mode in which nature operates, the nearer we are to fixed principles and a sure rule of practice.

It would seem then that the first great epoch of modern agricultural improvement began with Lord Townshend, who demonstrated the truth embodied in the adage,

"He who marls sand May buy the land,"

showed the value of the turnip, and, as we presume, must have been a patron of the four-course system, which had its rise in Norfolk about the same time. The second epoch was that of Bakewell, whose principles of stock-breeding have ever since continued to raise, year by year, the average value of our meat-producing The third epoch dates from the exertions of such men as the Duke of animals. Bedford and Coke of Holkham, the latter of whom, combining usages which had been very partially acted upon, brought into favour drilled turnip husbandry, carried all the branches of farming as far as was permitted by the knowledge of his time, and did the inestimable service of inoculating hundreds of landlords and tenants with his own views. The fourth epoch, if we were to take each advance from its earliest dawn, would comprise the various dates of the opening of the first railroad, the importation of the first cargo of guano, the publication of Liebig's first edition of the 'Chemistry of Agriculture,' and the deep draining of the Bonesetter's field on Chat Moss; but in general terms it may be said to date from the first meeting of the Royal Agricultural Society at Oxford in 1839, when farmers began to be familiarized with men of science, and men of science learned not to despise agricultural experience. This last era is almost the birth of yesterday, and already, as compared with any former period, the results read more like a page from the Arabian Nights than like a chapter in the history of agricultural progress. Deep drainage, artificial manures, artificial food, improved implements, and railroad conveyance, have been the leading means by which the change has been wrought. Deep drainage has brought into play the unexhausted fertility of our strong clays : portable manures and purchased food have increased the crops on land of every degree. Mangold and swedes have been made to flourish on stiff soils, and cereals on sieve like sands. Downs have been transformed from bare pastures to heavy root and rich grain-bearing fields. The visitors to Salisbury Plain at the agricultural show of 1857 were surprised to find a large part of it converted into productive corn-land—a change which has been almost entirely effected within the last twenty years. The scientific mechanic has provided the tools and machinery for breaking up and pulverizing the ground, for sowing the seed, for gathering the crops, for preparing it for market, for crushing or cutting the food for the stock, with an case, a quickness, and a The railroad is the connecting medium which perfection unknown before. maintains the vast circulation, conveying the agencies of production to the farmer, and the produce of the farmer to the market. The steam-cultivator is, perhaps, about to be added to the triumphs of mechanism, and then will be realized the expression in the fine lines of Mr. Thackeray on the Great Exhibition of 1851-an expression which was premature if it was intended to be historic, but which we hope, and almost believe, will prove to be prophetic.

> "Look yonder where the engines toil : These England's arms of c aquest are, The trophies of her bloodless war; Brave weapons these. Victorious over wave and soil, With these she sails, she weaves, she *tills*, Pierces the everlasting hills And spans the seas."

> > To be Continued.