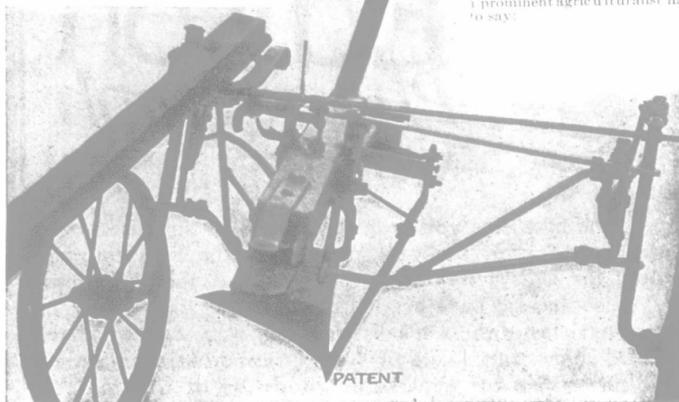


The Van Slyke Breaking Plow

is especially constructed for Western prairie conditions and its merits are commendable. The important points are patented. These include the left-hand coulter at an angle of 30 degrees.

the under-cutting shear from the landside and the unique tearing device. Numerous practical farmers testify as to its efficiency. Listen to what a prominent agriculturalist has to say:



Dr. J. W. Rowntree, President Van Slyke Plow Co., Red Deer, Alta.

Dear Sir:— Referring to demonstration which was given by you of your breaking plow, a few days ago, I noted the following conditions which recommended it to me very strongly.

The undercut share or fin on the landside, which prepared the next furrow for turning, would leave no possibility of any portion of the next furrow being turned without being cut loose from the adjacent sod. There seemed to be very little friction on the share and moldboard, it having so small an angle with the landside and the long sweep of the arms or rods back of the moldboard seemed to turn the sod with perfect ease and little friction, although turning the sod 20 inches in width, and a depth of not less than 4 inches, the draft was so light that it would appear one good team could handle it without very great effort. The coulter set at an angle and attached to the point of the share seemed to be a very good device, as it not only stiffened the coulter and kept it in exact position, but also cut the sod at an angle so it could less easily stand on edge. This assisted turning very much.

Owing to the soil which we have in the irrigation block, I believe you will find it to your advantage instead of cutting a furrow 20 inches in width to cut two furrows 12 inches in width. This will have a tendency to join the edges so as to leave flat the surface and where the soil varies as to its toughness, as it does here, it will turn the sod unbroken and leave a surface best suited for cultivating and would require less discing than it would if turned in wider furrows and not laid as regular.

If a few details are worked out I consider you have a plow that will eclipse anything that is now on the market and will work a revolution in breaking sod on this Western prairie. With these few suggestions permit me to say, that any assistance I can give you in working out this point, I will gladly do at any time, and when a plow turning 12-inch furrows, such as can be evolved from the plow shown in the present demonstration, has been made, and is on the market, I want you to put me down for one for use on my farm. I understood that this company are going to make such plows. For scrub brush land an 18-inch furrow plow works better than the narrower furrow.

I remain, Yours very truly,

F. W. CRANDELL,

Superintendent of Department of Irrigation and Colonization Dept. Can. Pac. Ry. Others likewise testify, while hundreds are sending in their orders. We guarantee it to work in all brush or gumbo soils.

WRITE FOR FULL PARTICULARS

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RED DEER, ALBERTA.

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Lightning, or more particularly, a lightning flash, is a discharge of electricity between two electrical bodies, as between one cloud and another, or between a cloud and the earth. Most of us are familiar with electricity and the varied economic purposes it serves. In all of these, however, it is under perfect control; it is chained, so to speak, by the wires which distribute it from the cell in which it is produced by chemical action, or from the generator, which transforms the energy of the steam engine into electro-motive force.

In order that the difference between the electricity that flows from a mechanical generator or other artificial source and that which abides in the atmosphere and on the earth's surface may be understood, it is necessary that first principles be considered very briefly.

ORIGIN OF ELECTRICITY.

It has been stated that electricity may be produced by chemical action or by mechanical means, but there are still other means by which a body may be given an electrical charge. Thus, if one rubs his feet over a woollen carpet several times and then touches his fingers to the gas fixture, a slight spark will pass to the latter with an audible snap. In this experiment the body, through friction with the woollen carpet, receives a very light electric charge. The latter is discharged, or dissipated, as soon as the finger touches the gas fixture. This experiment is intended to show the ease with which a body can receive an electric charge.

CONDUCTORS AND NON-CONDUCTORS.

Bodies do not all behave alike when an electric charge has been given them; thus some of them immediately conduct it away; in other words, the charge does not permanently reside on the body. To these bodies the name of conductor has been given, hence the term "lightning conductor" means a body that will conduct or lead away a lightning discharge. Other bodies have the quality of retaining an electrical charge for some time or of permitting it to escape very slowly. These are called non-conductors or insulators. A conductor, if supported by a non-conducting body, may also retain an electric charge, but the retention of the charge is due to the fact that the non-conducting support of the body prevents the escape of the charge. Telegraph lines, it will be remembered, are insulated from the poles by glass insulators. At one time it was thought necessary to insulate lightning rods from buildings by glass or porcelain insulators, but that view is not now generally held.

An electrical charge suddenly falling upon a copper conductor will be safely disposed of, provided the conductor is in connection with the earth. On the other hand, the same charge falling upon a piece of wood, the latter being a bad conductor, will split it into many fragments and possibly develop enough heat, by reason of the resistance offered by the wood, to set the latter on fire. For this reason lightning conductors are made with a view to preventing the accumulation of electricity in the object of the earth's surface on which it is placed.

POSITIVE AND NEGATIVE ELECTRIFICATION.

In nature there are two kinds of electrification, viz., positive and negative; thus a body may be either positively or negatively electrified. The law of electrical attraction and repulsion is generally stated as follows: Bodies electrified in the same manner repel one another, while bodies, one electrified positively, the other negatively, attract one another. In the behavior of oppositely electrified bodies when brought near each other lies the key to many interesting facts in electrical science.

A positively charged body, if placed between two others, one having a positive, the other a negative charge, will tend to move toward the latter, due, we are told, to the "electrical field" set up by the oppositely charged bodies. By an "electrical field" is meant the region in which work is done to move an electrical charge from one point to another. This work is susceptible of exact measurement; it varies inversely as to the square of the distance separating the bodies, and depends also on the material of the non-conductor separating the bodies. The latter is generally called the "medium" or

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SYNOPSIS OF CANADIAN NORTHWEST LAND REGULATIONS

ANY person who is sole head of a family or any male over eighteen years old, may homestead a quarter-section of available Dominion land in Manitoba, Saskatchewan or Alberta. The applicant must appear in person at the Dominion Lands Agency or Sub-agency for the district. Entry by proxy may be made at any agency, on certain conditions, by father, mother, son, daughter, brother or sister of intending homesteader.

Duties.—Six months' residence upon, and cultivation of the land in each of three years. A homesteader may live within nine miles of his homestead on a farm of at least 80 acres solely owned and occupied by him or by his father, mother, son, daughter, brother or sister.

In certain districts a homesteader in good standing may pre-empt a quarter-section alongside of his homestead. Price \$3.00 per acre. Duties.—Must reside six months in each of six years. — Must reside six months in each of six years from date of homestead entry (including the time required to earn homestead patent) and cultivate fifty acres extra.

A homesteader who has exhausted his homestead right and cannot obtain a pre-emption may take a purchased homestead in certain districts. Price \$3.00 per acre. Duties.—Must reside six months in each of three years, cultivate fifty acres and erect a house worth \$300.00.

W. W. CORY,
Deputy of the Minister of the Interior
N. B.—Unauthorized publication of this advertisement will not be tolerated.