

On the subject of connecting a bath waste pipe, to a soil pipe on which we made some remarks, in November number of the *SCIENTIFIC CANADIAN*, we now add another illustration from the *Sanitary Engineer*, in the hope that plumbers will be guided accordingly.—ED S C

PHILADELPHIA. Sept. 5th 1879

Editor of *The Plumber and Sanitary Engineer* :

We herewith submit to you two plans of connecting bath waste pipe to soil pipe, with request that you decide which you consider the best or least objectionable.

Plan No. 1 is the usual way of connecting the bath waste to the trap, but the owner objects, saying it is wrong in principle, that every time the w. c. is used the filth will be driven up the waste pipe of the bath and cause a smell in the tub. We contend that it will not act so because one pipe is 4 inches and the other 1½ inches, and there can be but little pressure if any. We also contend that there will be no smell if fresh water is run after using the w. c. We also contend that the waste of bath flushes the w. c. trap and keeps it clean. We also contend that there is less liability of the bath to choke and yet it is as effectively trapped as if it had a separate trap.

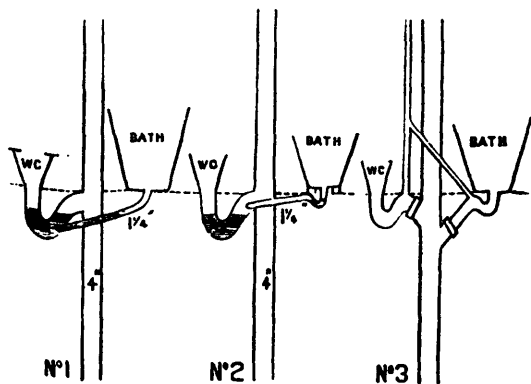


Fig. No. 2 is the owner's plan, and we object to it because—firstly, the trap is small and liable to be syphoned by the w. c. ; second, he cannot flush his w. c. ; third, sewer gas will be more liable to force a small trap than a large one ; fourth, the trap is liable to become choked and very difficult of access to clean out. Hoping you will favor us with an early reply, we remain,  
Yours, etc. H & B.

To those questions the *Sanitary Engineer* replied as follows :

"We consider Plan 2 the least objectionable, though drawing does not show the best practice. Plan No 3 is the better way. We gave our views of Plan 1 in our criticism of the article in the *Montreal Witness*, on Page 294, August 15th, and in reply to letter of C. E. Illsley, on page 230, issue of September 15th."

"Your objection are mainly based on a supposed defective condition of the surrounding work. With drains properly arranged, house traps would not be subjected to sewer gas pressure. Properly ventilate the trap under the bath and you will avoid syphonage. If this is not practicable, then, as the next best thing, use some of the numerous forms of traps and a deep seal."

**IMPROVED METHOD OF LUBRICATION.**—In a recent French invention the screw is applied to lubrication of shafts and other parts of machinery. In the case of a shaft, the oil is poured into a reservoir below, and a screw placed slantingly in the tube raises oil to the level of the shaft, whence it is distributed by channels over the breadth of the journal. The axis of the screw rests on the bottom of the reservoir, and its head turns in a bearing fixed in the tube. Motion is communicated to it from the shaft by means of gearing with helicoidal teeth. The impurities at the bottom of the reservoir are neither stirred nor carried up. The velocity of the screw is adapted to the lubrication required. If the shaft has a high velocity that of the screw is increased, so as to raise more oil because of the strong pressure. Thus a regular, continuous and economical pressure is obtained.

**THE SPANISH INTERNATIONAL EXHIBITION.**—A French architect, M. Colibert, has just been charged with the preparation of the plans of the building which will be needed for the international exhibition at Madrid in 1882.

## THE LAY OF THE DEMON PLUMBER.

(From the *Sanitary Engineer*.)

That much-abused yet indispensable mechanic, the plumber, is frequently held up to ridicule as well as to severe censure by writers for the press. Indeed, quite a literature has been formed having this general character. According to it, the plumber is a cold-hearted, mercenary wretch, who practices bad workmanship that he may have bills of repairs, who is elated at a severe frost which bursts pipes, because it brings his services into demand, and whose general prosperity is at other people's expense. We have much sympathy for the plumber, and frequently have reason to look upon him as a much-abused and misrepresented man. The following lay, clipped from a London paper, we, of course, believe does him great injustice. No one for a moment supposes that our plumbers entertain any such sentiments as are here set forth. If such ideas were entertained by them, the approach of cold weather would be a source of delightful anticipation, and we should even now see members of the trade hugging themselves and rejoicing at every indication of approaching cold as it is published in the daily bulletins of the Signal Service. Cold weather we shall undoubtedly have soon enough, and many pipes there are which will then require repairing, and many a plumber there is who will then reap the customary harvest ; but hardly any of them, we are sure, will sing out loud the "Ho ! and oho !" of the following lines :

It's ho ! and oho ! for the jolly Jack Frost,  
And the pranks he plays up, to my customers' cost !  
'Tis a precious ill wind as blows nobody good,  
And a nipping north-easter is most to my mood ;  
When it freezes the cisterns, and plugs up the pipes,  
Oh, I laugh till the tears from my hapless I wipes ;  
For it's followed in course by the loveliest thaw,  
And then there's such gammoaks as never you saw ;  
For the men and the servint' maids comes all a-blow,  
From a most every house in a most every row,  
Crying, "Come, Mr. Plumber—imnejit—you must !  
For the cistern is leaking, the pipes is all bust !  
The water's all spouting, and running to waste ;  
We are reg'lar swomped out—do, for gracious, make haste !"  
They all sing the same song, but I dordles along ;  
To expect me to 'urry is coming it strong !  
And when I arrives, oh ! the blokes and their wives,  
And the slavers nigh worried out of their lives !  
Such larks ! There's the water all squashin' and squirtin',  
And tricklin', and streamin', and spoutin' and spritin',  
And everythink dancin', and drenchin', and dirtin',  
Spillin' ceilings and walls, and the gov'nor's front-shirtin',  
As he tries to stop went, his white knuckles much 'artin',  
Which makes him use languidge—oh, ain't it diwertin' ;  
Then the mean 'uns, as, bent upon saving a mag,  
Tries botchin' the 'oles up with patty and rag !  
Don't I drench them to rights ! Don't I tip 'em stiff !  
Ain't it scrumptious to watch 'em they boggle and sniff !  
Oh, I do hate a stingy and meddlin' old messer !  
Then I outs with my tools, with my shaveback and dresser.  
My turnpin and egg iron, solder and soil,  
My taller, and rosin, and white lead, and oil ;  
( 'Arf on 'em's no use, but they make a good show,  
And with green 'uns that's jest 'arf the light, don't yer know ? )  
Then I turns up the carpets and flo-cloths all round ;  
Tramps up and downstairs with a thunderin' sound ;  
And I arks for a fire, and I 'ints for some beer,  
And I kinks up a stink as makes Missis turn queer ;  
If they "part," wy I sock my boys knowing and obat ;  
If they don't, I turn sulky and swear at the cat—  
Which she always comes sniffing and goes on the sear—  
If they 'uries, I tells 'em to keep on their 'air ;  
For a job such as this is a thing as takes time.  
Wy not ? Easy does it, and fudgin's no crime.  
Then, when they're well soaked, worried out of their wits,  
And the fire nigh poked out with my irons and bits,  
When the fumes of my solder has got in their eyes,  
When I've sp'iled a few gimcracks with lampblack and sicc,  
Dropped taller in lumps on the floor here and there,  
And broken the back or seat of a chair,  
Broke three or four bells, or may be 'arf a dozen,  
When everyone's grabby and cross and 'arf frozen,  
Wy I manages somehow to take up a jint—  
If they think it's a laster, it may disappint,  
'Cos we've got to make hay while the sun shines, yer know.  
Leastways, pile the dibs while there's frost, ice and snow.  
There is lots more a-waitin', I serves them the same,  
And so, smart and lively, I keeps up the game.  
Other trades may spout strong 'bout the beauties o' summer,  
But a jolly 'ard winter's the time for the Plumber !

**A SUBSTITUTE FOR TERRA-COTTA.**—The weight and brittleness of terra-cotta are considered objections to its use in interior decoration and for household utensils and ornaments. To avoid these drawbacks a Spanish South American firm employs cotton pulp covered with a special composition, which contains a soluble varnish. Articles which are made with this material are said to be very light and strong.—*Pottery and Glass Trades' Journal*.