

a clock-tower which is a *fac simile* of the one at Hatfield, the favorite residence of "good Queen Bess," some ten miles hence as the crow flies. A few squirrels in the park are busying themselves on the trees this crisp autumn morning, though few in number compared with what one sees in Central Park, New York. The oak predominates, and the English elm also thrives here, sending its roots through the yellow clayey, stony surface to the chalk which lies everywhere beneath. It was not one of the most fertile spots naturally that fell to Sir John's hand by inheritance when quite a youth; but having been in the family for three centuries at least, it has not been allowed to deteriorate in his care.

Born in 1814, he was not over twenty when his mind was directed to those severe forms of study for which a training at Eton and Oxford had given a ground-work to start from. A tough, wiry frame, and an active, lissome step, which up to now despises the aid of horse or carriage when they can be avoided, has built up a constitution that no difficulties can damp, and that has "persistence" marked in every line and feature. The first laboratory was an old barn, and good work was done there. But some forty years ago or more, Sir John fortunately associated with himself a young and rising chemist, who had English and German experiences of the highest character. Dr. Gilbert's name has been as well known as Sir John's, in the time that has since elapsed, but present limits forbid telling what I know about him till another time.

Some 500 acres are kept in hand, on the estate, and a great portion of this is very carefully worked, so as to give experimental results on a large scale. But the Rothamsted experiments do not regard this as their special field of action. The experimental work proper, in its rigid and severer forms, extends to some 25 or 60 acres. Part of this is in permanent pasture, part arable, and, I may add, a portion left to the hand of Nature. As every reader is aware, a most exhaustive series of experiments have been carried out during more than a generation, in respect to the sources of nitrogen as plant food. Numerous divisions, dealt with in the same manner year after year, for that long period, have led to certain definite conclusions. Taking the grass plats alone, the tale that is told is marvellous, and one which even an unpracticed eye cannot fail to see. But when you have the advantage of Sir John as a guide, the interest is heightened tenfold. I had the opportunity, a few years since, of taking the late well-known chemist, W. F. Wigner, President of the Society of Public Analysts, and some other scientific friends, to Rothamsted. Sir John took us round, and everything being at its best (it was in June or July), it was a life-long remembrance to hear the questions which the owner asked, and the answers which the plats before us were compelled to give.

The composition of the drainage waters, under different conditions, has been an interesting pursuit here. And here, too, may be found the most extensive series of rainfall investigations, and of rainfall recording instruments, which the world can produce. Perhaps I have been most interested in two points—first, the differ-

once in the actual results obtained between the ordinary 5 or 8 inch gauge and a gauge extending to the one-thousandth part of an acre. This shows ten per cent. of an excess over the small gauge, on a rainfall of 28 inches annually. And again, the Dalton or procolating gauges, to show how much water passes through the natural or unmoved soil at different depths. Of course you descend to underground chambers to read off these unique results. I may add here that the district is a peculiar one, the whole table-land and the adjacent Harpenden valley not having a running stream or brook in it. All the rain-water finds its way into the chalk, and re-appears in the adjacent valley of the Lea, two or three miles away. The Lea is the largest source of the New River, which gives to such a large portion of the metropolis its supply of daily water.

Experiments of equal care and severity have also been extended into the feeding of stock, and in many other ways. But Sir John Lawes—who got the honor of a baronetcy from the Queen a few years since—is no recluse. He is a good neighbor, a good landlord, and "all men speak well of him." Withal a modest man, for he has refused, again and again, to be nominated for the representation of his native county in parliament. He is now, though hale and vigorous, seeking to pull the threads of his many affairs into a compact shape, that there may be no undue fracture when he is removed, or when he may be less able to carry on the present work. His great manure firm, turning out over 50,000 tons of fertilizers annually, is formed into a company. His experimental work is duly provided for, by his having vested one hundred thousand pounds and several acres of land in the hands of trustees, for the special purpose of continuing the series of investigations.

No man has done more to encourage habits of industry and providence among the poor. His development of the allotment system for laborers is well known, and has proved a success. But he has just given a farther lift in the same direction, having this autumn laid aside an additional hundred acres for *petite culture*, at the ordinary rental of the adjacent farm lands. He does not grind the faces of the poor, and the first year each man has the land rent free, with the exception of local taxes.

Nearly every visitor asks the question, when looking at the experiments, "Do it pay?" This is missing the point altogether. Paying, in the ordinary sense, has not been the object in view, but rather the attainment of results that should—on the principle that knowledge is power—put it into the hands of every agriculturist throughout the world to judge for himself what such and such treatment should result in. This he and his able coadjutors have done. The "results," the "summings up" of the many abstruse papers of Messrs. Lawes and Gilbert, are always of the clearest. A wayfaring man, though a fool, need not err therein.

A COMPANY of eastern capitalists is about to be organized for the purpose of erecting elevators along the lines of railroad in North Dakota, which will be conducted on

an entirely new plan. They propose to furnish to each farmer a separate bin in which to store wheat, and in this way when he is ready to sell he can always get the wheat which he delivered. They also propose to lend money at 7 per cent interest to be secured by the wheat in store.—*Toronto Globe*.

[Could not our Halifax elevator be utilized in the same way for the benefit of our fruit and potato shippers.]

STEPS have been taken to obtain complete sets of the British American and Canadian Short Horn Herd Books for the Office for Agriculture, so that breeders in the Province requiring information from these publications may have means of obtaining it. In making enquiries correspondents should mention the name and number of the animals enquired about. Where only the name is known, and not the number, the date of calving, or the sire and dam's name, should be mentioned, to prevent mistakes in identifying an animal.

There is also a complete set of the American Jersey Cattle Club's Register in the Office of Agriculture, the ordering of which was one of the last acts of the late Central Board of Agriculture.

## Advertisements.

Resolution of Provincial Board of Agriculture,  
3rd March, 1882.

"No advertisements, except official notices from recognized Agricultural Societies, shall be inserted in the JOURNAL OF AGRICULTURE in future, unless PREPAID at rate of 50 cents each insertion for advertisements not exceeding ten lines, and five cents for each additional line."

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