

please them most. I have smiled to see them fondle round and lay in a nest of gasec eggs. Pulleta will begin to lay early in life, when nests and eggs are plenty, and when others are chuckling around them. A dozen dung-hill fowls, shut up from other means of obtaining food, will require something more than a quart of corn a day. I sink fifteen bushels a year a fair allowance for them; and after they have become habituated to find at all times a plenty in their little manger, they take, but a few kernels at a time, except just before going to roost, when they will take nearly a spoonful in their crops; but just so sure as their provisions come to them scantied or irregularly, so sure will they raven up a whole cropfull at a time, and stop laying. A dozen fowls well attended will furnish a family with more than two thousand eggs a year, and one hundred full grown chickens for the fall and winter stores. The expense of feeding a dozen fowls will not amount to more than eight bushels of grain. They may be kept in cities as well as in the country, and will do as well shut up the year round as to run at large. A grated room well lighted, ten feet by five, partitioned from a stable or outhouse, is sufficient for the dozen fowls, with their roosting, nests and feeding troughs. In the spring of the year five or six hens will hatch at a time, and the fifty or sixty chickens may be given to one hen. Two hens will take care of one hundred chickens well enough until they begin to climb their little stick roosts. They then should be separated from the hens entirely. I have often kept the chickens when young in my garden. They keep the May-bugs and other insects from the vines. In case of confining fowls in summer, it should be remembered that a ground floor should be chosen; or it would be just as well to set in their pen boxes of well-dried, pulverized earth, for them to wallow in during warm weather. Their pens should be kept clean.—*Scot. Ref. Gaz.*

PROTECTION OF ANIMALS AND EFFECTS.

Temperature and exercise are the two great influencing circumstances on the feeding and consequent growth of animals. A flock of Leicester sheep, on tolerably good food, will increase in weight throughout the year about 52 lbs. of mutton for each sheep; but this accumulation takes place chiefly during the spring and summer months, for during cold weather it requires all the farmer's supplies of food to keep them at the same weight. One hundred sheep were folded by divisions of pens, each of which was 22 feet in length, by 10 feet in breadth, and possessed a covered shed attached to it. They were kept there from the 10th of October to the 10th of March.—Each sheep consumed, on an

average, 20 lbs. of Swedes daily. Another hundred sheep were folded in similar pens, but without sheds, during the same time, and their daily consumption of Swedes amounted to 25 lbs. each. The sequel was, that these sheep which enjoyed the protection of the sheds had increased 3 lbs. each more than those which were left unprotected, although the latter had consumed one-fifth more food.—[Veterinarian, London]

Mechanical.

CHEMISTRY APPLIED TO ARTS AND MANUFACTURES.

METHOD OF DETECTING COTTON IN LINEN.

The following paper on the detection of cotton in linen, translated from Liebig's *Annalen*, of February, 1847, was communicated for that publication by G. C. Kindt, a distinguished German chemist, and will doubtless prove useful and interesting to the readers of the *Merchants Magazine* :—

This subject has frequently engaged the attention of commercial and scientific men; many experiments have been made in order to detect cotton thread in linen; many processes have been recommended, but none have hitherto proved satisfactory. I was therefore much surprised, when a stranger, a few weeks ago, showed me a sample of linen, from the one-half of which all the cotton filaments had been eaten away. He had obtained it in Hamburgh, and asked me whether I could give him a process for effecting this purpose. Now since, as far as I am aware, nothing has been published on this subject, and it is of very general interest, I consider it a duty to communicate the results of my experiments. I had already observed, in experimenting with explosive cotton, flax, &c., that these two substances behave somewhat differently towards concentrated acids; and although it has long been known that strong sulphuric acid converts all vegetable fibre into gum, and when the action is continued for a longer period into sugar, I found that cotton was metamorphosed much more rapidly by the sulphuric acid than flax. It is therefore, by means of concentrated sulphuric acid that cotton may be removed from linen, when mixed with it; and this object may be obtained by the following process :—

The sample to be examined must be freed as perfectly as possible from all dressing, by repeated washing in hot rain or river water, boiling for some length of time, and subsequent rinsing in the same water; and I may expressly observe that its entire removal is necessary for the experiment to succeed. When it has been