

large body of farmers defend the Hampshire or West Down sheep, notwithstanding their plain appearance, by saying that this plain breed comes to a greater weight, and therefore makes a greater money return, than the Sussex or true South Down. The breeders of South Downs reply that, if their sheep are smaller, more of them can be kept on the same farm.— Here, then, the abstract question has a practical bearing. Last winter I saw a little Devon beast by the side of a large Hereford preparing for the show of the Smithfield Club, and Mr. Trinder's feeder informed me that the small one ate about as much as his more bulky neighbour. In this second instance there was a very decided difference between Mr. Shackel's two lots, yet the larger lambs were satisfied throughout with an equal allowance of each kind of food; and, though of the same breed, made a better return by 4s. a head than the smaller sheep. This plain fact seems to warrant me in calling the attention of practical men to this point of farming

EXEMPLIFICATIONS OF INSTINCT.

The similarity between the simple instinctive action of animals and their ordinary organic functions is so great as to lead us to suppose that both sets of operations are arranged upon similar plans though these may not be identical, and that both are carried on without the forethought or the consciousness of the animal. Thus the young bee on the first day that it leaves the cell, without teaching and without experience, begins to collect honey and form wax, and, build up its hexagonal cell, according to the form which its progenitors have used from the earliest generations. Birds build nests of a certain structure after their kinds; and many species, at certain seasons, excited by some internal impulse, take their migratory flight to other countries. The insect, which never experienced a parent's care or a mother's example, labours assiduously and effectively for the future development and sustenance of an offspring which it, in its turn, is doomed never to behold. Others toil all summer and lay up stores for winter, without ever having experienced the severity of such a season, or being in any sensible way aware of its approach. We know that such actions are the result of involuntary and unreflective impulses, because we often find them performed in vain. Sir Joseph Banks had a tame beaver which was allowed to range at liberty in a ditch about his grounds, and was at all seasons liberally supplied with food. One day, about the end of autumn, it was discovered in the ditch very busily engaged in attempting to construct a dam after the manner of its companions in a state of nature. This was evidently the blind impulse of its instinctive feelings, for a moment's exercise of the lowest degree of reflection must have shown it that such labour under the circumstances in which it was placed, was altogether superfluous.— A common quail was kept in a cage, and became quite tame and reconciled to its food. At the period of its natural migration it became exceedingly restless and sleepless; it beat its head against the cage in many vain efforts to escape, and on examination its skin was found several degrees above its usual temperature. A bee, which can fly homewards one or two miles in a straight line to its hive, with extreme accuracy, if it happens to enter an open window in a room, will exhaust all its efforts in attempting to get out at the opposite window which is closed down, but never pause, to think of retracing its flight a little way backwards, so as to fly out at the opening at which it had entered. We often observe a dog, when going to sleep on the floor, turn himself several times round before he lies down, and this is just one of the lingering instincts which he has retained; while in his wild state he is accustomed thus to prepare his bed amid the tall grass or rushes. An acute observer of animal habits has remarked that a jackdaw, which, for want of its usual place of abode, had for its nest made choice of a rabbit hole, was often sorely perplexed in what way to get the long sticks, of which its nest was to be formed, drawn within the narrow entrance. Again and again did it attempt to pull in the piece of stick while it held it in the middle in its bill, and it was only after a series of vain efforts that, by mere chance, it at last accomplished its object by happening to seize it near one end instead of the centre. In this case it appeared to the observer that the building instincts of this bird were complete and perfect within a certain range, but without the limits of this circle it had no deliberative foresight to guide its actions.— *British Quarterly.*

Miscellaneous.

LORD PENRHYN'S POULTRY-HOUSE.

The following account of Lord Penrhyn's poultry house is extracted from "The Poultry-yard," by Peter Boswell;—"The most magnificent poultry place, perhaps, that ever has been built, is that of Lord Penrhyn's, at Winnington, in Cheshire. It consists of a handsome regular front, extending about 140 feet, at each extremity of which is a neat pavilion with a large arched window. These pavilions are united to the centre of the design by a colonnade of small cast iron pillars, painted white, which support a cornice, and a slate roof, covering a paved walk, and a variety of different conveniences for the poultry, for keeping eggs, corn, and the like. The doors into these are all of lattice work, also painted white, and the framing green. In the middle of the front are four handsome stone columns, and four pilasters, supporting likewise a cornice and a slate roof, under which and between the columns is a beautiful mosaic iron gate; on one side of this gate is an elegant little parlour, beautifully papered and furnished; and at the other end of the colonnade a very neat kitchen, so excessively clean and in such high order that it is delightful to view. The front is the diameter or chord of a large semicircular court behind, round which there is also a colonnade and a great variety of convenience for poultry. This court is neatly paved, and a circular pond and pump are in the middle of it. The whole fronts towards a rich little paddock, in which the poultry have the liberty to walk about between meals. At one o'clock a bell rings, and the beautiful gate is open. The poultry being then mostly walked in the paddock, and knowing by the sound of the bell that their repast is ready for them, fly and run from all quarters, and rush in at the gate, every one striving which can get the first share in the scramble. There are about 600 poultry of different kinds in the place; and although so large a number, the semicircular court is kept so neat and clean that not a speck of dung is to be seen. This poultry place is built of brick, except the pillars and cornices, the lintels and jambs of the doors and the windows; but the bricks are not seen, being all covered with a remarkable fine kind of slate from his lordship's estates in Wales. These slates are close jointed, and fastened with screw nails or small spars fitted in the nick; they are afterwards painted, and fine white sand thrown on while the paint is wet, which gives the whole the appearance of the most beautiful free-stone.

MODE OF MEASURING HAY STACKS.

The following directions are given by Mr. Bayldon, in his Rents and Tillages, for this process:—"Supposing the stack to be ten yards long at the bottom, and eleven at the eaves; four and a half wide at the bottom, and five and a half at the eaves; and presuming it to be four yards in height to the eaves, and to rise three yards to the point of the roof; in order to find the contents, the dimensions are summed up thus:

| | |
|----------------|------------------------------------|
| Medium length, | 10½ yards |
| Do. breadth, | 5 |
| | — |
| | 52½ |
| Do. height | 5 including ½ of the rise of roof. |

10)262½ = 26½ tons, or 29½ loads.

If the stack swells out considerably towards the eaves, the height—if taken against the side—will appear to be greater than it is in reality; it should therefore be measured by a pole set up perpendicularly to the eaves. When it is required to measure an irregularly formed stack, the contents may be found by giving and taking proportionate quantities of the separate parts, or by measuring or computing it in different divisions. If round, a more complex calculation is necessary, and can be hardly ascertained with accuracy without having recourse to geometry. Mr. Bayldon, however, mentions a simple method, which consists in measuring the circumference at the bottom, and at regular distances up to the eaves, which