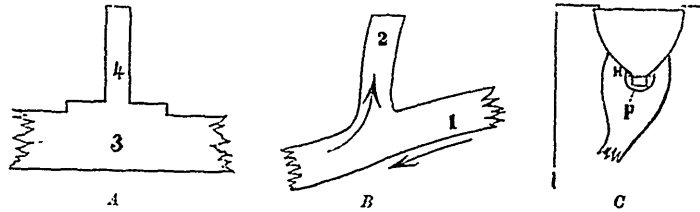
to ventilate from the house drain into the street drain, (a down-hill ventilation,) for the purpose of pointing out how the most common natural laws are sometimes outraged. In this connection, my reason for saying before that the house drain ought not to empty into the top of the arch will be apparent. The house drain would then act as a ventilating shaft to the street drain.

Far more attention has been paid to the ventilation of street drains or sewers, and as less has been left to the private individual and his medical adviser, owing to the existence and aid of the city engineer, I will devote less time to this portion of the subject.

Various have been the devices, fans, furnaces, hot-air shafts, making use of factory chimnies, &c., &c. These have been found costly and unsatisfactory, and sanitary engineers now rely upon frequent openings to the surface, passing the air through charcoal trays of various forms, and keeping as far as possible from the sidewalks. It is a good plan to make a sort of collecting place for foul air in the vicinity of the ventilating shaft (4), as shown in diagram (A), or to make a break in the line of the sewer at the point where it gives off the ventilating shaft (2), as in diagram B.



A B C

There are many things to which I would have liked to allude, such as the evils resulting from soakage in the course of the drain, and the means to prevent it; the prevention of deposit, by making the streams join in diagonal currents instead of at right angles; the precautions to be observed in laying and joining pipes; the proper shapes of drains under varying circumstances; flushing apparatus, &c. But as time is so brief I cannot trespass on it, but must defer the consideration of these points to a subsequent occasion.