Hæmorrhage into the Lung.—Over and over again we find this associated in some cases with a wound of the lung, in others merely due to concussion from the adjacent passage of the missile. Case 62 is a case in which there was a contusion of the upper surface of the diaphragm from the grazing of a shrapnel bullet (found at the bottom of the pleural cavity). Yet there was some blood in the peritoneal cavity ; some of it had gravitated down into the pelvis. Where the lung was adherent to the parietal pleura and the blood could not escape into the pleural cavity death seemed to come on more quickly. Case 57 seems a case in point. In Case 46, in which the lung was partly adherent, it was so disorganized that only the apex could be recognized as lung tissue.

Heart Wounds.—These were uncommon ; most would die on the field. We had one case, No. 12, which had a wound on the left ventricle, together with hæmothorax and lacerated spleen ; he died shortly after admission. There was one case in which the pericardium was in the track of the missile ; this was not suspected during life ; it showed streptococcal infection similar to the pleura. Whether it would have responded as well to the Eusol irrigation as the adjoining pleura did, is, of course, a matter for conjecture ; or whether Prontosil (or allied drugs) injections in cases of streptococcal pericarditis of the future will help, I cannot say.

Current Literature.

WATER WORKS AND SEWERAGE. 1938, v. 85, 1130. **Galvanic Corrosion Stopped by Water Treatment.** [Summary taken from *Pub. Health Engineering Abstr.* Washington. 1939, May 13, v. 19. Signed R. E. Tarbett.]

" Experimental work under way by the Division of Sanitary Engineering of the Department of Public Health of Massachusetts is revealing that, in spite of corrective treatment of the water, galvanic action continues to occur in piping systems wherein dissimilar metals are brought together. Combinations of nine different kinds of service pipes (including those in common use to-day) have been immersed in raw surface and ground waters and in surface and ground waters treated to prevent corrosion. Results to date indicate that treatment with soda ash or lime has little or no effect on corrosion caused by galvanic action. Therefore, it is apparent that treatment of the water at the source is only effective in preventing corrosion at joints when a uniform kind of pipe is used in the distribution system and services. The conclusion is that anti-corrosion treatment does not prevent corrosion of services where pipes of dissimilar metals are used in contact with each other."

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GLOVER, B. T. J. **The Use of Heavy Naphtha in Bed-Bug Disinfestation.** *J. Roy. San. Inst.* 1939, v. 59, 671–80.

This article deals with the use of washed heavy naphtha by the Liverpool authorities for bed-bug eradication in unoccupied, empty dwellings. Since 1937, 849 houses and 645 tenements had been treated with, it is claimed, only six instances of failure at the first application of naphtha.

A thorough description of the procedure for fumigation is given. First, the house is sealed and then, if outside temperature is below 65° F., it is warmed by primus stoves burning paraffin. The concentration of vapour lethal for bugs after eighteen hours' exposure is 0·15 per cent, and for this to be obtained 50° F. is necessary. For practical purposes, however, 60° F. should be the minimum temperature during fumigation. To minimize fire danger, the stoves are removed and their numbers checked and the gas is turned off at the meter. Then screens of cotton cloth on to which naphtha is to be sprayed are hung 4 in. from the walls on wooden frames. Old blankets or sacks are placed across the roof-space floor and sprayed with naphtha and the cock-loft door is sealed. Spraying is then continued, from the top of the house to the bottom, keeping the door of the room closed during the operation. In badly infested rooms and in corners in passages where the erection of screens is inconvenient the liquid is squirted with a syringe into the harbourages. One gallon of naphtha per 750 cubic feet of space is used. The operators leave by the door of the last room to be treated. The delayed action sprinkler described in a previous review (*Bulletin of Hygiene*, 1938, v. 13, 308) has not been used in Liverpool.

After eighteen to twenty-four hours the house is opened and ventilated, when the vapour clears with great rapidity. There is no tendency for concentrations to " build up " on closing the house after ventilation.

It is the opinion of the writer of the article that heavy naphtha vapour is not harmful to human beings, for there have been neither obvious ill-health nor complaints from the fourteen men employed in the work during the last two years. Damage to paint work and redecoration costs are minimized by the use of cotton screens. The importance of a well-trained and disciplined staff, who must take meticulous care with every detail of procedure if suitable concentrations of vapour are to be maintained, is stressed. It is found that a team of three men can fumigate one house a day. Liverpool, with four such teams, fumigate approximately twenty houses a week at an average cost of £5 12s. 4d. per house.

Results of fumigation are checked four times before the end of the first month's tenancy—immediately after fumigation, then by the decorators and by two subsequent inquiries. In the author's words (rather sanguine to the abstractor) : " If no evidence of bugs comes to light before the end of the first month of the new tenancy, it is certain that the treatment has been completely successful."

The article contains a useful list of the necessary materials for naphtha fumigation with their sources and costs. C. JOHNSON.

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