

THE MAKING OF ROPE USING FARM TRACTORS

The Yarn, the Strand, the Rope and the Cable.

Manilla Hemp the Most Serviceable Material—Study the Twists—Never Put Rope by When Wet—A Good Whitewash.

(Contributed by Ontario Department of Agriculture, Toronto.)

TO rationally use a rope, to care for it properly so as to keep it in good condition, and to correctly repair breakages when necessary, some knowledge of the method and principles of its structure are necessary. The materials used in making cordage consist of the various varieties of vegetable fibres: Manilla hemp, common hemp, sisal hemp and cotton; flax, jute and coconut fibre are also used. Of these hemp is the most serviceable, because of its strength, suppleness, flexibility and durability. Ropes and twine of cotton are extensively made; jute, too, because of its cheapness is now in considerable use, but it is very deficient in strength and durability; coconut fibre has many advantages, one of the greatest of which is its lightness and resistance to the influence of water.

To produce a flexible and a tenacious cord, which shall retain the collective strength of every fibre of the material of which it is composed, advantage is taken in the manufacture of cordage of the natural twist of the fibre. First, the fibres of the hemp are loosely twisted together, and form what is technically known as yarn. When two or three yarns are twisted together they form a strand; three strands form a rope, and three ropes a cable. The ropes, in their turn, subjected to a variety of processes in order to insure their leaving an equal strain prior to their being combined into a cable.

It has been found that the most effectual mode of obtaining the unit strength of the fibres composing a rope is by compressing and twisting the fibres in different directions. If the strands were twisted one way only they would untwist themselves, and part at the slightest strain; however, advantage is taken in the making of "rope" of this tendency to untwist, by laying strands together that have been twisted in opposite directions, producing a rope which is strong, round, bound together by friction of its parts, neither breaking or stretching on the one hand, by over twisting, nor leaving them so loose as to be easily drawn out from the mass on the other; either would be equally fatal in its results, and injurious to the stability of the rope. As a broad general rule it is borne in mind that the loss of bearing power by twisting is almost one-third, but the tighter twisted ropes gain in durability what they lose in power. A twist of four-fifths of the length of the component yarns gives one-third more bearing power than if twisted to two-thirds of the length, which is the ordinary twist of ropes in use.

The weakening effect of knots in a rope is very considerable, varying from 35 to 50 per cent., according to the gradual or abrupt bending in the formation of the knot. At the bend of the knot the strain is no longer equally distributed among the fibres, the outside being unduly strained, eventually rupturing, throwing the load on the few remaining fibres, resulting in a complete breakage; hence, a knot that least affects the strength of a rope is one having a gradual bend in its formation; should be avoided. A knowledge of the strength of ropes, and of their breaking weight, is essential in all operations where ropes are used.

A hemp rope one inch in diameter has an ultimate strength of about 6,000 pounds, and its safe working strength is about 300 pounds. A manilla rope is slightly stronger. For calculating the strength of ropes, a simple rule is to multiply the circumference of the rope in inches by itself, and one-fifth part of the product will express the number of tons the rope will carry. For example, if a rope be three inches in circumference, $3 \times 3 = 9$, the fifth of which is 1.8—the number of tons such a rope will sustain.

When ropes get wet they should be hung up to dry either in the sun, or by artificial means; not on any account should they be stored before they are dry, nor should they be kept in a confined or damp place, where no air can get to them.

Because of the twist given the rope in its manufacture, it should always be coiled "with the sun" and, in uncoiling it, the end first laid down should be the one first taken up, otherwise, the rope will twist and kink and jam in the pulley blocks. If for some special reason the end last laid down is required to be first drawn out turn the whole coil over, and then lead out the desired end.—Prof. John Evans, O. A. College, Guelph.

Prepare a Good Whitewash. Slake a half bushel of lime with boiling water, keeping it covered during the process. Strain it. Add a peck of salt, dissolved in warm water; three pounds of ground rice put in boiling water and boiled to a thin paste; one-half pound of powdered Spanish whiting; one pound of clear glue dissolved in warm water. Mix well together and let the mixture stand for several days. Keep the wash thus made in a kettle or portable heater, and when used put it on as heater, and when used put it on as heater, and when used put it on as heater.

Save Manure. There has never been a time when the making, saving, and utilizing of all sorts of farm manure was so essential. All fertilizing material is high in price, and some kinds cannot be had in sufficient quantities at all. Farm manure may be used for a number of purposes to a much greater advantage than commercial fertilizers. The total quantity of manure can be greatly increased by keeping live stock sheds and stables well bedded with straw, leaves, and other refuse about the farm.

Early Winter Hints. Attend now to any neglected repairs of wagons, harness, implements or machinery. So far as practicable repair work on the farm should be done on rainy days and during the winter months. Keeping the vehicles and harness in good repair may prevent a dangerous accident.

Viewing the Matter as a Purely Business Proposition.

Sitting Down to Count the Cost—What the Machines Can Do—The Personal Factor in Tractor Management Important.

(Contributed by Ontario Department of Agriculture, Toronto.)

THE farmer, who is always of conservative nature, is not so readily convinced of the tractor's paying qualities. He has seen demonstration machines with one man plough as much ground in an hour as he could plough in a day; he has also seen tractors give a very creditable showing on the belt. Then again he has seen machines which for some reason or other did not give satisfaction; he has also seen instances where machines were tied up for weeks for want of a spare part to replace a broken one. The result is that they are not "falling over each other" to buy tractors. A tractor costs a lot of money, and he is afraid to make the plunge, not being so certain that it will pay for itself.

An old saw-miller once said to the writer: "Every second that saw is not actually cutting lumber she is a bill of expense." Manufacturers tell us that the factory which can be kept going twenty-four hours a day is the factory which gives the biggest returns. The same is true of the farm tractor; the most profitable machine is the one which is kept at it for three hundred days of the year. This means that if we have not enough work to keep the machine going for a certain length of time each year we will be losing money.

The debt which a tractor must wipe out when it sets foot upon a farm is a two-fold one. First it must more than repay operating expenses, and second it must pay what the manufacturer calls "overhead expenses." The machine has no reason to fear the former obligation when it is properly handled. We know that the cost of ploughing with a tractor costs only from \$1.25 to \$2.00 an acre, while horse-ploughing will cost anywhere between \$3.50 and \$6.00 per acre, while other work shows an equally favorable comparison for the tractor. Besides the draw-bar work the tractor offers itself as a source of belt power which work horses have long since ceased to perform.

The "overhead" expenses which the tractor must face consist mainly of interest on money invested, together with a reasonable allowance for depreciation on the price of itself, plus the price of any machinery bought expressly for use with the tractor. The price of a three-plough tractor is somewhere near \$1,400; the ploughs cost \$200. To this we must add \$500 for part ownership of a three-horse and silo-filler. This makes \$2,100 in all. The interest on this at 7 per cent. is equal to \$147.00, and the depreciation of 10 per cent. per annum is equal to \$210, or a total of \$357, which our tractor must face, no matter how much or how little work it does. If the machine does only ten days of work per year the cost of the overhead per day would be \$35.70; if, however, the machine is used for one hundred days the overhead drops to \$3.57 per day. So that the greater the number of days in which the tractor is employed per year the more profitable will the machine prove.

There is plenty of work for a tractor on most Ontario farms, but the tractor can do it satisfactorily. A tractor cannot do good work in small fields. Turning around, even with a small tractor, is laborious work for both the operator and the machine, and is not conducive to the maximum amount of work per day nor to the best quality of work.

Most Ontario farms have too many fences for profitable horse-farming, to say nothing of using a tractor. Fences mean waste land; they harbor weeds, and it costs more to keep the usual quota of fences in repair than it does to build a temporary fence when needed and roll it up when not needed. Removing some fences is the first step toward fair play for the tractor. It is hard work to cultivate among stumps and boulders with horses. With a tractor it is impossible to do good work in such conditions. The second step in arranging our work for the tractor is to remove all obstructions. Give the tractor a fair chance at its work and it will not disappoint you.

In summing up the tractor's case as a business proposition we must consider the following points:—

1. That the tractor will do farm work more cheaply than horses can do it, if the work is properly arranged for the tractor.

2. The personal factor in tractor operation is so great that it alone may cause success or failure.

3. When a tractor is kept busy enough, its upkeep and overhead cost per year is far less than the same on the horses, which it is able to substitute for.

4. Belt work constitutes a large portion of the tractor's usefulness. In order to make it a paying proposition, it must do the farmer's belt work.—L. G. Heimpel, Kempsville Agricultural School.

Save Manure. There has never been a time when the making, saving, and utilizing of all sorts of farm manure was so essential. All fertilizing material is high in price, and some kinds cannot be had in sufficient quantities at all. Farm manure may be used for a number of purposes to a much greater advantage than commercial fertilizers. The total quantity of manure can be greatly increased by keeping live stock sheds and stables well bedded with straw, leaves, and other refuse about the farm.

Early Winter Hints. Attend now to any neglected repairs of wagons, harness, implements or machinery. So far as practicable repair work on the farm should be done on rainy days and during the winter months. Keeping the vehicles and harness in good repair may prevent a dangerous accident.

"Who owns no soul, no honest right!"

The BEST CHRISTMAS GIFT

—An Independent Future

A small monthly payment, or a lump sum, paid in advance, will secure to you and old a Canadian Government Annuity of from

\$50 to \$5,000

regular for life payable monthly or quarterly. May be purchased on a single life, or on two lives jointly. Employers may purchase for their employees.

Apply to your postmaster, or write, postage free, to S. T. Rutledge, Superintendent of Annuities, Ottawa, for new booklet and other information required. Mention age last birthday and sex.

Lightning Rods

Have your buildings protected from lightning by having them properly rodged. An agent for the Dominion Lightning Rod Co., and prepared to do all work promptly. All copper rod used. Repairing also done.

G. E. HOSKIN
Phone 7-15. R. R. No. 3, Jarvis

Seed

Highest Cash Prices Paid for all kinds of Grass Seeds

PHONE 22, JARVIS

F. W. Reichheld

If you buy out of town and I buy out of town what is going to become of our town? The dollar you spend in Jarvis will eventually "Come home to Boost."

JARVIS' BUY-AT-HOME CAMPAIGN

Read these articles with care, they may present something you have not thought of before. Patronize the home merchants, whose ads. appear here. They are your neighbors and will treat you right. The money you spend with them stays in circulation in Jarvis and neighborhood and benefits the town.

Service is The Measure of a Bank's Usefulness

We think we give the best. Our facilities are at the disposal of all who appreciate courteous consideration and the best terms consistent with sound banking. We are always glad to be consulted.

BANK OF HAMILTON, Jarvis-Nanticoke
J. H. BROWN, Manager.

Bring Your Old Shoes to Me for Repair

I will make them look like new. These are the days when it is necessary to cut down your expenses. I also have a fine line of men's and ladies' shoes to select from.

J. W. NORMAN,
The Old Veteran Shop.

Seldom Will You Find a Combination of Grocery and Bakery giving the service and quality of goods I do. I do not fear competition of any nature because the groceries and baked goods I sell cannot be duplicated anywhere.

D. C. ALLEN, Grocer and Baker

A Drive to and From My Garage is an Economy Drive. If you spend some money with me you will save money. If I attend to your car it will render a faithful accounting. Oils, Greases and Accessories.

E. W. ANDERSON, Garage

Pocket Billiards is a Recreation It aids digestion. — Come in and try it. My shop is clean and sanitary. If you need a shave, haircut, shampoo or massage you will get the right kind of service here. A full line of smokers' supplies and tobaccos always kept in stock.

W. M. JODGES,
Barber and Tobacconist.

GERARD HEINTZMAN

The piano whose present popularity with music lovers has been won by merit, and by merit alone. If interested first consult any Gerard owner, then for a quality deal of 100 cents on the dollar consult the district representative.

G. S. MCCARTER.

Get your next job of paperhanging, painting or decorating best done by me. My long and wide experience in Jarvis is your guarantee of a service well rendered. I also sell wall papers of every description. Look over my samples before buying elsewhere.

W. M. MACHELL, Paperhanger.

Buying Furniture in Jarvis

You will find my prices right, and I stand back of every piece of furniture I sell. My Undertaking Parlors are well equipped for service—night or day. Call me up or come in and see me.

IVAN W. HOLMES,
Furniture and Undertaker

I Am Always Prepared

To do all kinds of Sheet Metal Work, Trimming and Spouting. If I do your work you will be sure it is done right. No job too big or too small. I am always prompt and my prices as well as service is right.

W. R. OWEN,
Plumbers and Tinsmiths

WOMEN CONTROL TOWN'S DESTINY

Can Make or Break a Community Through Exercise of Their Buying Power.

THEY HOLD PURSE STRINGS

It is estimated that at least 90 per cent. of retail purchasing is done by feminine shoppers.

(Copyright.)

It has been said that the hand that rocks the cradle is the hand that rules the world and nowhere is this more literally true than in the world of trade. The woman is the purchasing agent of the household and man, as a rule, is very glad to have her handle the job.

It has been estimated by some students of the merchandising game that 80 per cent. of all retail buying is done by women. This may be a high estimate but a visit to the retail stores of any town or city is enough to convince one that the figures are not too high. The preponderance of women among the buyers is sufficient, at any rate, to make not only the retailer but the manufacturer and the wholesaler realize that it is the women that they must please with their merchandise.

Because they do by far the greater part of the buying in any community, the women have a responsibility that they do not always appreciate. The women of a town, through their buying power, can make or break the merchants of a town and as a natural consequence they can make or break the town. It is in their power to make it a prosperous town or a dead town. When the women of a town acquire the mail order habit, the town may just as well begin making arrangements for its own obsequies.

Hard to Understand. Just why a woman, who is a shopper by instinct and a shrewd judge of values in merchandise, should succumb to the lures of the mail order house it is difficult to understand but, unfortunately, some of them do. No one knows better than the woman who has had some experience in the buying of merchandise how difficult it is to distinguish between the genuine and the imitative.

Woman's Greatest Opportunity. Women are taking a more and more prominent part in public affairs all the time. They are aiding now in many parts of the country in running the affairs of state. Even where they do not have the ballot they are playing a big part, individually and through their organizations, in the conduct particularly of local government, yet in the one field where they can do most to help build up their communities they may be overlooking their opportunity. With the buying power in their hands they can do more for their community by stanchly supporting their home business men than they can possibly do in any other way.

Man may think he is a very important element in the progress and development of his town but when he reflects that 80 per cent. of the buying power of the community is in the hands of the women he is apt to realize that he is a very insignificant atom.

In the Line of Meats

You cannot beat the OLD VETERAN SHOP. Everything I have in stock is "proven best by every test." I invite your patronage with the assurance that you will be satisfied. Carry a good line of all vegetables in season.

E. MACHELL, Meat Market.

W. M. HOSKIN JARVIS, ONT.

—has been appointed the exclusive Sharples dealer for this territory. Because—we want you to get Sharples Service with Sharples machines. You can get repairs or supplies the same day. Furthermore, our local agent will demonstrate to you the superiority of any Sharples machine. The Sharples Separator saves cream thrown out by all other separators because it skims clean at all speeds, due to the wonderful Suction-feed.

SHARPLES SEPARATOR


—the only separator that will skim clean at widely-varying speeds
—the only separator that gives cream of unchanging thickness—all speeds
—the only separator that will skim your milk quicker when you turn faster
—the only separator with just one piece in the bowl—no discs, easiest to clean
—the only separator with knee-low supply tank and once-a-month oiling

Take a trip into our local agent's store today and see for yourself the above exclusive Sharples advantages and what they mean to you in cream saved and in convenience.

SHARPLES MILKER

The world's fastest milker—and fast milking increases the milk yield. Produces 1.25 lbs. of milk per unit per minute—one man can easily operate four units. Used on over 300,000 cows daily.

The Sharples Separator Co., Toronto



When It Comes to Supplying the needs of this community in the line of Groceries and Dry Goods. We feel proud to state that our lines cannot be surpassed. A complete line of everything kept in stock, and the service we at all times extend to our patrons is deserving of your patronage.

MILLER BROS.,
General Merchants.

Always at Your Service

Anything in the line of Real Estate, Fire Insurance, Loans & Conveyancing will be given the strictest attention by me. If you are considering the sale of your home or farm see me.

GEO. L. MILLER,
Real Estate and Insurance.

GOODS OF QUALITY!

By buying at home you have the advantage of seeing the goods you are paying for and know what you are getting. The quality of our goods will always bear inspection, and we invite you to come and look over stock. Groceries always fresh.

J. A. BURWASH,
General Merchant.

I have just opened up and have taken the agency for the Farmers Cocksfoot line of farm implements, also the Adams' make of wagons. Come in and get my prices on anything you may need, and I will assure you in advance of every courtesy possible in my line.

HERBERT PEACOCK, Implements

I Have Said It Before and Say It Again.

You can get better prices as well as quality in footwear at my store than in the city. My stock is of the best quality. Also carry a good line of harness, whips, etc. Bring in your harness now for repairs.

A. H. LANGRAN,
Saddler and Shoes

If You Have a Blower, Stoppo Brake, Pump or if your tires need re-treading bring it to me and I will show you how to save money on your tire bills. I have a complete vulcanizing and tire repair plant, and the service rendered is your guarantee of good work.

J. W. MORRISON,
Tire Repairer

In the Line of Groceries

I always aim to keep my stock fresh and clean. You can always return anything you buy from me that is not satisfactory. I carry at all times the choicest cuts of beef, pork, lamb, in fact, everything in the meat line. I solicit your patronage, guaranteeing to service in advance.

THOS. HARRIS,
Groceries and Meats

General Hardware Needs

At C. T. Carter's Everything in Hardware, Builders and Contractors Supplies, Farm Needs, etc. You can depend on any line of Hardware you purchase from me. Coal Ranges, Coal Oil Stoves and Heaters always kept in stock. Full line of Paints.

E. T. CARTER, Hardware

Pure Drugs Are Essential to health. We carry a full line of 100 per cent. pure drugs—and medicines. Big line of toilet articles and sick room supplies and everything usually carried in a first-class drug store. Buy in Jarvis.

JARVIS DRUG STORE