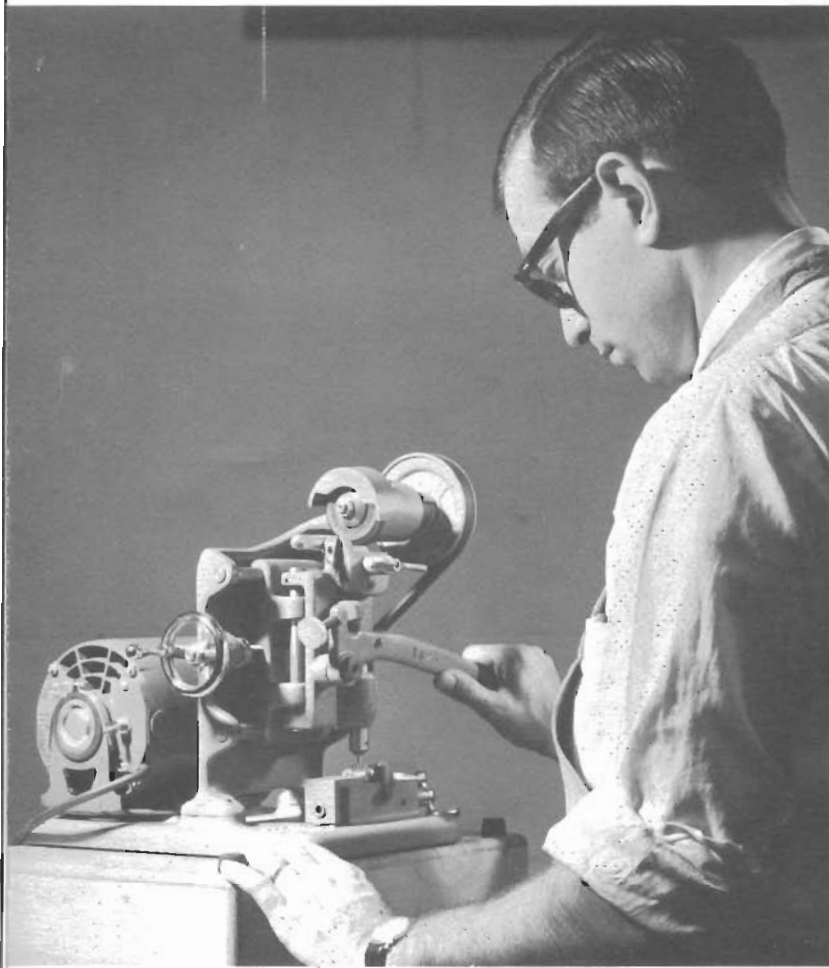


OPERATING INSTRUCTIONS



S&S
first key
machine

Patented

**MAKES AN ORIGINAL KEY
FOR LOCK CYLINDER WHEN
NO OTHER KEY IS AVAILABLE**

S&S KEY *Company*

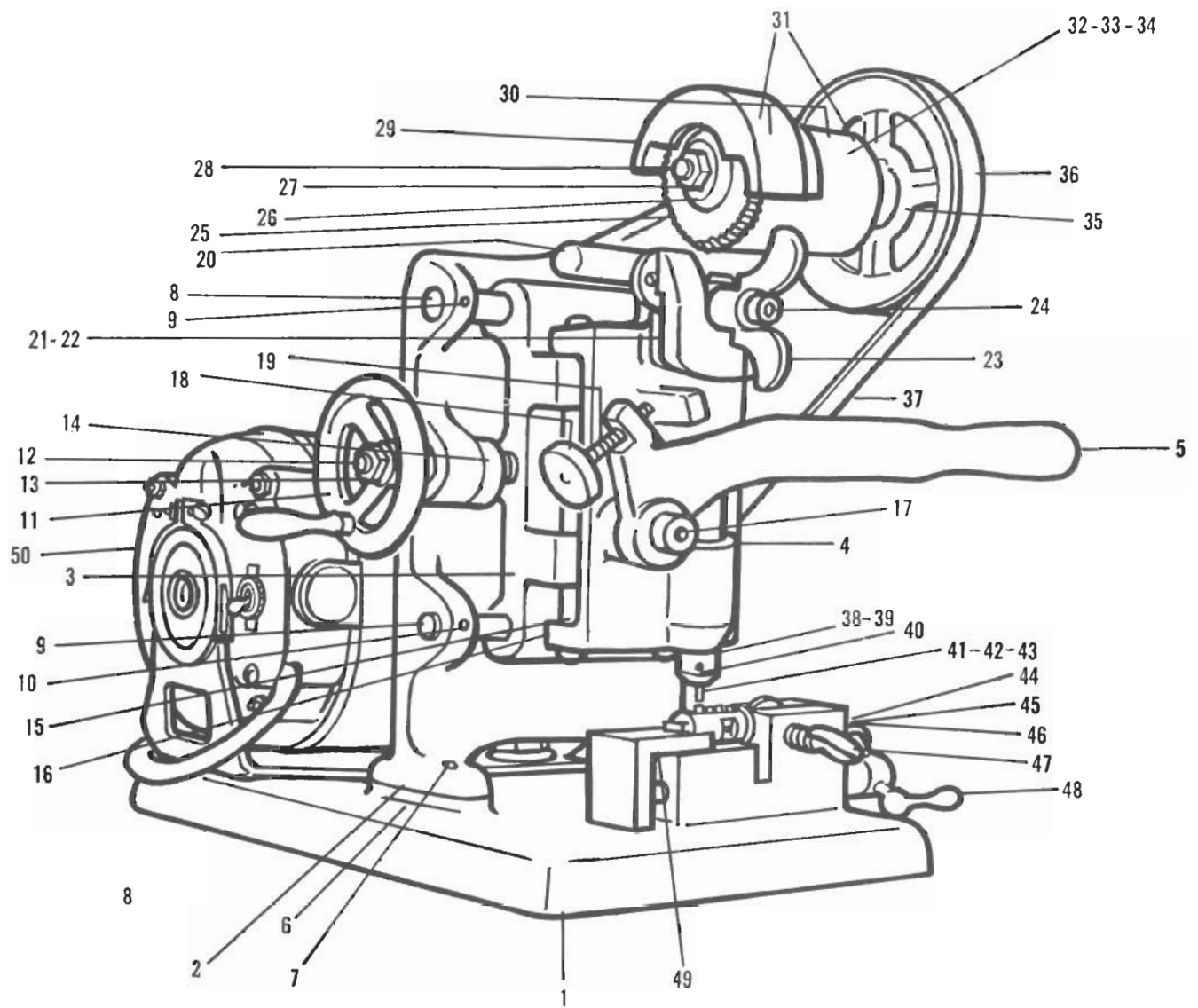


S & S KEY COMPANY

**2611 SOUTH 21st AVENUE
BROADVIEW, ILLINOIS 60153**

IND, WIS, MICH, IOWA
OHIO, MINN, KY, MO
800/323-0727

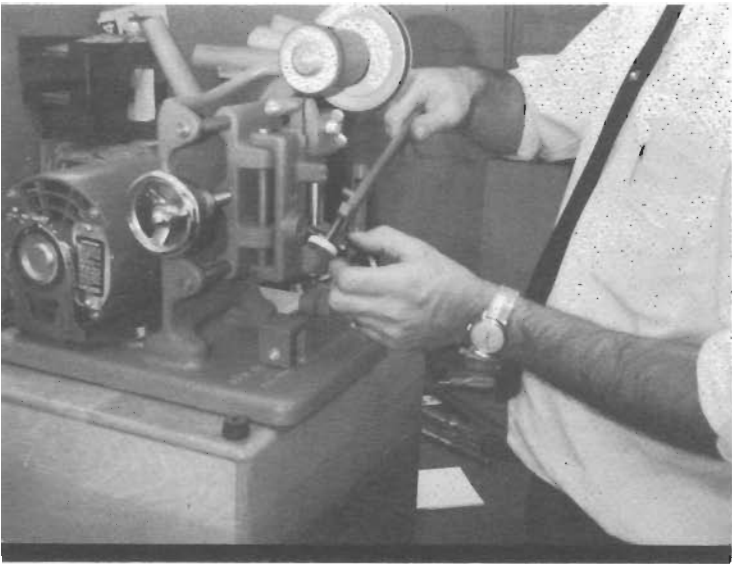
ILLINOIS CUSTOMERS
CALL COLLECT
312/681-2900



PARTS IDENTIFICATION

- | | | |
|---------------------------------------|--------------------------------------|------------------------------------|
| 1. Base | 17. Allen axle cutting arm | 34. Spacing sleeve small |
| 2. Upright back | 18. Depth adjustment screw | 35. Nut for shaft pulley |
| 3. Spacing carriage | 19. Depth adjustment screw spring | 36. Shaft pulley |
| 4. Depth cutting carriage | 20. Key guide assembly | 37. V Belt |
| 5. Cutting arm | 21. Key clamp | 38. Indicator pin guide |
| 6. Dowel pins (2 regular) | 22. Key clamp spring | 39. Indicator pin guide spring |
| 7. Base screws (4 regular) | 23. Wing nut for key clamp | 40. Indicator pin set screw |
| 8. Motor screws (4 regular) | 24. Wing nut screw clamp | 41. Indicator pin short |
| 9. Shaft spacing carriage (2 regular) | 25. Cutter | 42. Indicator pin long |
| 10. Shaft set screws (2 regular) | 26. Cutter washer (2 regular) | 43. Indicator pin .050 |
| 11. Crank spacing carriage | 27. Cutter locking nut | 44. Spring stop |
| 12. Screw for spacing carriage | 28. Cutter shaft | 45. Spring |
| 13. Crank nut | 29. Guard for cutter | 46. Spring stop screw |
| 14. Collar and set screw | 30. Guard screws (2 regular) | 47. Wing nut |
| 15. Shaft depth carriage (2 regular) | 31. Allen set screws (2 regular) | 48. Crank and shaft cylinder clamp |
| 16. Shaft set screw (2 regular) | 32. Roller ball bearings (2 regular) | 49. Cylinder clamp |
| | 33. Spacing sleeve large | 50. Motor |

UNCRATING & MOUNTING ARM



1. Unscrew 4 lag screws from sides of box
2. Lift off lid
3. Unscrew 4 machine screws from underside of base.

MOUNTING ARM

1. Remove Allen screw and washer from arm socket
2. Noting picture, insert Allen Axle screw thru arm, add washer behind it.
3. Tighten Allen screw making sure stem on back of arm rests on top of shaft holding the guide pin.

INSTRUCTIONS FOR FITTING FIRST KEY TO PIN TUMBLER CYLINDER

1. Two blank keys of the same key manufacture must be used that fit core. Insert one key blank in upper vise either using lower shoulder of key blank against key vise block or upper shoulder with guide stop and tighten vise (see Fig. 1 and 2).
2. Insert key blank in cylinder core with all pins in place. (Fig. 3) Place core, key blank and pins on lower vise base pushing down and against side of vise with spring tension against blank head. (Fig. 4)
3. Tighten set screw against head or bow of key blank. Tighten end clamp snug to core (see Fig. 4).

FIG. 1

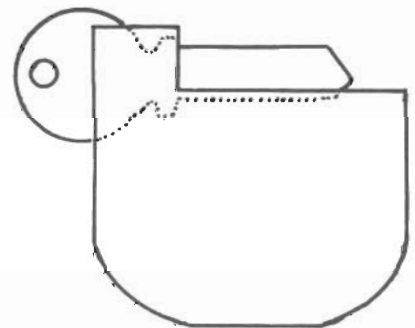
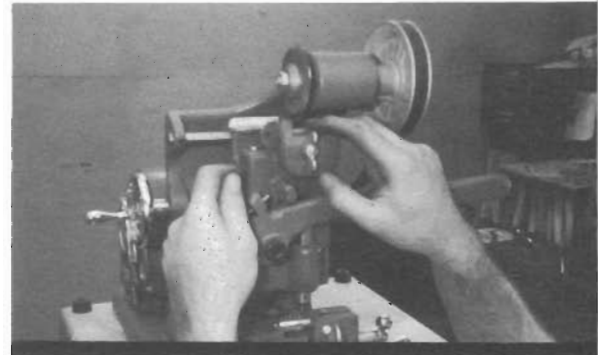


FIG. 2

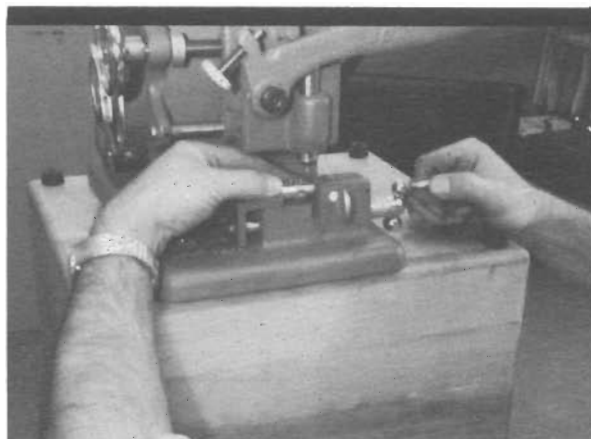


FIG. 4

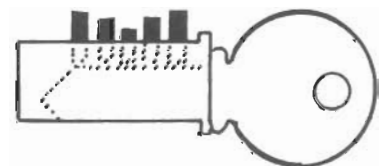
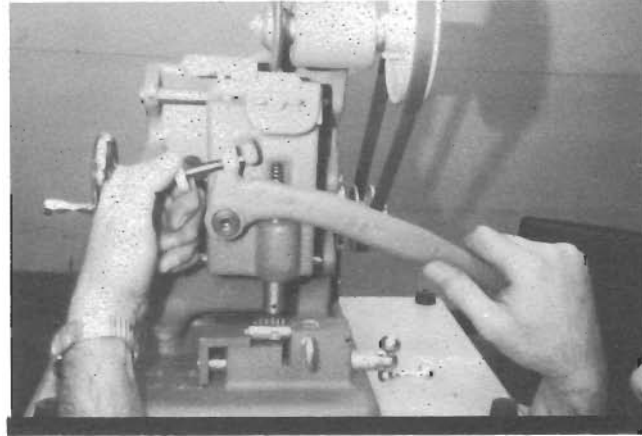


FIG. 3

FIG. 5



4. Screw in depth adjusting screw on arm. (Fig. 5) Remove any one pin from cylinder. Move carriage over with crank until guide pin is next to hole on core. NEVER ALLOW GUIDE PIN TO ENTER HOLE IN CORE (see Fig. 6).
5. Start motor. Depress cutting arm, until guide pin rests on cylinder core along side of pinhole (see Fig. 6).
6. Unscrew adjusting screw on arm until cutter barely touches key blank (see note #1). - Fig. 5
7. Your machine is now adjusted to the core and need not be adjusted again for use on cores of the same manufacture.
8. Re-insert pin in core, move carriage so that guide pin is directly over the cylinder pin, depress arm and make the first cut (see Fig. 7) ALWAYS RAISE CUTTING ARM BEFORE MOVING SPACING CARRIAGE. Continue cutting rest of cuts.
9. Where core has been hand filed on a slant instead of straight across, take highest point for initial setting of depth and as you move carriage from one pin to next, back off adjusting screw and with practice you will be able to judge within thousands of a inch the proper way of adjusting. (see note #1)

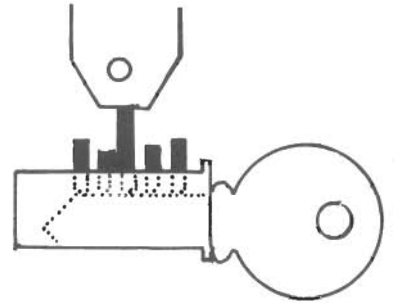
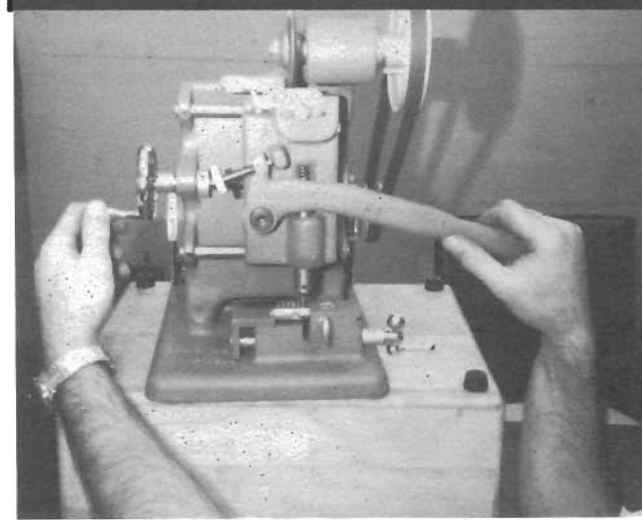


FIG. 6

FIG. 7



Note #1

One complete turn of depth adjustment screw equals .0312 in depth

1/2 turn of depth adjustment screw equals .0156 in depth

1/4 turn of depth adjustment screw equals .0078 in depth

1/8 turn of depth adjustment screw equals .0039 in depth

INSTRUCTIONS FOR MAKING FIRST KEYS FOR DOUBLE SIDED CYLINDERS

**TWO GATE KEYS ARE USED FOR EACH TYPE OF CYLINDER KEYWAY.
THESE GATE KEYS CAN ALWAYS BE USED AND NEVER DISCARDED.**

TO MAKE GATE KEYS

Two keys of the same manufacture of key blanks must be used. One of these gate keys is cut down on one side only so that it may enter the lock cylinder snugly, not loosely; (Fig. 10) the other gate key must be cut on other side of keyway (see Fig. 8 and 9)

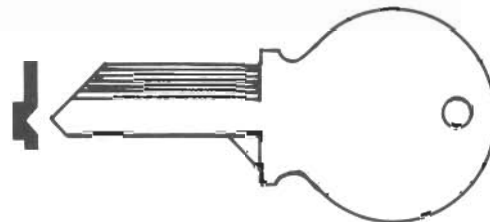


FIG. 8

TO MAKE FIRST DOUBLE SIDED KEY

1. Remove the large indicator pin and replace with small one. Install Fig. 8 gate key into cylinder so that tumblers protrude out of cylinder (see Fig. 10).
2. Place both gate key and cylinder onto lower vise with tumblers up pressing down and against side of vise. Tighten thumb on bow of key blank and end clamp against end of cylinder.
3. The key blank that is to be cut must be installed in the upper vise using reverse side of that in the lower vise. Place key blank in upper vise either using top guide or lower vise stop guide (see Fig. 11) and tighten vise.
4. Move spacing carriage with crank so that indicator pin is on barrel of cylinder to the right of tumblers protruding from cylinder (see Fig. 10).
5. Screw in depth screw, start motor, depress cutting arm and unscrew depth screw until cutter touches key blank in upper vise.
6. Raise cutting arm and move spacing carriage over so that indicator pin is directly over the first tumbler from shoulder of key.
7. Depress cutting arm and make first cut. Release arm, move carriage to second tumbler and depress arm. Continue until all cuts are made on this side of key.

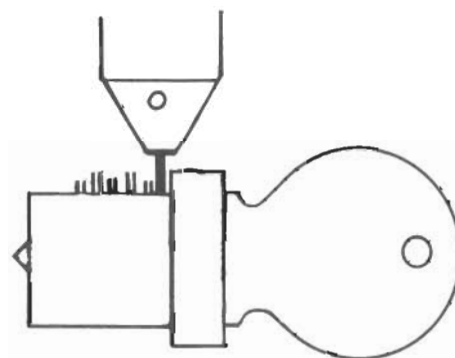


FIG. 10

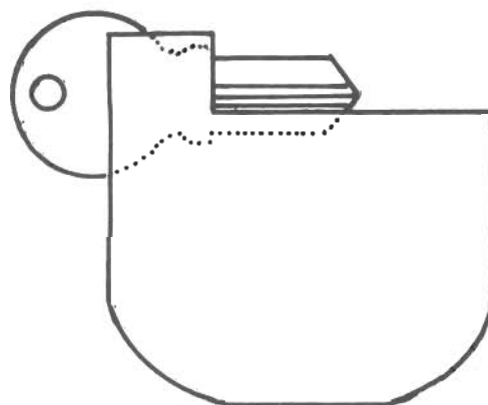


FIG. 11

8. Remove cylinder and gate key from lower vise and replace Fig. 8 gate key with Fig. 9 gate key (see Fig. 10). Place cylinder with Fig. 9 gate key in lower vise as before.
9. Remove key from upper vise and turn it over to uncut side (see Fig. 11) and place into upper vise.
10. Now cut this second side of the key following same method as above. (Note: The keyway on some cylinders have very loose tolerances and key can be cut deeper by unscrewing depth screw one-quarter turn or .0078. If key does not enter lock after being cut, file off the end of key cut (see Fig. 12). (see note #1)

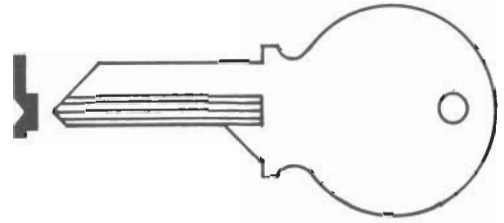


FIG. 9

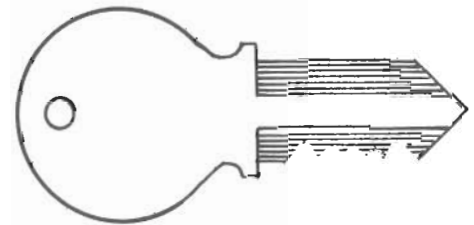


FIG. 11

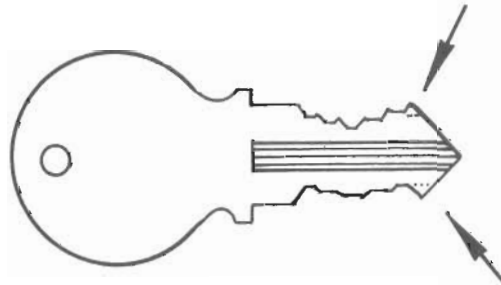


FIG. 12

MACHINE IS FACTORY ADJUSTED AND NO FURTHER ADJUSTMENT IS NEEDED





JANUARY, 1976

FIRST KEY MACHINE

MODEL FKM II

S U P P L E M E N T A L I N S T R U C T I O N S

THIS MACHINE IS FACTORY ADJUSTED, . . . NO FURTHER ADJUSTMENTS REQUIRED

GUIDE PIN (FORMALLY PARTS 41, 42, 43) NOW ONE UNIT FOR PIN TUMBLER, AND REVERSE FOR WAFER/DISC TUMBLER

MACHINE IS SHIPPED WITH PIN TUMBLER GUIDE IN PLACE.

TO CHANGE OR REVERSE (FOR DISC/WAFER TUMBLER LOCKS)

- A. CRANK CARRIAGE TO RIGHT
- B. LOOSEN SET SCREW IN GUIDE PIN HOLDER (PART 38)
- C. REMOVE GUIDE PIN DIRECTLY DOWN
- D. REVERSE - REINSERT DIRECTLY UP TO DEAD STOP
- E. TIGHTEN SET SCREW
- F. DISTANCE BETWEEN CYLINDER BASE AND BOTTOM TIP OF PIN SHOULD BE APPROXIMATELY ONE INCH.

(SHOULD AN ADJUSTMENT BE NECESSARY, THE ADJUSTMENT SET SCREW IS FOUND ON THE TOP RIGHT HAND SIDE OF THE DEPTH CUTTING CARRIAGE (PART 4) WHEN THE CARRIAGE IS COMPLETELY TO THE LEFT. SIMPLY RAISE OR LOWER THE CARRIAGE ASSEMBLY WITH THIS SCREW.)

CHANGING CUTTERS

- A. REMOVE HEX NUT, WASHER AND CUTTER.
- B. REPLACE NEW CUTTER - TEETH FACING DOWN
- C. REPLACE WASHER AND BOLT. TIGHTEN.

ALIGNMENT (SHOULD THE SHAFT ASSEMBLY VARY)

- A. CRANK CARRIAGE TO RIGHT - DEAD STOP
- B. PLACE GUIDE KEY IN TOP VISE WITH SHOULDER GUIDE
- C. LOOSEN TWO SET SCREWS ON TOP (PART 31)
- D. SHIFT SHAFT ASSEMBLY RIGHT OR LEFT SO THAT THE CUT GUIDE KEY ALIGNS PERFECTLY WITH CUTTER.
- E. TIGHTEN TWO SET SCREWS (PART 31)