naking a discovery when they had really only succeeded in exploiting at the concluding stages the pioneer work of others.

Soon after the publication of the constitution of atoxyl the writer met Ehrlich in Liverpool on his way to receive a medal at a sanitary congress being held in Douglas, Isle of Man, and congratulated him on his recent paper with Bertheim establishing the constitution of atoxyl, remarking that he had an able and energetic young man in Bertheim. The Geheimrath laughed heartily and said: "Energetic young man! Why he is a director of the Höchst Anilinfabrik, one of the greatest aniline dye works in Germany, and turned the whole staff on to the work."

It is in this combined team work, dealing with minute details, that Germany excels, and the history of the production of organic arsenical therapeutic agents is very similar to that of the aniline dye industry.

SUMMARY.

To conclude this brief sketch of the history of the therapy of protozoan diseases by the use of organic arsenical compounds, a history which only pretends to present the salient points and not to give any complete account of the literature, the following summary may be given:

Atoxyl, the mother substance, was discovered in France, the application to protozoan diseases was made by a Canadian working in a British laboratory, and the chemical nature of atoxyl was shown simultaneously in England and Germany; then German observers finessed amongst the derivatives to find the compounds best adapted for therapeutic use.

The details of production of the compounds were not revealed by Germany, and it is a matter for congratulation that these can now be manufactured in Britain.

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THE PREVENTION, SYMPTOMS, AND TREATMENT OF TETRYL DERMATITIS.

BY

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FOR the past nine months I have acted as medical officer to munition works employing about 250 women, where tetryl (tetra-nitro-methyl-anilin) is used.

This note, on the means used to avoid the dermatitis and other troublesome symptoms caused by handling this explosive, is written at the suggestion of Dr. Legge, H.M. Medical Inspector of Factories.

I. SELECTION OF WORKERS.

Experience showed that women with obvious eye or skin diseases should be excluded, and all workers should be taken on probation. It is quite impossible to foresee who will prove susceptible.

II. PROPHYLAXIS.

On entering the factory the workers remove their outdoor clothes, put on special overalls and slippers, and pass through a toilet room, where a responsible person sees that each worker hardens her hands in spirit lotion (filtered methylated spirit 20 per cent., water 80 per cent.) and dusts her face freely with powder (zinc oxide 1, starch 3).

In the rooms the workers are warned against touching their faces with their hands. The trays and tables are regularly wiped and the floors swept and scrubbed, so that the quantity of tetryl is limited. Tetryl-laden dust, or finely divided tetryl seems to be more injurious than tetryl in bulk. Some workers use veils or muslin across the mouth to avoid inhaling the dust. The rooms should be airy and cool, but not draughty. Hot, close weather increases the trouble, so that provision must be made for keeping the rooms cool in summer.

On leaving the works, the workers should wash their hands, using olive-oil soap or bran. Each worker should

have her own towel. The face is wiped free of powder and a simple greasy preparation may be used at the end of the day.

Washing of Clothes.—It should be noted that those living with workers get affected, especially if they wash the workers' clothes. All clothes should be soaked in cold water and paraffin and rinsed before being boiled, or the steam from the boiling clothes will be very irritating.

III. SYMPTOMS.

The hands of all workers are stained yellow, and in most of them the faces and hair. They are known in the town as the "canaries." The conjunctivae are never stained, nor the covered portions of the body, but the feet may get "yellow as duck's."

Dermatitis, by which almost all workers are attacked, consists, in its mildest form, of irritation and roughening of the exposed skin. More serious is a papular eruption; in the severest cases there is acute oedema of the whole face, closing the eyes and making the features unrecognizable; any variety of eczematous eruption may be seen. The attack may occur at any time, but usually after a fortnight's exposure.

Conjunctivitis may occur with or without dermatitis.

Nasal irritation manifests itself in excessive sneezing and in epistaxis, but is never severe enough to keep a worker at home.

Pharyngeal irritation has occurred in a few cases. Asthmatic attacks compelled two workers to leave.

Constitutional symptoms are almost absent. Insomnia perhaps occurs out of proportion to the cutaneous irritation. "Biliousness" at the monthly periods has been noticed. It has not been found necessary to give the workers rest days on this account. The appetite is excellent, and the general health of some delicate women has certainly improved.

TREATMENT.

If the symptoms are slight the worker is encouraged to remain at work, perhaps changing to a room where tetryl is not used. The symptoms will then, as a rule, subside in the course of a few days and not recur.

If the symptoms are more severe—if, for example, there is oedema or a papular eruption, or conjunctivitis of moderate degree—the worker must stay at home. She should not return until quite well, as a convalescent seems unusually susceptible. If, after recovery, the worker gets a second severe attack, I advise her to find other work. In some cases, however, where the worker has remained at her own risk, she has gradually improved, and the skin, apart from pigmentation, has become practically normal.

For the dermatitis, in the severest cases, steaming the face with subsequent application of wet cloths reduces the swelling and allays the irritation. Later on, and in less severe cases from the first, calamine lotion acts well, though some prefer an ointment composed of zinc ointment, lanoline, and castor oil, equal parts. I have avoided lead lotion, as lead has a dangerous affinity for tetryl.

For conjunctival irritation colloidal silver acts well, though it smarts on application. For nasal irritation we use liquid paraffin.

RELAPSING PARATYPHOID "A" INFECTION.

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SINCE the outbreak of the war paratyphoid fever has received a considerable amount of attention, and, with the extension of bacteriological laboratories, further opportunity has been afforded for its study. So far as recognized, the cases have presented more or less definite clinical manifestations, and the diagnosis is usually confirmed by the bacteriologist. That the infection may present itself in anomalous or atypical forms seems very probable, yet, so far, there has been little reported on the subject.