeanne Isom, the hostesses; third row, Laurel, Robin, and Roger Hall.



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