

HOW TO USE BORING

The **STANLEY**
TOOL GUIDE

Price 25c



HOW TO USE BORING TOOLS

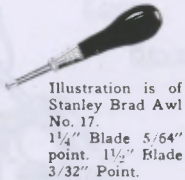
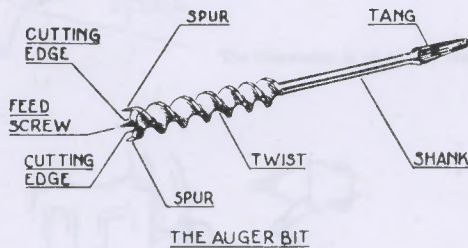
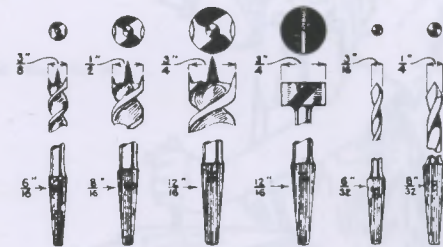


Illustration is of Stanley Brad Awl No. 17. 1 1/4" Blade 5/64" point. 1 1/2" Blade 3/32" Point.

Brad Awls are used to make holes for small screws and nails. To avoid splitting the wood, start the awl with its edge across the grain, turning it back and forth slightly as you press down. Do not let the edge come parallel with the grain.



THE AUGER BIT



Auger Bits 16ths of an inch. Fostner Bits. Twist Bits 32nds of an inch.

Auger Bits are sized by 16ths of an inch, measuring the diameter. Bits vary in length from 7" to 10". Dowel Bits are short Auger Bits about 5 1/2" long.

Bits are marked for size by a single number. The numerator of the fraction stands for the diameter of the bit. Auger and Fostner Bits are marked by 16ths of an inch. No. 8 stands for 8/16" or 1/2". Twist Bits for wood are usually marked in the same way, by 32nds of an inch. No. 8 stands for 8/32" or 1/4".



Twist Bits for Wood are used to make holes for screws, nails or bolts. They are sized by 32nds of an inch and range from No. 2 = 1/16" and larger.

For boring directions, see Stanley 3it Brace Chart and Stanley Doweling jig Chart. For drilling directions, see Stanley Hand Drill Chart.

Illustration is of Stanley Countersink No. 139—3/4".



With Gauge No. 139G—3/4".



Countersink Bits are used to widen screw holes so that the heads of flat-head screws may be flush, or slightly below, the surface of the work.



Bit Stock Drills are designed and tempered to make holes in metal, but may also be used in wood, especially in repair work where contact with nails or metal is possible. They are sized by 32nds of an inch and range from No. 2 = 1/16" and larger.



The standard double thread feed screw is best for general work with seasoned wood. It is preferred for cabinet and pattern making.

The single thread feed screw is best for fast cutting in green or gummy wood.

The diamond point is used for machine boring with power feed.

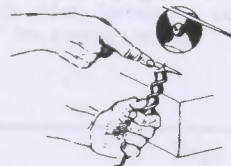


Illustration is of Stanley Bit Gauge No.

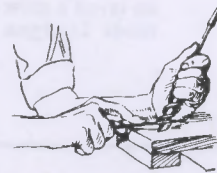
An Adjustable Bit Gauge may be used to regulate the depth of holes.



Fostner Bits are used to bore holes part-way through where the auger bit screw or spur would go through the work, also on end grain, thin wood, or near an end where an auger bit would split the work. To center or start a Fostner Bit, scribe a circle the size of the hole with dividers and press the rim of the Fostner Bit into it. Fostner Bits are sized by 16ths of an inch from No. 4—1/4" and larger.



Sharpen Auger Bits with a bit file. For a keen edge, also whet with a slipstone. Sharpen the spurs on the inside to preserve the diameter.



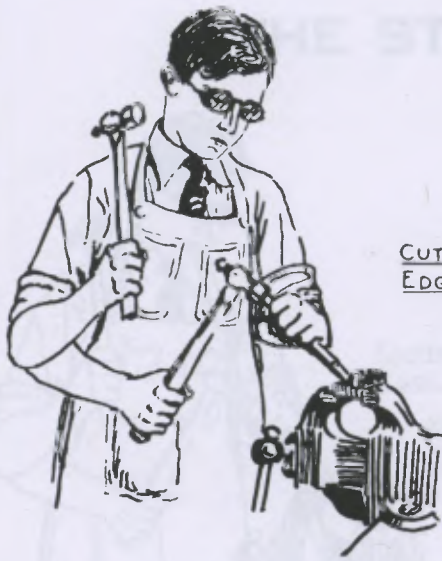
Sharpen the cutting edges on the top to maintain the clearance on the under side. The cutting edges must be kept even.



The Expansive Bit takes the place of many large bits. The cutter may be adjusted for various sized holes. When 2 on the cutter matches the index mark, the bit is set to bore a 2" hole. Moving the cutter 1/32 outward will increase the diameter of the hole 1/16". Test the size on a piece of waste wood. For boring through, clamp a piece of waste wood on the back of the work to prevent splitting.

NOTE: TOOLS WITHOUT CATALOG NUMBERS ARE NOT MANUFACTURED BY STANLEY

HOW TO USE THE STANLEY FLAT COLD CHISEL



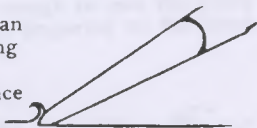
To chip a broad surface, that is, to remove the surplus material preparatory to smoothing with a file, use a cape and a flat chisel.

Chip grooves across the surface of the work with a cape chisel.

Then chip away the material between the grooves with a flat chisel.

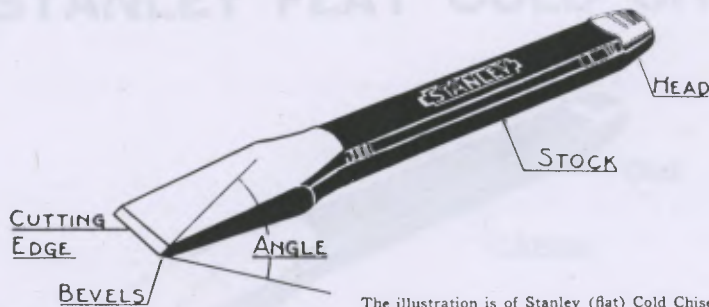
Hold the work in the vise at about elbow height. Grasp the chisel firmly enough to guide it, but loosely enough to ease the shock of the hammer blows imparted to the hand thru the chisel.

Hold the chisel at an angle that will bring the lower bevel parallel to the surface of the work.

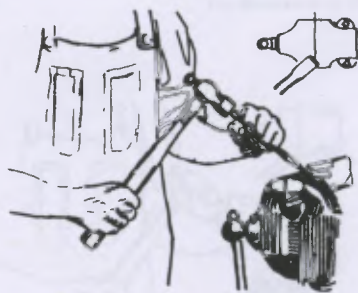


Grasp the hammer near the end of the handle and swing it well over the shoulder in a free graceful sweep.

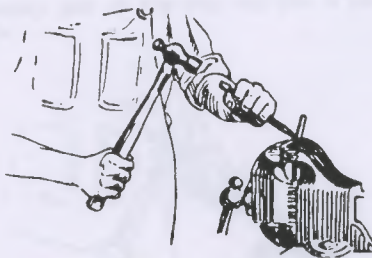
It is not necessary to lubricate the chisel when chipping cast iron. When chipping wrought iron or steel, lubricate the chisel every few blows by touching the edge to a piece of oil soaked waste.



The illustration is of Stanley (flat) Cold Chisel No. 99-3/4.



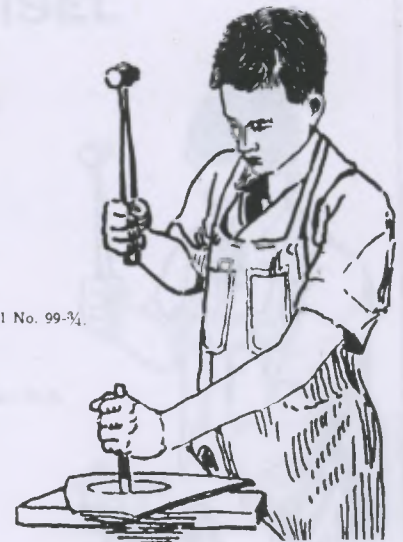
To shear in a vise, hold the chisel so that when struck with the hammer, the chisel and the stationary jaw of the vise act like a pair of shears.



To cut rod or small bar stock to rough size, nick it on opposite sides and bend it until it breaks.



Cold chisels are ground or filed with a bevel on both sides, forming a cutting angle of about 65° for average work.



To cut out a hole, use a narrow chisel so the shape of the cut will conform closely to the line, reducing the amount of filing necessary for finishing.

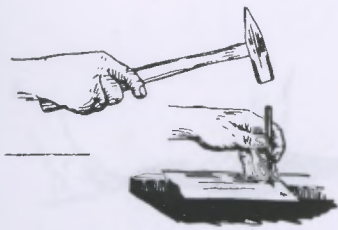
Cold chisels are usually made of carbon tool steel. Chisel No. 99 is made of Chrome Vanadium Alloy Steel, tough enough to give hard lasting use, but soft enough to file sharp; thus avoiding the danger of burning the edge when grinding.

TO AVOID ACCIDENTS

Keep the head of the chisel and the face of the hammer clean and free from oil. Let the grip of the thumb and forefinger be loose enough to give, if the hammer should slip and hit them. In use, the head of the chisel becomes turned over or burred. Keep the burr ground away, to prevent injury to the hands and to prevent particles of the burr from flying off into your eyes. Use goggles to protect your eyes when chipping.

HOW TO USE THE STANLEY RIVETING HAMMER

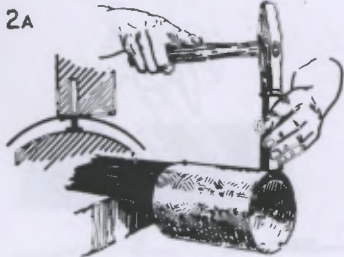
THE STANLEY SETTING HAMMER



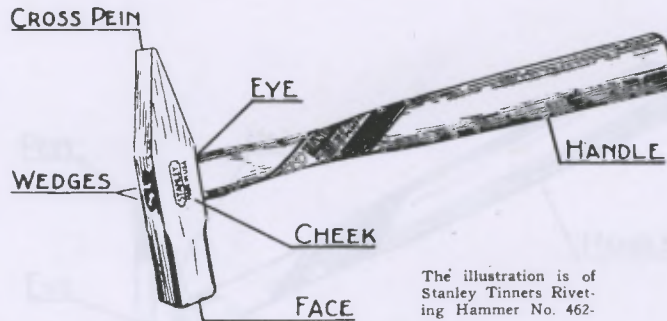
Lay off the positions of the holes by measurement or by template. Center punch them.



Punch or drill the holes by hand or by machine. To punch holes by hand, use a solid punch over a block of lead.



Frequently holes are punched by driving the rivet set down over the rivet.



The illustration is of Stanley Tinners Riveting Hammer No. 462-12 oz.



To overcome a tendency of the work to buckle, due to a slight stretching of the metal around the rivets, drive the rivets as shown by the numbers in the sketch. If a rivet bends, or is poorly headed, cut off the head, drive it out with a punch and try again.

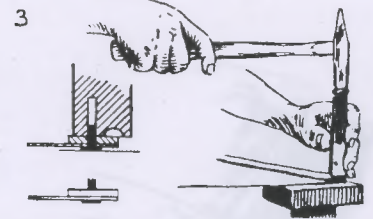


The most common kinds of rivets are round head, flat head, and countersunk head rivets.

For countersunk rivets, the holes are countersunk. The rivets are driven down until the heads fill the holes and draw the parts of the work tightly together. The heads are filed off even with the surface of the work.

TO AVOID ACCIDENTS

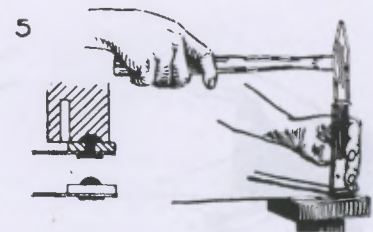
Inspect the hammer every time it is checked out of the tool room. Be sure the hammer head is firmly attached and the wedges driven tightly in place.



Insert the rivets, let a portion, about $1\frac{1}{3}$ times the diameter of the rivet, project for heading. Hold the work over a stake and draw the parts tightly together with the rivet set.

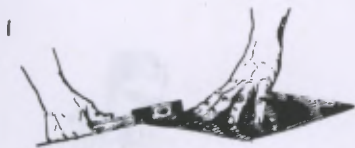


Strike a few blows straight down on the rivet. Heavy blows, or too many blows, will stretch and buckle the metal around the rivet.

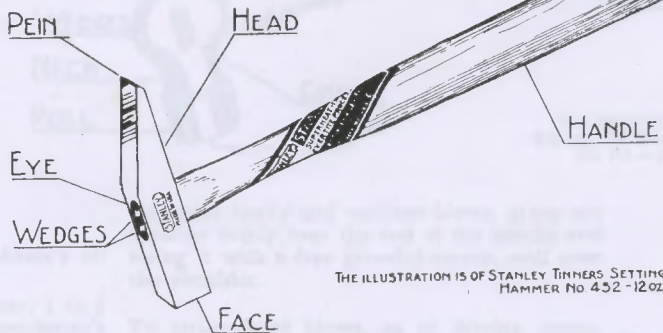


Finish heading the rivet with the cup like hollow in the rivet set.

HOW TO USE THE STANLEY SETTING HAMMER



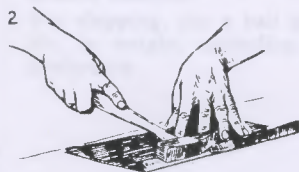
1 Dressing a lock edge on the edge of the bench with the side of the hammer. This operation is often done with a mallet or with a piece of wood.



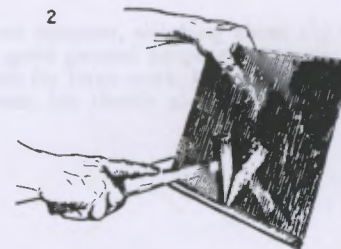
THE ILLUSTRATION IS OF STANLEY TIMMERS SETTING HAMMER No. 452 - 12 OZ.



1 Dressing metal around a wire to make a reinforced wire edge.



2 Dressing a bench made lock edge.

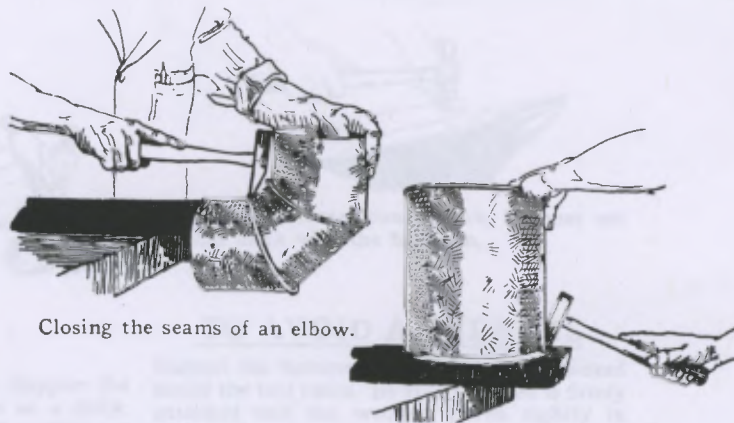


2 Peining the edge around a wire to finish a reinforced wire edge.



3 PEINED IN. CLOSED

Peining a lock edge with a setting hammer. Closing or dressing down a lock seam is done with a mallet.



Closing the seams of an elbow.

Closing the seams of a double seamed bottom.



Opening a closed seam.

TO AVOID ACCIDENTS

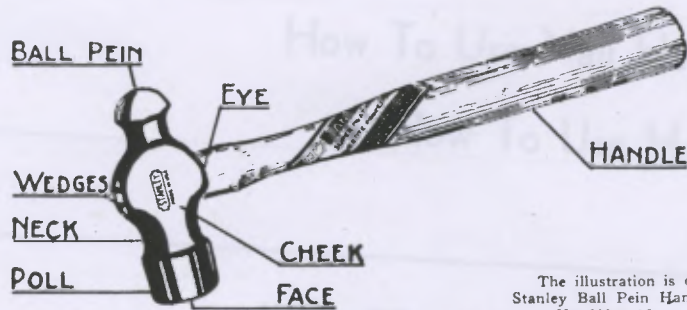
Inspect the hammer every time it is checked out of the tool room. Be sure the hammer head is firmly attached and the wedges driven tightly in place.

HOW TO USE THE STANLEY BALL PEIN HAMMER



The ball pein hammer is the mechanic's all around hammer.

For chipping, use a ball pein hammer, 1 to 2 lbs. in weight, according to the workman's preference.



The illustration is of Stanley Ball Pein Hammer No. 310 — 16 oz.



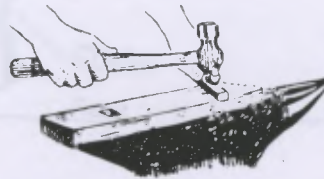
To strike heavy and medium blows, grasp the hammer firmly near the end of the handle and swing it with a free graceful sweep, well over the shoulder.

To strike light blows, as in driving rivets, grasp the handle nearer the head and swing with a motion slightly at the elbow but chiefly at the wrist.

The ball pein hammer, weighing about 1½ to 2 lbs., is a good general purpose light weight hand hammer for forge work. Notice the blacksmith extends his thumb along the back of the handle.



To rivet with a ball pein hammer: Support the rivet on something hard, a stake or a dolly, etc.; draw the parts together with a rivet set or with a drift; strike straight down on the rivet with the ball pein; head the rivet over with the ball pein or with the face of the hammer.



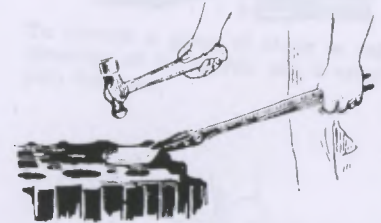
To change a center punch mark, hammer out the old mark with the ball pein.

TO AVOID ACCIDENTS

Inspect the hammer every time it is checked out of the tool room. Be sure the head is firmly attached and the wedges driven tightly in place. Avoid striking the handle to save it from breakage.

Avoid chipping the edges of the hammer face, when striking hard metals.

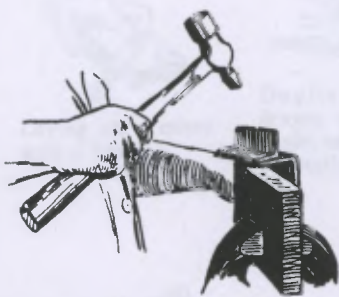
Avoid striking with the cheek of the hammer, as it is the weakest part.



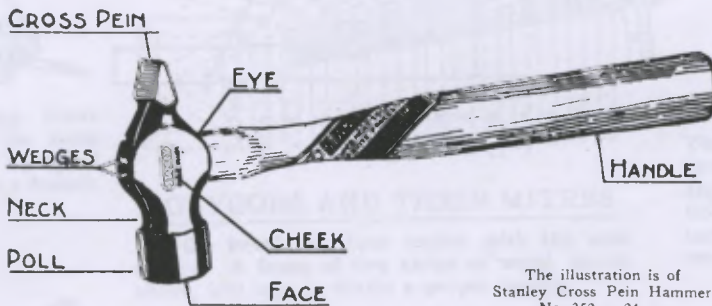
To raise a bowl shaped form, such as the bowl of a solder ladle, hold the work over a swage block or suitable form or stake and beat it out with the ball pein.

HOW TO USE THE STANLEY HAMMERS

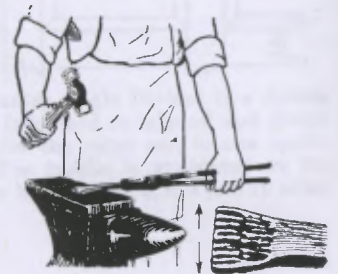
STRAIGHT AND CROSS PEIN



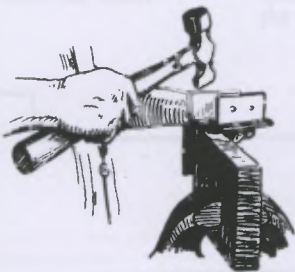
For many jobs of swaging, riveting, stretching or bending, a ball pein hammer is not suitable. Use a cross pein or a straight pein hammer, according to the work.



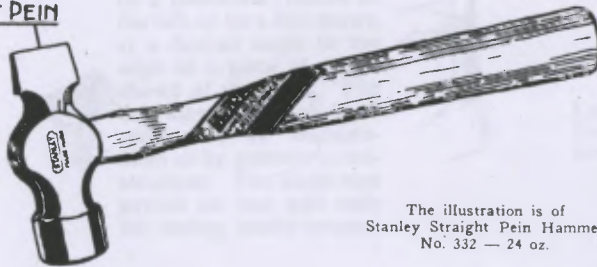
The illustration is of Stanley Cross Pein Hammer No. 352 — 24 oz.



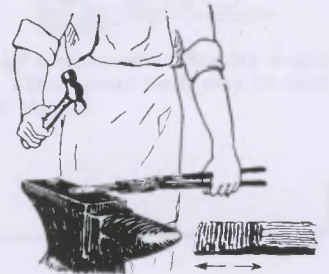
To stretch a piece of stock in the direction of its width, use a cross pein hammer.



STRAIGHT PEIN



The illustration is of Stanley Straight Pein Hammer No. 332 — 24 oz.



To stretch a piece of stock in the direction of its length, use a straight pein hammer.

To strike heavy and medium blows, grasp the hammer firmly near the end of the handle and swing it with a free graceful sweep, well over the shoulder.

To strike light blows, as in driving rivets, grasp the handle nearer the head and swing it with a slight motion at the elbow but chiefly at the wrist.



The machinist usually holds his thumb around the hammer handle.



The blacksmith usually holds his thumb along the back of the hammer handle.

TO AVOID ACCIDENTS

Inspect the hammer every time it is checked out of the tool room. Be sure the head is firmly attached and the wedges driven tightly in place.

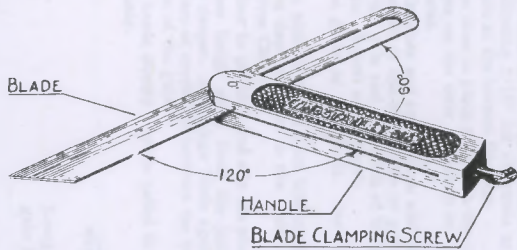
Avoid striking the handle to save it from breakage.

Avoid chipping the edges of the hammer face when striking hard metals.

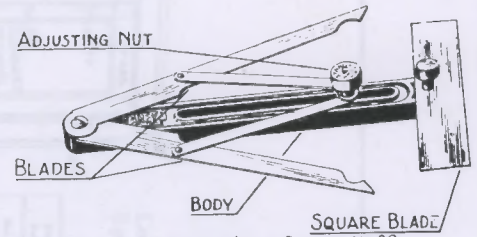
Avoid striking with the cheek of the hammer as it is the weakest part.

HOW TO USE THE STANLEY T BEVEL

AND THE STANLEY ANGLE DIVIDER



The illustration is of Stanley T Bevel No. 18—8 in.



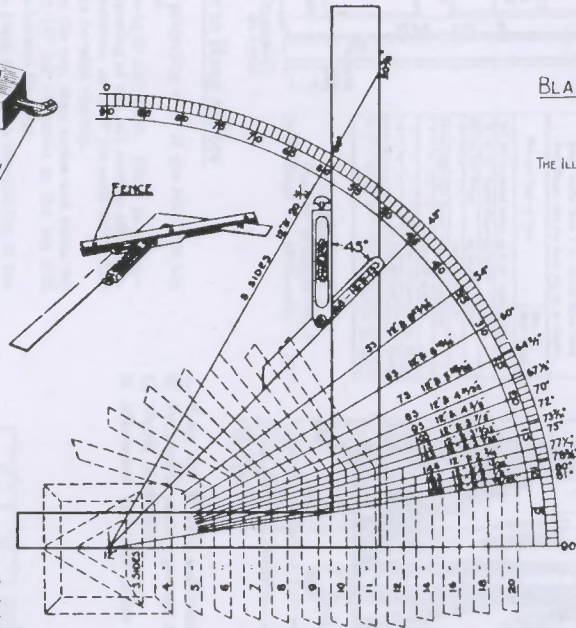
THE ILLUSTRATION IS OF STANLEY ANGLE DIVIDER NO. 30



Laying off a mitre with a bevel.

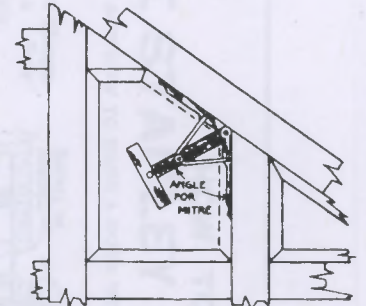


Duplicating lines drawn at the same angle, as in laying off dovetails for a drawer.

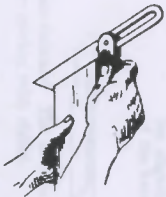


POLYGONS AND THEIR MITRES.

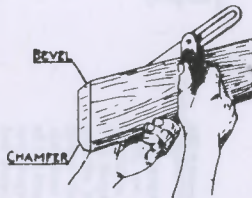
Set the bevel for these angles with the steel square. A fence of two strips of wood, shown above, will help to obtain a proper setting.



The Stanley Angle Divider is a double bevel. It is used to take off and divide angles for the mitre cut, in one operation. The handle is graduated on the back for laying off 4, 5, 6, 8 and 10 sided work.



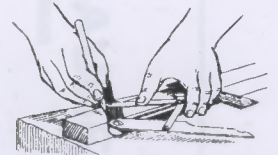
Testing mitred ends with the bevel.



Testing beveled or chamfered edges with the bevel.



The bevel may also be set by a protractor, shown at the left, or by a line drawn at a desired angle to the edge of a piece of wood, shown at the right. The line may be laid off by a protractor, by measurement or by geometric construction. The blade may extend on one side only for testing inside corners.



Laying off a mitre with a Stanley Angle Divider. The square blade may be used for a try square.