

ignorance, and be indifferent to their own interests. We will suppose, by way of illustration, that a farmer has an annual harvest, consisting of 100 acres of grain. This quantity, with an ordinary horse power threshing machine, could not be threshed under thirty days; and as we previously stated, a large share of this work would have to be done at a season when he could ill spare his team from the plough, but if an engine were employed instead of horse power, this trouble would be remedied, and the other purposes for which it could be converted, would, in many cases, return a larger profit than the farm itself. A ten horse power engine, and all the other apparatus complete for work, would not cost more than £300; and after the threshing and winnowing grain were completed, with a trifling extra expense, a few sets of circular saws could be set in motion for sawing firewood, veneering, &c., &c., and during at least six months of the year, it could be converted into a regular saw-mill, to be driven night and day, excepting Sundays. The slabs, and other refuse boards, and saw dust, together with a half a cord of well seasoned wood, would drive a ten horse power engine twenty-four hours. It is not generally known that saw dust, when first taken from the log will burn, almost equal to the best of wood. The lumber business is a most profitable one, and will undoubtedly improve, inasmuch as the great scarcity of wood in the United States and Great Britain, will give an increasing demand for the best descriptions of seasoned lumber. Maple, birch, basswood, and butternut lumber is in great demand in Great Britain, and we see no good reason why the farmers of this country could not devote their energies during the winter months, in preparing for the British market, good clear lumber which would otherwise be allowed to go to waste. Where water power cannot be had, steam could at least be employed most profitably in this business.

Steam-Power for Farmers.

The extended application of the Steam-Engine, or other Impelling Power of the Threshing-Machine, to farm purposes: being extracts from an Essay on this subject, by ROBERT ARTHUR, F. R. S. S. A. &c., Civil Engineer Edinburgh. Premium, Ten Sovereigns.

The rapid advancement which Great Britain has made by the influence of her steam-power and machinery in manufactures, commerce, and navigation, has not been without a correspond-

ing effect, though perhaps not to the same extent, in Agriculture. The proof of this is visible in the strenuous exertions made by agriculturists, of late years, to avail themselves of the use of machinery and improved implements of husbandry to economize labor. With the power of the steam-engine at command—although not now, perhaps, to the extent it may ultimately be made available—the British farmer has it in his power, at a moderate expense, on almost every farm, to lessen the labor of the barn, to extend its application to various useful purposes, and to place farm economics in a position of advancement which they have not hitherto attained.

By far the greater portion of the threshing-mills erected in the agricultural districts of Scotland are propelled by horse-power, but however convenient the use of the horse-walk and fixed threshing-machine was to the farmer, and justly considered, when introduced, as a great improvement in barn operations, and is yet esteemed so, still it has not been without its inconveniences, but when contrasted with the laborious employment of the flail, yet so generally in use throughout the world, its greater expedition and efficiency become apparent; and, when we consider that the use of the flail was better than the feet of animals, we may be enabled to form some idea of the value of the horse-mill to farm purposes. Still, of later years, the intelligent farmer has hailed, with much satisfaction, the application of a new impelling power to the threshing-machine—a power whose dominion extends over every branch of the arts and manufactures of our country—which has given an impulse to modern nations, a command over the produce of every climate, and of which the most learned nations of antiquity never could surmise.

The application of steam-power to farm purposes seems by far the most important improvement which has been made, connected with Agriculture, in these times, and must, from its obvious advantages, soon supersede every other power, except, perhaps, in a few isolated situations, where an ample water-power can be obtained, or where the smallness of the farms make it unimportant.

It is a good many years since steam-power was first applied to farms in Scotland, and, in the borders of England, in some few instances, from twenty to perhaps thirty years; but it is only within the last ten or fifteen years that it has become general, if it can even be said to be yet in general use.

The advantages of the steam-engine over wind, as the impelling power to the threshing-machine, appear to be, that it is always at command, and ready to perform the work required by day or night. Its advantages over water-power are, that neither heat can dry it up nor cold freeze it. Its advantages over horse-power are, that the motion is more regular and the work must be better done; for horses, in the threshing-mill, generally pull unequally, while the strain upon the limbs, in this arduous work, proves injurious.