

Report of the sanitary committee of the commissioners of sewers of the city of London, together with a report of the medical officer of health on the objections raised by the Butchers' Trade Society to the bye-laws proposed for the regulation of slaughter-houses.

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REPORT

OF THE

SANITARY COMMITTEE

OF THE

COMMISSIONERS OF SEWERS OF THE CITY OF LONDON,

TOGETHER WITH A

REPORT

OF THE

MEDICAL OFFICER OF HEALTH

ON

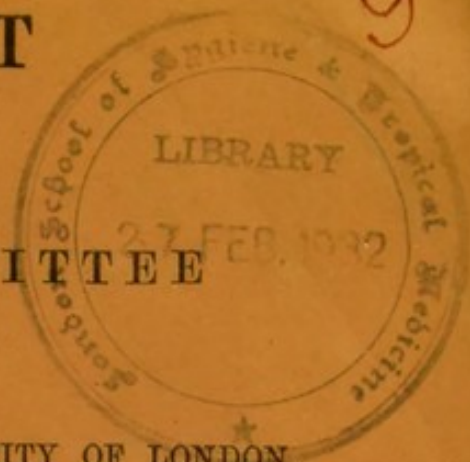
THE OBJECTIONS RAISED BY THE BUTCHERS'
TRADE SOCIETY TO THE BYE-LAWS PROPOSED FOR
THE REGULATION OF

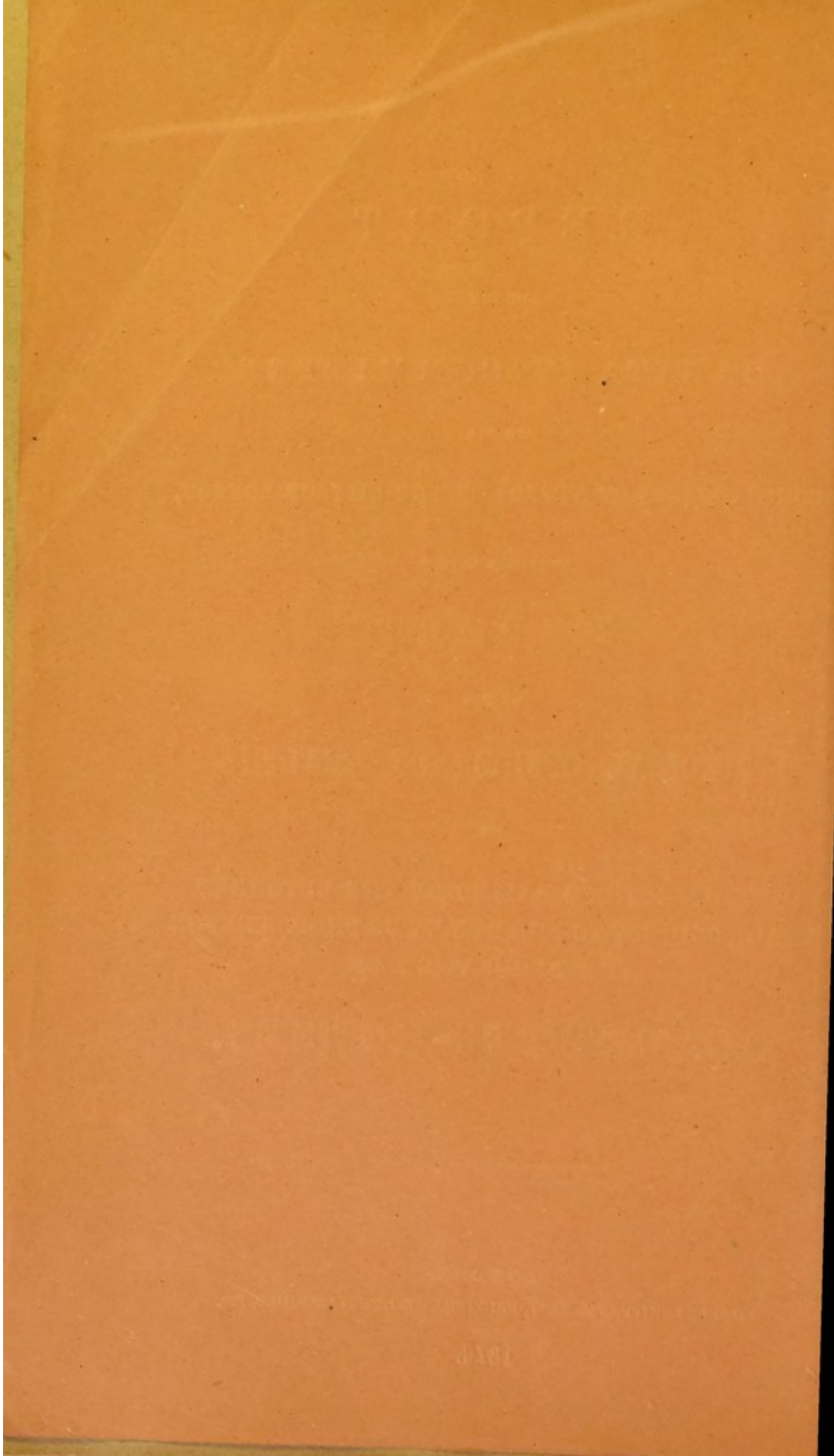
SLAUGHTER-HOUSES.

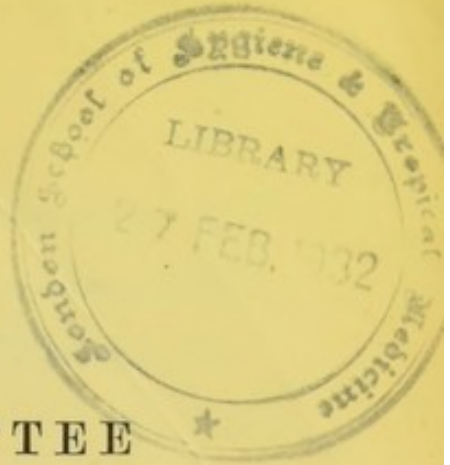
LONDON:

CHARLES SKIPPER & EAST, PRINTERS, ST. DUNSTON'S HILL, E.C.

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MEMORANDUM

TO THE HONORABLE SECRETARY OF THE INTERIOR

FROM THE UNITED STATES GEOLOGICAL SURVEY

STATE OF TEXAS

REPORT OF THE COMMISSIONER OF THE GEOLOGICAL SURVEY

FOR THE YEAR 1880

WASHINGTON: GOVERNMENT PRINTING OFFICE: 1881

*At a Meeting of the Commissioners of
Sewers of the City of London, held
at the Guildhall, on Tuesday, the
4th day of July, 1876,*

FREDERICK COX, ESQ., IN THE CHAIR.

A REPORT from the Sanitary Committee (WILLIAM CAVE FOWLER, Esq., Deputy, Deputy-Chairman), dated this day, was read—

On the Reference of the 23rd of May last, to consider the Letter from the Local Government Board relative to the Slaughter-house Bye-laws agreed to on the 14th of March last, and submitted to the Local Government Board for confirmation, and on the objections of the Butchers' Trade Society to the said Bye-laws.

Submitting a Report from the Medical Officer of Health in reply to the said objections, and recommending the Commissioners' concurrence therein.

RESOLVED—

That this Court doth agree with the Committee in their said Report, and doth confirm and adopt the same.

ORDERED—

That a Copy of the Medical Officer's Report be sent to the Local Government Board in reply to their Communications therein referred to.

ORDERED—

That the Report be printed, and circulated as usual.

HENRY BLAKE,
Principal Clerk.

R E P O R T
OF THE
SANITARY COMMITTEE.

WE have, in accordance with your Reference to us of the 23rd May last, considered the letter from the Local Government Board, dated the 13th of May, relative to the new Bye-laws for the management of Slaughter-houses within the City of London, agreed to by your Honourable Court on the 14th of March last, and submitted to the Local Government Board for confirmation. Also we have carefully considered the letter of Messrs. Crouch and Spencer, with objections on behalf of the Butchers' Trade Society, to the said Bye-laws, enclosed in the said letter from the Local Government Board for your observations.

We requested the Medical Officer of Health to give a detailed Report in regard to the objections raised by the Butchers' Trade Society to the said Bye-laws, and we beg now to submit the same to your Honourable Court.

We have carefully considered the said Report, with the Bye-laws, and the said communications from the Local Government Board.

We have also received and considered a further communication from the Local Government Board, with copy of a letter from Messrs. Crouch and Spencer, enclosing further objections on behalf of the Butchers' Trade Society to the said Bye-laws, also a Report from a Dr. Whitmore, and letters from certain residents of Aldgate in support of such objections.

We beg to recommend that your Honourable Court concur in the Report of the Medical Officer of Health, and that a copy thereof be forwarded to the Local Government Board in reply to their communication of the 13th ulto.

The effect of this will be, to adhere to the several proposed Bye-laws, except that as regards Bye-law No. 10, which is as follows :—

“ That the internal surface of the roofs and
 “ upper portions of the walls of the Slaughter-
 “ houses and Pounds, above the 7 ft. 6 in. of
 “ impermeable surface, be washed with quick-
 “ lime at least once every month.”

It is suggested that it may be so far relaxed, that the monthly limewhiting be required in the summer only, say from May to October, and that in the winter months, say from November to April, the limewhiting be required to be done once in three months.

And as regards Bye-law No. 18, which is as follows :—

“ That in case of any diseased or unsound
 “ cattle being brought to a Slaughter-house,
 “ Pound, or Lair, the occupier shall forthwith
 “ give information thereof to the Medical Officer
 “ of Health of the City of London.”

It is proposed not to insist upon the retention of the word "unsound," provided that the animals be slaughtered within a specified time of the occurrence of any accident that may disable them.

All which we submit to the judgment of your Honourable Court.

Dated this 4th day of July, 1876.

(Signed) FRED^K. COX.
W. C. FOWLER.
H. H. HEATH.
W. I. LOWE.

R E P O R T
OF THE
MEDICAL OFFICER OF HEALTH.

*To the Sanitary Committee of the Honourable
the Commissioners of Sewers.*

GENTLEMEN,

In compliance with your request that I should "give a detailed Report in regard to the "objections raised by the 'Butchers' Trade Society' "to the proposed 'Bye-laws'" for the better conduct and regulation of Slaughter-houses within the City of London, agreed to by the Honourable the Court of Sewers, and submitted by them to the Local Government Board for confirmation, and which "objections" were contained in a letter forwarded to the said Board by the said Society, a copy of which was sent to your Committee by the said Board for your consideration and observations thereon, I beg to offer the following remarks :

There are 27 Slaughter-houses in the City of London, viz. : 24 in Aldgate,* 1 in Bishopsgate, 1 in Farringdon, and 1 in Cripplegate Ward : of these the following observations apply exclusively to Aldgate, no "objections" to the Bye-laws having been expressed by the occupiers of the remaining three.

The Bye-laws referred to were framed with a full knowledge of the intended, and indeed threatened, opposition on the part of the slaughterers and butchers of Aldgate, and every "objection" mentioned in their letter to the Local Government Board was fully and dispassionately discussed by your Committee during many lengthy sittings, at each of which they invited, and were favoured by, the presence of the Deputy of the Ward in which the Slaughter-houses are situated.

This gentleman ably and forcibly supported the views propounded by the butchers, and evinced the keenest anxiety to protect their interests.

* These Slaughter-houses are really in Portsoken Ward, but they are always quoted as of Aldgate Ward, and will be so described in this Report to avoid confusion.

Subsequently your recommendations respecting these Bye-laws were adopted with surprising unanimity by the Honourable the Court of Sewers without amendment or alteration ; a number of Commissioners then being present who are immediately interested in the butchering business, and practically acquainted with its wants, concurring in their acceptance.

The initial difficulty in dealing with this question arises from the anomalous conditions as to size, number, and areas, to be found in the Slaughter-houses and adjoining premises at Aldgate.

The twenty-four Slaughter-houses in Aldgate are, with one or two exceptions, situated side by side ; all have a direct communication with a shop facing High Street, Whitechapel, and six of them have no other means for the entrance of cattle than by their being driven across the footways and through the shop ; a practice which renders the pavement at times impassable, and causes terror and annoyance to the public. These shops are for the most part low in ceiling height, and very narrow in frontage, one being but 9 ft. wide,—two 10 ft.,—one 10 ft. 6 in.,—two 11 ft.,—and so

on. In some of them the Slaughter-house widens in the back part of the premises, but in several, viz., at Nos. 55, 58, 59, 60, 68, and 73, the whole business of a retail butcher and slaughterer is conducted in the narrow strips above quoted.

Your Committee having viewed these places, will recollect that at No. 73, where the extreme width of the Shop and Slaughter-house was but 9 ft., there was no room to pass up and down the Slaughter-house when the carcasses of the slaughtered animals were hanging, excepting by moving sideways, and that the atmosphere of the place was pervaded by a hot, moist, sickening vapour, for want of thorough ventilation ; you must also have remarked upon the general state of disrepair of the whole of these Slaughter-houses, the dilapidated roofs, the blood-stained and filthy state of the side walls, the uneven and broken condition of the flooring, the imperfect, totally inadequate, and badly placed water supply, the large accumulations of dung, offal, and blood, and the defective and sluggish drainage, down the gratings of which you could not fail to have seen a plentiful flow of crude liquid manure, which the man in charge was

industriously sweeping into the sewers, to their great pollution ; all these indicate a state of neglect which could only have arisen from a consciousness on the part of the owners and occupiers that the Legislature intended to abolish such places as private Slaughter-houses upon the expiration of the Act of 1844, 7th and 8th Vict., c. 84. Unfortunately, however, the so-called vested interests of the butchers proved too strong with the Government for the protection of the public, and Parliament in 1874, by the 37th and 38th Vict., c. 67, was induced to perpetuate these Slaughter-houses in the City of London, under such regulations it is your province to make and maintain.

In order to be consistent, and to enable the Court of Sewers to exercise a proper amount of control, each Slaughter-house must be treated as a separate and independent building ; and, in advising you as to the best mode of securing such control, it has ever been a source of deep anxiety and considerable embarrassment to me, how best to reconcile the wants of modern sanitation, decency, and order, with the inevitable sacrifices on the part of the

occupiers of the smallest of these places, which I foresee and confess to be demanded by the institution of thorough disciplinary measures.

The necessity for treating each Slaughter-house as a distinct structure "*per se*," and the apparent consciousness of the inability of the holders of the smaller ones to adapt themselves to efficient regulations, is, I believe, the main cause of the opposition now made to the Bye-laws, for I have reason to know that the occupiers of the larger Slaughter-houses are ready to conform to the spirit of the Bye-laws, albeit they are not in accord with us as to some of the provisions therein.

Under the peculiar and exceptional circumstances of the case before us, the question of dimensions so completely underlies the whole contention, that I earnestly hope your Committee will call the particular attention of the Local Government Board to the *size* of these small Slaughter-houses, as shown on the Plan made to scale by your Engineer, and forwarded to the Board some time ago [a copy of which, upon a reduced scale, is appended hereto]; for I can scarcely imagine that the Board have

the least idea of the diminutive space in which slaughtering *on a large scale is going on night and day* in defiance of the principles of health or humanity.

The Board should also be informed that the slaughtering effected in these places extends far beyond the requirements of the neighbourhood, and that the plea of the Butchers that they provide marketable commodities suitable to the necessities of the poor of their locality is essentially unsound, from an economical point of view, it having been found in places where Abattoirs obtain, that the poor readily follow any market which offers them pecuniary advantages.

I now proceed to notice the various "objections" advanced in the letter of the "Butchers' Trade Society":—They relate, for the most part, to the *structural* repairs rendered necessary by the present ruinous condition of the Aldgate Slaughter-houses generally, which, in spite of admitted neglect, due to their owners having expected their demolition in 1874, when the Act of 1834 affecting Slaughter-houses expired, are now resisted upon the score of expense.

REPLY TO "OBJECTIONS" OF THE "BUTCHERS' TRADE
SOCIETY" TO THE BYE-LAWS.

BYE-LAW I.

That each Slaughter-house be paved with asphalte, laid with proper slopes and channels towards a trapped gully, and, where practicable, such gully shall be outside the Slaughter-house and Pound.

OBJECTIONS.*

The Butchers demur, firstly, to the use of asphalte, and, secondly, to the gully being placed outside the Slaughter-house.

REPLY.

The reason for insisting upon *asphalte* is to avoid *joints*, which are inevitable in every other kind of pavement.

The joints in stone pavements, however well laid, cannot be made durable, owing to the frequent concussions produced by the animals falling heavily

* The "objections" are quoted in abstract only, in order to save space, but the sense of the same has been scrupulously observed.

and suddenly when pole-axed, and the joints being once cracked or broken readily admit through their interstices every kind of liquid filth, which accumulates in the subsoil and decomposes there.

The flooring of the present Slaughter-houses in Aldgate is composed of small, and badly laid, flag-stones, &c., which are loose, broken, and uneven in many places, and which cannot be properly cleansed on account of the inequalities of the surfaces.

The retention of this Bye-law will, of course, prevent the replacement of the old flag-stones upon the reconstruction of the Slaughter-houses, and involve the owners in some expense.

A smooth jointless pavement for Slaughter-houses was unanimously considered the best at a meeting of the Royal Institute of British Architects, in a discussion which followed the reading of a paper by Mr. Darbyshire, on Public Abattoirs, 1st February, 1875.

The Metropolitan Board of Works is quoted by the "Butchers' Trade Society" as sanctioning the use of flag-stones, but this is scarcely ingenuous, the truth being that the Board recommend *asphalte* in the *first instance*, but allow flag-stones set in cement as an *alternative*.

The advantage of placing the gully *outside* the Slaughter-houses, is that it prevents the admission of solid matters into the drains, and provided the floor be laid at a proper inclination towards the door, all fluid materials can be readily conducted thence by gravitation into the drain beyond, by means of sunken stone channels, or cast-iron boxes having hinges, without the creation of unavoidable nuisance. These channels should be provided at certain intervals with what are termed "grids," which prevent anything but liquids passing into the drain or sewer.

"The *grids* are hinged to fall back against the
"walls, and, on being opened, reveal a cast-iron box
"or chamber, with a flange all round the top edge,
"which rests on a rebate cast on the outer shell; this
"box is movable, and is perforated through the bottom

“and sides ; under the movable box is another
 “chamber opening direct into the trap, which is cast
 “to the outer shell of the frame work.”—(Darbyshire
 on Abattoirs.)—These grids are in daily use at
 Manchester and elsewhere, and are made by
 Bunnett and Co.

The scavengers should attend to the movable
 boxes at regular intervals, and cart away all solid
 matter.

In the Edinburgh Abattoirs there are “two distinct
 “sets of drains, one for the surface water, which is
 “conveyed directly into Lochrin burn, the other for
 “the soil, which is conveyed into large tanks, prepared
 “for its reception, and sold for agricultural purposes.”
 (*Encyclopædia Britannica.*)

It is impossible to over-estimate the importance of
 excluding blood, offal or dung, &c., from the sewers
 at all times, but especially in seasons of epidemic
 zymotic diseases, and it would be an inestimable
 boon, and one by no means difficult of accomplish-
 ment, if the Scotch system could be imitated at
 Aldgate.

BYE-LAW II.

That each Slaughter-house be drained by a glazed pipe drain, not less than six inches in diameter, set in concrete and jointed in cement, or otherwise made impermeable, and communicating directly with the public sewer. That the gully at the inlet to the drain be trapped with a stoneware syphon-trap, or other trap of approved material and construction, and be covered with a grating, the bars of which shall not be more than three-eighths of an inch apart; the grating to be fastened with a lock and key, and kept at all times locked, unless opened for cleansing or repair.

OBJECTION.

That "it is very doubtful whether setting the drain pipes in cement, whereby they cannot be got at, except by great breakage and disturbance, is at all advantageous."

REPLY.

The advantages claimed for setting the drain pipes in, and upon cement, are durability and strength; and

if a pipe of six inches diameter be used, there is but little liability of its becoming choked or requiring repair for many years. Drain pipes laid on soft subsoil materials frequently break asunder from the subsidence of such a matrix, or from heavy weights falling suddenly upon them, from above, and our daily sanitary work furnishes abundant evidence of the danger to health arising from the fracture of drain pipes, where originally placed upon improper ground, and especially when under such circumstances they are subjected to violent blows.

In Edinburgh the Slaughter-houses are "laid with a thick well-dressed pavement, resting on a stratum of concrete twelve inches thick."

BYE-LAW IV.

That each Slaughter-house be provided with adequate cisternage and water supply, or, where practicable, with a *constant* supply of water, and such arrangement of pipes as will enable the pavement and the walls to the height of 7 feet 6 inches to be conveniently and quickly washed.

OBJECTION

The Butchers urge that four feet is sufficiently high for the washing of the walls.

REPLY.

The necessity for this alteration will be dealt with under remarks upon Bye-law No. 6.

BYE-LAW V.

That each Slaughter-house be separated from any adjoining Slaughter-house in a different occupation by a brick wall, of at least nine inches in thickness, extending from the ground to the roof, so as effectually to shut off all atmospheric communication between it and the adjacent Slaughter-house.

OBJECTIONS.

The Butchers object to the brick side walls between adjoining Slaughter-houses being more than six or seven feet high, above which they would have placed "the largest possible openings, fitted with louvre boards." They are of opinion "that the best construction in the

“ case of a row of Slaughter-houses would be, that there
“ should exist means of thorough ventilation from end
“ to end and side to side.”

REPLY.

This involves the most important change in the reconstruction of the Slaughter-houses, and in order to explain my views fully upon the matter, and avoid paraphrasing the same ideas, I must reiterate, almost “ *ipsissima verba*,” the observations contained in my Report upon the subject presented to you in June last, with such omissions or alterations more recent information has enabled me to obtain.

I may, however, premise by stating that the present divisional walls between the several Slaughter-houses are composed of wet, partially rotten, and rugged, brickwork below, and rough, imperfect, and defective, wooden partitions above, the whole of which are supersaturated with organic animal matters, grease, and dirt.

The faulty construction of these Slaughter-houses was clearly brought before the notice of the Select

Committee of the House of Commons in the evidence given by Sir J. Ogilvy and others, as recently as 1873, but the only action taken by Parliament to remedy the same in the Slaughter-house Act of 1874 (which was based mainly upon the recommendations of the said Committee) is comprised in Section 4, which directs that "The Local Authority
 " may from time to time *make, alter, and repeal* Bye-
 " laws for regulating the conduct of any business
 " specified in this Act, which is for the time being
 " lawfully carried on within their jurisdiction, and the
 " *structure of the premises on which such business is*
 " *being carried on,*" &c. And in order to protect the trade from arbitrary action on the part of any local authority, it is further enacted that "any Bye-
 " law made in pursuance of this section, and any
 " alteration made therein, and any repeal of a Bye-
 " law, shall not be of any validity until it has been
 " confirmed by the Local Government Board."

It is quite clear, therefore, that you are acting strictly within your legal rights in calling upon the Butchers to put their houses in order.

Your visit to Aldgate must have convinced you that the premises of these Slaughter-houses generally are too small for the enormous amount of business done in them, and as, owing to the natural increment of the population, this evil must ever be augmenting, it becomes a serious question to determine whether a strong remonstrance should not be addressed by the Commissioners of Sewers to Her Majesty's Government, or failing this to Parliament, against the continuance of the smaller of these places, or by insisting that slaughtering should only be carried on in houses of such dimensions as would ensure perfect ventilation, and provide the means of carrying on the process with efficiency. In order to perfect your powers, and establish a wholesome check upon the slaughterers, a short Act might be obtained, giving the Commissioners of Sewers authority to issue fresh licences, without which no Slaughter-houses should be allowed to exist. The present licences were issued in 1848, and have not been revised since that time, whereas outside the City they are (as they ought to be) renewed yearly.

In the exercise of this important jurisdiction, the

Metropolitan Board of Works have actually abolished 284 Slaughter-houses during the year 1875, having licensed 1,068 Slaughter-houses during the same period.

Respecting the technical means to be adopted to remedy the admitted defects of these Slaughter-houses, your Engineer will advise you ; but, without trenching upon the ground of that officer, it must, I think, be patent that nothing short of an entire reconstruction of the side walls and roofs of all of them will satisfy the requirements of scientific sanitation, or ensure that complete *isolation* of each house, which is *the one essential requisite for carrying on the business of slaughtering with due regard to the public health.* It is therefore a *sine qua non* that there should be a solid brick partition or side wall between each Slaughter-house, and that the only opening allowed therein should be for a door (where required), on the ground level, and that this wall should extend from the floor to the highest point of the roof. An exception to this may be made in those places in which an open air passage of 4 or 5 ft. wide exists between the side walls of two Slaughter-houses, for here it might be admissible to supplement other

means of ventilation and light by glazed sashes, which, however, must be so made as to be readily closed, should, by any accidental circumstance or oversight, a beast affected with any contagious disease be found in the adjoining house.

Second only in importance to the closure of these side openings, is the provision that the internal facing of all the walls in the Slaughter-house should be of a non-absorbing nature, and I am still of the opinion, which I ventured to urge unsuccessfully when the Bye-laws were framed in November, 1874, viz., that the height mentioned in Bye-law VI. is insufficient for the purpose, and that the *whole wall-surface* should be coated with a "hard, smooth, and impervious material," such as is now used in the wards of our best Metropolitan hospitals. When this is done, the disgusting and blood-stained appearance, seen on the walls of these Slaughter-houses on your recent visit, will be impossible, and one fertile source of disease averted.

I entertain a strong objection to the partitions in any part of the Slaughter-house, Pound, or Lair, being

constructed of wood, for the reason that this material becomes rapidly sodden by the constant presence of hot moist air, in which state it must inevitably absorb noxious and other vapours, and soon become saturated with albuminoid organic matter, and afford a ready nidus for the development and propagation of any disease germs which may be floating in the air.

The Butchers deny the existence of unpleasant odours in Slaughter-houses ; but whilst freely admitting this to be a matter in which the senses of ordinary men may be differently affected to those of persons constantly living in and enjoying an atmosphere, however nauseous, I must insist that the air within a Slaughter-house can never be wholesome so long as the disgusting practice of opening the paunches of hot, reeking animals, directly after they are knocked down, is allowed to continue.

From the nature of the food eaten by ruminants, and during its disintegration and assimilation, enormous quantities of stinking volatile gases are formed, and the sudden disengaging of these when the intestines are ripped up and emptied, before being

handed over to the tripe-dresser, must always fill the surrounding air with what common mortals would consider vile and poisonous smells.

You may remember I urged you to make a Byelaw prohibiting this custom, and I regret the more it was overruled in Committee, since the only excuse offered for its continuance was the very inadequate plea that the guts of a large animal were too heavy and bulky to be removed without being first deprived of their contents.

Mr. Simon, C.B., F.R.S., &c., &c., my talented predecessor, insisted in the Blue Book before referred to, that “an atmosphere which smells of organic decomposition, is an unwholesome atmosphere ; that it at least favours the spread, perhaps also what may virtually be considered the production, of morbid infections.”

It has been urged that the closure of the present louvres and other apertures in the side walls will restrict the necessary ventilation ; I am, however, of a contrary opinion, believing that it can be demon-

strated by the employment of an anemometer ; *that in proportion to the exclusion of disturbing currents of air from lateral sources, will be an increase in the velocity by which the fresh incoming supply will travel through the narrow passage from front to back of the premises, and that a readier displacement of vitiated air will result.* If this should prove insufficient, a constant upward direction of ventilation can be accomplished by well known mechanical contrivances in the roof of each house.

Without reiterating the reasons which have led me to insist upon this isolation of each Slaughter-house, I will only advert to the very evident facility given for one Slaughter-house to infect its neighbour should these side openings be allowed to continue, an objection which would apply with fatal force should cattle suffering from contagious disease be imported by carelessness or design into any one of them.

It being a well-ascertained fact that myriads of germs or disease-spreading organisms may be given off in the cutaneous exhalations, the excreta, and, possibly, the very breath of infected animals, it is no

exaggeration to affirm that one such beast might decimate its neighbourhood, affecting alike the living cattle in the Pounds and Lairs waiting for slaughter, and the dead meat hanging up to cool in the Slaughter-house before it was carried away by the retail butchers. In the latter case, the well-known power of warm fat in rapidly absorbing all kinds of odours, good and bad, would render every precaution to prevent the contamination of the meat already killed inoperative.

It is no argument against these measures to urge that their necessity has not yet been recognised by the unlearned, or to assert that no practical difficulty has arisen in the direction just mentioned, for it must be remembered that the great aim of all modern Sanitary legislation is to discover disease in its germinal condition, and apply such *preventive* agents as will combat the extension of the mischief when once discovered.

Interested persons have asserted that no injury to health has been proved to result from the existence of Slaughter-houses, even in densely

populated and confined situations, but my own experience, and that of every practical physician, leads to an opposite opinion ; in support of which I may recall the circumstance of my having recently reported to you an outbreak of scarlet fever in the vicinity of the Slaughter-houses in Aldgate, and again as lately as 14th March last a case of typhoid fever in Somerset Street, at the back of the Slaughter-houses, in a house in immediate connexion with the drains of the Slaughter-houses and the "blood house" adjoining. Moreover, it is a truism, established by recent researches in vital statistics, that slaughterers and butchers should be regarded as an unhealthy class of men, since they present a much higher rate of mortality than is observed in other trades.

It is now established as an actuarial fact,* that

* In a paper on the "Influence of Occupation upon Health," read by Mr. F. G. P. Neilson, F.S.S., before the Institute of Actuaries, and published in their Journal, July, 1872, it is shewn that in the forty years of age, 25 to 65, the mortality of butchers is 17·9 per thousand living, and that of poulterers 21·0, as against 10·6 of gardeners, 12·4 carpenters, 13·4 shoemakers, 16·8 stonemasons, &c. The results were obtained by a comparison of the whole of the mortality of England and Wales, 1860-1, with 1,147,243 years of life of members of Friendly Societies.

this unhealthfulness of calling applies to all trades in connection with animal food, and this has been supposed to depend, in the case of butchers and slaughterers,—*Firstly*, from their constantly inhaling an atmosphere impregnated with animal matter ;—*Secondly*, from their exposure to sudden alternations of temperature and the vicissitudes of weather ; and,—*Thirdly*, from the large amount of animal food they are known to eat. It has also been stated with much force that they are necessarily exposed, more than other persons, to fevers and zymotic diseases, from their constantly breathing an atmosphere charged with decomposing, and often putrescent, animal matter.

Respecting the separation of the Pounds from the Slaughter-houses, I still retain a strong conviction that such is both necessary and expedient, although I am not insensible of the difficulty of carrying it out in some few of the Slaughter-houses, whose cramped dimensions render this and other requisite accommodation well nigh impracticable. In these cases the owners should be compensated, and the places closed.

Before a clear idea can be entertained of the possible and impossible improvements in these Slaughter-houses, I strongly recommend that a ground plan* be prepared of the whole block in High Street, showing to scale the exact size of each Shop, Lair, Slaughter-house, and out-building, with so much of the surrounding property as will provide a back way into the Slaughter-houses upon a give-and-take line as between immediate neighbours; should the owners find it their interest to combine for such purpose.

“By means of this plan it may be seen how far it may be practicable to reconstruct the whole of these places upon one agreed basis, and prevent, *inter alia*, the objectionable practice of driving the cattle across the public footways into the Slaughter-houses, so much complained of.

BYE-LAW VI.

That the inner surface of the walls of every Slaughter-house be covered with slate, stone, or

* This has since been done, and a copy sent to the Local Government Board.

other hard, smooth, impervious material, to the height of 7 feet 6 inches, and that above this height to the roof the walls be cemented.

OBJECTION.

The Butchers say, "It is a useless expense to extend the smooth, impervious material beyond four feet," and that "there is no practical advantage in cementing the whole of the upper part of the walls of the Slaughter-house; on the contrary, the hard bricks are superior to cement, which will break off."

REPLY.

The height of the "dado" was increased from 4 feet 6 inches to 7 feet 6 inches, in consequence of my having inspected a Slaughter-house outside the City, and finding 4 feet 6 inches insufficient to protect the walls above from the splashing of blood and filth, the "dado" itself being clean.

In Edinburgh the walls are formed of solid ashler stone to a height of *seven feet*.

The advantage of covering the inner surfaces of the Slaughter-house walls with an impervious cement are twofold: *Firstly*, the walls can be much more easily washed and kept clean. *Secondly*, it obviates the

liability of the walls becoming saturated with decaying nitrogenous matter by the constant absorption of moist animal vapours by porous bricks. [This precaution was suggested by a perusal of an account of the practical experiments of Professor Pettenkofer, of Munich, who has clearly demonstrated in various ways the extreme porosity of ordinary brick walls.] *Lastly*, a hard, smooth wall prevents the ingress and lodgment of vermin. The question of expense raised by the Butchers is hardly worthy of prosperous and wealthy tradesmen, and the objection that the cement would "break off" is too frivolous to answer.

BYE-LAW VII.

That each Slaughter-house be provided with adequate lairage or poundage, separated from the slaughtering space by a closed partition, extending from the floor to the roof, formed of brick, stone, slate, or other similar material, having a smooth impervious surface, to a height of at least 7 feet 6 inches from the floor. That in all cases where from the present plan of the premises a door is needed between the Lair or Pound and the slaughtering

space, such door be provided with spring hinges, and be kept closed when not open for the passage of cattle, but that where other means exist of taking cattle from the Lair or Pound into the Slaughter-house, without passing through shops, or over important public ways, no door shall exist between the Lair or Pound and the Slaughter-house.

OBJECTIONS.

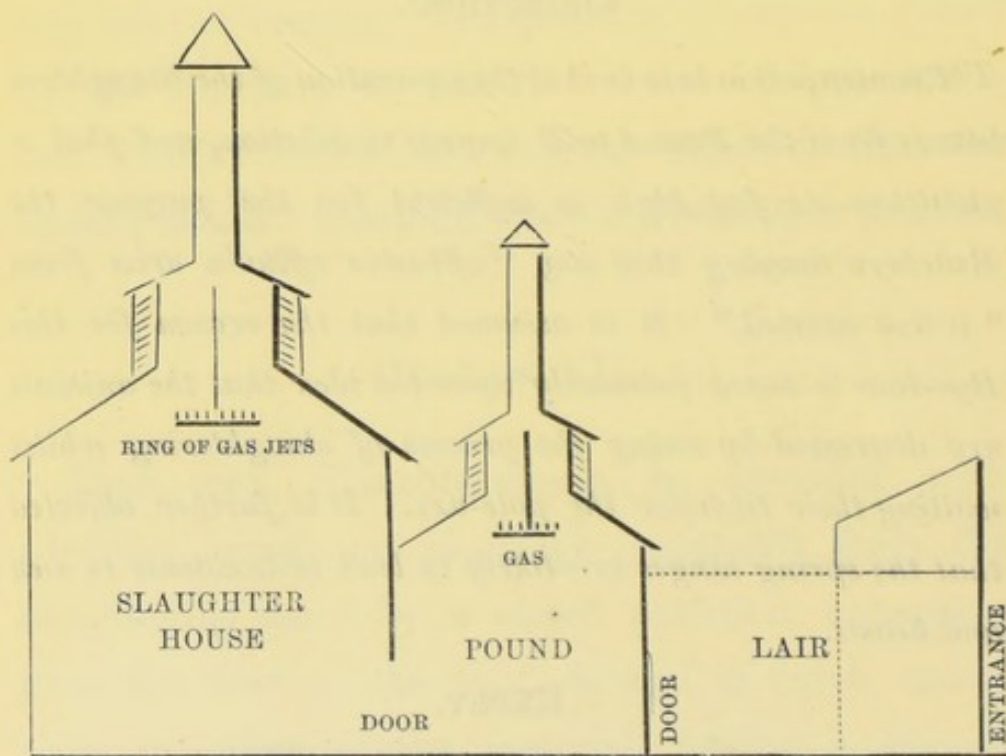
The contention here is that the separation of the Slaughter-houses from the Pound will impede ventilation, and that a partition six feet high is sufficient for the purpose, the Butchers denying that any "offensive effluvia arise from a live animal." It is assumed that the reason for this Bye-law is based primarily upon the idea that the animals are distressed by seeing the process of slaughtering whilst waiting their turn for the pole-axe. It is further objected that the spring hinges are likely to lead to accidents to men and beasts.

REPLY.

The chief considerations in support of this Bye-law are given in the extract of my Report on 1st June, 1875, above quoted. I may, however, say, in addition, that the possibility of the animals waiting

for slaughter seeing the process of killing other animals, formed no part of the argument.

Again, the Butchers' objection on the score of ventilation is based upon the supposition that the Pound must necessarily be of the same height as the Slaughter-house, which does not follow, as the accompanying Diagram will show :—



The spring hinges ordered in this Bye-law will ensure the door between the Slaughter-house and Pound being kept closed, but the Butchers may, if

they prefer it, hang the doors by balance weights, so as to slide up and down like an ordinary sash window, by which means the direful consequences predicted as likely to result from the use of spring hinges may be avoided.

BYE-LAW VIII.

That where any Slaughter-house or Pound cannot be sufficiently ventilated by openings on to the public ways, or on to other open places, it shall be ventilated from the roof, which shall be so constructed as to admit freely of the escape of air, and that rings for burning gas be fixed in the roof so as to increase the upward current when a-light, and that both Slaughter-house and Pound be properly lighted either from the public ways or other open spaces, and where that be not practicable, then from the roof.

OBJECTIONS.

The chief arguments relate to matters quite irrelevant, and are very confused and unintelligible. The only part of the "objection" belonging to this Bye-law is that which refers to the proposal for increasing the efficiency of the ventilation by rings of gas, which the Butchers characterise as "absurd."

REPLY.

The question raised here is as to the proper mode of ventilation and lighting, and seeing that it would be worse than folly to perpetuate the evil of allowing an intercommunication between the side walls of some of the present ill-devised, and worse-kept, Slaughter-houses in Aldgate High Street, your Committee were driven to the alternative of requiring both light and ventilation to be sought for in the roof.

The ring of gas spoken of so contemptuously by the Butchers will have the effect of rarefying the vitiated air in the Slaughter-houses during the process of slaughtering, and by producing an up-current, quicken the ventilation.

Upon this point Mr. Darbyshire, before quoted, says, speaking of his work at Manchester, "the Slaughter-houses are well lighted from the roofs, top lights being superior to side lights for purposes of slaughtering." All the Markets recently constructed by the Corporation of London are similarly lighted and ventilated, and at the Abattoir in Edinburgh the

whole of the ventilation is carried on by large ventilators, and other contrivances, in the roof.

BYE-LAW IX.

That each Slaughter-house and Pound be thoroughly washed over the entire surface of the walls to the height of 7 feet 6 inches, and over the whole surface of the floor directly after slaughtering is completed, or at least once in every twenty-four hours.

OBJECTIONS.

The substance of the objections raised is that the requirements for washing are too stringent, with a reiteration of the grievance of a dado 7 feet 6 inches; also the Butchers find it "difficult to imagine why the walls and floor of the Pound, as well as those of the Slaughter-houses, are to be washed after slaughtering," and seem to imagine that the washing is required every twenty-four hours, including Sundays, whether slaughtering is going on or not.

REPLY.

The provision for thoroughly cleansing, once in each twenty-four hours, Slaughter-houses and Pounds

that are in constant use, is too obviously necessary to require any defence, and the quibble raised by the Butchers about Sunday cleaning is, I presume, intended as a joke.

BYE-LAW X.

That the internal surface of the roofs and upper portions of the wall of the Slaughter-houses and Pounds above the 7 feet 6 inches of impermeable surface be washed with quicklime at least once every month.

OBJECTIONS.

That the requirements for the limewhiting are excessive, and that, if insisted upon, would be "oppressive and useless."

REPLY.

I am of opinion that this Bye-law may be relaxed, and that it will suffice if the *monthly* limewhiting be required in the *summer* only, say from May to October; and once in *three* months in the colder seasons, say November to April. The necessity for this periodical cleansing with lime would be made

abundantly clear if the Local Government Board would send one of their own Medical Inspectors to see the places as now existing ; who would be astonished, as your Committee were, to observe the foul, black, sooty, and greasy state of all that is left of the ruins of the timbers originally forming the roofs of some of the Slaughter-houses in Aldgate, and perhaps concur in remarks freely expressed by outsiders, that no regulations can be too stringent for the management of a business, which under the most careful supervision and with every intelligent precaution, is repulsive and offensive to the senses.

Assuming that the observance of the proposed Bye-laws will unavoidably compel a partial reconstruction of the Slaughter-houses in Aldgate, and substantial repairs in the adjacent structures, the washing with quicklime was ordered with a view of providing a suitable and inexpensive coating for the new wood-work of the roofs, &c., for, owing to the constant presence of Sulphuretted Hydrogen in Slaughter-houses, paint is inadmissible from the circumstance that it would speedily be turned black by the action of such gas upon any mineral pigment

employed. The limewhiting if used *hot* would act as a powerful disinfectant and deodoriser, as well as having the effect of greatly reflecting the light in the Slaughter-house, and giving the place a cool and clean appearance.

The Metropolitan Board of Works in their 6th Byelaw require that "the occupier shall keep the inner
 "walls of every Slaughter-house always *thoroughly*
 "clean and in *good order and repair*, and shall cause
 "the internal surface of the *roof and upper portions*
 "of the walls to be thoroughly washed with quicklime
 "at least once in every three months."

The Butchers have probably overlooked this Byelaw in quoting the action of the Metropolitan Board of Works.

BYE-LAW XV.

That no Slaughter-house or Pound be used for any purpose other than that for which it is licensed, and that no slaughtering be conducted within public view.

OBJECTION.

The Butchers maintain that the Pound is not included in the Licence for the Slaughter-house.

REPLY.

It is quite true that the word *Pound* is not used in the Licence for a Slaughter-house, but the Act of Parliament, 1874, distinctly provides that the Bye-laws shall extend to the "*premises*" generally.

BYE-LAW XVIII.

That in case of any diseased or unsound cattle being brought to a Slaughter-house, Pound, or Lair, the occupier shall forthwith give information thereof to the Medical Officer of Health of the City of London.

OBJECTION.

That the retention of the word unsound might involve the Butchers in a charge of Slaughtering Diseased Meat.

REPLY.

I should not insist upon the retention of the word "*unsound*" if some guarantee could be exacted that the animal would be slaughtered within a specified time of the occurrence of any accident which might disable it ; although it must be remembered that the flesh of a beast suffering pain, or deprived of the full use of all its functions, rapidly deteriorates in quality and nutrient properties.

BYE-LAW XXI.

That every person occupying a Slaughter-house shall cause the works needful for complying with these Bye-laws to be forthwith executed, and when completed shall not permit any alteration to be made in them without the sanction of the Commissioners of Sewers of the City of London, and that the whole of the works and regulations be carried out to the approval of the Medical Officer of Health.

OBJECTION.

That the Medical Officer of Health should not be the judge of the mode in which the works ordered by the Bye-laws are executed.

REPLY.

This Bye-law provides a salutary check upon the active resistance the Butchers seem ever ready to offer to rules intended for their own benefit, no less than the protection of the public health, and the general arrangements and discipline of a Slaughter-house belonging exclusively to the Sanitary Department, your Committee thought it would save circumlocution if the Medical Officer of Health was made amenable to the Court of Sewers for the due maintenance of the Bye-laws in their integrity.

So far, however, as I am concerned I shall be very thankful to be relieved from the odious duty of enforcing regulations which are so ungraciously acquiesced in by the persons on whose behoof they are made, at the same time I shall never shrink from accepting whatever responsibility may be connected with my office.

It is quite untrue, as stated by the Butchers' Trade Society, "that the Bye-laws in question have "been framed by persons totally without practical

“acquaintance with the trade,” the fact being, that they were prepared with the active assistance of several Members of the Committee of great experience as providitors, two of whom are large carcass butchers, and two others are extensively connected, commercially and officially, with the butchering interests, and well informed upon the economy of Markets and Slaughter-houses. Again, the Committee was attended at each of its sittings by the Deputy of the Ward in which the Slaughter-houses are situated, who was specially invited to attend upon each occasion, and who generously and frankly avowed himself the advocate of the slaughterers. This gentleman took part in all the discussions, and argued forcibly and fully every point in connexion with the subject ; but beyond this, your Committee’s Report was further analysed and criticised by the General Court of Sewers, amongst whom were many Commissioners practically and intimately acquainted with the whole bearings and requirement of the question. As you are aware, the Court adopted your Report, without amendment or alteration, being satisfied of the wisdom and expediency of the By-laws compiled by you.

The remarks of the "Butchers' Trade Society" relative to the Report being passed by the Court of Sewers with "closed doors" require one word of explanation : The exclusion of strangers at the time the Report was presented was not dictated by any desire to conceal the purport of its contents, and indeed had nothing to do with the main question of its adoption, but was resolved simply in order that the Solicitor might read a confidential communication having reference only to a technical legal proposition as to the mode of enforcing the said Bye-laws should they be sanctioned by the Local Government Board.

In conclusion, I will only add that, having given my best attention to the whole subject, and carefully considered the not very formidable "objections" raised by the butchers, I have arrived at the honest conviction that no substantial grounds are therein advanced which would justify you, as the Sanitary Authority in the City of London, in varying the requirements of the Bye-laws submitted for approval to the Local Government Board, beyond the concessions herein described.

Adverting to my individual action in the matter, I may here repeat that I am quite unconscious of the smallest desire to limit the usefulness or cripple the operations of an important and valuable trade, and that I have endeavoured to reconcile the desires of the occupiers of the Slaughter-houses with the imperative requirements of the public health ; nevertheless, I cannot help sharing the conviction of all competent Sanitarians, that the perpetuation of densely packed Slaughter-houses in the midst of a close population, where the introduction of a sufficient supply of light, air, and ventilation, is physically impossible, was a lamentable error of legislation, which every unprejudiced observer admits will, and *must*, be remedied, whenever the exigencies of public health are allowed to outweigh the antagonism of interested and uncompromising opposition.

I feel it necessary to say as much as this, since I have been credited with more than my share in the preparation of the materials upon which you have deemed it wise and expedient to frame these

Bye-laws, an impression which has involved me in no small amount of abuse and obloquy.

I have the honour to be,

GENTLEMEN,

Your obedient Servant,

WM. SEDGWICK SAUNDERS, M.D.,

Medical Officer of Health.

GUILDHALL,

27th June, 1876.

POSTSCRIPT.

Since the foregoing was written I have received copies of additional documents forwarded by the "Butchers' Trade Society" to the Local Government Board, and, in accordance with your request, have perused and considered the same.

These communications begin with a long letter from the above named Society, consisting of extracts from my Report on Slaughter-houses, dated 1st June,

1875, with observations upon the same, given point by point in parallel columns.

These remarks are really little more than a "*réchauffé*" of those already set forth in the voluminous epistle of the Society, dated 10th April, 1876, addressed to the Local Government Board, and I fail to recognise any more important differences than the following, viz., some very ungracious and totally irrelevant reflections upon the conduct of the District Sanitary Inspectors, for the forbearance shown by those officers in allowing the greatest latitude as to the defects and nuisances observed in the butchers' premises to continue with as little interference as possible until the new *régime* could be established ; also a statement that your Engineer is at variance with myself in the recommendations given to your Committee, the truth being that they were prepared by that officer in conjunction with your Solicitor and myself. Further, the Society inform the Local Government Board, that disease germs have never been known to rise to a height of six feet, and that therefore the side walls separating adjoining Slaughter-houses need not be

built as high as the Bye-laws require ! This is a fair sample of the recklessness with which the “ Butchers’ Trade Society’s ” last production has been framed, and pays a poor compliment to the discrimination of the Local Government Board, who may, if they think fit, educate the Society to the fact that disease germs have been known to travel many thousands of miles, carrying with them cholera and kindred diseases from the far East to the distant West ;—a corresponding degree of ignorance characterises the dicta of the butchers upon the physical laws which govern the movements of currents of air, and which for convenience is called ventilation. Again, the Society claim an exceptional state of salubrity and freedom from disease for butchers as a class — a proposition which I have already shown you is untenable. Further information may be obtained upon this subject from a Report written by Dr. Buchanan, one of the Medical Inspectors of the Local Government Board, upon the connection between scarlet fever and cow sheds, in a district under his charge. Lastly, the Society ask, whether in my judgment the butchers would be less unhealthy in the Slaughter-houses as arranged

according to my plan, and I answer broadly and unhesitatingly, Yes.

The remaining letters comprise one from the Reverend the Vicar of St. Botolph, whose testimony as to the general condition of the Slaughter-houses is opposed to the evidence of your own senses when visiting the places, and is otherwise grossly inaccurate; also letters from two resident medical practitioners certifying as to the healthiness of the neighbourhood of Aldgate in general, and the Slaughter-houses in particular—also a detailed Report from a Metropolitan Medical Officer of Health, who has so implicitly adopted every “objection” made by the butchers to your Bye-laws, that I am irresistibly forced to the conclusion that he is either the author of such “objections,” or has lent a too credent ear to the gentleman he mentions as having accompanied him in his survey, and “who gave him much valuable information, statistical and otherwise.” Upon fairly balancing the whole matter, I cannot see any reason to modify the opinions expressed in my Report of 27th June last, and in apportioning the value to be awarded to the conflicting testimony offered to

you, I must ask you to remember that the strenuous efforts in the way of resistance made by the butchers, and my own justification of the principles of right and propriety, which have alone dictated my advice, rest upon totally distinct bases.

W. S. S.

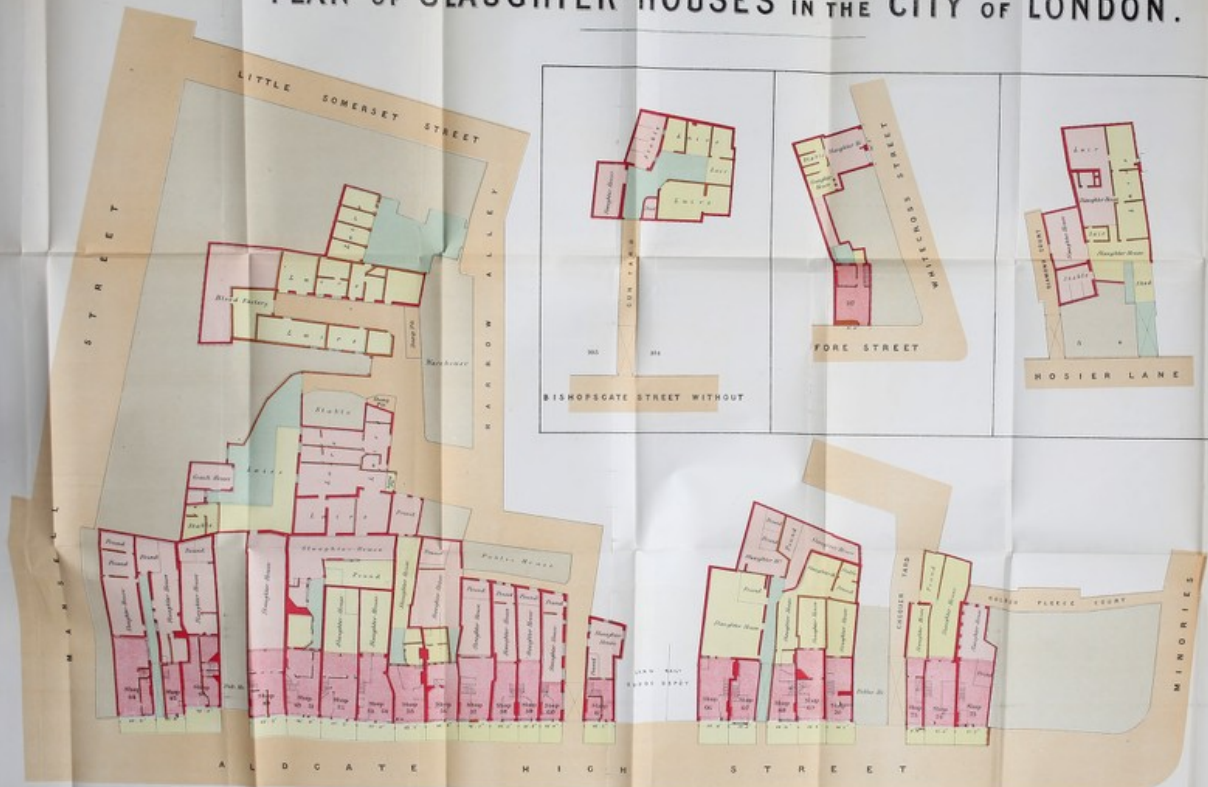
GUILDHALL,

14th July, 1876.

I must not fail to remember that the attention
of the public is directed to the fact that the
principles of the system are not
to be taken as a guide in any particular
case.

W. H. W.

PLAN OF SLAUGHTER-HOUSES IN THE CITY OF LONDON.



NOTE

The Light Red Tint shows buildings principally constructed of Brick
 The Red Tint shows buildings constructed of Brick and inhabited
 The Yellow Tint shows buildings principally constructed of Wood

William Hayward
 July 17/86

