

It will be observed that the fresh and pure air from without the building is brought in under the furnace and sub-divided by separate channels in such a way as to envelope in its ascent every part of the fire box and flues. Whereas in almost all other furnaces now used the air enters at one side only and directly begins to ascend, thereby only coming in contact with about half the heating surface.

The inventor claims as a most marked improvement the sub-division of the air, (first by separate entrance channels and then by the small distances between the tubes themselves, between the tubes and outer casing, and between the smoke boxes and outer casing) into thin vertical strata; for by such a subdivision it is much more rapidly heated by being at every point in contact with heating surfaces, than what a large undivided bulk of air is which receives its heat merely from radiation.

The arrows, in the blue tint on the plan, show the direct vertical motion of the air, through the apparatus, from the bottom at which it enters, to the top of the air chamber where it divides into separate channels on its way to the apartments to be supplied with it.