receptacle; that this channel may never be blocked the aperture must be the breadth of four fingers, with a small iron grating at the top, having holes the size of a finger and no more, so that the channel cannot fail to carry anything which passes. Doing the same for the well, the water both of this and of the kitchen will be carried to the receptacle, which will be a stone cistern, 1 foot underground, more or less, a square of 1½ ft. or 2 ft., according to the house. It will incline towards the street, with a mouth 6 in. square, to which mouth will be joined a channel of the same size, which will go to the street, carrying the water by its weight. The exit of the cistern to the channel will have an iron grating, as above, and the cistern will be covered by a stone pierced in the centre with a hole large enough to take a ball of shoemaker's wax, with five or six smaller holes rounded at discretion, to carry the rain water from the house, which will be directed to that place. If the channel, as it leaves the house, is near a neighbor's channel, they may be joined, to save the expense, from the wall of the house to the stream in the street. All streets will have an underground sewer into which the channels of the houses will go, the said sewers being 18 in. wide and the same height, more or less. If the channel of one street discharges into that of another, the latter must be larger. Thus will be carried underground the foul water, instead of being in the streets, and it will pass into the river. Whether the water of the springs ought to go underground or be allowed to take their ordinary course is a matter for the physicians.

The water running through the streets will be clear, not mixing with the kitchen water, but this also might go underground at small expense.

In Italy and elsewhere beasts are not slaughtered near the places of sale, but the butchers have fixed slaughter-places, generally on the river and somewhat above it.

At Antwerp house refuse has to be put at street corners or crossways, whence it is removed by carts. It would be better to put it in a corner of the house to await the cart.

The cost of the channels is estimated at 10d. per rod for the house channels and 28d. per rod for the public channel, taking the cost of bricks to be two ducats per 1,000. Existing lead channels can be used for other purposes; existing stone channels will serve the purpose. The expense of the street work should be found by the master of houses contributing to the Chamber of the Commonalty of London, or the latter should borrow at 15 per cent., and assess the total cost proportionately among the householders.

Every summer on a fixed day these channels should be flushed.

Arrangements should also be made to secure enough water in mill ditches; a sluice should control the flow of water into the ditch below the mill, which should be cleaned every five years and kept in repair by the millers. Common ditches also must be repaired every five years. In Tuscany such work is the duty of specially-appointed resident men.

As to the ditch which is situated almost in the middle of London, above the Cathedral Church, towards the Court [the Fleet], this comes from outside London, and has three bridges. If the houses which are upon the ditch have foundations so deep that the water cannot harm them, the ditch may be deep enough for the water of the river to come up to the third bridge. Nothing but water should be thrown into the ditch, and at its mouth should be a lock, without prejudice to the boats, so that the ditch may be flushed. This scheme assumes the houses on the ditch to have deep foundations.

Alternatively, the ditch should be deepened and the dirt thrown aside; then a frame should be made to the ditch, going down deep, the earth being thrown at the side mostly where the houses are, raising a wall of 3 ft. or 4 ft., as at Venice. Thus the adjoining houses might turn their sewers into it, subject to orders given by the city, forbidding any filth to be thrown there, and requiring that it should be put in order every five years.

If called upon, for the benefit of the city, he will gladly do in her service whatever he can.

Ventilation of Sleeping Cars.

John F. Norton, instructor at the Massachusetts Institute of Technology, has recently published in *Science Conspectus,* a brief review of conditions of health related