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WORK SUPPORT

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FIG. 1

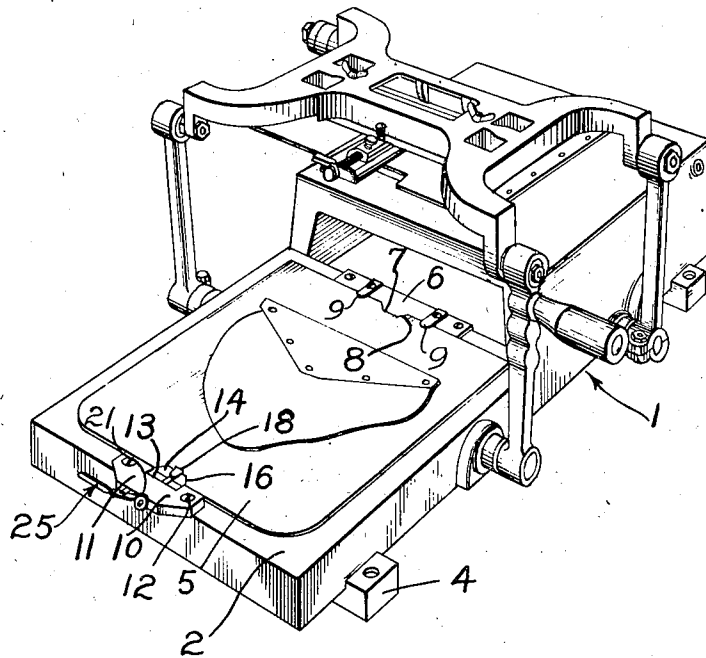
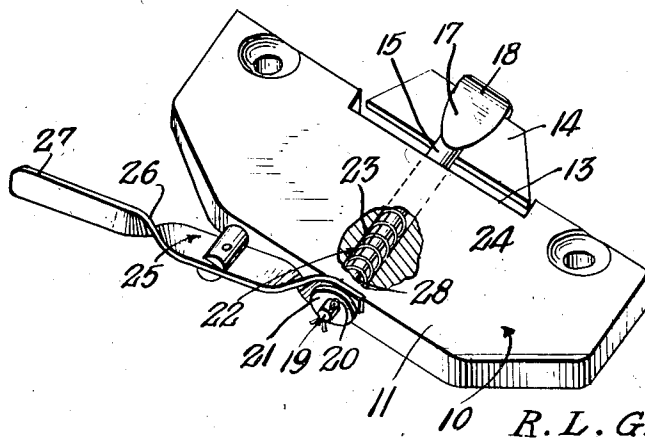


FIG. 2



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## UNITED STATES PATENT OFFICE

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## WORK SUPPORT

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5 Claims. (Cl. 101-407)

This invention relates to an improved gauge board locking device.

One of the principal objects of the invention is to provide a gauge board locking device which will effectively lock a gauge board in a fixed position and properly center said board with respect to a work table.

Another object of the invention is to provide a gauge board locking device which will be characterized by extreme simplicity in construction.

Other objects of the invention not specifically mentioned hereinbefore will become apparent during the course of the following description.

In the accompanying drawing:

Figure 1 is a perspective view of my improved machine.

Figure 2 is an enlarged perspective view of the locking and centering device for retaining the gauge board in locked and centered position.

In the drawing like numerals of reference designate like parts in the views. The numeral 1 indicates in general the frame of a stamping and embossing machine, said frame including a work-supporting table 2.

On the work supporting table 2 there is mounted a gauge board 5 which extends through the major portion of the area of the work supporting table and is held in place at one end by a retainer plate 6, said retainer plate having a tongue 7 engaging in a recess 8 formed in the edge of the retainer plate for centering the rear end of said plate on the work supporting table. Overhanging tabs 9 are carried on the retainer plate and extend above the free rear end edge of the board 5 and prevent said board from shifting upwardly. At its forward end, the gauge board 5 is retained in position by an improved gauge board locking device indicated in general at 10.

The gauge board locking device is shown in enlarged perspective in Figure 2 of the drawing and, as will be seen, includes a block 11 which is secured to the front end edge of the frame 1 by means of screws 12 which extend through said block and into the frame. The block 11 is formed with a recess 13 at its forward edge and said recess is adapted to receive a movable tongue shiftably mounted on a plunger 15. The tongue 14 is adapted to engage in a recess 16 formed in the front edge of the gauge board 5. As will be clearly seen in Figure 2, the plunger 15 has a flattened portion 17 which is slightly turned upwardly at its forward end and is projected past the front edge of the movable tongue 14 in overhanging relation thereto, said forwardly projecting portion being indicated at 18. The forwardly

projecting portion 18 will overhang the margin of the recess 16 in the gauge board 5 when the tongue 14 is in position in said recess for retaining the front end portion of said gauge board against accidental upward movement. The plunger 15 extends through the block 11 and has a reduced stem 19 which projects rearwardly of said block and is apertured to receive a cotter key 20. Surrounding the reduced stem adjacent the inner side of the cotter key is a washer 21. The block 11 is provided with a bore 22 which has fitted therein a spring 23. The spring 23 has one end thereof in engagement with a shoulder on the plunger 15 and the rear end engageable with a shoulder 24 at the inner end of the bore 22. The spring 23 will normally urge the plunger 15 in the direction of the gauge board 5. In order to release the removable tongue 14 from the recess 16 in the gauge board, I provide a lever 25 formed from a flat strip of metal which is twisted at 26 to define a convenient manually engageable portion 27. At its inner end the lever 25 is bifurcated, as shown at 28, to straddle the end portion of the stem 19 between the washer 21 and the end face of the block 11. A fulcrum post 29 is mounted on the block and is slotted to receive the central portion of the lever. A pin 30 provides the actual fulcrum. It will be seen that by shifting the lever 25, the plunger 15 will be drawn inwardly, against the tension of the spring 23, for shifting the portion 18 from its position overhanging the marginal outer edge of the gauge board. As soon as engagement of the handle 25 is relinquished, the spring will urge the movable tongue 14 into the recess 16 for locking the gauge board in position and centering said gauge board with respect to the work supporting table 2. In other words, the gauge board locking device serves the purpose of not only locking the forward end of the gauge board in position but also centering said gauge board with respect to the work supporting table.

Having thus described the invention, what is claimed is:

1. In combination with a gauge board having a recess, a gauge board locking device including a block, means securing the block to a table, said block having a recess, a wedge shaped movable tongue, a plunger shiftably mounting the tongue in the block, said tongue being engageable in the recess of the gauge board for centering the board on the table, means normally shifting the plunger for engaging the tongue in the gauge board recess for retaining the gauge board against displacement, and a lever carried by the

block and engageable for shifting the plunger and tongue for freeing the gauge board from the table.

2. In a machine of the class described as recited in claim 1, wherein said plunger is projected to define an overhanging portion for retaining the gauge board against upward movement.

3. In a machine of the class described, a gauge board locking device including a block, said block having a recess, a movable tongue, a plunger carried by the block and tongue and movably connecting the tongue with the block, a spring surrounding the plunger and normally urging the tongue away from the recess, said plunger having a stem extending clear of the block, a lever rockably mounted on the block, and means operatively connecting the lever with the stem, said lever being engageable for retracting the plunger for engaging the tongue in the recess in retracted position.

4. In a machine of the class described, the combination of a frame having a work supporting table, and a gauge board having recesses at its forward and rear edges, a retainer plate having a wedge shaped tongue engaging in the recess at the rear of the board for centering said board on the table, and tabs carried by the retainer plate and overhanging the rear margin of the

gauge board for preventing upward movement thereof.

5. In a machine of the class described, in combination with a frame having a work supporting table and a gauge board on said table, said gauge board having wedge shaped recesses in its forward and rear edges, a retainer plate carried by the work supporting table and having a wedge shaped tongue engageable in the recess at the rear of the gauge board for centering the rear portion of said gauge board on the table, tabs carried by the retainer plate and overhanging the rear margin of the board for resisting upward movement thereof, a gauge board locking device carried by the table at its forward end and having a wedge shaped movable tongue engageable within the recess in the forward end of said gauge board, said tongue centering the forward end of the board, a block, a plunger connecting the tongue with the block, said plunger being projected to define an overhanging portion for resisting upward movement of the forward end of the gauge board, means normally urging the tongue into engagement with the gauge board, and means for shifting the plunger and tongue for freeing the gauge board to permit removal thereof from the table.

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