

the farmer, and rescued him by timely aid from the difficulties which beset him. Nitrate of soda and guano were imported; superphosphate of lime from bones was invented; and agricultural chemistry, having earned the place of a practical, that is, a profitable science, the anomalies in connexion with the use of lime, chalk, gypsum, &c., were mastered and explained by the joint exertions of the farmer and his new ally the chemist. Nitrate of soda was imported from Peru, and sold in small quantities by an agricultural manure dealer somewhere about 1825, and in the same year a cargo of guano was consigned to a Mr. Myers, a Liverpool merchant. Guano (of any agricultural value) is the dung of sea-fowl feeding on fish in a zone where rain rarely falls. The guano of the Peruvian islands was protected in the time of the Incas by special laws. In 1609 its properties were fully described in a work published in Lisbon by Garcilasso de la Vega; but this precious fertilizer was neglected in Europe until the date of Mr. Myers' importation, when investigations into the chemistry of agriculture commenced with Sir Humphrey Davy, with very little practical effect during his lifetime, and carried on by continental philosophers, were beginning to bear fruit. Guano, although incredulously received by farmers in 1836, was eagerly accepted by the dealers in artificial manures, and sold, either in a pure state or under a special name, mixed with less active ingredients. In 1843, a store inferior to that of Peru having been discovered on the Ichaboe islands, on the coast of Africa, 1,100 feet long, 400 broad, and on an average 35 feet deep, the whole was removed before the close of 1844, and realized upwards of a million sterling. Three years previously, an article of forty-three pages, from the German of Dr. Charles Sprengle, appeared in the first volume of the "Journal of the Royal Agricultural Society," in which, though every kind of animal manure was described, guano only received a passing mention as a curiosity, and no note to supply the deficiency was attached by the editor; so little was it then known to the most intelligent cultivators, and so speedily had the knowledge of its value spread in the interval. This single fact would alone show that we had reached a new era in the history of farming.—*Quarterly Review for April.*

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**DISSOLVING BONES IN SULPHURIC ACID**—A practical Scotch farmer of large experience, Mr. Tenaut, thus describes his process:

"I put 25 bushels of bones into 3 old boilers, and next pour in 2 bottles of acid of about 170 pounds each, and 36 Scotch pints (18 imperial gallons) of boiling water into each boiler. It boils away at a great rate for some time, and in a day or two we empty the boilers into two cart loads of light mould, and turn the mixture over. At this stage the bones are only partially dissolved, but they heat and decompose in the heap after being turned over three or four times; and in the course of seven or eight weeks the compost becomes dry and breaks down with a shovel."

**ANOTHER MOVING MACHINE WANTED.**—It may sound a little singular to those who know the number of patents granted to hear us say that another is wanted; and each particular patentee, we suppose, will hoot the idea that we now advance, when we assert that very much the larger portion of the farmers of the Eastern and Northern States are as yet unprovided with a machine suitable to their wants. There are thousands of farmers living in comfortable circum-