Social Science Association to Leeds served to rouse the authorities to exert their powers to improve the sanitary state of the town and diminish a still unenviable high rate of mortality. The improvement of the homes and habits of the working classes is one of the most effective means of diminishing the high rate of mortality existing in most of our large towns. Popular lectures on sanitary science and physiology can be made very attractive by the introduction of a few experiments, such as those on the chemical composition of the atmosphere, water, blood, etc. The series of sanitary lectures at my suggestion kindly given by various medical men of standing under the auspices of the Leeds Branch of the Leeds Ladies' Sanitary Association were well attended and much appreciated; and I am glad to find that the ladies themselves have now decided to lecture to the poor women and give them sanitary information and useful domestic advice tending to promote the health and comfort of their families. Under the auspices of the Bishop of the diocese, the Vicar, and the leading clergy, and many of my medical brethren, the public meetings of the Leeds Association were highly successful, and its annual reports had a large circulation. A Social Improvement Society has now taken the place of the Leeds Branch of the Ladies Sanitary Association, and promises to be very useful. Branches of the Ladies' Sanitary Association have done much good in many other places. With sanitary agencies at work such as I have named, pointing out the remedies required, and with a long continued high rate of mortality in most of our large towns, and the continued prevalence of epidemics, Parliament was compelled to act, and at last we got the promised Public Health Bill, which last session, after grievous throes, was brought to see the light of day; but, during the tedious process of its birth, differences of opinion arose between the chief adviser in charge of the case and the numerous doctors and nurses who volunteered their assistance on the occasion, the delay caused by an unnatural presentation forming the cause of dispute. The consequence was, the offspring came into the world defective, if not malformed, though the parent of the child is sanguine that it will ultimately be developed to perfection, and be able to exercise all its organs with efficiency and confer credit on its originator. It is clear, however, there is some doubt as to this happy result; for, though the doctors have been displaced, who had given their services gratuitously, the lawyers and examiners have been selected to take charge of the infant whilst under the guardianship of the Local Government Board. This course has naturally displeased the medical faculty, the members of which, having made the prevention and detection of the disease and the preservation of health their special study, considered themselves best qualified to apply the needful remedies. The official instructions just issued for carrying out the new Health Act are elaborate enough, and it is to be hoped the operations of the Act will adequately meet the ends sought to be remedied. By the passing of the Adulteration of Food and Drugs Bill, a great impulse will be given to the cultivation of chemical analysis, and a field of useful and remunerative skill and labour opened to those medical men and chemists who have made analysis their special study. The acuteness and skill shown in the detection of poisons must now be bestowed to the detection of articles so frequently employed for the adulteration of food and drugs, etc.

The working of the Contagious Diseases Acts has proved on the whole successful, and it is to be hoped the clamour and outcry at one time brought to bear against one of these Acts has subsided, and that the law will be carried out where it is most required and found necessary for the protection of the public health. We separate and isolate small-pox cases, fever, cholera, etc., and it is equally for the safety of the public and for the benefit of future generations that persons with poisonous diseases of a loathsome nature, either in men or women, should be restrained from spreading these diseases, and be treated in a special manner in special institutions. In this respect we are not as careful as the Jews were as far back as the time of Moses. We have the privilege of living under a new and Christian dispensation; still, in many respects, we disregard both the Levitical as well as Christian code of laws laid down for the preservation of our health. By breaking the natural laws of health, we deface the sacred temple we possess, and run counter to the laws of our Maker. The necessity of temperance, cleanliness, and chastity must be enforced by the arm of the law, otherwise the human body is apt to become degraded into a mere brutal machine, and the highest interests of the creature, both here and hereafter, disregarded. Our most enlightened divines have long recognised the necessity of inculcating attention to the physical as well as spiritual wants of the people under their charge. Our leading sanitary reformers, humane statesmen, church dignitaries, and ministers of religion generally, have done much to remedy the gigantic sanitary evils so long uninterfered with by the law of the land. If God's laws are broken, those of men soon come to be unheeded as well. The co-operation of the clergy with the medical profession is

always attended with public benefit; and the Public Health Act will prove comparatively a dead letter, if the parties whom it is principally intended to benefit do not intelligently and heartily unite with the local authorities in carrying it into practice, and they will not do so unless their truest friends, the doctor and the pastor, convince them it is a real advantage to make their homes and habits subservient to the laws of health. As long as the body is neglected and dishonoured, the wants of the soul will receive no attention, the education of the young will be little cared for, civilisation and religion will be retarded, and national degeneration sooner or later ensue. To meet such direful consequences, and add to the happiness and longevity of the human race, are the grand objects of the social and sanitary reformer.

HYPERTROPHY OF THE ARTERIAL WALLS.

By GEORGE JOHNSON, M.D., F.R.S.,

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To any one who feels confident that he has satisfactorily worked out a problem, the opportunity of answering objections is always acceptable; and I have to thank my colleague Dr. Beale for having done me the favour to put forth two objections which admit of a complete answer.

The suggestion that thickening with degeneration of the arterial walls had been mistaken for genuine hypertrophy, is completely refuted by pointing to the obvious contrast between my published illustrations of hypertrophy and Dr. Beale's representations of arterial degeneration. It is assumed that the drawings fairly represent the specimens from which they are taken; but the specimens still exist, and can be compared with the drawings. Dr. Beale's Plate XIII, to which he refers in illustration of his criticism, a part of which only has been quoted by Sir W. Gull, contains five figures, of which one represents a normal artery, while three are illustrations of thickened arteries which most pathologists, without even a "hint" being given, would recognise as examples of amyloid or waxy degeneration. But one figure (72) presents an entirely different appearance. This is an artery from the peritoneum of a starved frog; and its fibrous tunic is much distended, probably by glycerine or by acetic acid, while the muscular coat is pushed inwards, and the canal is narrowed. This is a good example of the "hyalin-fibroid" change in the external coat of an artery—artificially produced, as usual. Dr. Beale now repeats the suggestion which he made on a former occasion—that a contracted healthy artery "may be indistinguishable from one of less diameter but with thicker walls." The specimen which Dr. Beale exhibited at the *soirée* of the Royal Medical and Chirurgical Society in illustration of this suggested source of error, showed, as I believe, to the satisfaction of most men who examined it, that, so far from it being difficult to distinguish a normal contracted artery from one with hypertrophied walls, it would scarcely be possible to confound the two. My own specimens of hypertrophied arteries exhibited on that occasion had their canals uniformly distended by injection, and formed a striking contrast with Dr. Beale's specimen. While Dr. Beale believes that the muscular wall of an artery may be atrophied, his singular incredulity as to the possible occurrence of arterial hypertrophy "under any supposable circumstances" will probably prevent him from spending much time in the search for what he conceives to be a physiological impossibility; but to those who are less sceptical I beg to suggest a mode in which they can easily obtain arteries with an increased thickness of true muscular tissue in their walls, and at the same time satisfy themselves that the thickening is not the result of contraction of the canals of the vessels. Let a section of an injected healthy kidney be compared with one from an injected small granular kidney. The size of the canals of the afferent Malpighian arteries, and the normal thickness of their walls, are both well known and remarkably uniform. A comparison of these particular arteries from the two kidneys will show that, while the canals may be of equal size in the two specimens, the muscular walls are more than twice the normal thickness in the diseased kidney.

ETHER AS AN ANÆSTHETIC.

By SAMUEL FIELDEN, Esq., Shildon, Durham.

At a time when the question of anæsthetics is again attracting the attention of the profession, the following notes may not be without interest.

C. B., aged 24, a feeble, cachectic young man, came under my care early in December last. His symptoms were indicative of vesical calculus, and from his history these had existed for eighteen or twenty