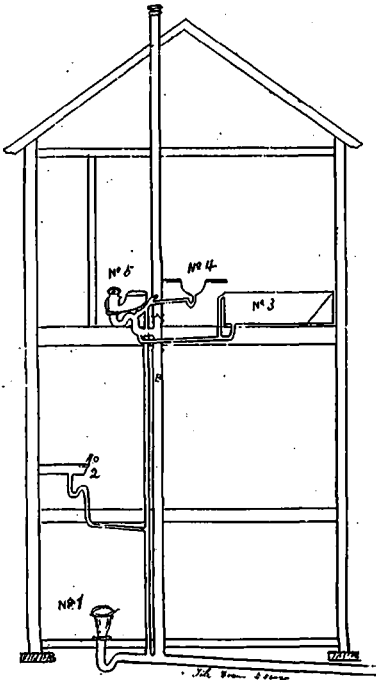


## SANITARY PLUMBING

### SPECIMEN NO. 2 OF "SANITARY PLUMBING."

IN our issue of last month we gave a brief description of a case of scamp plumbing that was aired in the Toronto courts. In the present issue we give another and a similar piece of work, executed by the same individual, and over which there has been another law suit. The circumstances of the case are briefly as follows: A was building a pair of houses and invited B to tender on the work. B sent in his tender and a specification of what he proposed to do. The builder considered the price ridiculously low compared with what he had been accustomed to pay for similar work, and sent word to B to this effect, at the same time stating that he wanted a good sanitary piece of work, and asked B to reconsider his tender, and put in a price to cover the requirements of the city ordinance. B sent in another tender, this time asking fifty dollars in excess of his first offer and was awarded the contract. All went on merrily until about



NOTE.—B, 4 in. cast iron pipe; A, 4 in. lead pipe, with slip joint made with putty; No. 1, hopper closet; 2, kitchen sink; 3, bath tub; 4, wash basin; 5, Demarest water closet. About one-half of the joints in lead and iron waste pipes were made with putty, and one joint on the 2 in. lead vent pipe was made with pitch.

half the work had been done, when one day the plumbing inspector happened along and insisted that material of proper weight should be put in to conform with the plumbing by-law, which B consented to do. Nothing further was heard of the matter until A received his bill, when to his surprise B had, in addition to his contract price, charged him \$42 for extra material in having to comply with the city by-law. A naturally refused to pay this extra charge, as he claims he instructed B to do this in his second tender. B then entered suit to recover his claim when A sent the plumbing inspector up to examine the job, and discovered the work exactly as shown in our engraving, which will at a glance explain itself. The judge on hearing the evidence decided the plumber was at fault, appointed another master plumber to examine the job and report

to him the probable cost of putting the work in good sanitary condition, gave judgment that the plumber should pay this bill, and disallowed his claim for extras with costs. This is not the first time this very enterprising person who poses as a plumber has received his reward for scamp work.

### TRAPS AND THEIR VENTILATION.

By B. KIRK.

THE main trap on house drains has been the subject of much attack from various quarters. It has been charged with having generated nearly all the foul gases which emanate from the sewers, and acting on the assumption that the charge has been proven, some are prepared to abolish it. This would be equivalent to a jump out of the frying pan into the fire. A drain trap is like any other trap used in plumbing practice; it should be so constructed as to be self-cleaning, and if it is not so constructed, it will be a nuisance. A drain, together with its trap should be of such a size as is calculated to meet all that will be required of it and not more than that. A six-inch drain is too large for an ordinary house, for the reason that sufficient water cannot be collected into it at one time from such a house to flush it. Therefore if the drain cannot be flushed, its trap cannot be flushed. I have seen a small house drained through a nine-inch trap which could never be anything but a cesspool of reeking filth.

Much ignorance is frequently displayed in the setting of drain traps. Nearly all the drain layers I have met with, level the trap from the cleaning hand-hole—placing a straight-edge over it—and if on placing a level on it, the drop shows in the centre, it is pronounced to be correct. Now, a look at some of the traps will demonstrate the absurdity of this. The hand-hole is seldom at right angles with the trap, so that when a trap is so set, the outgo will be found to be higher than the inlet (in some cases as much as three inches), and as a result, the water will remain in the drain on the inlet side for two or three lengths, varying with the amount of fall which is given to it. A trap set in such a way could not be other than foul. It is folly to reason that because such bad results emanate from improperly constructed traps, they should therefore be abolished. It might as well be reasoned that because improperly constructed water closets give poor satisfaction, therefore water closets should be abolished. Let us have traps properly constructed and then we will have good results.

I prefer the  $\frac{1}{2}$ S trap or P trap to the running trap, where sufficient fall can be obtained; the water having a fall of from six to twelve inches into the trap will more thoroughly flush it. In setting a running trap, the water seal should be about half an inch lower than the inlet. This will favor its chances of being flushed.

Another fruitful source of filth accumulation, is the manner in which the piping is often put together. A bedding of cement is placed in the bottom of the last pipe laid; then the next pipe is placed into it and forced up to the shoulder at the hub, carrying with it some of the cement, which is squeezed up into the pipe.

S. S. Hellyer, in his book "The Plumber and Sanitary Houses," speaking of untrapped drains, says: "It is, to say the least, a little communicative." It is bad enough to contend with the foul air contained in one's own drain, without contending with the accumulations of a whole community.

These are some of the risks attending the omission of the main trap. Some handy man who professes to understand all about drains, is engaged to make a connection with the drain for an additional rain water pipe, or for the purpose of draining a wet cellar. If a trap is furnished he will probably put it in, but it is a chance. A wall, under which the drain passes, settles down upon it, crushing or breaking the tiles; one of a block of houses remains idle—the traps being unused, dry out, the house being closed up and communication with the houses on either sides not being entirely cut off, sewer gas will find its way into each of them; the extension of soil pipes in close proximity to the windows of an adjoining house; the liability of such extensions to become closed up by hoar frost during the winter months, in which case a pressure in the sewer would be liable to force the traps.