SCHOOL DUST.*

By JAMES KERR, M.D., D.P.H.

Medical Officer (Education) London County Council.

DUST arises in school from wear and tear of floors, furniture, and materials, such as crayons, chalks, or wool, used in teaching. The greater part is introduced from outside, either upon the persons of the children and others attending the school, or with the unfiltered air which blows through windows and other ventilating apertures. Much material is carried in on the shoes of the children, but from enquiries and observations in naturally and artificially ventilated schools it appears that about as much dust is carried in by the air as is taken in by the children. Samples of the dust taken from the tops of cupboards in schools show, when examined microscopically, soot, chalk, and other amorphous materials, bits of woody fibre, hair and wool, and always epidermic scales derived from the skin of the children. Grown upon suitable media, colonies of the common organisms (*e.g.*, *staphylococcus epidermidis albus*) of the human skin have been cultivated. The organic contents of school dust show that it may be a source of specific disease. The more complete the removal of dust the healthier the school building must be. The taint of fermenting organic material can be distinguished first thing in the morning in most schools where the windows have been kept closed during the night.

Air borne.—The amount of dust collected in mechanically ventilated schools is only about one-half of that found in those naturally ventilated, although from the fact that hot-air deposits dust on colder surfaces this dust often appears as discolouration of the wall at the hot air inlets. The air entry in these mechanically ventilated rooms is usually preceded by filtration. It is impossible to filter the air entering naturally ventilated rooms, but more attention should be given to the state of the inlets; the apertures and passages often contain long standing collections of dirt. The more modern Tobins tubes have doors at the bottom opposite the inlet openings which permit of ready cleansing, but where there are galleries it is sometimes impossible to obtain access to these tubes; some of the inlets are also protected by fixed gratings which render their cleansing impracticable.

Personal Introduction.—The danger of specific contamination will be minimized by greater

attention to personal cleanliness and the more extended use of baths. Although the removal of dirty foot-gear is not practicable, more attention should be given to the removal of dirt from the shoes before entering school. The habit of scraping and wiping the feet upon entry to a building is so important that the habit should be inculcated in all children. In the Council's schools a sunk scraper is generally provided at the entrance door. The use of mats is decidedly advantageous, both in conjunction with the scraper at the door where the bulk of the dirt is removed, and also at the entry to the hall after mounting the stairs.

Daily Cleansing.—Damp saw-dust is used as far as possible. A sackful of saw-dust costs one shilling, and in a medium-sized school lasts about three weeks. Occasionally a school is found where dry sweeping is done, but this is unsatisfactory, as the effect upon the health of the cleaners is bad, and a large proportion of the dust is distributed through the air and left to settle on the desks and tables. It is uncommon to find sweeping being done with the windows closed, but in some schools, owing to the difficulty in getting rooms warm, the windows are kept closed. The use of wet sawdust in sweeping halls leaves nothing to be desired, and probably no better method could be adopted. It is, however, impossible to sweep the portions of the classrooms occupied by dual desks, as the time and labour allowed is too small to allow for the sawdust being removed from between and beneath the feet of the desks, and as the desks cannot be moved, a certain amount of dry sweeping is practically universal. The use of frequently damped brooms is probably the best solution, and lightly spraying with a garden syringe with a fine rose would be of great service; the provision of such apparatus in each school would render routine disinfection of class-rooms with formalin at times of infectious outbreaks an easy matter. After sweeping with or without sawdust, it is the general practice to close the windows and wipe all the furniture with cloths damped with paraffin. This is excellent, though the practice of waiting until the disturbed dust has settled is better. Much dust accumulates upon the tops of cupboards and ledges out of reach, and the fermenting material left undisturbed in these situations contributes largely to the unpleasant *bouquet* noticed when there is insufficient ventilation. It would be a great advantage if the tops of cupboards were made smooth and polished and

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slightly sloped, as it is impossible to clean them when left uneven. All ledges should be sloped outwards and downwards from the wall, and there should be no horizontal surfaces out of reach. The picture mouldings are generally veritable dust traps and extremely unhygienic. The older iron rail standing clear of the wall is greatly to be preferred.

School Dust and Disinfectants.—The specific function of disinfectants is asserted to be in connection with infectious diseases, the zymotic fevers especially. All our inquiries here and most of the teaching of recent years go to show that out-of-school conditions are far more powerful means of disseminating these diseases, and that the school plays a comparatively secondary role. The infection is from the children themselves, not from doors and cupboards, desks or floors; these means are trivial; it is the undetected or mild cases or carriers continuing to attend that accounts for school spread of disease when it exists. It is little use disinfecting a school-room if the clothes and persons of the infected children cannot also be disinfected. The method of searching for the infective focus and removing it must always be the chief line of resisting the spread of infective diseases. With these facts in mind, the value of routine disinfection as applied to school-rooms sinks to insignificance compared with its value in such a focus as a sick-room after the patient has been removed. The cost of disinfection will always be very great, and as the cost of the disinfectant is probably nine-tenths of the whole, it is obvious that as a commercial interest routine disinfection in relation to educational buildings is likely to be pushed as energetically as ventilating expedients were once urged on an ignorant public; although the value seems to be in little doubt the actual results to be obtained by routine disinfection might be worth a trial, using disinfection in one group of schools and omitting it in a control group.

Dustless Oils.—Far more efficacious from the dust point of view would be the use of oils as floor dressings. In many commercial houses and banks these oils are found very useful. They appear to have been unsuccessful when tried in some elementary schools, but at the Stockwell Secondary School for the past year the use of this method has been very satisfactory. The usual routine in the hall, for instance, is 9 a.m. assembly, 9.30-12.10 drill, 12.40 dinner. After this it is swept. 1.30-2, on wet days, dancing, 2, drill. The drill mis-

tress formerly suffered much from irritable throats, due probably to dust. This has disappeared since the floors were oiled. There is less dust now on the food and during meals, and dancing has only been practicable during the past year. The decorations of the room seem fresher than those of the adjoining school decorated at the same time. There are no complaints. Dresses are not dirtied or discoloured, and there is a considerable economy in labour. Considering the extensive use of these dust-fixing oils (*Staubbindende Oele*) in German Schools, it would be well worth trying an experiment on a considerable scale.

THE RE-INTERMENT OF MUMMIFIED REMAINS AT STAMFORD.—A leaden coffin containing embalmed human remains has recently been discovered on the site of the Black Friars' Monastery at Stamford. Permission having been granted by the Home Secretary, the body was examined by Dr. G. Boyd, the Medical Officer of Health for Stamford, who ascertained that the remains were those of a man. The flesh was in an almost perfect state after having been buried for over 500 years, and the features were easily distinguishable as those of an elderly priest. It was decided that the body is that of John Staunford, who was prior of the Black Friars at Stamford in the latter part of the 14th century. The remains were afterwards replaced in the leaden shell, which was enclosed in a wooden coffin, and removed to St. Augustine's Roman Catholic Church at Stamford, where a *requiem* service was held. Later the body was re-interred in a grave specially purchased in the portion of the local cemetery reserved for Roman Catholics. A paper was placed inside the coffin recording the incidents of the discovery and re-interment of the remains.

THE PREVALENCE OF "DERBYSHIRE NECK" IN DERBYSHIRE SCHOOL CHILDREN.—The Medical Officers were asked to pay special attention to the recognition of this disease, as it was felt that this would be a good opportunity of ascertaining its frequency and distribution, and whether its synonym "Derbyshire Neck" is justified. So far as the numbers at present are known it seems to be prevalent to the extent of about 1.5 per cent., and to be found chiefly in the Chapel-en-le-Frith and Bakewell Unions. It has been found not only among natives, but among residents of a few years' duration. In the majority of cases—even where the diseased gland is of large size—no serious attempt has been made to treat it, and it seems to be looked upon with indifference. No case of exophthalmic goitre has been reported.—*Annual Report of Dr. Sidney Barwise, County Medical Officer of Health and School Medical Officer, Derbyshire.*