



**GAS and OIL RACK**



**MINERAL BOX**



**BOX TYPE SILO**



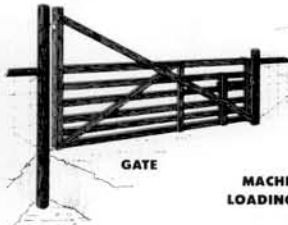
**HAY FEEDER**



**STOCK**



**STILE**



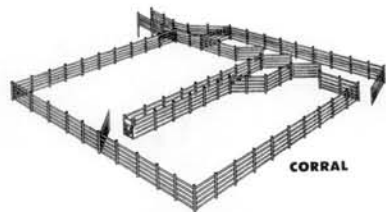
**GATE**



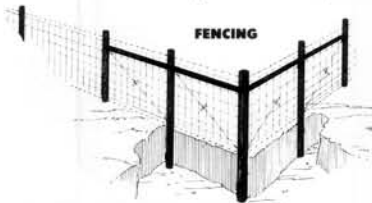
**CATTLE GUARD**



**MACHINERY LOADING RAMP**



**CORRAL**



**FENCING**

**Here are some up-to-date**  
*RANCH and FARM STRUCTURES*  
**built to last with *pressure-treated* wood**

These structures are typical of modern wood equipment put up from plans available through State Extension Service. We have a comprehensive list of these plans for all kinds of farm structures -for barns, crop storage facilities, sheds, feeders, for lot equipment and housing of all types. Come in and see this list of plans in our copy of the new catalog, WHERE TO GET PLANS FOR RANCH AND FARM STRUCTURES BUILT WITH PRESSURE TREATED WOOD.

When you buy *pressure-treated* wood, you get the full economy of wood's strength

and workability *plus* the advantage of durability. As with untreated wood, it requires no special skills and labor in building; you can keep down construction costs by doing the work yourself. Over the years, you will save labor, time and money through elimination of repairs and replacements.

This is especially true when you put up a well-designed, easy to build structure from plans that we can help you obtain. So, to get the *full* economy of wood and to make sure your wood structure is the best you can build- see us for *pressure-treated* wood.

**COBB**  
Lumber



**FEED BUNK**



**FEED TROUGH**



**LOADING CHUTE**

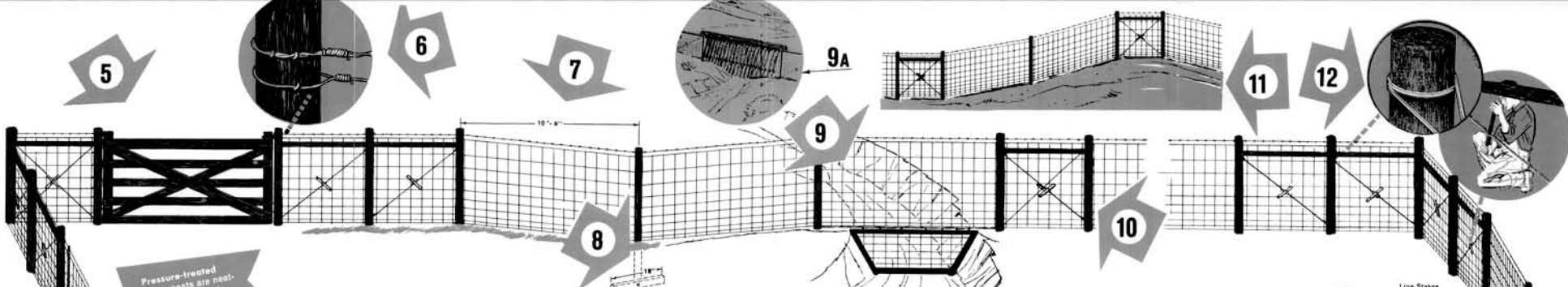
**to get the most from wood**  
make sure it's  
*pressure-treated*

Wood's economy, availability and ease of working have made it a very practical material for farm construction. Today, wood is more dependable than ever before because it can be made safer and longer lasting. Pressure-treated protects wood from quick destruction even when used *in or near the soil*.

Ground level attacks on wood come from two sources. One is the termite which chews up many millions of dollars worth of key structural lumber every year. The other major menace is fungi- mushroom-like organisms which obtain nourishment from wood while rotting away its cells. Construction wood - especially that which must serve in the soil - must be protected from insects and fungi to give full economy.

To do this, modern wood preservers are forced deep into the cells and fibers of sound, well-seasoned wood. Treated this way, wood is immune to every kind of rot or wood-eating insect and will last several times longer than untreated wood.

Wherever you want your building wood to last, specify pressure-treated poles, posts and lumber. That way, you'll be buying wood protected by the only method proved reliable in over a hundred years of service on farms, railroads and utilities.



Pressure-treated fence posts are neat-appearing, durable and low in cost.

### 1. Corner (or End) Construction

(Your Fence construction will be unhampered and easier if the proposed fence row is cleared of all brush and weeds before actual construction begins.)

Drawing is a double span, horizontal brace design and can be used for either 47" woven wire topped by one strand of barbed wire (suitable for cattle, hogs and sheep) or 39", 32" or 26" woven wire, with the desired number of strands of barbed wire. The table below shows recommended dimensions for posts and braces:

(All posts should be pressure-treated wood.)

	Dia.	Length
End or Corner Post	6"	8'
1st Brace Post	5"	8'

2nd Brace Post	5"	8'
1st Horizontal Brace	4 1/2"	8"
2nd Horizontal Brace	4 1/2"	8"

Brace Wires: 4 strands of 9 gage galvanized wire.

\*Although 8' horizontal braces should be used, 6 1/2', or 7' standard line posts will do a good job in end or corner construction. In this case, reduce brace post spacing to accommodate shorter braces.

A better method than cutting notches in posts to receive horizontal braces consists of dowel pin construction. Use a 1/2" or 3/4" x 4" steel rod. Bore posts and braces each about 1/2" deep to receive the pins. Use same size bit as rod. To keep ends of braces from possible splitting after steel pins have been inserted, wrap them tightly with several turns of 11 gage smooth wire.

Wherever pressure-treated wood is sawed or drilled, apply liberal amounts of creosote in the cut areas.

### 2. Staples

Use 1 1/2" galvanized staples or ring shank to fasten the wire to the posts. A shorter staple has a tendency to work loose or pull out.

For greater holding power, set the staple diagonally so that each point enters a separate grain of the wood. Staples should be driven snugly but not so deep as to bury the wire in the post.

### 3. Tension Curves

(See also No. 6 "Attaching Wire" and No. 14 "Stretching Wire")

- Enlarged view shows a tension curve in the line wire before the fence is stretched.
- Tension curve after fence has been stretched. Stretch wire until tension curve is 1/3 its original depth.

### 4. Grounding the Fence

About every 50 rods a grounding device should be incorporated into the fence in order to give protection from lightning. A 3/4" to 1" diameter x 10' (may vary) rod or steel pipe is recommended. Drive it deep enough into the ground to reach permanent moisture. Fasten fence line wires and all strands of barbed wire securely to rod with 11 gage galvanized wire.

### 5. Gates

See corner construction for gate post assembly. Gates can be made from 1" x 6" pressure-treated lumber assembled with gate hardware.

### 6. Attaching Wire

Starting at the end or corner post, remove two or three stay wires, then pull fence into position, staple line wires to post, then wrap the end of each line wire around post, splicing it to itself, as illustrated. Wherever possible keep the wire and livestock on the same side of the post.

### 7. Line Post Spacing

Round (2 1/2"-4" diameter x 6 1/2' or 7') or half-round (4"-6" x 6 1/2' or 7') line posts should be spaced 10' apart. However, if a stronger fence is desired, posts can be set closer together. If terrain is very uneven, a longer, braced post (see Figure 10) for stretching, should be placed at the end of every 20-rod roll of wire; if land is flat or moderately rolling, the stretcher posts can be 40 rods apart.

### 8. Shallow Depressions

Wherever a post is in a shallow depression, a piece of pressure-treated 2 x 4, 18" long, should be spiked or bolted across the bottom end of the post to serve as a hold-down lug. Tamp earth well after setting in place.

### 9. Gullies

Where fence crosses a narrow gully, wire should be stretched straight across from a post on each bank. Don't set a post in the gully as water from occasional rains will swirl and eddy around it and cause a wash-out. If gully is nearly always dry, one or two strands of barbed wire (depending on depth), 10' to 12' apart, stretched below the fence from bank to bank, should be sufficient for cattle. In case of hogs a panel built of woven wire and pressure-treated posts will provide adequate restraint if installed as illustrated. Add and twist 2 strands of No. 9 wire below the bottom of the fence to help support flood gate.

If considerable water is a problem, a flood gate should be installed as in Figure 9A.

### 10. Stretcher Post Construction

These posts should be 8' long x 5" in diameter. Set brace posts so that a line post may be used as a horizontal brace and placed 12" to 14" from post tops. See No. 1 "Corner Construction" for dowel pin method of holding horizontal brace in place. Diagonal brace wires should be applied as shown.

### 11. Knolls or Abrupt Changes in Terrain

Use stretcher post assembly. If wire crowds down on a ridge, it should be held above ground on temporary props made of two posts, while being stretched so that it can be properly stapled in place.

### 12. Diagonal Brace Wires

Brace wires used in corner, end and stretcher post construction should be made from two loops (four strands) of 9 gage galvanized wire. They should be tightened by twisting with lever as shown in Fig. 12. Leave the lever in place for future use in maintaining the proper tension.

### 13. Contour Fencing

**Spacing Line Posts**  
Stake out a smooth curve along the contour. Stakes should be placed 10' apart. Select three consecutive stakes in any fence section. Stretch a string between the first and third stakes. Measure the distance from the center stake to the string, as in Figure 13a. Repeat this operation wherever the curvature appears to change noticeably.

If the distance between center stake and string is 4' or less, the fence post can be put in at the stake points. If the distance is greater than 4", the posts should be spaced closer than 10'. See Table I for post spacing.

Check by eye to see that no single fence post will vary from a smooth curve. This will assure that the wire will pull equally against each post.

#### Setting Posts

When setting posts for contour fences lean the top out approximately 2" so that when the fence is stretched, the posts will tend to straighten up to a plumb position.

#### Placing Fence

Always put the wire on the outside of the posts on the curve so that it pulls against the fence posts. See Figure 13b.

#### Stretching Fence

A contour fence should be stretched only one-half to two-thirds as tightly as a straight line fence. The sharper the curve, the less tension should be applied. When stretching the fence, go along it several times and release it wherever it may have caught on the posts.

On sharp curves it may be necessary to stretch at ten-rod intervals; otherwise, twenty-rod intervals are satisfactory. When curvature changes materially, it will be desirable to start a roll of fence at the sharpest curvature. In this way, the fence on the sharper curve will have less tension. See Figure 13c.

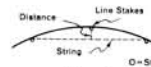


Figure 13a.

Table I

Distance from the Center Stake to String, Inches	Recommended Post Spacing, Feet
4 or less	10
6-8	9
9-14	8
15-20	7

### 14. Stretching Wire

Attach fence stretcher to end or corner post, or set up temporary stretcher post, as shown in Fig. 14. During stretching, check to see that fence doesn't catch on posts or sink anywhere; stretch fence slowly so that it can "set."

While stretching, keep stay wires as nearly vertical as possible. In other words, never pull top or bottom of fence very far ahead of the other.

See No. 3 "Tension Curves" for amount of stretching needed. When fastening fence to line posts, staple top and bottom line wires first, then alternate line wires. Each strand of barbed wire, of course, should be stapled to all posts.

Before removing the stretcher, loosen and slide three or four stay wires toward stretcher. This will provide free ends to wrap around the post. Starting with the center line wire, staple, cut and wrap it around the post, splicing the wire to itself, as shown in Figure 6. Staple, cut, wrap and splice every alternate line wire except top and bottom. Then remaining line wires should be stapled; cut, wrapped and spliced, leaving bottom next to last. Staple and cut, etc., top line wire last.

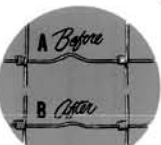
### 15. Stile

Don't climb fence or let others do so. Repeated climbing, particularly at the same spot, will break down the best of fences. A stile should be installed if fence line must be crossed repeatedly between gates.

### 16. Maintenance Instructions

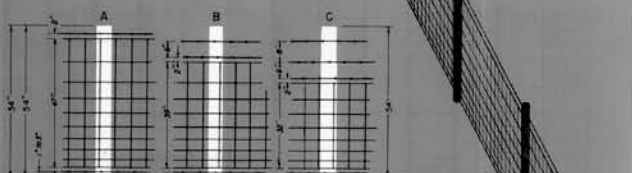
- Like any farm implement or building, a good fence must be inspected periodically and maintained if it is to have a long and satisfactory life. Keep fence row cleared of weeds and brush.
- Keep fence wires properly stretched. In slack sections of fence use "crimper" to add tension curves as needed. Don't allow crushed-down wires to stay that way.
- Make sure that fence is always securely fastened to posts.
- Splice broken wires in woven wire fence to prevent further damage.
- Check end, corner and stretcher posts and braces to be sure they are doing their jobs properly—reset and repair, if necessary.

In certain soils, fence posts up to 4" diameter can be power-driven. If pointed posts are purchased, they can even be hand-driven in areas where soil is loose.



### Wire Spacing

(All posts should be pressure-treated wood.)



These various wire spacings are based on 6 1/2" or 7" posts set 54" above ground and 24" or 30" below ground and can be considered standard practice (See Designs A, B, C, E and F).

For very low fences where posts shorter than 6 1/2" or 7" would be more economical and appropriate, such as 6" these such posts may be set 24" into the ground and 48" above. See Design D, G and H. For Design H, if only 42" above ground is desired, a 6" post would have to be set 30" into the ground.

The 2" space between bottom of woven wire fence and ground can be closed up by attaching one strand of barbed wire, as shown in Designs A, B, C and D. Design E is shown (5 strands barbed wire) and F (6 strands barbed wire) for those who may need a higher fence.

