

PLATE REGISTERING MACHINE.

1,056,968.

Patented Mar. 25, 1913.

Fig. 1.

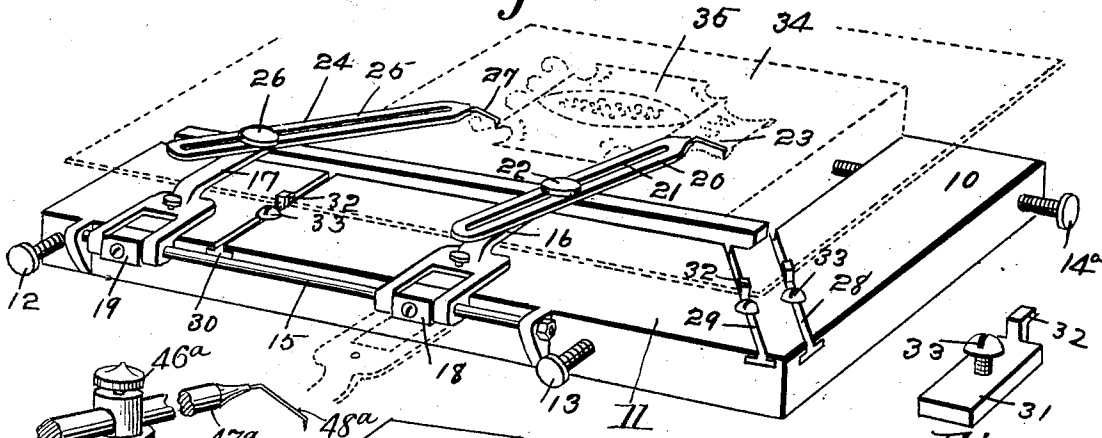


Fig. 6.

Fig. 5.

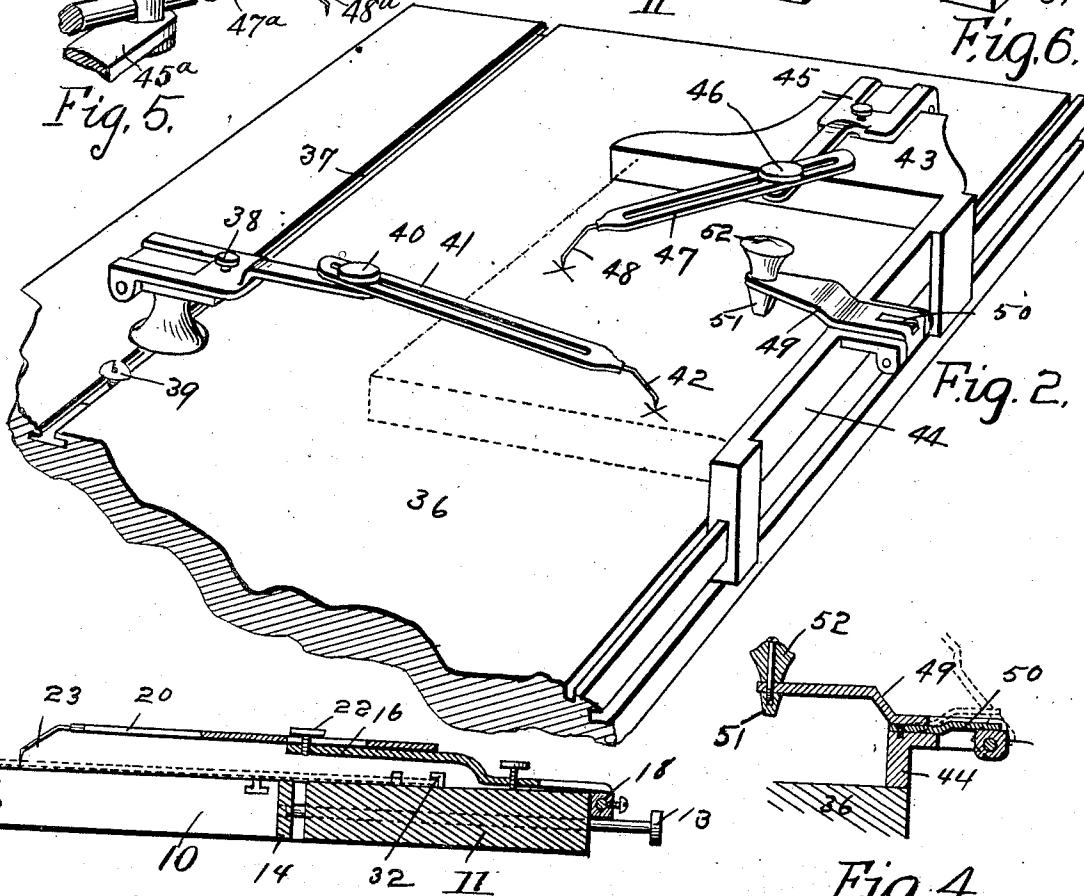


Fig. 4.

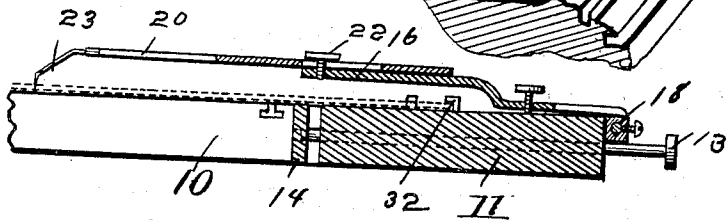


Fig. 3.

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UNITED STATES PATENT OFFICE.

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PLATE-REGISTERING MACHINE.

1,056,968.

Specification of Letters Patent.

Patented Mar. 25, 1913.

Application filed March 17, 1908, Serial No. 422,185. Renewed July 18, 1912. Serial No. 710,283.

To all whom it may concern:

Be it known that I, CYRUS G. BROWN, a citizen of the United States, residing at Des Moines, in the county of Polk and State of Iowa, have invented a certain new and useful Plate-Registering Machine, of which the following is a specification.

The objects of my invention are to provide a mechanism for determining the position of the metal portion of a zinc or other etching upon the block to which it is secured and for holding the block in position while this metal portion is being secured to the block.

A further object is to provide a mechanism for properly positioning a series of zinc etchings relative to the frame in which they are secured for printing in various colors.

My invention consists in certain details in the construction, arrangement and combination of the various parts of the device, whereby the objects contemplated are attained, as hereinafter more fully set forth, pointed out in my claims and illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of the device used for securing zinc etchings in position relative to a frame, and a device connected therewith for locating two common points in each etching in a series or group of etchings. Fig. 2 is a perspective view of the mechanism used for properly placing the metal portion upon the wood or other back of the zinc etching. Fig. 3 is a sectional view of the device shown in Fig. 1, showing in longitudinal section one of the indicator arms. Fig. 4 is a detail, sectional view of the retaining device for holding the metal portion of the zinc etching in position while it is being tacked or nailed to the back portion. Fig. 5 shows, in perspective, a modified form of one of the indicating arms, and Fig. 6 is a detail, perspective view of one of the paper holding devices.

Referring to the accompanying drawings, it will be seen that I have provided a frame which has the end portion 10 and the side portion 11 in it at right angles to each other. Extending through the side portion are two adjusting screws 12 and 13 which have secured to their inner ends, inside of the side portion 11, a movable bar 14. Through the end 10 I have provided an adjusting screw 14^a. Extending longitudinally of the outer edge of the side 11 I have provided the de-

tachable rod 15, which has adjustably mounted on it two indicator supports 16 and 17 which have the blocks 18 and 19 mounted between their arms so as to maintain the supports 16 and 17 against longitudinal movement as they are swung on the rod 15. These blocks 18 and 19 are secured to the rod 15 by means of screws.

Pivotally mounted at the outer end of the indicator support 16 is an indicator arm 20 having a longitudinal slot 21 in it. Extending into this longitudinal slot and screwed to the outer end of the indicator support 16 is a thumb screw 22, so arranged that the indicator arm 20 may be adjusted longitudinally, or swung in a horizontal plane. At the outer end of this indicator arm is an indicating pin 23.

Pivotally and slidingly attached to the outer end of the indicator support 17 is an indicator arm 24, having the longitudinal slot 25 in it, through which the thumb screw 26 passes and enters the indicator support 17, so that this arm can be adjusted in the same manner that the arm 20 can be adjusted. There is an indicator pin 27 at the end of the indicator arm 24. Adjacent to the point where the end 10 and the side 11 meet I have provided two channels 28 and 29 which are of inverted T-shape in cross section. I have also provided a similar channel 30 in the side 11 of the block. Mounted in each of these channels is a paper retaining device comprising a sliding block retaining arm 32 and a set screw 33 for holding it in place relative to the block.

In the practical use of this form of the device, the block 34, bearing the metal portion 35 thereon, is placed in position and the indicating arms are adjusted so that the two points are found by them, which can be located in a series of etchings, and the adjusting screws 12, 13 and 14^a are then adjusted to maintain the block 34 in the proper position. The indicating arms are then swung back and a proof printed of this etching after first having placed the paper in the proper position by adjusting the paper retaining devices, and the paper is then removed, and a new block put in the proper position and adjusted to that position after finding the proper points on the etching by means of the indicator arms, and then adjusting the screws to hold the block in the proper position. The paper which has once

been printed can be then placed in position and a different color can be printed upon it, and accurate alinement made on the proof.

In the modified form of the device, for properly positioning the metal portions upon the blocks in making zinc or other etchings, the base is indicated by the numeral 36. This base has a longitudinal channel 37 which is of inverted T-shape in cross section, extending longitudinally of one side of it, and slidingly mounted in this channel is an arm supporting member 38 which is held in the desired position relative to the base by means of the set screw 39. Pivotally and slidingly attached to the arm support 38 by means of the thumb screw 40 is the indicator arm 41 having an indicating pin 42 at its outer end. Slidingly mounted in the opposite edge of the base 36 from that near which the channel 37 is placed is an adjustable retaining block, comprising the end portion 43 and the side portion 44. Pivotally secured to the end 43 of this adjustable retaining block is an arm support 45, having pivotally and adjustably secured to its outer end by means of the thumb screw 46 the indicating arm 47 which has the indicating pin 48 at its outer end. By adjusting the indicating arms 41 and 47 to their proper positions, the metal may be placed accurately on a series of blocks for color printing where a series of colors are used in printing a single proof. In the modified form, the indicating arm 47* is pivotally and adjustably secured by the thumb screw 46* on the arm 45*. The indicating point 48* extends downwardly from said arm 45*. Pivotally attached to the side 44 of the adjustable retaining block is a metal retaining device comprising the body portion 49 which is pivotally attached to the side portion and is held in the position shown in Fig. 2 by means of the spring 50. There is a retaining head 51 at the free end of the metal retaining device and a handle 52 by which it may be swung on its pivot. In practical use with this form of the device, the block which forms the back of the zinc etching is placed in the position shown in dotted lines in Fig. 2 and the metal portion is then positioned by means of the indicator arms 41 and 47 and the metal retaining device is swung into engagement with this metal and it is then readily tacked upon the block in the proper position.

Having thus described my invention, what

I claim and desire to secure by Letters Patent of the United States, therefor is—

1. In a device of the class described, an angular block comprising members extending at right angles from each other, a rod secured to the side of the block, indicating arm supports pivotally and adjustably mounted on the rod, indicating arms adjustably secured to the arm supports, adjustable means for retaining a zinc or other etching in position relative to the angular block, and adjustable paper retaining devices mounted in the angular block.

2. In a device of the class described, an angular block comprising members extending at right angles from each other, a series of adjusting screws in the block for retaining the block of a zinc or other etching in position relative to the angular block, arm supports pivotally and adjustably mounted on the block, indicating arms pivotally and adjustably mounted on said arm supports, and adjustable retaining devices mounted in the block.

3. In a device of the class described, an angular block comprising members extending at right angles from each other, arm supports pivotally and slidingly mounted on the block to swing up and apart from same, indicating arms pivotally and horizontally mounted on said arm supports, there being points extending downwardly from the indicating arms, adjustable means in said angular block for retaining the block of a zinc or other etching in position relative to the angular block, and adjustable paper retaining devices in the angular block.

4. In a device of the class described, an angular block comprising members at right angles to each other, a rod secured to the side of said block and indicator arm supports pivotally and slidingly mounted on said rod which swing up and away from said angular block, means for securing said supports against longitudinal movement on said rod, indicator arms pivotally and adjustably mounted on said arm supports and adjustable means for retaining a base block or the like in position relative to the angular block.

Des Moines, Iowa, March 9, 1907.

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Witnesses:

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