

## WATER DEPARTMENTS AND THE PUBLIC HEALTH\*

By H. E. Barnard

**G**OLDEN apples no longer load the public utility apple tree. There was once a time when it was the stockholders' delight to gather in the orchard when the board of directors shook the tree, but those days are gone, and to-day it is the exceptional tree that will yield its expected 6 per cent. The fortunate owners of utilities before the days when commission pests and board of health coddling moths made the crop of golden fruit hard to grow and most difficult to gather, are, like other orchardists, prone to bewail the sad state which has come upon them and deplore the heavy expense to which they are put to make the tree blossom, to say nothing of the continual struggle to mature the crop after the fruit has set. But, coming out of the orchard, where metaphors may please but fail to enlighten, we find the public utility of to-day charged with a double duty. It must render service to those whom it presumes to serve. It should also return a fair profit to its owners. And the first duty is the greater.

I shall confine my analysis to the public utilities known as water companies, and I shall make no distinction between companies owned by stockholders in distant cities or municipal plants owned by the consumers. In each case the duty to the public is the same. If in the fulfilment of that duty the stockholder suffers, he is entitled to sympathy, perhaps commiseration, for the lack of judgment that allowed him to invest his money in a business where the first and last concern is service to the purchaser of the product.

Thirty years ago the water company worked under different conditions. Public opinion was uncrystallized and courts interpreted the law with no idea of what we now call social justice.

Then the consumer drank water at his peril; to-day he drinks with the assurance that if he is injured by his indulgence the water company will compensate him for his illness or his family for his death. There is no question as to the law or the interpretation of the courts. It is an accepted principle that when a man engages in the business of selling food he assumes all the risks. If by his act or by the act of his servant a customer is injured, he must be responsible. And the law is the same for the water company as for the butcher. Both are in the business of selling food, for water is a food and so recognized by all Federal and State food legislation.

In spite of law, court decisions and plain horse sense, there are still in operation water companies that conceive their purpose in life to be pushing water through pipes, and, that accomplished, they claim their reward. Fire protection is a function of a water supply. No doubt many towns would still be using wells if the fire hazard did not compel the laying of water mains and the installation of hydrants. But as soon as the tap is turned on in the kitchen the situation changes, and the primary duty of the water company is not to maintain pressure for fire protection, but to pump food through its line, and, above all, food that is sure to promote health and not to breed disease.

Now, then, where are we? We are up against the incontrovertible fact that a water supply, save in a few un-

usual instances, is an object of suspicion. There may have been a time when surface waters were pure, when our lakes and ponds were uncontaminated by the wastes of civilization. But that time is long past. No stream is so remote that it may not be polluted, no pond so protected that it is surely safe. The water company must operate a plant to make unsafe waters dependable in addition to the pumps which were once, and unfortunately still are, the superintendent's chief concern.

From the public health standpoint, and the writer maintains that is the all-vital consideration, fire protection is a secondary and minor function. And yet, last July an engineer for a water company in an Indiana city, when confronted by the demand of the fire chief for more water with which to fight a serious fire, turned into his mains the water of a grossly polluted river. After such criminal action, for it was criminal in the same degree as the act of the guard who throws open the city gates at the demand of the assaulting enemy, the officials called upon the state board of health for advice.

What we want, what we must have, is a trained, responsible man in every water company who will seek advice first and act only after the community knows what confronts it. The writer is not sure that the disaster of fire is ever as menacing as the scourge by typhoid, or that there can arise a situation in which a water company will be justified in filling its mains with polluted water, but if such an occasion should confront the water company, its first act should be to protect health by complete warnings.

As water companies have assumed the responsibility of pumping pure water, they have added additional defenses against bacterial contamination. Filter beds, no matter how efficient, are supplemented by chemical treatment. The almost universal use of hypochlorite, or chlorine, protects the consumer and breeds in him a faith that is the greatest asset of the water company. But chemical treatment is only efficacious when it is working. When no chlorine is entering the water, the supply is as dangerous as before the plant was installed; indeed, it is more dangerous, because the faith of the consumer has stopped his practice of boiling his drinking water.

Now, this is an admitted fact. There are no "maybe's" or "perhappes" to the premise. When a water company sells water, it guarantees that water to be pure, it pledges itself to know that it is pure. Why, then, does every political change, petty shifting of civic responsibility from incompetent shoulders to others more or less incompetent, mean a change at the waterworks? Why does the job go to some party follower or relative of the mayor, who wouldn't recognize a colon bacillus if it was as big as a toad, and whose only idea of service is the record of the pressure gauge? We, the consumers, are asleep; we, the health officers, are bound by precedent or fearful of overstepping our authority; we, the press, are partisan and indifferent; we, the chambers of commerce, are sworn to do nothing that will arouse fear or hurt business.

Consumer, health officer and every civic organization, realizing that pure water is not only a personal right, but a public asset, must work together to put the waterworks into the hands of trained, dependable experts, and, having chosen wisely, to demand full service. Not until then can we count on the public utility in the form of the water company to render dependable service in protecting the public health.

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Canada's war expenditure during the month of November totalled \$18,714,472, making a grand total of war expenditure to November 30th of \$151,969,271.