

Original Communications.

ARSENICATED WALL-PAPERS.

By JAMES WHITEHEAD, M.D., Manchester.

A PARAGRAPH has recently appeared in several newspapers on the subject of arsenicated wall-papers, containing a statement of which the tendency will be to mislead those who happen not to be well acquainted with the subject.

It appears that the Commissioners of Inland Revenue, having entertained the impression that the green paper with which some of their offices were lined was injurious to health, directed Mr. Phillips, their chemist, to institute an investigation as to whether such papers, as had been alleged by Dr. Halley, were likely to produce a poisonous influence on the system.

“Mr. Phillips's report, which (as the paragraph states) is printed in the *Journal* of the Society of Arts, is perfectly conclusive in solving this question in the *negative*.”

Now this statement, correct no doubt in so far as it has reference to the papers which Mr. Phillips examined, may not equally apply to green papers generally.

Mr. Phillips rightly states that the degree of heat which would be necessary to volatilise arsenic would be humanly insupportable, and consequently arsenic is not likely to be liberated by this agency in apartments wherein human beings dwell. It is obviously not by this means, therefore, that arsenicated papers prove deleterious. Mr. Phillips admits that particles may be separated in the process of cleansing by means of brushes where the glazing is imperfect.

In truth, arsenicated papers which are perfectly smooth and properly glazed are probably harmless. But it is altogether different with the tufted or flock papers, and also with the flat papers which are unglazed.

In the autumn and winter of last year, I attended a youth labouring under symptoms of arsenical poisoning, viz., aphthous ulceration of the gums and tonsils, violent frontal headache, great languor, nausea and occasional vomiting, inappetence, diarrhoea, disturbed sleep.

The complaint, mild at its onset, gradually increased in severity, spite of treatment, and at the end of eight or ten weeks, the patient was removed to the country, where he was speedily restored to health. I had repeatedly expressed a suspicion that the symptoms were those of effluvial or other kind of poisoning, and the supply of water and state of the drains were consequently examined; but in these no cause of complaint was found.

On his return home, perfectly well, he was placed in the same apartment; but in the space of four weeks, was worse than before. He had spongy gums, diphtheritis, violent neuralgia of the forehead and face, great languor, occasional diarrhoea, and emaciation. Attention was next directed to a cistern placed against the wall outside his bed-room, which it was thought might possibly have had a share in producing the mischief, and it was therefore subjected to alteration. This measure necessitated a change of apartment for the space of a fortnight, at the end of which period he was the third time located, again in perfect health, in his own room. In the space of three to four weeks after his restoration, the symptoms reappeared in an aggravated degree of severity, and this time it was believed, as had already been several times suggested, that the cause of all the annoyances would be found in the paper with which the apartment was lined. Such being the conviction, both of myself and the family, the paper was replaced, without loss of time, by one of a totally different tint, and was followed by results every way satisfactory. The youth, who has continued to occupy this room from that time until now, remains perfectly well, having had no relapse of symptoms since the removal of the green paper.

The apartment in question, formerly used for other purposes, was converted into a sleeping-room in the summer of last year, 1857. Its walls were covered with a rich green tufted or flock paper, which was placed thereon about four years ago; and it was remembered that the workman who was engaged to hang the paper had made use of the expression, during the operation, that he disliked working with that sort of paper, as it always made him ill. During the process of papering, the floor of the room was coated with green dust, and since that

time, whenever the room was cleansed, the dust which rested on the furniture always imparted to the articles used in the process of cleansing a green tinge, showing that particles were constantly being detached from the wall. When used for a few days in succession as a sitting-room, as it had been formerly, the occupants began to feel uncomfortable, and were, from that circumstance, induced to desert it for a period.

Having procured a portion of the detached paper, I scraped off from the raised parts a quantity of green powder, which was submitted to chemical examination. Thirty grains were sent to a chemist, with a request that he would ascertain whether the article contained arsenic, and if so, in what proportion. The remainder was examined by myself. The results were as follows:—

1. Note from the chemist: “I find the quantity of arsenious acid contained in the thirty grains of substance which you forwarded amounts to about eleven grains.”

2. A quantity of the green powder thrown upon a hot iron emitted an odour of garlic, characteristic of volatilised arsenic; mixed also with a peculiar metallic flavour.

Four grains, all that remained of the powder, were boiled in four ounces of water in a glass vessel, and submitted, after filtration, to the following tests.

3. Ammoniacal nitrate of silver threw down a pale brownish precipitate.

4. Ammoniacal sulphate of copper gave no result.

5. Sulphuretted hydrogen gave no result.

It is highly probable that the quantity of the green powder used in making the solution for the last three experiments was too small; and moreover, by an unfortunate mistake, the solvent employed was not distilled, but spring water. This would be sufficient probably to render the tests inoperative.

The fragment of paper from which the green powder was obtained measured less than a square foot in extent, and the ascertained superficies of wall covered by the paper was 350 square feet. Allowing, therefore, that eleven grains were held by the portion experimented upon, it follows that the quantity of arsenious acid remaining on the wall-paper, after four years usage, would amount to at least 3,850 grains.

Although the tests Nos. 4 and 5 gave no indication of arsenic, I cannot doubt that arsenious acid, and probably arseniuret of copper, formed the deleterious agents in this paper.

HYSTERIC HYDROPHOBIA, WITH DELIRIUM TREMENS.

By JOHN WHEATCROFT, Esq., Cannock.

MR. G. H. S., aged 29, presented himself at my surgery July 25th. He was in a state of great nervous excitement, stating that he had been bitten by a dog three weeks previously. “I have been a medical student,” said he, “although I am now travelling for a wine and spirit house. I feel dreadfully alarmed lest I should become hydrophobic. I was bitten by a dog whilst fighting. I applied nitrate of silver to the wound; but my limbs feel very stiff; my jaw feels queer; my salivary glands act abundantly; I cannot sleep. I have ceaseless dread of rabies.”

I examined the wound, which was in the right popliteal space. There were teeth-marks, looking rather sloughy, with evidences around of the application of the nitrate of silver. On inquiry, I found my patient had been drinking to excess. There was tremor of the hands and tongue, a wild appearance of the countenance, commingled with an expression of intense anxiety. I endeavoured to soothe his terrors, and ordered a mixture of carbonate of ammonia with tincture of opium, ten drops to the dose. Whilst I was so engaged, he fell on the surgery floor, in a fit, evidently epileptic. The convulsive struggles were very protracted; the face became livid; the tongue bitten; large quantities of foam issued from the mouth. Perfect intellectuality was never re-established. In three hours, the fit was repeated. On my visiting him half an hour afterwards, he was somewhat sensible, and answered questions intelligibly; but still there were the wildness of countenance and loss of memory. He complained of a choking sensation about the larynx. I offered a glass of water. The patient took the vessel eagerly; but, the moment the glass neared his mouth, there came on laryngeal spasm, and a shudder, a scream, and choking. This occurred four several times on my presenting the fluid: the patient looked piteously at me, and, with difficult articulation, said, “Mad, mad! Hydrocyanic acid give me, give me. Don't let me go quite mad; poison me