

STRONG-TIE

**DIY**

TM



**SIMPSON**  
Strong-Tie

Projects for a strong  
and beautiful home

# Inspiration at home



Look for the **Project Plans** icon. When you see it on a project page, it means there are project plans available at [strongtie.com/diy](https://strongtie.com/diy). These plans will offer the instructions, lumber cut lists, connectors and fasteners needed to get the job done.

Strong-Tie DIY™ offers inspirational ideas to accentuate the beauty and improve the function of your home. Whether it's organizing your garage, fixing a gate or building a backyard pavilion, Simpson Strong-Tie has creative solutions for building with style and strength. Let this guide inspire you to build projects that will enhance your living space.

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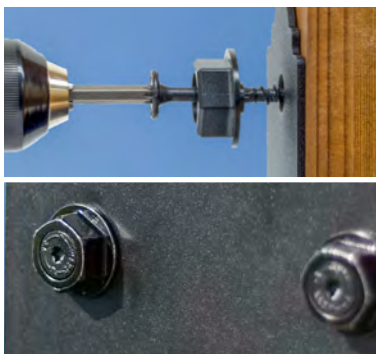
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# Outdoor Accents<sup>®</sup>

decorative hardware



## Hex-Head Washer and Structural Wood Screws

The Outdoor Accents hex-head washer provides the appearance of a bolted connection, but with an easier and faster installation. Combined with the Outdoor Accents structural wood screw, it gives you a structural load-rated solution.



## APA 90° Angles

The APA angles can fix a chair or tie together beams and rafters for a patio cover or other shade structure. The APA21 (right in photo) is great for connecting smaller lumber or for strengthening a wobbly chair. The APA4 angle (left) makes connections strong enough for 4x (or larger) lumber.



## APDMW Decorative Washer

Add Mission-style flair to your connection when you install it with the Outdoor Accents structural wood screw and hex-head washer.

Many of the inspirational outdoor projects throughout this guide were built using Simpson Strong-Tie® Outdoor Accents® decorative structural wood connectors and screws. To see the complete line of Outdoor Accents decorative hardware, visit [strongtie.com/outdooraccents](http://strongtie.com/outdooraccents).



### **APLH Concealed-Flange Light Joist Hanger**

APLH light hangers connect 2x joists to beams — perfect for that stylish patio cover you've been thinking about. Available in a range of sizes, the hangers install easily with the Outdoor Accents® connector screw.



### **APL L Straps and APT T Straps**

These straps deliver decorative appeal and lateral strength to any connection where one lumber piece intersects another at a 90° angle. Available in sizes to accommodate 4x and 6x lumber, both straps are easily installed with Outdoor Accents structural screws and hex-head washers.



### **APB Adjustable Post Base**

These post bases secure a post or column to concrete and are perfect for outdoor projects such as pergolas, patio covers and other top-supported structures. Want a more finished look to that installed post base? Try the APBDSP decorative post base side plate.

# Entertain



Create an attractive and unique space for entertaining guests with distinctive furniture.



<b>1</b>	<b>Rustic Bar</b> .....	8
	Inspired by the grand hotels of the Pacific Northwest	
<b>2</b>	<b>Faux Barnwood Table</b> .....	10
	A staple of American culture	
<b>3</b>	<b>Mobile Cooler</b> .....	12
	Puts the cool in storage	
<b>4</b>	<b>Picnic Table</b> .....	14
	The nexus of family gatherings	



1

# Rustic Bar





Distress new lumber to create a rustic feel that pays homage to a bygone era. This bar is built with practical features and Outdoor Accents® decorative hardware to help today's bartender entertain guests in style.



Simpson Strong-Tie®

#### HARDWARE NEEDED

- Outdoor Accents connectors
  - APL4 L strap ties
  - APA4 and APA21 angles
  - APBDSP decorative post base side plates
  - APDJT2-4 deck joist ties
  - APDMW decorative washers
- Outdoor Accents 3½" and 5½" structural wood screws and hex-head washers
- GA2 gusset angles
- 2½" Deck-Drive™ DSV Wood screws



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2

# Faux Barnwood Table



Recreating a rustic barnwood table look with affordable reclaimed lumber can be difficult. DIY expert Jaime Costiglio has solved this dilemma by creating a beautiful faux barnwood table with off-the-shelf lumber and Outdoor Accents® decorative hardware.



Simpson Strong-Tie®

#### HARDWARE NEEDED

- Outdoor Accents APA4 angles
- Outdoor Accents 3½" structural wood screws and hex-head washers



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DESIGNER

Jaime Costiglio

[jaimecostiglio.com](http://jaimecostiglio.com)



3

# Mobile Cooler



Create a stylish mobile cooler that will make your guests envy your ingenuity and style. Blending an off-the-shelf cooler with the right lumber and Outdoor Accents® decorative hardware, this piece exudes cool and provides ample storage.



Simpson Strong-Tie®

#### HARDWARE NEEDED

- Outdoor Accents connectors
  - APT4 straps
  - APDMW decorative washers
- Outdoor Accents connector screws
- Outdoor Accents 3½" structural wood screws and hex-head washers
- 1¼" Deck-Drive™ DSV Wood screws
- 3" Deck-Drive DSV Wood screws
- 6" Strong-Drive® SDWS Timber screws



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# Picnic Table





Gather your family and friends to enjoy meals, games and togetherness as you sit at this impressive picnic table. Whether at the campground or in the backyard, this picnic table provides sturdy seating and plenty of surface space.



Simpson Strong-Tie®

**HARDWARE NEEDED**

- 3" Strong-Drive® SDWS Framing screws
- 8" Strong-Drive SDWS Timber screws



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# Relax



- 1 Party Pavilion** ..... 18  
Celebration and relaxation
- 2 Meadow Pergola** ..... 20  
Gathering place for a wider expanse
- 3 Floating Deck with Pergola** ..... 22  
Elevate your backyard above the rest
- 4 Backyard Pergola** ..... 24  
Accentuate your yard
- 5 Attached Patio Cover** ..... 26  
Add style and shade

Build something extraordinary yet affordable that provides a practical place to kick back and an inspirational focal point for your outdoor living space.

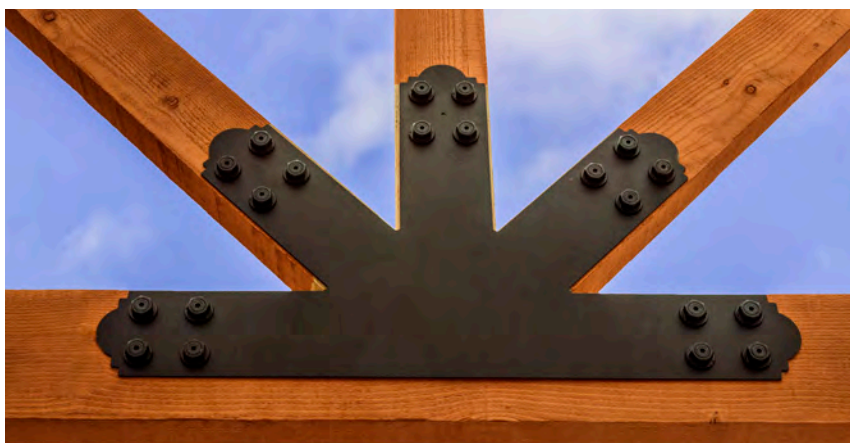
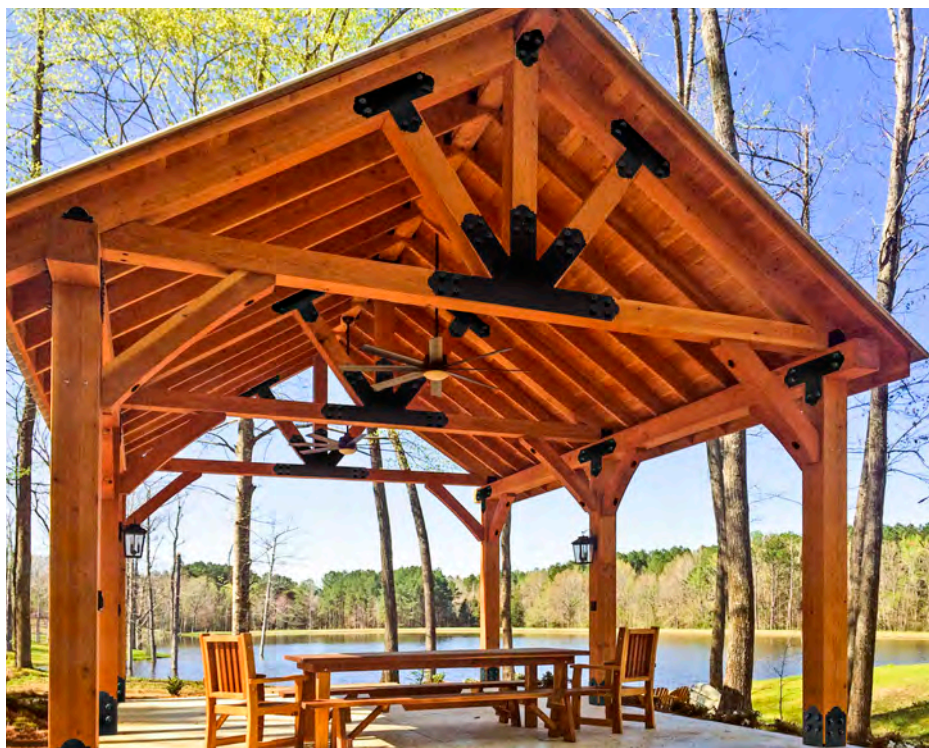


<b>6</b>	<b>Detached Patio Cover</b> .....	28
	Sturdy does it	
<b>7</b>	<b>Entertainer's Patio Cover</b> .....	30
	Entertain with elegance and ease	
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	Take refuge from your work and relax	
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	Bring indoor comfort outdoors	



1

# Party Pavilion



Create the undeniable centerpiece of your outdoor living space. This handsome pavilion offers a practical space for both special celebrations and daily sun protection.



Simpson Strong-Tie®

#### HARDWARE NEEDED

- Outdoor Accents® connectors
  - APGP812 decorative gable plates
  - APT6 T straps
  - APA6 angles
  - APB88 adjustable post bases
  - APB88DSP decorative side plates
- Outdoor Accents 5½" structural wood screws and hex-head washers





# Meadow Pergola





Transform your open space with a beautiful pergola that brings family and friends together, built with Outdoor Accents® decorative hardware to withstand earthquakes or high wind.



Simpson Strong-Tie®

#### HARDWARE NEEDED

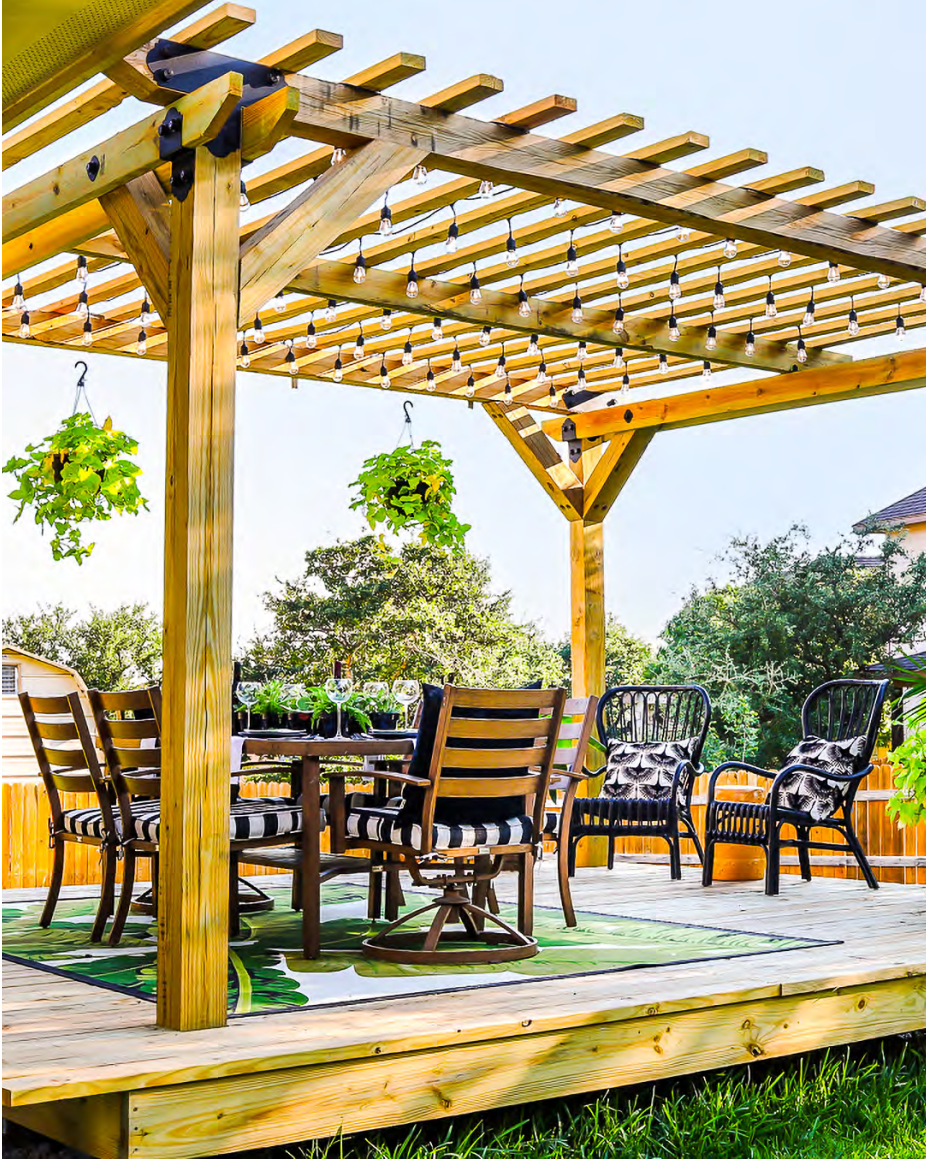
- Outdoor Accents connectors
  - APA4 and APA6 angles
  - APDJT2-6 deck joist ties
  - APL6 L straps
  - APT6 T straps
  - APB66 post bases
  - APDMW decorative washers
- Outdoor Accents 5½" structural wood screws and hex-head washers
- Outdoor Accents 3½" structural wood screws and hex-head washers
- 3½" Deck-Drive™ DSV Wood screws
- 5⁄8"-diameter anchor bolt



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3

# Floating Deck with Pergola



Elevate your perspective with a deck that sits just above ground. DIY expert Jen Woodhouse from The House of Wood skillfully designed this floating deck with an impressive pergola that offers shade during the day and casts atmospheric lighting in the evening.



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#### HARDWARE NEEDED

##### Deck

- BCS2-2/4Z post caps
- LUS28Z joist hangers
- H1 hurricane ties

##### Pergola

- Outdoor Accents® connectors
  - APT6 T straps
  - APDJT2-6 deck joist ties
  - APDMW decorative washers
- Outdoor Accents 3½" structural wood screws and hex-head washers
- 3" Deck-Drive™ DSV Wood screws



DESIGNER

Jen Woodhouse

[jenwoodhouse.com](http://jenwoodhouse.com)



4

# Backyard Pergola



Provide big benefits with this smaller wood pergola built with Outdoor Accents® decorative hardware. It offers a respite from the sun while furnishing the perfect place to read, eat or relax.



Simpson Strong-Tie®

#### HARDWARE NEEDED

- Outdoor Accents connectors
  - APT4 T straps
  - APDJT2-4 deck joist ties
  - APDMW decorative washers
  - APA4 angles
  - APA21 angles
  - ABP44 adjustable post bases
- Outdoor Accents 3½" structural wood screws and hex-head washers
- Outdoor Accents connector screws



 PROJECT  
PLANS

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5

# Attached Patio Cover





Relax, dine and enjoy lively get-togethers under this patio cover designed to provide comfort for all your al fresco gatherings. Building this cover with Outdoor Accents® code-listed connectors and fasteners will offer long-lasting strength and resistance to earthquakes and high winds.



Simpson Strong-Tie®

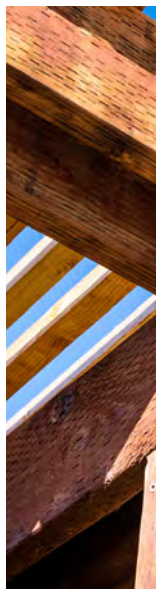
#### HARDWARE NEEDED

- Outdoor Accents connectors
  - APA21 angles
  - APT6 T straps
  - APB66 adjustable post bases
  - APDMW decorative washers
  - APLH26 concealed-flange light joist hanger
- Outdoor Accents 5½" structural wood screws and hex-head washers
- Outdoor Accents connector screws



6

# Detached Patio Cover



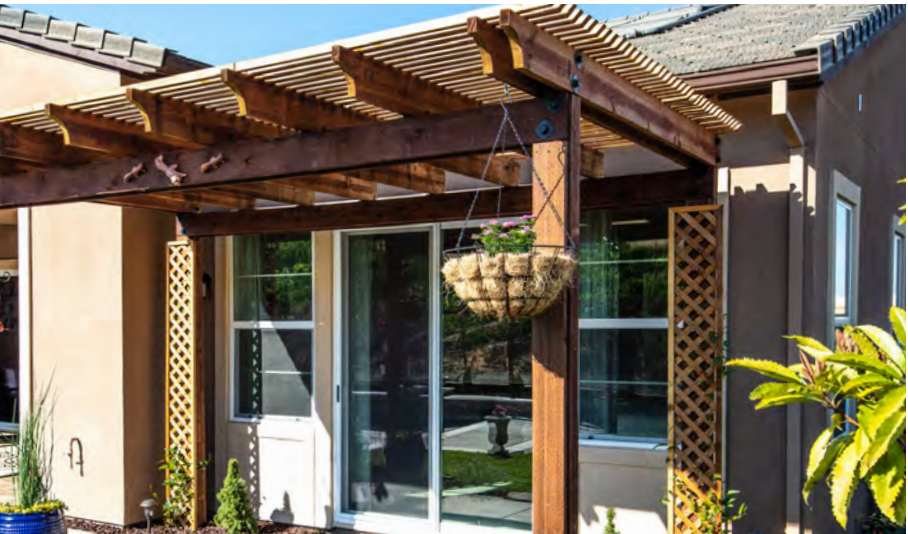
Acquire more shade and expand your living area with this freestanding patio cover. Even detached from your home, this patio cover maintains structural strength and resistance to high winds and earthquakes.



Simpson Strong-Tie®

#### HARDWARE NEEDED

- Outdoor Accents® connectors
  - APLH26 concealed-flange light joist hangers
  - APDMW decorative washers
- Outdoor Accents 5½" structural wood screws and hex-head washers
- 3" Deck-Drive™ DSV Wood screws





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# Entertainer's Patio Cover



Construct an entertainment and relaxation outdoor gathering space that family and friends will never want to leave with this stylish patio cover.



Simpson Strong-Tie®

**HARDWARE NEEDED**

- Outdoor Accents® connectors
  - APA21 angles
  - APB66 post bases
  - APT6 T straps
- Outdoor Accents 3½" and 5½" structural wood screws and hex-head washers
- Outdoor Accents connector screws





# Shade Arbor





Suspend a hammock and get protection from the sun so you can kick back and unwind. Plant some climbing plants along the side and watch them grow.



Simpson Strong-Tie®

#### HARDWARE NEEDED

- Outdoor Accents® connectors
  - APDMW decorative washers
  - APA21 angles
- Outdoor Accents 5½" structural wood screws and hex-head washers
- Outdoor Accents connector screws



# Outdoor Living Room



Extend your living space with shade protection from a solid or slated roof. Patios come in all shapes and sizes, and so should the structures that provide their shade.



Simpson Strong-Tie®

#### HARDWARE NEEDED

- Outdoor Accents® connectors
  - APA21 angles
  - APA6 angles
  - APB66 adjustable post bases
- Outdoor Accents 3½" structural wood screws and hex-head washers
- Outdoor Accents connector screws





# Organize



- 1 Workbench** ..... 38  
Customize your workspace to suit you
- 2 Heavy-Duty Shelving Unit** ..... 40  
Give your heavy stuff a solid lift
- 3 Over-the-Car Shelving Unit** ..... 42  
Create more storage space in your garage
- 4 Garden Tool Storage** ..... 44  
Grow plants, not clutter

Let these strong, modular storage units and workbenches do the heavy lifting. They'll store and organize your outdoor gear and tools for frequent access. It's easier than you think to declutter.



- 5 Sports Equipment Organizer** ..... 46  
Organize all your gear
- 6 Mudroom Bench** ..... 48  
Help messes stay in their place
- 7 Log Holder** ..... 50  
Keep your firewood in order

1

# Workbench





Customize the size of this sturdy workbench easily to fit your space with 2x4 lumber and Rigid Tie® connectors. This workbench is strong, with abundant storage for equipment and tools, along with a wide surface area to create and build.



Simpson Strong-Tie®

#### HARDWARE NEEDED

- Rigid Tie® RTC2Z connectors
- CF-R shelf bracket
- #8 x 1¼" wafer-head screws



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2

# Heavy-Duty Shelving Unit



Build a shelving unit for your garage or basement in a cinch with 2x4 lumber and Simpson Strong-Tie® Rigid Tie® connectors. This sturdy unit is strong enough to support your heaviest boxes, and can be built to a variety of lengths to accommodate your specific needs.



Simpson Strong-Tie®

#### HARDWARE NEEDED

- Rigid Tie RTC2Z connectors
- #8 x 1¼" wafer-head screws
- #6 x 1¼" flat-head screws



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3

# Over-the-Car Shelving Unit



Make extra storage space in the garage regardless of the size of your vehicle. This nifty unit is perfect for storing the important, but infrequently accessed, holiday decorations.



Simpson Strong-Tie®

#### HARDWARE NEEDED

- Rigid Tie® RTC2Z connectors
- Rigid Tie RTA2Z connectors
- #8 x 1¼" wafer-head screws

 PROJECT  
PLANS

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# Garden Tool Storage





Focus on tending your garden, not searching for your tools, with this easy-to-build caddy that keeps your workspace tidy. Use Simpson Strong-Tie® Rigid Tie® connectors and either 2x3 or 2x4 lumber to maximize your space.



Simpson Strong-Tie

#### HARDWARE NEEDED

- Rigid Tie RTC2Z connectors
- #8 x 1 1/4" wafer-head screws
- FB24Z fence brackets



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# Sports Equipment Organizer



Make being late to practice a thing of the past. This sports organizer is easy to build and alleviates clutter.



Simpson Strong-Tie®

**HARDWARE NEEDED**

- Rigid Tie® RTC2Z connectors
- Rigid Tie RTU2 connectors
- #8 x 1¼" wafer-head screws



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# Mudroom Bench



Sit comfortably while removing your shoes or boots, as you stow them all in this mudroom bench that houses your outerwear without bringing the mess indoors.



Simpson Strong-Tie®

**HARDWARE NEEDED**

- Rigid Tie® RTC2Z connectors
- FB24Z fence brackets
- CF-R shelf brackets
- 1/4" x 2" Strong-Drive® SDS Heavy-Duty Connector screws





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# Log Holder





Keep your firewood dry and tidy with this sturdy log holder that can be built in less than an hour so you can start stoking that fire.



Simpson Strong-Tie

**HARDWARE NEEDED**

- Rigid Tie RTC2Z connectors
- #9 x 1½" Strong-Drive® SD Connector screws



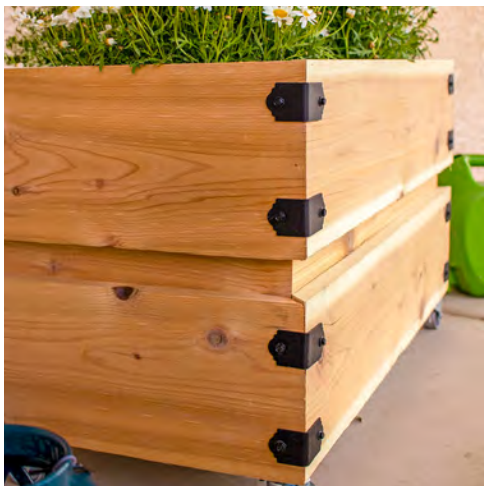
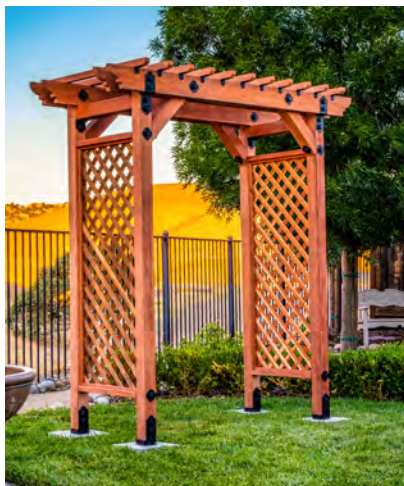
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# Grow



Construct stylish and functional structures that accent your yard and help grow something new. It's well within reach with the right connectors and fasteners.



- 1 Chicken Coop** ..... 54  
Happy hens produce more eggs
- 2 Garden House** ..... 56  
An oasis for blooms and butterflies
- 3 Lattice Arbor** ..... 58  
Upward mobility for your plants
- 4 Rolling Planter Box** ..... 60  
For blooms on the go



1

# Chicken Coop



Hear the roosters crow when they see all the happy hens in this modern chicken coop from DIY expert Jamison Rantz of Rogue Engineer. Your hens will feel right at home producing eggs for years in this cozy roosting space.



Simpson Strong-Tie®

#### HARDWARE NEEDED

- FB26 fence brackets
- FB24Z fence brackets
- A21 angles
- Rigid Tie® RTA2Z connectors
- 2½" Strong-Drive® SDWS Framing screws
- 1¼" Deck-Drive™ DSV Wood screws
- #9 x 1½" Strong-Drive SD Connector screws
- 0.131" x 1½" Strong-Drive Connector nails



[strongtie.com/diy](http://strongtie.com/diy)



DESIGNER

Jamison Rantz

[rogueengineer.com](http://rogueengineer.com)



# Garden House





Plant flowers, vegetables or herbs in this versatile garden house that offers a peaceful respite for migrating birds or butterflies.



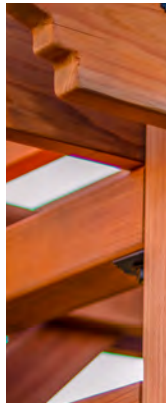
Simpson Strong-Tie®

#### HARDWARE NEEDED

- KBS1Z knee-brace stabilizers
- 66L strap ties
- Rigid Tie® RTA2Z and RTT22Z connectors
- L30 and L50 skewable angles
- A35 angles
- SD9 x 1½" and SD10 x 2½" Strong-Drive® SD Connector screws



# Lattice Arbor





Grow climbing plants with this latticed garden arbor. Assembled with Outdoor Accents® connectors and fasteners, this beautiful arbor adds sophistication to your yard.



Simpson Strong-Tie®

#### HARDWARE NEEDED

- Outdoor Accents connectors
  - APA4 and APA21 angles
  - APDJT2-4 deck joist ties
  - APB44 post bases
  - APDMW decorative washers
- Outdoor Accents connector screws and hex-head washers
- 3½" and 5½" Strong-Drive® SDWS Timber screws



[strongtie.com/diy](http://strongtie.com/diy)





# Rolling Planter Box



Roll this planter box around so your plants can follow the sun or shade as the seasons progress. Built by DIY expert Elisha Albretsen of Pneumatic Addict using common deck boards and Outdoor Accents® decorative hardware, this mobile planter gets you and your blooms moving.



Simpson Strong-Tie®

#### HARDWARE NEEDED

- Outdoor Accents APA21 angles
- Outdoor Accents 1½" connector screws
- 2½" Deck-Drive™ DSV Wood screws



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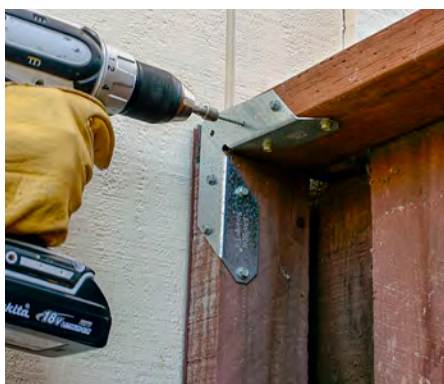
DESIGNER

Elisha Albretsen

[pneumaticaddict.com](http://pneumaticaddict.com)

# Mend

Use Simpson Strong-Tie® connectors to repair a leaning fence or broken gate inexpensively and in no time at all. Easily make those wobbly posts, sagging gates and broken rails a problem of the past.



<b>1</b>	<b>Fence Repair</b> .....	63
	Correct the tilt and secure your yard	
<b>2</b>	<b>Gate Repair</b> .....	64
	Swing it easy without replacing	
<b>3</b>	<b>Deck Repair</b> .....	65
	Safety is always a top concern	
<b>4</b>	<b>Furniture Repair</b> .....	66
	It's time to fix the wobble	



# Fence Repair

Replacing a fence can be difficult and expensive, so Simpson Strong-Tie offers a line of products designed to make reinforcing your existing fence posts easy and economical.



Simpson Strong-Tie®

#### HARDWARE SHOWN

- E-Z Mender™
- E-Z Base™
- A44 angles

 PROJECT  
PLANS

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# Gate Repair

Reinforce your gate to prevent it from leaning or sagging, which extends its effectiveness.



Simpson Strong-Tie®

#### HARDWARE SHOWN

- RTA2Z Rigid Tie® connectors



# Deck Repair

Have your deck evaluated by a building expert if it's old or worn. Repair or retrofit an unsafe deck before it needs replacing with Simpson Strong-Tie® connectors and fasteners.



## Simpson Strong-Tie®

### HARDWARE SHOWN

- LUS joist hangers
- DTT1Z holdowns
- DTT2Z tension ties
- Strong-Drive® SDWS Timber screws





# Furniture Repair

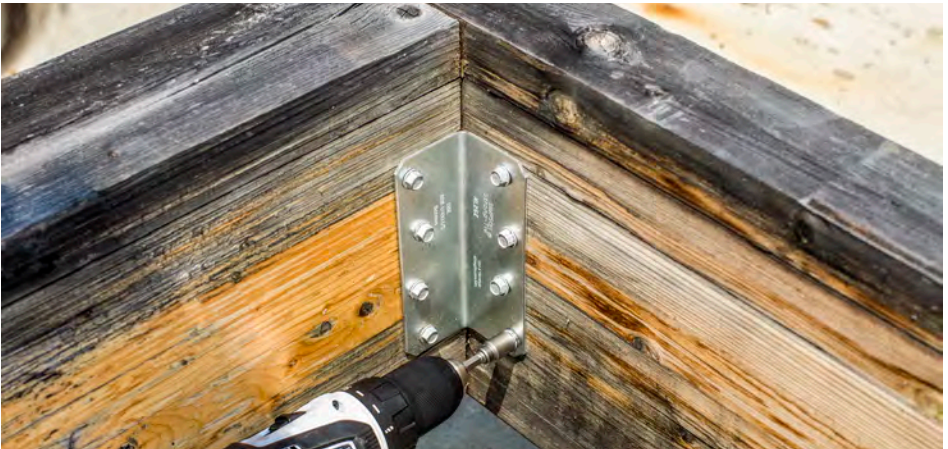
Make your furniture sturdier than the day you bought it by repairing wobbly legs and arms with these angles and other products from Simpson Strong-Tie<sup>®</sup>.



Simpson Strong-Tie<sup>®</sup>

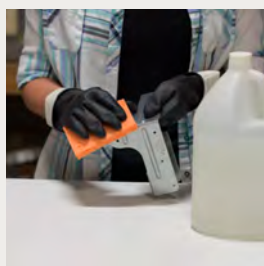
#### HARDWARE SHOWN

- A21 angles
- ML26 angles



# Customized Connectors

It's easy to add a unique dimension to your projects with just a splash of color on the connectors.



1. Use a rag and mineral spirits to remove oil and the bar code sticker from the connector.
2. Apply white vinegar with a rag or sponge to make the connector more receptive to paint. Rinse with water and dry thoroughly.
3. Use spray paint to coat the connectors.\* Choose a paint appropriate for outdoor or indoor use. To avoid drip marks, apply successive thin coats rather than a single heavy coat. Dry between coats.

\*If paint doesn't have primer, you'll need to prime the connector.

## Smart and stylish ways to improve your life.

The possibilities for smart, strong and stylish projects are endless. Are you inspired by what you see in this book? Have you built another DIY project that you would like to share? We want to see it! Visit [strongtie.com/diy](http://strongtie.com/diy) or follow Simpson Strong-Tie on social media and show us what inspires you.



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