

elastic web is attached, recede from or approach to each other by manipulating the adjusting screw in one corner. If, when the elastic sheet is expanded, an impression be printed on its surface by means of transfer ink, it is obvious that when the sheet is allowed to contract to any given extent, and the print be then "set off" or transferred from the rubber to a new and polished stone, the resulting picture will be a perfect and reduced *fac simile* of the original. This reduction is much more perfect than could be produced by any artist, no matter how accomplished he be; and coarsely executed work, such as that of the commonest wood engraving, may thus be made to rival the finest steel engraving, so far as fineness in the lines is concerned.

"Impressions from wood engravings and type become exceedingly valuable by means of the Pentagraph, as these, when reduced on stone, produce exquisite results, and can be altered to suit every purpose without reference to original size; thus effecting immense saving in labor and time, as evidenced in the present illustration.

"The practical value of this invention to a lithographic establishment, may be briefly stated in a few words; for instance, a bill-heading, after being once engraved, and transfers made or impressions taken upon the elastic transfer medium, can be altered and transferred to stone to fit any size of paper. Show cards can be reduced to print as business cards. Transfer impressions taken from wood engravings or type, reduced and transferred to stone, yield printed copies as fine as engravings; crayon, or chalk drawings, when drawn to an enlarged scale and printed on elastic transfer medium, and reduced when transferred and printed from stone are superior to any thing that could be done by the ordinary mode, and this is the only process by which duplicate transfers of chalk drawings can be accomplished that yield impressions superior to the original drawing. Engravings executed to a medium size may be used for obtaining reductions and enlargements, also contorted or metamorphosed, and used for any desired purpose, without the expense of engraving duplicates for each size. Manufacturers using various sized package labels or tickets may have their show cards reproduced as labels for each packet, as suitably as if engraved for the purpose, but possessing this great advantage, that each label, though different in size, presents the same character, thereby rendering imitations difficult and more easily detected.

Slow Poisoning.

He who suddenly kills a man, for the sake of robbing him, is a murderer; we have laws to hang him, and sometimes do hang him. But he who slowly poisons a multitude of people, for the sake of cheating them, is a respectable tradesman; we make him an alderman, congressman, deacon, or bank-director; and he dies full of years and honors, and his children live in the Fifth Avenue.

Philosophers in all ages have amused the people by telling that copper, lead, zinc, and their compounds are poison; yet tradesmen convert them into vessels in which food is prepared, into water-pipes and cocks, and in many ways get them into

contact with what we eat. The philosophers occasionally excite the admiration of learned societies by tracing epidemics to poisoned water, or bread, or pickles, or pork, or coffee, or other article of diet; but all this has little effect on "practical men," except to increase their contempt for theorists.

Whether the time will ever come when such foolish things as brass cocks, lead pipes, copper kettles, and zinc tanks will be put away, is a question for prophets rather than for philosophers; but if ever it does come, it is likely that longevity will be considerably increased. Though we can't see that a little copper, or lead, or zinc (if it ever really gets into water or food, from vessels that are kept clean) does much harm as a poison (if it really does any harm), we don't like the risk of it. The other day we reported a fellow who had poisoned over 300 people by filling the holes of his mill-stones with lead; that could not be a mistake; but it was too big a dose, and not an argument to prove that brass cocks, copper boilers, lead pipes, &c., can do harm, when kept clean; so practitioners assure us. But we have no faith in them.

What, then, shall we use as material for such vessels? Shall we use iron, and make dye-stuff of our tea? If this question be put as a question, and not as an answer, it is well worth considering. What can we make cocks of for the half-million house water-pipes in New York? is a question that may involve a new trade, and the health of a million people.

We have recently seen accounts of turning glass. Boring glass, and molding it, are old processes, which possibly may be improved. Grinding-in stoppers and plugs is a common practice. We have had schemes, that were deemed plausible to men of some talent, to use glass pipes for the distribution of water in houses. On the whole, were we very wealthy, we would rather order glass cocks, at the risk of losing money, than use brass, at the risk of losing health, or even white metal, in which we have no implicit faith. As a cheap article, black glass cocks may be worth thinking about.

The tin-lined lead pipe which is manufactured in New York is doubtless a great improvement, and may last a great many years; but in time the water may get at the lead, and very soon, if the joints be made by inexpert workmen, there may be a trace of poison—more than a liberal man would like for himself and his family. We would rather not have even a suspicion of poison in water-pipes, cocks, kettles, or anything else. For steam-fittings we have no prejudice against brass; but, although we profess the Christian faith, we make too much account of this life to be indifferent to the influences of these poisons, even in homeopathic doses; life is too important to be thus trifled with, even by the righteous, who expect a better life when they cast off their present bodies; what, then, should it be to the great majority of wealthy speculators, who have means and influence to change the practice of the manufacturers of these articles?—*Am. Artizan.*

Pins.

15,000,000 pins are said to be daily called for in Great Britain, in the manufacture of which 2,727 tons of brass wire are consumed. One firm in Birmingham consumes 150 tons per annum.