Sewing machines threaten to effect a complete revolution in thread and needle operations. About five hundred are now in full operation in America, and they are ordered from the manufactories faster than they can be supplied—They are now adapted to the sewing of boots and shoes.

An Artesian well, 334 feet deep, tubed 75 with cast iron, six inches in diameter, and throwing up 300 gallons of water per minute, has been sunk at Selma, Aly., at a cost of $300.

The Agriculturist.

TORONTO, NOVEMBER, 1852.

BONE MANURE.

We insert for the benefit of our readers the following observations on the use and properties of bones for the purposes of manure. No town in Canada of any importance should be without the requisite machinery for grinding bones, and we hope soon to see the agriculturists of the country bestirring themselves in this matter, which is certainly one of no small importance. Throughout the well settled parts of the country large quantities of bones of the best quality may be collected, which, in their present state, are quite worthless, and not unfrequently a positive nuisance. It is the province of ever advancing science and art to convert what is apparently useless, and sometimes deliterious and offensive into products of convenience and utility. So of late years, a new and ready way has been discovered of making the various constituents, of which the animal framework is composed,—things usually regarded as worthless and offensive—restore fertility to soils which man's ignorance and cupidity had exhausted.

We will only remark further, that we understand Mr. Gamble has recently erected a Bone Mill in this neighborhood, and that one or two Agricultural Societies in other parts of the Province are making enquiries into the subject. The price of bone dust at Mr. Lamb's works is very moderate:—1s. 6d. per bushel when taken in quantities. At this rate it can be *profitably* applied to turnips, and we think also in many cases to wheat, when that article does not fall below four shillings a bushel.

University of Toronto.

We, the undersigned, learn with much pleasure that Mr. Peter R. Lamb, of this city, has been the first that has had sufficient enterprise to erect the necessary Machinery for grinding bones for manure, at an expense of about £250.

It has been known for a number of years, by experienced Agriculturists, as well as by chemists, that Bones contains several fertilizing substances, more or less required by all cultivated crops, and that by the mere mechanical operation of crushing or grinding, they can readily be made available to the wants of vegetation, and thus constitute one of the richest and most permanent kinds of manure.

The rapid strides made in British Agriculture during the last quarter of a century, have been materially assisted by the application of Bones as a fertilizer; and it is not too much to say that without the ready and effectual means which they supply of preparing poor, light, and elevated lands, for a course of alternate cropping, Turnip Husbandry could not have been carried to anything like its present extent, and consequently those distinguished improvements which have of late years been effected both in the breeding and fattening of Stock, and the cultivation of root and grain crops, must have been greatly impeded. In England, so high is the repute of this manure, that bones are carefully collected, not only in the larger towns, but also in villages and farm houses, and such is the present demand for them, notwithstanding the heavy importations of guano, and the large manufacture of different kinds of artificial manures, that some thirty or forty thousands of tons, amounting in value to upwards of £200,000 sterling, are annually imported, chiefly from the countries of northern Europe.

Although bones vary considerably in their composition, according to the age and character of the animal, they may all, however, be considered as consisting of two essentially distinct parts; the mineral or earthy, and the organic. The former, amounting to about 60 per cent, consists chiefly of the phosphate of lime, together with small quantities of the phosphate of magnesia, fluoride of calcium, carbonate of lime, and common salt. The organic portion amounting to about 40 per cent, is made up of cartilage and fatty matters. Cartilage by being boiled in water is converted into glue or jelly, and is a substance rich in nitrogen, forming by decomposition much Ammonia, together with carbonic acid and a small quantity of a sulphur compound. Hence it is obvious that bones contain the most important materials for producing the living structure of plants.

As bones in their natural state are very slow in decomposing, it becomes necessary to break them