

# SCIENTIFIC CANADIAN

## MECHANICS' MAGAZINE

AND  
PATENT OFFICE RECORD

Vol. 7.

JULY, 1879.

No. 7.

### BAD PLUMBING, BAD TILE-DRAIN LAYING, AND BAD SANITARY ARRANGEMENTS IN THE INTERIOR OF HOUSES, IS:—

THE CURSE OF CITIES ;

THE CAUSE OF SCARLET AND TYPHOID FEVERS, DIPHTHERIA, SMALL-POX, AND ZYMOTIC DISEASES OF ALL KINDS ;  
AND, ALSO,

THE CAUSE OF DEPRESSION OF SPIRIT, LANGOUR, GENERAL DEBILITY AND NERVOUS DERANGEMENT OF THE SYSTEM.



AMONG the cities of North America, Montreal has attained the notorious and unenviable position of being the most unhealthy, for its size and population—and the cause of that unhealthiness, we boldly proclaim, is owing to *bad plumbing, bad house drainage, imperfect ventilation, and defective sanitary precautions and inspection.* We, moreover, assert that no matter how much money is spent upon perfecting a system of drainage in our streets ; no matter how often those drains may be flushed, it

will avail but little, if the discharge pipes, tile-drains and water-closets are to be made so imperfect that they become ventilators to the street drains, through bad workmanship in plumbing and other unsanitary imperfections.

There are but few houses in this city in which, if thoroughly examined, defects in the pipes could not be found ; and among the many examples of inferior work, wilful neglect, and gross, blundering ignorance, we may enumerate the following :—

I.—Over-flow pipes not soldered, but joined together with slip-joints, through which the poisonous gases have a steady flow, passing under floors and up between par-

titions until the whole of a house is impregnated with poison. These pipes are generally cased in with wood as soon as placed, so that the cause of foul gases leaking out of loose slip-joints is not perceived, and therefore the enemy is concealed while doing its deadly work.

II.—Over-flow and discharge pipes to baths discharging directly into the water-closet trap without any intervening bend or trap to prevent the foul odour of a water-closet trap passing through them into the chamber. This pernicious arrangement actually makes a ventilator of the bath pipes for the foul closet-trap, and frequently, when there is a small quantity of water lying at the bottom of the bath-tub, the gas may be seen bubbling up when the lever of the water-closet is pressed down. This method of carrying off the water of a bath-pan into a foul closet-trap (for foul the water will be in it in spite of flushing, and coated will its side be always with foul mucous matter) is most objectionable ; and, strange to say, it is a plan adopted by the majority of plumbers, from many of whom we certainly would expect better judgment.

III.—Imperfect connection between the soil-pipe and the tile-drain in the basement ; this frequently occurs, either from bad workmanship, or from the sinking of the house ; but in either case hardly any provision is made by which the fault may be found out and remedied without tearing up the floor.

IV.—Drain-pipes laid in the basement without the joints being cemented, and then covered up with earth. Thus every pipe leaks at its joint, and the earth in the basement becomes permeated with filth, from whence are bred germs of disease. Sometimes the apertures in the walls for these pipes to pass through into the street drain, are never built up close to the pipe, and any foul gas issuing from defects in the pipe outside, is carried into the house from this neglect.

V.—The imperative necessity of ventilating pipes at the head of the soil-pipe, and placed in such a way that these ventilators will act in all cases, and not become, as they sometimes do, mere ducts for forcing foul air into the house every time the water-closet lever is raised.

The foregoing are a few of the special evils we desire to point out : to enumerate all would require a pamphlet.