

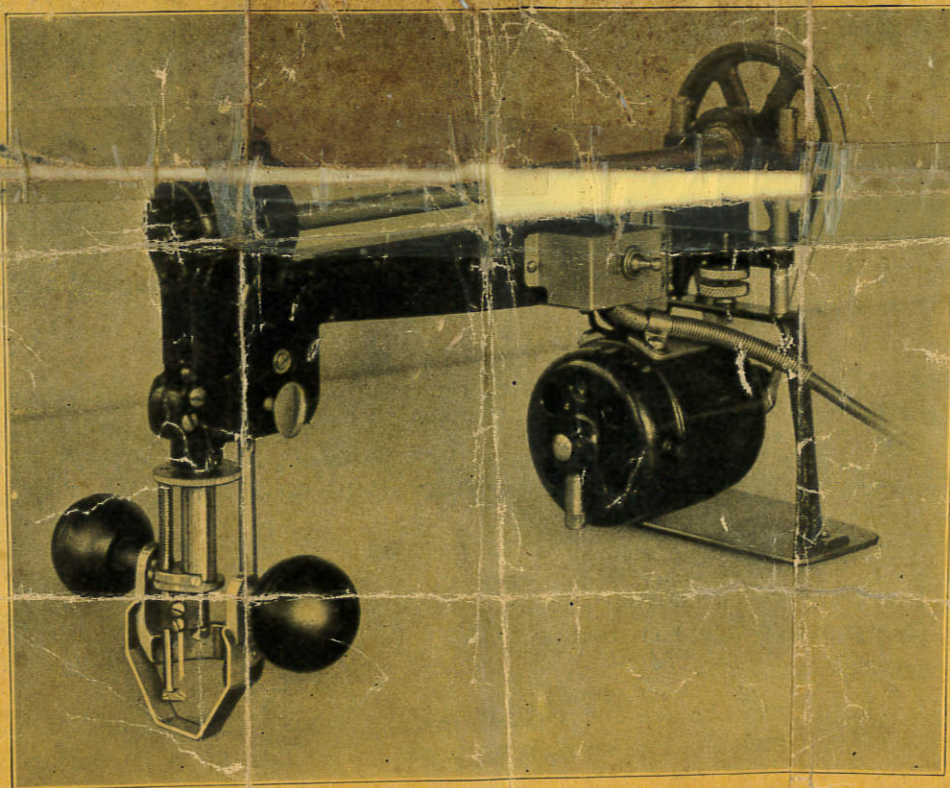
INSTRUCTIONS FOR
Operating the International K5A

Cutawl

Manufactured by

International Register Company

15 South Throop Street - - Chicago, Illinois



SETTING UP THE CUTAWL

The Cutawl is shipped assembled complete and ready for immediate use as shown in the picture above. It is only necessary to provide a suitable bench to support the work.

OPERATION

The K 5 A Cutawl uses a chisel to cut soft materials and thin sheet metal and a saw for harder and thicker substances.

OPERATION WITH THE CHISEL

A 1—BENCH. The bench used to support the work should be about 38 inches high with a smooth wood top not less than 1 1/2 inches thick. The heavy top is needed to prevent vibration. Cover the bench with a sheet of wallboard, which serves as an overlay for the work and prevents damage to the bench top and the chisels.

A 2—MATERIAL. Place work on top of bench and fasten it down. If the material to be cut is soft, such as cloth, felt or tissue paper, an overlay of stiff paper or cardboard should be placed upon it and fastened thru the material to the bench with small nails. This overlay holds down the edges of the material when cut, making it easier to move the machine.

An overlay of cardboard or heavy paper is also desirable in cutting sheet metal. The cardboard not only reduces the tendency to vibrate, but actually aids the cutting and prevents the Cutawl base plate or stand from scratching the polished surface.

A 3—IDLING STAND. (See page 3) is provided, which permits the front end of the Cutawl to be set down at any angle without injury to chisel or work. When used to support the Cutawl it should be pushed down and forward as far as possible; when not in use it should be pushed back and up until it rests against the K137 handle frame. The spring clamps will automatically hold it in this position.

A 4—CHISEL. 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.

Each Cutawl is shipped with a No. 8 chisel in place ready for cutting. Note its position.

Two dozen No. 8 and one dozen No. 9 chisels are furnished with each K 5 A Cutawl. The following chisels, shown on page 7, are carried in stock.

No. 0 Chisel. Long heavy blade—for cutting designs in all soft materials, such as wallboard, cardboard, soft wood, felt, linoleum, and similar materials. The maximum thickness which can be cut is 1/2 inch.

No. 2 Chisel. Long heavy blade with step cut end. It is intended for cutting sheet aluminum, brass, copper, celluloid, Masonite, and similar hard and tough materials. (See paragraph A 6 for special precautions regarding clearance).

No. 3 Chisel. Light blade—to be used on the same products as the No. 0. It is to be preferred where the designs to be cut are very intricate or where accurate fitting inlays are wanted. The maximum thickness which can be cut is $\frac{3}{8}$ inch.

No. 6 Chisel. Light blade with step cut end. It is for the same class of materials as the No. 2 chisel, but is preferred where finer and more intricate work is to be done. (See paragraph A 6 for special precautions regarding clearance)

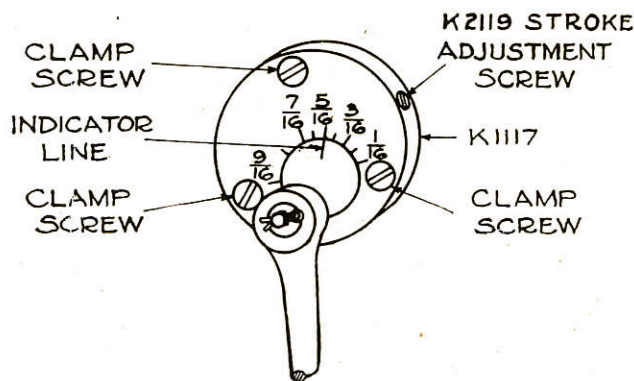
No. 7 Chisel. Side cutting chisel. This chisel cuts on both the end and side. The upper layers of material are cut with the side knife edge **without the chisel coming out of the work**, while the lower layers are cut with the end. One and one-half inches of felt, soft paper, fabric and the like can be cut with the No. 7 as against a maximum of $\frac{1}{2}$ inch with the Nos. 0 or 8.

In using the No. 7 chisel the material to be cut should be nailed to an underlay of wallboard and preferably should have a cardboard overlay which reduces the tendency of the upper layers to move as the Cutawl passes over them. The stroke is to be set at the maximum of $\frac{9}{16}$ (see paragraph A 5 for details) and the front end of the Cutawl raised or lowered (see paragraph A 6 for directions) until at the bottom of the stroke the chisel cuts into the underlay $\frac{1}{32}$ inch. Proceed as described under Cutting, paragraph A 8.

No. 8 Chisel. Same as the No. 0, except that it is sharpened at a 45° angle instead of straight across. It is for the same service as the No. 0, but is always to be used in preference to the latter because it follows the line of cut better and gives a smoother surface.

No. 9 Chisel. Same as the No. 3, except that it is sharpened at a 45° angle instead of straight across. It is always to be used in preference to the No. 3 for the reasons given in describing the No. 8 chisel.

Number 0, 3, 7, 8 and 9 chisels separate the material like a wedge without removing any. The number 2 and 6 chisels actually remove a very small amount. All operate at about 2,000 strokes per minute.



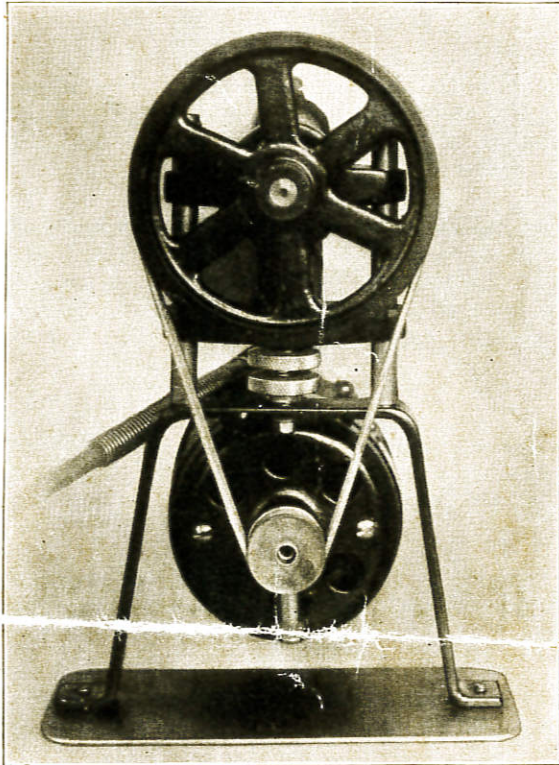
Stroke adjusting mechanism showing stroke set at $\frac{5}{16}$ inches.

A 5—STROKE. The stroke adjustment mechanism is at the front of the machine under the K190 guard. To adjust the stroke the three clamp screws on the face of the eccentric should be loosened one half turn. Then turn the recessed K2119 stroke adjustment screw on the edge of the eccentric until the indicator line points to the desired stroke. When the proper setting is secured, retighten the three clamp screws. The maximum stroke is $\frac{9}{16}$ inch, the practical minimum, $\frac{1}{4}$ inch.

To determine the proper length of stroke, a minimum of $\frac{1}{16}$ inch should be added to the thickness of the material to be cut to allow a clearance of $\frac{1}{32}$ inch above and below the work.

A 6—CLEARANCE. Turn the drive shaft until the chisel is at the top of its stroke. Place the front K1137 handle frame upon the work. Loosen the K2109 thumb screw and raise or lower the

chisel by rotating the K107 elevating gear. Chisels 0 and 3 should clear the work by about 1/32 inch. For chisels 2 and 6, 8 and 9, the clearance should be such that the long end of the blade just touches the work. When the proper clearance has been secured, clamp the adjustment mechanism in place by tightening the K2109 thumb screw.



Rear view showing leveling screws.

The chisel will automatically turn and cut in the proper direction. Do not touch the swiveling mechanism or attempt to guide it. This will interfere with its proper functioning and produce poor work.

At the end of any cut, remove the chisel from the work by lifting the front of the Cutawl, and turn off the current. Push the idling stand forward as far as possible. The front end of the machine may then be set down without injury to the work or chisel.

A 9—CUTTING SHEET METAL. To cut thin sheet metal most satisfactorily with the chisel, prepare the material for cutting as described in paragraph A 2. The use of a cardboard or heavy paper overlay is always desirable but not necessary.

Insert a No. 2 or No. 6 chisel as described in paragraph A 4, and adjust the stroke to 1/4 inch as described in paragraph A 5. The clearance should be set as directed in paragraph A 6 and the machine leveled as outlined in paragraph A 7.

Then lock the foot down by setting the machine upon the work with the chisel in the uppermost position, pressing down firmly on the front end and then tightening the K4135 locking screw.

Cut as directed in paragraph A 8.

A 7—LEVELING. The Cutawl must be horizontal to operate properly. To level, first loosen the top knurled locking thumb screw located above the rear support and then raise or lower the rear of the machine by turning the lower thumb screw. When the K1108 drive shaft and the work are parallel, lock the thumb screw in place by tightening the lock nut.

Having an independent height adjustment for both front and rear permits the Cutawl to be kept parallel to the work even when cutting at one level while supported from another. This is a great convenience in cutting designs in small sections of material, since the rear of the Cutawl can rest on the table and the front on the work, while the difference in level is adjusted for by regulating the height of the rear support.

A 8—CUTTING. Make sure the switch is in the off position. Connect the motor cord with any lamp outlet of 110 to 120 volt direct or alternating current. Grasp the left ball handle with the left hand and lift the front end of the machine 1 to 2 inches off the work. Snap the idling stand back until the catch holds.

CAUTION. Do not turn on the current with the front end of the Cutawl resting on the work. All cutting is started by inserting the chisel while in motion.

Turn on the current. Turn the swivel with the thumb and forefinger of the left hand until the now rapidly moving chisel points in the direction in which it is desired to cut. Now insert the moving chisel at the desired place. As soon as the chisel is in the work, remove the fingers from the swiveling mechanism. Guide the machine over the work by the ball handles.

CAUTIONS. 1. Do not lock the foot down so far that it presses too heavily upon the work. If this is done the swivel will not rotate freely and very poor cutting and possible breakage of the chisel will result.

2. The foot must be adjusted whenever the stroke or clearance is changed.

3. Always release the foot by loosening the K4135 locking screw when cutting materials such as wallboard, which do not vibrate.

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.

OPERATION WITH THE SAW

B 1—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.

B 2—SAW BLADES. The straight end of the saw should be inserted far enough into the chisel block so that the upper end is flush with top of block. The teeth should face toward the vertical K3130 plunger.

The No. 11 saw is for rough work and practically all soft material.

The No. 13 saw is for fine and intricate work and hard materials, particularly those which have a tendency to splinter.

B 3—STROKE. Set the stroke at $9/16$ inch as described in paragraph A 5.

B 4—GUIDE ROD. When sawing, the K7133 guide rod is not needed and should be kept off the work. This is done by pushing the rod up about $1/4$ inch and then locking it in place by tightening the K4135 locking screw.

B 5—CLEARANCE. Lift the Cutawl off the work. Turn the shaft until the saw is in the lowermost position. With the saw extending over the edge of the work, place the front K1137 handle frame on the material to be cut. Loosen the K2109 thumb screw and adjust the height of the front end of the Cutawl by rotating the K107 elevating gear until the end of the plunger (the K3129 nut) clears the top of the work by $1/8$ inch. Clamp the adjustment mechanism in place by tightening the K2109 thumb screw.

B 6—SAWING. Swing the idling stand out of the way. Place the Cutawl on the material with the saw teeth toward the edge of the work and saw as when cutting with a chisel.

When starting to saw from the middle of the work a hole must first be drilled.

C 1—LUBRICATION. There are only 4 points which require lubrication, all of which are at the head end of the machine. About once every hour of steady operation the guard should be tilted forward and a few drops of ordinary light engine or machine oil (do not use grease) put on the K152 washer, the K1132 connecting rod pin, and the K3130 plunger, both where it enters the K4122 plunger bushing and where it supports the K2127 chisel block. The K1108 drive shaft ball bearings are grease packed and will not require attention for years. The grease cups on the motor should be filled once every two months with Cutawl lubricant.

CAUTION. Do not put grease in any of the swivel bearings. It is too stiff to permit them to operate properly. Use light engine or machine oil.

MATERIALS CUT BY THE K5A CUTAWL

Material	Chisel Preferred given first	Max. thickness which can be cut	Saw preferred	Max. thickness which can be cut
Aluminum sheet,	6, 2	.025" (24 ga.)		
Asbestos, hard			13	1/4"
" soft	8, 0, 2	1/2"		
Brass	6, 2	.012" (30 ga.)		
Cardboard	8, 9, 0, 3	1/2"		
Celluloid	6, 2	1/8"		
Celotex	8, 0	1/2"	11	3/4"
Cloth	8, 0	1/2"		
"	7	1 1/2"		
Compo Board	8, 6, 2	1/4"	13	5/8"
Cork	8, 0	1/2"		
Felt	8, 0	1/2"		
"	7	1 1/2"		
Fibre Sheet	6	1/16"		
Homasote	8, 0, 3	1/2"		
Insulite	2, 6	1/16"	13	1/4"
Lead Sheet	6, 2	1/8"		
Leather	8, 6, 0	3/8"		
Linoleum	8, 9, 0, 3	3/8"		
Masonite, soft	8, 9, 0, 3	1/2"		
" hard	6, 2	1/8"	13	1/2"
Paper	6, 2	3/8"		
Rubber Sheet	8, 9, 0, 3	1/2"		
Stencil Board	6, 2	3/16"		
Veneer	6, 2	1/4"	13	1/2"
Wallboard	8, 9, 0, 3	1/2"		
Wood	8, 9, 0, 3	1/4"	13, 11	5/8"
Zinc Sheet	6, 2	.020" (25 ga.)		

ALL CUTS ACTUAL SIZE



NO. 0 CHISEL



NO. 3 CHISEL



NO. 7 CHISEL



NO. 2 CHISEL



NO. 6 CHISEL



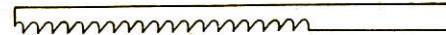
NO. 11 SAW



NO. 8 CHISEL



NO. 9 CHISEL



NO. 13 SAW

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 one year from date of shipment.

STANDARD EQUIPMENT

The standard equipment of each Model K5A Cutawl is as follows:

- | | | |
|-------------------------------|----------------------|--------------------------|
| 1 Cutawl complete with motor, | 6 No. 11 Saw Blades, | 1 Tube Cutawl Lubricant, |
| 24 No. 8 chisels, | 6 No. 13 Saw Blades, | Instructions |
| 12 No. 9 chisels, | 1 Screw Driver, | |

EXTRAS

In addition to the standard equipment we furnish the following accessories:

- CUTAWL LUBRICANT, Price per tube,\$.25
- CUTAWL LUBRICANT, Price per pound can,75

CHISELS	1 to 4 doz. per doz.	5 to 11 doz. per doz.	Gross Lots per doz.
Nos. 0 and 3,	\$1.50	\$1.25	\$1.00
Nos. 2 and 6,	1.75	1.50	1.25
No. 7,	4.00	3.75	3.50
Nos. 8 and 9,	1.75	1.50	1.25
SAW BLADES			
Nos. 11 and 13,	2.00	1.75	1.50

INTERNATIONAL REGISTER COMPANY

15 South Throop Street Station C Chicago, Illinois, U. S. A.

Cable Address REGISTER CHICAGO, Western Union Code.

PART NUMBERS OF HEAD OF K5A CUTAWL

