

out of the condensed liquor that falls to the lowest points in the mains to drip boxes provided for that purpose.

Then, again, the lighting and heating branch of the work is looked after separately, as this is where the advertisement comes in.

I think I have given you a fairly general summary of the methods of producing coal gas for commercial use, and the various plant used.

It would not be out of place now to finish up with a short illustration of the usefulness of gas as an illuminant, and one of the by-products of gas called coke as a fuel. Do not think this is an advertisement, but as a worker amongst gas plants and gas works all my life, I find it necessary for my conscience, perhaps, to give gas, especially as an illuminant, all the honor due to it. Although I do not claim to be a lighting expert in any sense of the word, a little thought and common sense will often show you that the difference between right and wrong is. Sometime ago I saw some advertising literature of a well known electrical firm who are represented all over the world. It was in the nature of a post card with skull and cross bones in one corner calling attention to large storekeepers who burn gas that, "although they had a fair show of light they were slowly poisoning their customers and clerks by vitiating the atmosphere they breathed." Now this sounds very well on paper, but if you put it into practice it is all rot, for if a building is totally lit with electric light and has no proper mechanical means of ventilating, in a given number of hours the atmosphere will be more impure than if gas had been burned.

I quote from an article or report from an eminent professor in his experiments made in a City Museum or Art Gallery, with a view of ascertaining whether its artificial lighting by electric arc lamps or by incandescent gas lamps respectively is preferable, from the point of view of possible pollution of air damage to pictures and objects of art exhibited there. These experiments show clearly that under the conditions of ventilation prevailing at the time:—

(a) In the absence of any artificial illumination there is a slight increase in the percentage of carbonic acid in the air during the course of the day.

(b) With the electric arc lamp illumination the increase in the percentage of carbonic acid is distinctly marked.

(c) With the incandescent gas illumination on the other hand, instead of there being any increase there is a distinct diminution in the percentage of carbonic acid in the air.

The explanation of this diminution is not far to seek, it being obviously due to the more efficient ventilation which is caused by the great draught of heated air through the ven-