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## STEAM PLOUGHING.

BY PROFESSOR BUCKLÁND.

The agricultural world seems certainly, if not rapidly, adopting a new power in the cultivation of the soil, and for diminishing manual and animal labor, that will form a new and striking epoch in the history of the art. I refer to the application of steam to farm work. The steam plough has already obtained a firm footing in the British Islands, and several European countries, in Egypt and India, in Australia and New Zealand. From what I saw last year of its working both in England and Scotland, and the severe and extensive trials to which it was subjected at the Royal Show at Leicester, the few misgivings I might have had relative to its practical and extensive adaptation were certainly removed. Not only is steam culture cheaper than horse, but it can be made deeper and more thorough than it is possible to do by the ordinary It has been said that the age of the plough, the old characteristic symbol of husbandry, is gradually drawing to a close, and that this ancient implement will be superseded by the cultivator or grubber. Without endorsing this opinion in its entirety, there is no doubt some reason in its favor. For many purposes, and in particular conditions of the soil, the action of the grubber is far more advantageous than that of the plough, as a more perfect disintegration and commingling of the whole mass is thereby effected; and there seems a growing tendency in an advancing agriculture to produce this thorough breaking up and mixing the soil in preference to the simply turning of it over, as is done in ordinary ploughing. There is, besides, an increasing conviction among those that have adopted steam cultivation that better crops are thereby produced; and from the opportunities I have had for observation on this matter, I am constrained to agree with the conclusion. could not help remarking last summer on the farms of the Messrs Howard, of Bedford, the renowned agricultural implement makers, as also in other parts of England, that the growing crops appeared more luxuriant and promising where steam culture had been adopted, all other conditions, soil, ma- | mentioned."

nure, &c., being apparently equal, than when, sometimes in the same field, what was considered good horse-power cultivation had been practiced. The difference in favor of the former was explained by the facts, that steam power effects a deeper, more thorough and uniform moving and intermixing of the soil, without subjecting it to the tramping of horses, which in wet weather and on heavy land, every practical man knows is very detrimental. The steam plow has, as yet been only introduced for experimental purposes, I believe, in this country. Various causes have combined hitherto to prevent its general introduction.

Notwithstanding, I feel it is a moral certainty that on this continent, particularly on the immense prairies of the great West, the steam plow will one day achieve its proudest triumphs. The richest soils, after the exhuustive cropping to which they are commonly subjected, will require deeper and more perfect cultivation in order to sustain their wonted fertility; and there can, I think, be little doubt that in, it may be a few years, these improved modern appliances will renovate many of our already deteriorated soils, and impart a fresh impetus and give a new and much improved character to American agriculture.

[Note by Editor O. F.—Apropos of the above, we insert the subjoined clipping from an Australian paper.]

" Among the Victorian farmers the steam-plow is coming into high favor, and no wonder. the aid of this machine, they are getting land plowed nine inches deep for 14s. per acre. To those who have been taking off crops year after year without returning anything in the form of manure, every acre broken up by the steam-plow is equal to an acre of new land. The merits of a system which introduces such a noble mode of cultivation are not casily over estimated. It at once does away with the great cause of failure in Australian cultivation -shallow culture, with its attendant evil consequence to the farmer whether the season brings him too little or too much moisture. The system upon which the work is done in Victoria appears equally applicable to large districts in Queensland. Darling Downs, the Logan and Albert, the Mary, the Pine Rivers, and the district surrounding Brisbane, all offer inducements for the introduction of steam-plowing machinery. The plows are owned by enterprising men, who move about the country, plowing and horrowing for about the rate per acre