

ONE-PIPE GRAVITY STEAM SYSTEMS.

Circuit Main System.

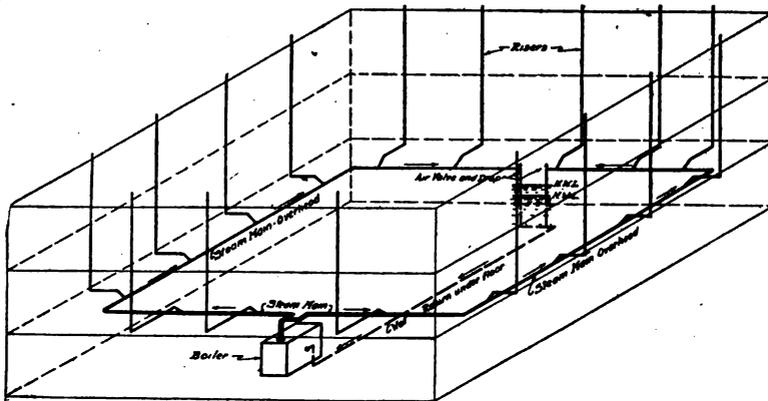


FIG. 1.

To obviate the difficulty experienced with the true one-pipe system, what is known as the "circuit main" system has been used with great success. In this scheme, as shown in Fig. 1, the radiator runouts, risers and branches are left pitching down from the radiators and against the steam flow, but the steam main—the point of greatest trouble—is pitched with the flow of the steam so that the condensation flows along with the steam, instead of against it. At the end of the steam main run a drip pipe, or "bleeder," as it is commonly called, is dropped down below the water-line and carried back as a wet return. The pipes are pitched down in the direction indicated by the arrows and all pockets should be avoided by the use of eccentric fittings or flanges, while expansion must be properly cared for, both on the steam and return main and in the radiator connections to the risers.

It will be noted that, with the exception of the runouts and riser branches, all of the condensation flows with the steam and as long as the risers do not get too big, *i. e.*, have too much radiation placed on them so as to produce an excessive quantity of condensation flowing back down—there is no difficulty experienced with this piping arrangement.