

"Stories of Success"

What are the young folks, the boys and girls of 17 and 18 years to do? What Trade? What Business? What Profession?

"Stories of Success" is an inspiration book for those who wish to answer that question in a practical way.

It tells of boys and girls who have decided to enter "the profession of business" and have done well.

It is written by one whose life-work has been the practical training of young people.

A limited number will be distributed free to parents, or to the boys and girls themselves.

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Toronto

How to Build a Telephone Line

There is nothing particularly difficult about building a rural telephone line. To build a telephone line should not be much more trouble than to build a good wire fence. The main idea is to follow certain simple rules and to exercise a reasonable amount of care in its construction, and the telephone line should prove entirely satisfactory.

The route over which a telephone system is to run, must be the first consideration. The shortest, but at the same time, the easiest route should be chosen. The shorter route is not always the cheaper. Sometimes by going over a great distance a large number of trees that would be required to be trimmed will be escaped. Digging of holes in the rock might also be avoided. It is important to obtain the good will of the property owners adjoining the telephone line. Many obstacles to the success of the system will be overcome if this is tactfully attended to, as you are depending upon these same property owners for the support of the line.

It must be decided definitely whether you are to build metallic or grounded circuits. In a metallic circuit there is a complete circuit of wire outgoing and returning over each line. A grounded circuit is one of but a single wire. The return side of each circuit is through the ground. Thus the ground is common to one side of all circuits. A grounded circuit is cheaper to construct. In many cases it will be just as satisfactory as a metallic circuit. Where there can be no interference due to the noise from any electric light or power currents, when not paralleled by other grounded telephone circuits for a great distance, and when not longer than 25 or 30 miles, the grounded circuit will prove satisfactory. When any of these disturbances are apt to occur, the metallic circuits are far the better. It is as well to anticipate these disturbances and to build metallic lines at the outset. If the metallic circuit can not be afforded at first, make arrangements toward that end and when necessary in the future the change can be made.

The route being located, estimate

the number and sizes of the poles required. The number of poles per mile depends largely upon the number of wires that are to be carried. For 10 or less wires, set the poles about 35 feet apart. For a greater number of wires about 35 poles a mile. The longer the pole the greater will be the span permissible. The shorter poles should be used on the hill tops. The longer ones on the valleys. Have the tops of the poles graded as well as possible. Because of the need for grading the poles a number of lengths will be required ranging from 20 to 35 feet. Poles 16 to 18 feet are permissible for a short run across fields to catch a single subscriber.

When but two wires are to be carried they may be attached to the poles by means of side blocks or brackets. If more wires are to be strung, or if the adding of additional circuits in the near future is contemplated, cross-arms must be used. A pole with a top four or five inches in diameter will be satisfactory when side blocks are used. No pole with a top less than six inches and preferably larger should be used for cross arms. For cross arms, use nothing less than a 10 pin arm. It costs no more for a labor and the difference in price is little. With extra room on the arm, additional circuits may easily be added at any time. Care should be taken to select poles large at the butt, as otherwise they will rot out soon. In selecting poles remember that you are building for the future. The more substantial the line, the less trouble and depreciation there will be. At road crossings the wire should clear the ground at least 20 feet at the point of the lowest sag. At railroad crossings, the wire at the lowest point must clear the top of the rails at all times by 22 or more feet. When crossing the road place a pole as near as possible to the crossing on each side; then in case the wire breaks, it will pull back out of the way and will not tangle up the team. The same precautions should be observed at railway crossings, a pole being placed as close as possible to the right of way at each side.

In digging the holes make them large enough to permit of tamping all around the pole. If the hole is too

narrow, the earth cannot be properly tamped and the pole will work loose. The poles should range in depth from four feet for a 16 ft. pole, to six feet for a 35 ft. pole.

White cedar, chestnut, or tamarack are the best material for poles. The straightest poles only should be chosen and those free from wind break and rot. Before setting they should be gained and all fixtures attached. The top of the pole should be roofed at an angle of 30 or 40 degrees and the ridge should always be in line with the lead of the poles. Gains for the cross arms should be cut as shallow as possible not to exceed $\frac{1}{4}$ of an inch deep. It is well to paint the gains and the roof of the pole to prevent rotting. Drill a $\frac{1}{8}$ inch hole in the centre of each gain for the cross arm bolt. By means of $\frac{1}{2}$ inch bolts, fasten the cross arm tightly in the gain, using a square washer under the head and also under the nut. Have the nut on the cross arm side of the pole. There should be gains enough to accommodate all the cross arms that are to be put on in the future. Attach the two cross arm braces to the arm by means of a 3 $\frac{1}{2}$ inch carriage bolts. Attach the cross arm to the pole at right angles to the pole and fasten the brace by means of a $\frac{1}{2}$ x 3 inch bolt driven through the hole in each brace into the pole. It is best to have each arm completely equipped with insulator pins. These pins are driven in the holes provided for them and are held in position by a six-penny nail driven through the pin and pin from the side. Arms should be 18 or 20 inches apart between centres. The top arm should be 10 inches below the ridge of the pole.

If the pole is to be provided with side blocks, these should be attached before setting the pole, though it is not absolutely necessary, as they are more easily attached than arms after the poles are set. If the pole is to be two side blocks, one should be on each side of the pole. Place one about eight inches below the ridge of the pole on one side, and the other about 18 inches lower down on the opposite side. On curves both side blocks should be on the outside of the curve on the same side of the pole. Fasten the side blocks with two nails, the upper should be a 50-penny and the lower a 20-penny nail.

Every tenth pole should be provided with a lightning rod of No. 9 steel wire. The lightning is tightly stapled to the pole. The upper end should extend above the ridge of the pole, five or six inches; the lower end should be fastened to the butt of the pole, leaving several feet coiled up, so as to provide a good sized surface.

(To be Continued next week.)

Our Legal Adviser

SUBSTITUTION OF SEED.—I planted half an acre of what I thought to be Aberdeen turnips. It now turns out to be rape. Can I make the dealer from whom I bought the seed pay me for my loss, and how shall I go about it? Will be necessary for me to engage a lawyer? The dealer says a seedsmen sent him the packages from which he got the seed marked Aberdeen turnip seed. Will that clear him?—Subscriber, P.E.I.

You are entitled to recover damages for failure of the dealer to supply the kind of seed you ordered. It is no mistake was his own or that of the person from whom he purchased, but the measure of damages is simply the difference in value between the seed ordered and that which was furnished, and you are not entitled to recover in addition the profit you would have probably made if the seed had been what you had ordered.

Pigs given away, for clubs of seen new yearly subscriptions. Write Circulation Department, Farm and Dairy, Peterboro.

Preparation

"I have a sod loan, well drained to sow with a would be a right away would you prefer the spring?—Out.

To insure on the field the best plan would with a shallow twice, disk harrow falls during the or 25, then rib or board plow, or furrow very all first plowing, down and sow a thin seeding seed per acre. good fifth and it would very using no nurse case you should until about the sor alfalfa seed row with light weather is rainy about the end be advisable to The catch is it is more certain is. If, how able or not in v

A Halstead Cow

The cow here ill Edmund Laidlaw & Co. whose farm is on Duff's Prize Farm here shown, Hilbo years old, gave 49 days, and 12,235 lbs. a year, and in a three year old, in 1908, she gave 16,340 lbs. of butter fat. The use of the milk returns even if all—J.H.G.

Timothy

Please give me some of the growing W. & S. Co., Calgar. Timothy (Pheasant) of the most extensive in the world. It is very varying, cool and climate. It is in the temperate clay or clay loam, stable matter and drained.

The seed bed good and the soil in good ing. It is usual to Any of the cereal crop, provided they thickly. Sow about usual amount of ground with timothy sown by itself, in to keep the soil in good spring cultivation early in July.

Seed should be sown of 10 to 14 lbs. per acre as the only grass seed proven somewhat less sown satisfactory. taken to get good sown



"Do you know that a wooden roof equipped with lightning rods costs more than a Metallic roof."

THE PHILOSOPHER OF METAL TOWN.



Now is the Time to Repair the Roof

Harvest is over—winter and storms will soon be here—you have a few weeks more while the weather is fine and comparatively warm. This is your opportunity to repair the roofs of your barns, houses and buildings. Did you ever think how expensive this repairing, necessary every year with wooden roofs, is, not alone in material but for labor? It will pay you to cover your buildings with a durable, fire-proof roof

"Eastlake" Metallic Shingles

They never need repairs—can be cheaply and quickly laid by yourself, and will last a lifetime. Roofs laid 25 years ago with "Eastlake" Shingles are weatherproof to-day. A roof covered with "EASTLAKE" STEEL SHINGLES is proof against lightning, wind, rain or snow.

A barn roofed with "EASTLAKE" METALLIC SHINGLES and sided with our Galvalized Corrugated Iron Siding, is absolutely protected from fire outside sources.

Let us quote you on rat and mice-proof sheet metal lining for your granary, also send measurements of your barn and let us give you complete estimates of cost of roofing or siding, or both.

MANUFACTURERS

The Metallic Roofing Co. Limited
TORONTO & WINNIPEG