TIPS & POINTERS FOR INSTALLING GATES & POSTS

INTRODUCTION

Our comprehensive plans and instructions offer guidance on how to construct a few different, common sized rail gates. Our plans have set sizing based on what we have found to be common and functional but if those set sizes do not fit your needs, we encourage you to use our plans and instructions as a starting point and to make the adjustments you need to them. Remember that if you change the overall width or height of the gate that the length and cut angles of the diagonal brace(s) will change. How to determine and cut the angles of the diagonal brace(s) to fit any gate size is explained and pictured, in the written build instructions.

There are many components to a well functioning gate system; Proper post selection and setting, quality gate construction, and proper hardware selection all function together to make a useful, long lasting, and visually pleasing gate.

COMMON ISSUES

Some of the most common issues found with exterior gates are sagging or posts moving. These factors not only affect the look of the gate but also its functionality over time. Wood expands and contracts as well as twists and warps with changes in temperature and humidity. Similarly, areas with heavy frost can see movement over time of posts installed in the ground. While we cannot eliminate these issues entirely, we can implement solutions to help minimize the effects of these variables. Gates that are built with sturdy construction and diagonal support(s) and additionally paired with quality and potentially adjustable hardware will have the best chance of standing the test of time.

Another common issue we see, especially for larger gates, is often people will attempt to install their gates with minimum space tolerances like you might see used on a door in a house. By providing more space between the gate and posts you can sometimes mitigate issues caused by expansion and contraction of lumber, and from posts heaving or leaning over time. It is better to have a bit more space and not need it than not to have enough from the start, so plan accordingly. The rail gate plans we offer describe a recommended space between posts; this can vary depending on the hardware you have selected to use so pay close attention to these details.

HARDWARE CONSIDERATIONS

We recommend you consider the following points when ordering your hardware, these points can help in maintaining proper functionality of your gates over time and assist in preventing damages to your gates.

<u>Adjustable Hinges</u>

The most basic solution to some of these common issues is to ensure your hinges are heavy duty and adjustable. This will allow for small adjustments to be made later to help offset the moving of posts or the sagging of gates. Your hardware choice is important, but it also needs to be paired with well set posts and quality gate construction.

Cane Bolts

The use of cane bolts (drop rods) is a necessity in most installations of double gates. In a double gate installation, you pin one gate in the closed position to the ground so that you may latch the second gate to something stable. This provides you with a gate system that has an operable pedestrian gate and a secondary gate that you can open for the times you need to get machinery or vehicles through. Additionally cane bolts in a double gate configuration can allow for both gates to be held in the open position, preventing your gates from being closed by the wind as you and your equipment or vehicles pass through.

Gate Stops

We strongly advise the use of a gate stop in single gate configurations. It is a simple step that ensures your gate stops in the closed position before it puts any excessive force on the latch or hinges. Every door in your home has a stop built into the millwork to ensure the door stops in the correct position. It is even more important for gates, as exterior gates are subject to wind gusts as well as slamming from gate closers and people. Gate stops are an ounce of prevention to ensure the gate operates as intended and will continue to operate as intended.

GENERAL TIPS FOR THE SNUG COTTAGE HARDWARE RAIL GATE CONSTRUCTION

Consider the use of your gate. Is your gate going to be used daily? Is it going to be used by many people? Is heavy machinery going to be driven through it regularly? Is it attached to a fence around a pool? Answering these questions will point you in the right direction when you are constructing your gate and considering hardware. If you would like assistance in selecting hardware for these purposes, we would be happy to talk them through with you. Please feel free to give us a call.

We always recommend having your hardware in hand before beginning to build any of our gate plans. Doing so will help in forming a course of action for installing your hardware. Additionally, it will allow you to see any offsets or space requirements needed to install your selected hardware. Read any instructions provided and try to visualize how best to use what you have.

Use true 1" thick boards. The construction of any of our rail gate plans use three layers of 1" material stacked up to make a 3" thick gate. You can buy this in most regions readily available from your local lumber yard as decking lumber. It is sold as 1-1/4" but comes dressed to a full inch. Do **not** buy 1" x 6" lumber as it usually comes dressed to a 3/4" dimension.

Think about the placement of the hardware you are using as it can differ from gate to gate depending on your needs and choices. We recommend placing painters' tape on the gate as you build it where the hardware will sit. This will provide a visual cue to keep you from accidentally installing carriage bolts and screws where hardware needs to go in later steps.

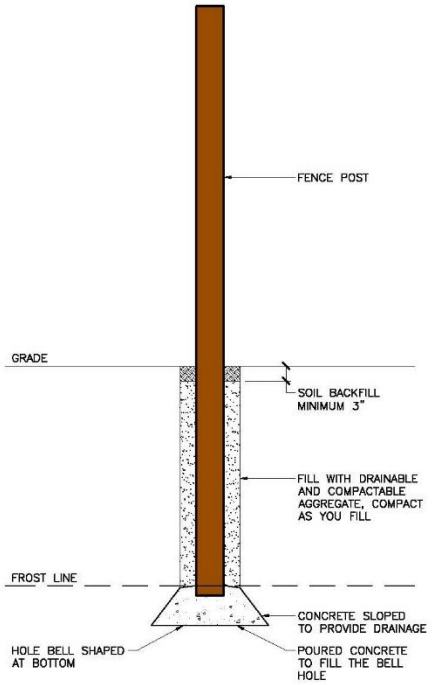
If you read our build instructions carefully you will notice that all the screws we install are done so from the middle layer out leaving no visible screws on the exterior of the finished product. It is easy to screw together the first two layers from the middle out, but we use clamps to temporarily hold the third layer in position while we install the carriage bolts through the center of each intersection. This makes for a clean finished product with the only visible fasteners being the carriage bolt heads. You can choose to do it anyway you like, but this method is our preference and provides a nicely finished product.

Hold or clamp a scrap piece of lumber on the backside of the gate when drilling your holes to minimize the tear out the drill will cause on the backside.

POST INSTALLATION

The Post Hole

1. The diameter of the hole should allow for a 2" clearance between the post and the hole's edge.
2. Ensure that the depth of the post hole extends well below the frost line.
3. Keep tree roots away from the post. Ensuring that when they grow, they will not move the post.
4. Remove all stones and boulders that may push against the post.
5. Dig out the side walls of the bottom of the hole to make a bell shape, this will help prevent the post from rising in the ground.
6. Fill the bell of the hole with concrete once the post is in place, let it set, and fill the remainder of the hole with compactable aggregate (A-Gravel, chips and dust, etc.) allowing for water drainage away from the wooden post.



HAND DUG OR AUGURED HOLE WITH BELL END

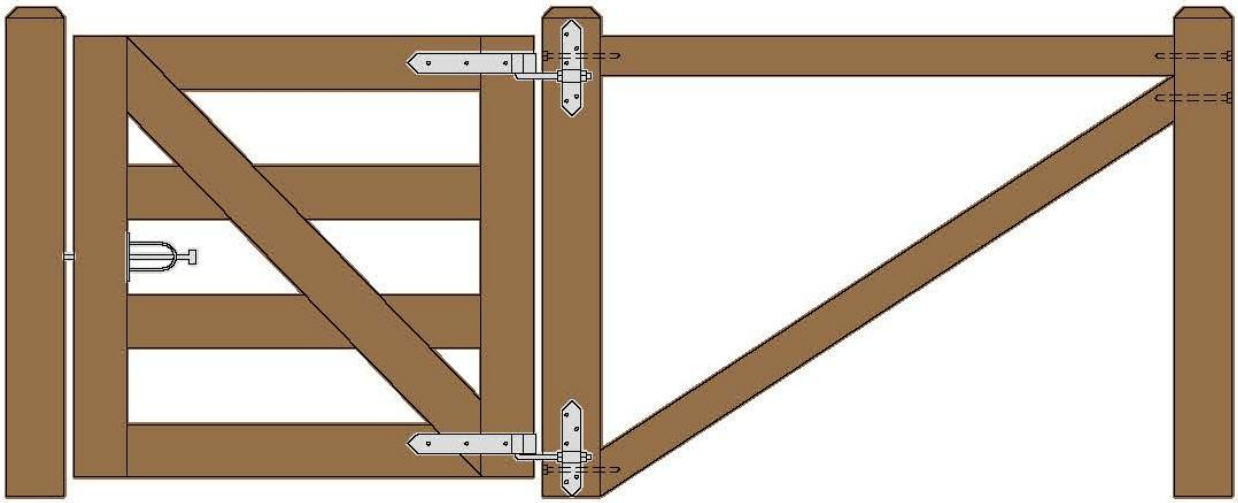
The Hing Post

1. The hinge post should be of sufficient size to support the weight of the gate. We do **not** ever recommend the use of 4" x 4" wooden posts, instead use 5" x 5" wooden or larger posts as the additional material will provide greater support. Larger gates need larger posts.
2. For larger gates we suggest bracing the hinge post to the first line post. This extra support has the gate pulling on two posts rather than just one and it helps eliminate the post leaning over time.
3. This idea is not applicable for all scenarios, but you may also wish to install your posts so that they lean out and away from the gate at the top by 1/8" or so in 4' of height. It's a small detail but sometimes under the weight of a heavier gate the gate posts can lean in a little. By compensating for this during the installation of the posts you can avoid any potential issues later.

POST BRACING

For longer and heavier gates, we recommend bracing between the hinge post and the first line post of your installation. The construction of this brace should follow the reference diagram seen below. Use rigid or structural lumber for bracing. The top horizontal brace should fit tightly between the two posts. Lags or structural screws should be installed from the opposite side of the posts and should extend at least 3" into the horizontal brace. The diagonal brace should butt up against the underside of the horizontal brace at the line post and slope downwards to fit tightly against the gate post just above ground level. Lags or structural screws should be installed from the opposite side of the posts and should extend at least 3" into the diagonal brace.

If a wire brace is preferred, it should extend from the high side of the hinge post to just above ground level on the first line post. This method should also use a rigid horizontal lumber brace across the top of the void space between the hinge post and first line post.



SMALL ANIMAL PROOFING (OPTIONAL)

If you need to keep pets or small animals in or pests out, then install a galvanized wire fence between the second and third layers of boards. Cut your wire fence to size, allowing it to extend into the outer rails and stiles by roughly 1-1/2“. Using a table saw, cut a kerf for the wire into the backside of the third layer of boards. Install the wire fence using staples onto the second layer of boards, once fastened install the final layer of boards using carriage bolts. Your pre-cut kerf will allow the board to fit tightly and provide a nice finish detail. When installing the wire be conscious of where hardware will be installed, cut the wire fence around these areas prior to installing it to avoid hitting with drill bits later.

If you have selected the Central Eye Hinges (8312), they require about 4-1/2“ to 5” between the gate and the post. If you are trying to keep small animals in or out, we suggest filling the space with another piece of lumber screwed to the post above and below the hinges. These filler blocks should not be tight against the gate as they will impede the swing of the gate if installed to be touching it. Additionally, they should not be installed tight against the hinges as you want to leave room for some adjustment later on.

To order hardware required to complete this gate, please contact...

Snug Cottage Hardware
Phone (800) 637-5427 or Email info@snugcottagehardware.com

We would love to see what you build! Please send us photos when your project is complete.

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