The public are gradually realizing the vast extent to which "crooked" plumbing is sapping the health of the community. Every day new facts come to light, showing the shocking way in which drains are laid and pipes put together in dwellings and, indeed, all kinds of buildings. The reports of the tenement house inspectors, in the daily papers, reveal a deplorable neglect of health and decency in these houses. When it is stated that like defects, only in a less degree, exist in the bulk of the better class of city residences, it is apparent that reform is imperative.

Mere wholesale denunciation of plumbers will not do any good. This only confounds good men with bad, and if anything, helps the latter to get work. What is necessary is to summarily put to the employment of incompetent and unscrupulous men who do the scamped work so common everywhere. The whole tendency, sanitary thought and discussion in this country is in this direction. The end to be accomplished is three-fold. First, to exclude sewer gas from dwellings; Second, to check the vast waste of water which is exhausting the reservoirs of all our large cities; Third, to stop the general saturation of the soil with water and sewage, which fosters malaria and renders large sections of country unhealthy.

Much can be accomplished by intelligent and honest official inspection. Authority must be had to examine and pass upon all work in new buildings before they can be occupied. In order to have intelligent action and practical results it is necessary to have a comprehensive code of rules. As a basis for such a code we have prepared with considerable care what seems to us essential at this time, which will be found on another page under the title "Requirements for the Drainage of Every House."

The Chicago Times deserves commendation for the vigorous manner in which it has exposed flagrant cases of bad plumbing, and in mentioning the men responsible for it. This will have the effect of causing others to use more caution.

We think, however, that it should be very careful in suggesting or endearing plans of drainage. It can hardly be expected that the average reporter, while possibly quite competent to report upon flagrantly bad work, is capable of giving sound technical advice on such matters. The Times will do well, therefore, to refer its readers to experts of recognized position and ability. For the past eighteen months, this journal has pointed out the defects, to which the attention of Chicago people is now so forcibly called, and has repeatedly suggested their remedies.

We shall be glad to receive inquiries from any Chicago residents, and give them the benefit of the experience of the ablest sanitary engineers in the country. Chicago has had its full share of skin building, and rascally and ignorant plumbers, and we hope the Times will keep on till it has secured a good license law, a proper sanitary code and honest official inspection.

A Memphis editor summed up the lesson of the Southern plague of 1878 in these words:— "We have had enough of charity and heroism; next year let us try common sense and drainage." If this wise counsel had been obeyed, we should have been spared the present epidemic in the southwest, with the vast damage it has inflicted on health and prosperity. It seems useless to waste sympathy where people have so wilfully neglected their duty. Precautions have no doubt been taken, but they have been neither prompt nor sufficiently radical. The public authorities have tried to do their duty, but householders have refused to keep their premises clean, and fostering conditions for contagion have been abundant.

The time is past for repentence. Memphis is a doomed city. The rigid quarantine will doubtless prevent the infection from spreading, but her commerce and prosperity are destroyed. Most of her inhabitants have fled, and the remainder must remain in a state of siege till the frost comes. It is to be hoped that this second warning will then be heeded, and that proper precautions will be taken against a return of the disease.

Some of the "solid men of Boston" are exercised on the subject of their ancient graveyards, stowed away among the streets of the city, in Paul's churchyard, at King's Chapel, and the old Granary ground near the Common. Mr. George W. Phillips, brother of Wendell Phillips, whose family burial-place is in the latter place, recently appeared to defend the cemetery against a sanitary citation from the prosecuting attorney, Mr. Whitmore. He said that only twenty interments were made in it between 1873 and 1878. But the sense of the people at large is against such places. A story is told of a country visitor who came to Boston lately and put up at the St. James Hotel. Next morning he looked out of his rear-window and saw the graves of Paul's Church. He migrated at once to the Parker House and asked for a front room. Having taken possession, he looked out into School
RIVAL SCHEMES OF HEATING.

BY ROBERT BRIGGS, C.E., OF PHILADELPHIA.

If the fortunate holder of funds, the depositor of money lying idle in a bank, has any question as to where he can secure the greatest interests and exclusive grants for the systematic heating of a city by steam, if he has doubts as to where he can stake his capital with the greatest certainty in earning a permanent investment.

In place of steam, or the great heat distributor, he will find commercial hydrogen gas to become as important as water. The recent experience of the Mutual Gas Co., which is about to lay its mains, to deposit $50,000 as a guarantee against damage to the streets. Gas in Rockford, Ill., costs $2.70 per thousand.

The London gas companies are endeavoring to extend their system of cooking by gas, which seems somewhat mysterious.

The value of hydrogen gas is not fifty years old) is, "You pays your money, and you takes your choice."

The theory of the case for either competing method is based upon the relative quantities of gas consumed in the comparison of heating effect by volume that will be needed, and the products of combustion are reduced in both cases being utilized to 70°. It is also an admitted practical fact that each pound of steam that is wasted in the production of heat, is a pound of gas that may be sold for the same heat. This advantage is still more apparent when it is considered that the cost of the fuel is the lesser item. The problem of boiling the tea-kettle, which is propounded as a question of the pipes conveying the steam to the works, is considered as the test of the franchise, or the value of this franchise to the favored community in view. The projects of these communities, side by side with lighting-gas and water mains, and when our mills and factories and workmen are relieved from the unsightly and unhealthy habits of dirt and ashes, and extravagance, will be the result of the exercise of the franchises in question, and the elimination of certain prejudices against gas have been overcome. The city of Columbus, Ind., has required the Mutual Gas Co., which is about to lay its mains, to deposit $50,000 as a guarantee against damage to the streets.