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ON THE SCOTCH TICKETING SYSTEM.

GENTLEMEN,—I have been given to understand that it would be agreeable and might be useful to my brother medical officers in England who preside over urban districts if I were to say something in explanation of the nature and results of what is known in Scotland as the "ticketing system" for the prevention of overcrowding in private houses.

Overcrowding was first differentiated as a special form of "nuisance" in Scotland in 1862, by Section 443 of the General Police and Improvement (Scotland) Act. A certain proportion of inmates to the cubic space of a house, which must be such as to be injurious to their health, but was not otherwise defined, was declared to be a "nuisance." In administering a law so expressed, certain practical difficulties are obvious. How were the facts to be ascertained—(1) the cubic contents of the house, (2) the number of inmates? The latter is the chief difficulty. One wishes to know how many sleep in the house, and that can only be discovered by getting inside during the night and counting the inmates. But if by some means these facts have been obtained, then comes the proof of injury to health. It is an axiom in sanitary administration that where a question of "nuisance" depends upon special evidence, and that form of nuisance is of frequent occurrence, no progress can be made in suppressing it until the nuisance has been constituted by legal definition, and summary powers obtained to remove the conditions so defined on mere proof of their existence.

No doubt these were the considerations which led the promoters of the Glasgow Police Act (1862) to go further than the general Act of the same year, and to introduce for the first time the method of measuring and ticketing private houses. The suggestion of the idea came from the old method of extraordinary procedure under Order in Council, and its adoption and expression in a perpetual ordinance is worth remark in passing as an example of evolution in sanitation. Epidemics having been the first teachers of sanitary method, it is not surprising that pupils in such a school learned a system of spasm and cataclysm. When the epidemics went away the pupils betook themselves to play. When they returned they evoked the Privy Council order, under which everything could be turned upside down—the Habeas Corpus Act suspended, the Englishman's house no longer his castle, sweeping the cobwebs out of the sky, and the like phenomenal proceedings. If you look at the powers conferred upon local authorities by those old-fashioned "Orders in Council," you will see that now we are familiar with them all as the ordinary routine of the daily work of our sanitary departments. The powers spasmodically used for crushing epidemics are used from day to day to prevent them.

Among the directions and regulations which authorities were empowered to issue under those orders was one "for preventing the overcrowding of private dwelling-houses by fixing the maximum number of persons who shall live or be lodged therein, in the same way as is provided with reference to lodging-houses." It was a step forward to add overcrowding to the number of defined "nuisances," but the Glasgow Act went further, and devised and obtained power continuously to enforce the practical method of dealing with overcrowding private houses described in general terms for use under Order in Council. Just as we now employ "house to house visitation" every day; cleanse ashpits and privies, courts and closes every day; maintain hospitals constantly and accommodate the sick there every day; disinfect and wash every day, so now we prevent overcrowding every day. It is remarkable that while in all other respects this evolution of sanitation from the spasmodic to the usual has advanced co-extensively in England and Scotland, it has not

done so in respect of overcrowding in private houses. There certainly are no general powers in England to such effect as those which I am about to describe, and I am not aware of any such local powers. In Scotland they were acquired by Glasgow in 1862, and subsequently by Edinburgh, Aberdeen, and Greenock, and although they are not yet general, no doubt they will be made so at the first opportunity, as they are included in the provisions of that huge Scotch Burgh Health Bill which has for so many years been prevented by its own magnitude from getting through Parliament.

Let me now give the gist of the Glasgow enactments. 1. A principle of measurement of cubic space in dwelling houses is laid down. No lobbies, closets, presses, "recesses not exceeding 4 feet in depth and not having a separate window therein, and not perfectly clear from floor to ceiling and from wall to wall," or in which there is any fixture, are to be included. 2. A minimum size of house thus measured is fixed. A one-room house if in use before 1862 must contain at least 700 cubic feet, if not at least 900, otherwise it cannot be inhabited. A two-room house must in like manner contain either 1,200 or 1,500 cubic feet; and in three-room houses either 1,800 or 2,000. Penalties may be imposed both upon owner and occupier. 3. Powers are conferred to enter and measure any dwelling-house which consists of not more than three apartments, and if the cubic contents are found not to exceed 2,000 cubic feet, to affix a tin-plate ticket on or over the outside of the door, on which are marked the total contents and the proportioned number of inmates allowed. A penalty attaches to the removal or defacement of this ticket. 4. A standard of occupancy is fixed, namely, one person, aged 8 years or upwards, for every 300 feet, or two persons aged below 8 years. A penalty not exceeding 5s. for every day during which there is an excess over the legal number is incurred, and any authorised person may from time to time enter dwelling-houses which are so ticketed "if they believe that these provisions are being contravened." By the Glasgow Police (Amendment) Act of last year the original Act was altered in certain important details. 1. The standard was raised from 300 to 400 cubic feet, and the half rate fixed at less than 10 instead of 8 years. 2. The mode of measurement was altered so as to include bed recesses when perfectly open in front, the object being to put a premium on such bed spaces as against the abominable "box-bed" which used to be provided. The standard, 400 cubic feet, is made applicable to "any dwelling-house," whether ticketed or not. It would be difficult to prove a case of overcrowding except in a ticketed house, but I have found this extension useful in giving point to a friendly warning. The folks living outside the ticketing limit are quite open to advice, and if sent for and spoken kindly to, will see that their own interest requires a change. In the last resort a hint to the landlord will procure it. 4. Lastly, the possible penalty is raised from 5s. to 10s.

Such is the Glasgow ticketing system. As adopted in the other towns, there are sundry differences. The chief are that the standard is still 300, but in Edinburgh without distinction in respect of age; that in Greenock power is taken to close a house after two convictions, and slight variations in the mode of measurement. The result in all is the same, namely, that the smaller houses, occupied by householders who will buy as little house space as they can, and use that little as much as they can, are let with the conditions of occupancy declared, and subject to night inspection to see that these conditions are kept. You will observe that this is quite different from the method applied to common lodging-houses and houses let in lodgings. The regulation adheres to the house, not to the use made of it by the tenant.

The ticketing clauses of the 1862 Act did not become effective until May, 1863. At that time my predecessor, Dr. Gairdner, was in close grips with a severe epidemic of typhus. Reading his graphic and instructive reports now makes one feel like the house-surgeon of a city hospital when he begins country practice, and misses the ready appliances and the skilled nurses. None of the helps we regard as absolutely necessary were at hand. These were all potentially in the clauses of the new Act, but long years were required to drag them out into actuality. Guided by the fever to the localities where overcrowding prevailed, in little more than a year over 6,700 houses were measured, ticketed, and put under police inspection, with the exception of between 5 and 6 per cent,

which were found undersized and shut up. This process was gradually extended over the city. In a report dated March, 1866, "submitted with documents showing the relation of epidemic fever to overcrowding," Dr. Gairdner says: "These figures undoubtedly show that it is possible, by legal interference, to do a good deal towards mitigating some of the worst evils connected with over-population; and it is very satisfactory to note that the fever rate in these three districts, formerly so high, seems persistently declining; while in the northern and western districts, notwithstanding much greater natural advantages of situation, and a much superior class of population, the increase of fever has kept pace with the over-occupation of the ticketed houses, which has been permitted in these districts." The same argument has been adduced from time to time up to this day. Typhus has never been epidemic since 1864-65, but it has never been for a single day extinct, and whenever the magistrates grow lax in their treatment of the overcrowders brought before them, the current history of typhus affords illustrations of the fact that it at any rate consistently inflicts punishment; although unhappily from one aspect, but happily from another, the punishment may involve the innocent with the guilty.

Extensions of the ticketing process are still guided by such isolated outbreaks of typhus as occur; but in new localities landlords are always warned before their property is ticketed. The general result is that the offending families are warned off. Partly from the extensive demolitions of inferior houses of late years, partly from the increased size of the apartments, which places houses above the 2,000 cubic feet limit, the proportion of the number of ticketed houses to the total houses in the city is less now than it was some twenty years ago. There are over 23,000, of which about 11 per cent. are found unoccupied on inspection. There are thus at one time 20,800 inhabited ticketed houses, the inhabitants numbering 75,100. There are 14,640 houses of one room and 6,160 of two rooms—none of three—the former inhabited by 46,400 persons, the latter by 28,700. The probability is that 35 per cent. of the whole inhabitants of one-room houses live in ticketed houses and 14 per cent. of the whole inhabitants of two-room houses. In this way the proportion of the population living under inspection in the different statistical divisions of the city varies very much. Taking the houses as an index, I find that the proportion ticketed begins at nothing in two districts, and rises to 51, 55, and even 57 per cent., the proportion over the city generally being 18.

The inspection of these houses was taken out of the hands of the police, and placed under the sanitary department in 1870. There are six men who go out in pairs in different parts of the city during the night, provided with lanterns and ruled notebooks. They knock at the door of each house on which a ticket is fixed, having first made a note of the number shown on the ticket. When the door is opened—which it always is with little delay—they count the inmates, carefully examining every press or place where anyone could hide. Persons have been found up chimneys, in trunks or out upon the roof. The result is noted in detail, distinguishing lodgers from the members of the family. Notes are also taken of any facts observed which seem to throw light on the habits and circumstances of the people, for the guidance of the magistrate. If the excess belongs to the family, and is small, the officers warn the householder of what will follow another detection. If there are lodgers, or the case is aggravated, a summons is subsequently served. If they do not respond, a warrant for apprehension is issued. The magistrates deal sharply with overcrowding arising from lodgers. Since the erection of the model lodging houses by the Corporation, the proportion of these cases has fallen from 71 per cent. to about 25 per cent. Of the one-room houses inspected, between 13 and 14 per cent. are found overcrowded; of the two-room houses, 6 to 7 per cent., or about 11 per cent. of the domiciliary visits result in the detection of overcrowding. The number of such night visits runs from 50,000 to 60,000 a year, so that each house is visited at irregular intervals two or three times in the course of the year. This is only an average, however. The men follow the hints of disease, and will visit an infected tenement until it is rectified. Indeed, there are grades among the dwellers in ticketed houses, as in every other class of human beings. Some occupy them all their lives, and never transgress or even approach the limit. Hence it happens that, on

the average, ticketed houses are not overcrowded if we put their total inmates against their total capacity. But this class comprises not only the honest poor bravely breasting the waves of adverse fortune. The majority are the *débris* of the social fabric—the criminal, the vicious, the outcast. They do not at all represent the artisan class. The workers are unskilled, mostly labourers, hawkers and the like. They have little furniture, the most primitive methods of cooking and eating, and they are nomads. They contribute little or nothing to the public rates, and they are a heavy drain on the resources of the parochial boards and the sanitary department. Lastly, the ticketed house contains elements from each of Booth's three circles of Darkest England, and like them it is "sodden with drink."

So much for the ticketed houses and their inmates. What about the advantages of this system? I have to say in general that in the opinion of the Commissioners of Glasgow as well as of myself there is no power we possess which we consider of greater practical value. Having among our population such a large proportion of both Irish and Scotch Celts we can only form a conception by the help of past history of what would happen if we could not restrain that propensity to overcrowding. Under no other system could it effectually be done. As to particular results, it is hard where so much active sanitary work has been going on to apportion to each section of it the due share of the total result. I find, however, that the death-rate from the 7 chief infectious diseases has fallen steadily from 610 per 100,000 in the 10 years 1861-70 to 310 in the last 10 years, and that next to small-pox the most remarkable declension of all has been in the case of typhus, from which, in place of an annual average of 151 deaths per 100,000 in the 10 years 1861-70, there have been only 4 in the last 10 years.

I think also the existence and exercise of these measuring and ticketing powers have kept the attention of the whole population, landlords and tenants alike, more keenly alive than it would otherwise have been to the importance of space in the house. The conditions of measurement have no doubt discouraged the box-bed and unventilated dark recesses in general. My experience of the Glasgow artisan is that he likes a good house, with a ceiling not less than 9 feet high, and that you never find him with less cubic space per head of his family than 700 or at least 600 feet. I cannot but ascribe to these powers some share in the improvement in the housing of the people of Glasgow, which is shown by the diminution of the proportion of the population living in houses of one room from 31 per cent. at the census of 1871 to 25 per cent. in 1881, and 18 per cent. in 1891, and a corresponding increase in the proportion living in houses of two, three, and four rooms.

THE INFLUENZA EPIDEMICS OF 1889-90 AND 1891, AND THEIR DISTRIBUTION IN ENGLAND AND WALES.

Read in the Section of Public Medicine at the Annual Meeting of the British Medical Association held in Bournemouth, July, 1891.

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THE year 1889 and following years have witnessed the recurrence and world-wide extension of epidemic influenza—a disease which had not occurred, at any rate with the same prevalence and universality, for upwards of forty years. The last great epidemic in this country was in 1847-8, in which years 4,881 and 7,963 deaths from influenza were recorded in England and Wales. A certain number of deaths ascribed to "influenza," indeed, have been recorded every year since then, but this number has been a steadily diminishing one. Up to 1860 the number of deaths in England and Wales from influenza was always over 1,000 annually, and was greatly above this figure in the years 1851, 1855, and 1858; but between 1860 and 1890 it never again attained 1,000, growing smaller and smaller year by year, until in 1889 only 55 deaths were so recorded.