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ILLUSTRATIONS, REFERENCE TABLES AND APPENDIX

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Hygiene, on the other hand, approves of hard wood or impermeable floors, curves instead of corners and angles, smooth and non-absorbent walls—in brief of everything which will prevent the collection of dust and germs and facilitate their removal.

Workshops should be swept daily after cessation of work, the sweeping should be done when practicable with damp saw dust, with the upper windows opened. In certain industries, cleaning and dusting by vacuum system has been employed and should be encouraged, especially where there is exposure to poisonous dust. All work benches and tables should be carefully cleansed, and wiped with a damp cloth for the removal of fine dust. Feather dusters do not remove but simply displace dust. In a number of occupations, cement floors, with a suitable incline and drainage so as to facilitate washing with hose, have been found very useful. The application to floors of so-called "dust oil" cannot be approved since it simply allays dust, but does not remove it, and is therefore especially objectionable in industries where poisonous dust is given off.

Miscellaneous Sanitary Provisions.—In this connection it is desirable to point out certain sanitary requisites, which are important in all dusty occupations, especially in those involving exposure to toxic dust and fumes.

1. Suitable Work Clothes and Caps.—There is a great variety of suitable patterns in the market, of which the snug-fitting duck work suit, without many folds, properly buttoned and adjusted is the best. Such suits and caps should be furnished at the expense of the employer and washed once a week. In occupations involving contact with poisonous liquids, rubber gloves and impermeable overalls or aprons offer the best protection. For all wet processes impermeable clothing or at least rubber and wooden shoes should be worn. Asbestos clothing has been recommended for firemen, etc., but its weight is objectionable, and leather suits or aprons are preferable. Ordinary work suits may be rendered practically non-inflammable by chemical treatment.

2. Dressing-rooms, Lockers, Bath and Wash Rooms.—It is desirable in all dusty occupations, that the workmen should take off all their street clothing before beginning work, and this is absolutely essential when the occupation involves exposure to poisonous dust. For this purpose suitable dressing-rooms, provided with lockers for street suits and separate compartments for overalls, are necessary. Facilities for washing and bathing, brushes, soap and individual towels should be furnished. In most of the civilized countries statutory provisions have been made for these sanitary requisites, in all establishments in which poisonous substances are manufactured or used, and the result has been most beneficial. It is important that workers should be instructed to wash their hands and teeth before eating and upon cessation of work. Indeed it is a good habit to rinse the mouth before swallowing even water, as much of the injurious dust lodged in the mouth will find its way into the stomach.

3. Pure Drinking Water and Lunch Rooms.—Hard work and dusty occupations produce thirst, and hence the necessity of an ample, easily accessible pure and cool supply of drinking water. Sanitary fountains are coming more and more in evidence in factories and workshops. The health and safety of employes exposed to industrial poisons demand that no food shall be taken, or tobacco in any form used, in the workrooms. A commendable number of establishments have provided special lunch rooms where either their own food can be warmed up, or rolls, sandwiches, coffee, milk, soft drinks, fruit juice and hot soups may be obtained at a nominal cost. Coffee and tea allay thirst and are stimulants, without the depressing effect of alcohol and their use has materially lessened the evils of intemperance. Milk is especially recommended for workers in the lead and anilin industries and is often supplied free of charge.

The effects of excessive or defective light are set forth in the chapter on diseases and injuries of the eye, X-ray, glass blowers, steel makers, etc. and it remains for us to emphasize here the principles which should govern the subject of lighting.

Natural Light.—The natural light in workshops should be sufficient, so that the eyes need not be strained even on cloudy days. When the light is defective the objects have to be brought too near. The eyes in consequence converge. The muscular strain thus produced causes a gradual elongation of the anterior-posterior axis of the eyeball, and nearsightedness results. It is believed by specialists that 80 to 90 per cent. of the headaches are due to eye strain caused by defective light, also numerous cases of backaches, anæmias, and general impairment of health. In addition there is good reason to believe that defective lighting influences the number of industrial accidents, the efficiency of production, the quality of the product and the cleanliness, cheerfulness and healthfulness of the shop.

It has been found by Putzeys¹⁵ that the natural lighting in temperate latitudes will usually come up to hygienic requirements when the area of windows, exclusive of sash frames, equals one-sixth of the floor space. In order that the light may penetrate the deeper portions of the room, the windows should reach almost to the ceiling and the glass should be either white or prismatic, and kept clean.

The difficulty of securing a sufficient amount of daylight in buildings situated in narrow streets, surrounded by tall buildings, has been partly overcome by glass building blocks 8 by 6 by 2½ in., with an air chamber in center, used instead of bricks or stone, in connection with steel-frame construction, but more particularly by the introduction of prismatic glass, which refracts and diffuses the light.

Artificial light, no matter how obtained, differs from daylight in this, that it does not furnish a pure white light, the prevailing rays being red, orange or violet. Whatever difference of opinion there may be as to the light best suited to the eye, we know that vision is most perfect under