PHOTO BY KASSIDY BREMER

Handy Tips for Building Fence

Many tricks offered to ease building and maintenance of permanent fences, and to speed up moving portable fences.

by ***Heather Smith Thomas***

Most permanent pasture fences for cattle use barbed wire, net wire or multiple strands of high-tensile electric wire, stretched tightly and secured to well-set posts. Most portable fences utilize electrified wire that's easy to roll up and unroll, with step-in or easily driven small posts that can be pulled up and moved. There are a number of tricks that make fence building/maintenance easier for permanent fences, and ways to speed up the moving of portable fences.

Tips for permanent fences

Handy wire unroller — When building barbed-wire fence, a person needs an easy way to unroll the wire. Many methods are used, such as putting the roll on a stationary bar and pulling the wire out along the fenceline.

►Idaho rancher Lynn Thomas, 74, made this version of a homemade wire unroller to work in his rough terrain. Friction between the metal plate and the unrolling wire creates a drag that acts like a break, so the wire doesn't spin out of control.

A simpler method was devised by 74-year-old Idaho rancher Lynn Thomas six years ago when he needed to build several miles of fence with limited help and waning strength. He says necessity was the mother of his invention.

His innovation was inspired by looking at a homemade unroller a neighbor gave him — a device that attached to the rear bumper of a pickup. It was a U-shaped piece of metal a little bigger than a roll of barbed wire, with a metal rod in the middle to hold the roll of wire. The idea was to park the pickup and pull the wire out from it, or to drive the pickup along the fenceline to unroll the wire, with the end of the wire affixed to a post.

The problem with this method was that Lynn's ranch terrain (steep sagebrush-covered mountainsides) did not lend itself to either application. Wire unrolled in this manner tends to catch on sagebrush, creating a jerk. Then the spool of wire unrolls too fast — with backlash and entanglements.

Lynn created his own version by taking one of the round, flat metal plates from the neighbor's device as a starting point.

"A person could make a similar plate from a piece of ⅜-inch metal, cutting it in a round circle about the diameter of a roll of barbed wire and putting a hole in the center that a bar will fit through," he says.

Lynn put a tire rim around the outside of the metal plate; the roll of barbed wire sits on the flat metal plate, with the tire rim around it.

"Make sure the rim does not stick up beyond the plate. It must be flush so the wire won't catch on the rim," he says.

The rim Lynn used was from a 13-inch

(in.) car tire. He says it works best to leave the tire on the rim to provide stability. The main reason this works so well is that friction between the metal plate and the unrolling wire — the roll sitting on the plate with a bar through the center — creates a bit of drag that acts like a brake. The wire won't spin off it out of control.

He used this method to unroll wire while building 4 miles of five-strand barbed wire fence, unrolling more than 20 rolls of wire.

"In all the unrolling, the wire pulling over the tire and rim did not leave any cuts in the tire rubber and very little abrasion," Lynn notes.

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He suggests placing the unroller at the spot you want to start, making sure it's flat — even if you have to put rocks under the lower edge. The wire should be unrolled from flat ground or heading downhill; it doesn't work to pull the wire uphill.

The roll of wire is set on the flat plate, with a metal bar or small rod put down through it into the ground. You can pound the rod into the ground a few inches to hold it in place.

"This device stays in place even when pulling long runs — even the whole roll (¼ mile) if you make sure the final end of the wire doesn't come off the spool," he says.

In uneven, brushy terrain, two people can readily pull the wire — with one person starting down the hill with the end of the wire, and the second person taking hold about 75 or 100 feet (ft.) behind the front person to give some added pull.

"We've never had anything that worked as well as this — and we've built more than 25 miles of new fence over the past 50 years on this ranch," says Lynn.

Tool tips — "If you need to build a lot of fence in a day, a good assortment of tools will pay off in time saved," says Michael Thomas of Thomas Custom Fencing, Baker, Idaho. "There are many good battery-powered tools available today, from grinders to drills. I use a grinder a lot; it's handy in the deconstruction phase where you have to remove an old fence before you can build the new one. I use it for cutting old wire, cutting off spikes or taking a gate out. We keep a good supply of cutting wheels, and the battery-powered grinder makes short work of taking down the old fence."

Most fencing projects require a good digging bar and shovel. Two-handled post-hole diggers only work in good soil conditions (clay or loam) with no rocks and little sand.

"If it's sandy, the 'bite' falls out before you can get it up out of the hole. This tool works well in certain soils, however, especially if there is a little moisture to hold the dirt together as you pull it out of the hole. In our dry, rocky country, however, a digging bar and a shovel works best. It needs to be a post-hole-digging shovel rather than an irrigating shovel," he says.

Keep a sharp point on your digging bar. After a hard day in rocky ground you may have to resharpen it, but it saves time the next day.

"We just heat and re-point those bars, hammering a new point. The difference in what you get from that bar, with it sharp, is substantial," Michael says.

Having the right tools saves a lot of time.

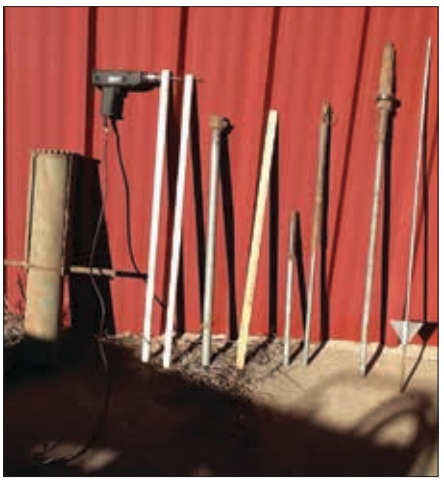


PHOTO COURTESY TOM LARSON

►The better you build it the first time, using good materials and good tools, the longer the fence will last and the less maintenance it will take.

"We carry digging bars and metal tamping bars, not wooden. A tamping bar is like a digging bar except it has a blunt, round tamping foot on one end and a flat chisel on the other. We keep the chisel end sharp for cutting tree roots, and that end is also handy for tamping around a tight space around a post where the flat end won't go," he explains.

"A good tamping bar weighs about 16 pounds. You don't want it any lighter; the heavier bar does a better job with less effort. You get twice as much done with each stroke," he says.

For building/maintaining barbed-wire fence you need good pliers and hammers to cut wire, hold and bend it, and pound staples.

"The traditional fence pliers/fencing tool works best. There are some fancier tools but most of them are not worth the money. There's one made of cast iron that looks like a hammer and fencing tool combined, but the handles break because cast iron is brittle. They don't hold up," says Michael.

"When building braces with wood posts, a small chainsaw is handy for cutting the notches — easier to handle and safer than a big saw. The small saw also makes a nicer, cleaner cut. We also started using ⅝-inch rebar for twisters in the brace wires because they last longer than wood twisters," he says.

"A good 2-inch barbed staple works better than 1½-inch staples. Small ones are cheaper but won't stay in as long. I recommend a 2-inch minimum, and barbed ones won't pop out as readily. Weather takes them out eventually, so the more staple (longer shank) you start with, the longer they last before they come out. Frost pushes them out, and wildlife hitting the fence can pop them out," he says.

The better you build it the first time, using good materials and good tools, the longer the fence will last and the less maintenance it will take.

Tightening wire with a hammer — When mending wire fence — splicing a broken wire back together or tightening a sagging wire — a fence stretcher is the ideal tool, but a simple substitute, and easy to carry while checking fence, is a carpenter's hammer. A wire can be pulled tight, using the hammer for leverage.

If the wire is broken and unstretched with no extra for splicing, you may need to add a short piece of wire to make the splice to enable you to make loops in the ends of the broken wire and make a "hammer roll" to pull it tight. A piece of smooth wire 1 ft. to 2 ft. long will make a splicing job easier.

To start the splice, make a loop in one end of the broken wire and run the short piece of wire through the loop. Place the hammer against the wire and anchor the loose end between the hammer claws. Then roll the wire around the hammer, making as many twists as needed to get the wire very tight.

Once the wire is tight, untwist the hammer, leaving the wire still tight where it bends. Then you can twist the remainder of the loose end around the wire, finishing the splice. Using the hammer this way, you can pull the wire much tighter than you can by hand, making the bend in the wire tight enough to hold until you can finish it off by wrapping it around itself.

Tips for portable fencing

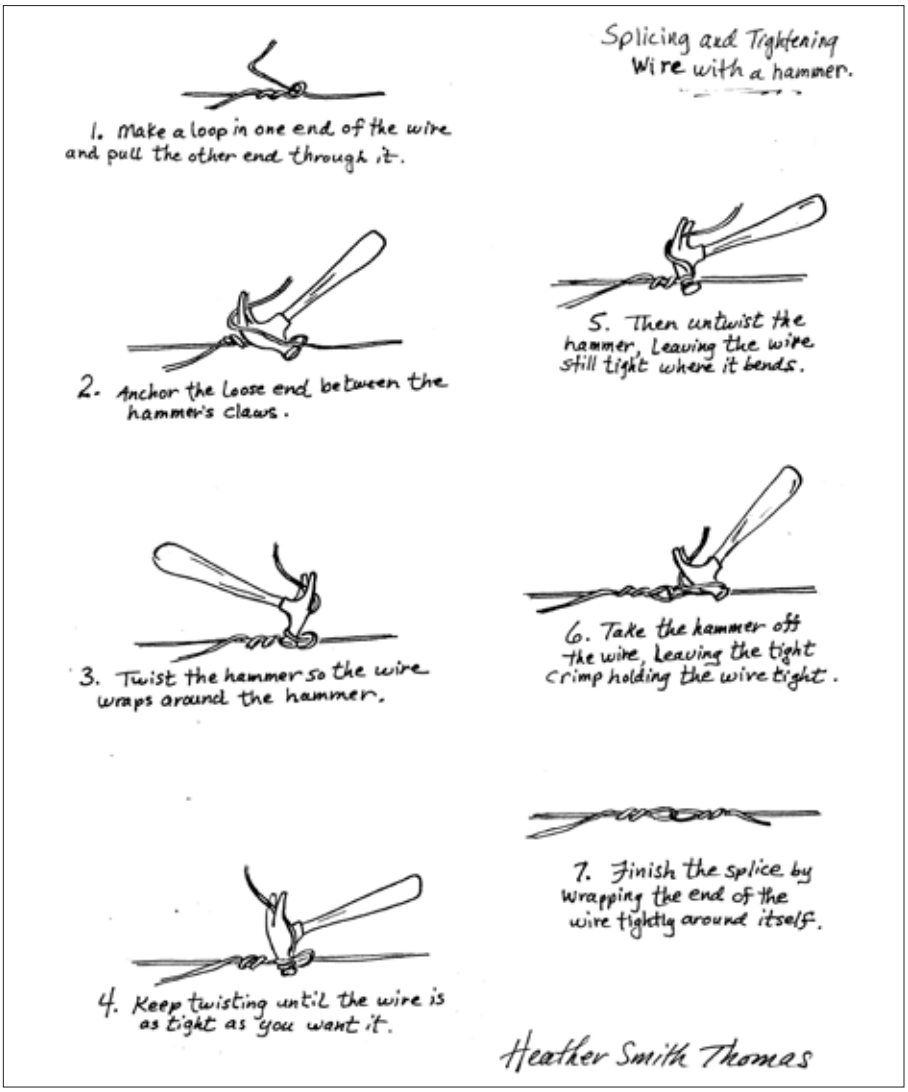
Plan it out — Ian Gerrish of Cobb Creek Farm, Hillsboro, Texas, has a cattle operation and partnership in a fence and water system business. He has been using portable fences since he was a child helping his father move fences.

"Your paddock design will depend on your terrain. In an ideal setup, however, you'd have permanent lines that might be only 300 to 800 feet apart, and then you can make straight runs between those permanent lines. Moving those portable wires can be easily accomplished in about 10 minutes — to set up a fence and take another one down," he explains.

A long, narrow pasture lends itself to quick and easy fence moving, since the portable dividing fence is very short.

Wire — The important thing is having the right supplies. "If you get the wrong kind for your purposes you may become very frustrated," says Gerrish. There are several kinds of wire, but Gerrish recommends only one type — the braided polywire.

ILLUSTRATION BY HEATHER SMITH THOMAS



►A fence stretcher may be the ideal tool for mending fence, but a carpenter's hammer can substitute.

PHOTOS COURTESY IAN GERRISH

►Ian Gerrish recommends only one type of portable electric fencing — the braided polywire. The black economy gate handles pictured are what he has found works best for an end to a reel.

►Gerrish uses these reels for running wire in between two temporary fences. They will hold up to 600 ft. of polybraid. He braces both ends with his O'Brien post trick and hangs these beside the brace.

"It's much more durable than anything else on the market. It's also easy to handle," he says.

"You can put it onto a geared reel for unrolling and rolling back up. There are several kinds of reels; PowerFlex makes a good reel, and so does Kencove and O'Brien. Most of the reels today come with guides to keep the wire from spinning off the sides, and this helps prevent snarls. You also need appropriate handles."

Gerrish always moves his fences hot, meaning they are not unhooked from the power source.

"I go ahead and hook it up to the hot fence and then run it out where I want it. I am used to working with it hot and don't get shocked very often. If you are just starting to use electric fence, however, it's best to run the fencelines out and hook them up after they are in place," he says.

When moving a fence, he generally takes the posts out first, unhooks the wire and then reels it in like a fishing line.

"This is not recommended, because they say it will shorten the lifespan of the polywire, but I have some I've been using five years and it is still not showing wear. By contrast, I've used other types of wire that would completely fray out if you did this to it. Reeling it in this way saves a lot of time."

He recommends a braided wire and not one of the twisted wires.

"I've had the best luck with PowerFlex polybraid, O'Brien reels and O'Brien step-in posts. These will keep you going for many years," says Gerrish. "When you spend money for fencing materials, you want some that will last."

Typically you make the fence hot through your handle on the far end.

"All the companies sell their reels with dead handles that you hook up with jumpers, but I like to always know that my far end will be the hot end. Then, on the reel, you make sure the reel end is never grounded out," he says. "I have seen people hook their reel onto a hot wire that is lying against a steel post. If the reel touches the steel post it shorts out the whole fence. Make sure the handle and reel are not grounded out."

Another handy way to string out polywire quickly if you don't have a reel is to wind the wire on extension cord spools. These plastic spools are about 1 ft. in diameter and hold a 50-ft. extension cord. You can easily wind a quarter to half mile of polywire on that spool. It has a donut hole with a plastic handle inside for easy unrolling. A person can drive a 4-wheeler along to unroll the wire.

Another tip is to create new pastures with one fence ahead of the animals — putting up the next fence before removing the last one — so there is no chance of cattle getting past the new fence you are putting up. If you ever have to move cattle through a hot wire without a gate, you can raise the wires on a tall PVC pipe and train them to walk under it when it's raised.

Posts — Gerrish likes O'Brien step-in posts because they are easy to put in without pounding.

"If ground gets really hard in the summer, it may be more of a challenge, but those posts

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have hooks on both sides and it's easy to put those posts in and out if the ground is not too hard," he explains.

There are also metal pigtail posts that work well.

PHOTO COURTESY IAN GERRISH

►Gerrish created an innovative way to lock O'Brien posts together so they can hold for corners.

"These have a metal foot and, if the ground gets hard, you can use a hammer to tap them in. With metal posts you can put more curve in your fence than you can with the step-in posts because they hold better," he says.

He has an innovative way to lock the O'Brien posts together, however (so they hold for corners). Facing opposite ways on top, he then puts an angle brace with another O'Brien post.

"I've pulled quarter-mile runs from that pull point. There are a lot of little tricks you can use to make portable fencing easy," he says. "Ideally, however, you want to run straight lines, and the shorter the better. I've run cross-fences all the way up to half mile of poly-braid, but that takes a big reel that's more difficult to use," says Gerrish.

"With step-in posts, some people space them as much as 50 to 60 feet, but I prefer no more than 45 feet at most between posts. It also pays to get your cattle well-trained to a hot wire and then they don't challenge the fence."

Innovative posts and pounders — Tom Larson, on a farm in Colorado, after many years in Nebraska, has used a lot of electric fencing in rotational grazing systems, moving cows frequently in a pasture or when grazing crop aftermath. In the sandy soil of Nebraska it was easy to put in posts because there were no rocks, but other challenges led to innovative fencing methods.

Deer coming back and forth through fences are always a problem. Posts with insulators are not dependable. If a deer runs through the fence it can flip the insulator off. Even some of the new plastic or fiberglass posts with hooks to hold the wires can have the wire knocked off by deer charging through the fence.

Larson avoided that problem by using ¾-in. rigid plastic PVC pipe for his fences instead of steel posts, with the wires going through the posts themselves.

He'd get 10-ft. lengths and cut them into three pieces to create three posts. Near the top of each post he drilled a hole, then put a 2.5- to 3-in. cotterpin on the wire. The longer ones are a little easier to spread with your fingers without a tool. You can open the cotterpin a little, put it on the wire, close the legs on the wire and push it through both holes, and then spread it. This holds the wire in place at the post, but loose enough on the wire that it can move around a little if something hits it and the wire won't break. The wire could never come loose from the post because it goes through it.

Larson made a driver for these plastic posts, and in the sandy soil without rocks, it's easy to drive them down far enough to hold. They work much better than steel posts, because a deer could hit these smaller posts and they flex. The impact wouldn't knock the fence down or take the wire off.

The driver he made is about 30 in. long, using a lightweight tube (like 1-in. conduit) that fits over the post. It's small enough in diameter that it doesn't rattle around, but isn't too tight on the post. The tube has to be relatively long and close-fitting, because the pipe/post is so flexible that it's like trying to drive a piece of spaghetti unless the pounder tube is long enough to stabilize it. For a really flexible post, you need the driver to be almost as long as the post.

To make it heavy enough for pounding, he welded a chunk of steel at the top. Whatever you can find that's the right size will work, such as an old sledgehammer head. With light soils you don't need much weight. This can be readily assessed by trial and error to figure out the best weight for the driver. Anything about 2 to 3 pounds is adequate for light soil. For frozen ground he made a driver using a transmission shaft to provide enough weight to drive the posts.

Another tip for putting posts in frozen ground is to use a cordless drill with a 2- or 3-ft.-long bit. Larson uses a regular drill bit and welds a piece of rod on it to make it long enough. You can make a little hole in the frozen ground with it, and then put the post into the hole.

Fence charger — A good energizer is key for any electric fence. For battery-powered electric fencing, Larson often puts the fencer and battery inside an old oven, or uses a large farm mailbox chained to a post. He puts the charger inside the door of a mailbox with a viewing window cut out of the door, and the battery inside the mailbox.

"On a leased place where you don't want to put in a lot of permanent structures, many people use portable electric fence. Battery-powered chargers work, but there are also some good solar energizers today," says Gerrish.

"I highly recommend StaFix energizers. They have some contained units that are about a half joule (that's as big as they go) with an energizer and a battery that's like the bigger motorcycle batteries. It's a contained unit that is easy to move around. It fits on top of a T-post, and all you need to do is ground it and you are good to go. I now prefer solar over any other power source. The solar systems today are very reliable, and you don't need to worry about your power going out or a battery running down," he says.

You do need to check it now and then, but it's a good practice to keep checking an electric fence to make sure it's working. It's easy to carry a tester. Every time you go out to the field, you can check the fence to see if you have any problems.

Solar chargers are dependable even during long periods of cloudy weather, if you select the right-sized battery.

"Most of the recommended sizes have a 10-day to two-week window. It would take that long without sunshine to kill the battery," he says. Most of the time you'd have some intermittent sunshine to keep the battery going.

If your cattle are trained to a hot wire, they won't be pressing it.

"With my cows, I am pretty sure I could have my fence off for a month and they wouldn't go through it. If they grow up around electric fence, they don't challenge it," he says.

Editor's Note: *Heather Smith Thomas is a freelance writer and cattlewoman from Salmon, Idaho.*