THE FARMER'S ADVOCATE
AND HOME MAGAZINE.

THE LEADING AGRICULTURAL JOURNAL IN THE DOMINION.

PUBLISHED WEEKLY BY
THE WILLIAM WELD COMPANY (LIMITED).

TWO DISTINCT PUBLICATIONS—EASTERN AND WESTERN.

EASTERN OFFICE:
CARLING STREET, LONDON, ONT.

WESTERN OFFICE:
IMPERIAL BANK BLOCK, CORNER BANNATYNE AVE. AND MAIN ST.
WINNIPEG, MANITOBA.

BRANCH OFFICE: CALGARY, ALBERTA, N.-W. T.

LONDON (ENGLAND) OFFICE:
W. W. CHAPMAN, Agent, Mowbray House, Norfolk Street,
London, W. C., England.

JOHN WELD, MANAGER.

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It is impartial and independent of all cliques or parties, handsomely illustrated with original engravings, and furnishes the most profitable, practical, reliable information for farmers, dairymen, gardeners, and stockmen, of any publication in Canada.
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sold each year, together with any old or unsound ewes that it would not be profitable to maintain.

It is not always safe to depend upon figures in farming and stock-raising, as a proposition does not always pan out in practice as favorable as on paper, but, by way of illustration, let us suppose that you purchase in October twenty young grade ewes at $6 each, and a pure-bred ram at $10, making $130 for the first outlay, though it would probably pay to give $25 for a better ram; that from these you raise 25 lambs the first year, eighteen of which are sold before winter at $4 each = $72, to which add the amount from sale of wool of the original twenty-one head, say, seven pounds each, unwashed, at ten cents a pound, $14.70, and you have a return of $86.70 for the first year, and a flock of twenty-eight head left, which would appear to be a fair return from the investment, calculated on very moderate figures. By raising the figures slightly, counting on thirty lambs, and selling them all at five dollars each, and an average of eight pounds of wool at the low price of ten cents, you have $166.80, or enough to pay for the foundation flock and their first year's feed, all of which, with present prospects for sheep and wool values, is within the bounds of reasonable possibility, and may easily be exceeded by the exercise of good judgment and management, especially with pure-bred sheep, which can now be bought for little more than grades. Compare these figures with the cost of founding a herd of cattle or horses, counting the expense for labor and feed in each case, and the probable returns, and if sheep do not make a better showing than either by a considerable margin, then leave them severely alone, as so many farmers are now doing with no valid reason. All classes of stock have their ups and downs in prices, and sheep have been down the last few years, but will surely have their innings again, and all indications point to that time being soon. Ten years ago a farm horse, such as would sell to-day for $150, could be bought for $60, and cattle of some of the beef breeds of equal quality could then have been bought for about one-half the price they are now selling for, and the average of the prices of then and now lets the farmer out tolerably safely.

HORSES.

Wounds.

While it is usually wise to send for professional aid in case of serious wounds, it is well that all owners of horses, or those in charge of them, should have an intelligent idea of the proper treatment of accidents of this kind. In many cases, where important blood-vessels are severed, fatal hemorrhage would result before aid can be secured, unless means are taken to check it, and in other cases it may not be possible to secure the services of a veterinarian, and treatment must, of necessity, depend upon the skill procurable; hence we consider it wise to consider rather minutely the different kinds of wounds, and the necessary or advisable manner of treatment.

A wound may be defined as a solution of continuity of living tissue, induced by some mechanical cause.

Wounds are classified under the following heads: INCISED, PUNCTURED, CONTUSED, LACERATED, GUNSHOT and POISONED.

INCISED WOUNDS.—An incised wound is one made with a clean-cutting instrument. The textures are divided evenly and smoothly; there is no tearing or bruising of the parts; hence, on account of the blood-vessels being cut instead of torn, the bleeding is usually much greater than in wounds of a different nature. If the wound has been made parallel to the course of the muscular fibers of the part, there will be little gaping of the edges so long as the part is kept in apposition; but if the incision be across the direction of the muscular fibers, or transverse to the axis of a limb, the lips of the wound will be drawn apart in proportion to the tension of the muscles, the deep-seated tissues often dividing further than the superficial, owing to the retraction of the muscular tissue; and a cavity is sometimes formed in which blood and pus will collect and retard healing.

TREATMENT.—The treatment of incised wounds may be said to be somewhat simple, but some important points must be observed, viz.: First, to arrest bleeding; second, to remove all foreign bodies and cleanse the wound thoroughly; third, to effect and maintain co-adaptation; fourth, to guard against excessive inflammation. (1) Bleeding, whether from an artery or vein, unless slight, must be arrested promptly. If from an artery the blood will be of a bright red color, and escape in jets; if from a vein it will be dark-red in color, and the stream will be constant. Arterial hemorrhage is the more serious. If the vessel be small and only partially severed the blood will escape more or less freely in jets, as stated, and in many cases if the artery be completely severed with a knife the ends contract and bleeding ceases. The coats of an artery are composed largely of elastic tissue, the fibers of which curl up when severed, hence when a vessel is torn, lacerated, or cut with a dull instrument, which makes a more or less fimbriated edge, the fibers curl inwards and thereby close the opening and check the flow of blood. This is the reason bleeding is more profuse from incised wounds than from others. When the vessel is small, even though cut with a sharp instrument, the contractile power of its coats is sufficient to close the orifice, but if the artery be one of considerable size this cannot take place, and bleeding will continue or take place from time to time, and prove serious, even though the vessel be completely severed. In such cases the end of the artery must be searched for, drawn out with forceps and tied by a ligature. Carbolized silk or catgut makes the best ligatures, but when these cannot be secured a clean string or thread can be used. In some cases it is necessary to enlarge the wound in order to secure the artery, and occasionally the wound is in such a position that this is dangerous or inexpedient, and we must check hemorrhage by other means. If the wound be in a limb, or where the wounded artery runs close to a bone, and there is little muscular tissue external to it, bleeding can be checked by pressure applied to it between the wound and the heart, by buckling a strap or applying a bandage tightly around the limb. This will, of course, check the circulation in all vessels enclosed in the turniquet, and the pressure must be left on only such time as is necessary to dress the wound properly, or until skilled assistance arrives. When such assistance cannot be secured, the turniquet will check the bleeding until the wound is cleaned and stitched, after which a pad can be placed over the stitches and a bandage put on moderately tight to exert considerable pressure on the pad without materially interfering with other vessels, and in a few hours a clot will have formed in the end of the severed artery, and there will seldom be danger of a recurrence of hemorrhage. When the severed artery is deep-seated in muscular tissue and cannot be taken up and ligatured, the wound must be plugged firmly with batting or other clean material, which is first rendered antiseptic by saturating in a solution of carbolic acid, creolin, zenoleum, phenyle or other antiseptic, then introduced firmly into the wound and maintained there by bandages or sutures. It must be left thus for six or eight hours, and the animal kept as quiet as possible in the meantime, when in most cases a clot will have formed and the plugging can be removed and the wound properly dressed. Venous bleeding is generally easily arrested by moderate pressure, or by styptic application, as the tincture of iron. As a rule, even these applications are unnecessary, the bleeding stopping spontaneously if the wound is exposed to the cold air, but if a large vein be severed it is often necessary to tie with a ligature, or proceed as in arterial bleeding. Veins being more superficially situated than arteries, there is seldom much trouble experienced in taking them up when necessary.

We will discuss the further treatment of incised wounds in a future issue. "WHIP."

FARM.

Lightning Rod Construction.

(Continued.)

Sir,—In my letter of last week, near the close, I referred to some cases of lightning striking where rods were in use, which could not be disputed. The wonder is not that there are some, but that there are so few, where rods of all descriptions, good, bad and indifferent, are used. Rods that are out of repair are, if not a positive source of danger, at least not much protection. The other day I saw one, one of whose points that should have been upright, was lying flat on the roof, and the rod itself was broken off near the ground. Heard of another on a schoolhouse, the disconnected end of which hung dangling half way down the side wall. Still another which had once come down the gable end of a barn, but a shed having afterwards been built up against the barn, and the rod being broken off, it now terminated in a haymow.

Again, some rods are so slight that when carrying off an electric current they literally burn in two. But where rods as ordinarily put up are, as it seems to me, most generally deficient is in not having sufficient ground connection. No matter how much a roof is covered by a rod, nor how many glittering points there may be, it is very seldom that there is more than one earth terminal. Sir Oliver Lodge and Mr. John Dearness, who interviewed him, both insist on the importance of good earth terminals and plenty of them. In the past, too much attention has been given to points above, and too little to what is much more important, connections with earth below. There is good reason for believing that some cases of lightning striking of rodded buildings (for instance such as those referred to by Prof. Reynolds in the "Farmer's Advocate" a few years ago) would never have occurred had there been two or more ends in the ground instead of one.

On barns fifty feet long and over I would run the rod all along the ridge, down the gables and into the ground at both ends. If there is a straw shed running T shape from the barn, then it should be protected by a rod beginning in the ground at the further end, then up the gable, along the ridge and joined, by wrapping it round a few times, to the rod on the main buildings. Points can be attached afterwards.

Now, how a farmer can make and put up a good lightning rod. Use soft No. 9 galvanized fence wire. To those of your readers who remember the discussion in your paper seven years ago nothing need be said in defense of the material mentioned. For the sake of others, let me quote from Sir Oliver Lodge, as reported by Mr. Dearness at that time: "Well, galvanized fence wire makes an excellent (lightning) conductor; much better than copper or its compounds, because these oxidize so readily." Find out how many feet of rod you need, including upright points and ground ends. Set a wagon in position so that one of the wheels can be used for twisting the wire. Measure from the wheel the length required for rod, and drive a strong stake, through which an inch or inch and a half auger hole has been bored. Brace well both stake and wagon to stand the strain. Let one end of a wire be put through the hole in the stake, and bent around, using plenty of length, the other end fastened around one of the spokes of the wheel close to the hub. Continue until nine wires are stretched, allowing for shortening in twisting, four inches per one hundred feet. Nine strands of No. 9 wire makes a cable much larger than ordinary lightning-rod, and weighs one-half pound per foot. Fasten everything solid at both ends, raise the wheel off the ground as if for greasing, and turn until the wires are twisted together so that they will stay.

Cut off the pieces needed for upright points, five or six feet high is sufficient, but a length of one and a half feet more must be left to be opened up and wound around the main cable to make good electric connection. At the actual point the wires should be spread apart, each one being cut off on the slant or filed to a blunt point. For support, get your blacksmith to make iron standards, such as lightning-rod men all use. Points may be placed about twenty feet apart.

If you own or can borrow a two-inch well