

as one of the most important and distinctive features of the machine.

The finger-bar is made of cast steel, with the front edge rolled or turned up, thus greatly strengthening it and answering the purpose of a cross-bar in front of the knife-bar.

The guards are of forged cast steel, with tempered cutting faces and points, and of such shape that they will not clog. Although light, they are so strong that they can hardly be broken, even by the roughest usage.

The rolled bar and steel guards of the Clipper are as much in advance of the usual style of flat bar and malleable guards, and the latter are in advance of the old wood bars and cast iron guards.

The shifting-lever is convenient to the left foot of the driver, with which he can instantly throw the machine either in or out of gear, without using his hands.

The lifting-lever is convenient to the driver's right hand. The machine being so nearly balanced, he can easily raise the outer end of the bar two feet, and the inner end eight inches from the ground. The bar can be readily folded without the necessity of the driver leaving his seat.

In its general appearance, the absence of the heavy, cumbersome, wooden frame, the fine and well-adjusted proportions and tasteful design of the machine, make the Clipper Mower one of the most attractive of all the implements used on a farm; while from its costly material and workmanship, it is cheaper at its price than any other in market, and can be sold at the list price only because we use the most expensive and elaborate machinery expressly built for its manufacture.

The Clipper is built of four sizes, as follows:—

No.	Length of Cut.	Diameter of Wheel.	Power.	Weight.	Price.
1,	3½ feet,	30 inches,	1 horse,	480 lbs.	\$110
2,	4 "	30 "	2 horses,	(light) 510 "	120
3,	4½ "	32 "	" "	620 "	130
4,	4½ "	36 "	" "	680 "	140
4,	5 "	36 "	" "	690 "	145

Nos. 4 and 5 can be readily fitted for Reaping machines, and, when so fitted, weigh nine hundred and fifty pounds.

The One Horse Mower, is as light for one horse as the Two-Horse machine is for two horses. It will cut from three quarters of an acre to an acre of grass an hour, and is, in fact, the only practical one-horse machine in market.

The Clipper Machines are warranted to be well built; of good material; to be strong and durable; of light draft, and easily managed; and to do their work equal to the best that can be done with a Mowing Machine, or a Hand Scythe.

If any part proves defective, on account of imperfect material or workmanship, it will be made good FREE OF COST to the purchaser.

R. H. ALLEN & Co.,
189 and 191 Water Street, New York.

Communications.

LIME.

The use of lime is justly esteemed as one of the best means we possess for improving certain kinds of soils. On many soils the addition of lime is followed by increased fertility, and in numerous cases the improvement effected in this manner is so striking that we cannot wonder at liming being at present ranked amongst the standard operations of agriculture.

Lime is required for the growth of all cultivated plants, and consequently is an indispensable constituent of all cultivated soils. Lime is invariably present in soils that admit of cultivation, but the quantity of lime naturally contained in them is often too small for the vigorous growth of certain crops; the addition of lime to these soils must obviously increase the fertility. On soils of this kind the most striking effects of lime are displayed, especially when a soil contains in abundance, all the materials required for the growth of plants, with the exception of lime. The addition of lime in these cases is all that is required to transform a comparative barren to a fruitful soil. To a less extent the use of lime on ordinary soils is generally attended with good results,—it not only acts as a direct manure by increasing the supply of a material necessary for the growth of all plants, but it supplies us with one of the best means of altering the condition of substances already present in the soil, either by destroying or modifying substances that are objectionable and noxious, or by the conversion of indifferent bodies into useful fertilizing materials.

Lime, like all alkaline or caustic substances, possesses the property of rotting and destroying organic matter of every sort—hence, on its addition to soils it quickly diminishes the quantity of insoluble vegetable remains. A soil whose fertility is impaired by an excessive quantity of vegetable matter, as a peaty or boggy soil, is relieved of this encumbrance by a copious dose of lime. It is a well known fact that vegetable remains, under peculiar circumstances, refuse to decay, and accumulate to an injurious extent,—this is often found in undrained or imperfectly drained land; to remove this, lime is generally employed, which, by acting upon the insoluble matter hastens its decay and tends to "sweeten" the land. Lime thus converts a noxious ingredient into a source of fertility. When soils are infested with insects a dose of lime is the least troublesome and most effective remedy. When applied in large quantities to clay lands it opens and loosens the dense masses of clay and imparts a certain amount of porosity and mellowness, and by so doing opens the way to further improvement, by exposing

a larger extent of surface to the action of the atmosphere. Whenever practicable it is advisable to apply lime in the state of hydrate, or as slaked lime. In using, the lime is generally brought to the field in a caustic or hot state, and put up in small heaps loosely covered with earth. In the course of two or three weeks the lime is completely slaked and falls to powder, which can be easily spread over the land. The quantity of lime applied to the land will of course vary with the purpose it is intended to serve; if employed to remove the excess of organic matter a copious dose will be necessary, but where it is required to act as a dried manure a much smaller quantity will suffice. Difference of opinion exists amongst practical men as to the best system of liming the land. While some recommend a large dose at long intervals, others think it better to use a smaller quantity more frequently. From my own experience I would recommend the latter as the best system for obtaining the fullest effect of the lime—as it is well known that everything applied to the land exhibits a tendency to sink into the ground and bury itself beyond the reach of the plant.

In using lime as a manure it must not be supposed that other manures can be dispensed with. Lime is a special manure, and performs in the soil an office of its own sufficiently important to entitle it to a high place amongst manures, at the same time it ought not to be used in the place of farm-yard manure. It is true that the addition of lime on certain soils is all that is necessary to insure abundant crops; and from this fact we might naturally infer that lime is a substitute for other manures, but such is not the case. Lime by its stimulating effect upon the soil, will for a time replace manure, by exciting the soil; but this is effected at the expense of the soil—"it is drawing upon its capital," and must sooner or later feel the effects of this undue exhaustion. Lime ought never to be employed at the same time as other manures; it is advisable to put off the application of other manures as long as possible to land that has been recently limed. This is necessary in the case of manures that contain combinations of ammonia, as lime liberates ammonia with the greatest ease from all its combinations, hence the loss of considerable fertilizing material. Four to five bushels of lime per acre is sufficient where the land contains much organic matter previously,—on stiff clay soils two to three hundred bushels may be applied. Refuse lime from gas works mixed with ten times its bulk of earth, and laid together twelve months, becomes "gypsum," or much of that nature, and makes an excellent top-dressing for grass lands.

Yours respectfully,

ALFRED SAUNDERS,
Seedsman, 168 Argyle Street.