

diaphragm pattern; taps poor in design, often defective, and the plumber was called in to remedy the defects.

Baths were but rarely met with in the old days, owing to the difficulty of getting the necessary water; and this, with the hot water services, perhaps is the only compensation plumbers have for the substitution of constant service supplies against that of pump supplied houses.

The old form of supplying baths in the best houses was that of the triple valve arrangement, by which means the hot and cold water was supplied through the waist outlet; and while condemning it from a sanitary point of view, it was the means of giving a lot of work to plumbers.

The present-day method of fitting up lavatories is far preferable to that of the old, which involved much more work in fixing the supply valves against the wall, with a breeching pipe and supply to arm of basin, and its putty or red lead joint. This is yet another instance showing how the work has been lessened.

Sinks and troughs, which were formerly lined with lead, have been replaced with copper, or more frequently with those of glazed fireclay.

Supply cisterns, which were formerly of lead, are now made of galvanized iron, or in some cases of copper and but very rarely of lead.

Who would have believed in the old days, when we were busily at work striking out and wiping up service boxes and fitting in the old bells or poppet valves in water-closet cisterns, that the day was coming when such work would be as extinct as the Dodo? Yet it has all gone. The lining of the cistern, the making of the service boxes and wiping them in meant more work for the plumber than the whole job of fitting up a closet does at the present time. To-day we have the cistern delivered at our shop doors, complete and ready for fixing, and either made of cast-iron or earthenware.

When the plumbers had to make their own soil pipes, bends and traps they could always depend upon having work to do in the shop, but no employer would to-day dream of letting his men make a soil pipe with its soldered seams, and the introduction of hydraulic presses has entirely superseded the making of such articles by hand labor. All this has tended to reduce the available amount of work to a minimum.

A marked change for the better has taken place respecting the methods of wiping. Well do I remember the first lesson given to the plumber's boy, viz., that of cooling the plumbing iron, the getting ready of the quench hook, the cooling of the handle so far up, the seeing that the iron was not burnt, the filing off of the scales, and above all the correct way of handing the iron to your mate, as it had a nasty habit of falling back and touching you up. And after the great event of wiping was over, the care taken in picking up the bits of solder—for solder seemed more valuable than it does to the boys of to-day.

Before treating with the question of water-closets I would like to refer to the making of the rightly-condemned old-fashioned D-trap, but we did not know of its bad character then.

One can remember the old set of patterns hung upon the wall of the shop, religiously preserved from generation to generation; the wiping in of the dip pipe, and the great care exercised in seeing that it was not too far down or too high up. These considerations involv-

ed a deal of care and thought on the part of the plumbers of those days.

But whatever fault we may find with the D-trap, we must all acknowledge that it was a nice job to be making them, and it was with regret we parted with them, and have only our recollections of them left.

The old pan closet has been anathematized over and over again, and I have not one good word to say of it, only that it was the means of providing work constantly for plumbers. In well ordered houses it was a standing job to take them out, and clean, black and re-tin the copper pan once every 12 months. So here again the public have benefitted at the expense of the trade.

The valve closet, and one maker's in particular, was a source of much work. How many will remember the patience required in dealing with the intricate regulators, and resisting the desire to drop one's "big hammer" through the pan! But these are going the way of the old pan closet, and are practically replaced by the more modern closets in earthenware.

The work of fitting up wire bells was formerly done by plumbers, and was a very important branch of the trade. To give you an idea of the comparative cost of the old-fashioned wire bells as against electric bells I will tell you of a case that has recently come before me.

An architect is about to build a gentleman's residence a few miles out of town, and he specifies that the bells are to be of the old-fashioned kind, with wires and cranks, &c. The fittings are to be supplied by a certain firm who make a specialty of this class of work, and upon asking them for a quotation for the material required, they very courteously informed me that they had already quoted several people for the work, and their price was £60. Now if this job was done with electric bells, many would be glad to get it at from £15 to £20.

I only refer to this as an illustration of the decline in this class of work, because it is the labour item that would be more reduced than that of material.

But this is not the worst part of it. When electric bells were first introduced, we, as a trade, failed to see "the sign of the times," and neglected to grasp this branch of the trade as we should have done.

I am speaking generally because I am aware that there are some few exceptions to this general statement; but nevertheless the majority of us failed to grasp it, and so we can add bellhanging to the "what might have beens." Not that it is too late even now to cover ourselves. I am sure that if we once realize the necessity for it, we will take full advantage, and receive our share, of a branch of the trade that is rapidly falling out of our hands and into the hands of electrical fitters.

I am perhaps laboring this question of bellhanging, but it is because I have experienced on the part of the plumbers a strongly rooted objection to have anything at all to do with electric bell work.

In recent years there has been a very serious decline in the gasfitting branch of the trade, so far as it concerns the plumbing trade generally, and it is due to two distinct causes—1st, that of the introduction of electric light; and 2nd, to that of the competition of gas companies.

Taking the latter first, what do we find? We find that, owing to the fact that the companies supply stoves on the hire system, this branch of the work has practically ceased to exist so far as the trade is concerned,