

read last year, I will not recapitulate them. To withdraw steam power from us would be to plunge this country into ignorance, poverty, and disorganization. Agriculture is only on the threshold of the use of steam power. She has never cheapened her products, nor supplied the wants of her customers. It is no exaggeration to expect that every farm of 100 acres will give employment to four horses of steam power. When this takes place, a large area of land used to feed horses will be set free for the production of human food. I also venture to predict that great commercial companies will be formed, who will purchase estates, parcel them out with topographical economy, and connect them with the towns and cities, whose sewage they will economise. We shall then see our agricultural engines gliding along a line of rails from farm to farm and city to city, drawing the produce to market—cultivating the farm. To see the powerful monster drawn by four horses along the common road is an insult to mechanical common sense, and, could the engine speak, would receive his indignant condemnation. When the locomotive was invented, somebody found means to expend £300,000,000 to make a suitable road for it, and somebody will, some day, do the same for steam in agriculture. The future of British agriculture may be said to rest upon the sufficient use of that cheap untiring power which has given such an enormous development to almost every branch of our national industry except agriculture. Steam, whether for cultivation or for the manipulations necessary in a well conducted homestead, for draining the swamps and irrigating the hills, and above all, for applying town sewage to our pastures, green crops, and root crops, will become the sheet anchor of British agriculture; and it is by this economy that the British farmer will be strengthened in his competition with other corn producing countries. That great man, Baron Lielig, has revealed to us the mysteries of our subsoil—that subsoil into which the British plough has never yet penetrated. His researches raise a doubt whether it is possible to manure the subsoil through the cultivated top soil; if so which I believe, how all important it must be to bring the manure, the air, and the subsoil into immediate contact and admixture with the surface soil. But, in any case, let us seek in our subsoil, by means of steam, that treasure which the old farmer told his son to dig for.

Public Companies for improving Agriculture.—Assuming and believing that great and comprehensive improvements in agriculture will originate with public companies, I prognosticate that a combined system of irrigation—town sewage irrigation—and railroad transit must form an important feature of any great district operation. The principles of drainage, steam cultivation, covered buildings, steam machinery, &c., so well understood by our agricultural engineers

and surveyors, would naturally form a portion of every such improvement. "But," said a farming friend of mine, as we discussed the question of connecting farms and towns of rail, "how can you expect to do this? Mr. So-and-so would not listen to such a proposition, and his landlord would not like his farm altered and cut about." I reply there is no cure for prejudice like a public company and an Act of Parliament. At this very moment regardless of objections and prejudices in favour of old residences and old customs, our new Railway Companies are, by Acts of Parliament, levelling whole streets, and blocks of houses, overlapping, undermining, destroying and reconstructing, with a hardheartedness yet unknown to British landholders, and British tenants. I hope the time is fast approaching when great associated companies of city merchants and rich agriculturists will expend enormous sums in the purchase and reconstruction of estates, making them subservient to the one grand object of an economical use of steam power for almost every farming operation, including sewage irrigation. We shall then not have the modification to say that it is possible to carry coals at three farthings a ton per mile, at 20 miles per hour on railway (farmed at enormous cost, and still paying Consols interest to its shareholders), while our farm produce on the common road costs 5s. per mile, and crawls along at a snail's pace. When estates and farmeries have been so improved by public companies, farmers will be found willing to pay a double or a tripled rent, provided they see that such increased rent only represents a fair interest on the necessary improvements; and such estates, or portions of them, would readily find purchasers. We all know that farmers like to hold under public bodies (such as Charities, &c.), because their tenure is more secure, and they are more free from personal or political interference or caprice than when holding under a single individual. I have no doubt that Parliament will some day facilitate the registration and transference and exchange of lands, that public companies may be found to deal with land improvements. It seems odd that, while hundreds of millions of capital flow into almost every other channel, British or foreign, agriculture has not been dealt with, except lately, on a limited but beneficial scale, by the "Land Drainage" and "Land Improvement" Companies. When I suggest public companies, I mean that they should do on a large scale and with immense resources that which it would be impossible for individuals to accomplish, and having made all necessary improvements, sell or let the various farms improved.

Land Drainage.—It would be an insult to this Club to enter into details on this now well understood subject. Its influence on the quality and quantity of the food of the people