

Aug. 4, 1936.

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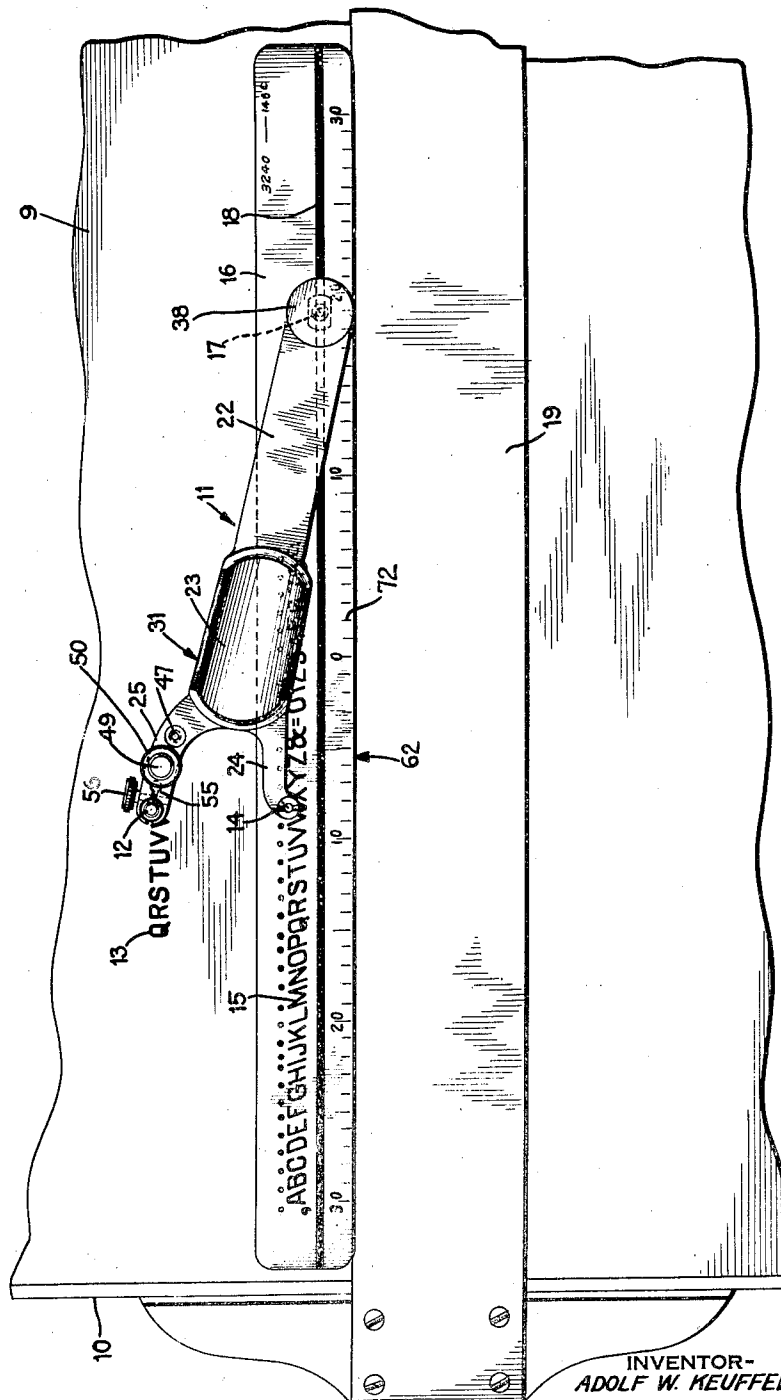
2,050,057

TEMPLATE

Filed May 17, 1933

2 Sheets-Sheet 1

FIG. 1.



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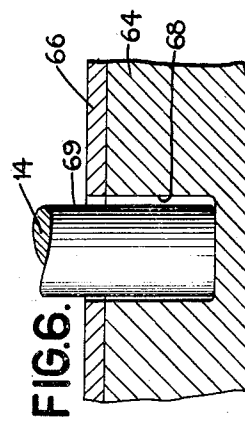
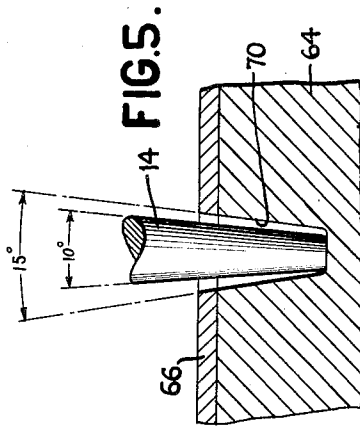
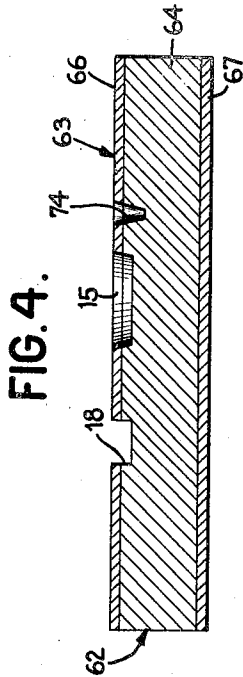
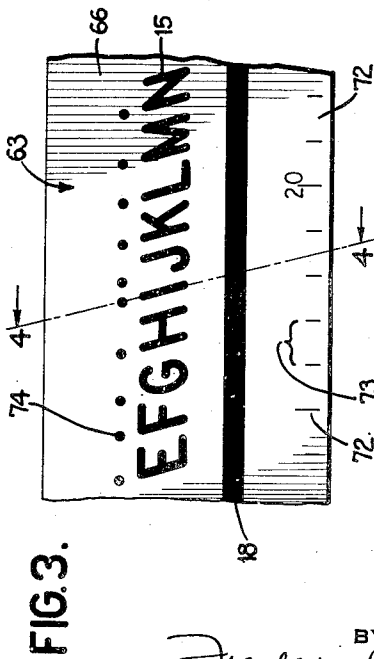
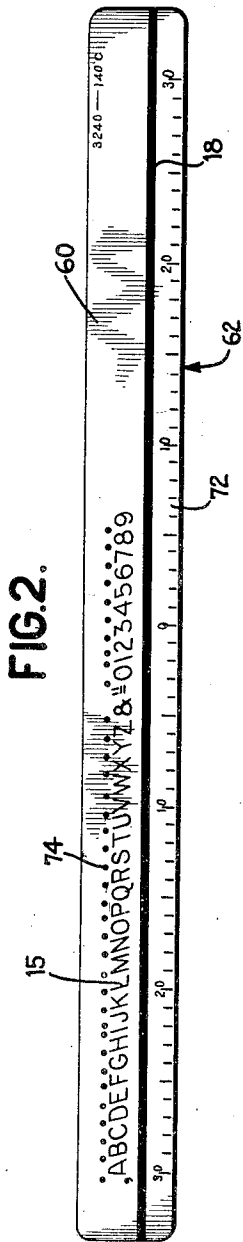
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2,050,057

TEMPLATE

Filed May 17, 1933

2 Sheets-Sheet 2



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2,050,057

TEMPLATE

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Application May 17, 1933, Serial No. 671,463

6 Claims. (Cl. 33—23)

This invention relates to scribing devices of the kind in which a writing instrument is carried by a body member and is directed over the surface to be written upon by a tracer pin movable in character grooves formed in a template and by a tail pin movable in a groove parallel with the line of lettering.

Devices of the character described have heretofore been awkward to use, limited in their application and complicated in design to counteract inherent defects.

One object of the present invention is an improved template for use with a scribing device of the character described in which the character grooves are easily visible. Accordingly, the character grooves are of a contrasting color from that of the template.

Another object of the invention is a template wherein the contrasting colors are permanent and not subject to wear under normal conditions of use.

It is also an object of the invention to provide a template by which extreme accuracy of inscribed character formation may be attained.

A further object of the invention is a template by which the centering of the inscription may be readily effected on the writing surface.

The invention also seeks ready means of positioning the template whereby the characters may be quickly inscribed in the desired sequence.

It is a further object of the invention to provide a scribing device which is practical from the standpoint of ease and accuracy of manufacture and use.

These and other objects of the invention and the means for their attainment will be more apparent from the following detailed description taken in connection with the accompanying drawings illustrating a preferred embodiment and in which:—

Figure 1 is a view showing the scribing device of this invention and its use;

Figure 2 is a view showing a template in plan;

Figure 3 is a fragmentary view on an enlarged scale showing details of the template;

Figure 4 is a vertical sectional view taken on the line 4—4 of Figure 3 looking in the direction of the arrows;

Figure 5 is a fragmentary sectional view of the template and character groove therein showing the tracer pin in a character groove; and

Figure 6 is a view similar to Figure 5 but showing a modified tracer pin and character groove.

Referring first to Figure 1, a writing surface, such as a sheet of drawing paper or tracing cloth,

is indicated at 9 carried upon, say, a drawing board 10. A scribing device indicated generally at 11 is adapted to inscribe, by means of a pen 12, or other writing instrument, letters, numerals, diagrams or other characters 13 on the writing surface 9 by being guided, as by the movement of a tracer pin 14, in character grooves 15 formed in a template 16. The scribing device is also controlled, in its movements by a tail pin 17 positioned in a horizontal groove 18, also in the template 16. This groove 18 is parallel to the line of lettering. The groove 18 is maintained in parallel relationship with the line of lettering, say, by being guided and positioned by a straight edge, such as the T-square 19.

The scribing device, in the illustrated embodiment, comprises a body member, Figure 1, elongated and relatively narrow in width for approximately half its length, as illustrated at 22. From this point, the body member increases progressively in width toward the opposite end, as at 23. At the latter end, the body member is bifurcated or formed with two arms 24 and 25 spaced apart where they join the body and diverging progressively.

In Figure 1, the scribing device occupies generally the position it assumes when used to inscribe characters.

The near arm 24 is provided, preferably, with a hardened tracer pin 14 fixed therein.

The end of the tracer pin 14 is received in the character grooves 15 of the template 16. These character grooves 15 are formed in the template 16 in the outline of the writing instrument. The inclination and proportions of the character grooves bear a definite relationship to the angular relation of the lines joining, respectively, the writing instrument and tracer pin with the tail pin and the desired inclination of the inscribed characters 13.

Proximate the arms 24, 25, that portion 23 of the body which is of progressively increasing width, is also of increased thickness, the vertical sides 31 being plane and diverging for convenient grasp between, say, the thumb and middle finger, the index finger resting on the upper surface which is conveniently slightly concave, in a transverse direction.

The tail pin 17 slides freely in the horizontal groove 18 of the template 16 as the tracer pin 14 follows, in the character groove, the outline of the character being inscribed. To retain the tail pin 17 in the groove 18, the extremity of the end 22 is weighted. As shown, a plug or weight 38 of some heavy material, such as lead,

is carried by the end. By means of the weighted end, the scribing device may be moved back and forth along the template and rotated through appreciable angles about the axis of the tail pin 17 without danger of the tail pin leaving the horizontal groove 18.

It is proposed, with the scribing device of this invention, to inscribe characters of varying heights and line thicknesses. While any writing instrument, a stylus, a graphite or crayon pencil, for instance, may be used, there is illustrated, for convenience, a pen of the kind disclosed in Patent Number 1,528,142 dated March 3, 1925, having a tubular ink receiving reservoir and tubular ink delivering nozzle and a rod like cleaning device disposed within the tubular portion of a smaller diameter at its lower end than the interior diameter of the nozzle, whereby ink may flow outwardly around the lower end of the cleaning device. In practice, the end of the cleaning device rests on the writing surface 9 and the lower edge of the delivery tube is slightly above the surface 9. To retain the parts in such relative position, a raising screw 49 is carried with the remote arm 25.

The arm 25 is provided with at least one and preferably two or more threaded apertures 47 at different distances from the pen 12. The raising screw comprises a threaded shank for reception in the aperture 47, and a blunt bearing end which rests and slides over the surface 9. It has a head, conveniently knurled, by which the shank is turned in the threaded aperture and the elevation of the arm 25 adjusted above the surface 9, and thus the mouth of the pen's delivery nozzle is maintained at the proper distance above the writing surface 9. When the raising screw 49 is in adjusted position, it may be locked in that position by the lock nut 50.

To receive the writing instrument 12, the extremity of the remote arm 25 is apertured and on the median line the arm 25 is slotted with a relatively wide slot from the end inwardly on a diameter of the aperture, the slot terminating in an aperture 55. The bifurcated end of the arm 25 may then be drawn together by a clamping screw 56 to draw the sides tightly against a writing instrument 12 in the writing instrument aperture and hold it in position.

When a pen, adapted to form thin lines, is used, the raising screw is placed in the aperture nearest thereto in order that the raising screw may be as close to the pen as possible for accurately positioning the pen with respect to the writing surface. If, however, a letter is being formed of relatively great width, the raising screw would wipe into the letter and cause a blot. In order to avoid this, the raising screw is moved into the more remote aperture and thus the raising screw may be adjusted both vertically and laterally with respect to the writing instrument.

So much of the scribing device as has been described forms the subject matter of copending applications, Serial No. 671,464 filed May 17, 1933 and Serial No. 671,465 filed May 17, 1933, respectively.

The template 16 of this invention comprises an elongated rectangular rule like member 60 which is also rectangular in cross-section. It is preferably accurately made so that at least its side edge 62 is a "straight edge" to cooperate with a straight edge 19 on the drawing board. The groove 18 is, of course, parallel to the edge 62 so that the lettering may be formed on a

horizontal line on the drawing or other writing surface 9.

The template 16 affords a contrast between the character grooves 15 and the surface or background 63. The character grooves, and in fact all the grooves, are preferably black, or a dark color, while the face 63 of the template is white, or a light color. In manufacture, a laminated construction is proposed. The body or inner portion 64 is preferably of black celluloid with a relatively thin facing strip 66, 67 secured to the upper and lower faces. Conveniently, these facing pieces are cemented to the inner body and in practice the body 64, is, say, .100" thick, while the facing strips 66, 67 are .010" thick.

The grooves, both character and tail pin grooves, are advantageously engraved on the upper surface, the engraving tool cutting through the white upper facing strip 66 into the black body 64 so that the grooves show clearly and distinctly in black against a white background 63.

In making the template of celluloid, there are the added advantages that the template, and its component parts before assembly, remain flat and straight. The edges of the grooves are cleanly cut and smooth without additional treatment. They hold their shape and do not wear in use so that clear cut, even and exact lettering is always produced. Any ink or dirt which accumulates can be readily washed off.

The bottom of the grooves in every instance is slightly wider than the width of the end of the pin fitting therein to insure freedom of movement. While the ideal shape of groove is that shown in Figure 6 with the side walls 68 vertical and the surface 69 of the end of the pin 14 or 17 parallel thereto, it has been found advantageous in manufacture to incline the walls 70 slightly toward the bottom of the groove as shown in Figure 5, and form the end of a frusto-conical pin 14 or 17 which moves therein on a taper of a slightly less angle to the vertical. In practice, the taper of the pin is at an angle of say 5° to the vertical while the angles of the walls are, say, 7½° to the vertical. Such relation has been found satisfactory in use.

It will be noticed that in this construction, the end of the pin is in contact at all times with the flat bottom of the engraving cut and that the sides of the engraving cut act as end stops only to guide the pin. A slight side play of at least .001" is necessary to insure the smooth motion when the tracer pin is run in the groove of a character.

The scale 72 along the lower or straight edge of the template is intended to aid in locating or centering a line of lettering. Each space 73 on the scale 72 represents the average distance from center to center, between letters or other characters 15. The center line or mark on the scale is numbered zero ("0") and equal divisions on opposite sides are appropriately numbered, as shown, from the center in each direction.

The function of the scale may best be understood by describing its use in a specific problem. Assuming that it is desired to center the words "BUCHANAN STREET", the scale would aid as follows: The two words contain fourteen normal letters, with a space between the words equal to the width of a normal letter, making a total of fifteen spaces. The center of the inscription is, therefore, half this distance, at a distance of 7½ spaces from the end. The zero on the scale is, therefore, brought to a point on which the line of lettering is to be centered and a mark

is made on the writing surface 9 seven and one half spaces to the left. The template is then moved so that the pen will be directly over this mark when the tracer pin 14 is in and at the base of the vertical leg of the letter "B". By starting letter "B" in this position and lettering the words "BUCHANAN STREET" with a normal spacing between characters, the distance between the first letter B and the last letter T will be uniformly spaced from the center of the group.

Referring to Figures 2, 3 and 4, a dot 74 is shown as engraved above and in line with the left extremity of each character and is used as an aid in determining the spacing of a letter about to be made from the one just completed. That is, the tracer pin 14 of the scribe is set into the dot 74 of a letter next to be inscribed and then by glancing at the pen the spacing from the letter which has just been completed can be judged quite accurately and the template moved by means of the tracer pin to the desired position. The tracer pin is then removed from the dot without in the meantime moving the template and the pin is then inserted in the character groove of the letter which is then scribed.

It will thus be seen that a template as a component element of a scribing device has been provided which is convenient to use, quickly manipulated, durable and accurate in guiding a scribe in the formation of various and sundry characters, that is, letters, numerals, designs, etc. It is capable of having formed in its surface character grooves of a wide variety of shapes and widths.

Various modifications will occur to those skilled in the art in the composition, configuration and disposition of the component elements going to make up the invention as a whole as well as in the substitution therein of features performing equivalent functions and no limitation is intended by the phraseology of the foregoing description or illustrations in the annexed drawings.

What is claimed is:—

1. In a scribing device, a template for use with a scribe and formed with a groove to receive a scribe tail pin and character grooves to receive a scribe tracer pin, and comprising a composite laminated body whereof one lamination is of a color contrasting with another lamination and formed with grooves passing through the last named lamination and penetrating said first named lamination.

2. In a scribing device, a template for use with a scribe and formed with a groove to receive a scribe tail pin and character grooves to receive a scribe tracer pin, and comprising an inner lamination of a dark color and an outer lamination on each face thereof of a light color and grooves formed in one outer lamination and penetrating said inner lamination.

3. In a scribing device, a template for use with a scribe and formed with a groove to receive a scribe tail pin and character grooves to receive a scribe tracer pin having a flat end and the surface proximate thereto defined by a line in a plane including the axis and revolving thereabout, and whereof the bottom of the groove is flat, the bottom of the character grooves being slightly wider than the end of the tracer pin, the sides of the grooves being planar.

4. In a scribing device, a template for use with a scribe and formed with a groove to receive a scribe tail pin and character grooves to receive a scribe tracer pin having a frusto-conical end, the bottom of a groove being slightly wider than the end of a pin and the walls of the groove lying at an angle to the bottom greater than the angle of the surface of the end of the pin.

5. In a scribing device, a template for use with a scribe and formed with a groove to receive a scribe tail pin and character grooves to receive a scribe tracer pin, and comprising a composite laminated body whereof an inner lamination is of a color contrasting with the outer lamination and formed with a plurality of character grooves passing through the outer lamination and penetrating said inner lamination and a scale along one edge whereof the graduations are spaced a distance substantially equal to the average distance from center to center of the characters to be formed and having its zero graduation in the center of the scale.

6. In a scribing device, a template for use with a scribe and formed with a groove to receive a scribe tail pin and character grooves to receive a scribe tracer pin, and a plurality of substantially circular recesses disposed above the line of the character grooves, respectively, for the reception of the tracer pin, each of said recesses being so disposed with respect to a character that, with the tracer pin therein, and when the writing instrument is over a given scribed character, the corresponding character groove is positioned to receive the tracer pin in the scribing of said character.

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