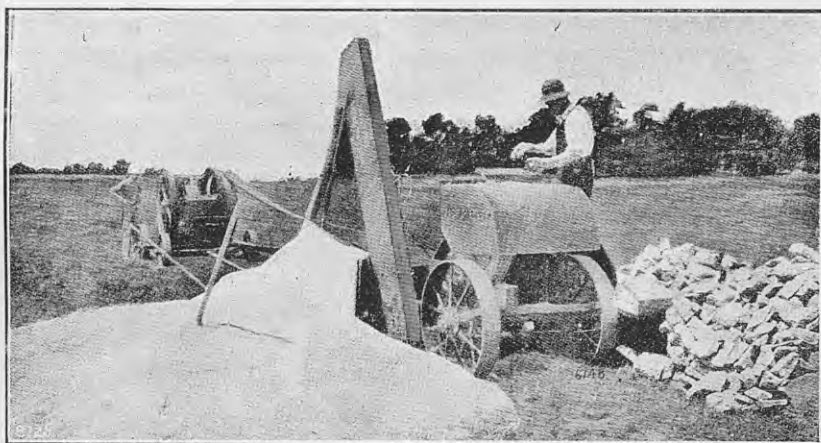


matter. The old adage, "Lime and lime without manure makes both farm and farmer poor," refers to this exhausting effect of burnt lime, and not to the mild and inexhaustive carbonate of lime. Of course, burnt lime in quantity could be used even on light lands if provision were made for the keeping-up of the humus-supply by periodic applications of farmyard manure or by systematic green-manuring. But in this country we produce little farmyard manure, and we have no guarantee that farmers as a whole will seriously adopt systematic green-manuring.

From the point of view of haulage, however, burnt lime is the more economical form to use, provided too heavy dressings are not applied, for 56 lb. of the burnt lime is equivalent to 100 lb.



AN AMERICAN PORTABLE LIMESTONE-GRINDER.

of the carbonate form. In other words, if a farmer purchases 100 tons of carbonate of lime (ground limestone) he will have in reality only 56 tons of lime—that is, lime in the burnt or oxide form. The balance (44 tons) will consist for the most part of a gas known as carbon dioxide; and there is usually plenty of this gas in the soil-air, for it is given off by the roots of plants. The haulage of this extra 44 tons a distance from the railway is therefore to some extent an economic loss. This points to the use of burnt lime on soils situated some distance beyond the 100-mile railway limit from the source of supply, or located back from the railway a distance that has to be considered in the haulage of materials. On the lighter of such soils so situated burnt lime should be used only in comparatively small quantities and at a