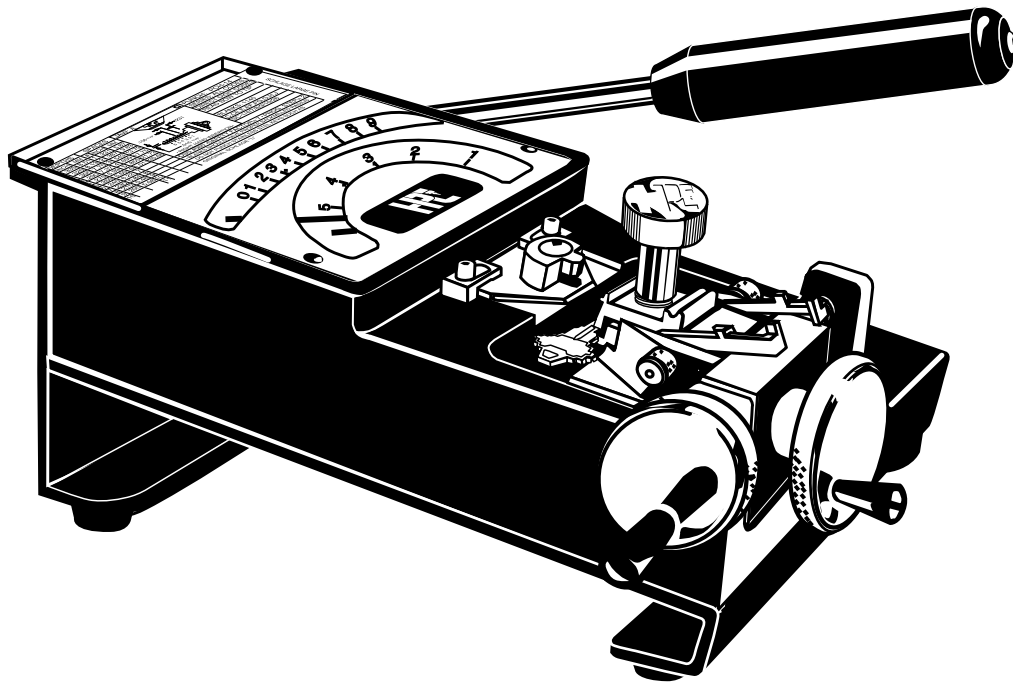


THE
PUNCH MACHINE™
No.1200PCH
HAND OPERATED CODE CUTTING MACHINE



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Schiller Park, IL • 60176 • USA

1.0 Introduction

The Punch Machine™ (1200PCH), works on the same principle as the popular 1200CMB Code Machine (a known and proven system), but is more portable and works without electricity. All that is needed to handle almost any code cutting situation is included, and all the power you need is in the palm of your hand! The ease with which changes can be made from one manufacturer's specifications to another is unparalleled!

In just a short time, you will be amazed to find that radically different set-ups, such as Schlage to small Master to Best to double-sided Ford can be accomplished in an average time of 10 to 30 seconds each.

State of the art code cutting is made possible through the use of cards that are inserted beneath the lens. Quite often, just replacing the card is all that is required to change from one manufacturer to another. No additional depth or space adjustments are required.

By inserting the correct card, selecting the proper punch and jaw, then moving the key carriage both laterally and inward throughout the use of the two crank assemblies, the key blank is positioned correctly beneath the punch.

A fully illustrated, step-by-step set of instructions are contained in the following pages. Please be sure to spend some time reading and understanding all the steps thoroughly so that all of the unique capabilities of this versatile machine are fully understood.

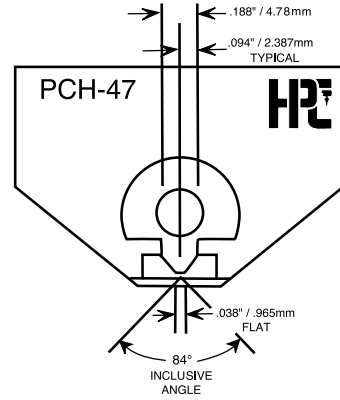
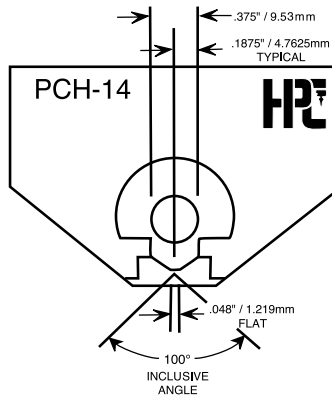
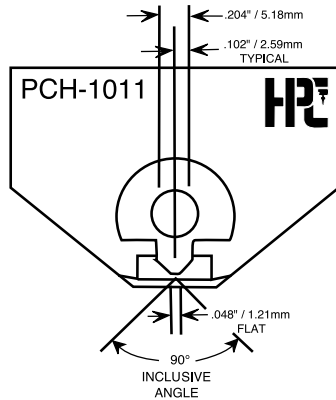
IMPORTANT NOTE

This machine is designed to cut brass or soft steel key blanks. The cutting of any hard steel or other alloys may damage the machine.

The Punch Machine™ Manual Contents

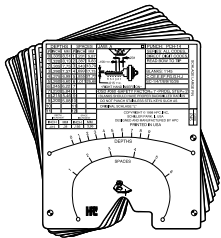
1.0	Introduction.....	3
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1200PCH Packaging Contents

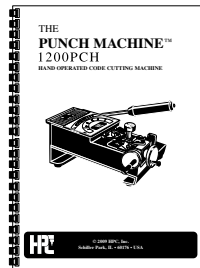


Punches

Nos. PCH-1011, PCH-14, (installed) and PCH-47



Code Cards
No. PDECK-104



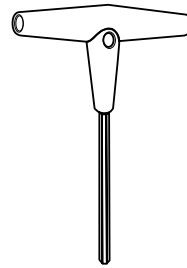
Manual
No. 1200PCH-MAN



3/32" Allen Wrench
No. WRENCH-4



1/8" Allen Wrench
No. WRENCH-9

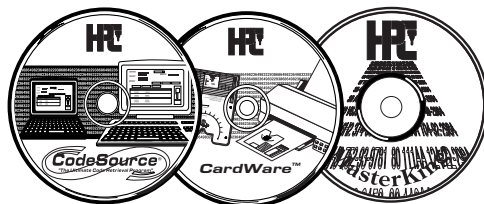


Punch/Die Wrench
No. WRENCH-5

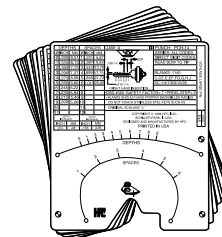


Depth Adjustment Wrenches
No. WRENCH-6

Optional 1200PCH Accessories Available



HPC Software



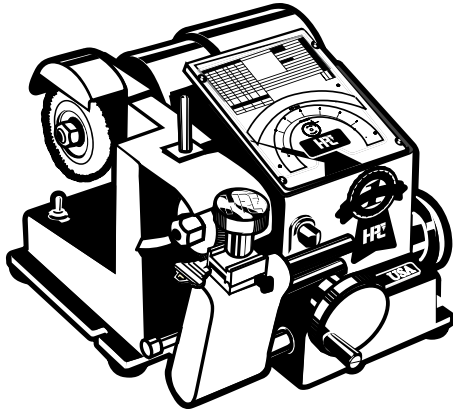
Individual Code Cards

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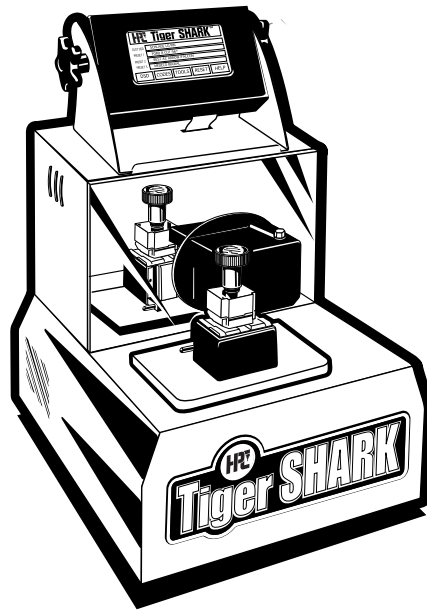


121009 36PCH-100-00

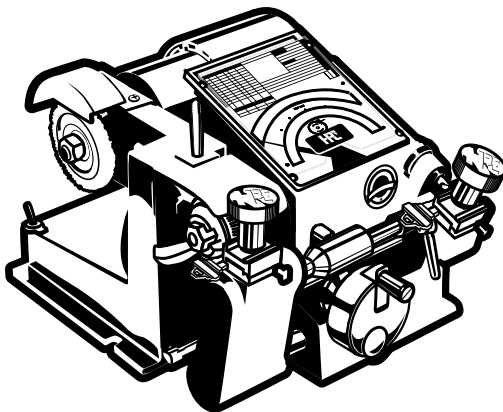
Code Cutting Key Machines by HPC



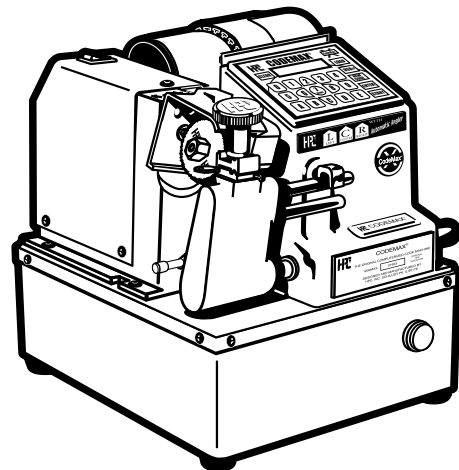
Original Blitz™
No. 1200CMB



Tiger SHARK™
No. 123TSHARK



Switch Blitz™
No. 1233CMSB



CodeMax® Auto Angler
No. 1200MAXAA

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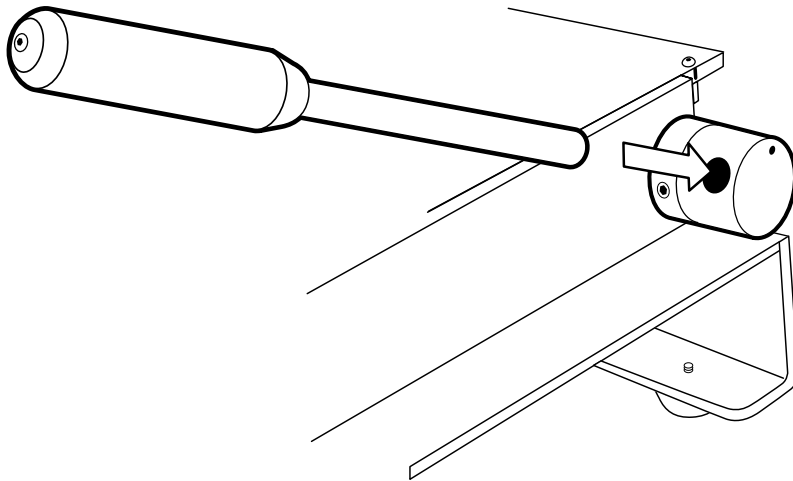
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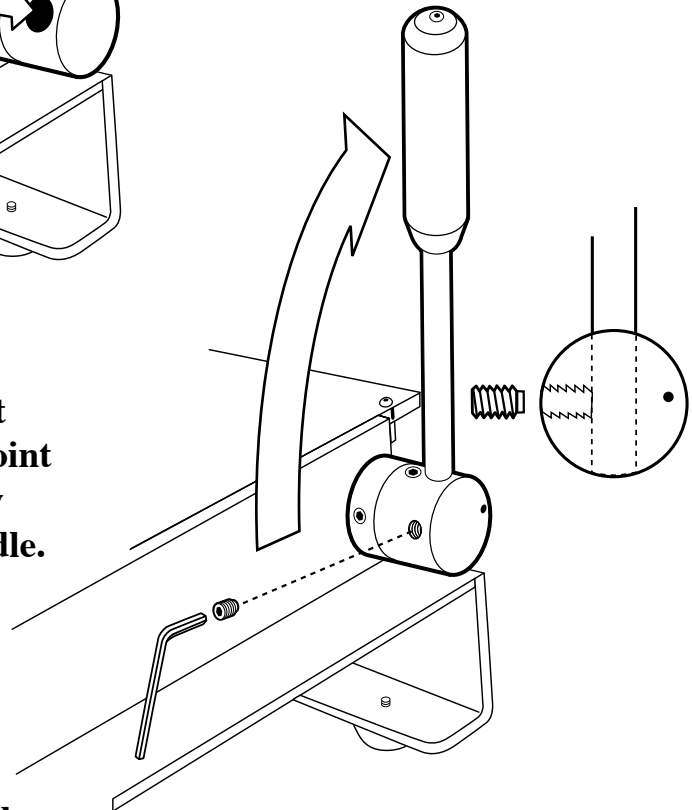
Preparation

Attach Punch Handle to The Punch Machine™

1. Insert handle into open hole of handle axle, flush to opposite side.



2. Turn handle to straight up position.



3. Using a 1/8" Allen Wrench, insert the provided 1/4" - 20 x 3/8" Dog Point Allen Screw into hole located below the handle and tighten. Lower handle.

★ IMPORTANT NOTE!

Never lift the Punch Machine™ by the Handle! Always lift the Punch Machine™ from the bottom using both hands.

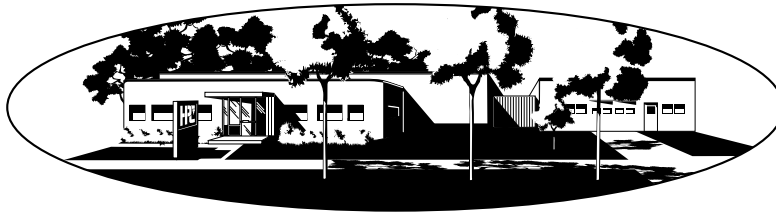
Should you need to package The Punch Machine™ for transport or shipping, you'll need to remove the Punch Handle Assembly. Simply reverse the above procedure to remove the Punch Handle Assembly.



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2.0

General Machine Movements

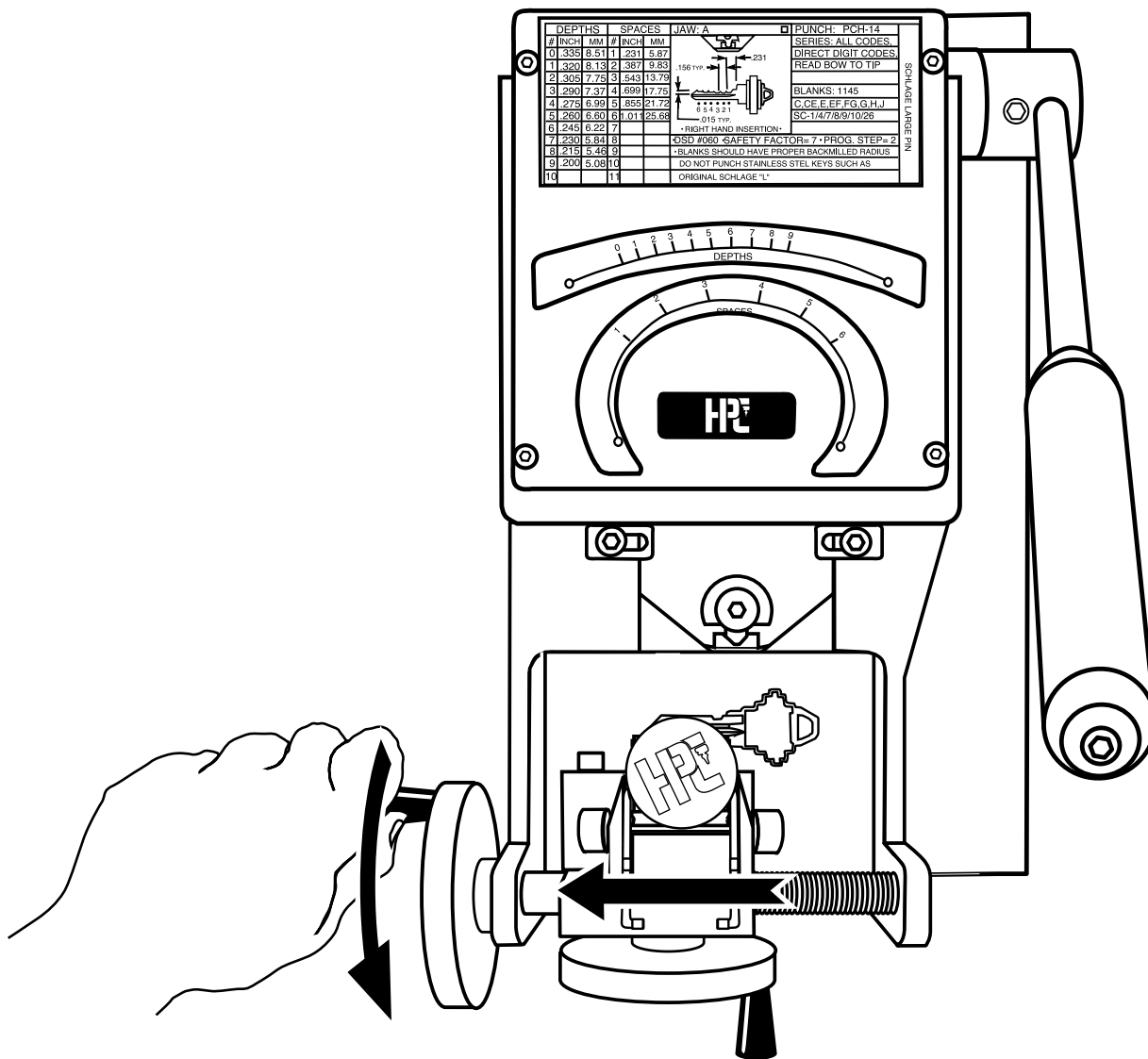


Fig. 2.1

**Turn the Spacing Crank clockwise
to move the Key Carriage to the left.**



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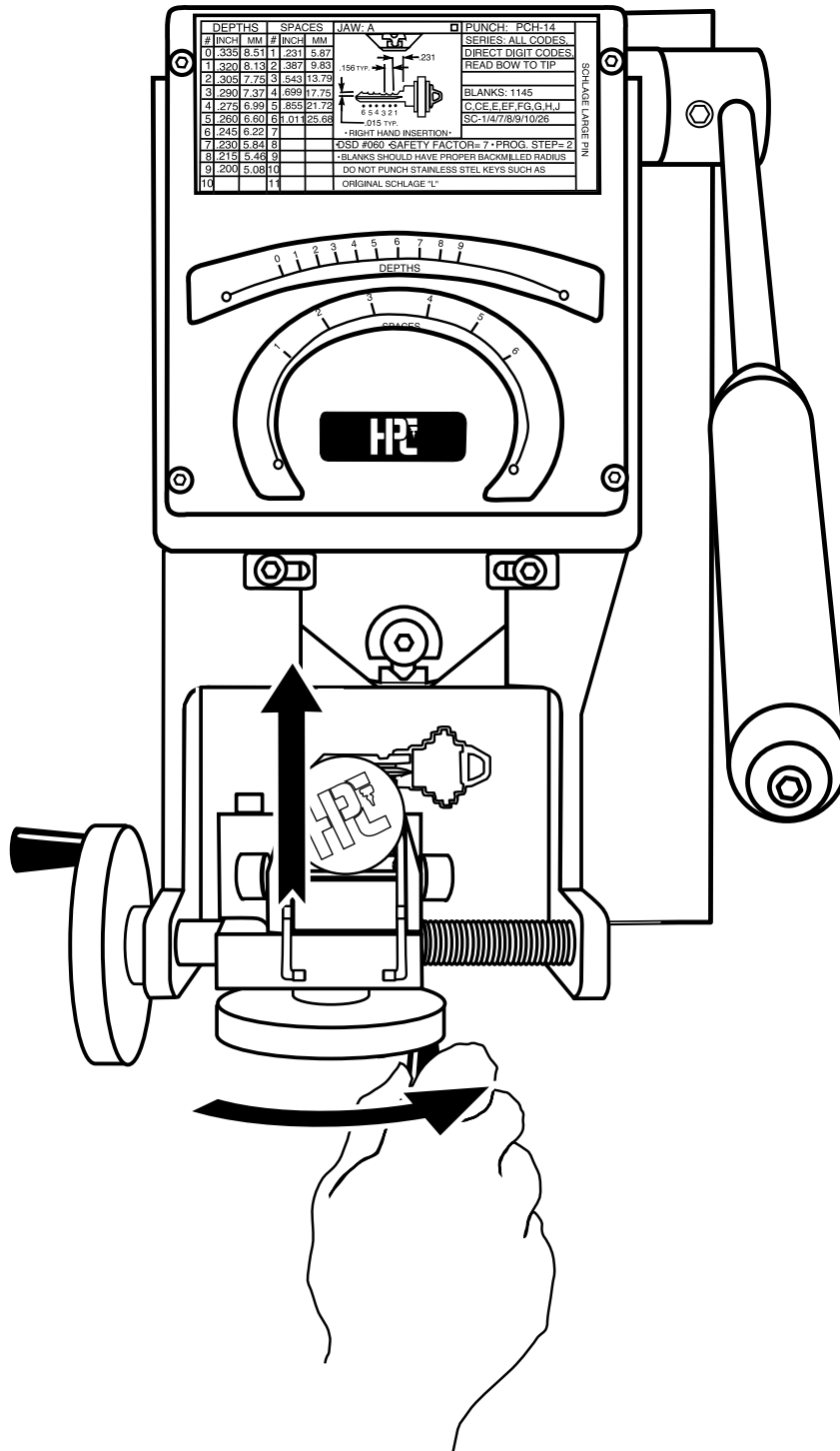


Fig. 2.3

**Turn the Depth Crank clockwise
to move the Key Carriage IN.**



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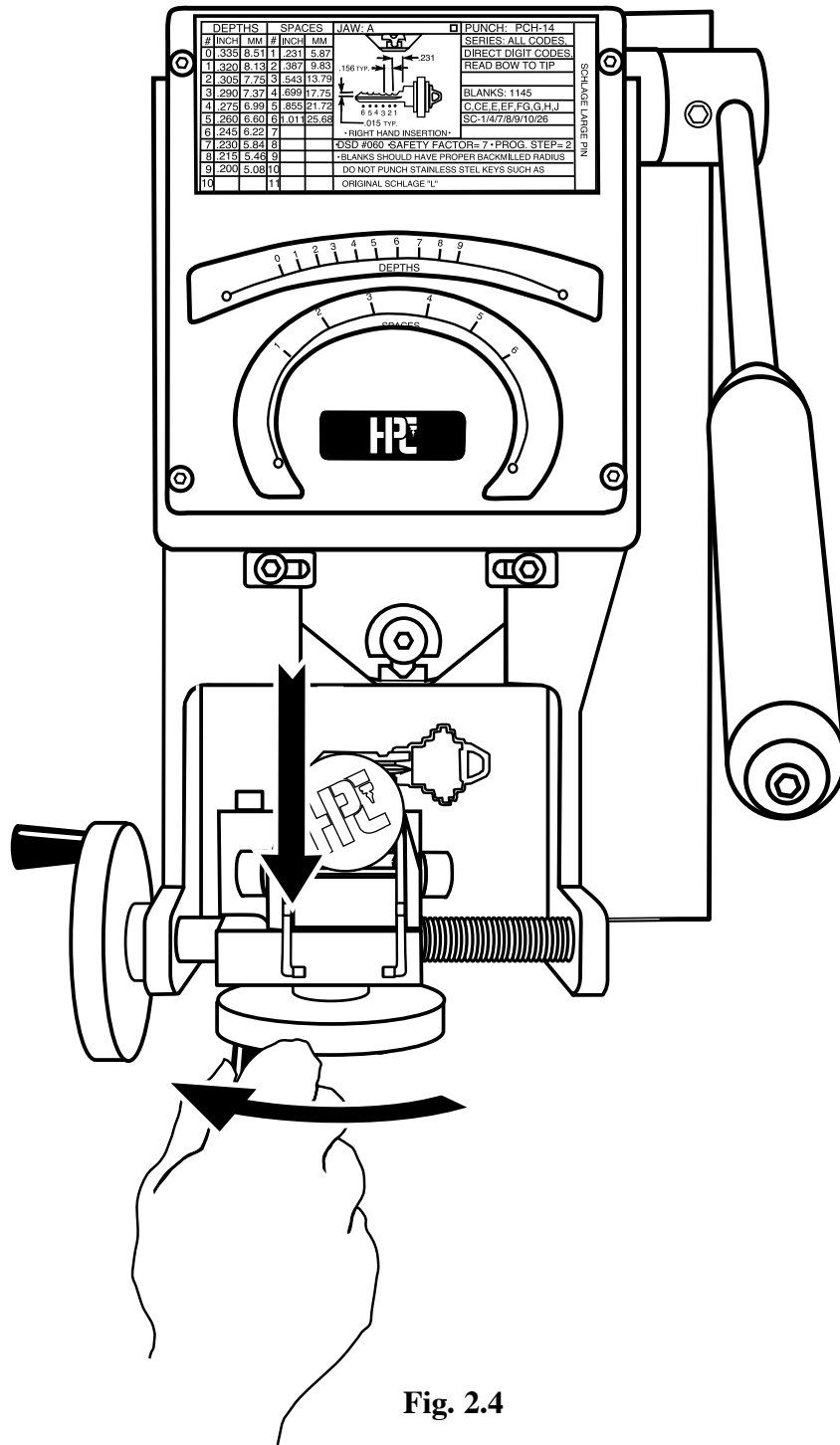
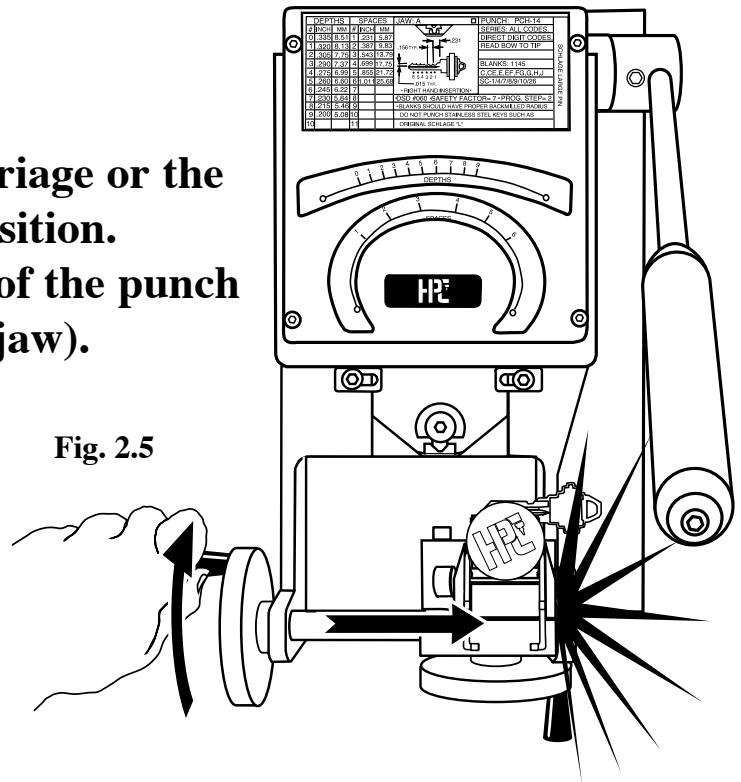


Fig. 2.4

Turn the Depth Crank counterclockwise to move the Key Carriage outward.

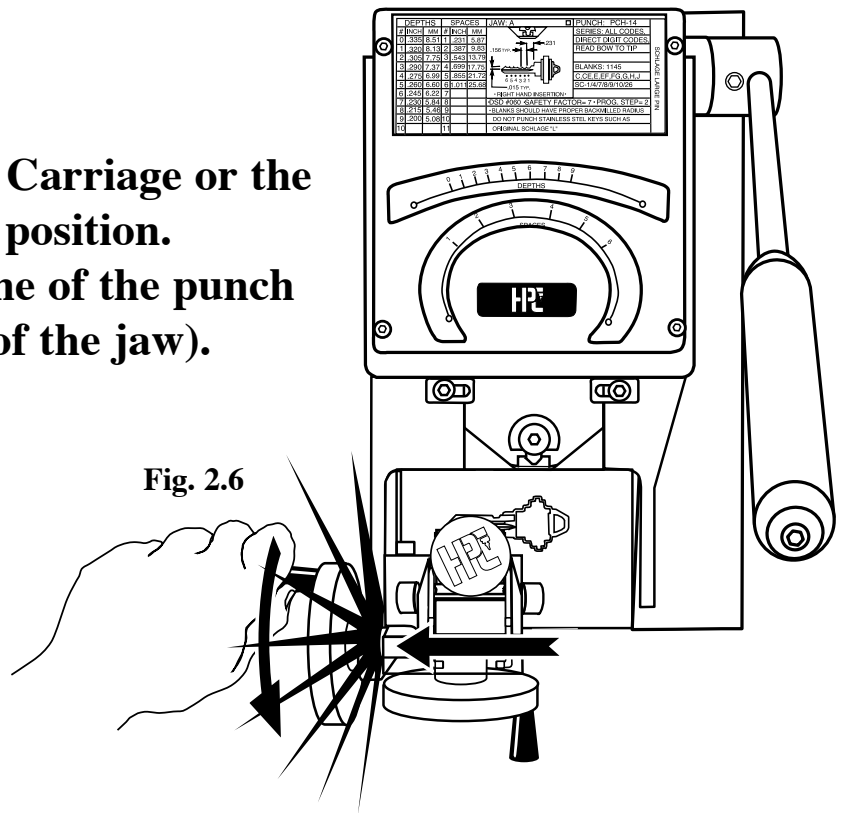
NOTE: Never force the Key Carriage or the Spacing Crank past full right position. (Full right equals the centerline of the punch with the extreme left side of the jaw).

Fig. 2.5



NOTE: Never force the Key Carriage or the Spacing Crank past full left position. (Full left equals the centerline of the punch with the extreme right side of the jaw).

Fig. 2.6



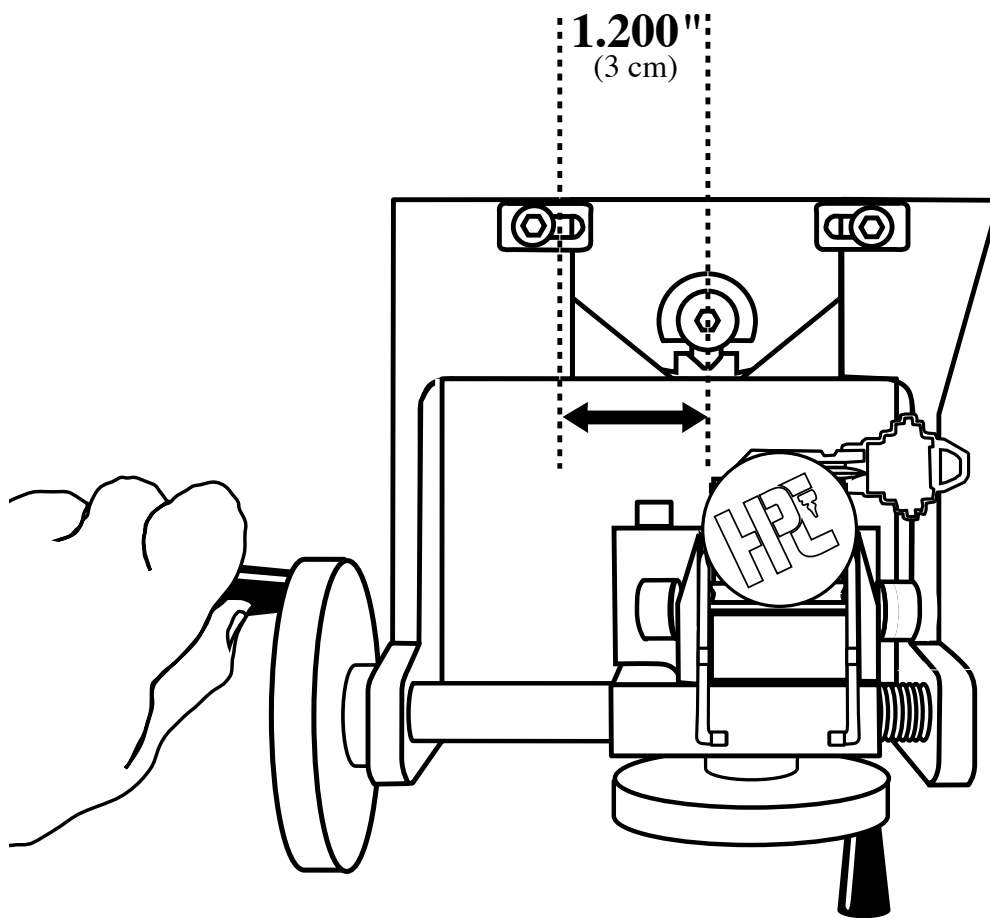


Fig. 2.7

The total spacing range of the machine is from the extreme right to the left side of the jaws and equals 1.200" (3 cm) maximum.

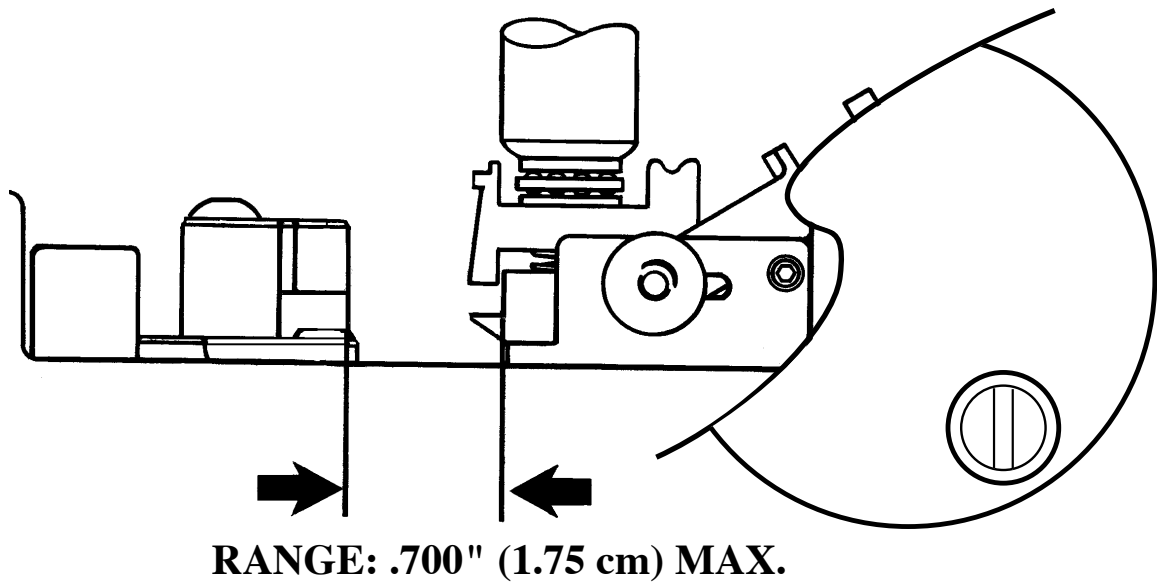


Fig. 2.8

The total depth range of the machine is from the face of the punch to the back of the bottom jaw and equals .700" (1.75 cm) maximum.

3.0

Holding And Gauging Of Keys

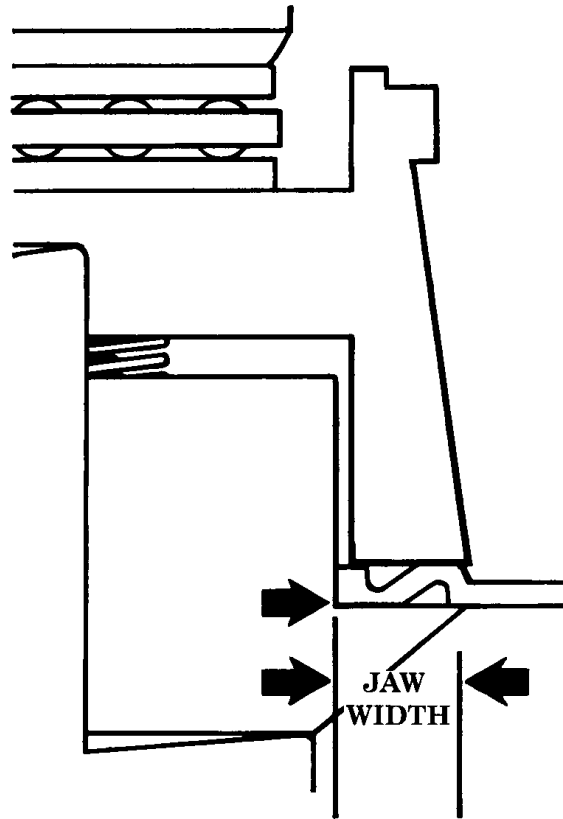


Fig. 3.1

Position the key at the back of the bottom jaw to satisfy most single-sided key holding situations.

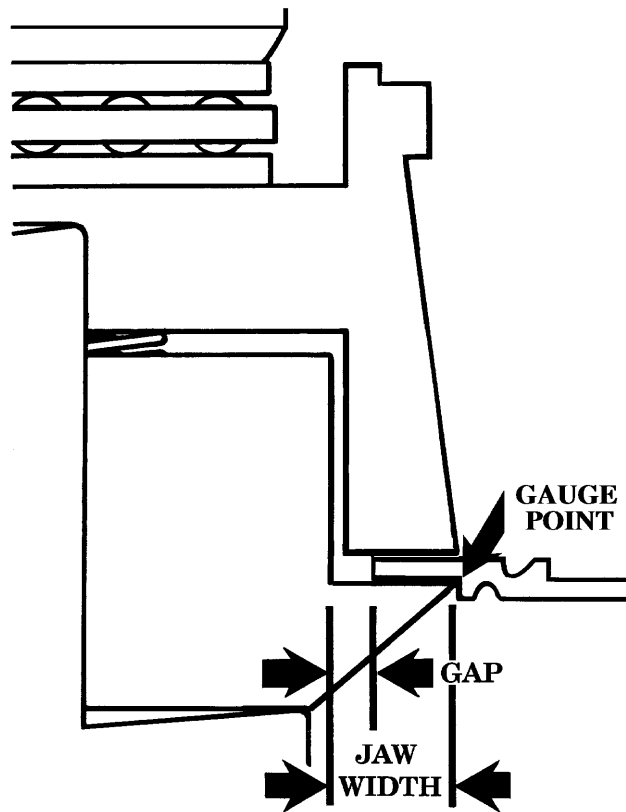


Fig. 3.2

Optional Method: Position the key at the front of the bottom jaw for double-sided symmetrical keys.

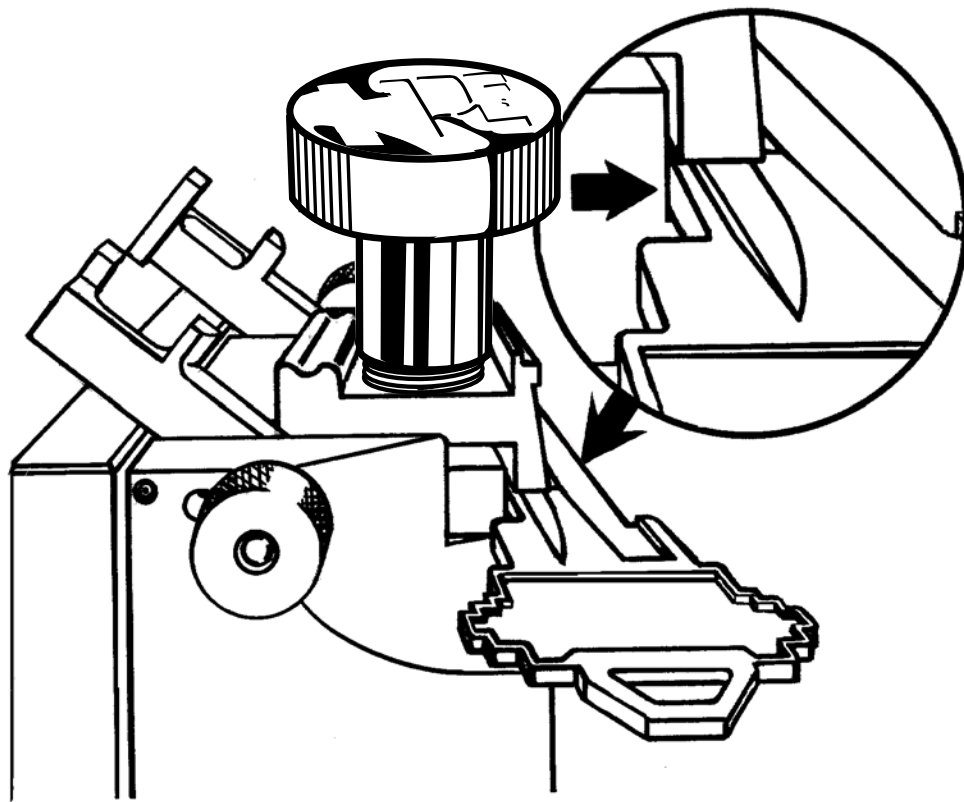
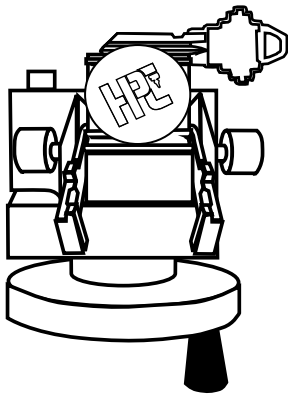


Fig. 3.3

NOTE: For single-sided keys the blank must be flush with the back of the Bottom Jaw.

CORRECT



INCORRECT



**The bow is not
flush with the
back of the jaw**

INCORRECT



**The tip is not
flush with the
back of the jaw**

Fig. 3.4

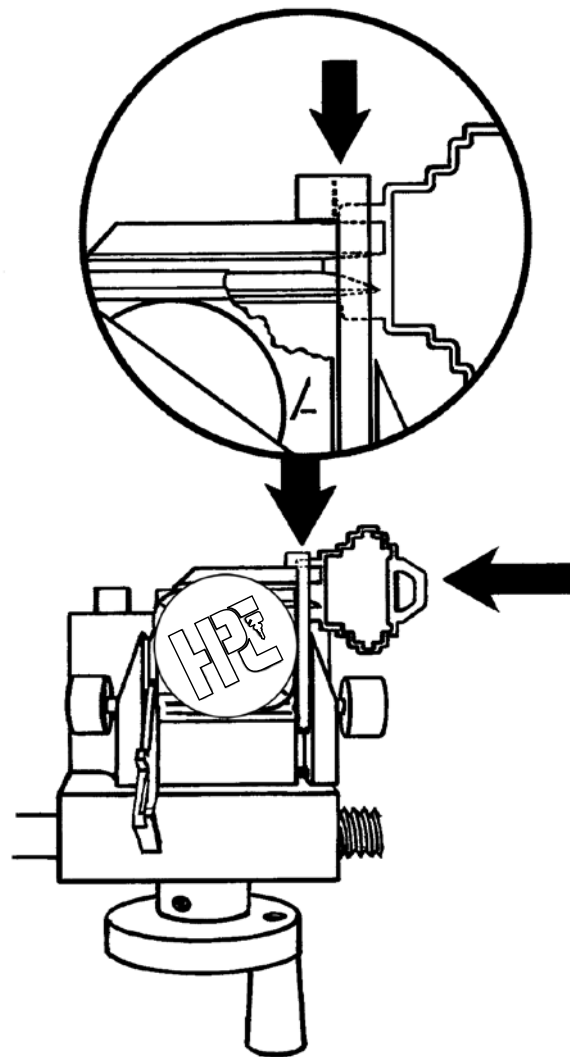


Fig. 3.5

Typical shoulder gauging.

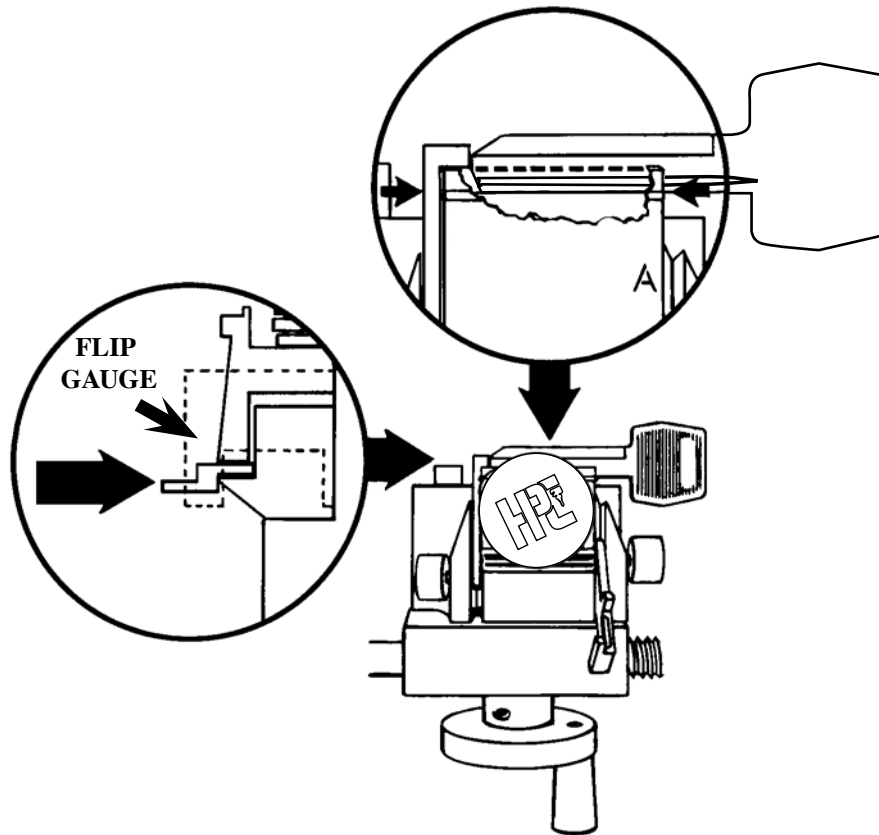


Fig. 3.6

Typical tip gauging.

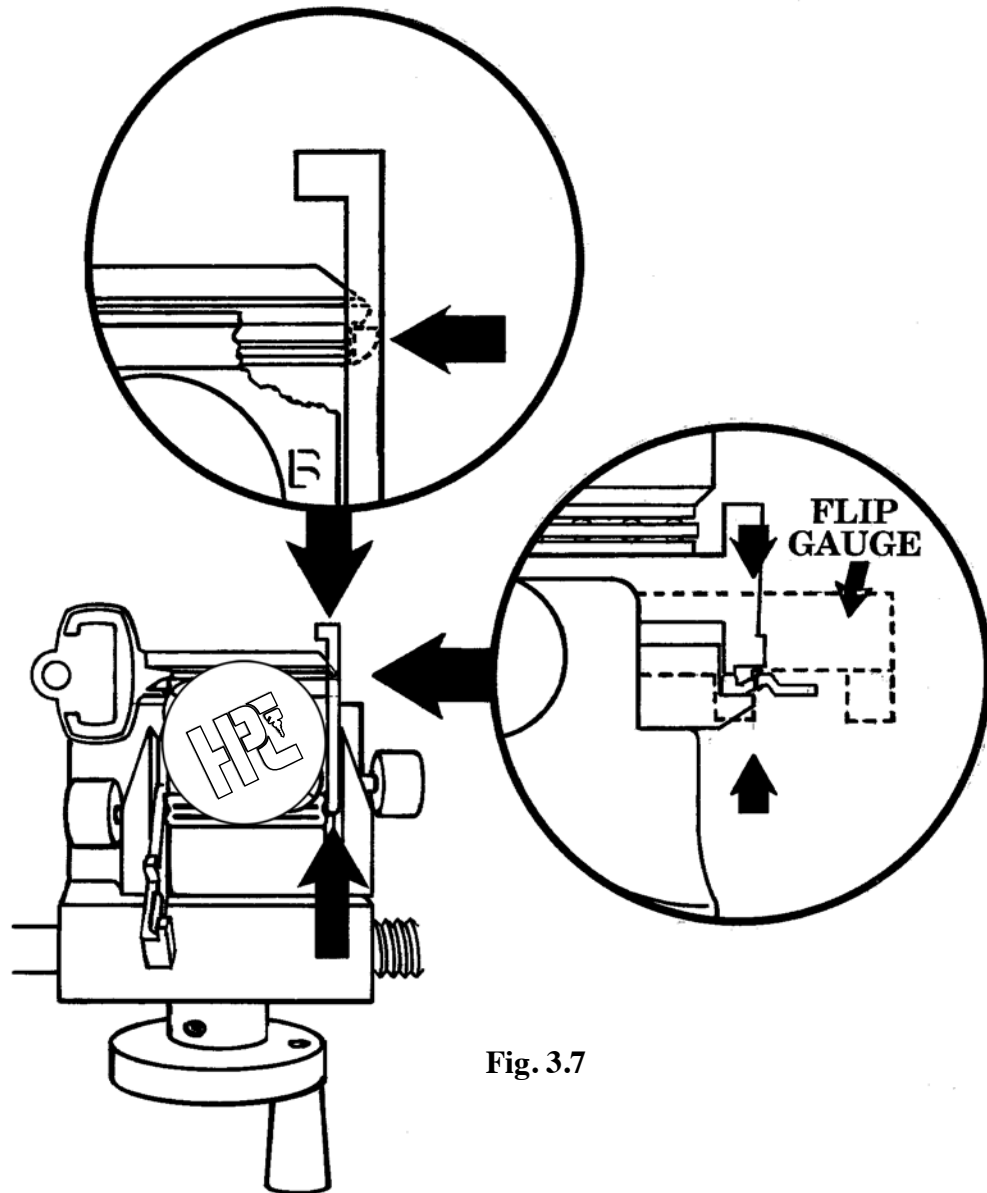


Fig. 3.7

Special Best tip gauging.

**Alternate holding of keys for
double-sided cutting:
Insert the key using the Tip Stop.**

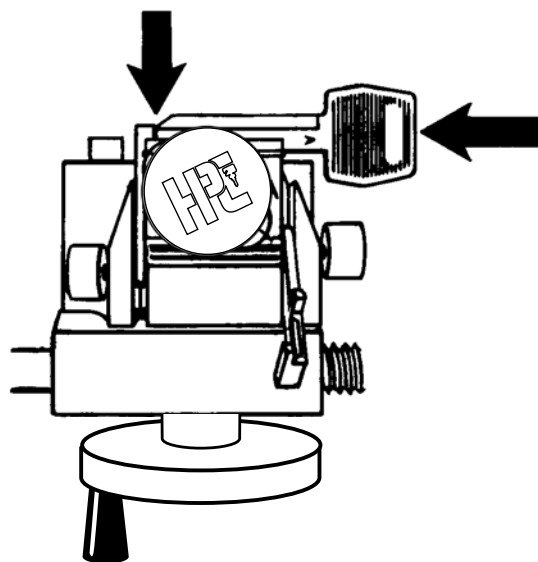


Fig. 3.8

**Gauge the center ward of the
key against the front
of the Bottom Jaw.**

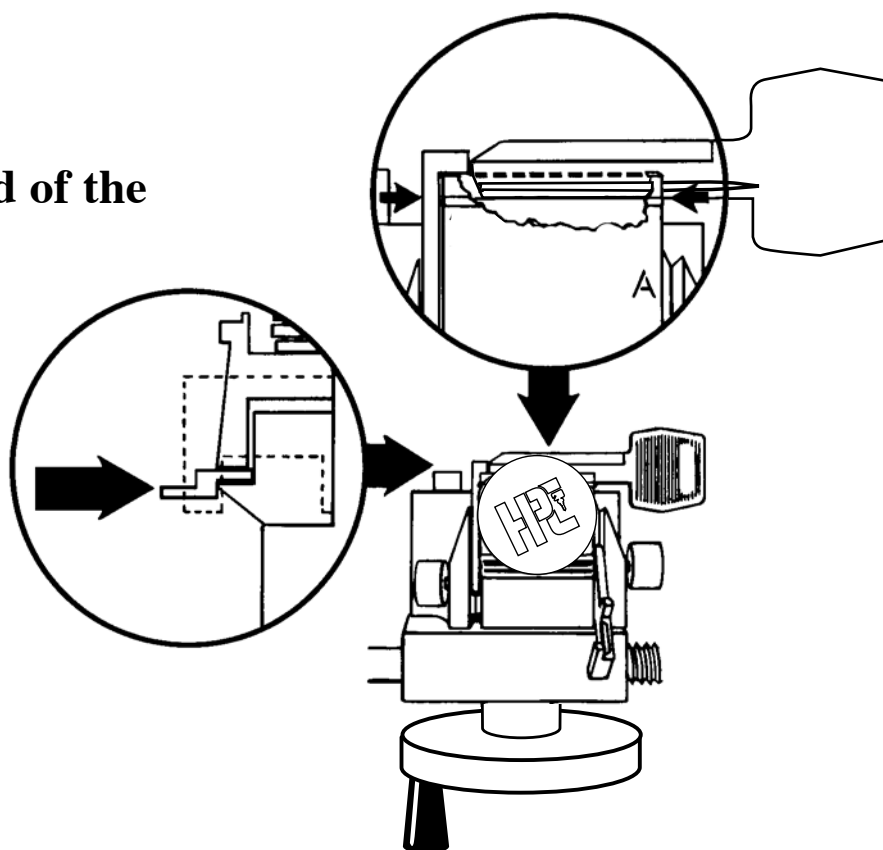


Fig. 3.9

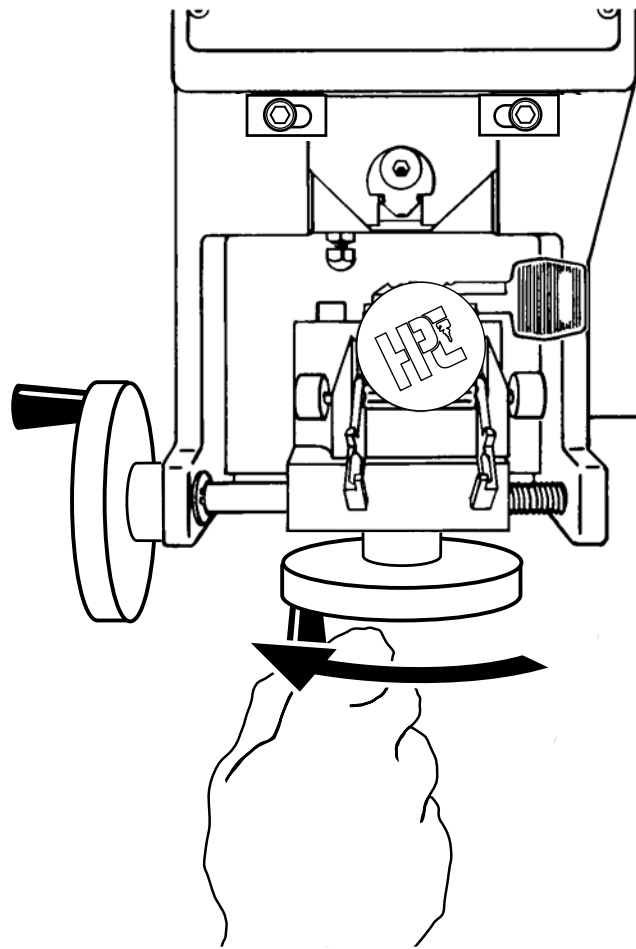


Fig. 3.10

Move the key in and punch all of the cuts on one side, then move out.

**Take the key directly out,
while maintaining position.**

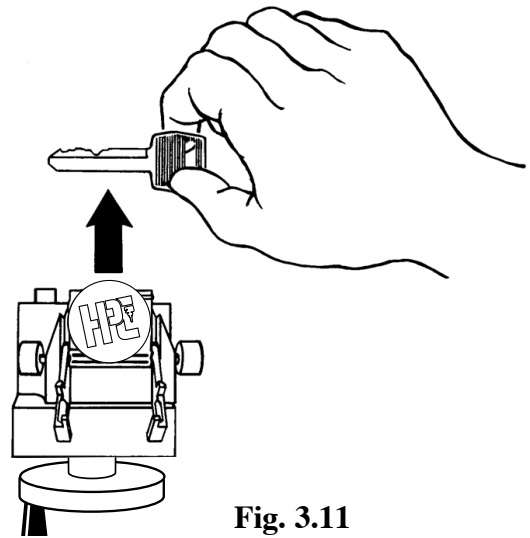


Fig. 3.11

**Flip the key 180° so that
the uncut side is now facing
upward or toward the Punch.**

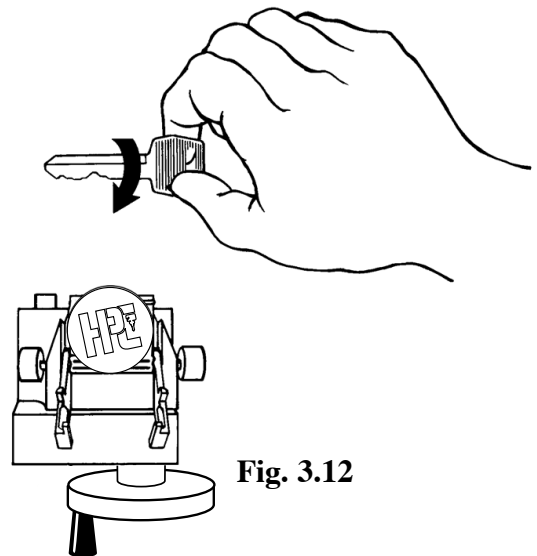


Fig. 3.12

**Reclamp the key and punch
all of the cuts on the other side.**

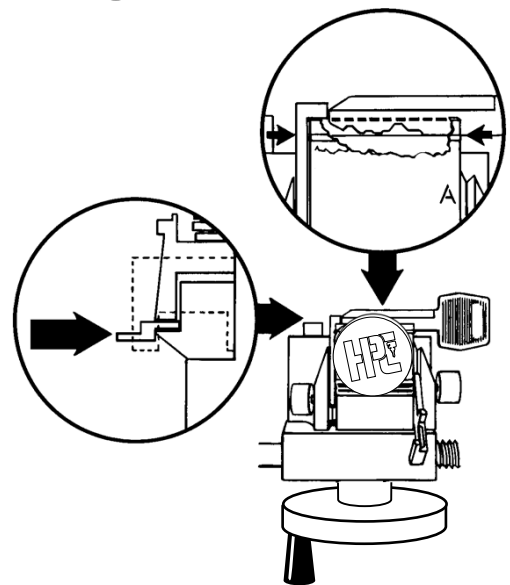


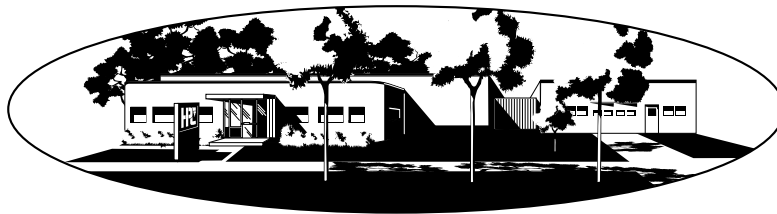
Fig. 3.13



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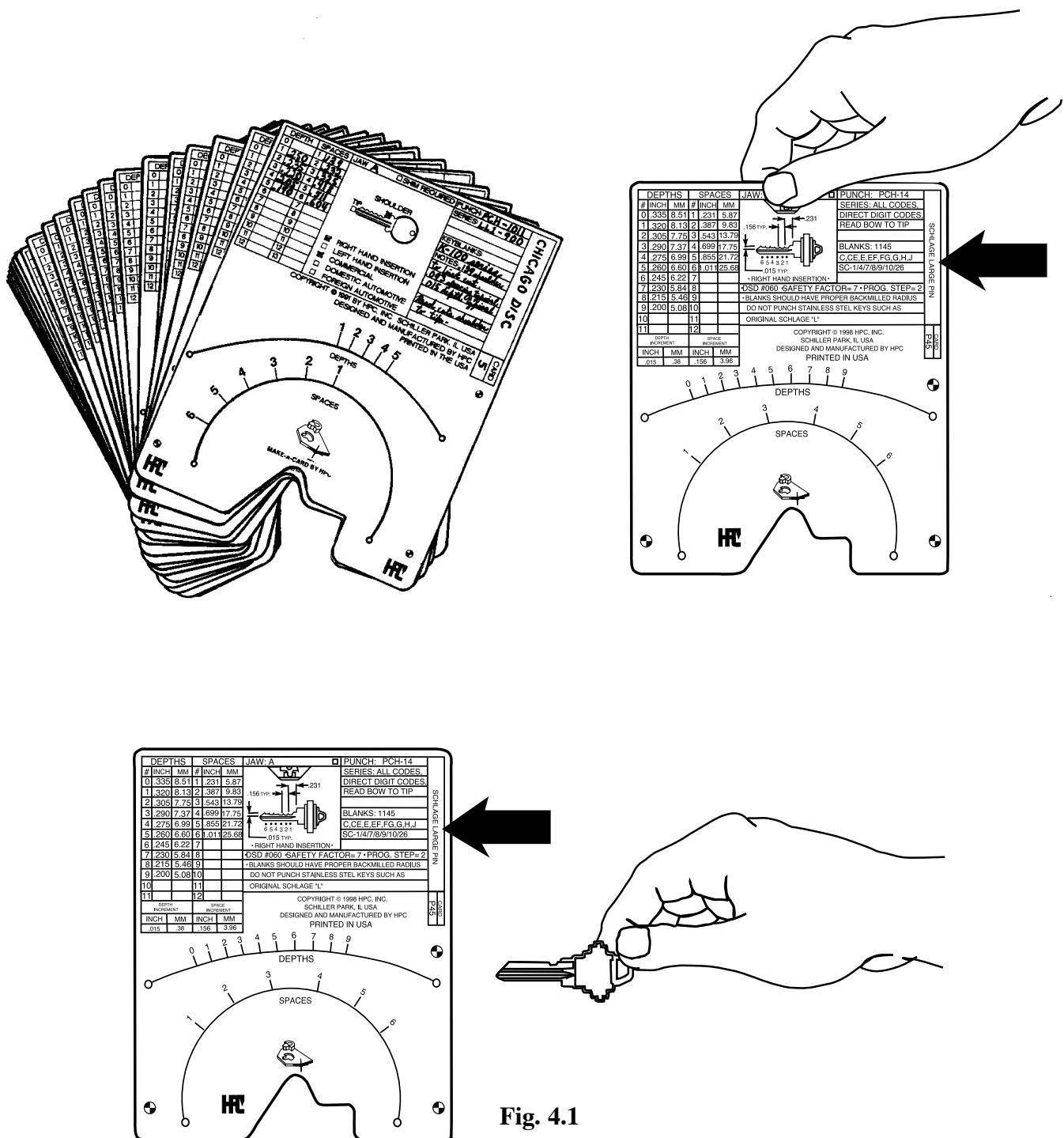


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4.0

Cutting The Key



Select the proper card and key blank to be used.



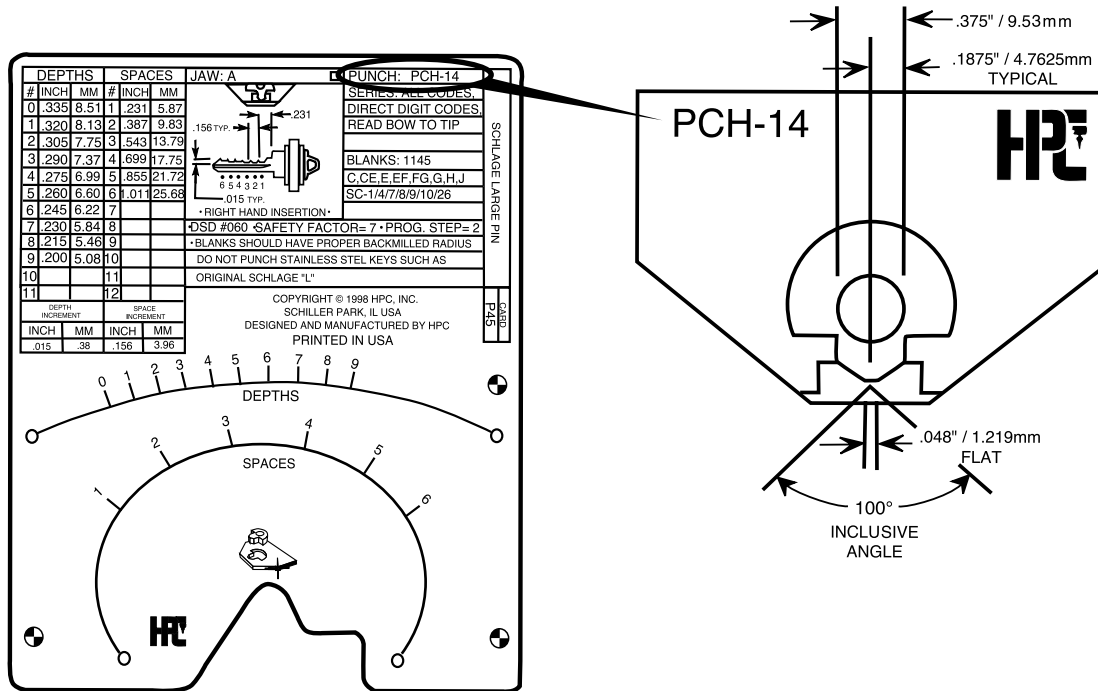
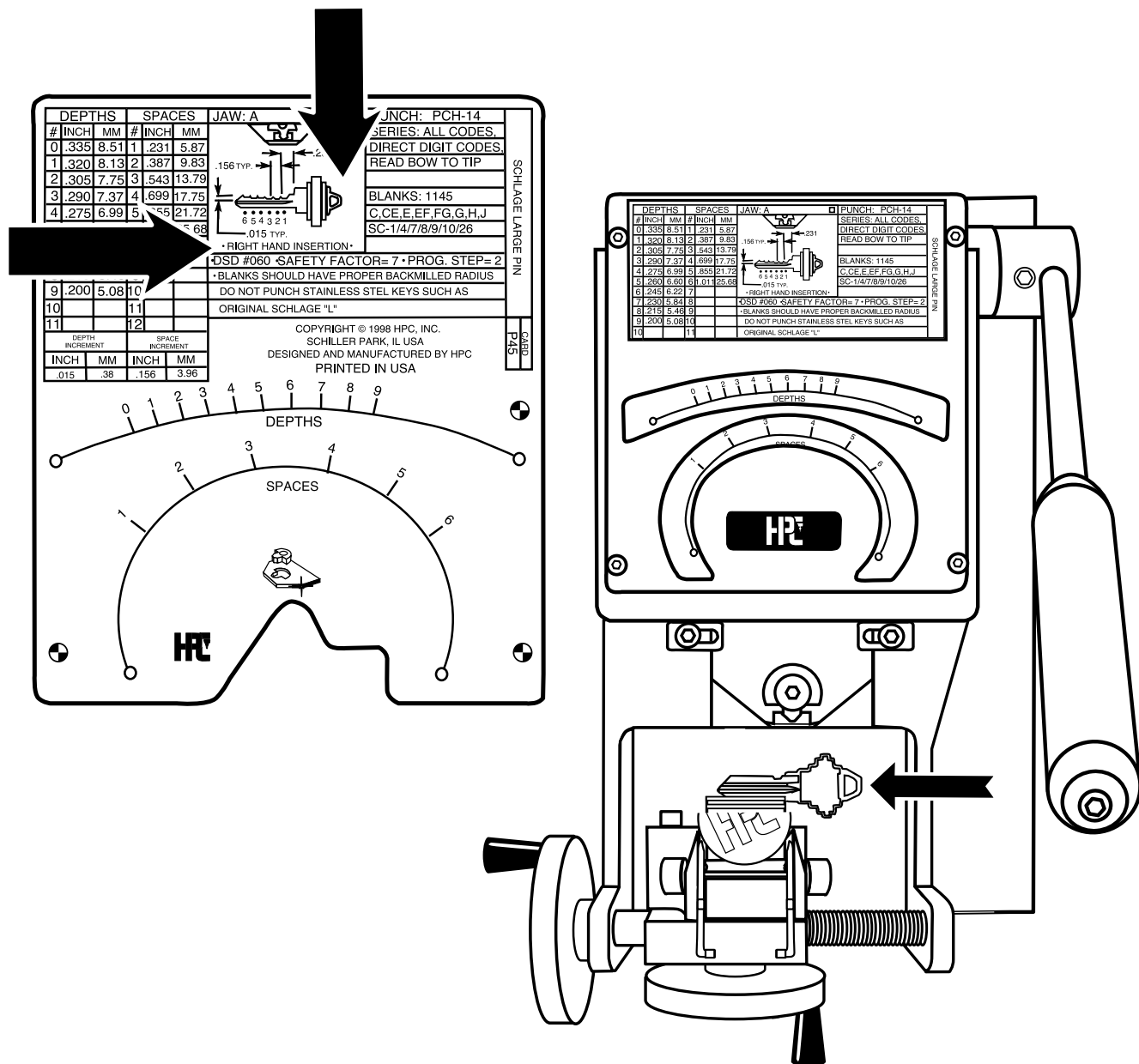


Fig. 4.2

Select the proper punch.



Select the proper gauging and insertion direction for clamping of the key to be cut. Tighten wing nut to hold the key blank securely between the jaws.



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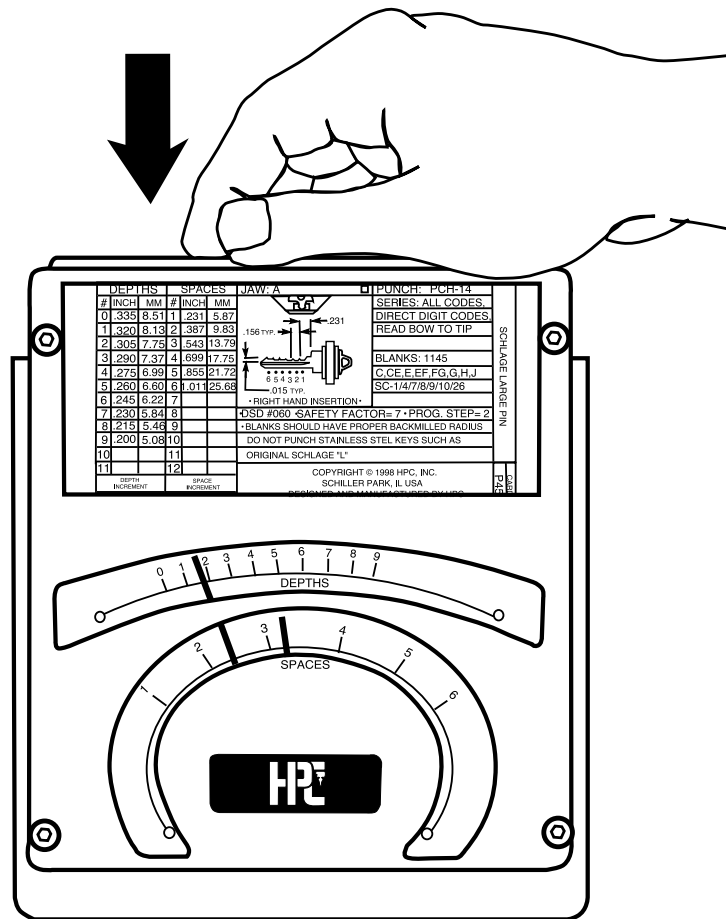


Fig. 4.4

Insert the card beneath the lens.
Be careful to place card under the needles.

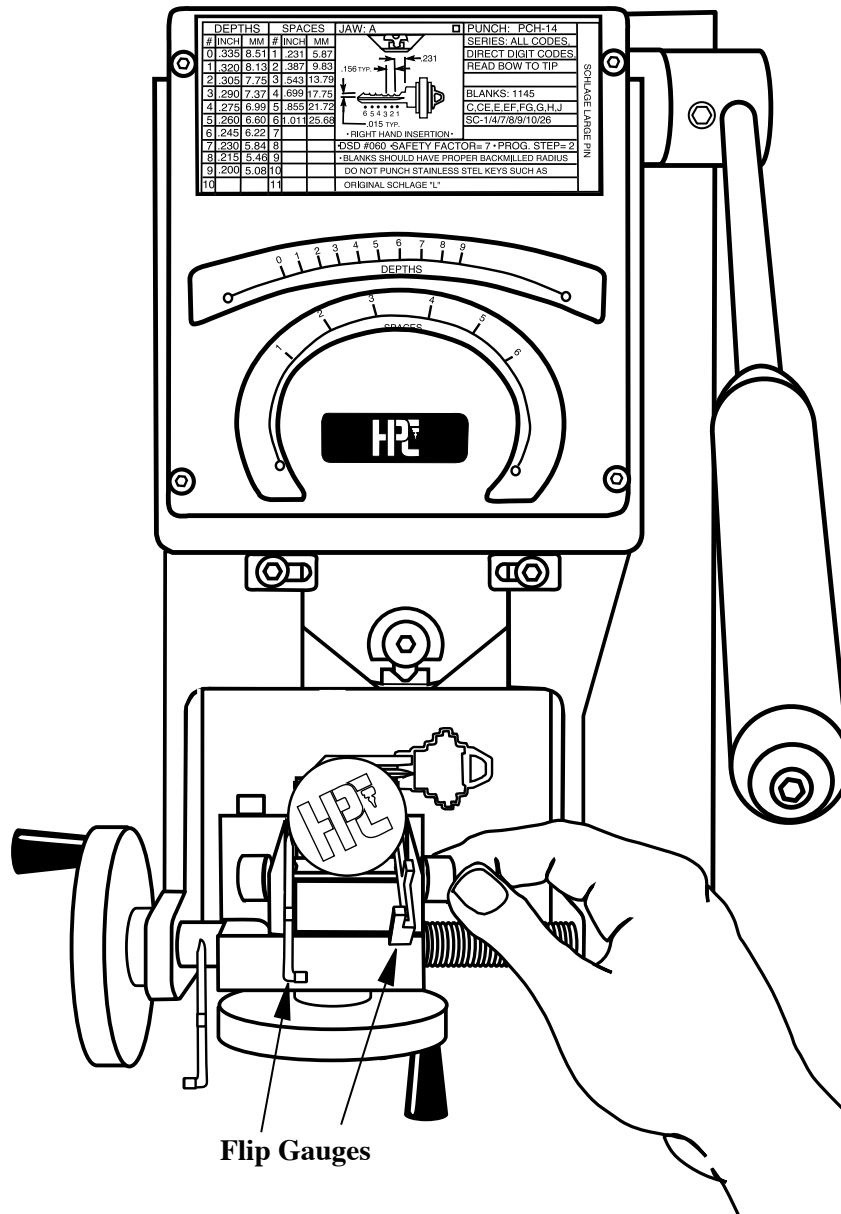


Fig. 4.5

Move the Flip Gauges out of the way.

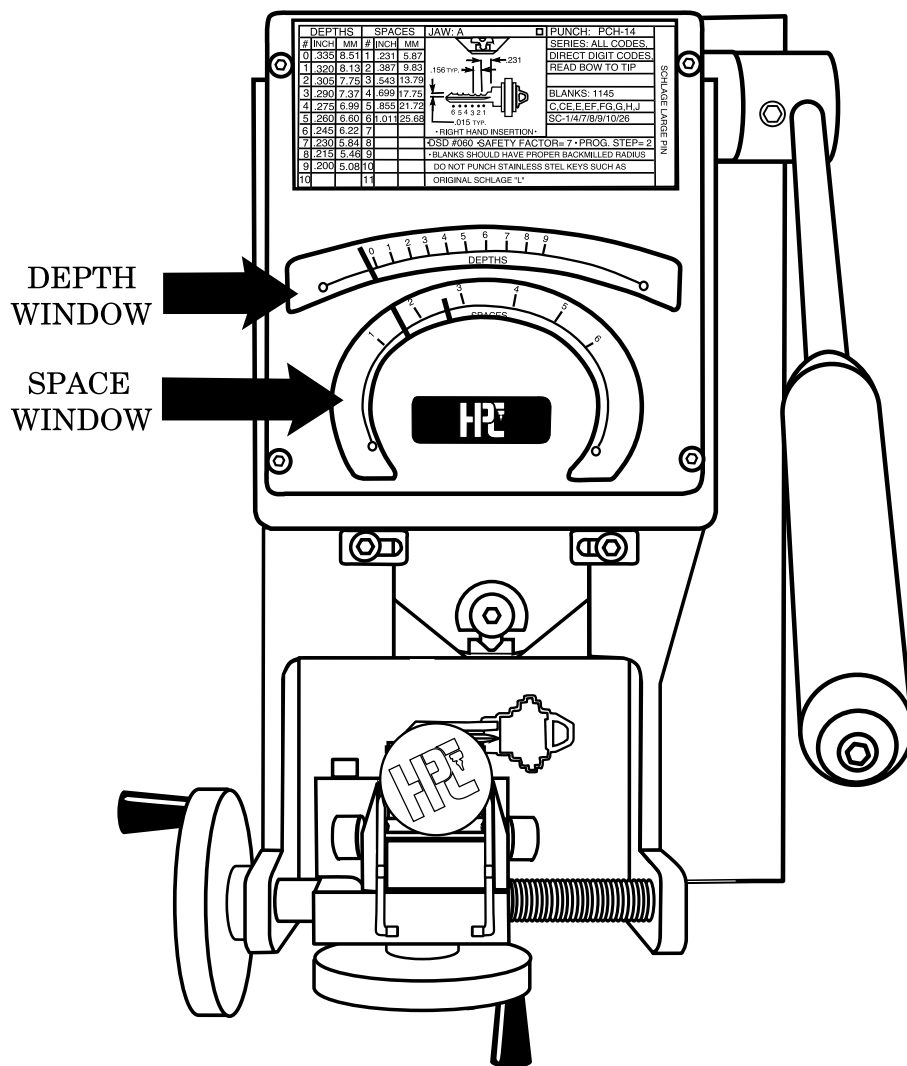


Fig. 4.6

Note: Depth and Space Windows.

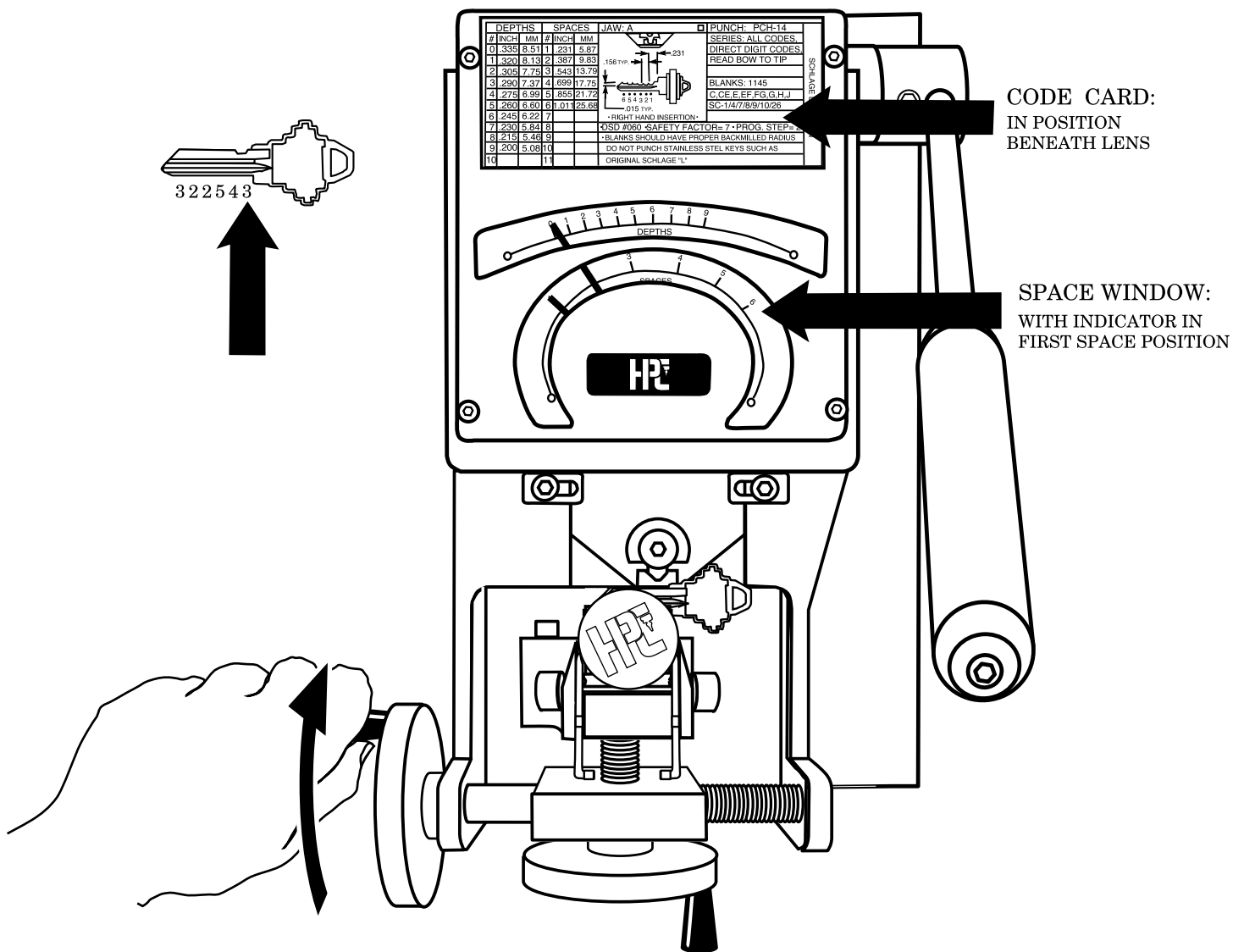


Fig. 4.7

Turn the Spacing Crank to move the Key Carriage to the first position.



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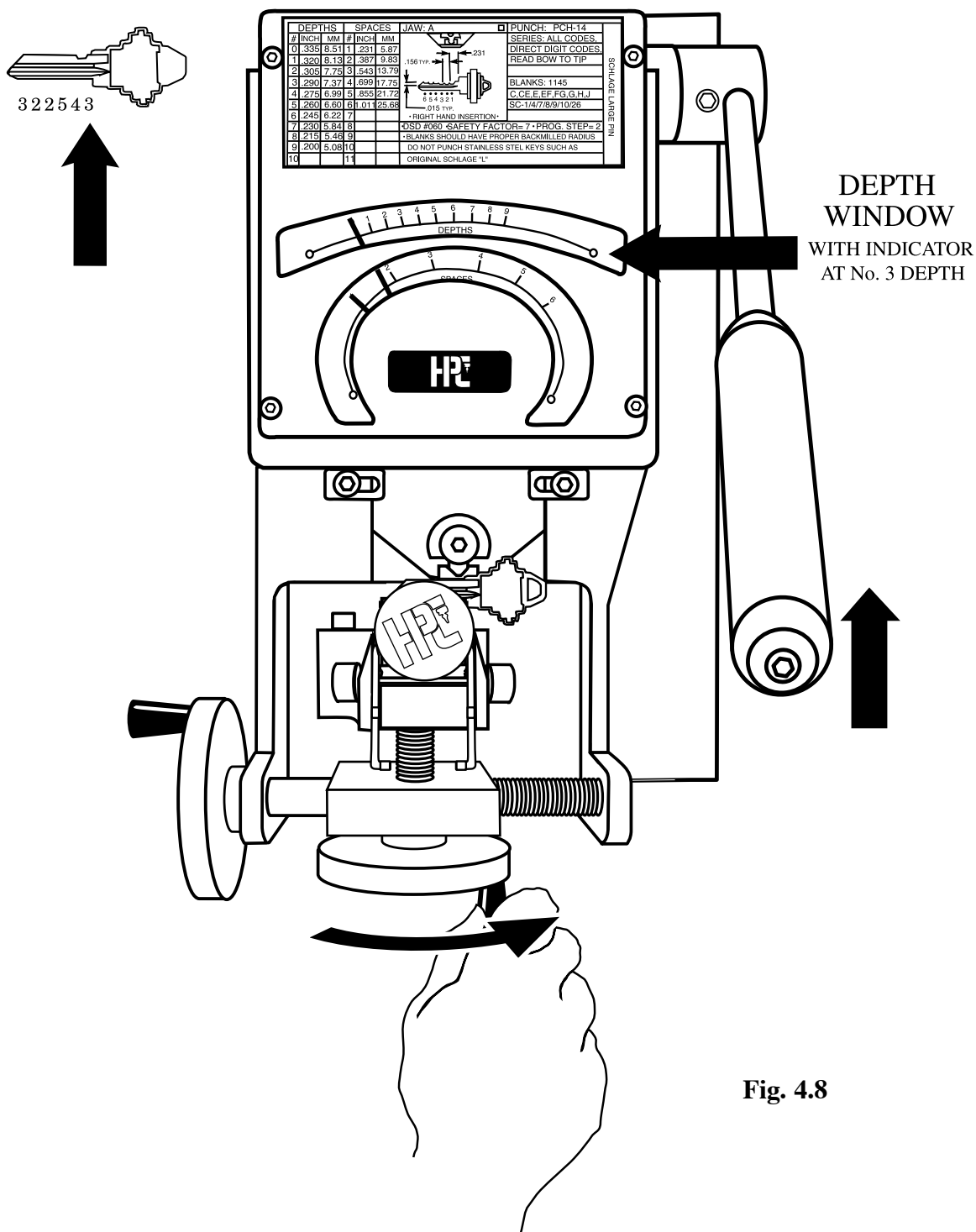


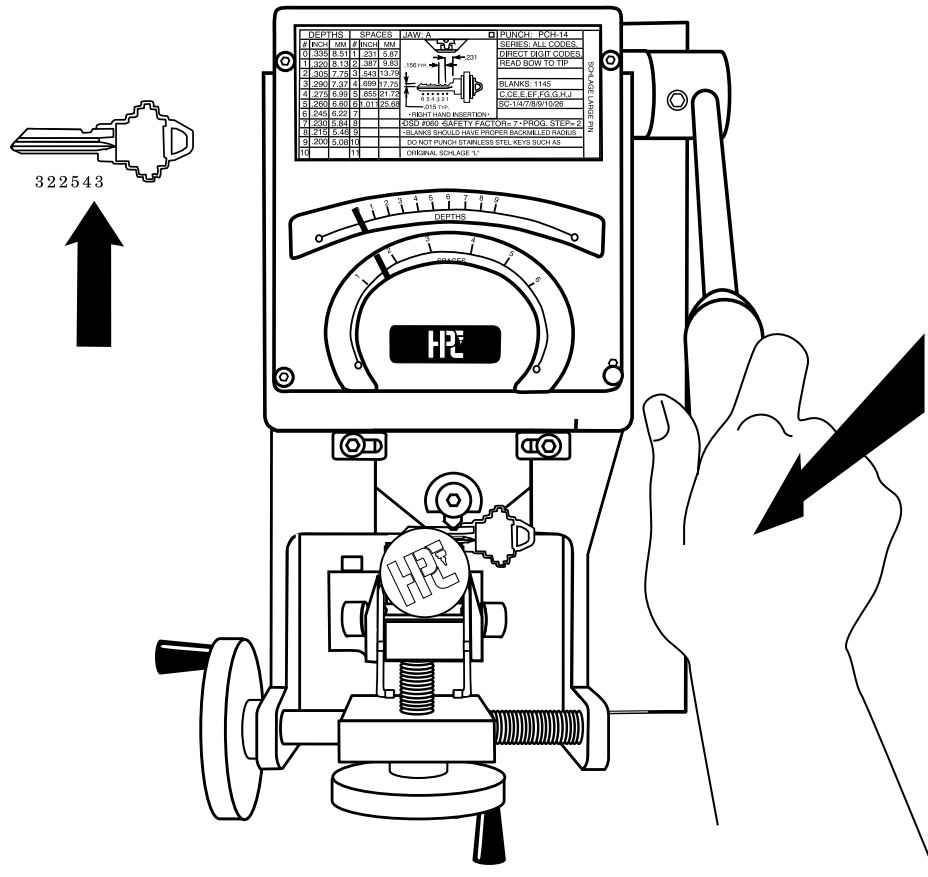
Fig. 4.8

Turn the Depth Crank to move the Key Carriage to the first desired depth position.



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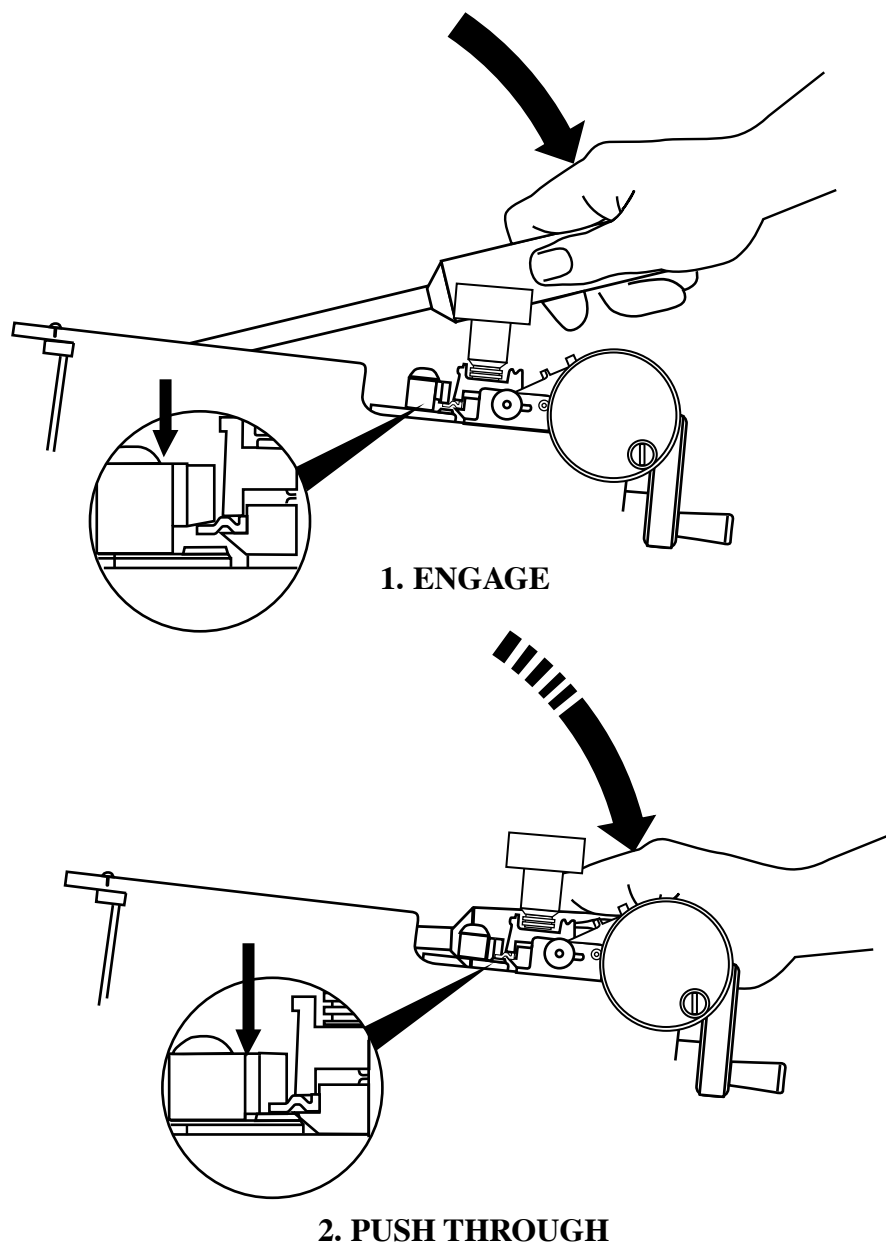


Fig. 4.10

**A smooth, even movement
ensures the best results.**

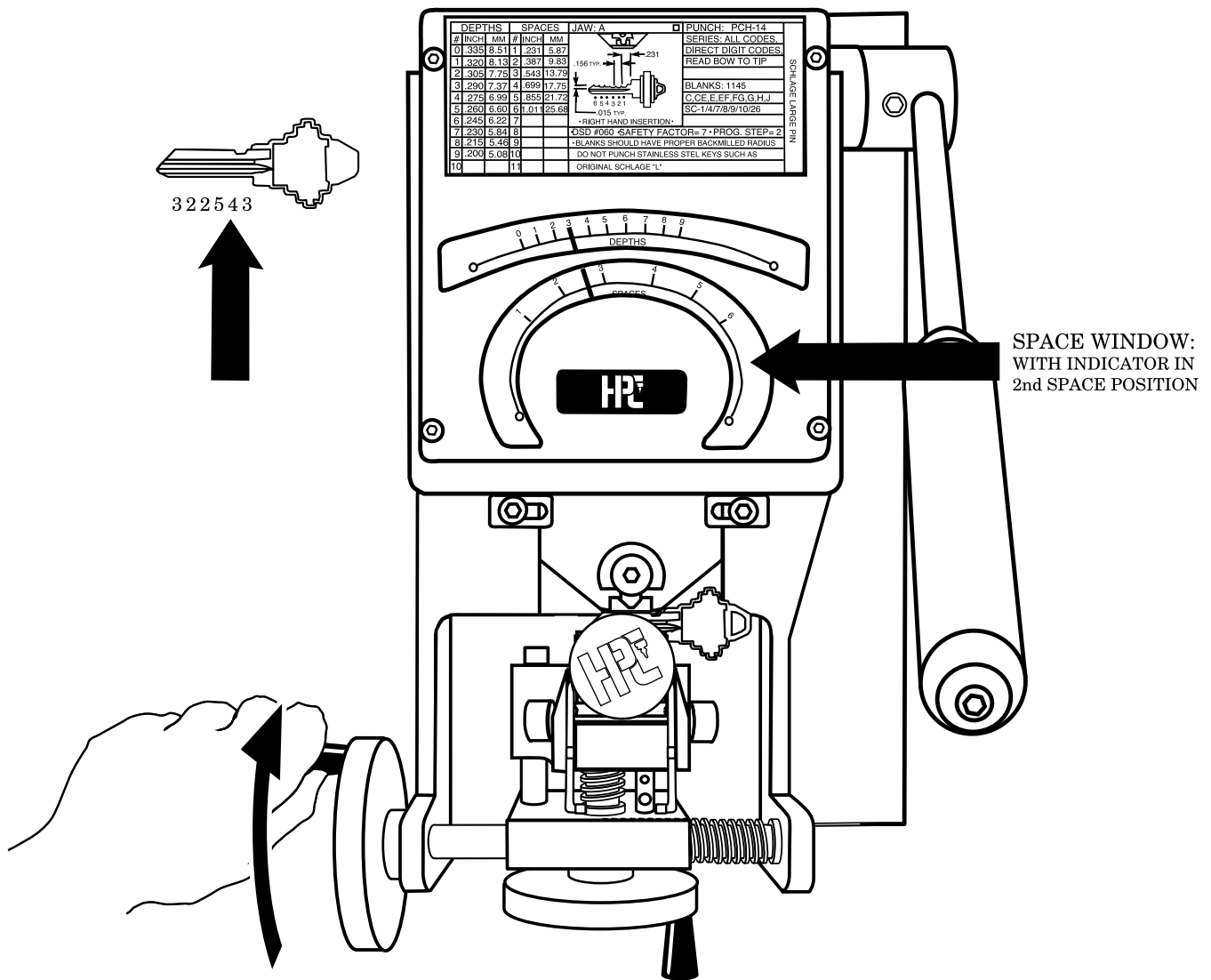
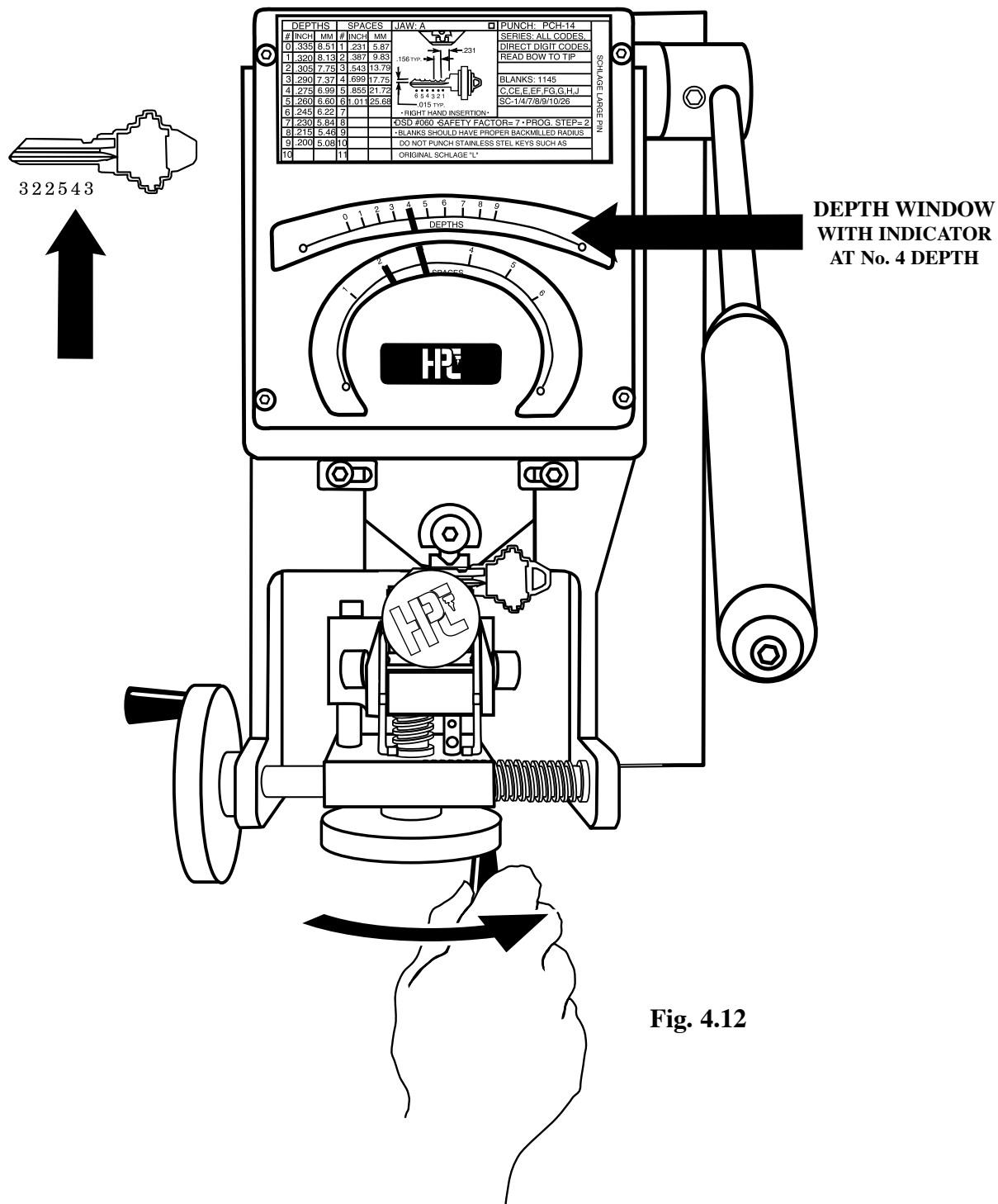


Fig. 4.11

After the first cut is made, move to the next space position.



Again, move to the next depth position.



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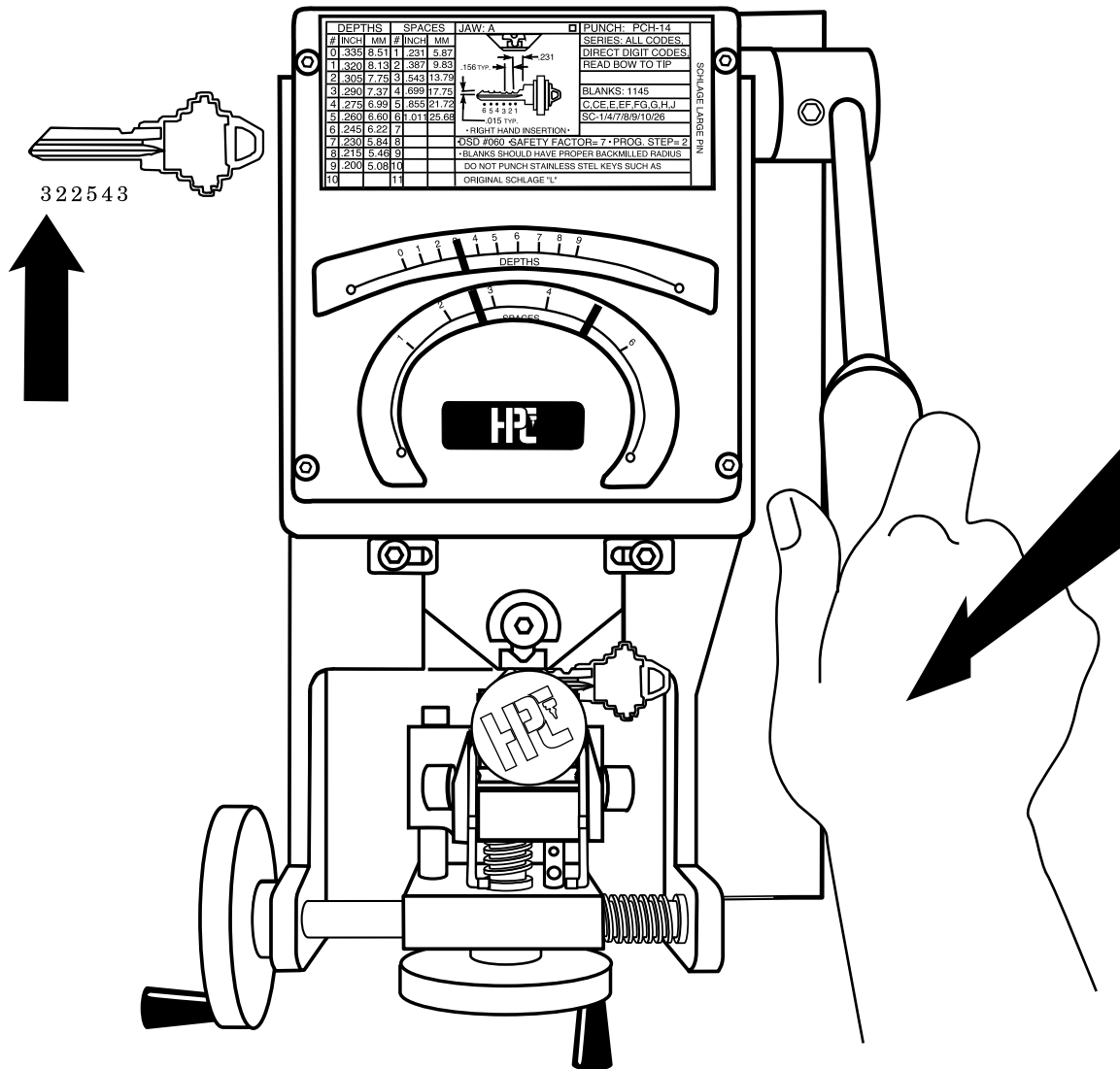


Fig. 4.13

PUNCH!
Repeat these steps until
all of the cuts are made.

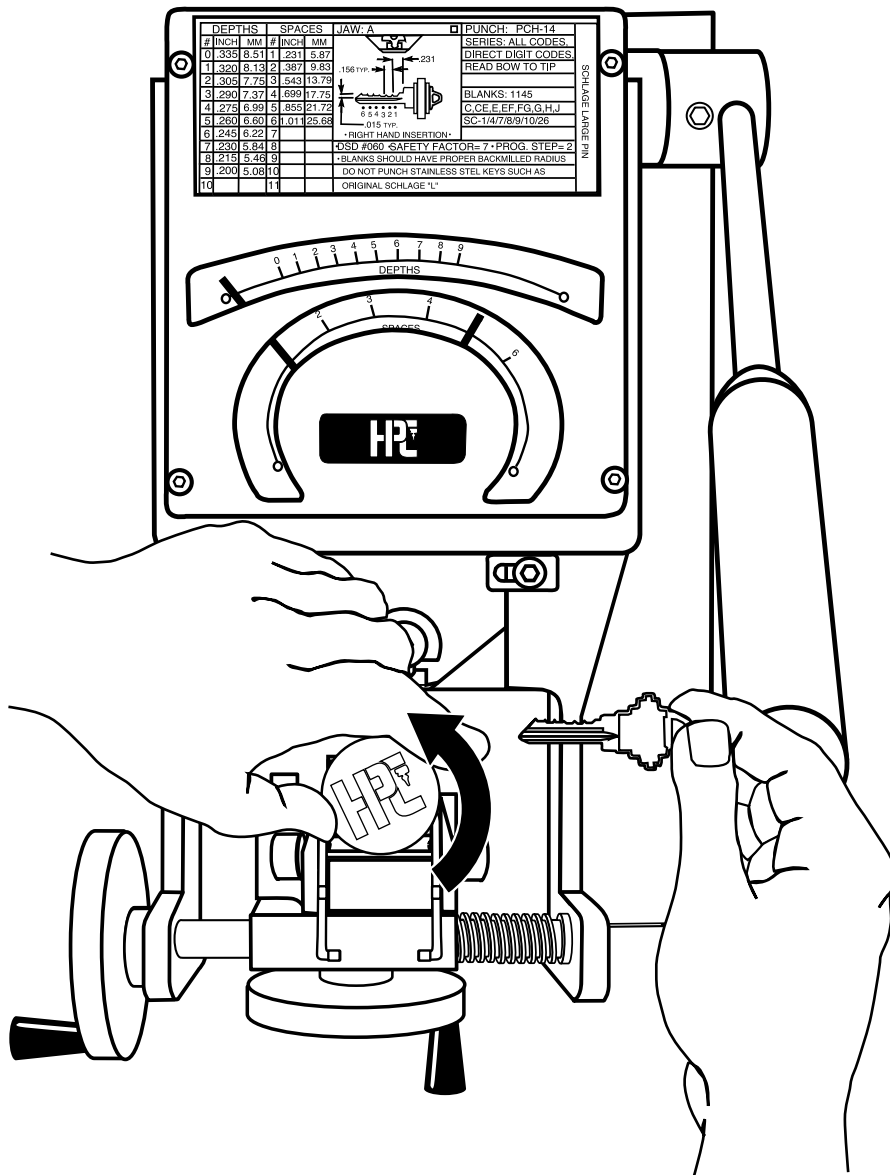
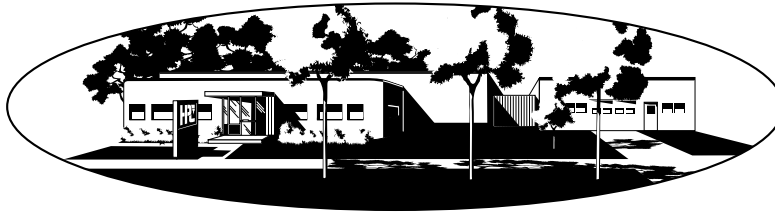


Fig. 4.14

After all of the cuts have been made, remove the key. There should be no need to deburr the key for it to work in the lock.

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5.0

Changing the Punch

5.1 Removal of the Punch

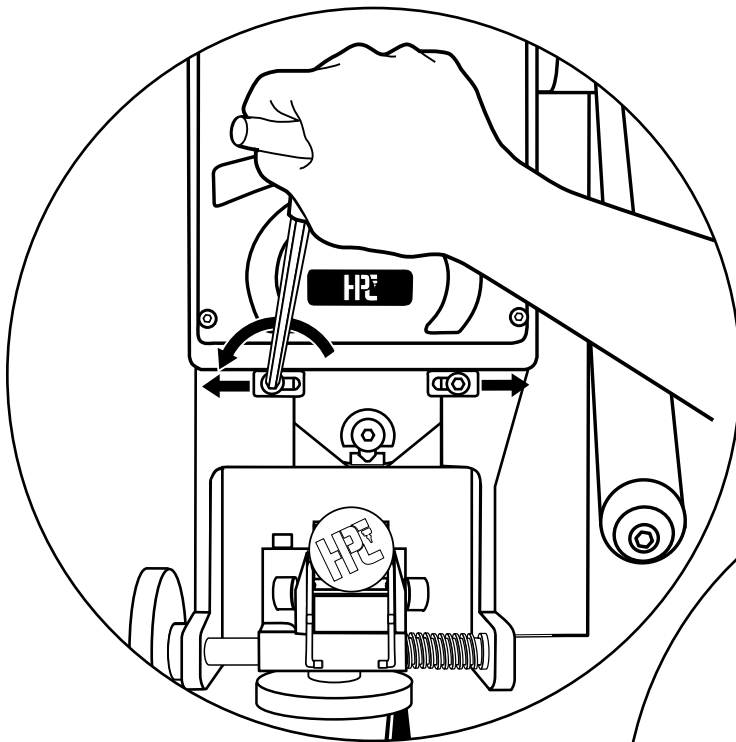
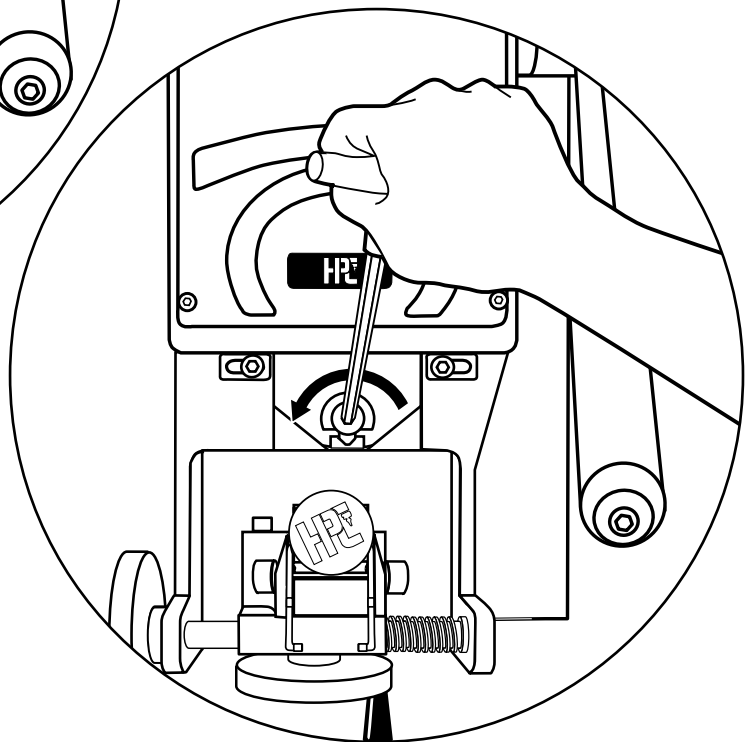


Fig. 5.1.1



**Loosen both of the Toe Clamps and
move clamps out of the way.
Loosen Punch Screw and remove it.**

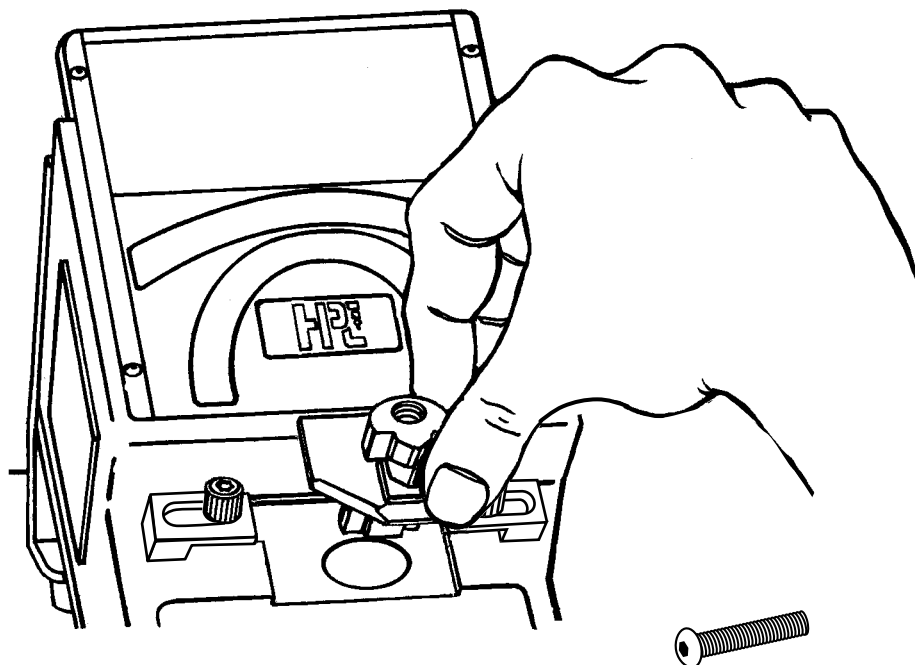


Fig. 5.1.2

Remove the entire Punch and Die unit from the machine.

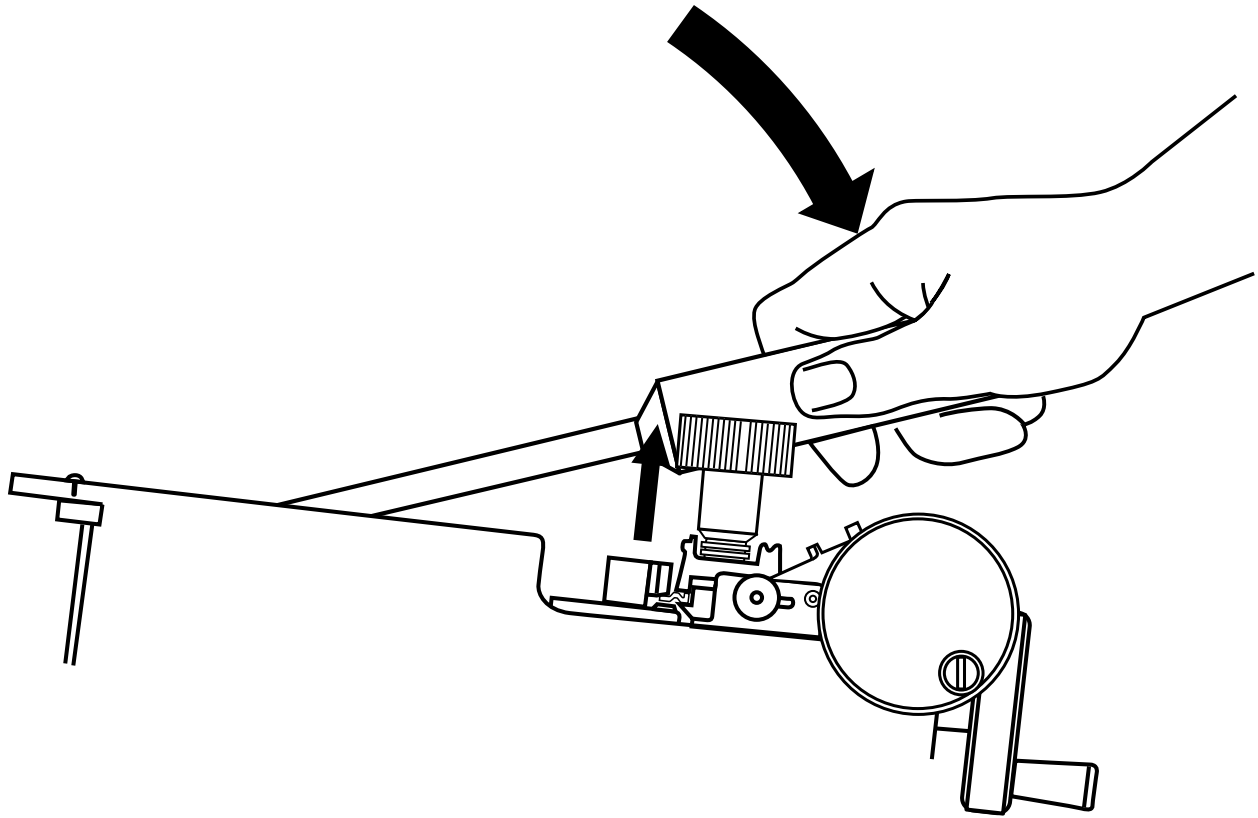


Fig. 5.1.3

NOTE: If the unit does not come out easily, push down on the handle. This will cause the unit to free itself for easy removal.

5.2 Replacing the Punch

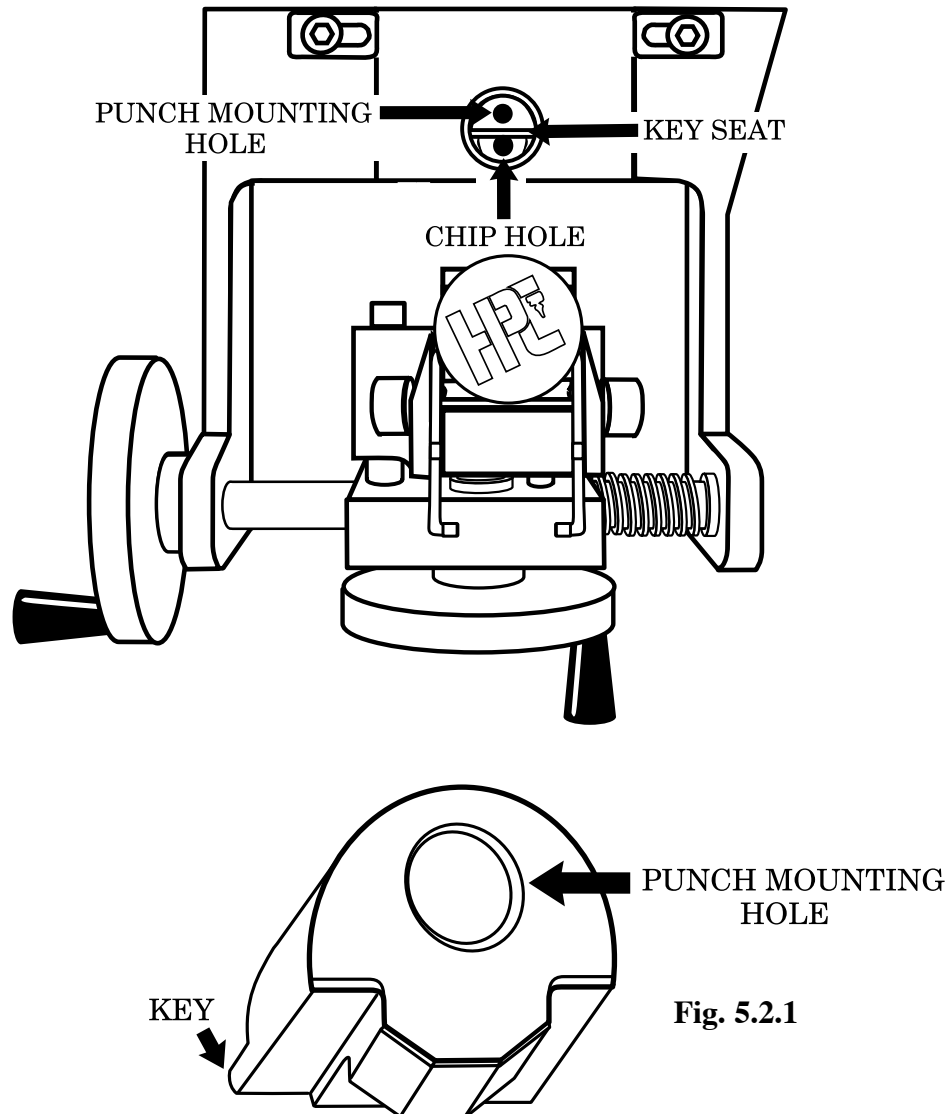


Fig. 5.2.1

These are critical areas to mate upon insertion of a new punch.

Note: Clean any brass chips from all of the critical areas.

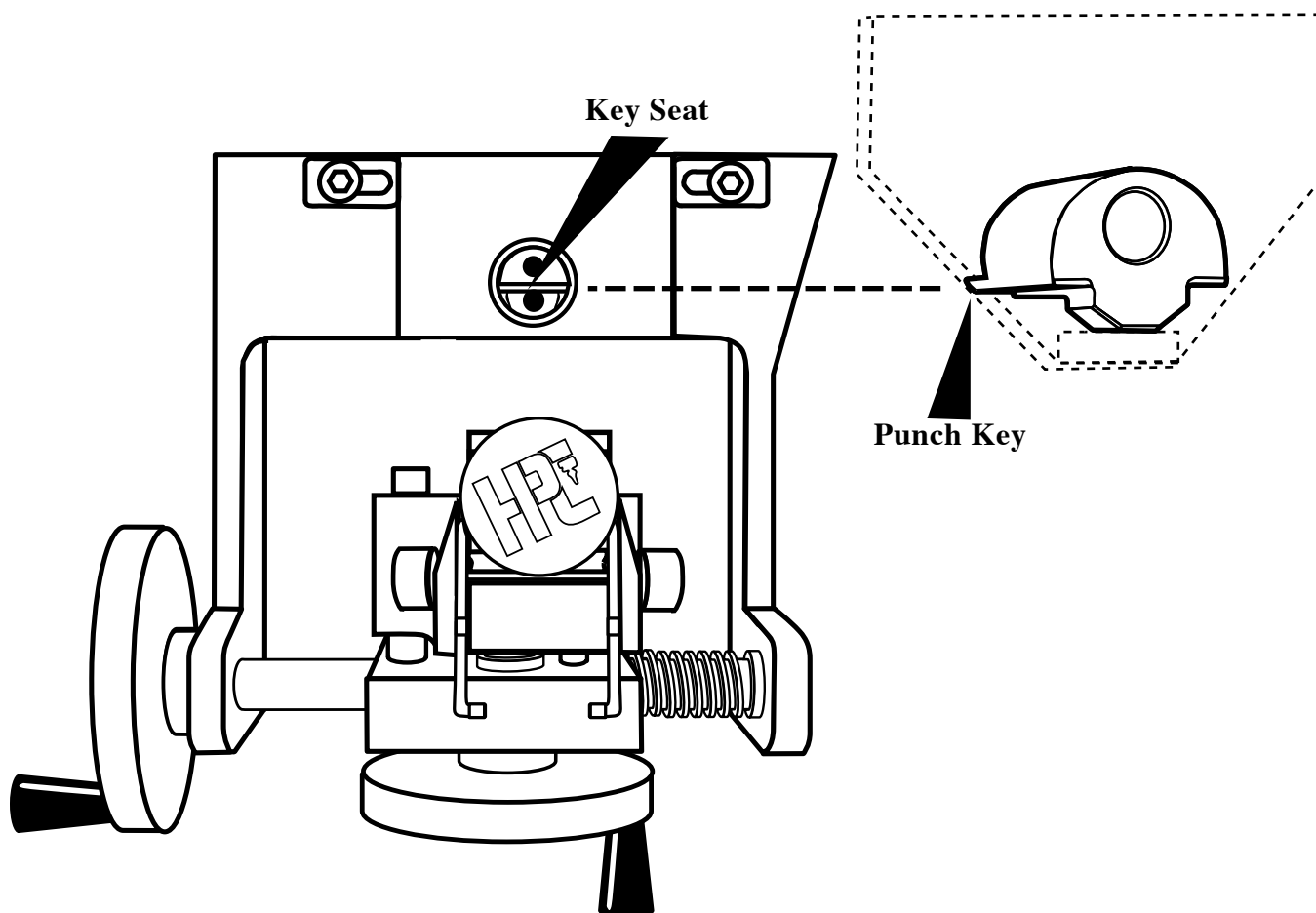


Fig. 5.2.2

Note: Punch Key should line up with Key Seat.

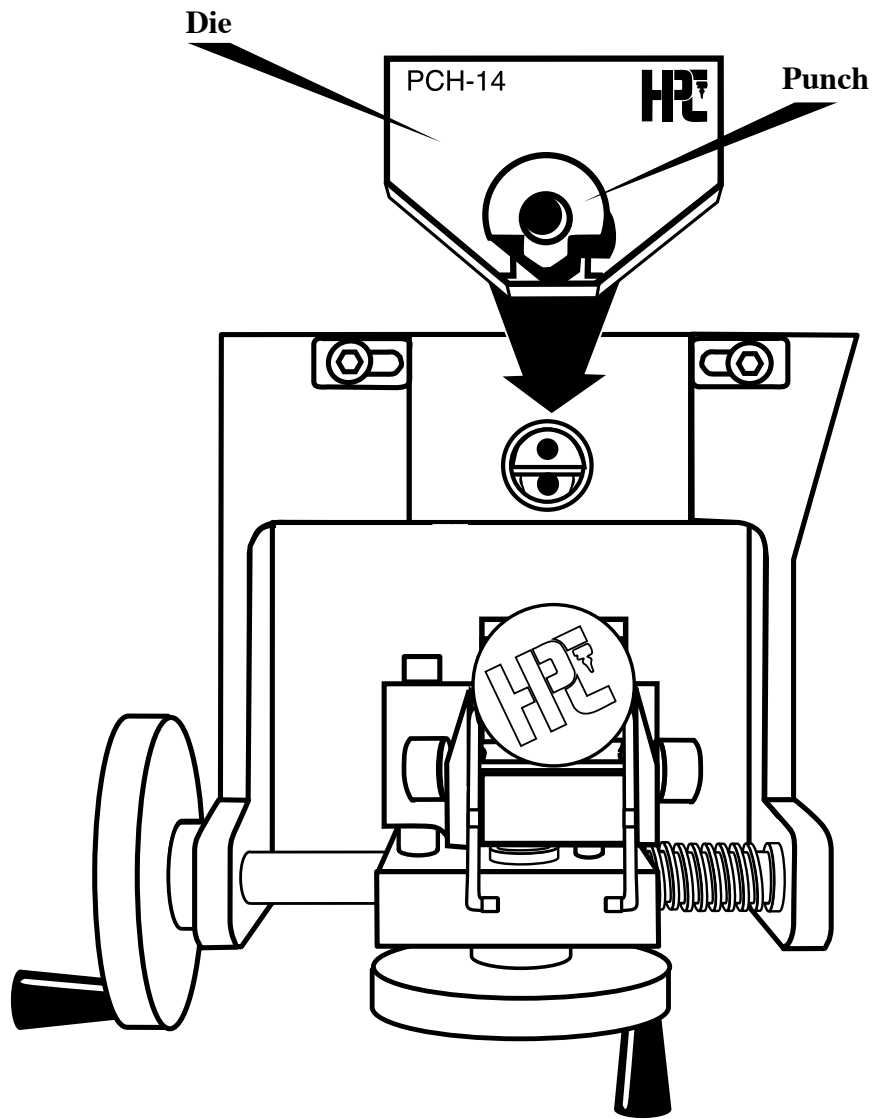


Fig. 5.2.3

Insert the Punch and Die unit into position. You can insert the die unit first and then the Punch unit (making sure the Punch key lines up into key seat), or both pieces as one unit (as shown above).



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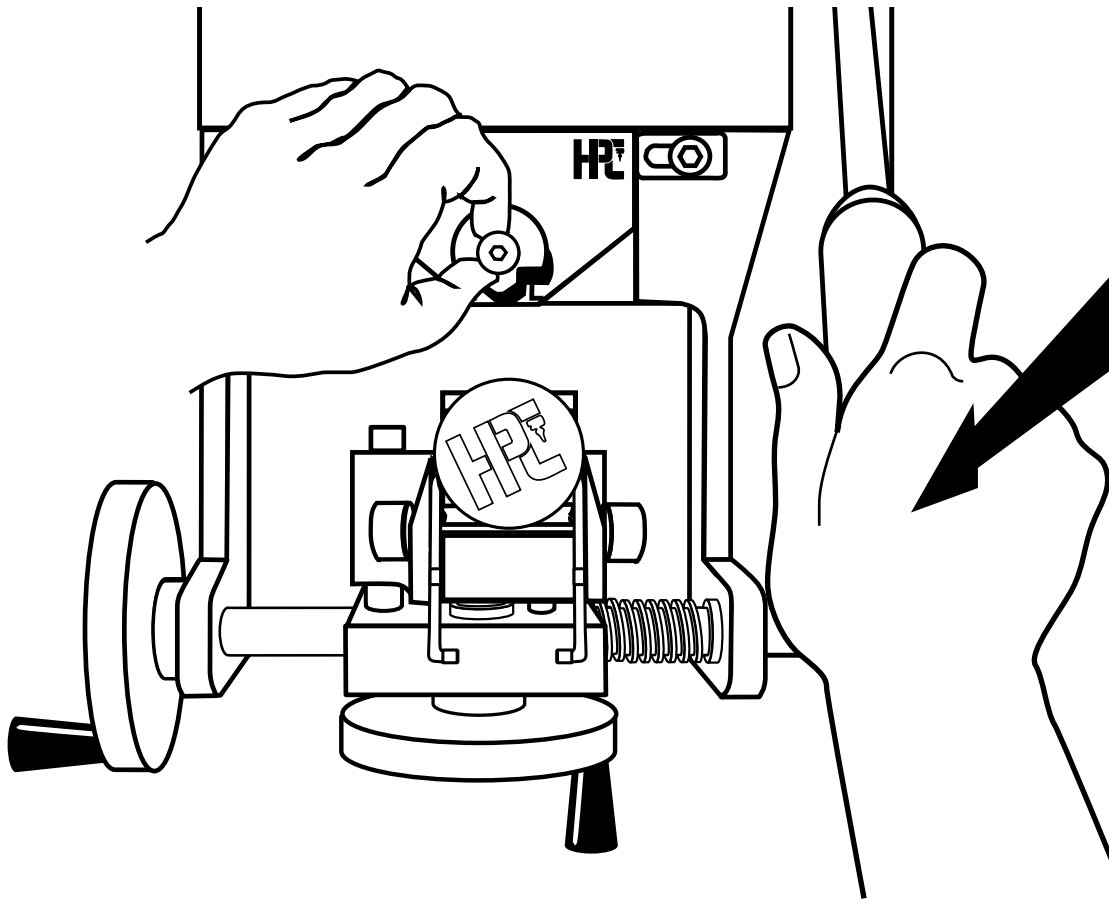


Fig. 5.2.4

Thumb-tighten the Punch Screw and depress the Punch Arm to line up the Punch and Die unit before the final tightening.

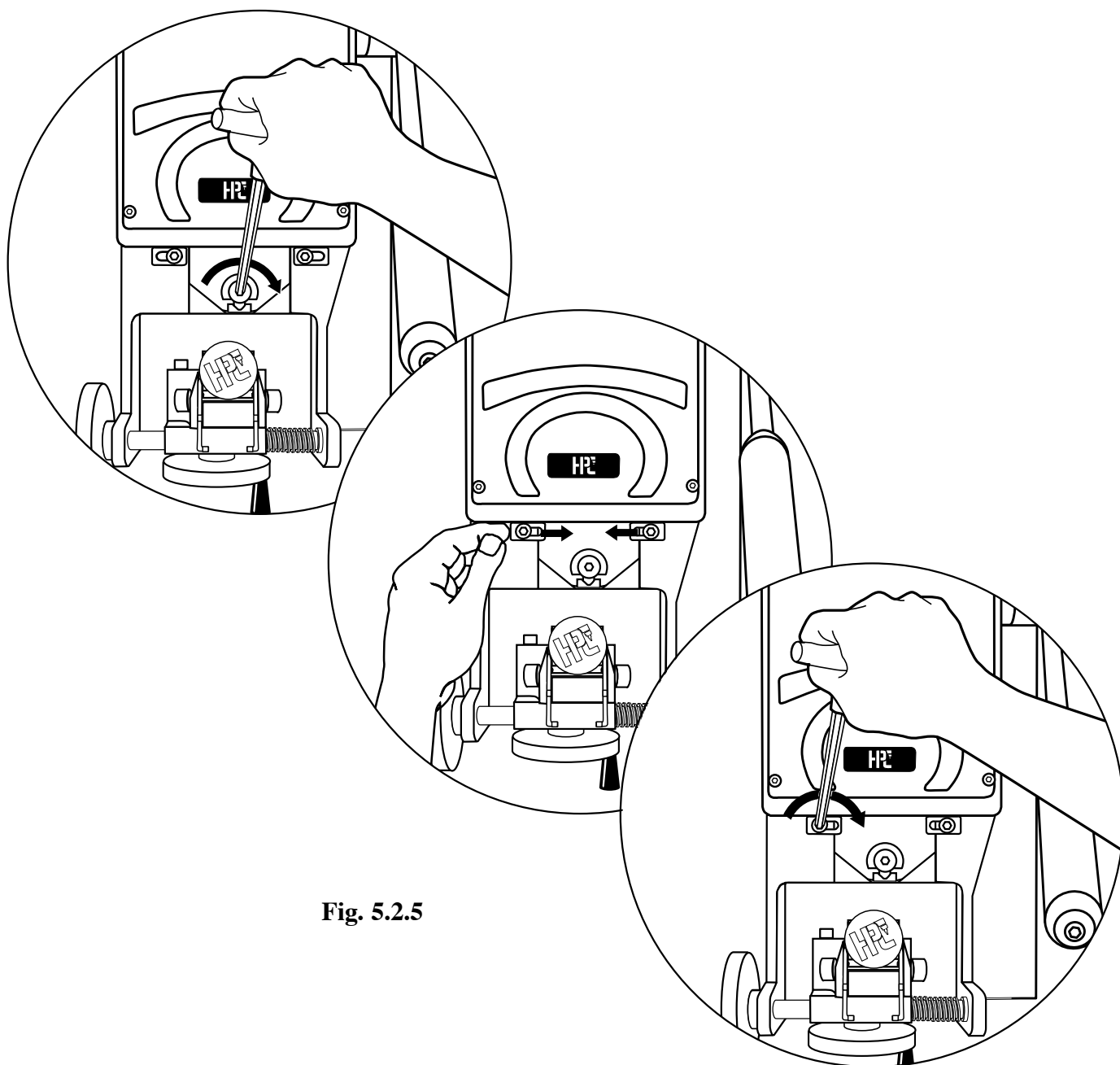


Fig. 5.2.5

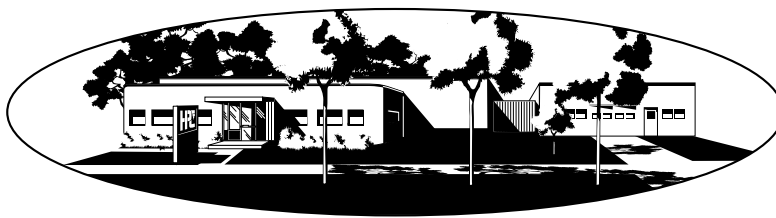
**Tighten the Punch Screw with the wrench.
Do not overtighten! Move the Toe Clamps into
position and tighten.**



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6.0

Depth Adjustment

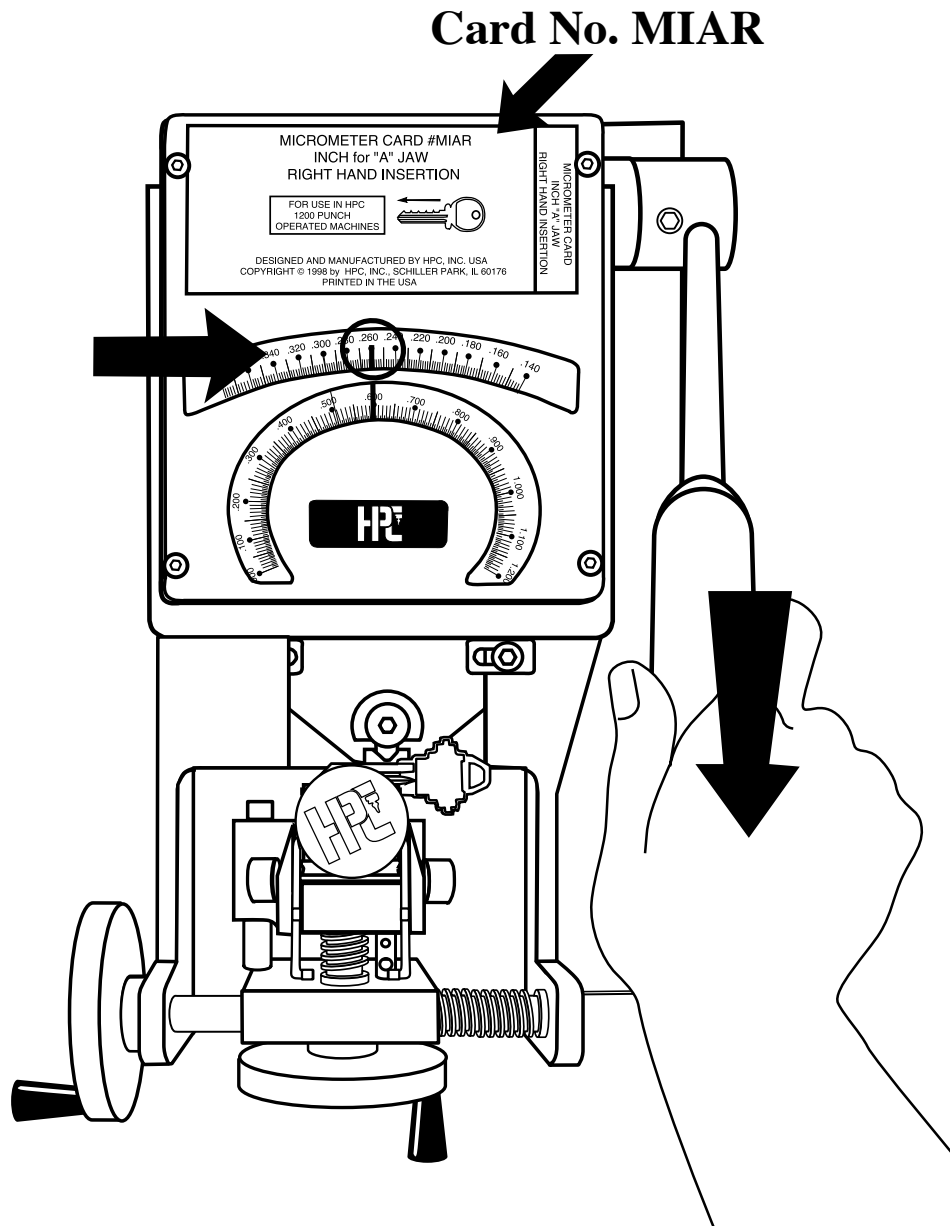


Fig. 6.1

1. Insert Micrometer Card No. MIAR
2. Gauge and locate a single-sided key blank.
3. Move the depth needle to 0.260
4. Punch a cut into the key.

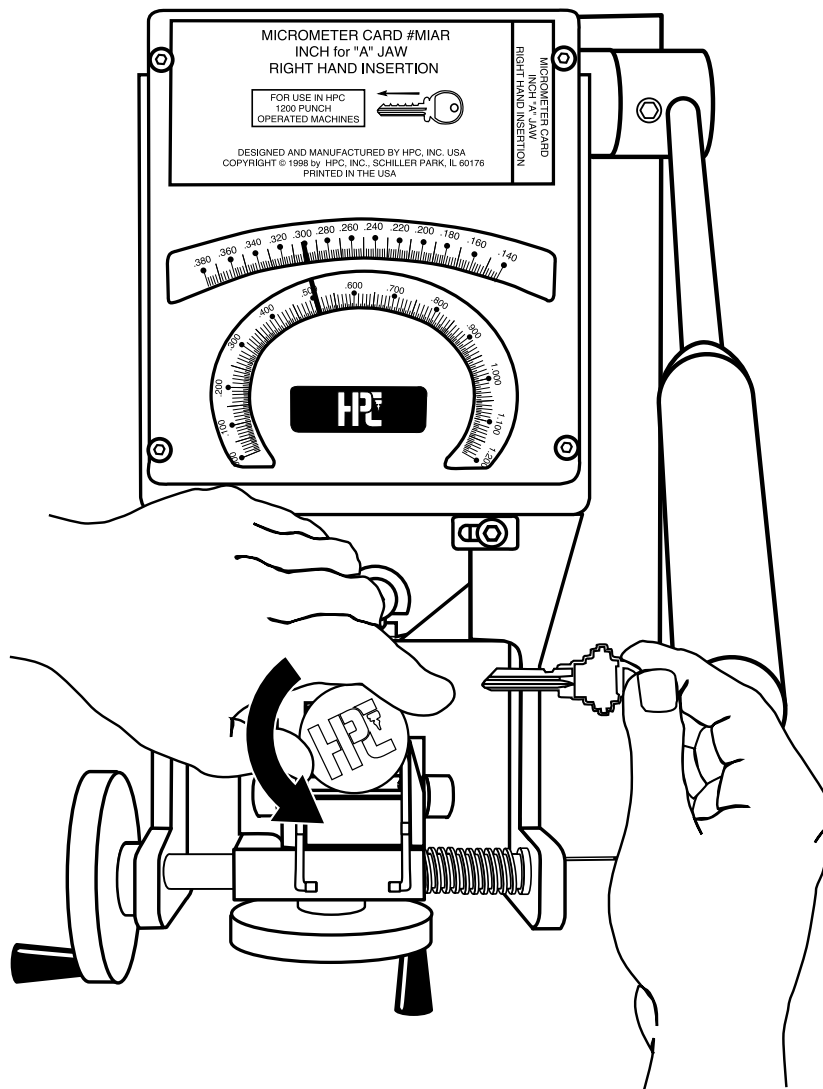


Fig. 6.2

Remove the key from the Carriage.

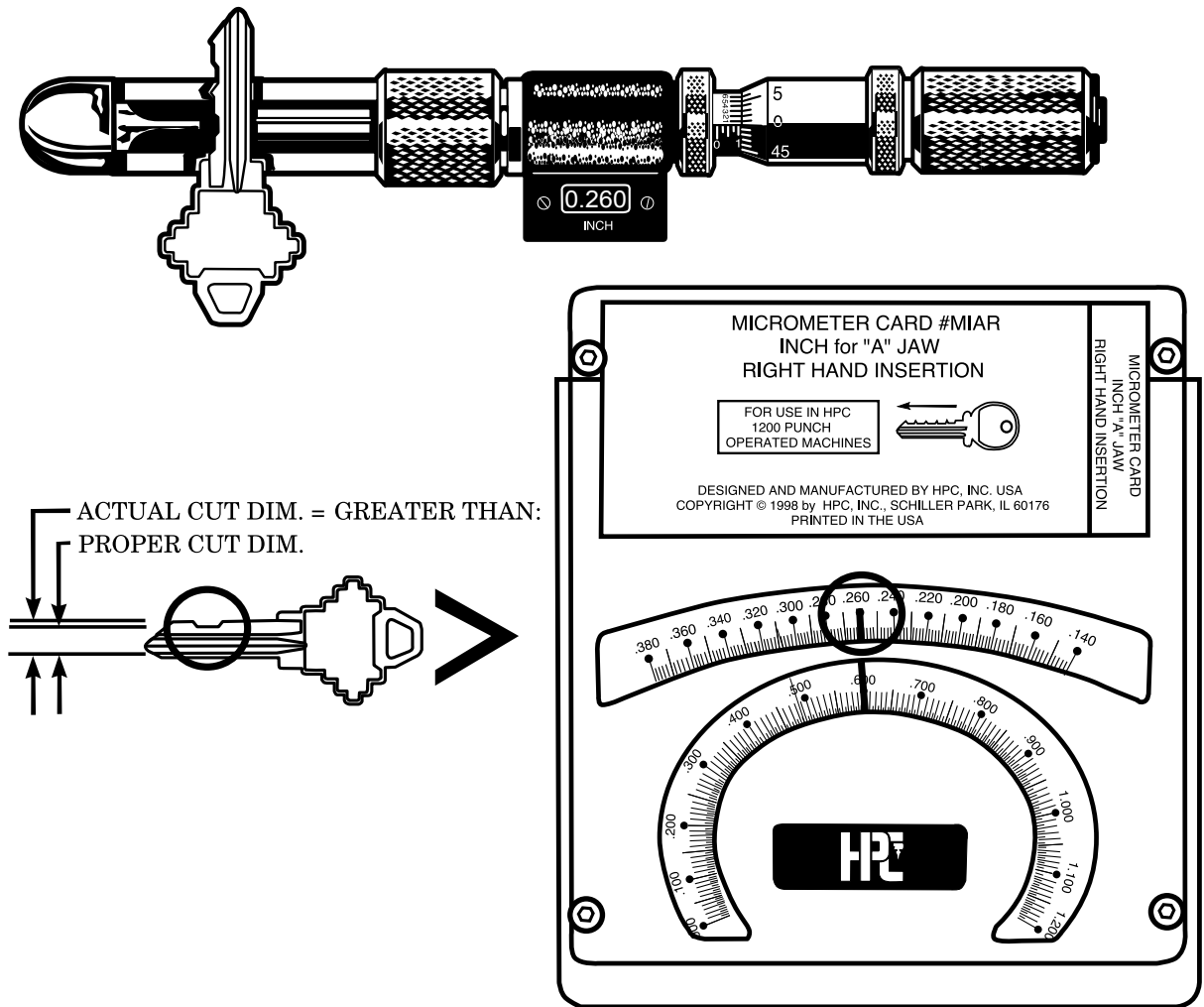


Fig. 6.3

**Measure the key for the actual punch cut dimension.
Note whether the key is equal to proper cut dimension or
greater than.**

$$\begin{array}{rcl}
 \text{Example: proper cut dimension} & = & .260 \\
 \text{actual cut dimension} & = & .265 \\
 & & + .005
 \end{array}$$

The cut is greater than the proper cut dimension.

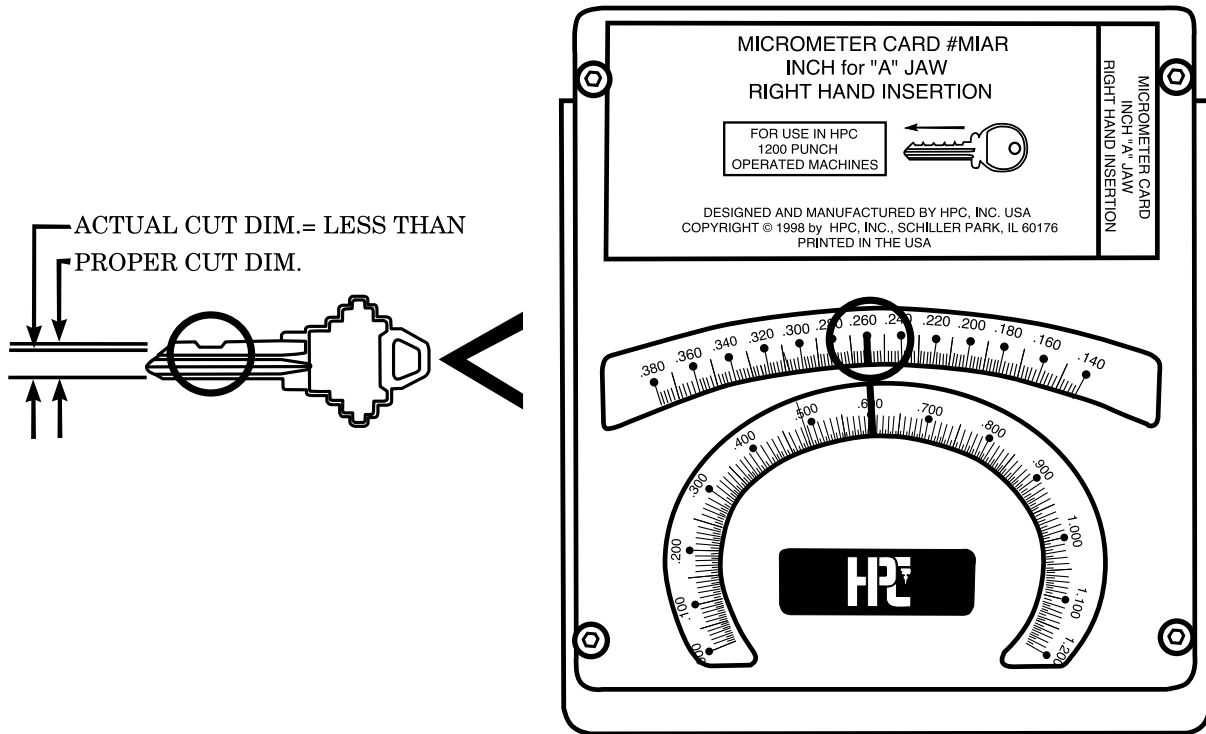


Fig. 6.4

The key may also be cut less than the proper cut dimension.

$$\begin{array}{rcl}
 \text{Example: proper cut dimension} & = & .260 \\
 \text{actual cut dimension} & = & .255 \\
 & - & .005
 \end{array}$$

The cut is less than the proper cut dimension.

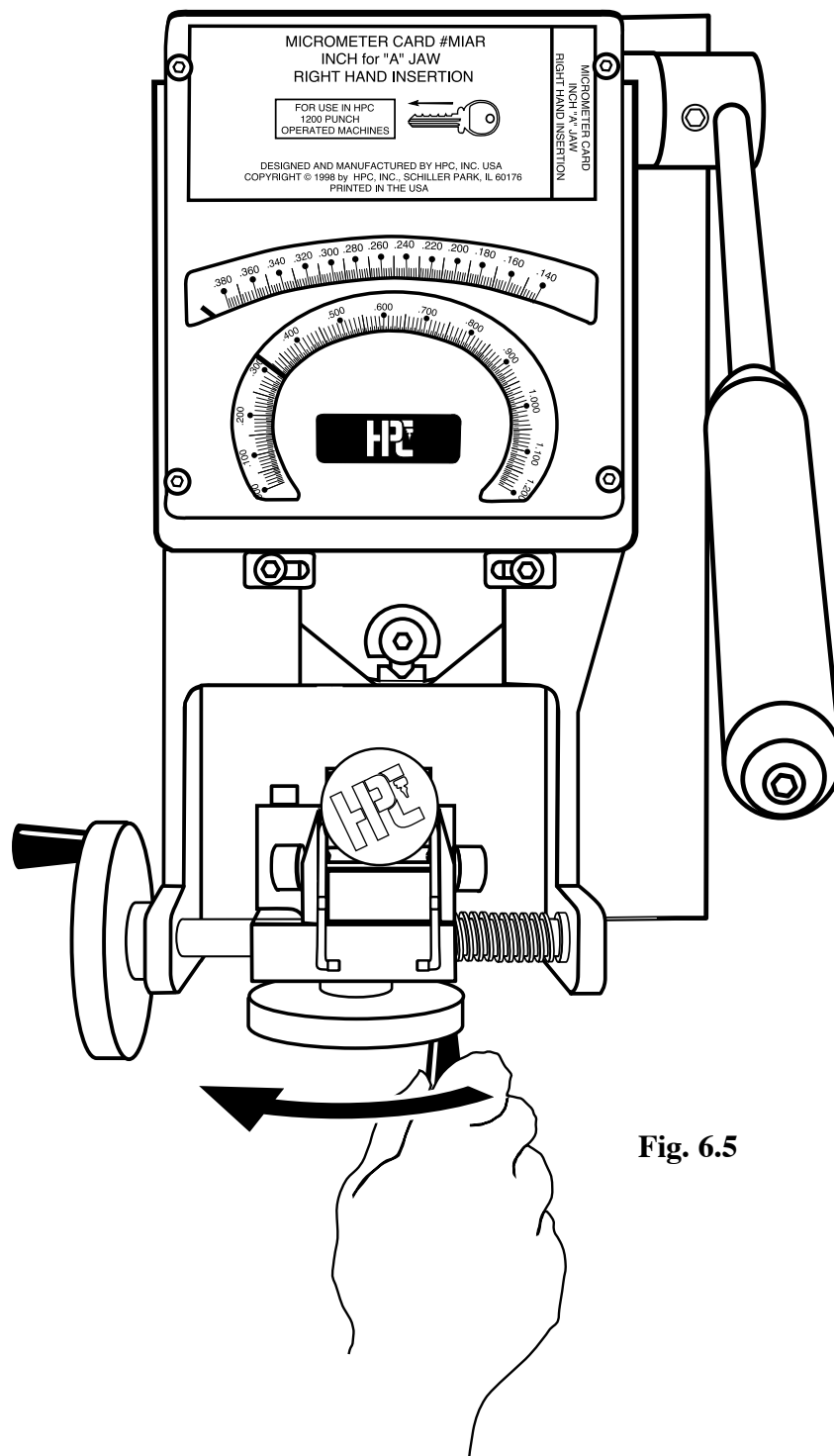


Fig. 6.5

Move the Carriage back to allow room for adjustment.

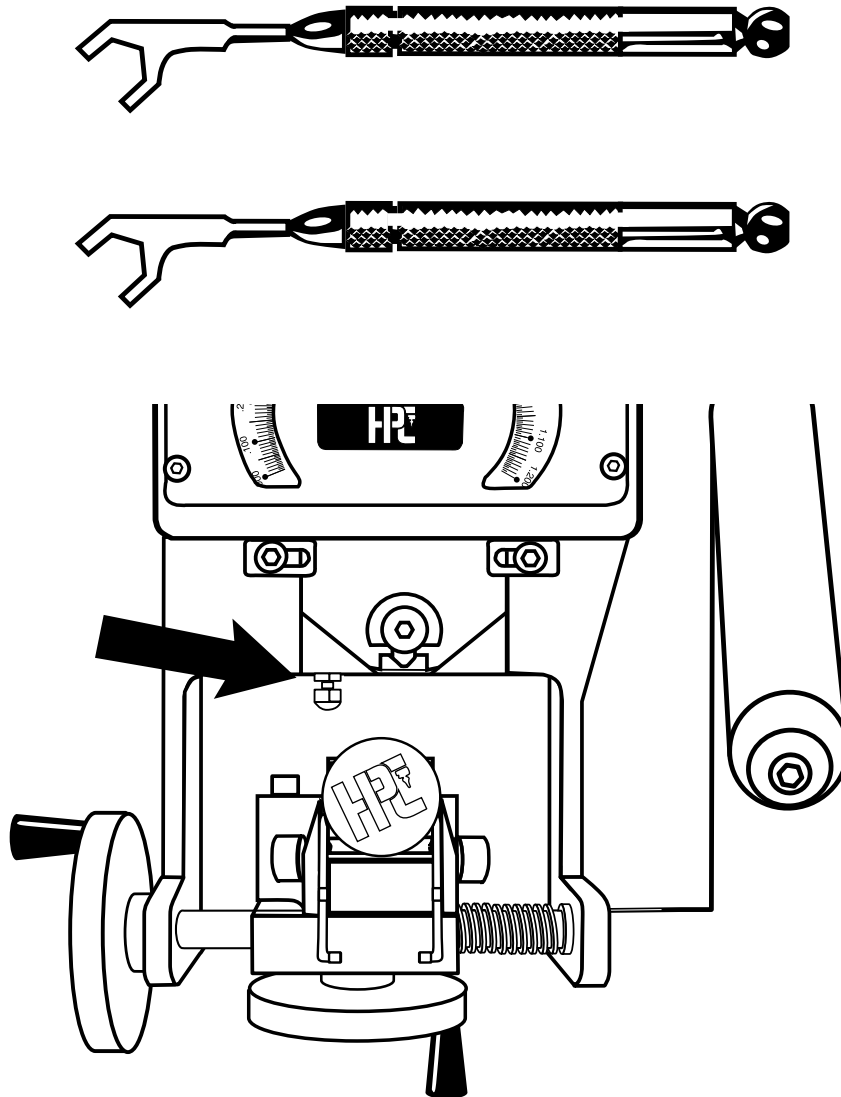


Fig. 6.6

Note Depth Plunger to be adjusted and Adjustment Wrenches to be used.

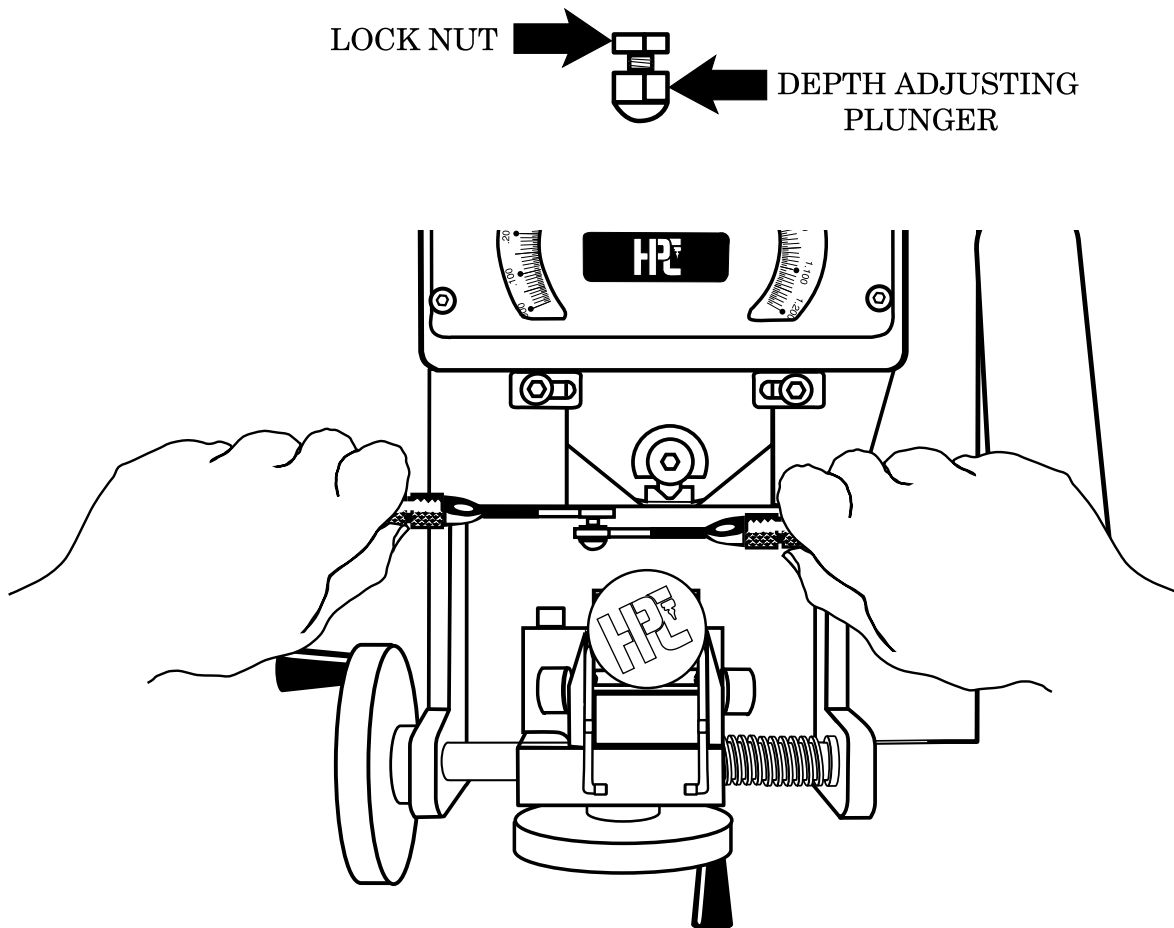


Fig. 6.7

Place the Wrenches on the Locknut and Plunger.
Note: Do not loosen or turn unless you are certain of which movements are necessary!

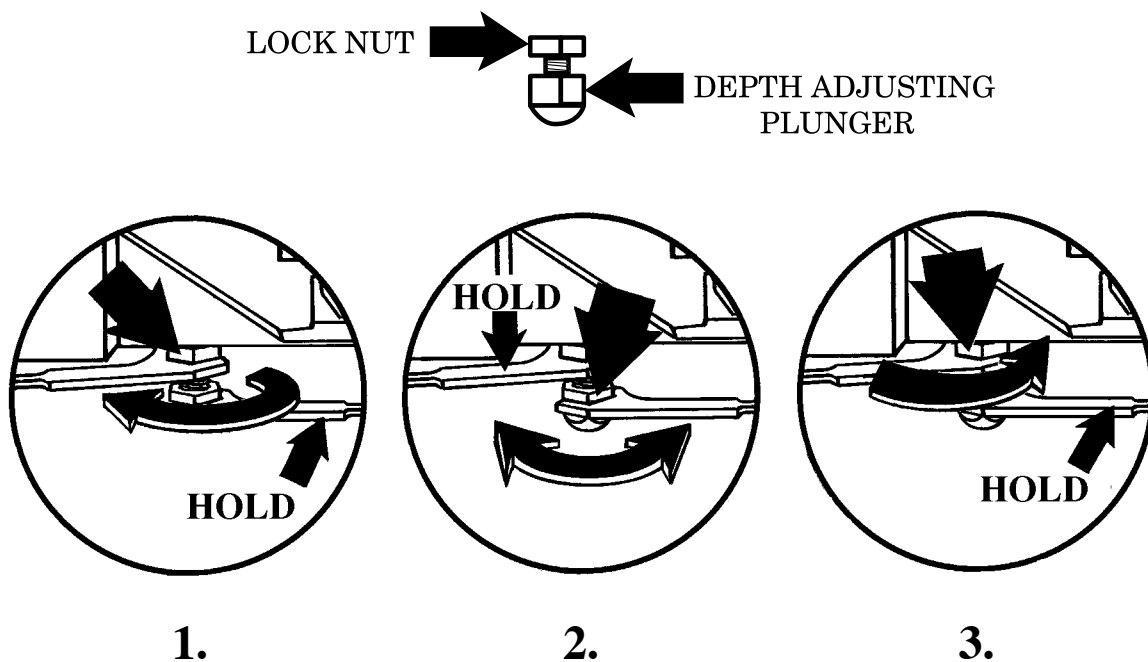


Fig. 6.8

Step 1:

Loosen the Lock Nut while holding the Depth Plunger still.

Step 2:

For a shallower cut, turn the Depth Plunger counterclockwise. For a deeper cut, turn the Depth Plunger clockwise.

Step 3:

Hold the Depth Plunger still and tighten the Lock Nut.

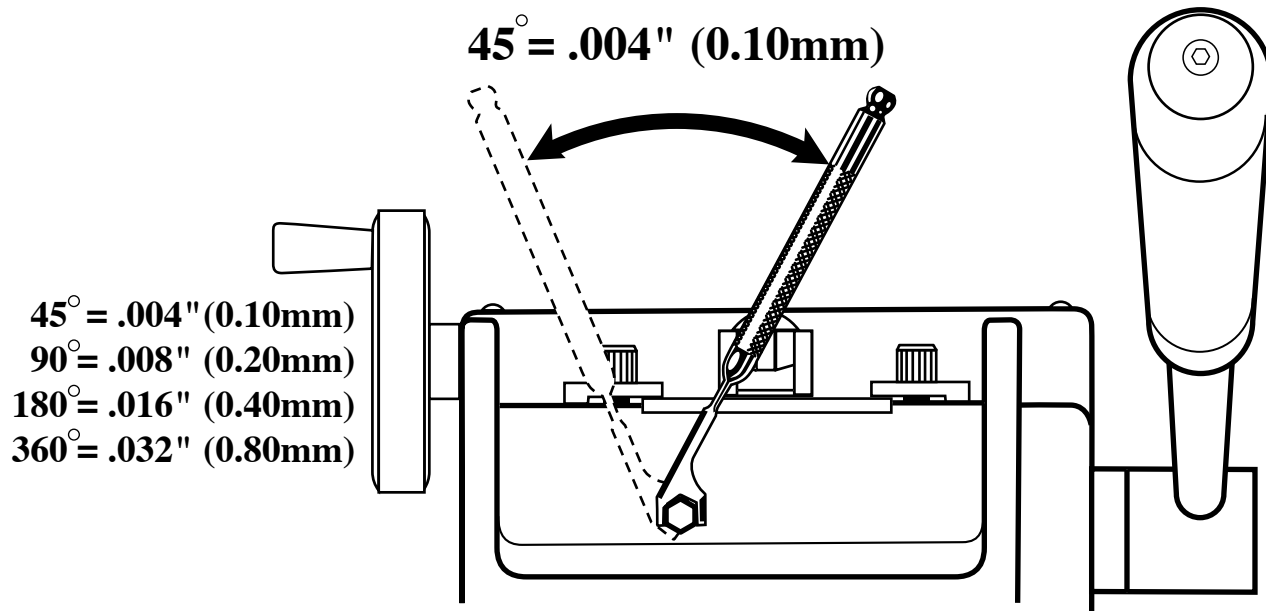


Fig. 6.9

Determine amount of movement necessary to make the appropriate adjustment.

7.0

Space Adjustment

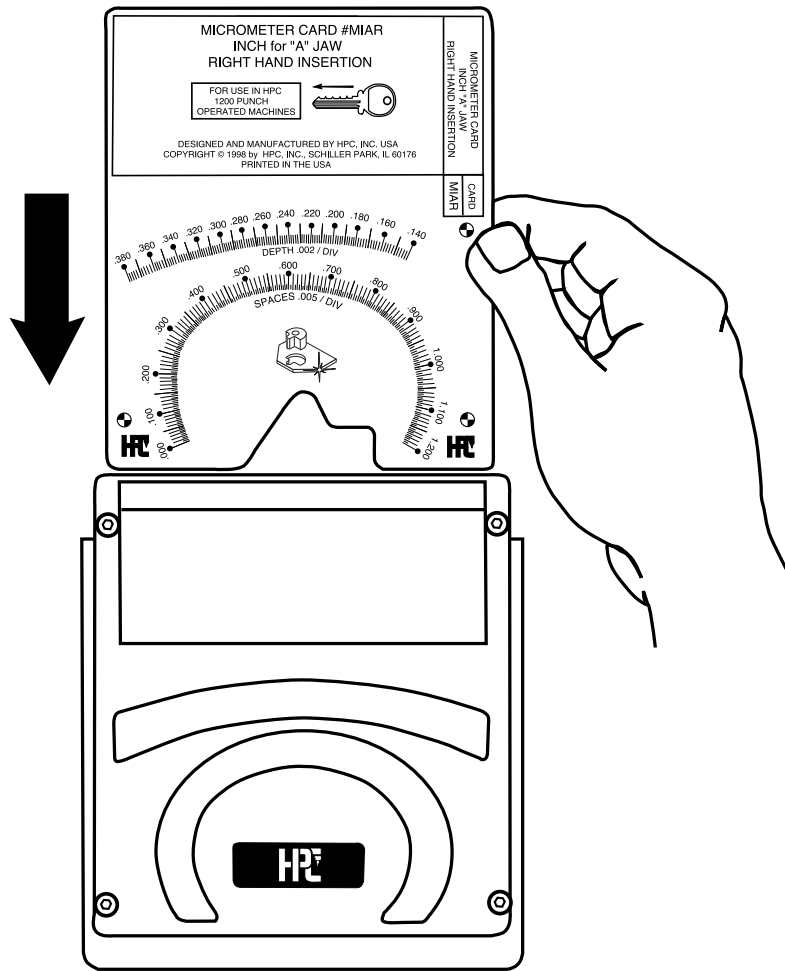


Fig. 7.1

Insert the Micrometer Card.

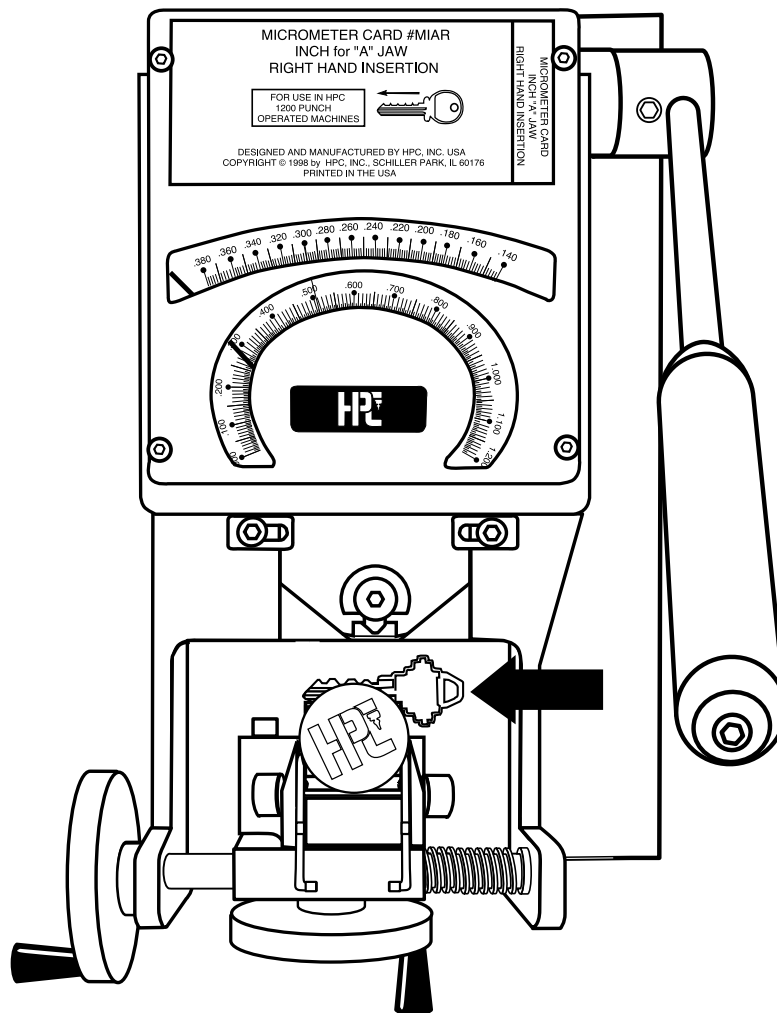


Fig. 7.2

Insert a key of known dimension (manufacturer original cut key) using the proper clamping procedure.

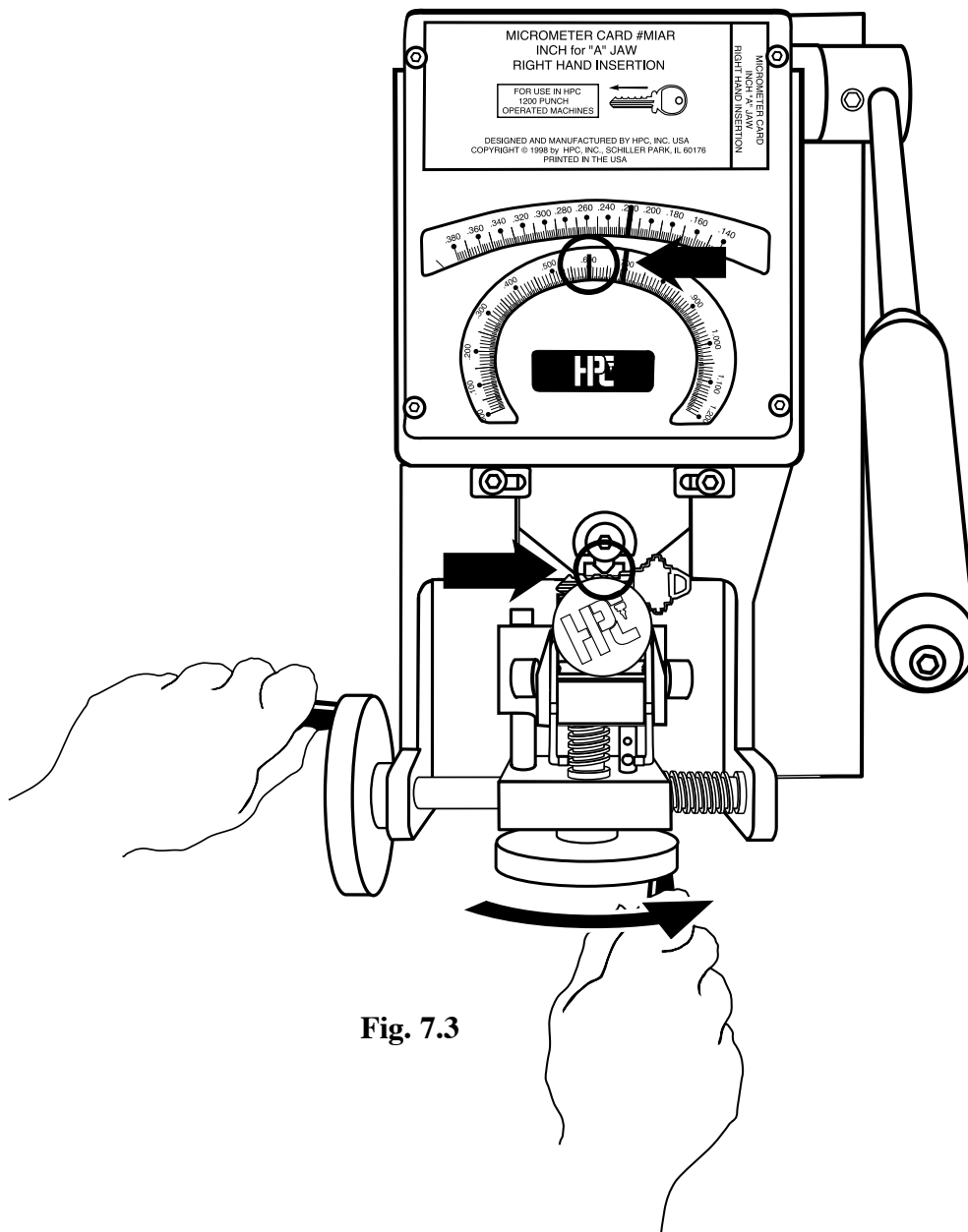


Fig. 7.3

Move the key as shown, to line up with the center of the cut, and check if the known dimension and the actual reading match. If not, proceed to Recalibration Of Space. As with any HPC product, if your machine is no longer functioning properly, please dial our toll-free number (1-800-323-3295) before attempting any adjustments to avoid further damage.



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7.2

Recalibration Of Space

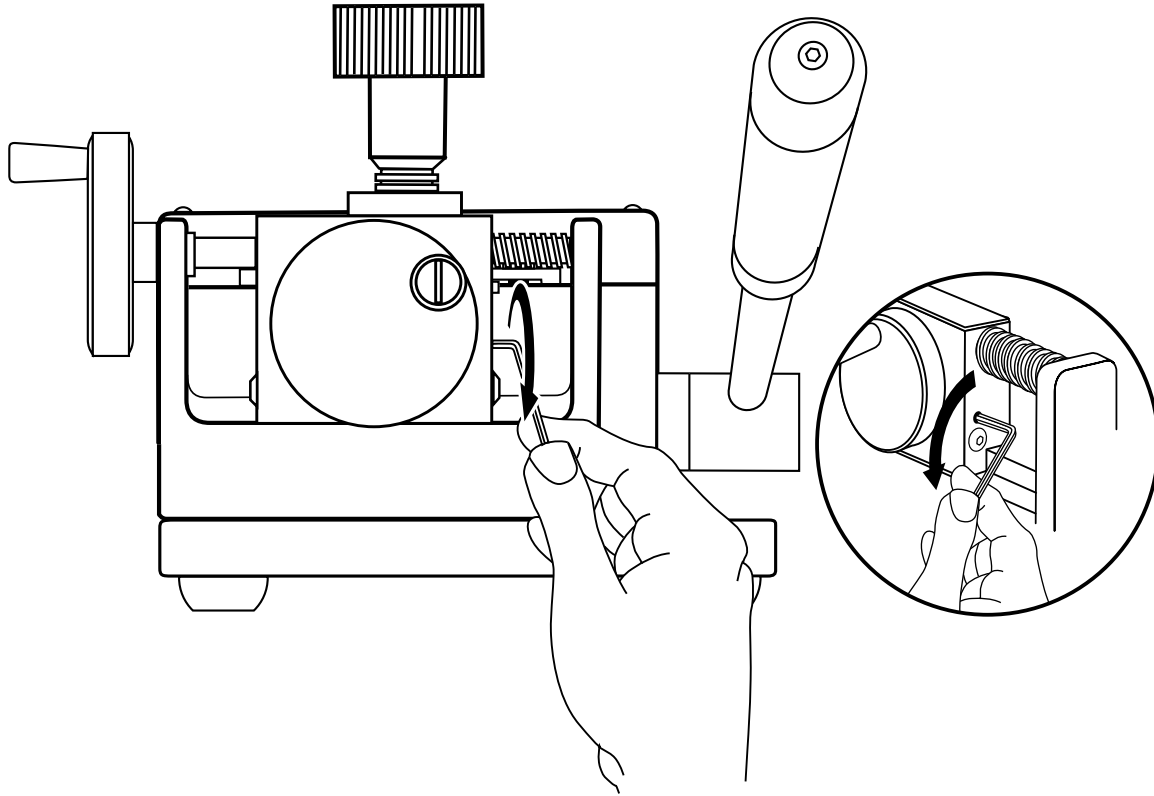


Fig. 7.2.1

Loosen the Space Adjustment Screw one-half turn (using the supplied wrench) as shown, but do not remove.

1. Insert supplied wrench into the Space Adjustment Hole.

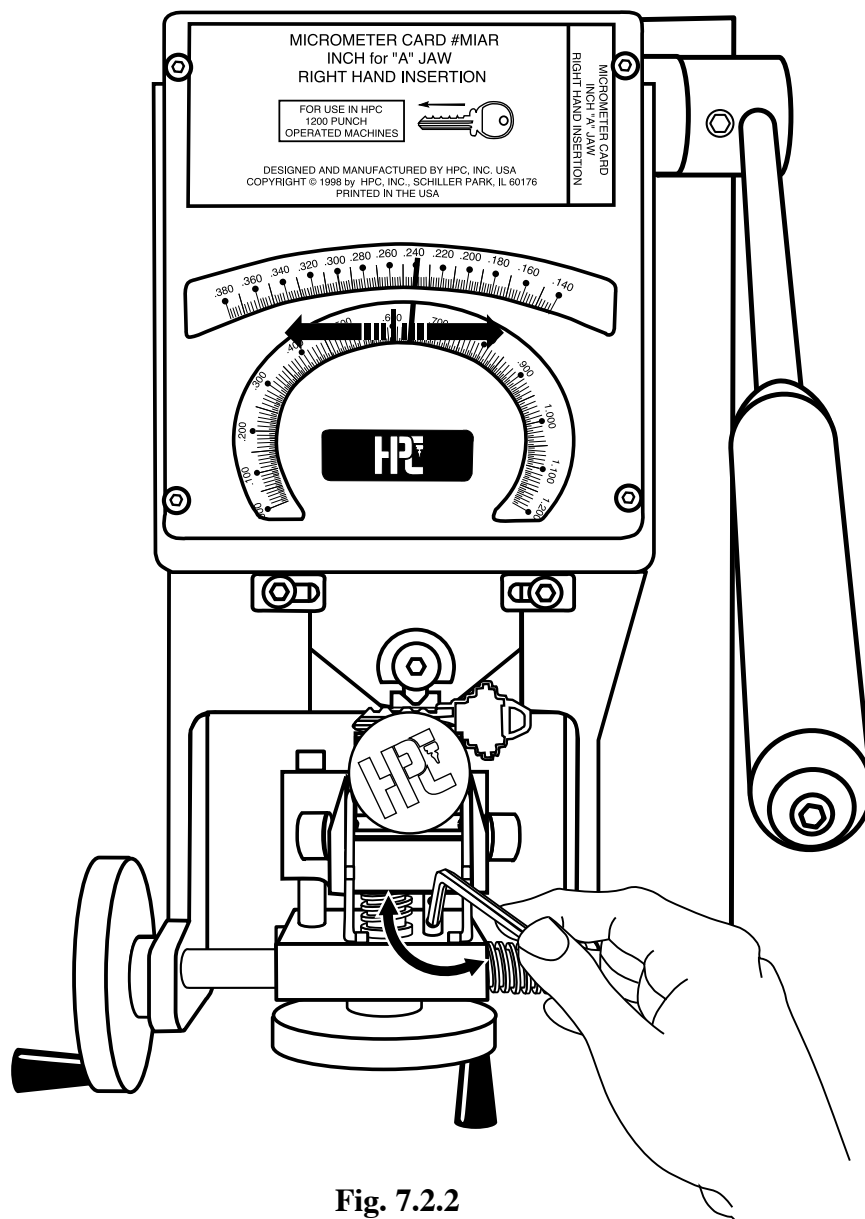


Fig. 7.2.2

2. Move the wrench as indicated to set the needle at known space dimension. Turning the shaft counterclockwise moves the Spacing Needle to the right. Turning the shaft clockwise moves the Spacing Needle to the left. Do not force beyond full left or right positions! (see page 14).

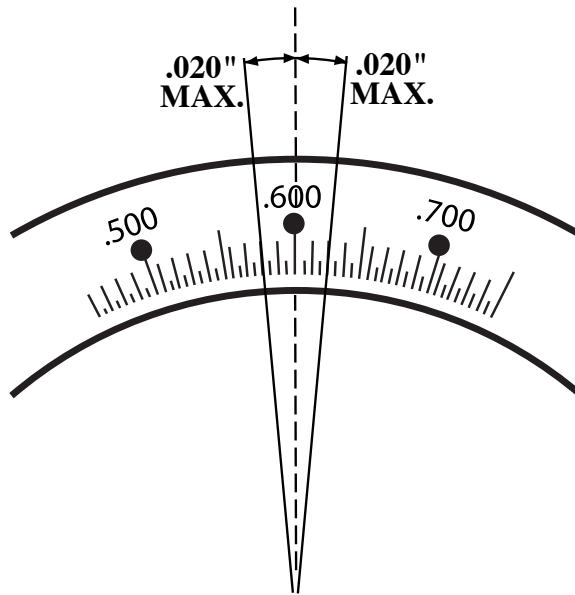


Fig. 7.2.3

Note maximum range of possible adjustment.
Any further adjustment MUST be done by
authorized factory personnel.

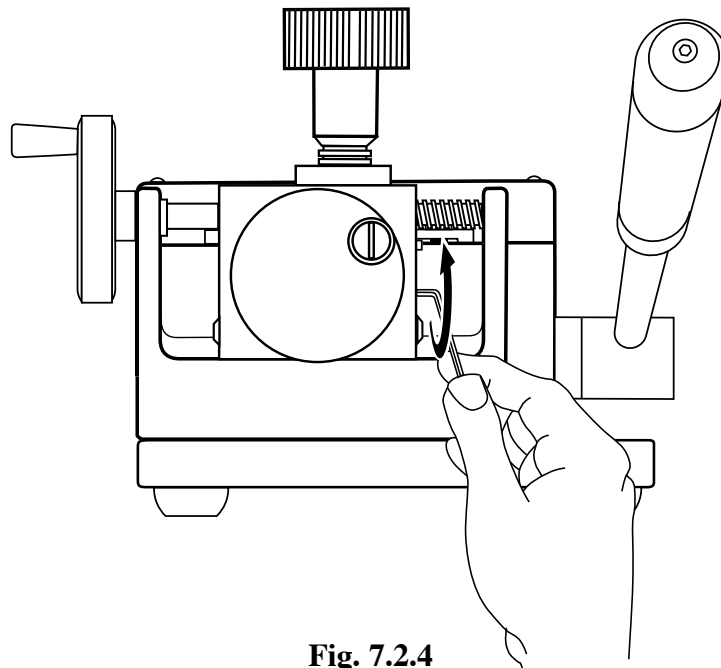
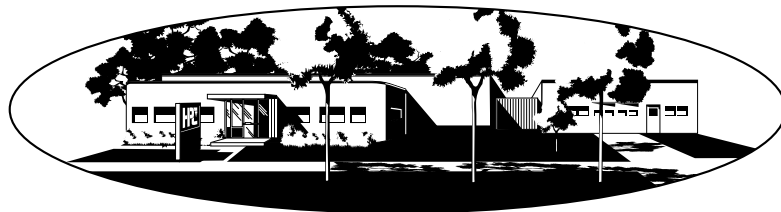


Fig. 7.2.4

After the recalibration of the needle is done,
retighten the Adjustment Screw.

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8.0

Preventive Maintenance

Preventive Maintenance, Lubrication, Repairs, and Guarantee

1. **BEARINGS AND SLIDING SURFACES** — These are to be given a light coat of a light grease at least every six months.
2. **EXPOSED STEEL SURFACES** — All remaining exposed steel shafts, cutters, etc., should be sprayed with WD-40 or equivalent light oil at least every six months. Wipe off any excess.
3. **CLEANING** — Remove all brass chips, dirt, and grit from the surface of your machine daily, with a soft bristle brush. Take particular care in keeping the jaw area clean and free of all residue build-up.
4. **CODE CARDS** — The Code Cards are made of durable card stock and die cut to extremely close tolerances. Dirt is easily washed off with a mild, non-abrasive liquid detergent, such as dishwashing soap and lukewarm water. Dab lightly with a soft cloth until dry. Never use an abrasive or solvent-based cleaner to wash these Code Cards!
5. **REPAIRS** — The preventive maintenance and recalibration of space and depth, as fully outlined on previous pages are the **ONLY REPAIRS** or **ADJUSTMENTS** suggested. Every effort has been made to thoroughly field test this machine for both permanent shop and/or service truck installations. Internal operating mechanisms, while extremely simple in function and design, are **FACTORY REPAIRABLE ONLY**. Do not incur additional repair charges by attempting to fix the machine yourself.

HPC SERVICE DEPARTMENT: 1-800-323-3295

8. **GUARANTEE** — The Punch Machine™ is fully guaranteed for one year from the date of purchase, against factory defects in material and workmanship. Mail the Warranty Card immediately, to validate your guarantee. Should your machine require factory repairs, it should be packed securely, along with a letter clearly stating the nature of the problem, and returned to the factory.

During the one year warranty period, you will be billed for handling and shipping only. Neither HPC, Inc. nor HPC distributors have “loaner machines” available.



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9.0

Exploded View and Parts List

1200PCH Parts List

#	Description	Stock #
1.	Card Lens	PCH-2001A
2.	Screws-Lens	PCH 2002
3.	Punch Handle	PCH-ARM ASSY
4.	Punch Handle Mounting Screw	CM-50185
5.	Screw-Punch	PCH-2011
6.& 7.	Punch & Die Set	Sold Separately
8.	Screws-Clamp	PCH-2013
9.	Clamp-Die Plate	PCH-2014
10.	Spring-Clamp	PCH-2015
11.	Easy Grip Wing Nut	EGN-1
12.	Ball Bearing Washer	BBW-2
13.	Top Jaw	PCH-TJAW
14.	Spring- Jaw	PCH-2017
15.	Bottom Jaw	PCH-BJAW
16.	Screw- Jaw	PCH-201
17.	Stud- Jaw	CM 8-1019MA
18.	Gauge Knob	PCH-2021
19.	Screw-Gauge Knob	PCH-2022
20.	Gauge-RH	PCH-2025
21.	Gauge-LH	PCH-2026
22.	Screw-Gauge Rest	PCH-2027
23.	Ball- Main Block	PCH-2036
24.	Screw-Ball Adjustment	PCH-2037
25.	Washer-Crank	PCH-2041
26.	Crank	PCH-2042
27.	Screw-Crank	PCH-2043
28.	Handle-Crank	CM-1046
29.	Snap Ring-Lateral Shaft	PCH-2034
30.	Rubber Foot	CM-50133MA
31.	Screw	CM-50134
32.	Plunger Stud	PCH-2059
33.	Plunger Nut	PCH-2060
34.	Pin-Plunger	PCH-2061



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Exploded Parts View

