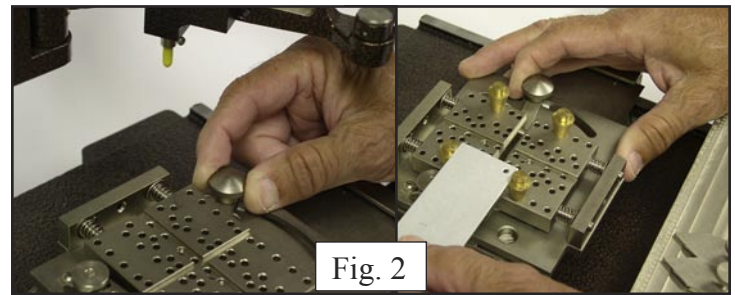
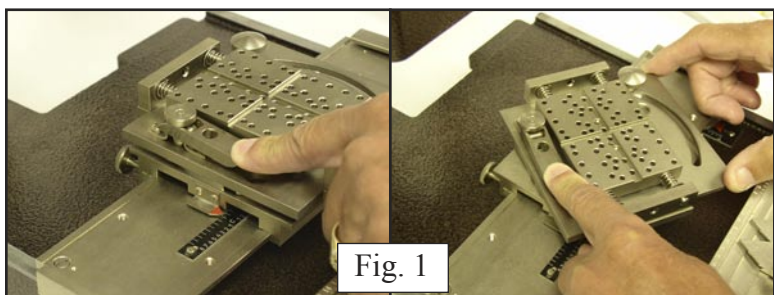


**USER INSTRUCTIONS FOR MODEL 157.50
ENGRAVING MACHINE**

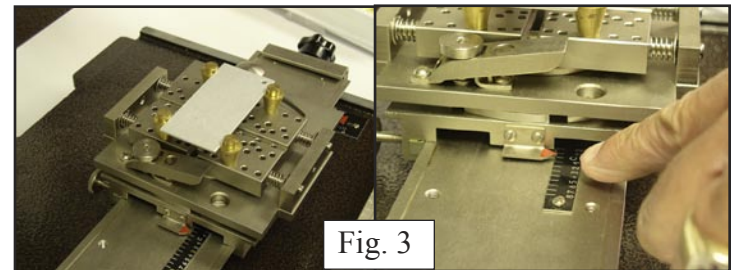
PEPETOOLS two-dimensional pantograph engraving machine is equipped with a tracing stylus and a diamond tip-engraving stylus. Letters can be engraved on jewelry up to ¼” tall and as small as 3/32” tall. Actual letter size on the 1 ¼” blanks is 5/8”. The size of the engraved letter is set by setting the ratio numbers on the pantograph arms. The setting of 2 ½ is the largest letter and 6 is the smallest. Please note that the setting on both of the pantograph arms must be the same in order for the letters to be the same.

The engraving machine has several adjustments.

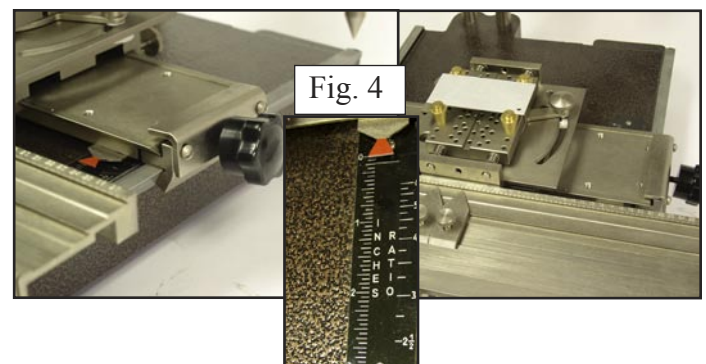
1. The machine is adjustable to accommodate articles of varying heights. The pantograph arms slide up and down on the two vertical posts and held in position by the large knob on the pantograph arms yoke.
2. The font holding table can also be adjusted to accommodate the height of the pantograph arms. The font table is held in place with the two knobs on either end of the table.
3. The article-holding table is the one with all the holes on the surface. The holes provide positioning for the article holding pins. By depressing the lever shown in *Fig. 1*, the table is released from its locked position and able to turn 360° and can lock at every 45° increment. The best or normal position for the table is with the unlocking lever on the left side of the machine.



5. The article holding table can also be adjusted either left or right of center. To move the table, loosen the two small locking knobs on the rear of the table. The red pointer on the left side of the table is used for reference location points when engraving the same article various times. The “C” is to center the table in the center of the engraving machine *Fig. 3* which is always the starting position.

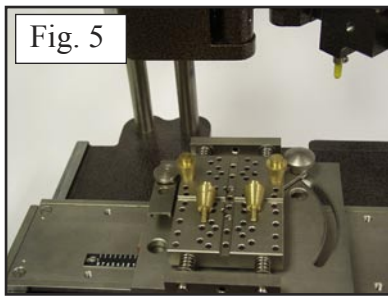


6. The article-holding table can also be moved up or down which is also forward or back on the bed of the machine. To move the table, loosen the knob on the right side of the table *Fig 4*. The scale on the bed of the machine is a reference as to the selected ratio. The red pointer is lined up with the selected ratio number. If you have selected ratio 4 as the size of letter, then the center of the diamond will be in or close to the center of the article. This is providing the tracing stylus is in the center of the font table right above the small hole in the center of the table, and that the article is mounted in the center of the article-holding table and that the article table is in the center position “C”.



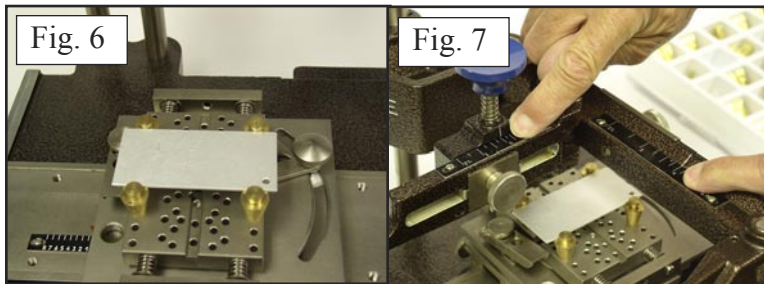
4. The article-holding table is able to open in order to accept the article to be engraved. To open the table, loosen the knob on the lever on the right side of the table *Fig. 2* and pull the lever down to open. Once the article is in place, push the lever up tight and tighten the knob. **Be sure to never totally unscrew or remove this knob.**

7. The brass pins are used to hold the article to be engraved in position on the table with all the holes. **Fig. 5** The two brass pins with the flat surface are for support when engraving a large flat thin plate.



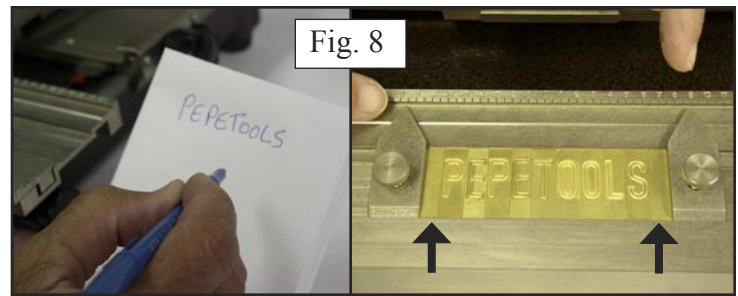
ENGRAVING

8. To begin engraving, place the article onto the article-holding table. Hold the article in place using the brass pins. **Fig. 6**. Try to place the article as close to the center of the table as possible. The configuration of some article may be difficult to hold with the brass pins, if so, consider the holding assortment No. 157.401. **Fig.16**

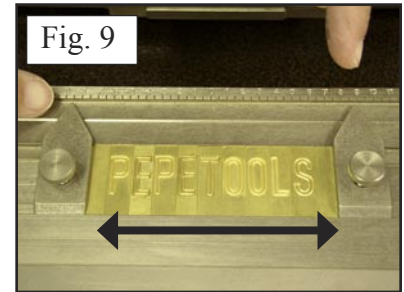


9. Select the size of letter you wish to engrave by aligning the ratio numbers with the left and right ratio arms. **Fig. 7**. Please note that your first attempt at engraving should be to engrave a practice plate with all the sizes of letters the machine will engrave. Start with size 2 ½ and engrave letters all the way down to ratio 6. Not only will this give you the desired practice but you will also know what size letters will fit where.

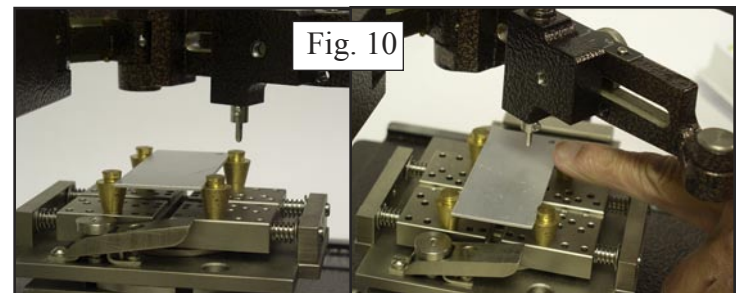
10. Write on paper the name or message needed to be engraved. This will help you not make errors in the spelling. Select the letters and place them on the font-holding table. Be sure to use the blank spacers at the beginning and end of the name or word. **Fig. 8**



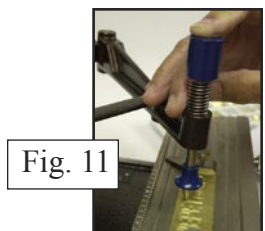
11. Center the letters on the font table using the pointers at the left and right ends of the letters. The numbers at the top of the font table will help you center the letters. **Fig. 9** Tighten the font table with the letters in place by using the three knobs at the front of the table. A helpful hint is the grasp the table with either your left or right hand and squeeze tight while tightening the knobs. The letters cannot be loose in the table, they must not be able to move left or right nor up or down. Never use pliers to tighten the knobs.



12. Adjust the up/down position of the pantograph arms so that the diamond tip be approximately ¼" above the article you are engraving. The diamond tip must also NOT hit the holding pins. **Fig. 10**



13. Adjust the font-holding table either up or down. Be certain that the tracing stylus point will comfortably reach the grooves of the letters and that there is ample room for you to hold the stylus. **Fig. 11**



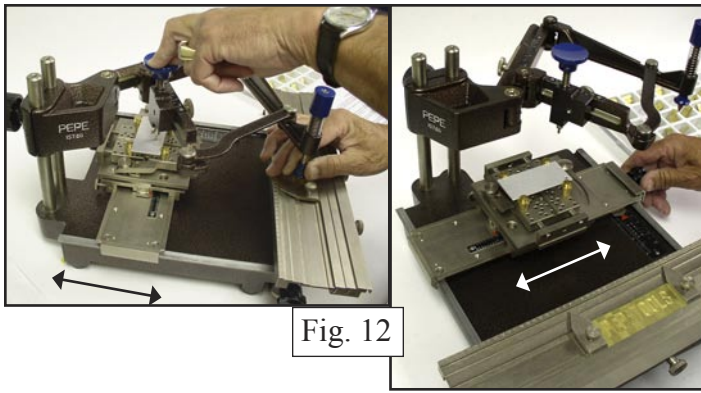


Fig. 12

14. Adjust the article-holding table by moving the table left or right and up or down. ***Fig. 12***

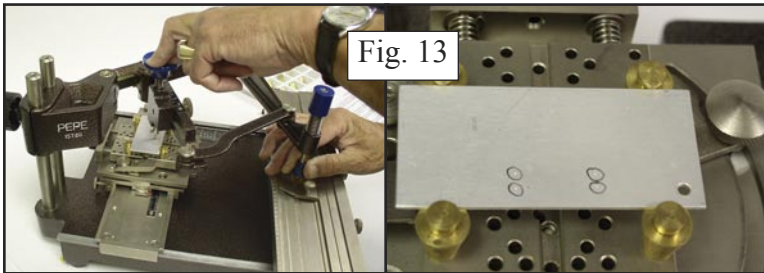


Fig. 13

15. To move the table to the exact position where you want to start the first letter, place the tracing stylus in the groove of the first letter at the upper extreme left side, which would be the very beginning of the letter. Bring the engraving stylus down and touch the surface of the article. This will leave a very tiny mark, which indicates the beginning of the letter. Move the tracing stylus to the bottom of the letter and make another mark. This indicated the height of the letter. Move the tracing stylus to the end of the word or name and repeat the marking process. With these marks, you will know the beginning, end and height of the word or name. If the dots are not in the position you want them to be, move the table accordingly. ***Fig. 13***

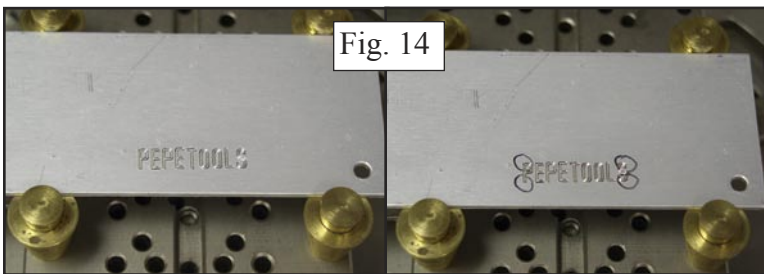


Fig. 14

16. Once you are sure all the adjustments have been made, place the tracing stylus in the first letter and bring the diamond stylus down to engage the article. Apply a small amount of pressure and trace the letter. Release the diamond stylus first before moving the tracing stylus out of the groove of the letter. Failure to release the diamond tip first will result in unwanted scratches and marks on the article. It is wise to apply only a small amount of pressure to the diamond stylus. Excessive pressure will result in distorted letters. The letters can be retraced if not enough pressure was applied. ***Fig. 14***

HELPFUL HINTS

Hold the tracing stylus as you would a pencil. ***Fig. 15***
 In the event the machine does not engrave in a straight line, make the following adjustments: ***Fig. 16***

Place a practice engraving plate on the article-holding table. Set the ratio at 4 on both arms. Be precise when aligning the marks on the arms with the numbers. Using the straight line below the centering scale, scribe a line on the practice plate. If the line inclines upward, loosen the knob on the right pantograph arm, reposition the scribed mark down approximately 1MM, and scribe a new line. Once a straight line has been scribed, loosen the screws on the scale of the arm and reposition the scale so that the 4 is on the new position. The opposite adjustment is done if the line declines downward.

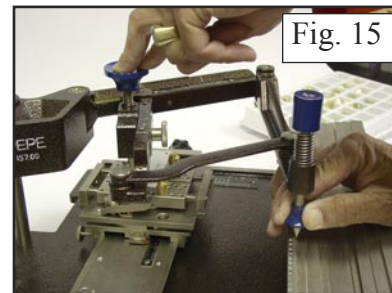


Fig. 15

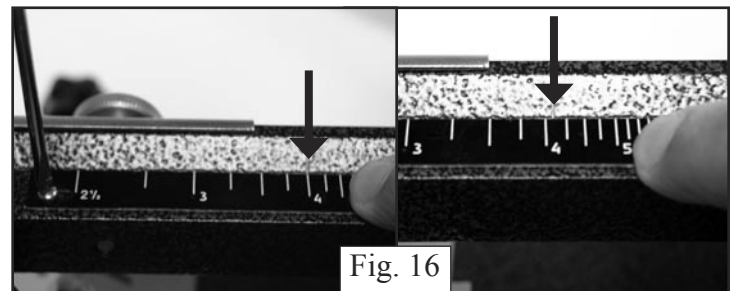


Fig. 16

PEPETOOLS thanks you for choosing our product.