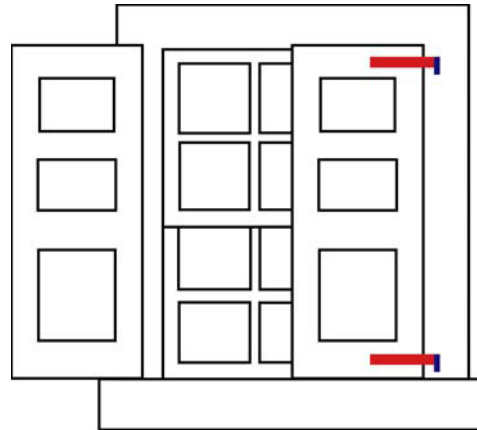


## SHUTTER HARDWARE INSTALLATION DETAILS

**STRAP HINGES** offer strength and versatility of mounting. They consist of two parts: a strap with a gudgeon (circular fitting) that mounts to the shutter and a pintle (pin fitting) that mounts to the house. A typical installation is shown to the right with the hinge in red and the pintle in blue. For especially large or heavy shutters, sometimes three hinges are used per shutter. John Wright's strap hinges come with a cast iron pintle that is mounted with screws to a wood surface. An optional lag screw pintle is available and can be installed in wood or masonry. See "Lag Mounting" below for more details.



**OFFSET** is the distance between where the hinge mounts and where the pivoting action takes place. Both the hinge and pintle have offset. The offset for the hinge and pintle are usually, but do not have to be, the same. The offset of  $1\frac{3}{8}$  inches for a strap hinge is shown to the right.



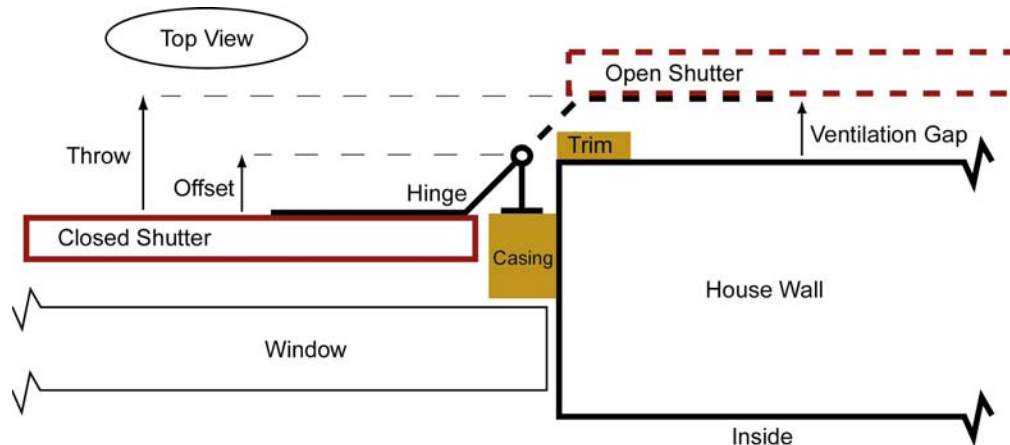
**THROW** is the sum of the offsets of the hinge and the mounting hardware. Normally, the throw is just twice the offset of the hinge.



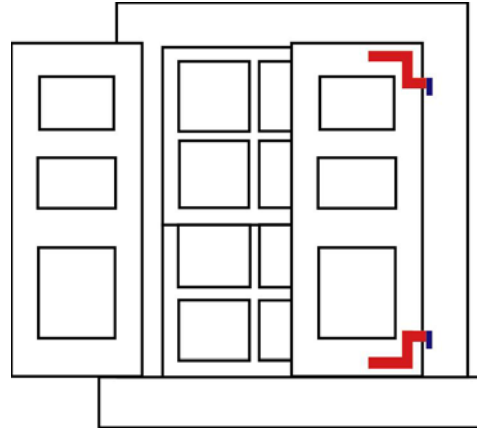
The throw of a strap hinge and pintle mount is shown to the left. Throw is measured with the hinge in the open position.

Throw matters because it allows shutters to swing clear of an exterior wall or trim that sticks out past the window casing or other mounting location. The figure at the bottom shows a top view of this situation. Here, the throw of the hinge allows the shutter to swing clear of the trim and allow a gap for air flow and ventilation between the house wall and the shutter in the open position. A ventilation gap of at least  $\frac{1}{2}$  an inch is recommended. Throw concepts apply to all types of hinges.

To find your minimum required throw, measure the distance from where the hinge will mount to the house to the outermost face of any trim or casing. Remember to add at least  $\frac{1}{2}$  an inch for a ventilation gap.



**NEW YORK STYLE HINGES** are similar in function to strap hinges but work as a right- and left-handed pair, as shown to the right. Offset and throw are determined for these hinges in the same way they are determined for strap hinges. Unlike strap hinges, New York hinges are offered with different offset options. A “new construction” version uses a pintle with  $2\frac{1}{8}$  inches of offset and a hinge with nearly zero offset.



**LAG MOUNTING** is available as an option for strap and New York style hinges. The lag mount replaces the standard pintle. Lags can be installed directly in wood with a pilot hole or in brick and other masonry using readily-available “lag shield” anchors, as shown below. The offset of a lag mount is not fixed and will vary depending on how deeply the

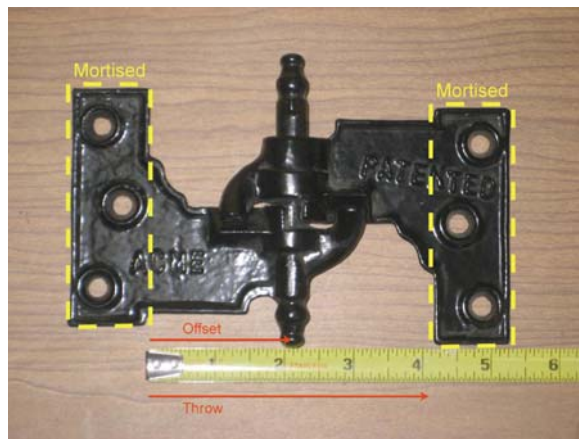
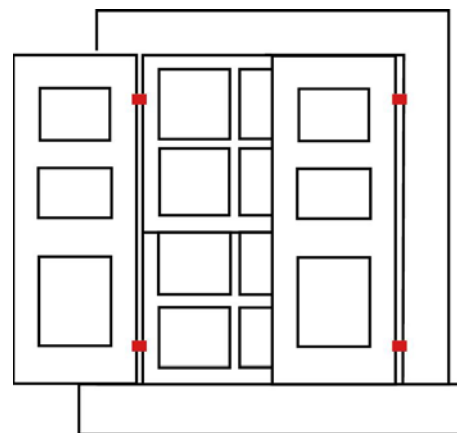


threads are installed. It is recommended that between 60 and 90 percent of the total thread length be installed in the mounting

surface. Offset is measured from the mounting surface to the center of the pintle, as shown to the right with a  $1\frac{1}{2}$ -inch offset.

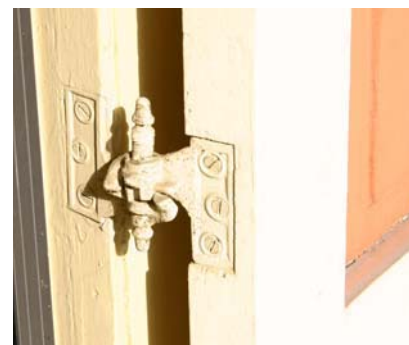


**ACME, LULL & PORTER HINGES** are mortised into the *edge* of the shutter and window casing. They use a once-patented design that helps to lock the hinge in the open position. The shutter is lifted up slightly to disengage the hinge and allow closure. The shutter can also be removed completely without

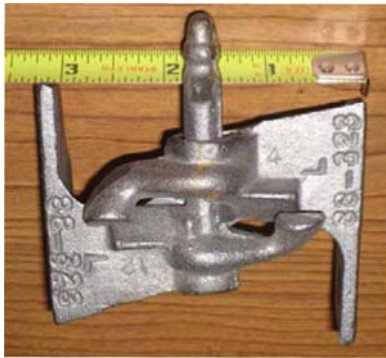


tools. Acme hinges work in left- and right-handed pairs and are marked for handedness. Each hinge has two halves: one with a pintle and another with a gudgeon.

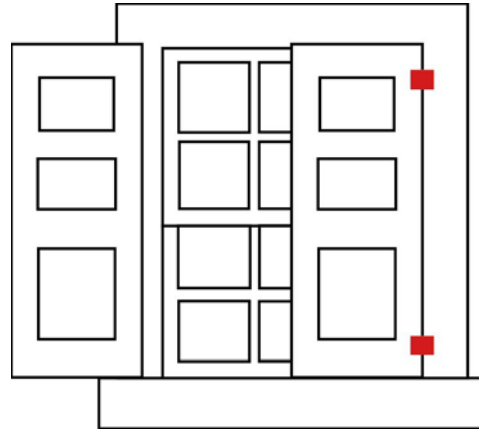
The pintle half is mounted to the window with the pintle pointing up. Offset is measured from the casing or shutter edge to the center of the pin. An offset of  $2\frac{1}{8}$  inches and a throw of  $4\frac{1}{4}$  are shown above with the hinge in the open position. The throw is twice the offset. The areas that mount into the mortised spaces are shown with dotted yellow lines.



**CLARK'S TIP HINGES** are nearly identical in operation to Acme, Lull & Porter hinges but are surface-mounted.



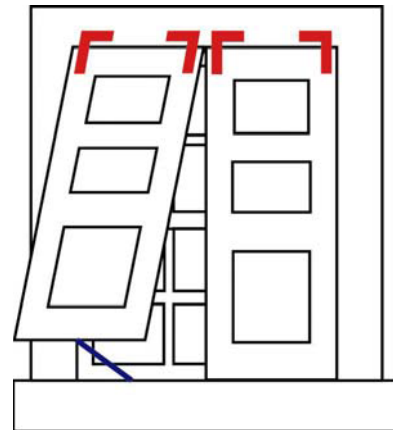
They are commonly used when there is not adequate wood exposed to use an edge-mount hinge. Throw is measured for this hinge in the same way it is measured for a strap hinge. To the left, a throw measurement of  $3\frac{1}{4}$  inches is shown



with the hinge in the open position. The pintle half is mounted to the window with the pintle pointing up.

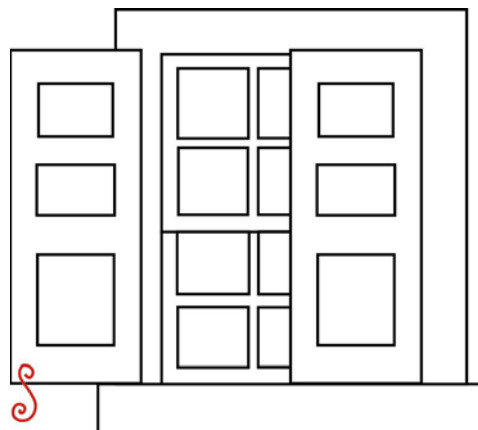
**BERMUDA HINGES** are surface-mounted but are mounted at the top of the shutter. They work in left- and right-handed pairs, but John Wright's unique design allows a single hinge to be used in either left- or right-hand applications.

Bermuda-hinged shutters are held open with a shutter stay that consists of a long hook-and-eye assembly. The base of the hook is usually mounted at or near the bottom of the window, and the eye is mounted on the inside of the shutter near the bottom. Stays can be mounted in the middle of the shutter or toward the outside edge. Mounting in the middle is stronger, but mounting at the edge allows the hook to be more easily stowed when not in use. Additional eyes are available to stow the hook when the shutter is closed. Considerable flexibility in mounting the stay is possible, but it is recommended that the shutter be held open at an angle no greater than sixty degrees from the building. For very large shutters, two stays may be required.



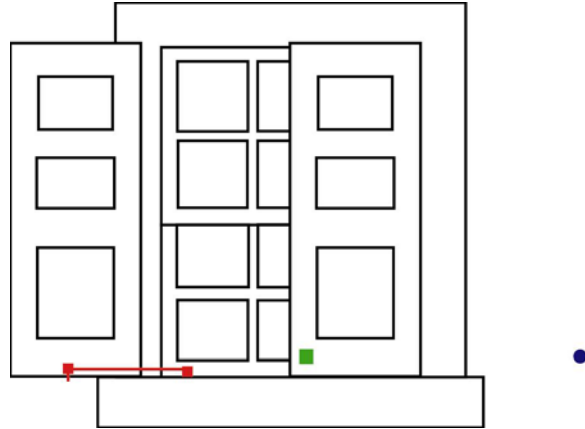
**SHUTTER DOGS** are traditionally used to hold shutters in the open position. Shutter dogs have a through-hole and are mounted so that they can be rotated to move out of the way of the shutter when it opens. The dog is then rotated in front of the open shutter to keep it open. Dogs are installed at the far edge of the shutter when it is open.

Dogs are weighted so that gravity prevents them from rotating freely on their own. John Wright also produces a unique magnetic shutter dog holder (#88-439) that further helps keep the dog from rotating when holding the shutter open. Shutter dogs are commonly mounted in one of three ways. A special lag screw with a washer and hairpin clip can be used for mounting in wood and masonry surfaces. A lag shield (see "Lag



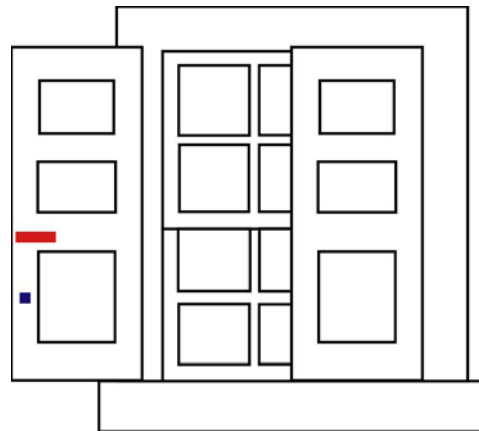
Mounting” above) is required for masonry. Lags provide some adjustment range depending on how far the threads are engaged. Dogs can also be mounted with a round or square post mount. Post mounts have a base with screw holes and a post that extends and engages the hole in the dog. Post mounts are designed for wood surfaces. Finally, some dogs (#88-265 through -268) can be mounted using a sill mount. This attaches to a wood window sill and extends below the bottom of the open shutter.

As an alternative to shutter dogs, bullet catches (#88-470, -475) can also be used to hold shutters open. As shown to the right, bullet catches consist of a spring keeper (green) that mounts to the bottom outside of the shutter and a bullet-shaped post with a screw (blue) that mounts to a wood building surface behind the open shutter. When the shutter is opened, the spring keeper engages the post and locks in place to hold the shutter open.



Yet another alternative to shutter dogs, also shown to the right, is a hook and eye (red). The hook is attached to the wood window sill and the eye mounts on the inside of the shutter near the bottom. The shutter is opened and the hook is inserted into the eye.

**SLIDE BOLTS** are traditionally used to hold pairs of shutters in the closed position. As shown to the right, they are mounted on the inside of the shutters (red). Mounting position must allow the bolt to be reached from inside the home through the window opening. This will usually require mounting the bolt on the lower one half of the shutter. Slide bolts have two halves: the bolt and the catch. The bolt mounts to one shutter and the catch mounts to the other. Pull rings are helpful to make using slide bolts much easier. Pull rings allow the shutters to be easily pulled and held closed so the slide bolt can be slid into the catch and latched. Pull rings are usually mounted somewhere below the slide bolt (blue).



A shutter fastener (#88-303) can also be used to hold a shutter closed. A small latch with a pivoting hook attaches to the bottom inside of the shutter and engages a keeper that is screwed to a wood window sill.

**FAUX HARDWARE** is also available for use with non-functional shutters and other decorative applications. It provides a traditional look for merely decorative shutters at a fraction of the cost of functional hardware. Faux hinges (#88-395) and faux scroll shutter dogs (#88-270, -271) are commonly used with stationary vinyl or wood shutters. Faux spade and strap hinges are not usually used on shutters because they are not visible, but are instead used on doors, garage doors, and gates.

