

Chapter 6

Windows

WINDOWS

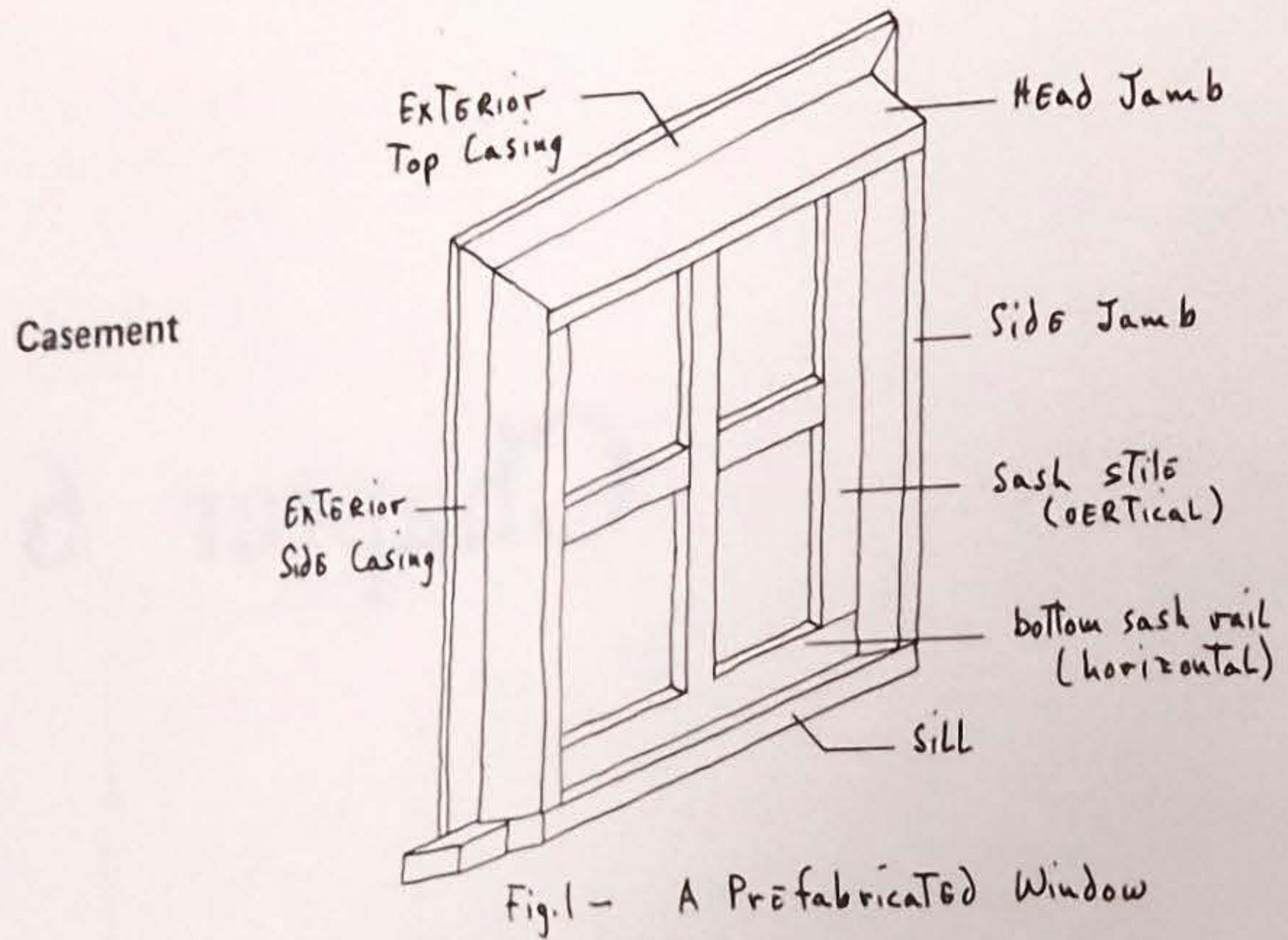


Fig. 1 - A Prefabricated Window

Sheathing--See Putting It All Together: Sheathing

Roofing felt--See Roofs: Making The Roof Waterproof

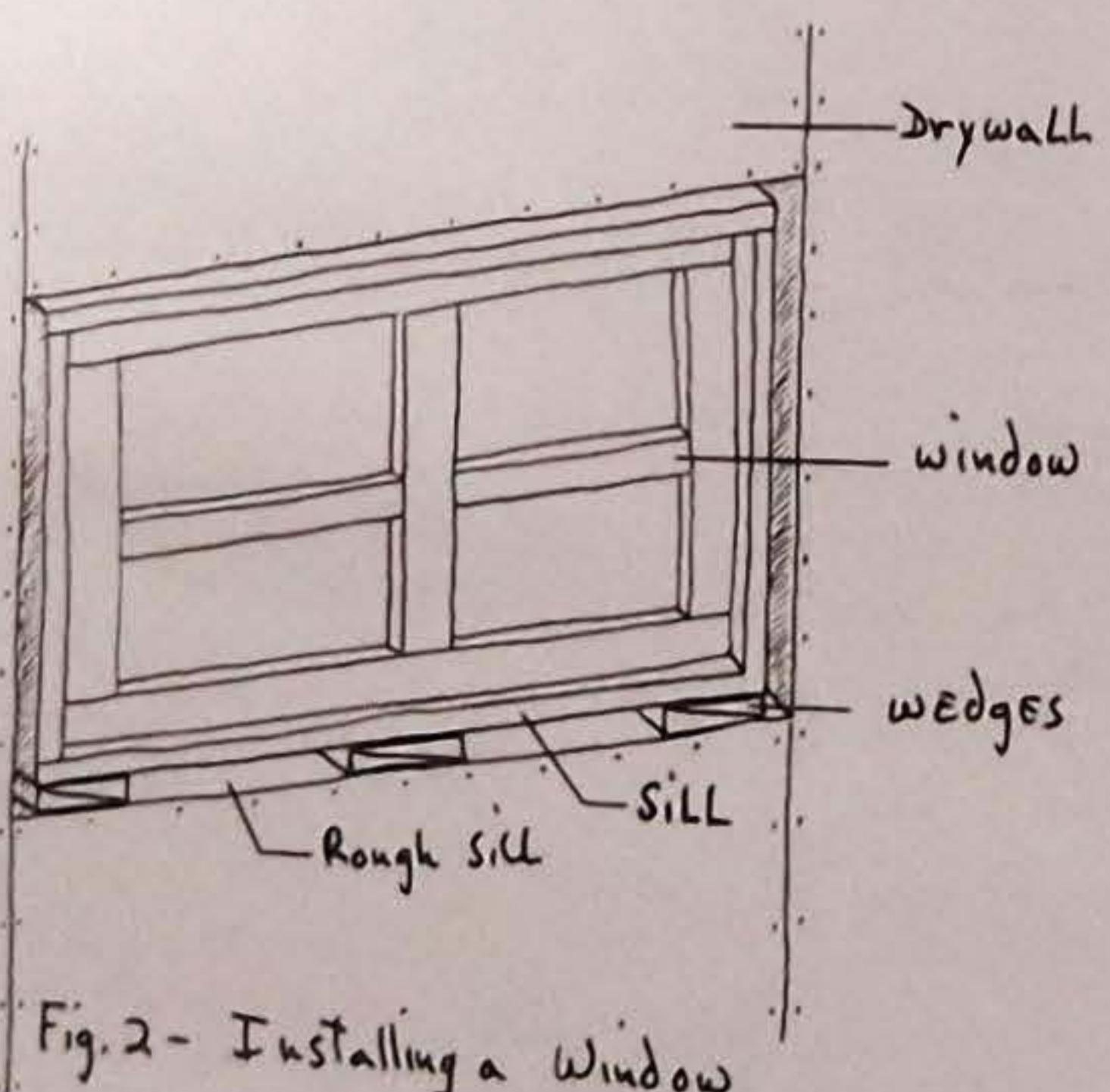


Fig. 2 - Installing a Window

Typical window height

Most windows are prefabricated nowadays assembled with opening mechanism and outside casement). Fig. 1. In modern construction, prefabricated windows are installed after the exterior wall has been sheathed with either plywood or fiberboard. Sheathing is the structural covering of walls and roofs which, when nailed to the rafters and studs, ties the structure together. After the windows and exterior door frames are installed, siding, the finish covering of the walls, is put on over the sheathing.

Installing Prefabricated Windows

Fold 10" or 12" strips of heavy building paper (15 lb. roofing felt for example) over the sheathing and into the rough opening around the perimeter of the rough opening. Anchor the paper with a few nails. There is a lot of heat transfer and condensation around windows because there is little insulation. The building paper helps prevent the moisture from seeping into the building.

The window is inserted into the rough opening from the outside and pushed in until the outside casing is tight against the sheathing. Fig. 2. Casement or casing is the picture-frame-type trim that goes around the perimeter of windows on both the inside and outside. There should be at least one woman inside and one outside during the leveling process.

The woman inside should place wedge-shaped blocks under the sill and, by manipulating them, raise the window to the correct height (usually 6'8" from finish floor to the underside of the head jamb of the window). Place a level on the

sill and level the sill by moving the wedges. There should be at least two pairs of wedges (wedges are always used in pairs) under the sill-- one at each end. If the sill is long, several pairs of wedges should be placed under the length of the sill to keep it from sagging.

When the sill is level, two 16d casement nails should be driven through the bottom of the exterior side casings and into the trimmer or king studs to hold the window in place. Fig. 3. Now put the level on each of the side jambs, and when they are plumb, drive a 16d nail through the top of each side casing into the studding. Check to see if the window works smoothly and check again with a level to make sure all sides are plumb and that the sill is straight and level. When the window is where you want it, finish nailing it securely in place with 16d nails 16" O.C., 16" apart, and 3/4" in from the outside edge of the casing.

Siding around windows and doors should be embedded in a bead of caulk, which is placed all around the outside casing in the joint between it and the sheathing. Fig. 3. Even if there is to be no siding installed over the sheathing, the joint between casing and sheathing should be caulked. (Butyl caulk doesn't crack in the cold.)

Capillary Action

Capillary action happens when a nurse pricks your finger to get a cherry of blood and then holds a tiny tube in the drop of blood. The blood will work its way up the tube against gravity even though there has been no suction applied. Capillary action also occurs between two surfaces that are close together. It is because of this

King and trimmer stud—See Walls: Fig. 11

On center—See Walls: Layout

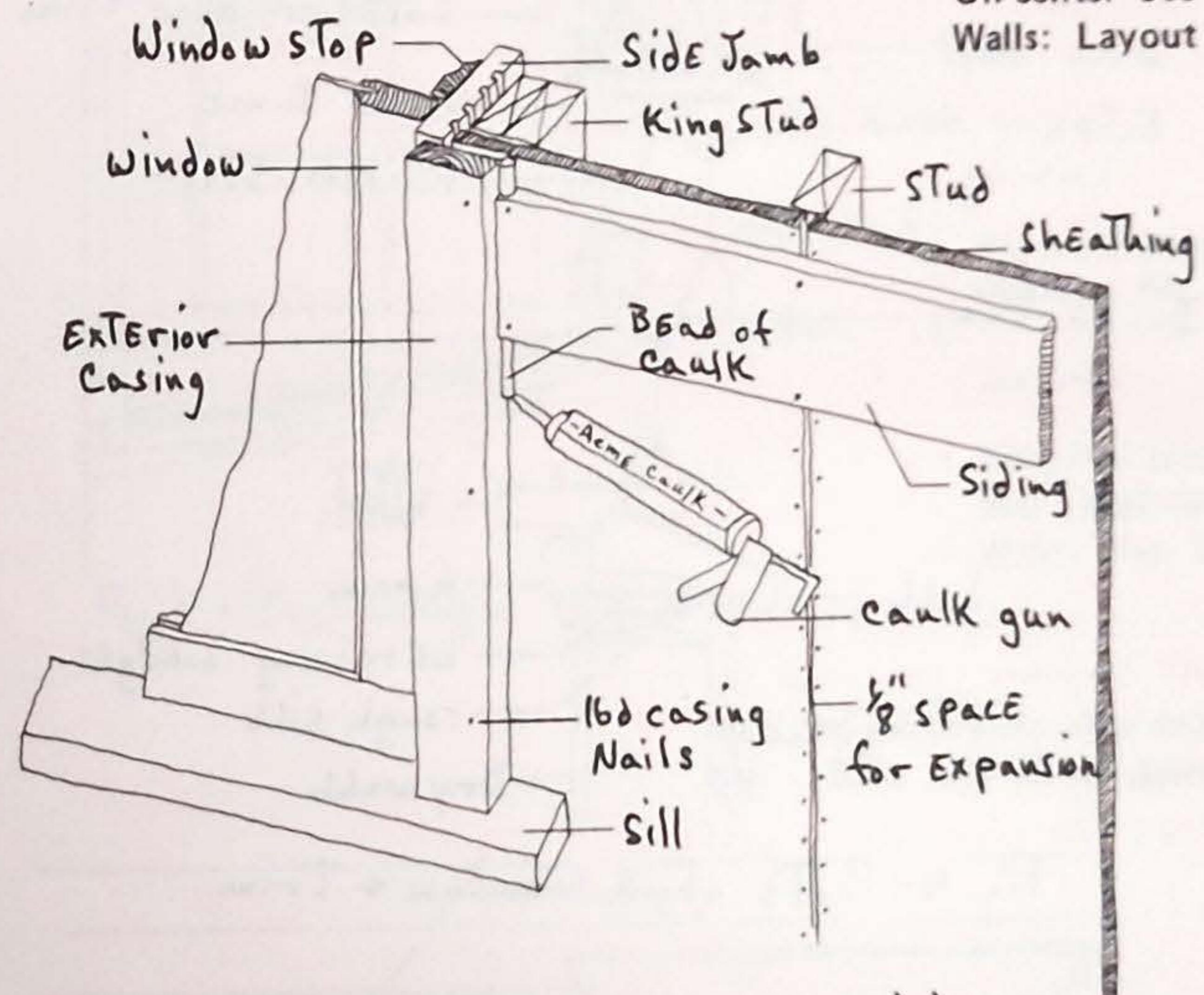


Fig. 3 - Bead of Caulk Around a Window

Caulk

Caulk gun

Capillary action

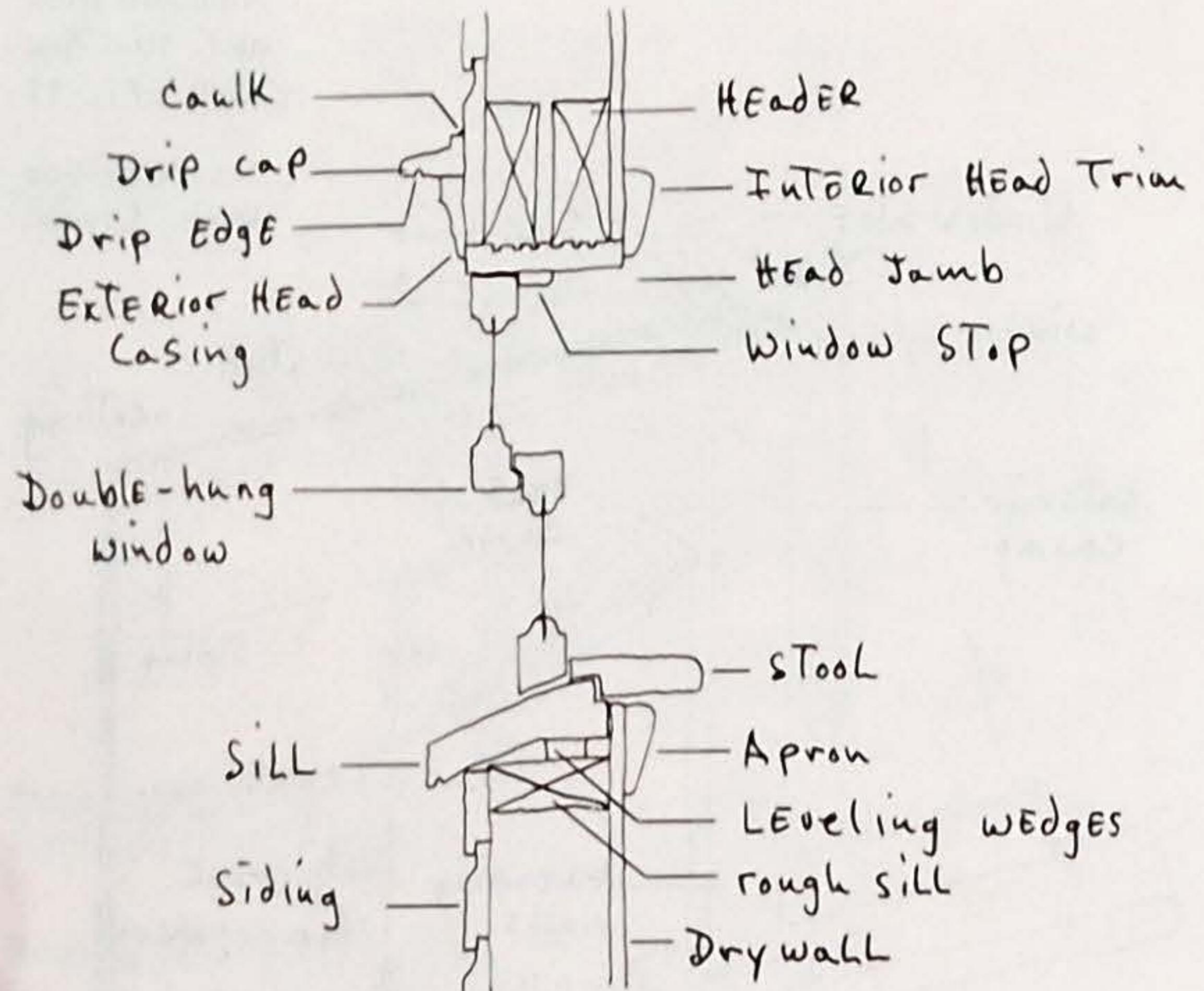


Fig. 4-Parts of a Window & Trim

Drip edge

Installing a jamb--See
Doors: Plumbing And
Leveling The Jamb

Cedar shingle wedges--
See Doors: Fig. 3

capillary action that you must be very careful to caulk around all windows and doors and to install drip edges above them.

The Drip Edge

All exterior openings like windows and doors should have a drip edge or drip cap above their head trim. Fig. 4. A drip edge or cap is a piece of molding with a groove along the underside. The little groove prevents water from traveling into the house. Water accumulates and drips from the groove because it can't travel up into the indentation. If the drips fall on the sill below, it must be slanted down or the water will travel into the house by capillary action.

SALVAGED WINDOWS

If you have a "found" or salvaged window, which is more likely, that is just a piece of glass in a frame, a jamb can be built in the rough opening and the window can be hinged to that. The jamb material will be pieces of 1x6" that have been ripped down to approximately $4\frac{1}{2}$ " wide. The jamb should be exactly as wide as the wall is thick. (A typical case is $3\frac{1}{2}$ " for the thickness of the studs plus $1/2$ " for the thickness of the exterior sheathing plus $1/2$ " for the thickness of the interior sheetrock.) $4\frac{1}{2}$ " brings the jamb flush with both inside and outside surfaces, which is important when installing the casing. Using pieces of cedar shingles as wedges, plumb and level the head, bottom and side jambs within the rough opening. Nail them in place with 6d or 8d finish nails so that they line the rough opening. Fig. 5.

TRIMMING OUT A WINDOW

Both the interior and exterior windows need to be finished in some manner. Basically this involves making a "picture frame" trim to go around the window on both the inside and outside.

Exterior Trim

In Fig. 3 the sheathing covers the king stud and trimmer and butts up against the window jamb. The frame or casing can be made of 1x3" (approx.). When in place, the casing covers most of the jamb (leaving 1/4" along the inside edge exposed); the rest of the 1x3" casing covers the sheathing. The casing should be nailed into the studs with 10d-16d casing nails and into the jamb with 6d casing nails. Both sets of nails should be 16" O.C.

The joints of the frame can be either butt or miter joints. The casing can be pre-assembled into a frame and then nailed in place, or the casing can be nailed in place one piece at a time, as is described for interior trim. Fig. 6.

If a prefabricated window has no exterior casing included in its construction, trim must be installed once the window is in place. The casing consists of three pieces: head casing and two side casings. The sill, which is included in the prefabricated window, forms the bottom piece. Sometimes a piece of trim is installed under the sill similar to the apron in interior window trim. This kind of exterior trim is put on the same way as the interior trim.

Interior Trim

The trim around the inside of a window is

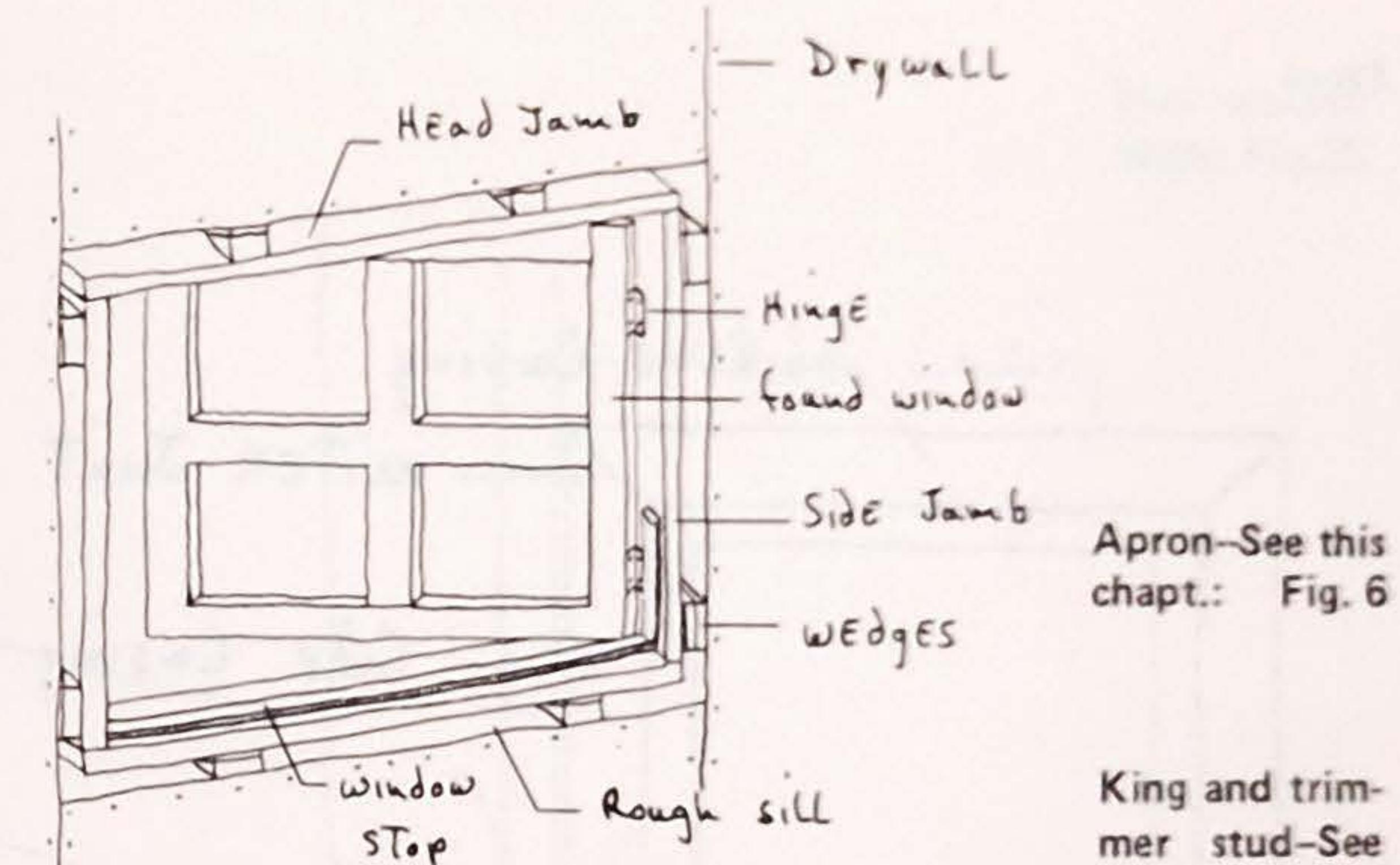


Fig. 5 - INSTALLING A SALVAGED WINDOW

Apron—See this
chapt.: Fig. 6

King and trim-
mer stud—See
Walls: Fig. 11

Butt and miter joints—See Join-
ing: Butt and Miter Joints

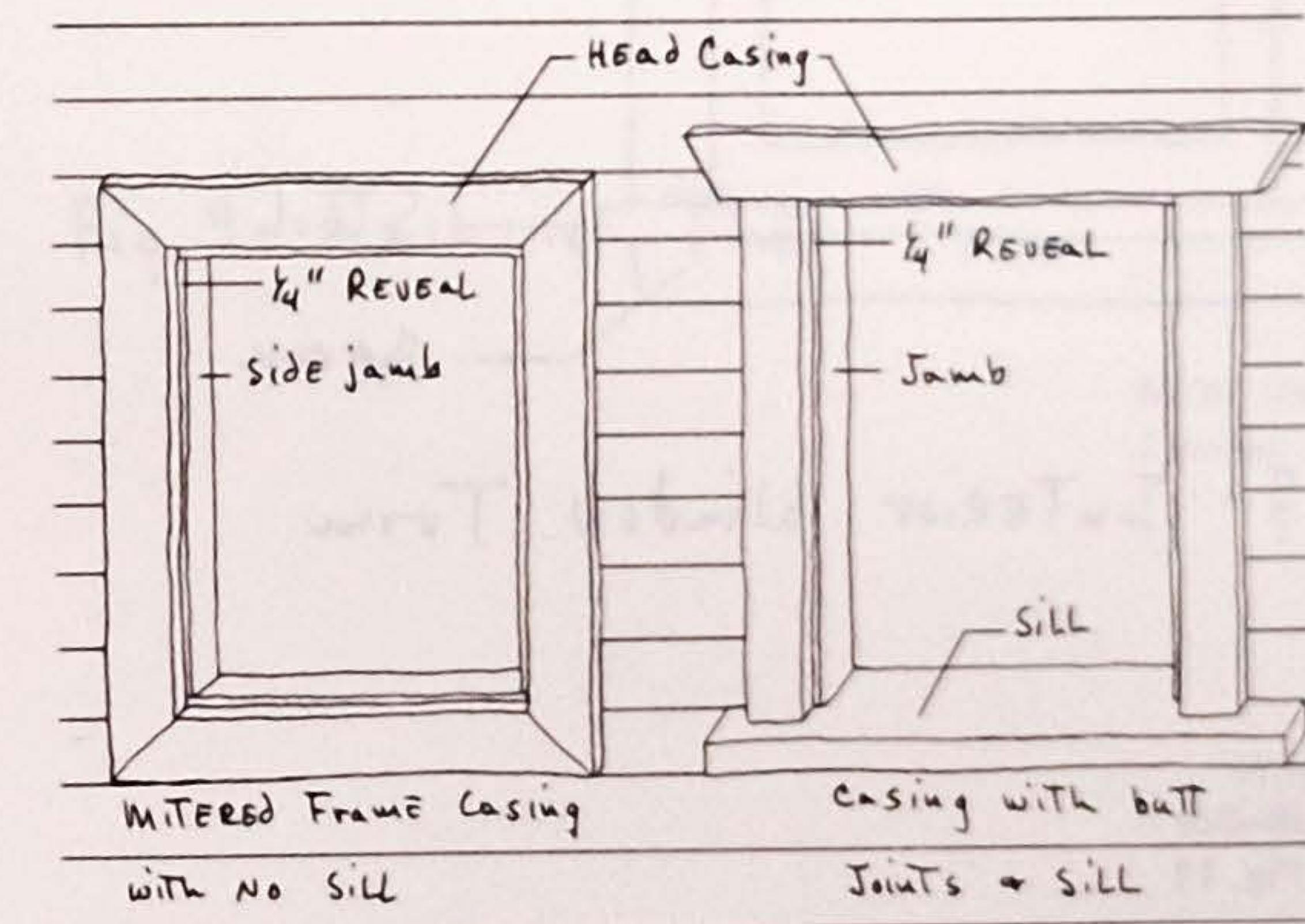


Fig. 6 - EXTERIOR WINDOW CASING

Stool

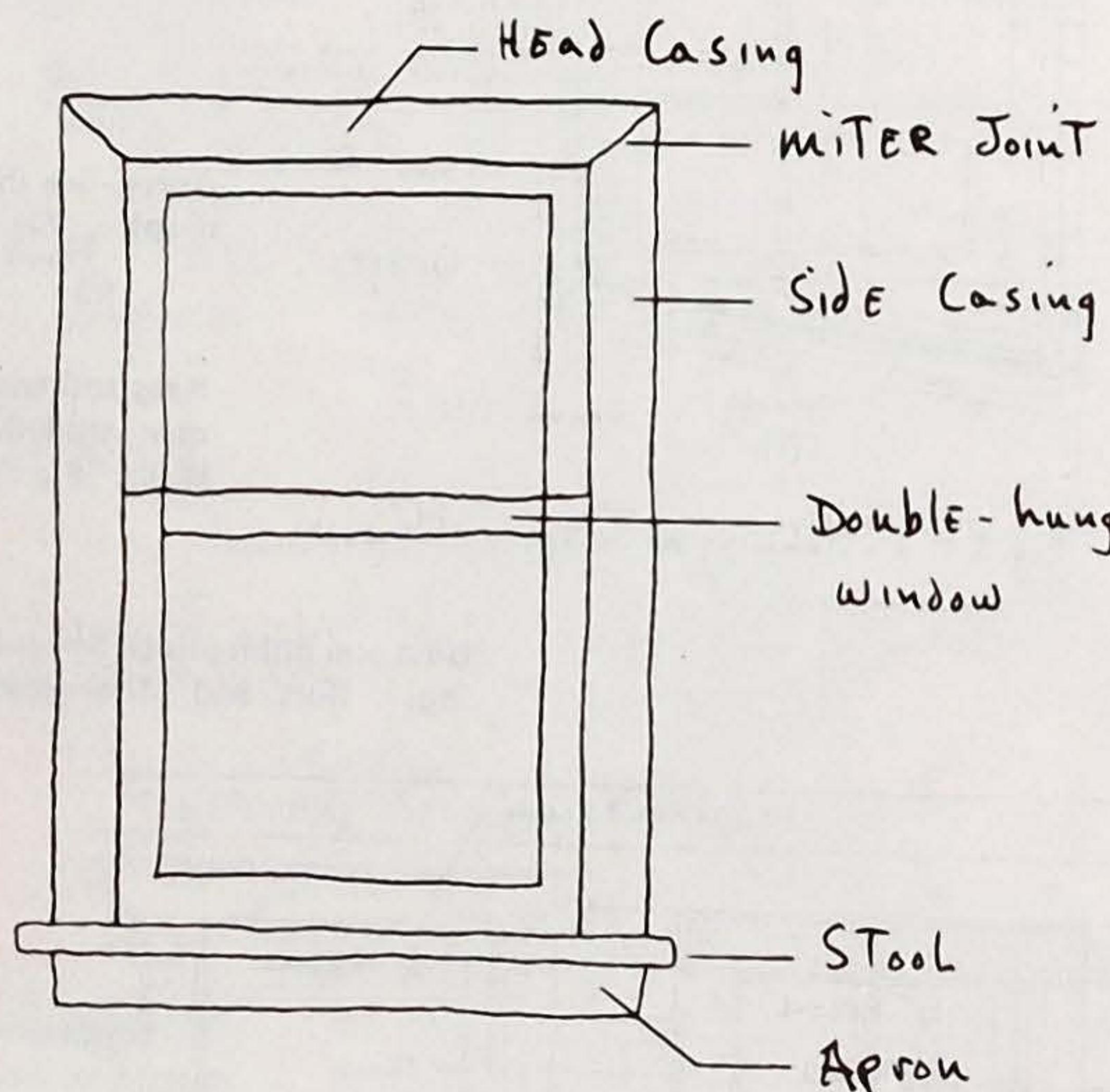


Fig. 7- Interior Window Trim

Rough sill--See
Walls: Fig. 11

similar to the exterior trim, except in place of a slanting sill there is a piece called a stool, which butts against the sill and extends into the room, beyond the side casings. Fig. 2 and 4. The stool is the interior counterpart of the sill and is commonly known as the widow sill, even though the real carpentry term for it is stool. Fig. 7.

All interior trim, be it for windows or doors, is usually made of number one white pine or clear white pine. As is predictable with capitalist production, the quality of lumber drying and processing has decreased so markedly over the last 50 years that it is impossible to find #1 white pine (wood with an even grain and free from knots) at a lumber yard anymore. #2 white pine or as clear a pine as they have is the best you can do.

There is a type of molding called window and door mold that is commonly used to trim windows and doors, but anything will do and if you like knots and wood with personality, salvaged or crate wood can be very beautiful.

Installing The Stool

The stool is installed first. It is usually a 1x4", a 1x5" or a purchased stool (a piece of plywood covered with plastic laminate). Hold it level with the rough sill (the 2x4" beneath) and mark the position of the inside of the jambs--also gauge (draw) a line on the top (face) of the

stool where it will fit against the wall surface. When the stool is cut and fit, it should look like Fig. 8. The ends of the stool should extend beyond the side casings at least $3/4"$. Nail the stool into the rough sill in places where the stools will be covered if possible by the side casing or window stop. A nail can also be driven through the edge of each end of the stool and into the trimmer or king studs. When the nail is set, the hole can be filled and it will barely show.

Fig. 9.

Installing Interior Casing

Next fit the side casings. Hold a piece of uncut trim against the sheetrock at one side of the window so that its bottom (make sure it is square) is tight against the stool. If there is to be a $1/4"$ reveal ($1/4"$ of the jamb showing--the rest of the jamb being covered by the trim), hold the piece of trim back from the inside edge of the jamb $1/4"$ and mark the short point of the miter on the face of the casing. The short point will be where an imaginary line $1/4"$ above the inside of the head jamb intersects the side casing. Fig. 10. Put the trim in a miter box and cut a 45° angle from the short point to the outside edge of the trim. The procedure is the same for the other side casing. Nail the casings in place with 4d or 6d finish nails along and into the jamb edge and 8d finish nails along the outer edge into the studs. Both the nails along the jamb and along the outer edge should be spaced $16"$ O.C. If the casing material is hardwood, such as oak or birch, drill holes for the nails with an electric drill. If you don't, the nails will bend and the wood will split.

Nail set--See
Walls: Fig. 20

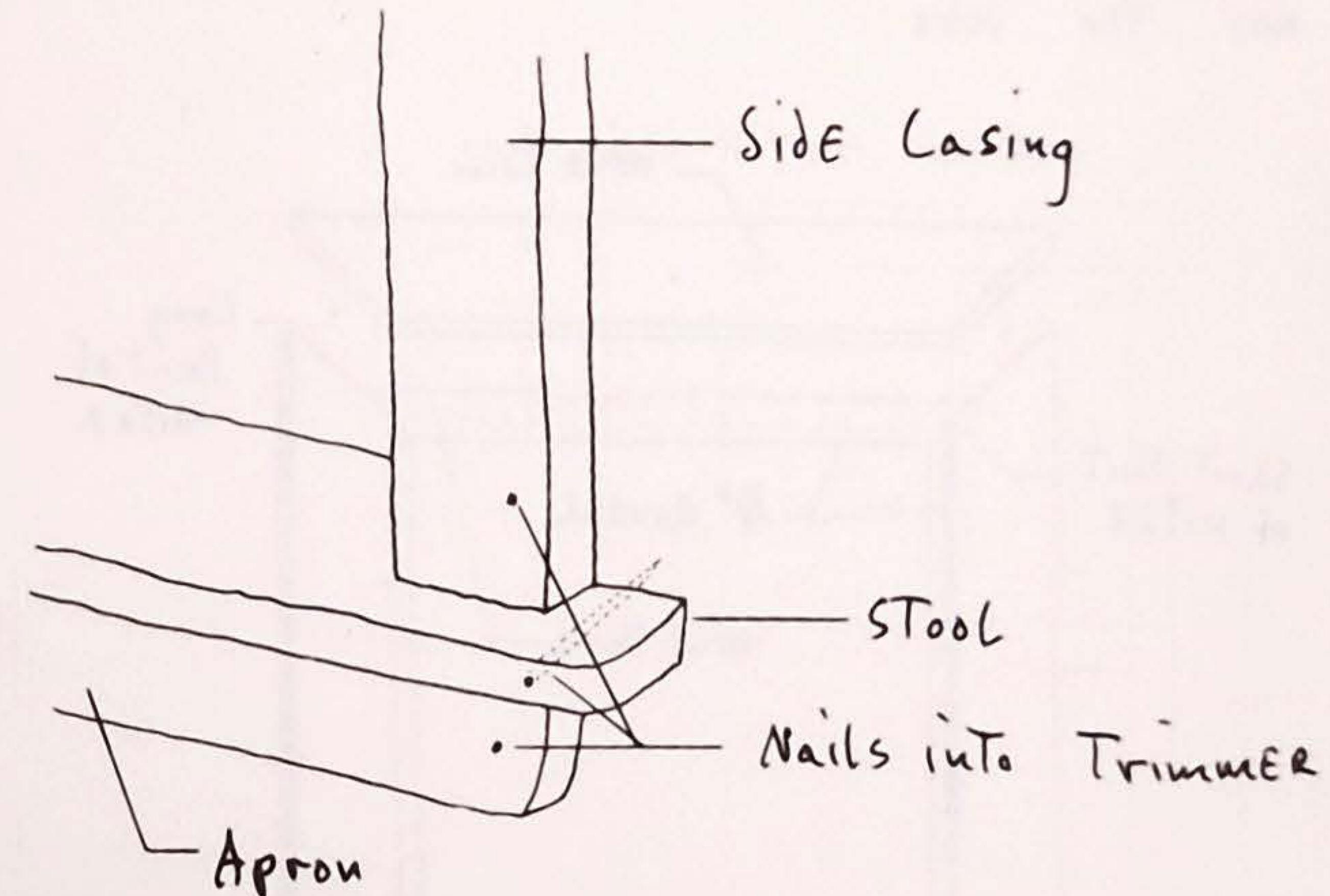


Fig. 9- Nailing The Trim

Miter box--See
Joining: Fig. 16

Hardwood

Backplaning--See Joining: Miter Joints, Fitting The Joint

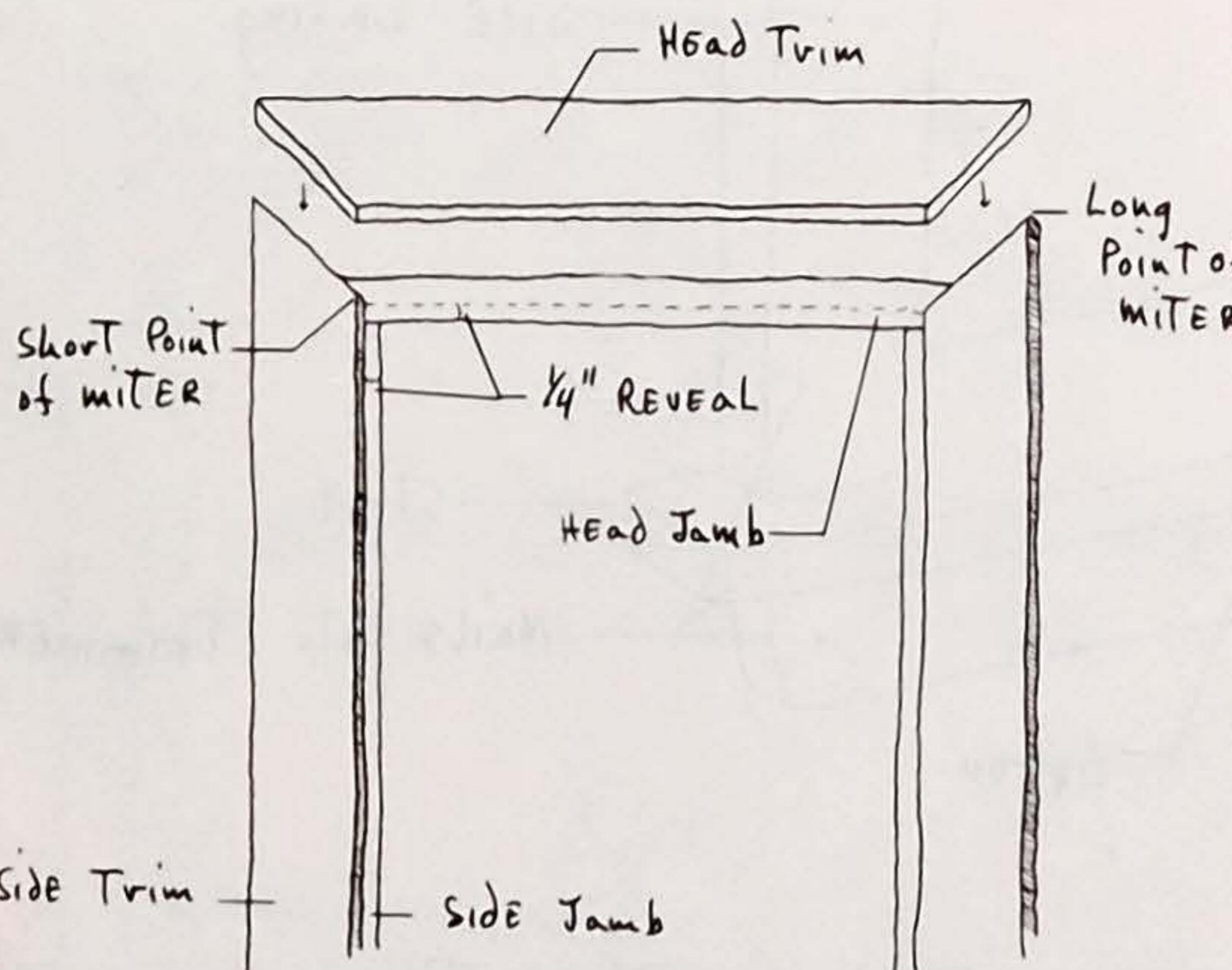


Fig. 10 - Fitting Door & Window Trim

Hinging windows--See
Doors: Laying Out
Hinge Pockets And
Hanging New Doors

Beveling a window--
See Doors: Fig. 6

Door stop

For the head casing, measure from the long point of one side casing miter to the long point of the other and cut a piece of molding with miters at both end and the same long point measurement. Fig. 10. Drop the head casing into place. If it doesn't fit, shave a little off the back side of the miter with a block plane until it does. Try not to mar the face side of the miter; this usually causes more trouble. Nail the casing with 4d or 6d finish nails along the edge of the jamb and 8d finish nails along the outer edge into the studs. Both the nails along the jamb and along the outer edge should be spaced 16" O.C.

The apron is the last piece of trim to be installed. The length of the apron is the width of the window plus side trim. The apron is butted to the underside of the stool and nailed into the rough sill with 8d finish nails.

HINGING THE WINDOWS

After the trim has been installed the window can be hung. Hanging a window is essentially similar to hanging a door. Therefore, both are explained in *Doors: Laying Out Hinge Pockets and Hanging New Doors*.

DOOR AND WINDOW STOP

After the door or window is hung and the lock is installed, door stop is applied. Door stop is a type of molding ($3/8 \times 1\frac{1}{4}$) that is used on jambs to keep the doors and windows from swinging in the wrong direction and to keep the weather out.

Door stop is fitted and nailed while the door or window is in the closed position. The pieces of door stop that are to go on the side jambs are cut to butt into the floor or sill on one end and are mitered on the other so that the short point of the miter is on the face side of the molding. The door stop that goes on the hinge side of the jamb is held against the door and nailed with 4d finish nails approximately 16" O.C. The stop that goes on the lock side of the jamb is held back from the door or window about $1/16$ " and similarly nailed. The stop that goes against the head jamb is mitered on both ends so that the length from the long point of miter to long point equals the width of the door opening from side jamb to side jamb. Insert the appropriate end of the head stop into the hinge stop miter. (If the molding is asymmetrical, there is a right and wrong end.) By bending the head stop a little, the other end can be inserted into the miter at the lock jamb. The head stop should also be nailed with 4d nails 16" O.C. The nice thing about learning how to put on door trim is that there are plenty of examples around--any door in your apartment.

If door stop is being applied to a window and there is to be a piece of it at the bottom along the sill, then the stop would be mitered at all four corners, not just at the top. Fig. 3, 4 and 5.



Chapter 7

Doors

King and trimmer stud--See Walls: Fig. 11

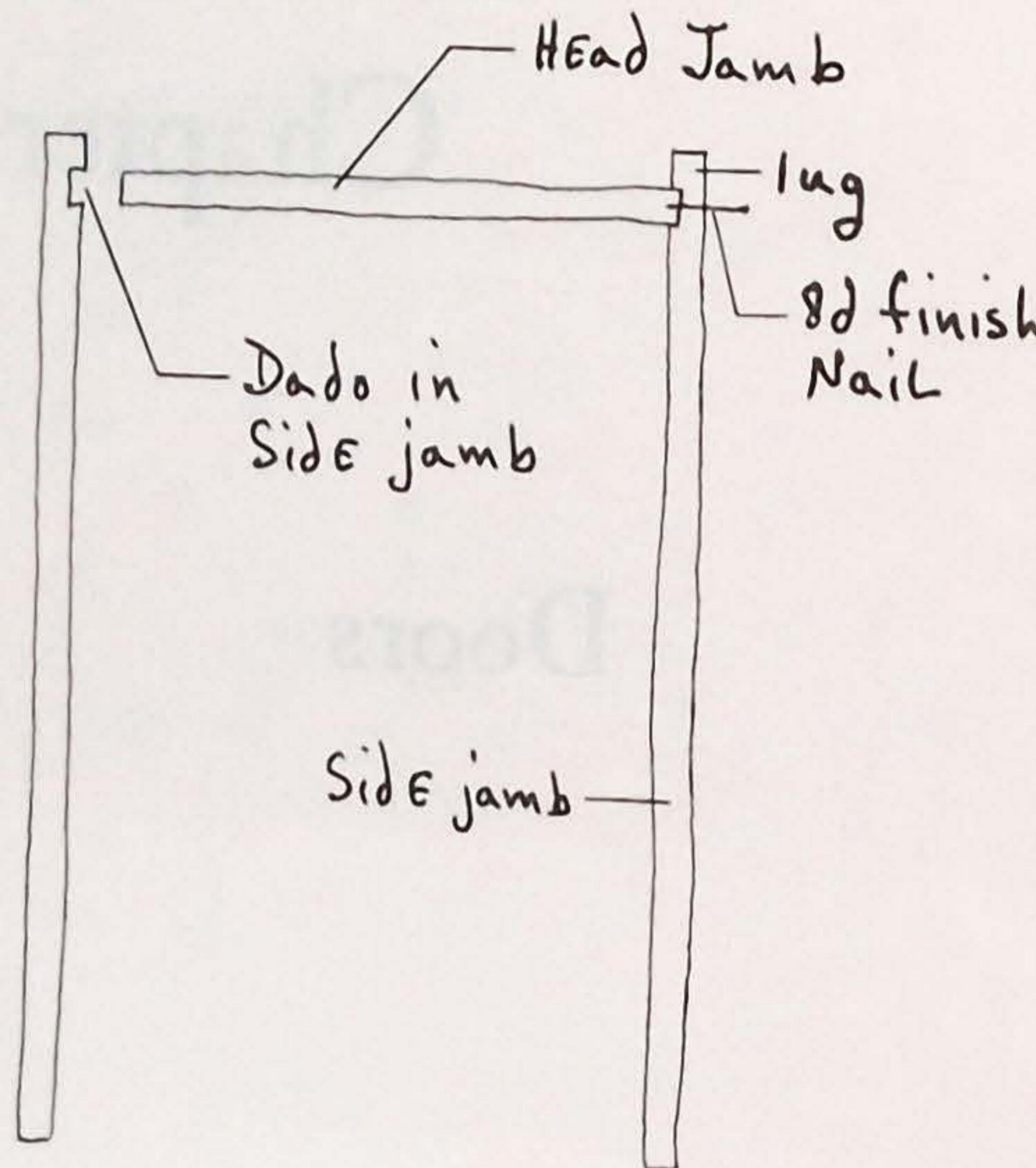


Fig. 1 - The Parts of a Door Jamb

Lug
Jamb
Dado

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DOORS

I love to hang doors; it encompasses all aspects of carpentry--rough heavy work and delicate finish work. A rough opening becomes a beautiful doorway in one day and, if the work is done with patience and exactness, the door will swing and close perfectly.

Do The Rough Work Well

When constructing the rough opening for a doorway, it is important to plumb the king and trimmer studs very well. This makes plumbing the jamb easier and saves time later. Also check the door size and make sure the rough opening is $2\frac{1}{4}$ " wider than the actual door size for an interior door and $2\frac{1}{2}$ " wider for an exterior door. Taking time to check the basic elements and calculations of a project is always worth it. It saves time and frustration later.

The minimum head room (distance from finish floor surface to height of finish opening) should be 6'8" in houses. This applies to door openings and stairwells.

INSTALLING THE DOOR JAMB Material And Calculations

Door jambs are usually made of clear white pine. Side and head jamb material can be bought

at the lumber yard with the dados pre-cut into the side jambs. Fig. 1. The jambs come in different widths to accommodate different wall thicknesses. As with window jambs, the edges of the door jamb should be flush with the wall surfaces on either side.

Width of jamb material=entire wall thickness.

Jamb width calculations for an interior door:

$$\begin{array}{rcl}
 \text{Sheetrock} & = & 5/8" \\
 + \text{Studs} & = & 3 \frac{1}{2}" \\
 + \text{Sheetrock} & = & 5/8" \\
 \hline
 \end{array}$$

$$\text{Width of Jamb} = 4 \frac{3}{4}"$$

At the lumber yard ask for two 4 3/4" side jambs (or whatever width equals the wall thickness) and a head jamb suitable for whatever width door you have. If you have a 3'0" door, they'll give you a head jamb piece approximately 3'1" so that there is enough to go into the dado in the side jamb. The length of the side jamb material is enough to allow 6'8" head room in the finish opening.

Before making the first cut, which is cutting the head jamb to the correct length, you must understand the whole layout of the project. In order to figure how long to cut the head jamb, you have to know how wide the door is and how much

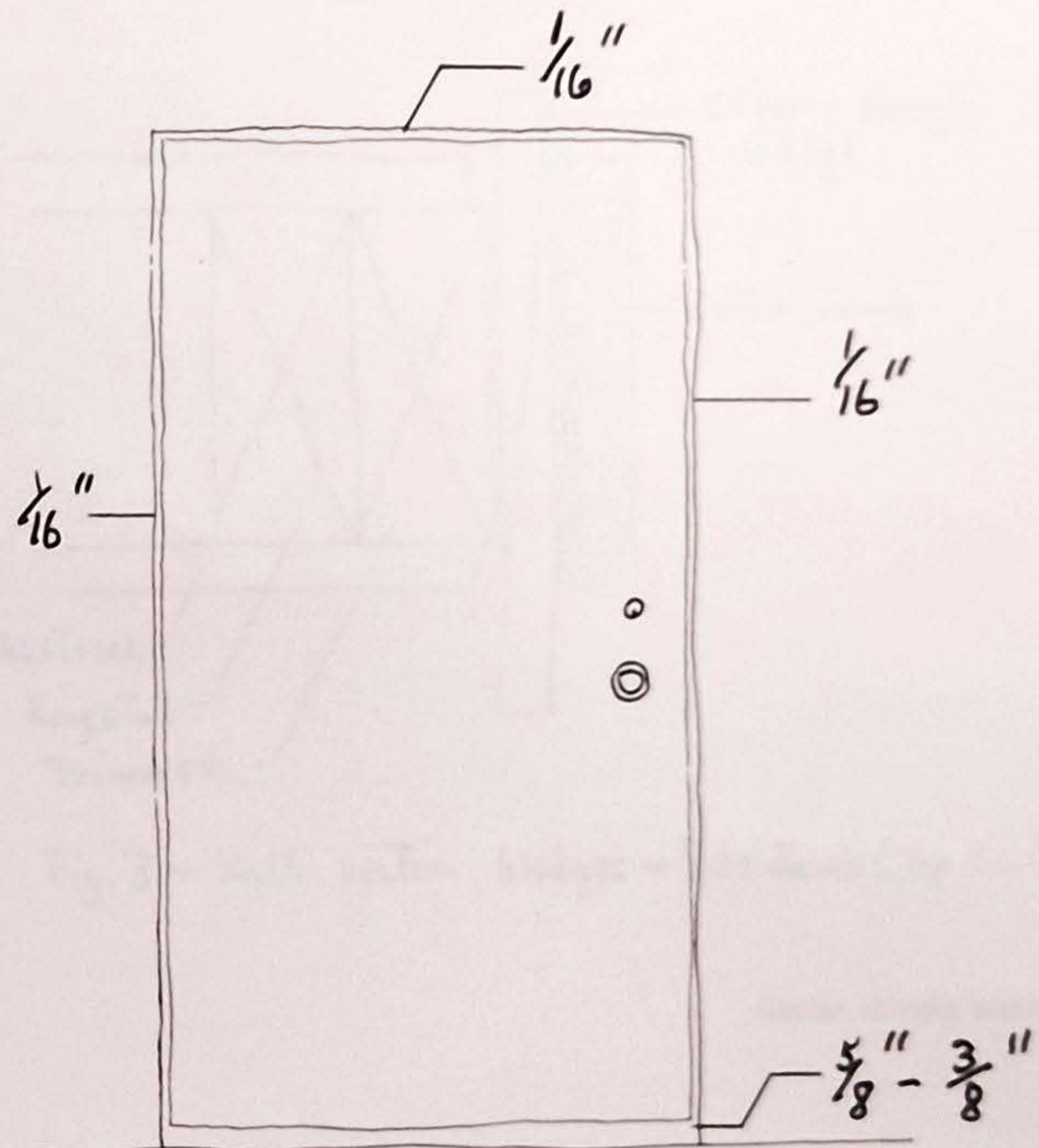


Fig. 2 - CLEARANCES Around a Door

clearance there will be between the door and the jamb on all sides. Fig. 2.

Usual clearances:

Top: 1/16" between door and head jamb

Sides: 1/16" between door and side jamb

Bottom: 5/8" between door and
floor (exterior)

3/8"-1/2" between door and
floor (interior)

After measuring the depth of the dado in the side jambs, the length of the head jamb can be calculated.

depth of one dado= 3/8"

depth of other dado= 3/8"

door size= 3' 0"

clearance between door and left jamb= 1/16"

clearance between door and right jamb= 1/16"

length of head jamb= 3' 7/8"

Assembling The Jamb

Cut the head jamb piece to the length obtained through these calculations and assemble the whole jamb on the floor. Spread glue in the dado grooves, insert the head jamb into the dado in the side jambs and nail from the outside of the side jambs into the head jamb with 8d finish nails--3 per side jamb. Fig. 1.

All joints in door and finish work should be glued--
white glue is very good for interior woodwork.

Lug-See this
Chapt.: Fig.1

Plumbing And Leveling The Jamb

Raise the assembly and place it in the rough opening. (One woman can do this.) If the jamb doesn't fit into the rough opening, trim off enough of the lugs until it does. If the jamb is way too long, also trim off equal amounts of the bottom of both side jambs until it fits. Check to see if the head jamb is level--if it isn't, trim the bottom of the side jamb that is high.

Place a 1x6" spreader on the floor between the two side jambs. The spreader should equal the distance between the two side jambs at the head jamb. The purpose of the spreader is to hold the side jambs equidistant while the door jamb is being plumbed.

The jamb frame is held in place by pairs of wedges between the jamb and trimmer spaced along each side jamb. Use cedar shingles split into 3" or 4" wide sections as wedges. Place a set of wedges at the top and the bottom of one side jamb and adjust them until the side jamb is plumb. An 8d nail can be started in through the jamb and into the trimmer below the wedges to hold them in place. When the jamb is plumb, put two 8d finish nails into each set of wedges. The nails in the jamb should not show, so try to put them where the door stop will cover them.

Do not drive any of these jamb nails home until the whole jamb is plumbed and you are satisfied

Plumbing--See Walls:
Plumb and Plumbing

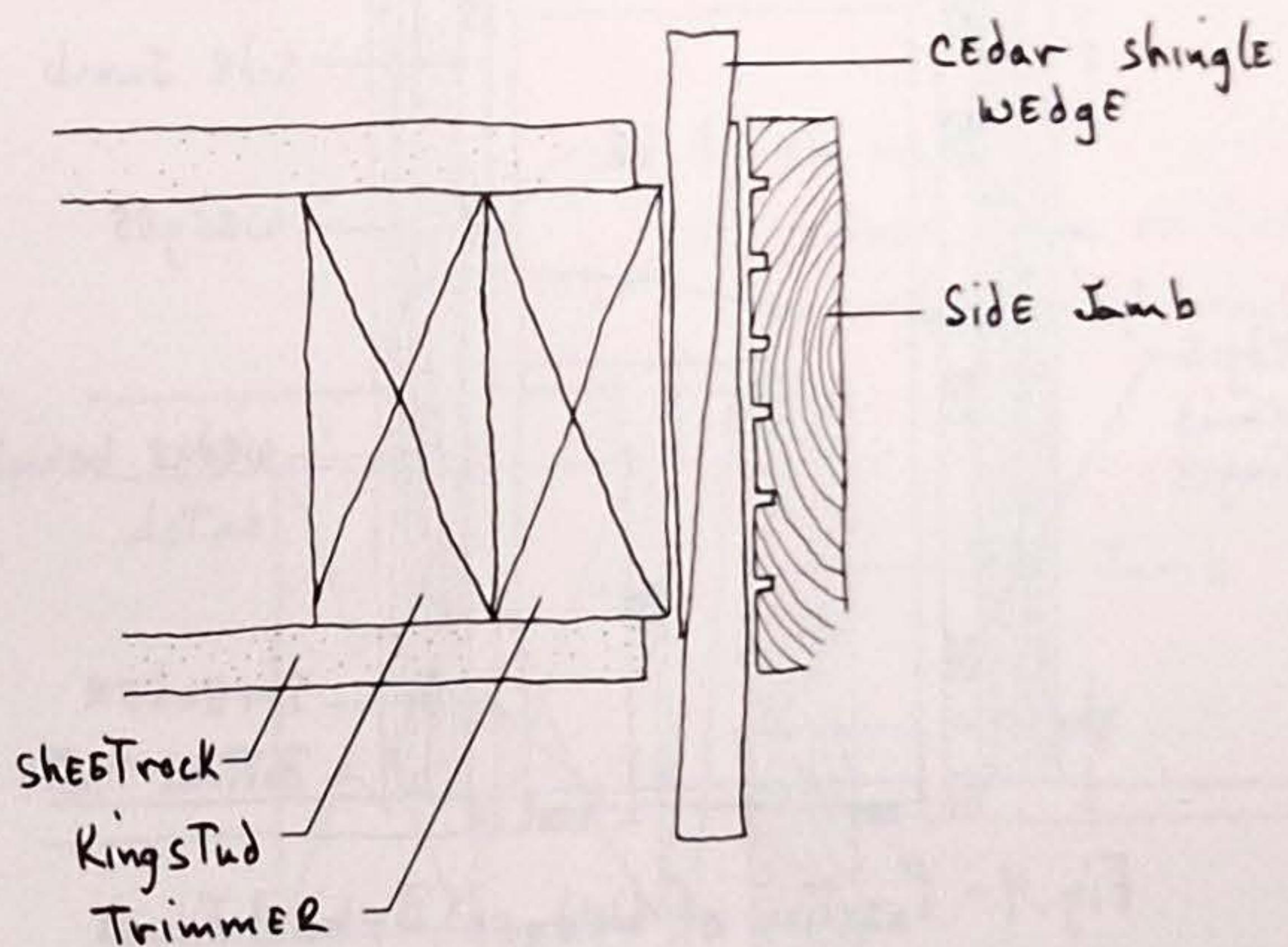


Fig. 3 - Wall section, Wedges & Side Jamb (Top View)

Cedar shingle wedges

Door stop--See Windows:
Door and Window Stop

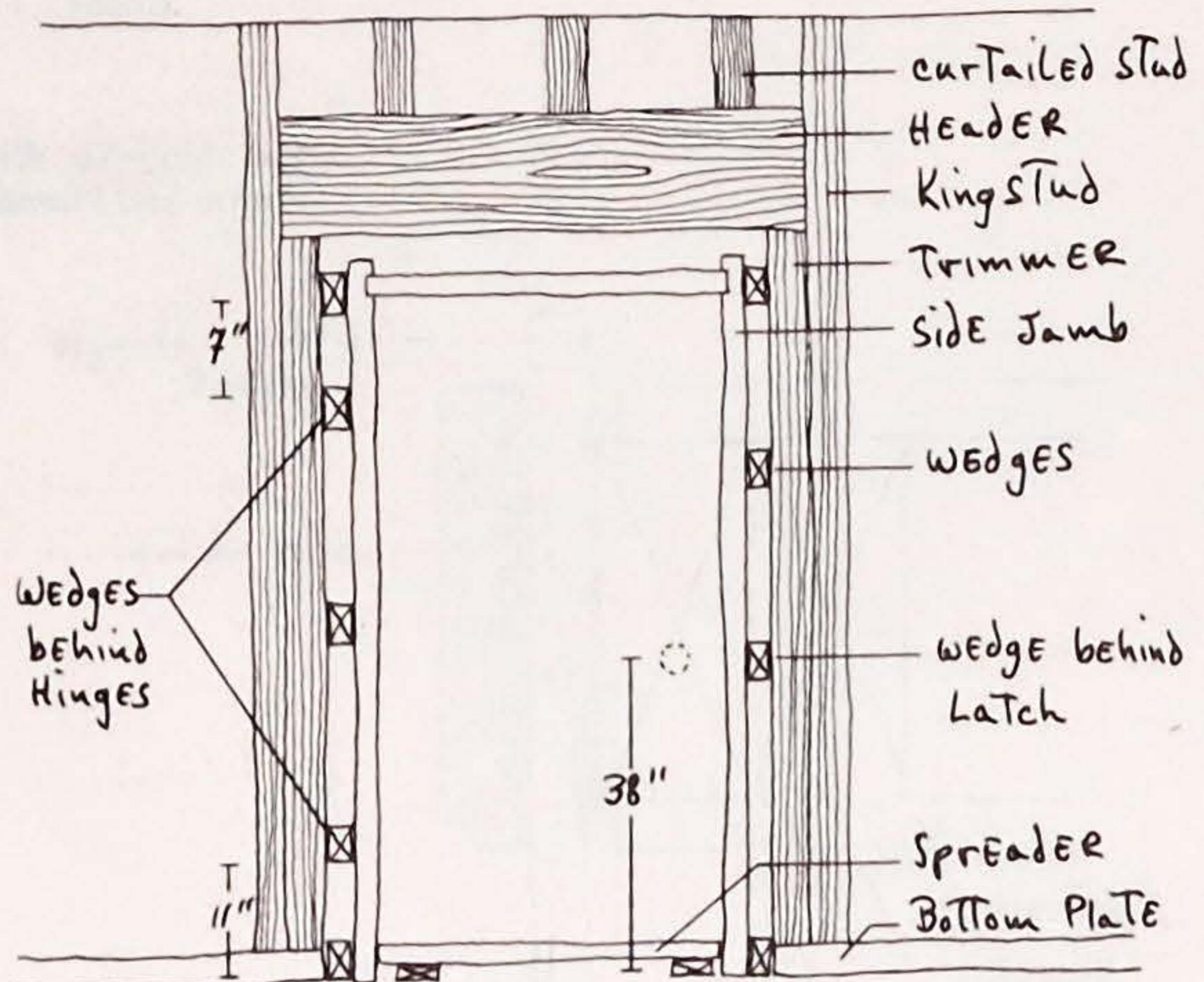


Fig. 4- Position of Wedges Behind Jamb

Hinge pocket

that the door will fit with proper clearances. The door stop is a $1\frac{1}{4}$ " wide strip that is placed against the door and nailed to the jambs to keep the door from swinging through and ripping out its hinges. Door stop also covers the cracks between the jamb and door and keeps out cold and noise. The part of the jamb that will be covered by the door stop is a $1\frac{1}{4}$ " strip a door's thickness in from the edge of the jamb that the door will go on.

Figure out which way the door should open and swing. Doors should swing against blank walls when possible, not interfere with the swing of other doors, and never open into a hallway. Once the direction of swing is known, the hinge side of the jamb and door can be assigned.

Plumb the other jamb in the same fashion and put more pairs of wedges along the side jambs--especially behind where the latch and the hinge pockets will go. Fig. 4. A hinge pocket is the shallow chiseled-out groove into which the hinge fits so that it is flush with the surface of the door and jamb. The top of the top hinge is located 7" down from the underside of the head jamb and the bottom of the bottom hinge is located 11" up from the bottom of the door. The latch and knob can go at any height on the non-hinge side of the door so long as it's comfortable for the people who will use the door--usually the knob is 36"-38" above the floor.

Door jambs may be plumbed using three different tools: a 6' or 4' long level; a short level and straight edge or a string line and plumb bob.

Trimming Out The Door Frame

After the jamb is plumb, the casing or door trim is applied. Door casing has two purposes: for beauty and also to keep the jamb from moving as the door swings. Casing is nailed both to the side jamb (with 4d or 6d finish nails) and into the trimmer stud (with 8d finish nails). It adds strength to the door frame by tying the wall to the jamb. Door casing is installed using the same techniques as window casing. Fig. 5.

THEY DON'T MAKE DOORS THE WAY THEY USED TO

Interior doors purchased these days are called flush doors and are merely a 2x2 frame covered by 1/8" plywood and filled with cardboard. You can put your fist right through them. Whenever I see old buildings being torn down, I try to scavenge doors--even if I don't need them at the time, there's always someone who'll need a partition built in her apartment. Besides, they can be used as tables until then. In most towns there are demolition companies which sell items like doors, windows, bathroom fixtures, sinks etc. These old doors are called panel doors and are made of solid wood and usually beautifully stained.

Door casing—See Windows: Interior Trim

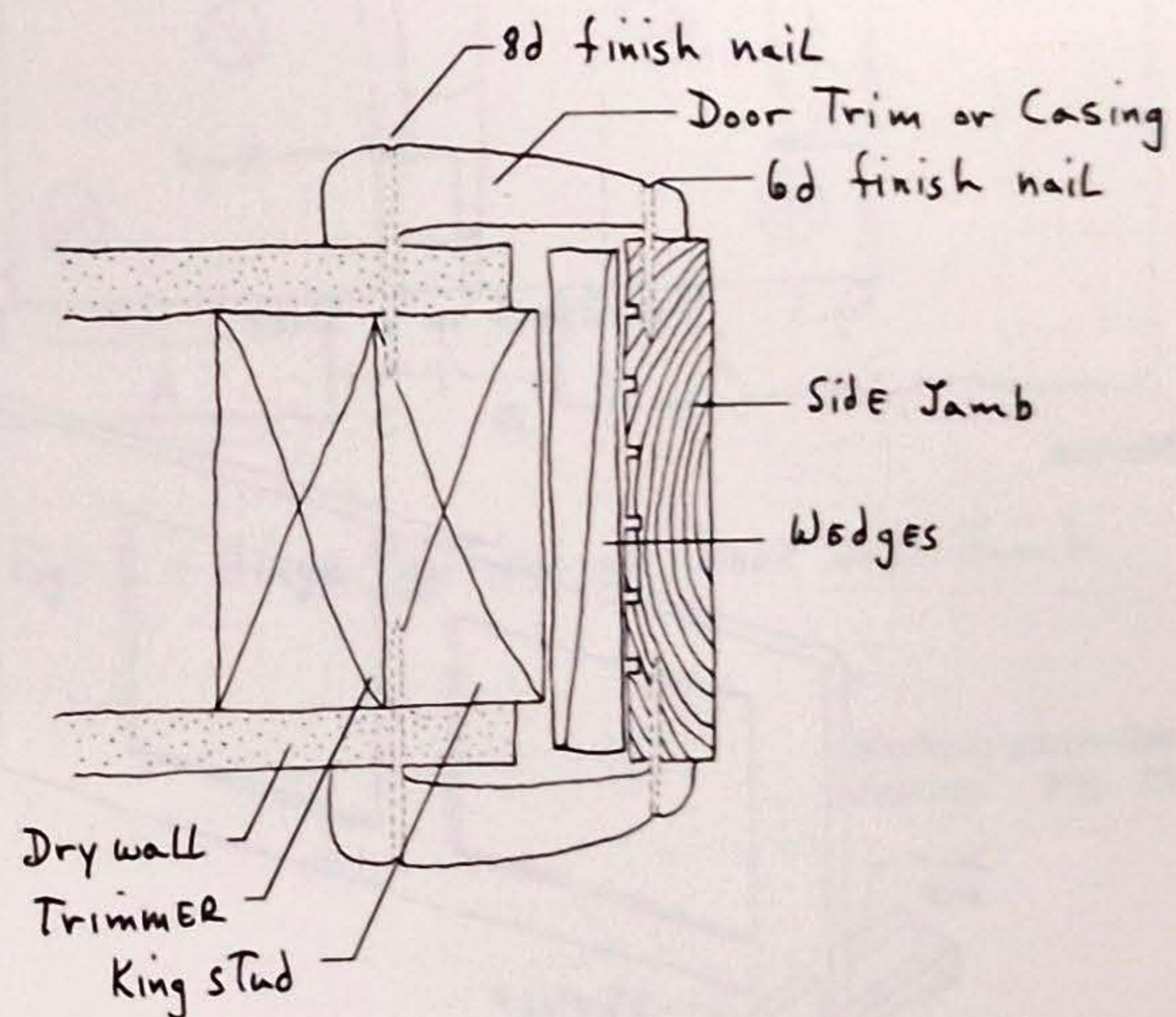


Fig. 5 - Applying Trim to a Door Jamb

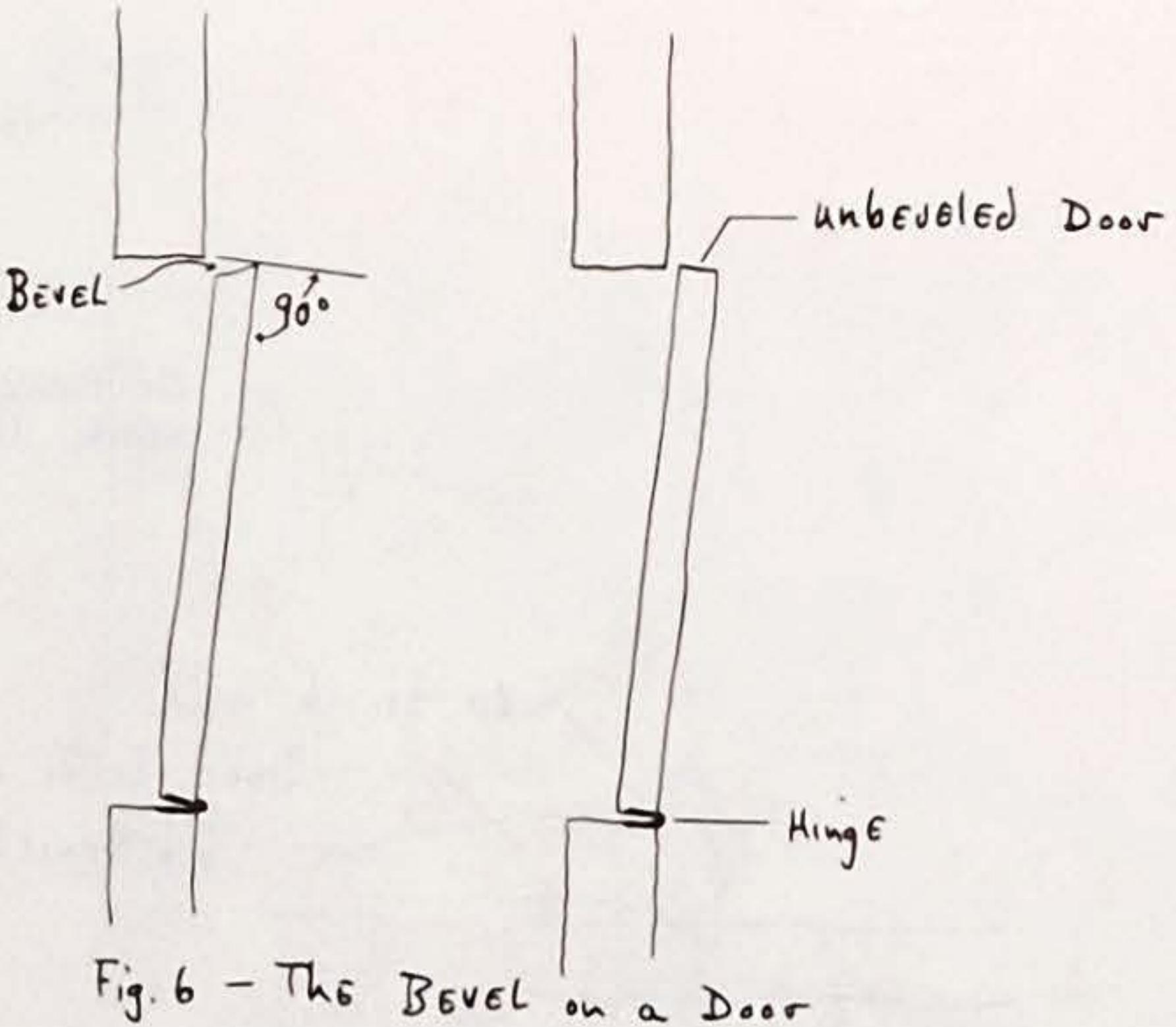


Fig. 6 - The BEVEL on a Door

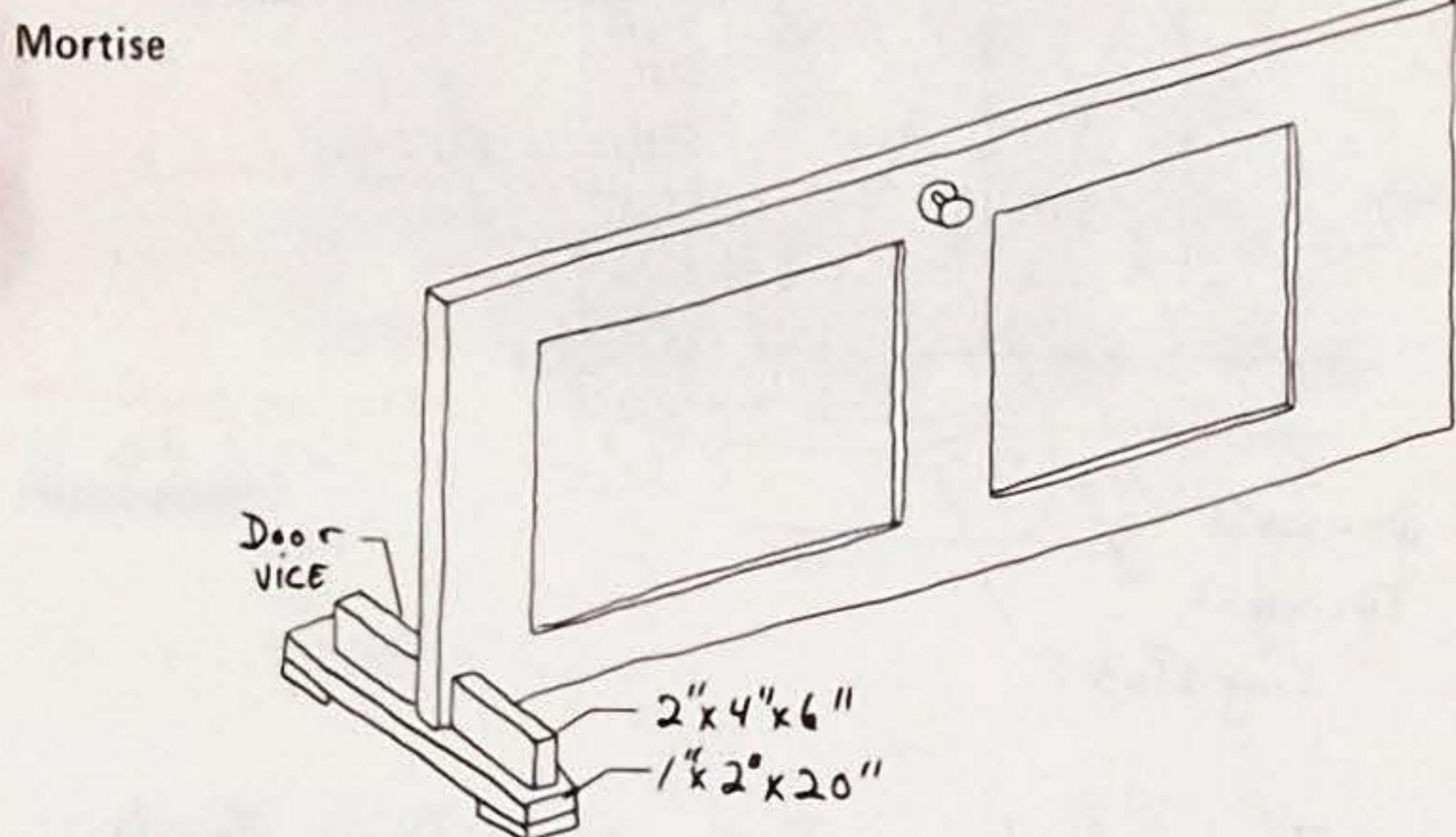


Fig. 7 - HOMEMADE DOOR VICE

Square across—See
Joining: Fig. 26

Exterior doors are usually $1\frac{3}{4}$ " thick and 2'8" or 3'0" wide. Interior doors are $1\frac{3}{8}$ " thick. FHA specifies minimum width of 2'6" for bedrooms and 2'0" for bathrooms. The lock side of doors is not square but beveled a little ($\frac{1}{8}$ " in 2" or $3\frac{1}{2}$ "). If the lock side of the door weren't beveled, the door wouldn't close. Fig. 6.

LAYING OUT HINGE POCKETS AND HANGING NEW DOORS

1. The hinges used for doors are called butt hinges and come in different sizes. The $3\frac{1}{2}$ " and 4" size (which is the length of hinge leaf) are most common. $3\frac{1}{2}$ " butt hinges are usually used on interior doors. There is a removable pin that holds the two leaves of the hinge together. When installing the hinge, it is important that the head of the pin is up so that it won't fall out. Butt hinges are also called mortise hinges because the leaves of the hinge are mortised (set into the wood) into hinge pockets in both the door jamb and the door.

2. Lay out the location of the hinges on the length of the hinge side of the door. To do this easily, the door should be standing on its non-hinge edge. Have someone hold it upright or build a door vise. Fig. 7. Measure up from the bottom of the door 11" and down from the top of the door $6\frac{15}{16}$ ". This is the bottom of the bottom hinge and the top of the top hinge, respectively. Measure down from the top mark and up from the bottom mark a distance equal to the length of the leaves of the hinge-- $3\frac{1}{2}$ " or 4". Square these marks across the edge of the door using a small square and a very sharp, hard lead pencil or knife. For heavy exterior doors use

three hinges. The position of the top and bottom hinge remains the same; an additional third hinge is centered between them.

3. Lay out the position of each hinge on the edge of the door between the layout marks for each hinge. Fig. 8. The hinge is set into both the door edge and the jamb the same distance--"A". "A" cannot be so great that distance "B" is less than $1/8$ ". When the door is to be flush with the edge of the jamb, as most doors are, there must be a clearance--"C"--the distance from the edge of door to the center of the hinge pin. Clearance--"C" must be equal to one-half the overall thickness of the door trim, or the door will hit the door trim and not open fully.

4. Considering all measurement requirements, locate each hinge in the proper place on the door and mark the outline of the hinge with a sharp knife or hard lead pencil. Mark the thickness of the hinge on the side of the door and gauge (draw) a line at this depth ($1/8$ " approximately) with a pencil or marking gauge. Use a wide sharp chisel, $1\frac{1}{2}$ " or so, to cut along the outline of the hinge. Use a hammer to tap the chisel into the wood to a depth equal to the thickness of the hinge. Now using the chiseling techniques described in JOINING: Dado Joints, Fig. 29, pare the wood from the hinge pocket. Finish the bottom of the hinge pocket by pushing the chisel (bevel up) from the gauge line along the side of the door into the hinge pocket, keeping the blade flat.

5. When the hinge pockets are finished, fit one leaf of the hinge into the pocket--the top surface of the leaf should be flush with the door edge. If the hinge pocket is too deep, shim the hinge up with pieces of cardboard. Fit the hinge into the pocket, mark the screw holes, drill holes

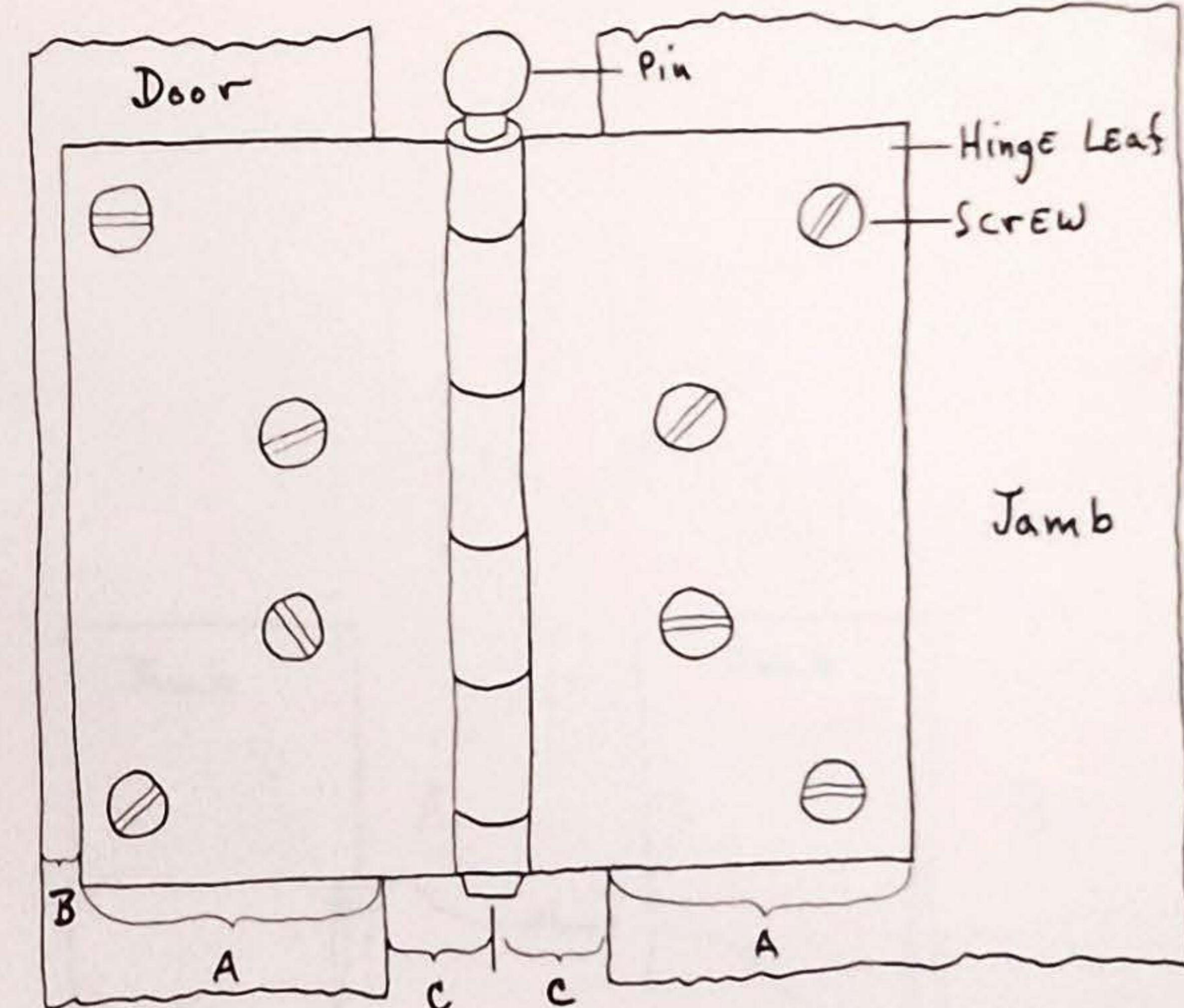


Fig. 8 - Hinge Position on Door and Jamb

Marking gauge—See
Joining: Fig. 11

Shim

Drilling holes for screws—See
Tools: Hand Drills and Drilling

for the screws, and screw the hinges to the door, making sure the removable pins are up.

6. Fold the other hinge leaves over so they are against the leaves screwed into the door and fit the door into the jamb frame. Place a 4d nail between the top of the door and the head jamb to keep the clearance correct. Wedge the door up from the bottom so that it stays in the frame while you mark the location of the hinges on the side jamb. Mark both the top and bottom of each hinge.

7. Remove the door from the jamb, remove the pins from the hinges and fit the other half of each butt hinge to the door the same way you fitted the first hinge leaf to the door.

8. The door is hung on the hinge leaves screwed to the door by meshing the leaves of the top hinge first and slipping the pin in at least part way and then meshing the leaves of the bottom hinge and inserting the pin. If the door is heavy and hard to manipulate, a wedge can be placed on the floor next to the hinge side jamb and the door rest on the wedge while the top hinge leaves are meshed together.

If you are hanging an old door which has hinges attached to it, make the hinge pockets in the side jamb--especially distance "A". Fig. 8. Match the hinge pockets already on the door.

MAKING THE DOOR SWING SMOOTHLY

If the door doesn't close easily, there are some little tricks that can be done to correct the problem. If the lock side of the door rubs against the jamb, there is most likely enough space between the hinge side and door to throw a

hog through, but not enough space along the lock side. To correct the problem, the door needs to be drawn to the hinge side, thereby evening up the clearances on either side of the door.

Cut several thin strips of cardboard $3\frac{1}{2}'' \times \frac{1}{4}''$ --the box the hinges came in works nicely for making these shims. Loosen the screws in the hinge leaves on the jamb and place one or two shims under the non-pin edge of the hinge leaf. Shim the leaves one at a time so that one is always tight and holding the door in place. When the screws are tightened, these shims will throw the pin side of the hinge over more toward the hinge side of the door. This will draw the door over and make more room on the latch side. Fig. 9A.

If the problem is that there is too much space along the lock side, or if the door resists closing and springs back in the last inch of swing as you gently push it closed, the door is hinge-bound. This means the leaves of the hinges and the edge of the door and jamb are hitting each other before the door is in the closed position. Loosen the hinge leaves on the jamb one at a time and slip a couple of shims under the front pin edge of the hinge as in Fig. 9B. This will throw the door toward the lock side and even up the clearance on either side. The number of shims you put in determines how far the door is thrown to one side or the other. If the space between the door and jamb is uneven--more space at the top than at the bottom--insert more shims under the top hinge than under the bottom one.

If the door rubs against the head jamb or floor, the only thing to be done is to plane off the door. Do not hit the hinges up or down with a hammer because it will not solve the problem and will ruin the hinges. Take the door off its

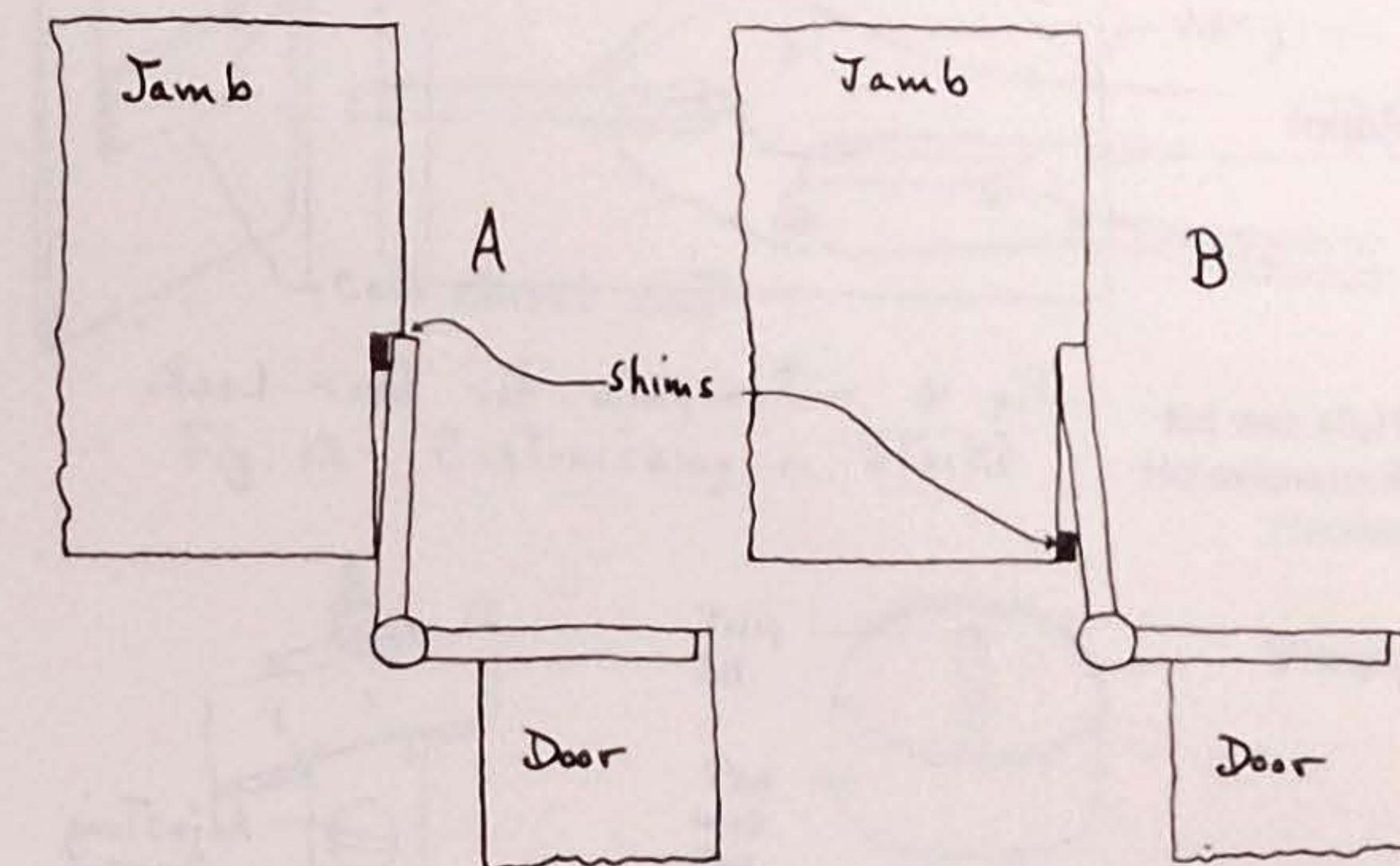


Fig. 9 - Shimming the Hinges of a Door

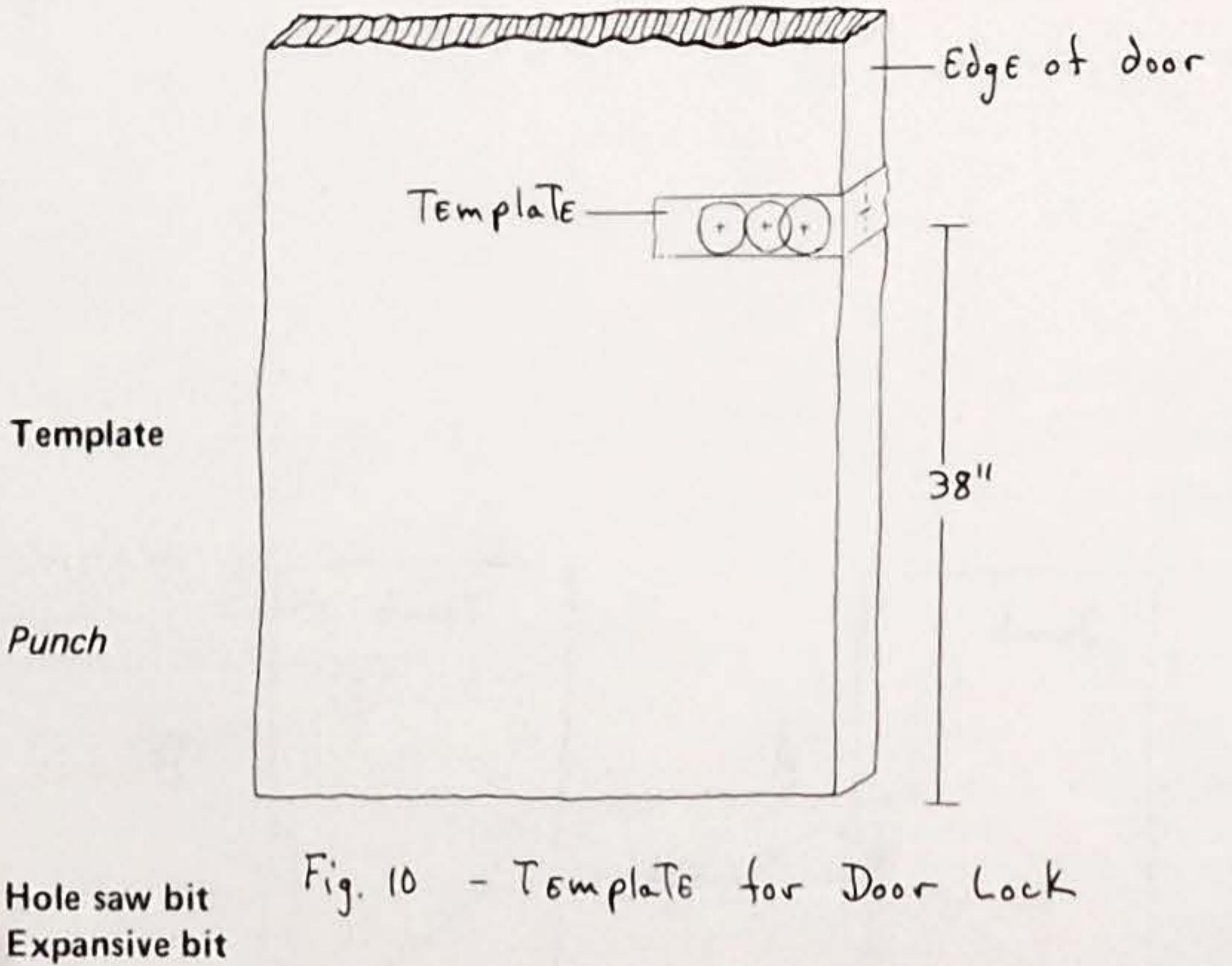


Fig. 10 - Template for Door Lock

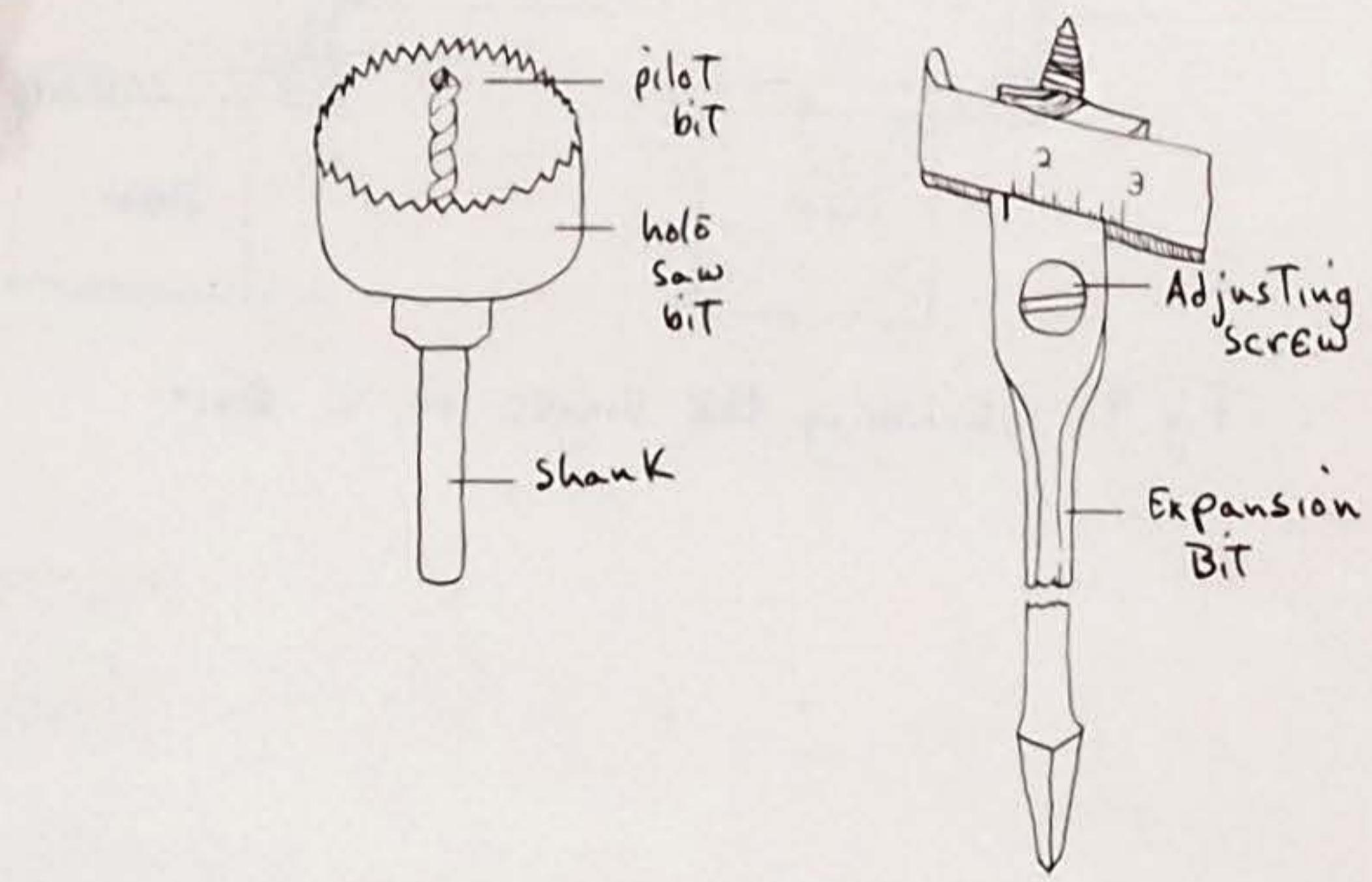


Fig. 11 - Hole Saw and Expansion Bits

hinges by removing the pins, lay it in the door vise, and plane the edge.

INSTALLING LOCKSETS AND STRIKES

All locksets for interior or exterior doors come with good directions and a template for proper placement on the door. The template is usually a piece of cardboard with a fold that goes on the face side of the lock side of the door and folds over the edge. Fig. 10.

With a punch or nail, mark where the template shows for doors with the specifications of the door you have. Drill the required size holes into the edge and face of the door. You will probably need a large adjustable bit if you are using a brace, or a hole saw bit if you are using an electric drill, because the hole through the face of the door is usually 1"-2 1/8" in diameter. Fig. 11. Doors pre-drilled for the lock on the lock-side can be purchased. (Flush doors are reinforced with solid wood around the lock).

Strikes

The strike plate is a flat piece of metal mortised into the side jamb on the lock side to receive the tongue or bolt of the lock when the door is closed. After the lock and knob are installed, close the door and mark where the tongue of the lock hits the jamb. Place the strike on the jamb so that when the tongue fits into the hole in the strike, the face of the door is flush with the edge of the jamb. Trace around the strike and chisel out a place for it in the jamb. The strike is mortised into the jamb until its

surface is flush with the jamb, so the techniques used in chiseling the hinges into the door are useful here. Chisel or drill a deeper part out for the tongue of the lock.

Strikes For Scavenged Doors

When you scavenge a door it is important to take all the hardware that goes with it: the hinge leaves off the jamb and the strike. A nice thing about scavenged doors is that they usually have a door knob and lock set already in them. If the strike wasn't scavenged with the door, go to a junk or demolition company and find a matching strike or one close enough. A strike fits a lock when the tongue and bolt of the lock fit into the holes in the strike. If the hole is too small, take a small file and enlarge the holes in the strike. If the holes are way too small, break a 6" section off a hacksaw blade (they break easily), clamp it in a pair of vise-grips and saw down on each side of the hole the required distance. Fig. 12.

When this is done, take a cold chisel and cut across the saw kerfs by hitting the cold chisel repeatedly (and very hard) with a hammer. Cut on both sides of the strike. File the jaggedly cut edge down until it is smooth and the custom-made strike is finished.

When you're cutting with the cold chisel, the strike should be resting on a solid surface like concrete. Put a piece of thin cardboard between the strike and the concrete to protect the surface of the strike from being marred by the rough concrete surface.

After the lock and strike have been put on, the door stop is installed. The application of door

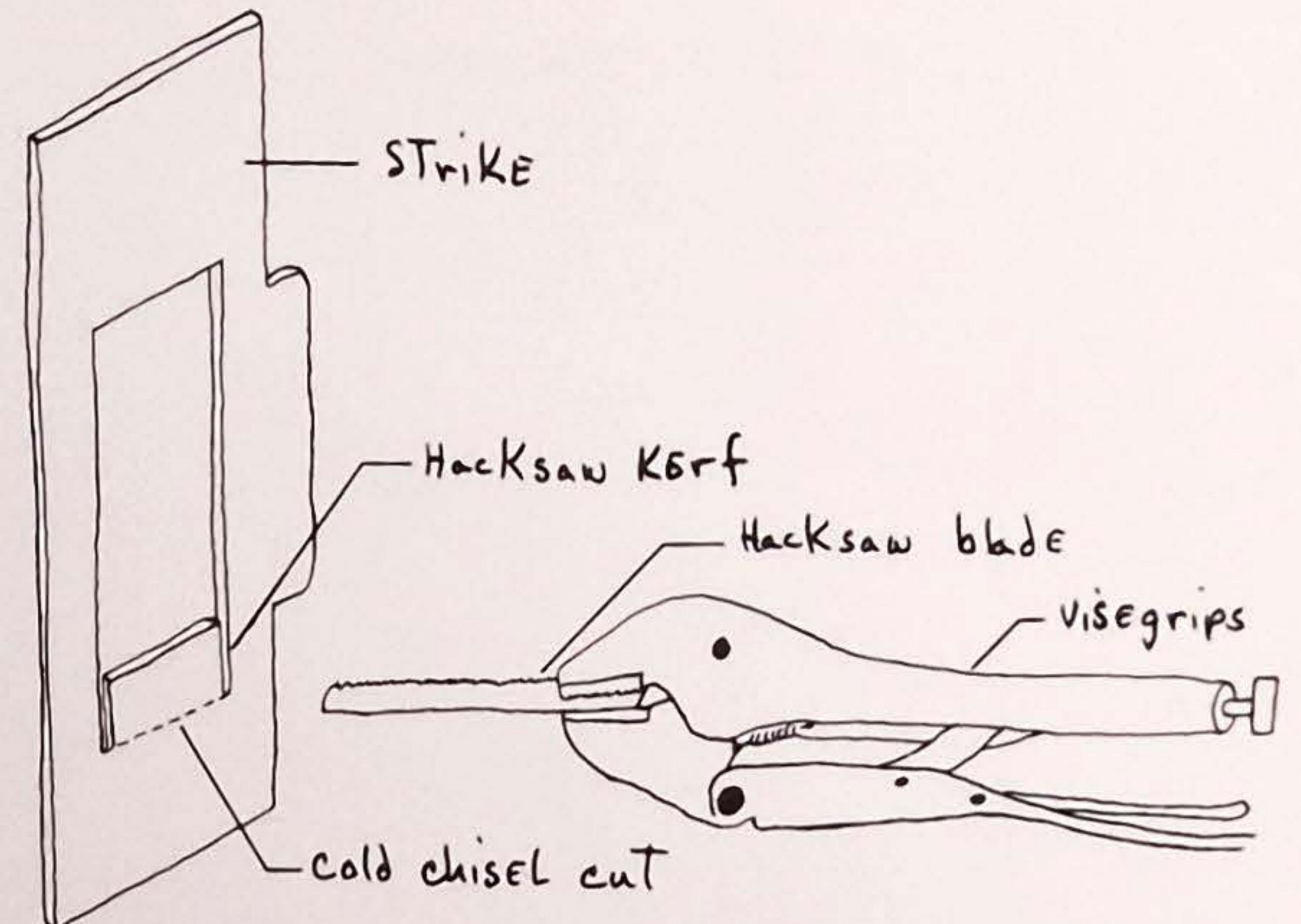


Fig. 12 - Customizing a STRIKE

Hacksaw

Visegrips

Cold chisel

PRE-HUNG DOORS

Pre-hung doors can be purchased at the lumber yard. The procedure for installing them is similar to doing it from scratch--just easier. The manufacturers have done everything for you (assembled the jamb and casing and hung the door); all that must be done is to plumb and level the unit in the rough opening.

Take the casing off one side (this casing is only tacked on), insert the assembly in the rough opening. Plumb the unit and secure the shims with 8d nails. 8d finish nails should be driven through the casing attached to the main assembly, into the trimmer stud and header to help secure the pre-hung door. Finally, nail the casing that was removed to the other side of the wall.

BIFOLD DOORS

Bifold door

Most closet doors (of the few closets remaining nowadays) are either bifold or sliding doors that operate on a track hidden in the ceiling. Nylon wheels are attached to the doors and roll along a track that supports the weight of the door. Sometimes a guide is placed on the floor for sliding doors, but with bifold doors there is nothing on the floor. None of the weight of a bifold door is on the center guide; it is all carried by two pivot brackets--top and bottom at the side jamb. The height of the bifold door off the floor can be adjusted by turning the bottom pivot screw inserted in the door--a special wrench and direct-

ions are always provided. This bottom pivot screw is spring-loaded, and after the top pivot screw in the door is nestled in the top pivot bracket in the head jamb, the bottom pivot can be snapped into the bottom pivot bracket in the floor and then adjusted for height with a wrench. All this is confusing unless you are looking at such a door or a picture of one.

If a sliding door is sticking or impossible to move, it is probably off its track. Usually by lifting the door, you can remove it totally from its track, figure out what went wrong, and lift it back onto the track. There might be a floor guide that must be removed in order to take the door off its track.

Full directions for hanging this type of door come with the door.