

MUNICIPAL DEPARTMENT

THE VENTILATING AND FLUSHING OF SEWERS.

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PARTICK.

(Continued from last week.)

The ventilation of sewers by open gratings in the surface of the streets, which actually began about 1850, is the system still universally adopted. Recommended by Sir Robert Rawlinson, the late chief inspector of the Local Government Board, the system was readily adopted because of its simplicity, cheapness and access. The system is satisfactory enough in streets not less than about 36 ft. wide, where the sewers are laid on self-cleansing gradients, and the manways are placed at intervals of from 50 to 80 yards apart. But even under the most favourable circumstances this system cannot be said to be the final solution of the problem. It must, however, remain until another has proved itself to be eminently superior. The emanations from surface manways at certain periods of the year are very disagreeable, and occasionally very strong complaints are received by sanitary officials, and requisitions to have them removed. In some cases there are real grounds for complaint, and these should always be dealt with by every authority and official in a manner which will convince the objectors that an earnest endeavour is being made to combat the evil without increasing its intensity to others. It is no remedy, for instance, to merely close a manway grating without providing something as effective in its place. Complaints, however, are very often greatly exaggerated. To prove this, a certain burgh surveyor experimented a little on a ratepayer by putting up a vertical shaft on his property without making the actual connection to the sewer. The manway cover was supposed to be closed, but not actually carried out, so that the former conditions remained for a period. On enquiry of the duped ratepayer some time afterwards he triumphantly stated that the new ventilation was a decided improvement, and that there was now no smell of any kind.

The introduction of tall ventilating shafts at the kerb lines or attached to walls of buildings as a substitute for open gratings at the surface of the streets on an extensive scale is of comparatively recent practice. Objections to this method have been expressed by such eminent sanitarians as Sir Robert Rawlinson, Dr. Corfield, and Dr. Parkes, on the ground that the many bends necessary would impede rather than promote ventilation. Mr. Baldwin Latham, C. E., also asserts that the system during certain periods of the year would prove absolutely useless, owing to the small difference of temperature between the external and internal air, and adds that the current produced under the most favourable conditions would only affect the sewer a short dis-

tance from the shaft. Over against these objections, which seem to be more theoretical than experimental, we have to put the experience of several municipal engineers who have been able to expend public money and time in seeking to prove the truth of these assertions. Mr. E. G. Mawbey, city engineer of Leicester, and president of the Municipal Section of the Royal Institute of Public Health, stated in his address at Eastbourne six weeks ago that during the past 12 years he had made about 3,000 experiments on the system of ventilating by tall shafts, with the result that on an average he found the upward current to be from three to five times greater than the velocity of the downward current. Although these facts prove conclusively the efficiency of shaft ventilation in places where the houses are to a large extent not over 30 ft. in height, they do not prove that the results would be as effective where the buildings chiefly consist of high tenements from 50 ft. to 60 ft. in height. From a sanitary point of view the proposal to erect a series of shafts 30 ft. high along the kerb line of our streets, and where high tenements are built, would not be any improvement on the old system of street openings, as, necessarily, the outlets from the top of the shafts would be in greater proximity to the windows of sleeping apartments than before; and to suggest that shafts 50 ft. high might be attached to the front walls of houses has so many difficulties and objections connected with it, that we

must put the proposal aside until a better solution is arrived at.

Although this association does not lay itself out to discuss questions of art and architecture, still it might be said that one objection to the adoption of a system of tall shafts on public streets would be the effect on the general appearance of our streets. What with tramway standards, electric lighting standards, and gas lamps, the resemblance of many thoroughfares is not unlike that of a shipyard; and surely this aspect of the question ought to be considered before adopting a system of this kind. The idea of the utilising of untrapped side gullies as a means of ventilating sewers is adopted in several places, the idea being that the side grating would act as an additional inlet for fresh air, while the street grating acted as an additional outlet for the sewer air. This system is the one adopted in Partick by my predecessor, the late Mr. Potts; but whether the comparative absence of complaints in the burgh is due to the untrapping of the side gullies, or to the comparatively good gradients in most of the sewers, has yet to be proved. Presently I am endeavouring to carry out a series of tests with the anemometer to prove whether the side gratings act as inlets simultaneously with an outward current from the manways, or vice versa.

(To be continued.)

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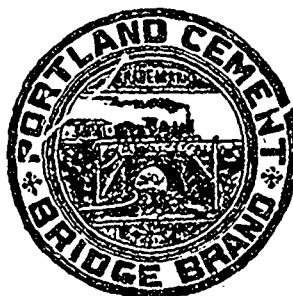
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