

coughing, and by expectorations which contain millions of the bacteria or direct agents of the disease.

Other special sources, such as the milk supply from tuberculous cattle, do increase the danger of infection from this disease, especially in children; but if the problem of living in houses in harmony with the environment is to be adequately solved, it must be especially realized that it is the particles discharged into house atmospheres and on to walls and floors of rooms which must be dealt with if tuberculosis is to be eliminated from any population.

The problems of dealing with and of preventing tuberculosis will, therefore, it is apparent, mean the removal, so far as in practice is possible, of the dangers directly attaching to the tuberculous person, such as a consumptive who expectorates enormous numbers of the germs of the disease, and thereafter of cleansing the air, the person's clothing, the furniture, the floors, and walls of rooms which he has occupied, and of providing in all such places the largest amount of fresh air that is possible. Education of the individual stands in the first place in the measures for the prevention of tuberculosis, and all persons, whether physicians or members of families where the sick are, should teach and be taught the principles of personal hygiene. In practice, it is found that nowhere do individuals suffering from the disease receive such education so well as in sanatoria, where expert physicians and nurses establish a routine of daily hygiene, which those who have spent a few months under it will practise after they have returned to their homes or gone elsewhere.

#### EDUCATION NEEDED AS TO MEANING OF FRESH AIR

But even greater good will result from the education of the community at large as to the real meaning of fresh air in living houses and living apartments. The weekly sweeping and still more the half-yearly house-cleaning illustrate, as when a carpet is beaten, the infinite number of particles which, unseen, are constantly accumulating in houses. It is further only necessary to leave a room closed in which a carpet is present to appreciate strong odours and the effects of moisture in the decomposition of the organic materials present in it, through the action of microbes which cause decomposition. We thus realize how one of the first steps we must take to keep a house clean is to allow nothing to be on the floors, which will retain particles of organic matter and the microbes which settle upon it, which cannot be readily and frequently removed and cleaned in the fresh air. Thus polished hardwood floors with rugs fulfil best both sanitary and æsthetic household conditions; while in many instances, as in hospitals and places of public resort, nothing serves the purpose so well as well-made modern linoleum, which can be cleaned with a moist cloth, or, still better, frequently rubbed with a weighted felt block, which has been treated with paraffine dissolved in turpentine or with some other wax preparation. What has been said with regard to carpets on floors is similarly true with regard to heavy wool hangings, such as curtains.

#### STANDARDS OF AIR SPACE IN ROOMS

Inasmuch, however, as we have persons always present in rooms, whose boots and clothing, as well as their persons, carry particles of all