

hour acquire a distinct yellow, tinge, and their textile strength is somewhat diminished. Exposed to a dry heat of 220 F. for four hours, or a steam heat of 228 for half an hour, white flannel acquired a slight yellow tinge, but its textile strength was not appreciably impaired.

Scorching is especially apt to occur where the heat is in the radiant form. To avoid risk of scorching the heat should not be allowed much to exceed 250 F., and even this temperature is too high for white woollen articles.

Linen articles, sheeting, body linen, &c., which have been in contact with infection, should be disinfected before coming into the laundry, since otherwise they may infect the washerwomen, and possibly the linen of other households. Such objects, however, if soiled with bodily excreta cannot be disinfected by heat, not even by boiling water, without indelibly fixing the stains. The only alternatives, therefore, are to put up with damage to this extent, to allow the articles to pass through the earlier processes of the laundry in an undisinfected state, or to attempt their disinfection by chemical means, which are uncertain and unsatisfactory. When the grosser dirt has been removed by soaking and rubbing in cold or tepid water, the articles may be boiled without injury, and are then doubtless effectually disinfected.

The limits of the field of practical usefulness of disinfection by heat may be gathered from what has gone before. For washable articles which will stand *boiling in water*, no other procedure is necessary. The difficulty is that, granting that linen may be disinfected by washing, if conveyed in undisinfected state to the wash, it may communicate infection to the washerwomen and to the linen of other households.

The best plan is to place the linen on being left off, and before it is removed from the infected precincts, to soak in a pan of cold water, which may contain some chemical disinfectant, though it is doubtful if much additional security be gained thereby, unless the solution be a very strong one, in which case it may cause injury to the clothing. After the grosser impurities have been

removed by this preliminary rinsing, the clothes may be boiled without damage, and (with care to avoid re-infection) may be considered free from infection and sent away if necessary, to undergo any further processes of the laundry which may be required.

The articles for which a more technical '*disinfection by heat*' is especially required are such as will not bear washing in boiling water. The most common articles of this sort are blankets, rugs, carpets, and cloth clothes generally, pillows, beds and mattresses, furs, and dresses. Articles of furniture with stuffed seats and backs, as chairs and sofas, may require disinfection by heat if they have been in an infected room, and such articles are often so exposed to heat in order to check the ravages of moths. Again, exposure to heat is often employed in workhouses and similar establishments to destroy lice in clothing, or the animal and vegetable parasites which cause certain skin diseases. It may be necessary to insist on the disinfection of rags coming from places where epidemic diseases prevail, and in such cases heat, especially in the form of steam, affords the most satisfactory means. Letters sent by patients suffering from infectious diseases, or coming from countries in which epidemics prevailed, might readily be disinfected by heat, provided that they were not fastened with sealing-wax. Books which have been used by the sick or convalescents may be disinfected by heat, but the effect of steam on leather bindings must be remembered. In some hospitals the periodical heating of pillows and mattresses is practised as a part of the ordinary routine of antiseptic practice.

For some of these purposes dry heat and steam are both applicable, provided that in the case of steam precautions are taken to avoid undue wetting. Steam possesses the advantage over dry heat of requiring far less time and a lower temperature for penetration into bulky objects, and for destroying contagia: it is on these grounds especially adapted for the purification of bedding, bales of rags, large bundles of clothing, and other objects difficult of penetration. On the other hand, it