the heat could be used to dainty fabrics without injury to their appearance or Dr. Parsons came to to their texture. the conclusion that all infected articles which could be treated by boiling water, so as to penetrate the substance efficiently by this means without injury to the articles themselves, could not be so well disinfected in any other way as by simple boiling for a few minutes; that infected articles which from their nature did not lend themselves to such boiling had best be treated with highpressure steam, with such arrangement as would insure complete penetration of the steam at high temperature, and that such treatment might be relied on to destroy any infective quality in them with the thoroughness and rapidity that were desired; and that in the comparatively is w cases where the articles to be disinfected would be injured by steam, a dry heat of 240 F. would if sufficiently prolonged, bring about the desired destruction of infection, but that this could not, in the case of most articles, be had by means of dry heat without an inconvenient length of exposure. Dr. Buchanan, in commenting on the results obtained, expresses himself as of the opinion that, 'so far as we are at present informed, there is no sort of disinfector or disinfectant that can rank by the side of heat; and of all methods of applying heat, the use of high-pressure steam is by far the most generally available.'

With the exception of spore-bearing cultivations of the bacillus of anthrax, all the infective materials reported on were destroyed by an hour's exposure to dry heat of 220 F, or five minutes' exposure to steam at 212 F. Spores of bacillus anthrax required for destruction four hours' exposure to dry heat of 220 F, or one hour's exposure to dry heat of 245 F, but where destroyed by five minutes' exposure to a heat of 212 F. in steam or boiling water.

It may therefore be assumed that the contagia of the ordinary infectious diseases of mankind are not likely to withstand an exposure of an hour to dry heat of 220 F., or one of five minutes to boiling water or steam of 212 F.

Dry heat penetrates very slowly into bulky and badly conducting articles, as of bedding and clothing; the time commonly allowed for the disinfection of such articles, being insufficient to allow an adequate degree of heat to penetrate into the interior. Steam penetrates far more rapidly than dry heat, and its penetration may be aided by employing it under pressure, the pressure being relaxed from time to time, so as to displace the cold air in the interstices of the material. In hot air the penetration of heat is aided by the admixture of steam, so as to moisten the air, but hot moist air does not appear to have a greater destructive effect upon spores of anthrax bacilli than dry heat.

The question whether articles can be submitted to the required degree of heat without injury requires to be by solved not merely laboratory experiment, but by practical experience on a large scale; which involves technical knowledge of trade processes, and is complicated by questions of The principal pecuniary interest. modes in which injury may occur are these:—1. Scorching or partial decomposition of organic substances by heat. In its incipient stages this manifests itself by changes of colour, changes of texture, and weakening of strength. Overdrying, rendering materials 2. brittle. 3. Fixing of stains, so that they will not wash out. 4. Melting of fusible substances, as wax and varnish. 5. Alterations in colour, gloss, &c., of dyed and finished goods. 6. Shrinkage and felting together of woollen mate-7. Wetting. rials.

Scorching begins to occur at different temperatures with different materials, white wool being soonest affected. It occurs sooner in woollen materials, such as flannel and blankets, than with cotton or linen; while horsehair will bear a higher temperature still; in fact the process of curling it for stuffing chairs is effected by exposing it to a temporature of over 300 F. Most materials will bear a temperature of 250 F. without much injury, but when this temperature is much exceeded signs of damage soon begin to show. Flannel and blankets exposed to steam at 260 for half an