The Control of the Sale of Disinfectants.

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ALTHOUGH we may differ in our estimate of the value of disinfection as practised by the general public, we shall all agree that there are circumstances in which such disinfection may be of real value if it can be efficiently practised and that the sale of these agents to the public is a very large one. It follows, therefore, that the sale of agents as disinfectants, which do not, in practice, disinfect, is something more than a public fraud; it is a public health danger. It is only a few disinfectants advertised and sold to the public which come into this category; and yet I have it on excellent authority that in London alone the sale of disinfectants which will not disinfect is fully half a million gallons a year, and I am informed that many only make and sell inferior articles because competition compels them to do so.

To indicate how necessary it is to control the statements made with reference to these articles, I would instance an advertised disinfectant of which the purchaser is recommended to add half a teaspoonful to a quart of water (1 in 640) for the purpose of disinfecting discharges; yet I find that, even in urine, its coefficient drops so low that a 1 in 100 dilution is necessary to destroy the enteric fever germ within fifteen minutes.

Already the Navy, Army, Government Departments, large Railway Companies, Harbour Trusts and many Local Sanitary Authorities, protect themselves by the stipulations of their tenders. It is only the private purchaser who is unprotected.

I feel confident that the legitimate trade would welcome legislation controlling the sale of disinfectants; and this is now possible, for the British Disinfectant Manufacturers' Association have adopted the Rideal-Walker test as the standard method by which we may sufficiently define the germicidal strength of a liquid disinfectant; and the Lister Institute of London has undertaken to maintain and supply a standard strain of bacillus typhosus for the purpose of the test.

In return for much that they have taken from us, our American cousins have given us a lead in some important matters of Public Health. They have done so with reference to the control of the sale of disinfectants. An Insecticide Act (1910) of the United States Department of Agriculture forbids any false or misleading statement, design or device, regarding sub-

stances intended to be used for preventing, mitigating or destroying insects which may infest vegetation, man or other animal; under heavy penalties of fine or imprisonment. The names and addresses of the manufacturers have to be printed or stamped on all packets, etc., containing insecticides. For the purposes of this Act, the Federal Board of Agriculture and the different American States have adopted standard methods of testing, and have fixed standards of purity, quality or strength. It was inevitable that such an Act would lead to similar legislation relating to disinfectants to destroy the bacteria, etc., which endanger the health and life of human beings. The first American State in the Union to obtain such legal powers was Connecticut (1917), where it is required that all disinfectants must bear on a label a statement of the carbolic acid coefficient, as ascertained either by the Rideal-Walker test, or the American Hygiene Laboratory test. The penalty for misbranding so as to deceive or mislead the purchaser is a heavy fine or sixty days imprisonment. Subsequently the State of South Carolina passed a similar law. A Maryland Act relates to any article of food, water, drug or disinfectant misbranded or insufficiently labelled. It is required that any disinfectant must be labelled with its carbolic acid coefficient, and that a deodorant or antiseptic having no germicidal strength must be plainly labelled and sold as such, and not be labelled a "disinfectant." By a North Dakota Act the percentage by weight of formic aldehyde in "Formalin" must be stated, and this article is held to be adulterated if the percentage is below thirty-eight.

But while it is now possible to demand a *minimum* carbolic acid coefficient in respect to any agent sold as a disinfectant, it would not be desirable to call for a statement of the strength of the disinfectant in terms of such a coefficient, for the following reasons:—

(1) Many preparations lose strength on keeping, and so it would be difficult to prove misrepresentation; for a coefficient may have been obtained when the preparation was freshly made, which later may be found to have fallen away somewhat.

(2) It is possible by increasing the fineness of the soap emulsion of a coal tar disinfectant to give a value of germicidal power, as tested by the Rideal-Walker method, which misrepresents its real value in comparison with other disinfectants in the ordinary conditions of use. For in this method the dilutions used for testing purposes are made up with distilled water, and when such a disinfectant is diluted in practice with a very hard water, the coefficient may be reduced some forty to eighty per cent; and the presence of organic matter, which is considerable in amount in most conditions of practical use, has a similar effect. Thus of two disinfectants, the one with a

superior carbolic acid coefficient when diluted with distilled water in a laboratory may have the lower carbolic acid coefficient in the actual conditions of use.

Already one well-known and much advertised British-made disinfectant has fallen foul of the Insecticide Act in America, and the proprietors have been fined. Surely the time has now arrived for all countries to legislate against the sale of substances in reference to which false or misleading, and, therefore, dangerous, statements are made as to their disinfecting powers; and so I venture to suggest for your consideration the desirability of passing the following resolutions:—

(1) That it is desirable in the public interest and on public health grounds that the sale of any liquid as a "Disinfectant" should be controlled by legislation.

(2) That such legislation should demand:—

That any liquid sold as a "Disinfectant" shall have a carbolic acid coefficient (as tested by an approved method) of at least one.

That a penalty should be imposed (*a*) for any false or misleading statements as to the germicidal value of a disinfectant, and (*b*) for any misleading instructions with reference to the effective use of a disinfectant.

(3) That copies of these resolutions be forwarded to each of the Borough Councils of Great Britain, inviting them to pass similar resolutions, and that the Ministry of Health be informed of the results.

DR. EDMUND M. SMITH (York) seconded Prof. Kenwood's resolutions, in the hope that the Government would, in consequence, take up the control of the sale of disinfectants, and the guidance of officials of local authorities as to the scientific value or otherwise of the innumerable disinfectants on sale to such authorities and to the general public. The Government should carry out regular analyses of such preparations and communicate the results to local authorities and the press, in order to save the wasteful cost of separate analyses, if such were left to local sanitary authorities to carry out, and the wasteful expenditure on worthless goods. Whatever might be best as to the details of such a scheme, it was high time that something be done in the directions suggested by Prof. Kenwood.