

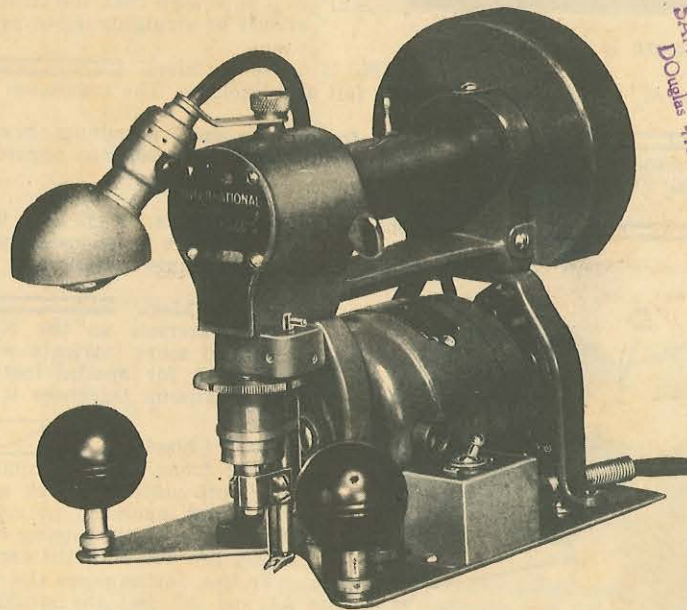
INSTRUCTIONS FOR OPERATING  
The Models K6 K7 and K8

# Cutawl

Manufactured by

International Register Company

15 South Throop Street, Chicago, Illinois



MODEL K8 CUTAWL

C.W. MAYER & CO. ESTABLISHED 1872  
TOOLS - METALS - SHOP SUPPLIES  
76 First Street  
SAN FRANCISCO  
Douglas 4180  
11th & Alice Sts.  
OAKLAND

## SETTING UP THE CUTAWL

All models of the Cutawl are shipped assembled complete and ready for immediate use.

The Cutawl uses either a chisel or a saw. The chisel is for cutting soft materials up to a maximum of  $\frac{1}{8}$  inch, the saw for cutting harder materials to a maximum of  $1\frac{1}{4}$  inches. On page 3 is given a list of the materials which can be cut with the Cutawl, the maximum thickness that can be handled and the best type of chisel or saw to use.

## OPERATION WITH THE CHISEL

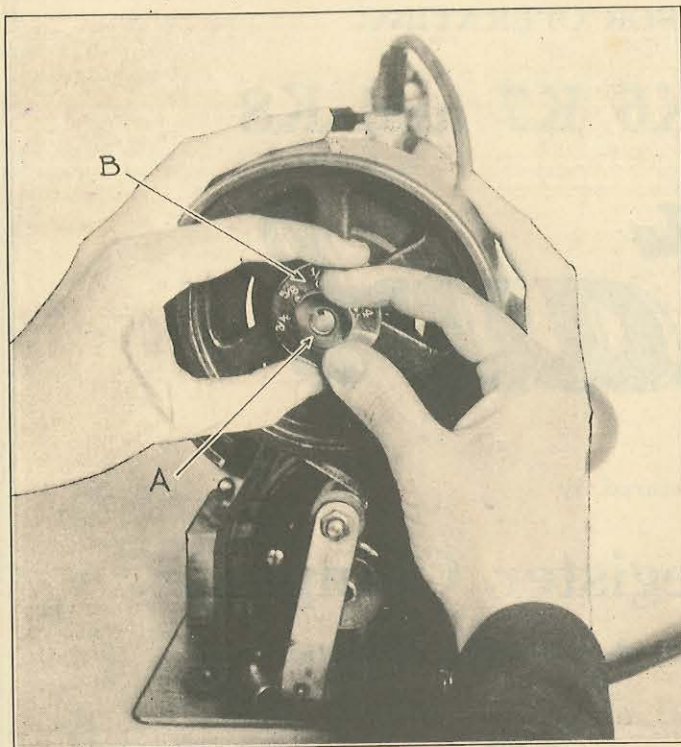


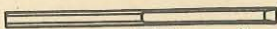
Figure 1


**A1—BENCH.** A bench should be provided on which to lay the material to be cut. For greatest comfort of the operator, it should be about 38 inches high, with a smooth wood top. It is best to have the top at least  $1\frac{3}{4}$  inches thick to prevent undue vibration. Cover the bench with a sheet of wallboard or several layers of heavy cardboard nailed in place. This serves as an underlay for the work and prevents damage to the bench top and the chisels.


**A2—MATERIAL.** Place the material to be cut on top of the bench and fasten it down. This is easiest done by nailing with small nails or brads. For cutting very soft materials such as cloth or paper, or when cutting metal, follow the special instructions given on page 4.

**A3—CHISEL.** Different chisels are used for cutting different materials. Below the different types are described and pictured. Each Cutawl is shipped with a No. 11 chisel in place, and with all adjustments properly set to cut  $\frac{1}{4}$  inch wallboard, cardboard, soft wood or similar material.

All chisels should be inserted far enough into the chisel block so that the upper end is flush with the top of the block. Place the flat side of the chisel shank against the set screws. Care must be used to see that the chisel blade is vertical, and also parallel with the sides of the chisel block, after the set screws are tightened. Otherwise the chisel will not cut properly. If the chisel is not vertical or parallel with the chisel block, bend it gently until it is in the proper position, or replace it with a new chisel. If the Cutawl cuts smoothly when cutting a curve clockwise and roughly cutting anti-clockwise, or vice versa, it is a sure sign that the chisel is not vertical or parallel. It should be straightened or replaced.

**No. 0 Chisel.**  For cutting all soft material such as wallboard, cardboard, soft wood, felt and linoleum. The maximum thickness it can cut is  $\frac{1}{8}$  inch.

**No. 2 Chisel.**  Step cut end for cutting sheet aluminum, brass, copper, celluloid, Masonite, and similar hard and tough materials. (See paragraph A5 for special precautions regarding clearance.) The maximum thickness it can cut is  $\frac{1}{8}$  inch.

**No. 3 Chisel.**  For use on the same materials as the No. 0 where the designs are small and intricate or where accurate fitting inlays are wanted. The maximum thickness it can cut is  $\frac{3}{8}$  inch.

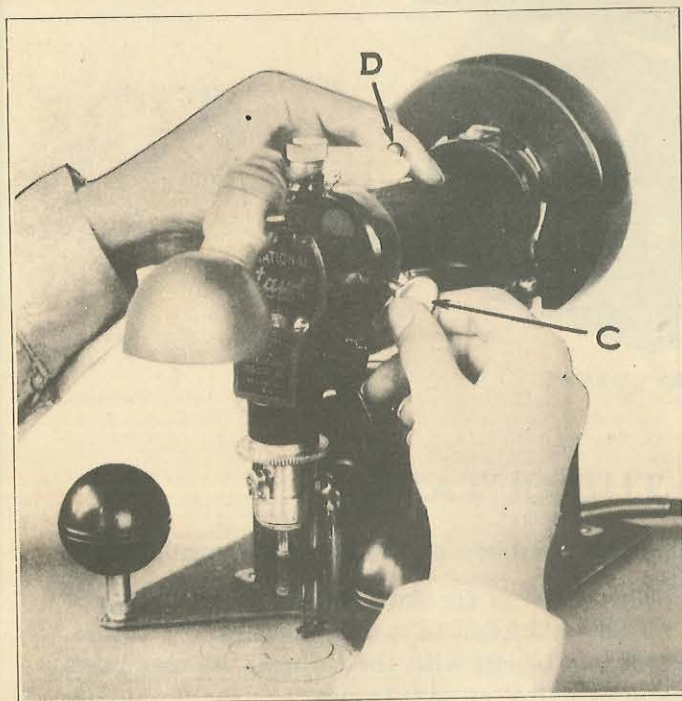

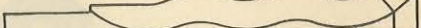



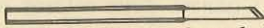
Figure 2

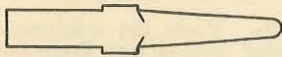
**No. 6 Chisel.**  For use on the same materials as the No. 2 but is preferred where finer and more intricate work is to be done. (See paragraph A5 for special instructions regarding clearance.) The maximum thickness it can cut is  $\frac{3}{8}$  inch.

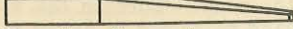
**No. 7 Chisel.**  For cutting from 1 inch minimum to  $1\frac{1}{2}$  inches maximum of very soft materials such as felt, cloth and tissue paper. The upper layers of material are cut with the knife edge without the chisel coming out of the work while the lower layers are cut with the end.

To use, fasten down the work as directed in paragraphs A1 and A2. Set the stroke at the maximum of  $\frac{3}{4}$  inch and adjust the depth of the stroke (see CLEARANCE paragraph A5) until at the bottom the chisel cuts into the underlay  $\frac{1}{2}$  inch. Proceed as directed in paragraph A6—CUTTING.

**No. 8 Chisel.**  For the same service as the No. 0, but is preferred for very accurate work since it follows the line of cut better. Maximum thickness that it can cut is  $\frac{1}{8}$  inch. (See paragraph A5 for special instructions regarding clearance.)

**No. 9 Chisel.**  For the same service as the No. 3, but is preferred for very accurate and complicated work, since it follows the line of cut better. Maximum thickness which it can cut is  $\frac{3}{8}$  inch. (See paragraph A5 for special instructions regarding clearance.)

No. 10 Chisel.  For use only with bevel cutter for cutting all kinds of material. Maximum thickness that it can cut is  $\frac{3}{8}$  inch.

No. 11 Chisel.  Preferred for cutting medium and coarse designs in soft materials such as wallboard, cardboard, soft wood, paper, etc. It gives the smoothest and most accurate cut of any chisel. The maximum thickness which it can handle is  $\frac{5}{8}$  inch. (See paragraph A5 for special instructions regarding clearance.)

MATERIALS CUT WITH THE K6, K7, and K8 CUTAWLS USING EITHER CHISEL OR SAW

Material	Chisel Preferred Given First	Maximum Thickness which can be cut	SAW PREFERRED		Maximum Thickness Which Can be cut
			With Saw Table	Without Saw Table	
Aluminum sheet	6, 2	.025" (22 gauge)	15		$\frac{1}{8}$ "
Asbestos, hard			15, 14	13	$\frac{3}{8}$ "
" , soft	11, 8, 0, 2	$\frac{1}{2}$ "			
Auditec	11, 8, 0, 2	$\frac{5}{8}$ "			
Bakelite			14	13	$\frac{1}{4}$ "
Beaver Board	11, 8, 9, 0, 3	$\frac{5}{8}$ "			
Brass sheet	6, 2	.014" (27 gauge)	15		$\frac{3}{32}$ "
Cardboard, soft	11, 8, 9, 0, 3	$\frac{11}{16}$ "			
" , hard	6, 2	$\frac{5}{8}$ "	14	13	$\frac{3}{4}$ "
Celluloid	6, 2	$\frac{1}{8}$ "			
Celotex	11, 8, 0	$\frac{11}{16}$ "	14	13	$1\frac{3}{8}$ "
Cloth	11, 8, 0	$\frac{11}{16}$ "			
Compo Board	7	1" min. to $1\frac{1}{2}$ " max			
Copper Board	11, 8, 6, 2	$\frac{1}{4}$ "	14	13	$\frac{3}{4}$ "
Copper sheet	6, 2	.020" (24 gauge)	15		$\frac{3}{32}$ "
Cork	11, 8, 0	$\frac{11}{16}$ "	14	13	$1\frac{1}{4}$ "
Cornell Board	11, 8, 9, 0, 3	$\frac{5}{8}$ "			
Felt	11, 8, 0	$\frac{11}{16}$ "			
Fibre sheet	7	1" min. to $1\frac{1}{2}$ " max.			
Homasote	6	$\frac{3}{32}$ "	14	13	$\frac{3}{8}$ "
Insulite	11, 8, 9, 0, 3	$\frac{11}{16}$ "	14	13	$1\frac{1}{4}$ "
Iron, Galv.	11, 8, 9, 0, 3	$\frac{11}{16}$ "			
Lead sheet	2, 6	.013" (30 gauge)	15		$\frac{1}{16}$ "
Leather	6, 2	$\frac{1}{4}$ "	15		$\frac{1}{2}$ "
Linoleum	11, 8, 6, 0	$\frac{3}{8}$ "			
Masonite, soft	11, 8, 9, 0, 3	$\frac{1}{2}$ "	14	13	$\frac{3}{4}$ "
" , hard	11, 8, 9, 0, 3	$\frac{11}{16}$ "	14	13	$1\frac{1}{4}$ "
Metallic Foils	6, 2	$\frac{1}{4}$ "			$\frac{3}{4}$ "
Mica	6, 2	$\frac{1}{4}$ "			
Paper, crepe	6, 2	$\frac{1}{4}$ "			
" , kraft	11, 8, 0	$\frac{1}{2}$ "			
" , tissue	6, 2	$\frac{3}{8}$ "			
Rubber sheet	11, 8, 0	$\frac{1}{2}$ "			
" hard	11, 8, 9, 0, 3	$\frac{1}{2}$ "	14		$\frac{3}{4}$ "
Steel	6, 2	$\frac{1}{16}$ "	14	13	$\frac{1}{4}$ "
Steel, Galv. sheet	6, 2	$\frac{1}{16}$ "	15		$\frac{1}{16}$ "
Stencil Board	6, 2	$\frac{1}{4}$ "			
Upron Board	11, 8, 9, 0, 3	$\frac{5}{8}$ "			
Veneer, 3 ply, soft	11, 0, 3	$\frac{5}{8}$ "	14	13	$1\frac{1}{4}$ "
" , 3 ply, hard	6, 2	$\frac{1}{4}$ "	14	13	$\frac{3}{4}$ "
Wallboard	11, 8, 9, 0, 3	$\frac{11}{16}$ "	14	13	$1\frac{1}{4}$ "
Wood, soft	11, 8, 9, 0, 3	$\frac{1}{2}$ "	14	13	$1\frac{1}{4}$ "
" , hard	11, 2	$\frac{1}{4}$ "	14	13	$\frac{5}{8}$ "
Zinc sheet	6, 2	.020" (10 gauge)	15		$\frac{1}{8}$ "

A4—STROKE. On the hub of the driving pulley (see figure 1) is the stroke adjustment mechanism. On the adjustment disc are stamped the fractions  $\frac{1}{4}$ ,  $\frac{3}{8}$ ,  $\frac{1}{2}$ ,  $\frac{5}{8}$  and  $\frac{3}{4}$ , which indicate the various lengths of stroke of the chisel in inches. The location of the red tipped pin shows the stroke for which the machine is set.

To determine the proper length of stroke,  $\frac{1}{8}$  inch should be added to the thickness of material to be cut to allow a clearance of  $\frac{1}{8}$  inch above and below the work.

EXCEPTION: The Nos. 2, 6, 8, 9 and 11 chisels require special adjustment, see paragraph A5.

To adjust the stroke, loosen the thumb nut A as shown in figure 1 until the disc B can be disengaged from the red pin. Then, holding the pulley, turn the disc so as to place the red pin in the hole opposite the stroke wanted. Tighten thumb screw firmly.

A5—CLEARANCE. The clearance, or the amount the chisel comes out of the work at the top of the stroke, must be correctly adjusted or the Cutawl will not operate properly. It must be reset whenever the stroke is altered or a chisel changed.

To adjust the clearance, turn the pulley until the chisel is in its uppermost position. Loosen the thumb screw C, figure 2, then turn the shaft housing, using the knob D, until the chisel comes out of the work about  $\frac{1}{8}$  inch. Tighten screw C and the machine is ready to cut.

EXCEPTION: The tips of chisels 2, 6, 8 and 9 should just touch the surface of the work. The tip of the No. 11 chisel should remain  $\frac{1}{8}$  inch or more in the work at the top of the stroke. To have the tip of this chisel come out of the work reduces its efficiency.

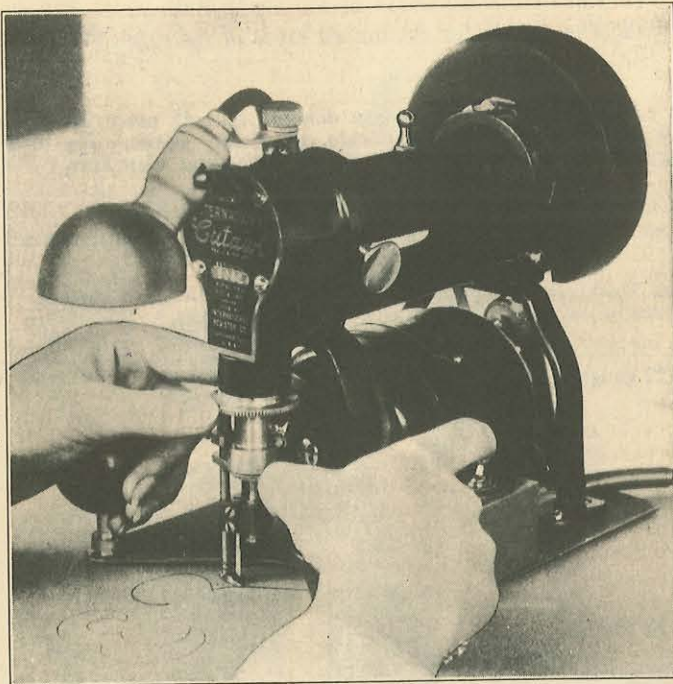


Figure 3

If the swivel latch lies against the Cutawl frame turn it outward so the fingers can grasp it for easy operation up or down.

To unlock the swivel push the latch up until the swivel is free and the latch is caught and held by the automatic catch.

**A8—INSTRUCTIONS FOR CUTTING STRAIGHT LINES.** To cut a straight line free hand with the K8 Cutawl, rule the line on the work, lock the swivel (see paragraph A7) in the most convenient position and follow the line turning the entire machine to correct any tendency to deviate.

Cutting straight lines with the K6 and K7 Cutawls where the swivel cannot be locked, will be facilitated by scoring the surface of the material to be cut with a knife. The chisel will tend to follow the score mark.

Very accurate straight lines can be cut with any model Cutawl by laying a straightedge on the work and using it as a guide for the edge of the base plate.

**A9—INSTRUCTIONS FOR CUTTING VERY SOFT MATERIALS.** If the material to be cut is soft such as tissue paper, soft cloth or felt, an overlay of stiff paper or cardboard should be placed upon it, and fastened through the material to the bench with small nails. This overlay holds down the edges of the material when cut and makes it easier to move the machine.

**A10—INSTRUCTIONS FOR CUTTING SHEET METAL.** The Cutawl will cut thin sheet metal very well using the chisel. The procedure given below has been found best. If carefully followed, excellent results are always obtained.

1. **UNDERLAY.** Use an underlay of heavy cardboard or wallboard. All things considered, wallboard is the most satisfactory material for this purpose. Employing a harder underlay, such as wood, gives a cleaner cut. The improvement is not great, however, and except under unusual circumstances does not justify the higher cost.

2. **OVERLAY.** Wherever possible, use an overlay of very heavy paper, or cardboard. This not only prevents the surface of the metal from being scratched by the base plate of the Cutawl, but greatly reduces the tendency to vibrate and gives a very much improved cut. No single factor contributes as much to the easy cutting of metal as the use of a proper overlay.

3. **FASTENING.** The overlay, metal and underlay should be tacked down or otherwise fastened very firmly to the table to reduce the tendency to vibrate.

4. **CHISELS.** Use the No. 2 or the No. 6 chisels; the former for coarse work and thick metal, the latter for fine designs in thin material.

5. **STROKE.** The stroke should be set at  $\frac{1}{4}$  inch.

6. **CLEARANCE.** The clearance should be adjusted so that the slight projection at the end of the Nos. 2 and 6 chisels just clears the surface of the overlay. If no overlay is used the chisel tip should just touch the surface of the metal at the top of the stroke.

7. **CUTTING.** In starting the cut the swiveling mechanism should be held firmly between the thumb and forefinger of the left hand so that it will not dance about as the chisel is being inserted. Otherwise, cutting is as described in paragraph A6.

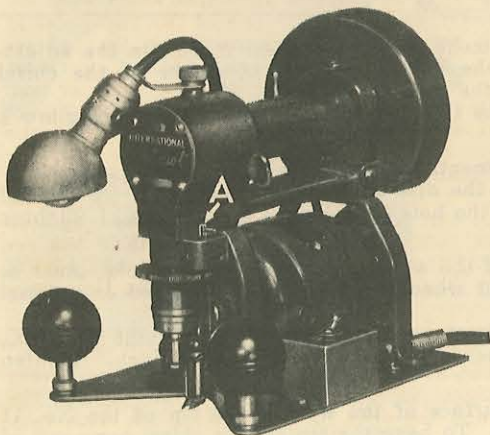


Figure 4

**A6—CUTTING.** Place the machine on the work, and connect the motor cord to any lamp outlet of 110 to 120 volt direct or alternating current. Grasp the ball handles as shown in figure 3. Tilt the machine back so that the chisel clears the work. Turn on the switch with a finger of the right hand as shown in figure 3. Take hold of the swivel by the knurled disc using the thumb and forefinger of the left hand. Turn the swivel until the now swiftly moving chisel points in the direction in which it is desired to cut. Then, still holding the knurled disc with the fingers, insert the moving chisel at the desired place.

**CAUTION:** Always allow the Cutawl to attain full speed before inserting the chisel in the work.

As soon as the chisel is in the work release the knurled disc and guide the machine by holding the ball handles only.

When changing direction or turning corners, DO NOT turn the whole machine. Merely push, without turning, in the direction in which it is desired to cut. The chisel will turn of itself and cut in the direction wanted.

At the end of any cut, turn off the switch and tilt the machine back until it rests in a vertical position on the pulley guard. Do not let it rest on the chisel. To do so will dull and bend it.

**A7—SWIVEL LOCK.** The K8 Cutawl only is provided with a swivel lock to facilitate the cutting of straight lines. To lock, turn the swivel until the proper notch in the knurled disc is directly under the swivel latch marked A in figure 4. Then push the swivel latch down until the end of the latch fits into the notch, locking the swivel.

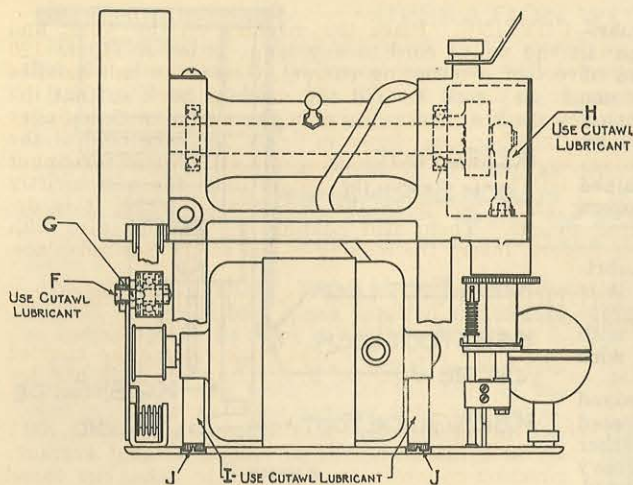


Figure 5

well lubricated. Figure 5 shows the points on the Cutawl which require lubrication. Use Cutawl Lubricant provided with each machine in all places.

**BELT IDLER.** Lubricate by screwing down the screw plug F a half turn every week. This forces lubricant into the ball bearing as long as any remains in the tube G. When the plug F is screwed in as far as it will go, remove the plug and refill the tube.

**ENCLOSED MECHANISM.** The crank pin, connecting rod, ball bearings, shaft, etc., are self lubricating from the lubricant in the crank case H. This compartment is reached by removing the name plate, and should be kept one-third full of lubricant at all times. The lubricant in the enclosed mechanism has a tendency to escape at two points: around the rotating drive shaft between the large pulley and the rear end of the frame, and down the plunger which carries the chisel holder. Both of these points are provided with stuffing boxes in which the packing may be tightened or renewed to stop leakage.

The packing at the rear end of the frame may be tightened as follows: Remove nut A and disc B, figure 6, and insert wrench C in the hole in pulley D. Push lightly on wrench C and revolve the pulley until the wrench enters the hole in the packing nut E. Then, holding the wrench in position, turn the pulley in the same direction as it is driven by the motor, until the packing is tight.

**CAUTION:** To avoid excessive wear and load on the motor, tighten the packing only enough to prevent leakage of lubricant.

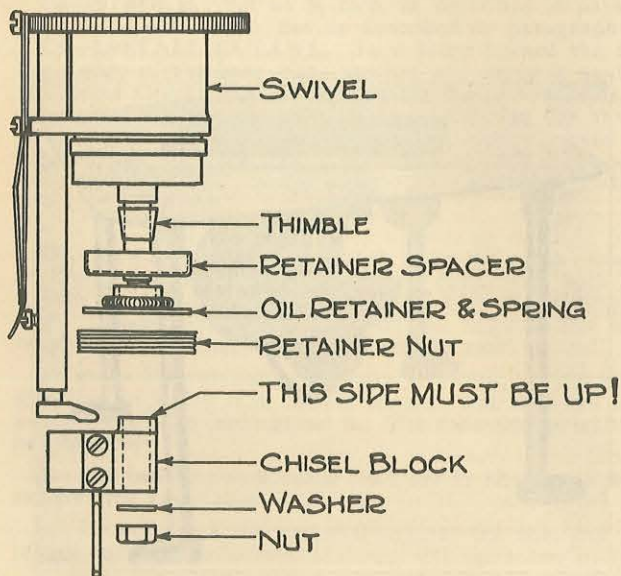


Figure 7

The maximum thickness of various metals which can be cut with the chisel is as follows:

Aluminum sheet	.....0.025 inch	.....(22 gauge)
Brass sheet	.....0.014 inch	.....(27 gauge)
Iron, galv.	.....0.013 inch	.....(30 gauge)
Lead sheet	......250 inch	.....
Zinc sheet	......020 inch	.....(10 gauge)

Thicker layers must be sawed with saw and saw table.

#### A11—INSTRUCTIONS FOR CUTTING THREE LAYERS OF WALLBOARD

Three layers of standard  $\frac{1}{8}$  inch wallboard are best cut by using the No. 11 chisel, setting the stroke at  $\frac{1}{2}$  inch, and adjusting the clearance so that the tip of the chisel remains in the wallboard  $\frac{1}{8}$  inch at the top of the stroke. This setting of the clearance will insure the lowest layer being cut through cleanly.

It is possible to cut three layers of wallboard using the No. 0 or No. 11 chisel set on  $\frac{3}{4}$  inch stroke, but the heat developed due to the long stroke causes excessive chisel breakage.

**A12—LUBRICATION.** Because of the high speed at which the Cutawl operates, all parts should always be kept

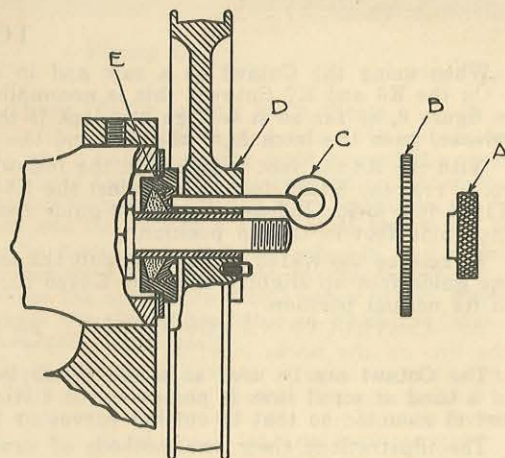


Figure 6

In the K6 and K7 Cutawls, the packing around the plunger which carries the chisel holder is of necessity installed inside the machine in such a location that special tools are required for tightening it. We recommend that if lubricant leakage on the K6 and K7 model Cutawls becomes objectionable, they be returned to the factory for adjustment.

On the K8 Cutawl, however, the packing around the plunger can be replaced easily as follows:

With the plunger at the top of its stroke, (see figure 7) remove nut, washer and chisel block. Remove the retainer nut by using the spanner wrench furnished with each oil retainer, or by inserting a punch in one of the two holes in the bottom of the retainer nut. Remove the leather oil retainer and spring, and retainer spacer. Clean the recess from which these parts were removed and the retainer nut.

Place the thimble (furnished with each oil retainer) over the end of the shaft as shown in figure 7. This allows the leather oil retainer to pass readily over the shoulder of the shaft. Assemble retainer spacer, oil retainer and spring, and retainer nut in the order shown in figure 7, and push them up the shaft until the retainer nut can be screwed up into place. Make sure that all parts have fitted inside the retainer nut so that it screws up flush with the end of the swivel mechanism. Tighten the retainer nut with the spanner wrench or a punch.

Remove the thimble and reassemble the chisel block, washer and nut, making sure that the collar of the chisel block is uppermost and that the chisel block turns freely after the nut is tight. If it tends to bind at all, smooth the washer, the nut and the ends of the chisel block with very fine emery paper.

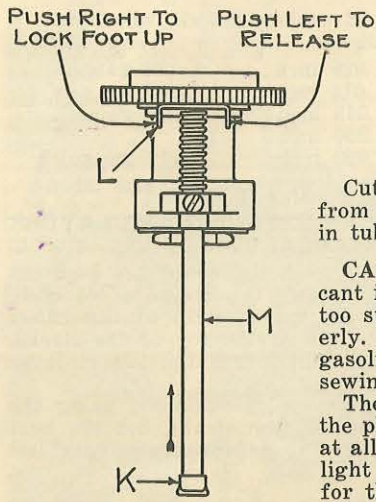


Figure 8

**MOTOR.** The motor is lubricated from two grease cups I, see figure 5, one at each end of the shaft, which extend down into the base plate. These should be kept full and are reached by removing the slotted caps J.

Cutawl Lubricant may be obtained from the factory or from Cutawl dealers in tubes or in pound cans.

**CAUTION:** Do not put Cutawl Lubricant in any of the swivel bearings. It is too stiff to permit them to operate properly. If the swivel sticks, wash out with gasoline and lubricate the ball races with sewing machine oil.

The chisel block where it fits around the plunger should be kept well lubricated at all times with sewing machine or other light oil. Cutawl Lubricant is too heavy for this bearing and should not be used. Any Cutawl lubricant which finds its way down the plunger should be wiped off so as not to gum the chisel block bearing.

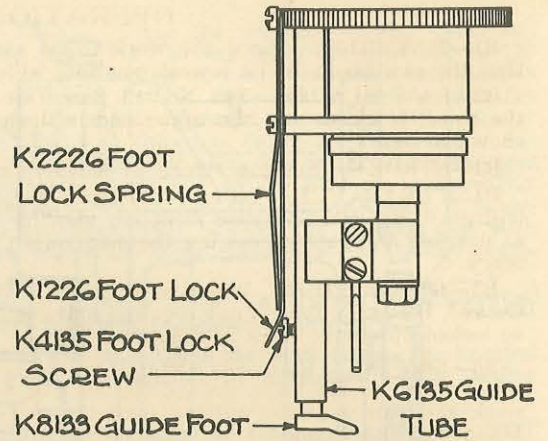


Figure 9

### TO LOCK UP THE FOOT

When using the Cutawl as a saw and in some other instances, the guide foot should be locked up off the work. On the K6 and K7 Cutawls this is accomplished as follows: Push the foot K in the direction indicated by the arrow in figure 8, as far as it will go and lock it there by pushing the latch L to the right into a notch in the shaft M. To release, push the latch L to the left and the spring will return the foot K to its normal position.

With the K8 the foot is locked in the following manner: Push the K8133 guide foot (see figure 9) up as far as it will go. Press the K1226 foot lock against the K6135 guide tube so that the K4135 foot lock screw enters the hole in the K1226 foot lock. Release the K8133 guide foot. The K4135 foot lock screw will catch in the K1226 foot lock and hold the guide foot in the up position.

To release the K8133 guide foot, pull the lock spring of the K1226 lock out beyond head of the K4135 screw and push the guide foot up slightly until the K4135 foot lock screw releases the K1226 foot lock. Allow the guide foot to return to its normal position.

### CUTAWL USED AS A SAW

The Cutawl can be used as a saw by replacing the chisel with a saw blade. When used in this way it takes the place of a band or scroll saw. It possesses the distinct advantage over all other sawing tools of having the cutting mechanism swivel mounted so that in cutting curves or turning corners neither work nor machine need be rotated.

The illustrations show two methods of sawing with the Cutawl. In figure 10 the machine is used without attachments, the work being raised on parallel bars to allow clearance for the saw below. In figures 11 and 12 the Cutawl is shown inverted and clamped in a specially designed saw table which may be used with legs (figure 11) or mounted without legs flush with the bench top (figure 12.)

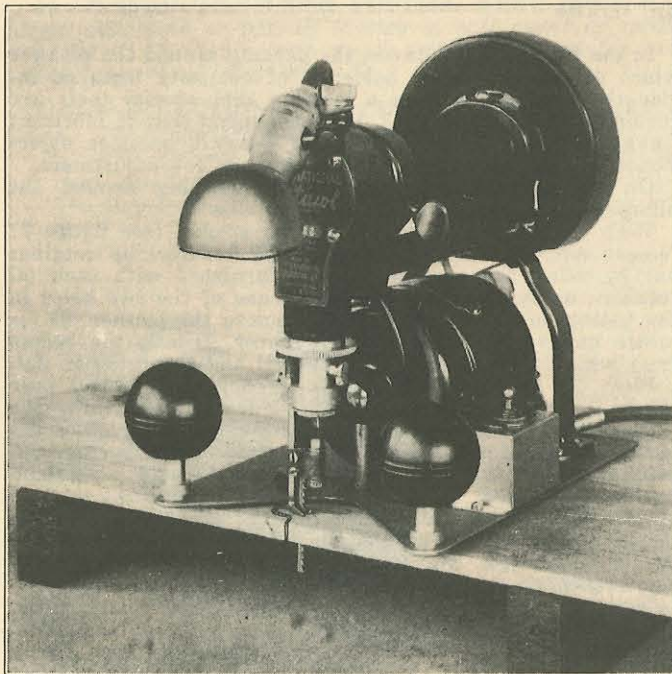


Figure 10



Figure 11

## OPERATION WITHOUT THE SAW TABLE

**B1—MATERIAL.** Place the work to be sawed on parallel strips of wood or other material of sufficient thickness so that the saw blade, at its lowest position, will not strike the bench top.

**B2—SAW BLADES.** The No. 13 Saw (see figure 19) is to be used. The shank should be inserted far enough into the chisel block so that the upper end is flush with the top of the block. The teeth should face toward the plunger as shown in figure 10.

**B3—STROKE.** Set the stroke at  $\frac{3}{4}$  inch, as described in paragraph A4.

**B4—CLEARANCE.** Loosen the thumb screw C (figure 2) and turn the shaft housing using the knob D as far as it will go in an anti-clockwise direction viewing the machine from in front. This puts the plunger as close to the work as possible and permits cutting the maximum thickness of material. Lock the shaft housing in place by tightening the screw C.

**B5—GUIDE FOOT.** When sawing with the Cutawl, the guide foot is not required and should be locked up off the work as described on page 6.

**B6—SAWING.** Place the Cutawl on the material with the saw teeth toward the edge of the work and saw as when cutting with the chisel. When starting to saw from the middle of the work a hole must first be drilled in which to insert the saw.

### SAW TABLE

Where there is considerable sawing to be done, especially on fragile work or where metals or hard materials are to be cut, the Cutawl Saw Table is recommended. This table is equipped with removable legs so that it may be mounted on top of a bench for small pattern and model sawing as shown in figure 11, or mounted flush with the table top as shown in figure 12, for sawing large sheets.

**SAW TABLE WITHOUT LEGS.** To mount the saw table in a bench for use without legs, saw a  $1\frac{1}{8}$  inch square hole in the bench top. Center the saw table over this hole, with the side which has the spring latch toward the operator, and fasten it to the bench top by four wood screws through the holes around the edge of the saw table. This method of mounting leaves the saw table  $\frac{1}{8}$  inch above the bench top. If it is desired to have it exactly flush, mark the outline of the saw table on the bench top and chisel out the wood between this line and the hole to a depth of  $\frac{1}{8}$  inch.

**SAW TABLE WITH LEGS.** When used with legs, the saw table may be fastened to the bench top in any desired location. Assemble legs and top by pushing the grooved ends of the legs into their sockets in the saw table, being sure that they are in up to the shoulder. Lock them in this position by tightening the set screws with a screw driver. Fasten the legs to the bench top by wood screws through the holes in the feet. Have the side of the table on which the latch is located toward the operator so that the Cutawl can be fastened in place or unfastened easily.

## OPERATION WITH THE SAW TABLE

**C1—GUIDE FOOT.** Lock up the guide foot as directed on page 6.

**C2—SAW BLADE.** With the saw table use—

No. 14 Saw (see figure 19) for general work.

No. 15 Saw (see figure 19) for metals, asbestos, bakelite, etc.

The No. 15 saws (see figure 19) for metal are made of special steel. In making them hard to retain their sharpness, they become somewhat brittle and should be used with greater care than other saws.

**CAUTION:** Do not use the No. 13 saw blade, which is for use without the table.

Insert the saw blade in the holder as described in paragraph B2.

**C3—STROKE.** Set at  $\frac{3}{4}$  inch, as described in paragraph A4.

**C4—CLEARANCE.** Set as described in paragraph B4.

**C5—INSTALL CUTAWL.** Turn lamp toward the back of the machine. Turn the Cutawl bottom side up. Tilt the back edge of the base plate upward and bring it up through the hole in the saw table, sliding it back until it rests on the strips at each edge of the opening in the saw table. When the base plate reaches the end of the opening in the saw table, lift the front of the Cutawl up, pulling the latch forward to clear the front tips of the base plate. See that the latch drops back into the grooves in the ball handle studs. This locks the Cutawl in position ready for use.

**C6—SAWING.** Place the work to be cut on the saw table, turn on the current and holding the work down with both hands, slide it over the table until it is in contact with the cutting edge of the saw. Unless the cut is started at one edge of the work, a hole must be drilled from which to start the saw.

To guide the cutting do not turn the work, merely push it in the direction in which it is desired to cut. The saw will turn and cut as the work is pushed against it. The following precautions should be observed:

1. The harder the material the more firmly it must be held down against the saw table.
2. Do not force the material against the saw any faster than it will cut easily.
3. Do not move the material suddenly at right angles to the line of cut, but allow the saw to cut itself free in making all turns.

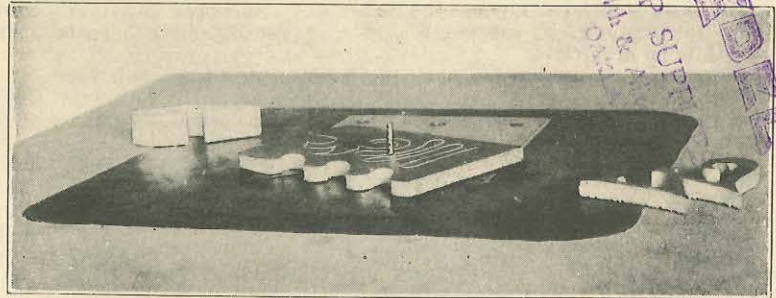


Figure 12

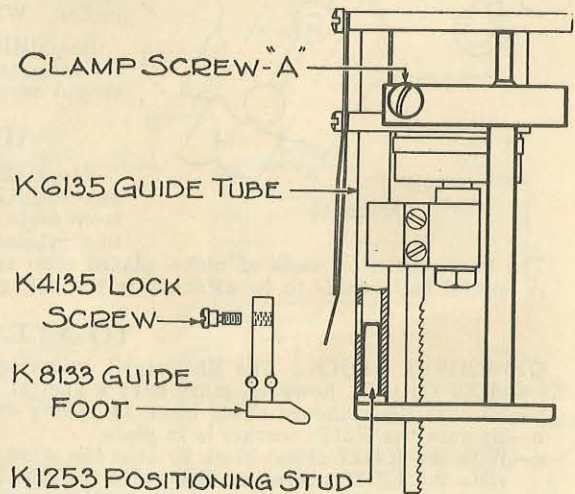


Figure 13

In sawing thin metal or other hard materials where its strength is not sufficient to stand the strain without bending or catching between the teeth and moving up and down with the saw, the material should be placed on or between layers of thin wood such as  $\frac{1}{4}$  inch thick three ply veneer. It is usually necessary to fasten metal and wood layers together, as any movement between the several layers will cause saw breakage.

**C7—LUBRICATION.** When sawing with the Cutawl inverted in the saw table, sawdust tends to collect on top of the plunger bearing, absorbing the lubricant. This dust should be cleaned off at regular intervals and a few drops of machine oil dropped on the operating shaft. The chisel block bearing where it fits around the plunger should also be cleaned at regular intervals and lubricated with light machine oil.

### SAW SUPPORT

**D1—DESCRIPTION.** The K8 Saw Support is for use only with the K8 Cutawl and saw table to increase the ease and speed of sawing. It supports the saw on the sides and back giving longer saw life and more rapid cutting. It also supports the material at the point of cut, preventing vibration and making possible the sawing of more intricate designs and thinner materials.

Use of the saw support is not necessary as the Cutawl mounted in the saw table will saw satisfactorily without this attachment. However, the saw support facilities sawing and its use, therefore, is recommended, particularly in sawing metal.

**D2—TO INSTALL.** First remove the K8133 guide foot (see figure 13) by unscrewing the K4135 lock screw and then pulling the guide foot out of the K6135 guide tube. Insert the K1253 Positioning Stud in the K6135 Guide Tube as shown in figure 13, as far as it will go. Lock the saw support in place by tightening equally the two clamp screws A.

**NOTE:** Do not remove the spring in the K6135 guide tube. Proceed as directed under SAW TABLE paragraphs C2, C3, C4, C5 and C6.

### CIRCLE CUTTING ATTACHMENT

**E1—DESCRIPTION.** The circle cutter is an attachment which fits on the front of any K6, K7 or K8 Cutawl and guides it so that the chisel cuts a true circle. The attachment may be quickly fastened to the two ball handle studs. It has a movable slide carrying a pivot pin which may be adjusted so that circles from  $\frac{3}{4}$  inch to 48 inches in diameter may be cut.

**E2—TO ATTACH.** Lock up the Cutawl guide foot (see page 6). Hook the slot in the right side of the circle cutting attachment over the ball handle stud A as shown in figure 15. With

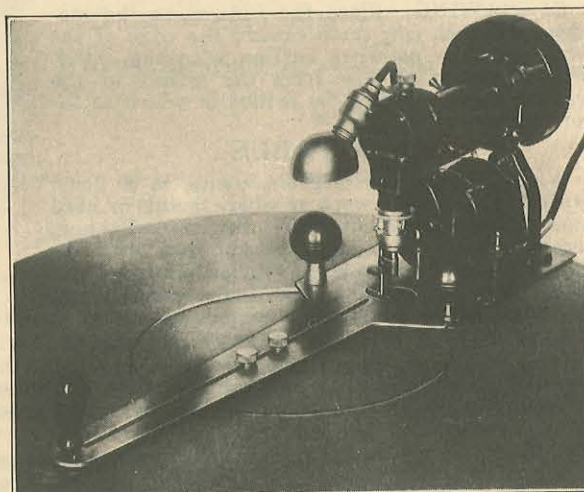


Figure 14

the stud A acting as a pivot, swing the attachment to the left as indicated by the arrow, slipping the guide foot B into the yoke C, until the notch D is engaged with the ball handle stud E. Remove the ball handle from the stud E and drop the lock sleeve F over this stud so that the large end of the sleeve engages the circular depression of the notch D. Lock the attachment in place by screwing the ball handle down firmly.

**E3—TO SET SIZE.** To cut a circle of any desired diameter from  $\frac{3}{4}$  inch to 48 inches, loosen the two thumb screws G, figure 15, and move the adjustable slide H until the arrow on it is opposite the desired size on the scale. This scale is marked in  $\frac{1}{4}$  inch divisions from  $\frac{1}{2}$  inch to 48 inches. When the pivot pin in the adjustable slide is in the end nearest to the chisel, the slide can be set for circles from  $\frac{3}{4}$  inch to 24 inches. To cut larger circles, remove the thumb screws, reverse the slide end for end, and insert the thumb screws in the end of the slide opposite to the pivot pin. The slide may now be set to cut circles from 24 to 48 inches. When the size is set, tighten both thumb screws securely.

**E4—CHISEL.** Only the Nos. 0, 3, 2 and 6 chisels should be used, the first two for soft material, the last two for hard. The No. 11 chisel is not satisfactory and should never be used.

### ADJUSTABLE BEVEL CUTTING ATTACHMENT

**F1—DESCRIPTION.** The Adjustable Bevel Cutter is an attachment which fits any K6, K7 or K8 Cutawl. Adjustment of the chisel arm permits cutting bevels from 45 to 65 degrees, in any material which can be penetrated by the chisel, up to a maximum of  $\frac{3}{8}$  inch.

The bevel cutter is made of nickel plated steel specially hardened to prevent wear. A special ball handle to be attached to the belt guard of the Cutawl is sent with every bevel cutter.

### TO ATTACH THE BEVEL CUTTER

**G1—CHISEL BLOCK.** The K8 Cutawl comes equipped with a chisel block suitable for operating the bevel cutter. The K6 and K7 Cutawls, however, must have a special chisel block installed as follows:

- a—Remove the standard chisel block by taking off the K3129 nut and K2129 washer (see figure 17.)
- b—Be sure the K2128 washer is in place.
- c—With the K4127 chisel block so that the word "Top" faces upward, slip the K5133 guide rod into the groove G and slide the K2130 operating shaft into the hole in the chisel block.
- d—Replace the K2129 washer on the K2130 operating shaft and screw up the K3129 nut until snug. The chisel block cannot be installed with the K5133 guide rod locked up. (See paragraph G3.)

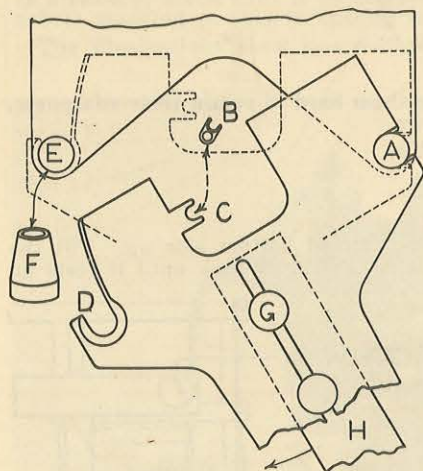


Figure 15



**CAUTION:** Make sure that the chisel block rotates freely on the K2130 operating shaft. The slightest tightness will cause trouble. Turning one or both of the washers opposite side up will usually correct any tendency to bind. If the chisel block is still tight, smooth it and the K2128 washer by rubbing them with very fine emery paper. Once in place, the K4127 special chisel block need not be removed since it has all the features of the standard K2127 chisel block.

**G2—INSTALL THE K195 BRACKET.**

- a—Disconnect the K194 chisel arm from the K195 bevel bracket by unscrewing the K197 thumb nut.
- b—Unscrew the left K1138 ball handle.
- c—Turn the Cutawl bottom side up and take out the screw in the hole D.
- d—Slip the notch F in the K195 bracket over the K223 ball handle stud and line up the hole C with the hole D in the leg and base plate.
- e—Insert the special K199 screw, which is sent with the bevel cutter, in the hole D and tighten until bracket, leg and base plate are held firmly together.
- f—Drop the K1171 lock sleeve with the large end down over the K223 ball handle stud. Lock the bracket in place by screwing the K1138 ball handle down firmly.

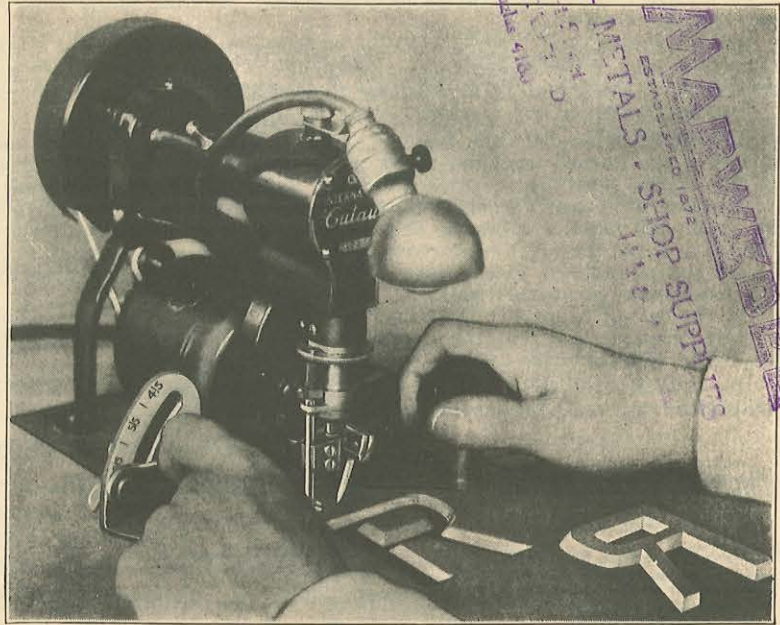


Figure 16

**G3—LOCK UP THE GUIDE FOOT.** Follow the instructions on page 6.

**CAUTION:** Always release the foot when cutting without the bevel cutter.

**G4—CONNECT THE K194 CHISEL ARM.**

- a—Turn the chisel block so that the driving pin H is toward the motor.
- b—Slip the driving pin H into the slot E.
- c—Connect the end of the K194 chisel arm with the K195 bracket as shown in figure 17, by inserting from the front the K196 clamp screw in the hole of the chisel arm. Slip the flattened portion of the screw into the slot B in the K195 bracket. Place the K197 thumb nut on the K196 screw and tighten until firm.

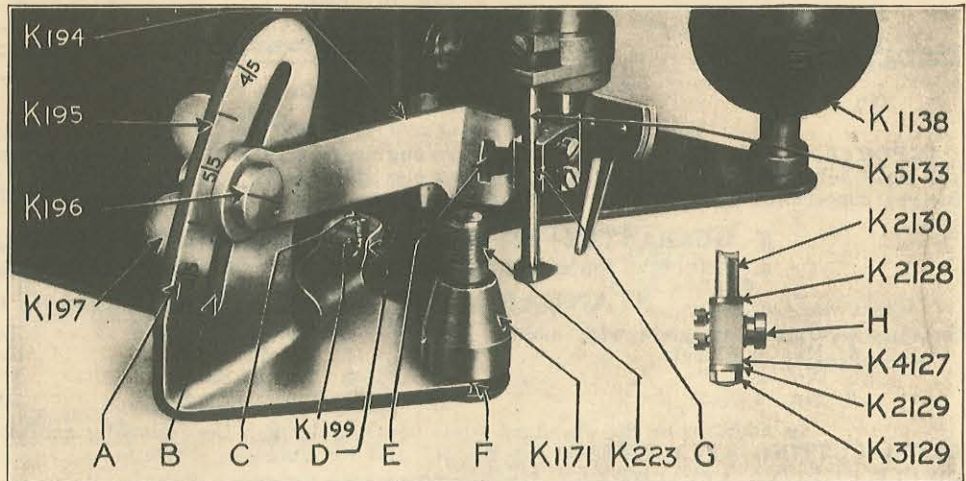


Figure 17

**G5—CHISEL.** Use only the No. 10 chisel, inserting it in the chisel holder as far as it will go. This chisel is double edged and will cut in either direction. When dull it can be sharpened on an oil stone.

**G6—INSTALL SPECIAL K1199 BALL HANDLE.** Remove the K212 screw (see figure 18.) Hook the end of the mounting bracket to which the ball handle is fastened over the edge of the K1151 guard. Align the screw hole in the K1199 mounting bracket with the hole from which the K212 screw was removed, and fasten the bracket in place by inserting and tightening the special K4199 screw which is sent with the K1199 ball handle.

**OPERATION**

**H1—ADJUST THE BEVEL ANGLE.** The bevel cutter can be set to cut a bevel of any angle between 45 and 65 degrees by loosening the K197 thumb nut and sliding the end of the chisel arm up or down until the mark in the K196 screw head is opposite the desired figure on the scale A (see figure 17.)

**H2—STROKE.** Set the stroke as described in paragraph A4. For cutting up to 1/4 inch maximum, 1/4 inch stroke should be used; for thicker layers 3/8 inch. The maximum thickness of material which can be cut is 3/8 inch.

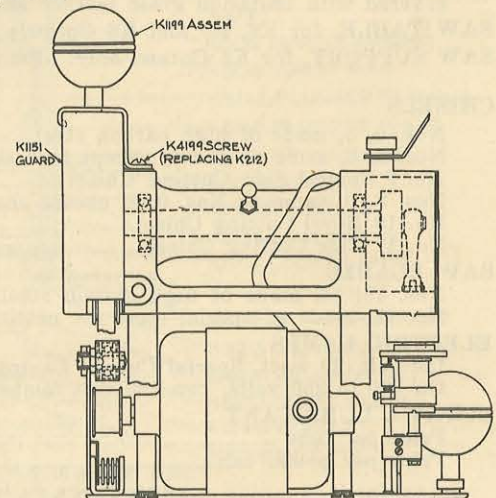


Figure 18

**CAUTION:** The bevel cutter is designed for use only on  $\frac{1}{4}$  inch and  $\frac{3}{8}$  inch stroke. Use of any other stroke will damage the Cutawl.

**H3—CLEARANCE.** When cutting with the bevel cutter the chisel should never come out of the work. The clearance, therefore, should be adjusted (see paragraph A5) so that at the top of the stroke the chisel extends at least  $\frac{1}{8}$  inch into the material being cut. When cutting the maximum of  $\frac{3}{8}$  inch the chisel should remain far enough in the work at the top of the stroke to cut through at the bottom.

**H4—CUTTING.** Lift the front of the machine off the work by holding the front ball handles. Switch on the current and turn the Cutawl until the chisel points in the direction in which it is desired to cut. NOW, insert the moving chisel at the desired place by lowering the front end of the Cutawl sidewise until the machine rests evenly on its base plate.

To guide the Cutawl when using the bevel cutter it is necessary to turn the entire machine. This is done by releasing the front ball handles after the chisel is once inserted in the material to be cut and grasping the special K1199 ball handle. Use it to force the machine forward. Change direction by rotating the entire Cutawl about the chisel as center until the chisel points and cuts in the desired direction. Guide the machine by the special K1199 ball handle only. Do not hold the machine at any other point.

At the end of a cut lift the chisel out of the work by the front ball handles.

It is recommended that the electric cord be suspended from directly above the machine. This helps to prevent the cord becoming tangled when cutting complicated patterns.

**H5—LUBRICATION.** The driving pin H and the yoke of the K194 chisel arm where it fits over the K196 clamp screw should be kept well lubricated with Cutawl lubricant.

**CHISEL DIAGRAM All cuts actual size**

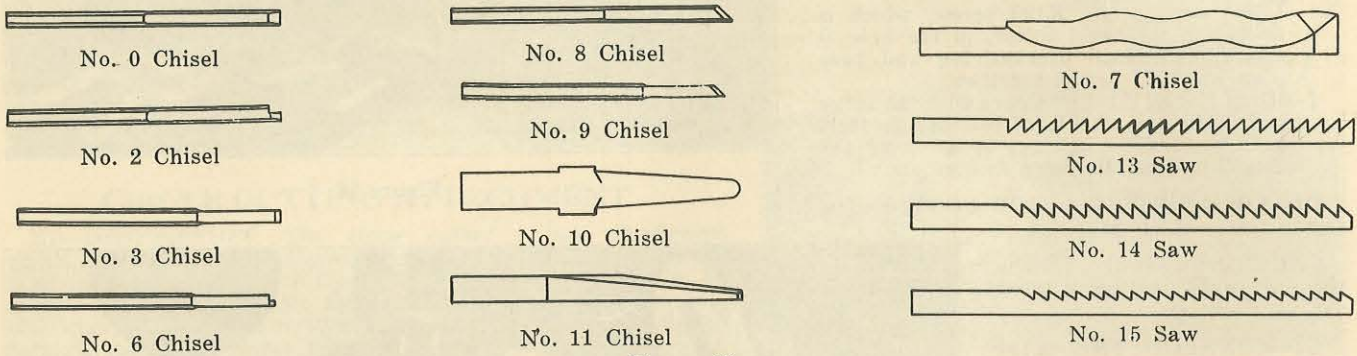


Figure 19

**IMPORTANT—**We offer the services of our engineers free to Cutawl users to help solve special cutting problems. If you need help, send us complete data and samples if possible, and we will advise you promptly. When writing the factory concerning your Cutawl, or in ordering parts, be sure and give both the MODEL and SERIAL numbers.

[ **GUARANTEE—We guarantee the INTERNATIONAL CUTAWL against defects of material and workmanship for six months from date of shipment.** ]

**STANDARD EQUIPMENT For K6, K7 and K8 Cutawls**

- |                              |                 |                           |
|------------------------------|-----------------|---------------------------|
| 1 Cutawl complete with motor | 6 No. 8 Chisels | Tube Cutawl Lubricant     |
| 6 No. 0 Chisels              | 12 No. 11 " "   | Screw Driver              |
| 6 No. 3 " "                  | 6 No. 13 Saws   | 1 Special S11 Carbon Lamp |
| 6 No. 6 " "                  |                 | Instructions              |

**ACCESSORIES**

In addition to the standard equipment we furnish the following accessories f. o. b. Chicago:

- |   |         |
|---|---------|
| <b>BEVEL CUTTING ATTACHMENT</b> , for K6, K7 and K8 Cutawls. Price.....   | \$12.50 |
| <b>CIRCLE CUTTING ATTACHMENT</b> , for K6, K7 and K8 Cutawls. Price.....  | 7.50    |
| <b>CARRYING CASE</b> , for K6, K7 and K8 Cutawls, with handle and serviceable lock. Made of three ply basswood, covered with imitation grain leather and trimmed with metal corners. Price..... | 5.00    |
| <b>SAW TABLE</b> , for K6, K7 and K8 Cutawls, with detachable legs and 12 No. 14 Saw Blades. Price.....   | 12.50   |
| <b>SAW SUPPORT</b> , for K8 Cutawl only. Price.....   | 7.50    |

**CHISELS**

- Nos. 0, 3, made of high carbon steel.....
- Nos. 2, 6, same as above, except furnished with step cut end .....
- No. 7 Special Side Cutting Chisel.....
- Nos. 8, 9, same as Nos. 0, 3, except sharpened at 45° angle .....
- No. 10 Bevel Cutting Chisel .....
- No. 11 Side Cutting Chisel .....

**SUPPLIES**

	1 to 4 doz. per doz.	5 to 11 doz. per doz.	Gross Lots per doz.
Nos. 0, 3, made of high carbon steel.....	\$1.50	\$1.25	\$1.00
Nos. 2, 6, same as above, except furnished with step cut end .....	1.75	1.50	1.25
No. 7 Special Side Cutting Chisel.....	4.00	3.75	3.50
Nos. 8, 9, same as Nos. 0, 3, except sharpened at 45° angle .....	1.75	1.50	1.25
No. 10 Bevel Cutting Chisel .....	2.25	2.00	1.75
No. 11 Side Cutting Chisel .....	2.50	2.25	2.00
<b>SAW BLADES</b>			
Nos. 13, 14, made of high carbon steel.....	2.00	1.75	1.50
No. 15, made of special steel for cutting metal.....	3.00	2.75	2.50

**ELECTRIC LAMPS**

- 120 volt, 20 watt, Special Cutawl Lamps. Price each.....
- On 200 to 250 volts, two 120 volt lamps are used in series with a double bracket.

**CUTAWL LUBRICANT**

- Price per tube .....
- Price per pound can.....

**INTERNATIONAL REGISTER COMPANY**

15 South Throop Street, Chicago, Illinois, U. S. A.  
Cable address REGISTER CHICAGO, Western Union Code

## NUMBERS OF K6 AND K7 CUTAWL PARTS

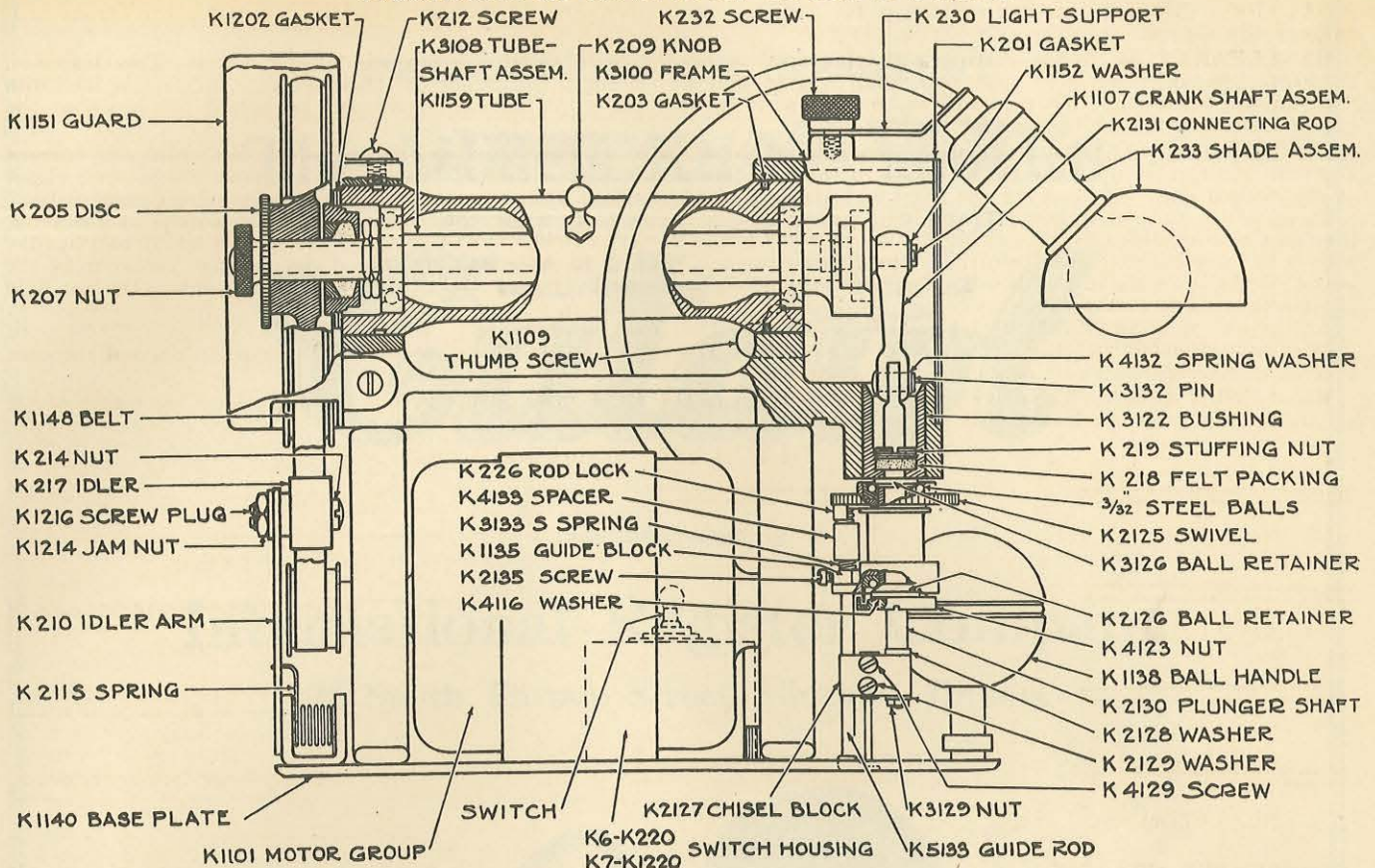


Figure 20

## NUMBERS OF K8 CUTAWL PARTS

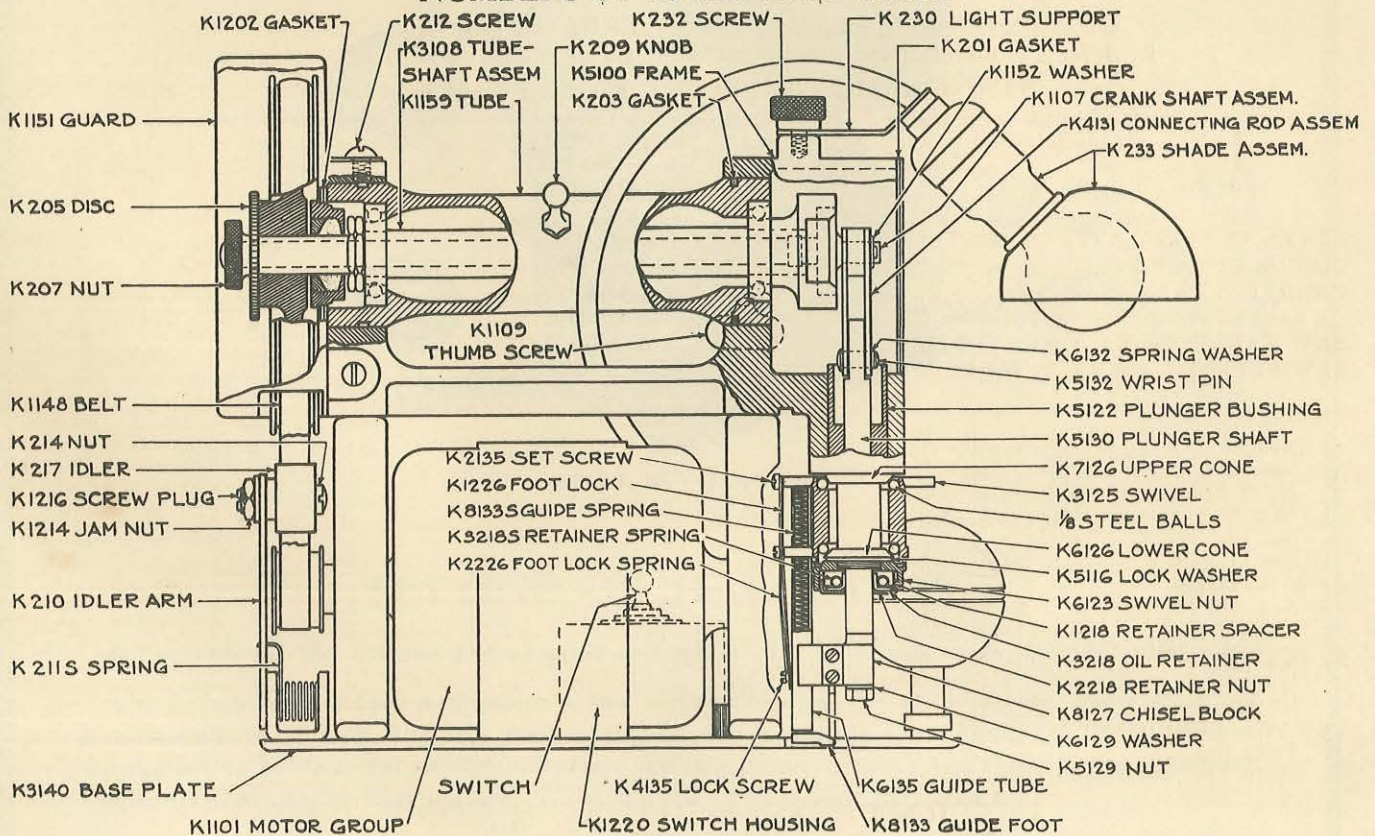


Figure 21