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District Heating Is Not New, Benjamin Franklin devised a plan.

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While communal heating has made great strides especially in America during this age it is by no means new. Birdsill Holly, may have been the Father of the system as we know it to-day but a Roman named Marcus Negidius Vacula, heated three houses in Pompeii from one heating chamber. Carl Thistlewaite, digging in that ancient city in 1821 discovered this early system of chain heating. He tells us that the heat was conducted in square terra cotta pipes from house to house and radiated through a square heating well in each dwelling covered by a perforated copper plate, the perforations being arranged to form a geometrical design. In this plan the circulating heat must have been hot air minus smoke but how the smoke was otherwise disposed of is not clear. Thistlewaite, suggests that the air possibly was heated in metal conduits passing through the hypocaust, but he does not state what evidence he found that would suggest this.

The Chinese had hollow flues beneath the floors of their better built houses connected with a furnace constituting a system known as the tikang. They used charcoal as fuel.

Sir William Chambers, in a Dublin printed pamphlet dated 1759 states that he was then adopting this form of heating in many mansions in Ireland. He refers to one scheme of town houses he designed for the Duke of Lienster, ten in all, in which a continual heating conduit was carried right through them from a furnace at one end to a tall chimney at the other. The conduit was twenty-four inches square, built with hard fire brick and covered with tiles.

That great American philosopher, Benjamin Franklin, tells us in a letter dated 1749, "I have been engaged for years now on the better heating of buildings. With this view I have arranged a new-invented construction for heating houses in rows. If health continues I hope to complete this ingenious plan before the end of year. Nothing could be more simple than it is. The drawing laid down to scale makes the plan clear. An iron stove-furnace to be set in a chamber beneath the ground will use as a flue an

iron box-pipe of ten inches across in every way joined in a faucet and laid below the floors to the clear level. To prevent burning let it be enclosed by brick walls with tiled covered tops to the common level between the wood of the floor and the heat pipe. The smoke and hot gas is draughted to a common flue by the same size at the far house of the row. By experiment I have proved that a good and ample heat could be had in one and all dwellings and complete confidence may be reposed in such constructions."

From this original document in the handwriting of that great man of 18th century science we learn that the principle of district heating was thought of by him. It was he who also some years before, 1745 to be correct, published a pamphlet on his Pennsylvania fireplace, combining the descending flue of Prince Ruphert with Gauger's caliducts. This publication was produced by himself from his own printing press.

Matthew Bolton, the great English engineer, the partner of James Watt, of steam fame made a plan for the heating of four houses in Soho, London, by cast iron steam pipes, being an enlargement, the caption on the drawing tells us, to the proposal to heat his own house by this method. A six inch pipe carried along the back walls of all apartments on the ground floor above floor level was proposed to be returned along the front walls on the first floor. An outlet pipe passing through the walls into the open air was to be provided from lead and return pipes and this was plugged with wood and was meant to act as an "escape against explosion" according to a note on the drawing.

There is no evidence that this communal heating proposal was ever put into practice even in his own house.

These facts from the records of time clearly establish that the thinking men of old conceived the idea of central heated communities which our American cousins have now put so widely into practice. "There is nothing new under the sun" is there?

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