Correspondence

with. This is the only point we can criticize adversely in a book that we hope will afford as much pleasure and profit to others as we have had from it. We can recommend its purchase for every hospital library; better still, by everyone dealing with medical cases.


The eleventh edition of the "Handbook of Sanitary Law," by Dr. B. Burnett Ham, has been brought up to date. Although intended mainly for students desirous of taking the Diploma of Public Health, it will also be useful for reference by Medical Officers of Health.

The characteristic simplicity and conciseness of earlier editions have been preserved, and the present edition is eminently suitable for its purpose. The subject matter has been clearly arranged and the book is of portable size.

Correspondence.

LONDON WATER SUPPLY.

TO THE EDITOR OF THE "JOURNAL OF THE ROYAL ARMY MEDICAL CORPS:"

SIR.-(1) The editorial on the London Water Supply appearing in the December, 1931, number of the Journal contains certain statements regarding the action of ammonia chlorine compounds which appear to merit amplification.

This subject has been dealt with at length in various communications to this Journal, and also in a paper read before the Centenary Congress of the Royal Institute of Public Health, held at Brighton in 1925. In the early days the interpolation of very necessary supporting experimental data undoubtedly detracted from the clarity of the various conclusions, and as the routine employment of these compounds is now gaining ground, perhaps a few explanatory remarks may not be out of place.

(2) The original experiments with chlorine and ammonia chlorine compounds were especially designed to test their comparative value in the treatment of all possible casual water supplies which might be encountered by armies in the field, ranging in type from the lightly contaminated, relatively pure well to the village tank of the far-off frontiers. The consideration of the latter type of supply, which would not normally come within the purview of civil practice, is necessary in the Army, since the success of a military operation might easily depend upon the temporary utilization of such a source of supply.

(3) In grossly polluted water it appeared that the action of chlorine
was seriously hampered, probably owing to the combination of chlorine with albuminoids, etc.; on the other hand, ammonia chlorine compounds proved more efficient, both from the point of view of germicidal velocity and persistence. This is of interest when it is considered that in early experiments with simple chloramines, colloids (glue) were associated with their preparation. Slight increases in the temperature of the water under treatment, such as might be met with abroad, favourably affected the germicidal velocity both of chlorine and ammonia chlorine compounds, but in the case of chlorine, absorption or deviation was disproportionately increased and its inferiority became more obvious.

(4) In relatively pure water chlorine exhibited its usual rapid germicidal effect, but with slightly increased temperatures the germicidal velocity of ammonia chlorine compounds approximated very closely to that of chlorine.

(5) Those of us who are acquainted with the records of water-borne disease on the Indian frontiers, and the habits of Indian races, will appreciate that any method of purification adopted for field service must prove capable of standing up to an unexpected load of human pollution.

After the foregoing findings were confirmed further tests with specially polluted samples of water were carried out. These tests proved that while employing bulk dosing of the supply with ammonia followed by chlorination, failures were experienced owing to the fact that inimical substances in the water sample occasionally caused deviation of the chlorine before it could enter into combination with the ammonia. This loss could be mitigated by super-dosing with ammonia, but this conservation was associated with a very prolonged germicidal lag which indicated that the activity of chlorine had been completely immobilized.

(6) Chloramine ("pre-formed") made by the interaction of chlorine and ammonia in optimum concentration and added to the test samples gave constant results and no failures were experienced. It also appeared that the germicidal velocity of chloramine ("pre-formed") was higher than that obtained by bulk dosing with ammonia followed by chlorine.

(7) Chloramine ("pre-formed"), both mono- and di-chloramine groupings, gave good results on all occasions, but those obtained with the monochloramine group were of a more even character, and this group also proved superior from the point of view of resistance to higher temperatures and persistence in water.

(8) The final conclusion arrived at was that the chloramine ("pre-formed") of the mono-chloramine type was the purification agent of election for field service.

I am, Sir,

Your obedient servant,

Salisbury,
December, 1931.

C. H. H. Harold,
Major, R.A.M.C.
EDITORIAL NOTICES.

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