

Oxide of iron and alumina, . . . . .	3.01
Sand, . . . . .	2.83
Soluble salts, . . . . .	.41
Soluble organic matter, . . . . .	.13

It is to be regretted that this large amount of phosphate of lime should be carried out of our State instead of being used at home. There is no doubt of it being valuable for manure as its constituents clearly indicate, because of the phosphate and carbonate of lime it contains. Its carbon also will prove a source of carbonic acid in the soil.

#### CRACKLINS OR GREAVES.

This material consists of the tissues and other matters remaining after the melting and straining off the fat of animals.

At one establishment in Baltimore (the Butchers' Hide and Tallow Association) there are 100,000 lbs. of this material produced per annum, all of which is sold at one cent per lb. to parties in Philadelphia, to be used in the manufacture of Prussian blue. I have no means of knowing the whole amount produced in Baltimore, but it must be considerable.

Boussingault determined the proportion of nitrogen to be 11.88 per ct., which will produce during the decay of the material more than 14 per ct. of ammonia, or nearly equal to the amount in the best Peruvian guano. It seems, therefore, that it would be worth more than one cent a pound for manure, if it were powdered or otherwise reduced to such a fine state of division as would admit of its being properly mixed with the soil. As it comes from the press, its cakes are about 3 feet square and about 6 inches thick, which are easily transported without being packed. It is in fact almost as solid as wood itself, and will require suitable machinery to bring it into a proper state for manure.

It is but very recently I learned that it was produced in quantities worthy the attention of farmers, but it is my intention to examine further into it as early as practicable.

A mixture of cracklins and the bone black of the sugar refiners would constitute a very valuable manure.