

CORRESPONDENCE.

[Letters are invited to this department on subjects relating to the building interests. To secure insertion, all communications must be accompanied by the name and address of the author, not necessarily for publication. The publisher will not assume responsibility for the opinions of correspondents.]

FIRE PROOF MATERIALS.

MONTREAL, December 3rd, 1895.

To the Editor of the CANADIAN ARCHITECT AND BUILDER.

DEAR SIR,—I beg leave to question your views on fire proofing. Judging by several articles which have at different times appeared in the CANADIAN ARCHITECT AND BUILDER advocating the use of concretes for fire proofing, I think you have overestimated the value of that material for that purpose, and I consider that the letter signed “An Architect” is to the point and ought to appeal to the unbiased judgment of anyone having only public interest in view.

That concrete business is as old as the hills and has been pushed for all it is worth in every imaginable shape, and up to this day there is not a single instance where its most sanguine advocates have been able to prove its superiority over porous terra cotta. There is one thing we all know, and that is that at the Denver tests it was shown conclusively that porous terra cotta was the only material that stood all the tests. We all know that porous terra cotta is absolutely fire proof and that we have never heard of a building fire-proofed with porous terra cotta ever having been destroyed by fire. Does it not then stand to reason that it is safer to use a material that we know is fire proof, rather than run the risk of adopting what we only consider as good, but of which we only have opinions and no positive facts? Is it not better to leave well enough alone?

Yours truly,

N. T. GAGNON.

[NOTE.—Mr. Gagnon is mistaken in saying that we advocated the use of concrete for fire proofing. We only gave the facts as they were presented to us, and did not express an opinion of our own as to the relative merits of concrete and terra cotta.—EDITOR C. A. & B.]

SAFETY OF HOT WATER HEATING SYSTEMS.

Editor CANADIAN ARCHITECT AND BUILDER.

SIR,—The prevalence of accidents to hot water heating systems at this season of the year entitles practical engineers to enquire into cause and effect.

This system of heating is annually becoming more generally used both in public buildings and private dwellings, and the amount of ignorance displayed as to the requirements of safety is remarkable. When we consider that nearly every plumber has developed into a “practical steamfitter” (so-called), who will undertake the erection of the most intricate systems of heating apparatus, and considers himself fully competent of doing so as soon as he is able to run a straight thread and cut a piece of pipe—notwithstanding that the theory of expansion and contraction is an almost unknown thing to him. When we examine some of the arrangements laid out by these men we wonder that some of the explosions (“break-downs” they call them) that have followed their experiments have not resulted in a serious loss of life. Thus, so far, Dame Fortune seems to have been kind to them in this respect.

A very large number of business blocks are now heated by this system, and the usual class of labor employed is a fireman who has not the slightest knowledge

regarding the nature of the plant under his charge. It is therefore especially necessary that all systems should be properly examined before being passed over to this class of help.

It has been my lot to have to look into several more or less serious “break-downs” of hot water furnaces, to ascertain the cause, and in every case the cause of the whole trouble was traced to want of expansion. One instance will suffice. A pair of twin boilers blew up some time ago in a manufactory here, and made things exceedingly interesting around the establishment. The boilers were set side by side and were so arranged that either one or both boilers could be used for the whole system as occasion demanded. Boilers were attached to separate headers as shown in diagram. For convenience we will discuss arrangement of pipes under separate heads. For the information of any of your readers who are not well versed in this method of heating, I wish to point out that the whole efficiency of the system depends on a proper and systematic arrangement of mains and their accessories.

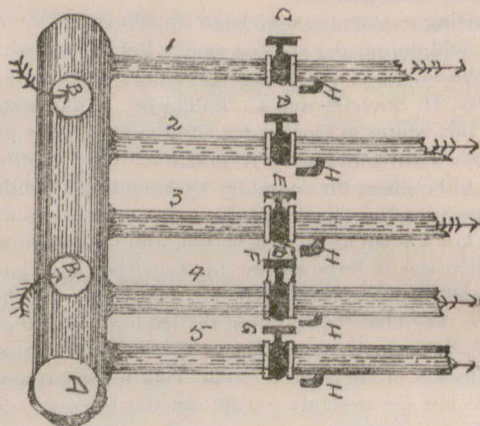


DIAGRAM NO. 1.

Diagram No. 1 represents “flow” header, designated A, fed from boilers at B, B¹ mains shown at 1, 2, 3, 4, 5, distributing hot water to several radiators throughout the building.

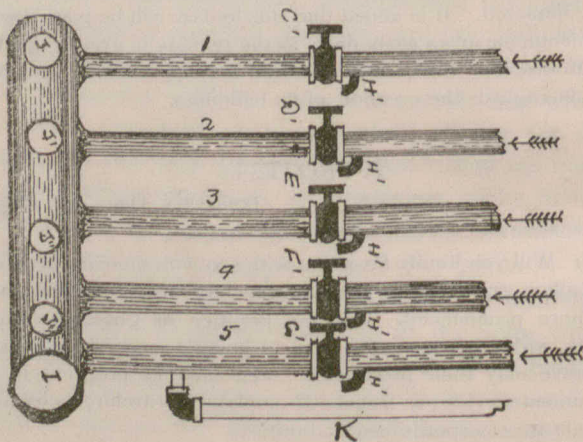


DIAGRAM NO. 2.

Diagram No. 2 represents return header, designated I, return from header to boiler being effected at pipe J, J¹, J¹¹, J¹¹¹,—pipes from the radiators being arranged as 1, 2, 3, 4, 5.

Boilers were each provided with shut-off valves between header and boiler on each pipe. As water is heated it flows in direction indicated by arrows. My object, however, is not to discuss action and circulation of water so much as arrangement of mains, etc.

By diagrams it will be noticed that each line of main is provided with valves, as at C, C¹, D, D¹, E, E¹, F, F¹, G, G¹, and drip valves as at H, H¹, thus enabling any