

College with the University, so that its classes may be recognized for a great part of what is necessary for a degree. But whatever is done in this matter, Mr. Dyer thinks that the architects of Glasgow should not rest content until they have a Professor of Architecture in the University—a man of wide culture and experience, who would imbue architects with proper ideas of the dignity of their profession, and lead public opinion in such a way as to insure that opportunities were afforded for the most thorough training being obtained by those who were really able to take advantage of it. Mr. Dyer concluded by advising the architects not to increase the number of examinations unnecessarily. If they were properly represented on the examining boards of the different teaching institutions, the certificates or diplomas of those should be accepted by the professional institutes. The tendency of the present day is to multiply examinations to such an extent as to stifle all originality both on the part of the teachers and the students, and to turn out the latter, loaded with certificates, but with all true scientific and artistic spirit extinguished; and he trusted that arrangements would be made which would induce the students to study the art and science of their profession in such a way as will not only make them good architects, but also, what is of more importance, good men generally.—*Industries*.

BUILDING AND PLUMBING.

In our large cities complaints are general regarding the sanitary condition of some quarters of the cities, public buildings, and private residences. These complaints are indicative and suggestive. They indicate that there is a healthful agitation of sanitary matters, and suggest that the evils will be remedied, in many instances pointing out the cause of the evil, and recommending its cure. There is probably no subject that has been studied and discussed more of late years than the evils arising from imperfect house drainage, and, as related to man's well-being, there is no subject of more importance.

Of late years the subject has received attention from our best scientists, and on it has been bestowed the efforts of our most advanced sanitarians. Yet there is regarding it a serious indifference or ignorance which permits the construction of unhealthy buildings in the midst of our most aggressive sanitary intelligence. No one will deny that ignorance of these important matters exists to a surprising extent. It must be admitted that architects, plumbers, builders, etc., are intelligent and generally abreast with hygienic knowledge; yet these complaints evidenced a lack of intelligence or care somewhere. There is really a lack of both; the owner of the building erected is ignorant of sanitary laws, and the officers whose duty it is to enforce them are often too indifferent, unable or incompetent. It can hardly be presumed that the proprietor would have a house erected in violation of the laws of health if he knew them, and in the majority of cases he has his building constructed as he wishes. To him must be attributed the ignorance. To the officers whose duty it is to enforce the sanitary regulations provided by municipal or State government, ascribed the indifference.

A case in point is found in an article by D. D. Kearns in the *St. Louis Republic*: "At present in our city of 63 square miles we have two plumbing inspectors, and, indeed, to be more exact, we have but one who personally inspects our houses. That this one man can properly do the work for which he is appointed would be absurd to expect, no matter how strict our laws might be. At present when a man wishes to build a house he visits his architect and gets his plans executed and figured on. Then it becomes necessary to procure

permits from the Building Inspector's office and from the Sewer Inspector. Thus we find two different departments which should be combined in one, and which would without doubt give better results if so managed."

Boston is pointed out as a model for its building and plumbing laws. These laws are not only very perfect, but the machinery for their execution is adequate, and is presided over by intelligence. The Building Inspector's office is efficiently provided and is conducted with business regularity and care. Under a chief inspector are appointed careful men, well versed in building matters, often chosen from the ranks of mechanics. These men are given a certain district, and are expected to note all the work going on in that district and report progress day by day. The laws governing the work being well understood and very stringent, it entails but little work to see that they are obeyed. Thus, not only is the inspector expected to know all about the new buildings in his district, but by inspections he becomes familiar with all kinds of houses, and often is the means of saving valuable property in cases of fire by reason of this outside knowledge.

The evils of improper methods in building and plumbing cannot be laid to the charge of builders, architects, or plumbers wholly, even should they be inclined or induced to disregard sanitary laws. It is the business of the inspector to secure regard for those laws—to enforce their observance on the part of the artisans and contractor, and to prevent the error of ignorance on the part of the proprietor. Yet behind the inspector are the laws and the agencies through which they are administered. In many cases the laws are insufficient. They are not broad enough in scope or minute enough in detail. Many health departments are of recent establishment, and the laws provided for them have not been properly adjusted to the existing conditions. Departments that have been longer established have not received the legislation necessary to meet new conditions and the general growth. Moreover, courts are tardy and lax in the proper enforcement of existing laws, and in many cases do not give the subject of sanitation the serious thought its importance demands.

Hygienic knowledge is becoming more perfect, practical, and general, and sanitary intelligence has been reduced to a practical science for every-day use. Our plumbers are intelligent, and it is not reasonable to suppose that they would slight their work when so much competition exists. It is to their interest to do good work, for each job is an advertisement of the character of the work performed. They are often called on by the owner to do work in a certain way. Inspection permits this, and unhealthy shops, stores, business offices, and homes result. Enough of this is seen in our cities to call loudly for a reform—a better enforcement of law. The teaching of the sanitarian stops short of this. It is busy in keeping pace with new conditions arising from the demand for greater building and the complications of inventive necessity. The agencies of the law are sometimes slow to adjust themselves to new relations, and in this they fall behind the spirit of progressive sanitation. No plumber, architect, or builder would oppose the proper regulation of these matters, for a perfect building is their greatest pride. Our officials must become more strongly impressed with the importance of their duties and more prompt, efficient, and thorough in their discharge.—*Sanitary News* (Chicago).

The following is a very good stain for ash: Dissolve 4 oz. shellac, with 2 oz. of borax, in $\frac{1}{2}$ gallon of water. Boil until a perfect solution is obtained, then add $\frac{1}{2}$ oz. glycerine, after which add in sufficient water, soluble aniline black, and the mixture is ready for use.