These are a very few instances of its beneficial results, and, no doubt, many other equally important, are brought about by the agency of electricity. Independent, however, of all other results, it seems by no means alien to the usual course of nature to believe, that the agency of electricity may be made alike destructive in the far-spread, though silent and searching, scourge of a potato disease, as in the short, but overwhelming terrors of a thunder storm.

The simple practical protection, then, proposed for general adoption by growers of potatoes, based on electrical science and successful experiment during the season of 1846, when the disease raged so fatally, is this:—

In the centre of each field of growing potatoes, if of moderate dimensions, erect a pole, at a right angle, of sufficient height to form an inclination to the extremities of the plot of from 20 to 40 degrees.—From the top of this pole[12] suspend from 4 to 8 or more lengths of copper bell-wire, diverging around, to the outside of the head rigs, to as many upright stakes placed there, of not less than three feet from the surface of the ground, and which must be driven a sufficient depth into the earth to be perfectly stable. To each of these stakes one of the wires must be firmly secured, the ends of the wires being inserted into the ground. It will be seen from electrical facts already stated, independent of experiments alluded to, that *these wires will unfailingly protect the crop* from the prejudicial effects of superabundant electricity at any time existing in the atmosphere. The apparatus may be erected with comparatively little trouble and at trifling expense; and the wires, at the end of each season, being carefully rolled up for future use, will last for years.

one-half; after a lapse of five hours the vinous fermentation was over in the electrified half, while in the unelectrified half, it did not cease till after eight hours. He always found that fermentation was accelerated by electricity. The effects of electricity on the corruption of dead animals, has been remarked by him, and he concludes from his experiments, that putrefaction is accelerated by electricity.

[12] The easiest and best way of securing the wires to the centre pole, is by having the top of it shod with a metal rim or ferrule, having as many holes or rings as there are wires intended to be used. An end of each wire can thus be easily and effectually secured to the top of the pole before raising it. It is not necessary or desirable that the wires should be drawn tight to the stakes. They can be secured to the top of each stake by a small staple or two, and by twisting the wire round each one till it enters the ground. When the fields are of large dimensions, two or more similar apparatus may be erected.

NOVA SCOTIA HERD BOOK.

LADY LUCY.

A thorough bred Short Horn Durham. Roan. Calved April 14, 1867. Got by the Yeoman, (bred by Frederick W. Stone, Esq., Moreton Lodge, Guelph, Canada West), whose Sire was Twelfth Duke of Northumberland, 4711.

Dam, Beauty, by Kossuth, 619 or 1753 of vol. 3.

g.d. Snowdrop, by Durham, 1488.

g.g.d. Flora, by Wellington, 183.

g.g.g.d. Victoria, by Agricola, *alias* Sir Walter, (1614).

g.g.g.g.d. Beauty, by Snowball, (2647).

g.g.g.g.g.d. by Lawnsleeves, (365).

g.g.g.g.g.g.d. by Mr. Mason's Charles, (127).

CLIPPER MOWING AND REAPING MACHINE.

Nova Scotia being a great Hay country, we have frequent enquiries respecting Mowing Machines, and therefore reprint the following description of the Clipper Mowing and Reaping Machines of Messrs. R. H. Allen & Co. of New York, from a circular just received from the-e manufacturers:—

This machine was introduced by us into this market in 1863. Although it at once took the first place among this class of machines, it has since been modified from year to year, as each successive season's experience in the field showed any point susceptible of improvement, and it now ranks among harvesting machines as our modern light steel tools, plows, etc., do in comparison with the old-fashioned and heavy implements of the past generation.

To avoid bulk and secure durability, iron has been substituted for wood; to avoid weight and secure strength, wrought and malleable iron have been largely substituted for cast iron, and steel for wrought iron; and to secure simplicity, the pieces or parts, of the machine have been reduced to about one-half the number generally used, without sacrificing either its utility, convenience or durability. The machine is, in fact, so simple and with so few parts, that but twenty-seven bolts, and these of only two sizes, are required to put it together.

The parts of all machines of the same size are interchangeable; this is a feature peculiar to the Clipper Machine.

The frame is entirely of iron, and so made by a combination of parts, that if either is injured, only that part need be replaced. The material of which it is made renders it indestructible, except by ill usage, while it cannot be warped or injured in any way by exposure to the weather, as is the case with wood frame machines.

The drive-wheels have ten wrought-iron spokes, each bracing the two adjoining ones, instead of six of cast iron, which is the number generally used. The rim is thus supported at ten different points, and the wheels are lighter, and at the same time much stronger, than the ordinary cast iron wheels. Though they are independent of each other, each will drive. Both are in gear while advancing, and out of gear while backing. The inside wheel runs in the track of the shoe and does not press down the cut grass.

The fast running gearing and shafts are entirely cased, thus excluding dust, dirt, and the grass, and preventing any injury to the clothes or person of the driver; and as the journal-boxes are formed within this casing and sleeve, the shafts and gearing can not be thrown out of line by the warping or twisting of the frame. The crank-wheel is also entirely protected from dirt and the grass by a hinged fender.

The casing, together with the perfection of the gearing, and the mechanical arrangement of the several parts, renders this machine almost noiseless in its operation.

The whiffle trees are underneath the pole and attached to the front bar by a short draught-rod. The draught is thus applied as low and as near the finger-bar as possible, so that when it meets an obstruction, the strain is not transmitted through the machine, but is taken off very near the point at which it was received. When the draught is by the pole, and the machine strikes an obstruction, the strain is transmitted through its whole framework, and, not infrequently, the shafts and gear are thrown out of line, causing the machine to run hard and stiff without any apparent reason. The draught being applied to the front end of the machine below the pole, the tendency is to lift the shoe and make it pass lightly over the ground. The power required to draw the machine is thus considerably lessened, as the weight, which otherwise would rest on the shoe, is transferred to the wheels. A small wheel, fastened either directly to the shoe or at the front end of the frame, is often resorted to to accomplish this object, but by adding weight it increases the evil which the diminished friction from the use of the wheel was intended to prevent, and necessitates lifting the inside shoe when turning corners. The method of drawing from the front end of the frame below the pole gives a true centre draught, thus avoiding all weight on the horses necks and side draught. In the Clipper the bar is drawn instead of being pushed, as is done in other machines, cutting in front, when drawn by the pole. This secures uniform and very light draught.

By means of a lever convenient to the right hand of the driver, the points of the guards and knives can instantly be raised or lowered while the machine is in motion, thus varying the angle of cut and adapting it to lodged grass or rough boggy ground. This may be regarded, in connection with our self-adjusting knife-head,