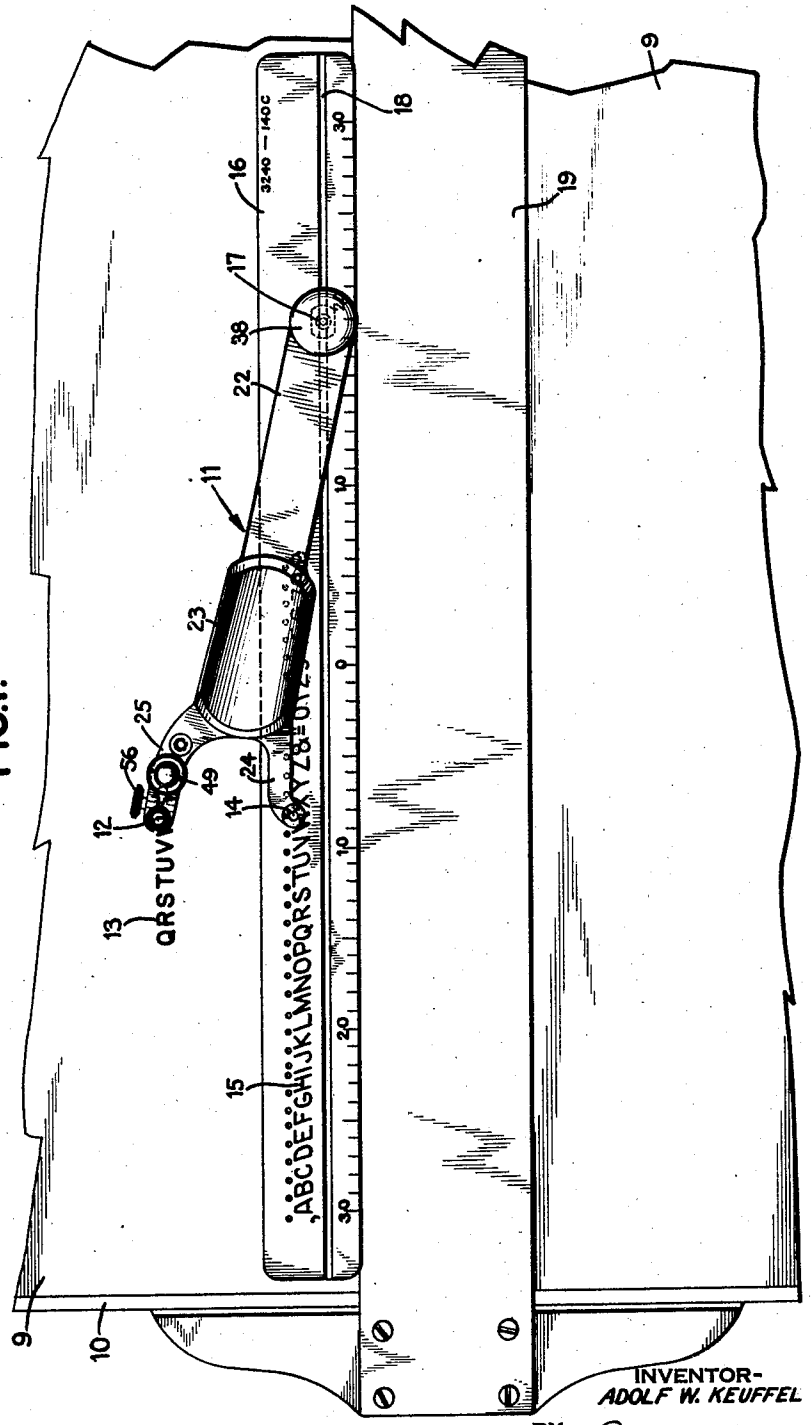
Aug. 4, 1936. A. W. KEUFFEL 2,050,058

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FIG.1.



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FIG.2.

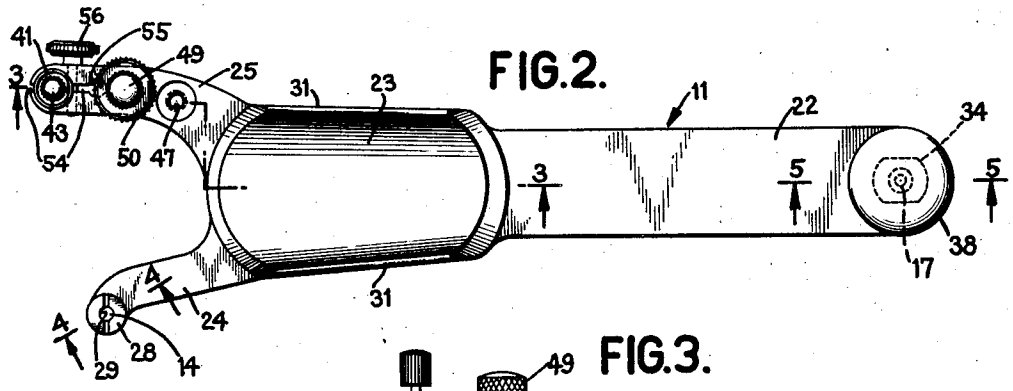


FIG.3.

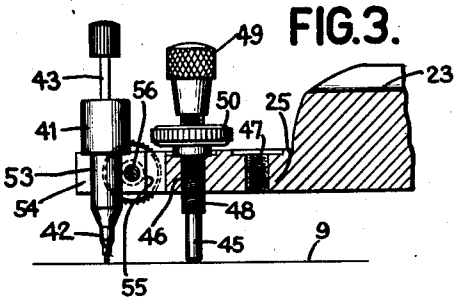


FIG.4.

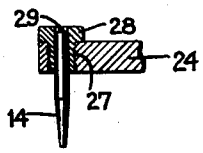


FIG.5.

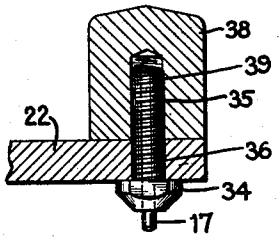


FIG.6.

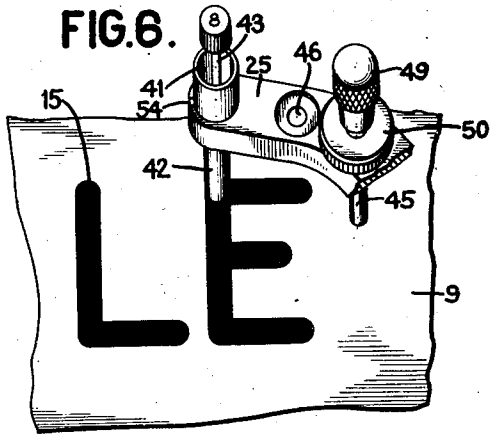
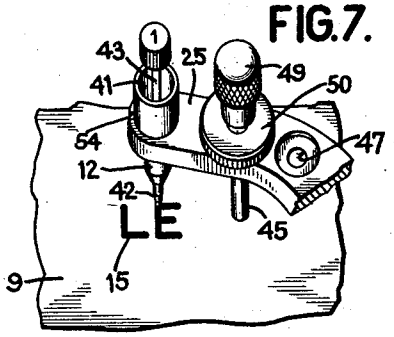


FIG.7.



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2,050,058

SCRIBER

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Application May 17, 1933, Serial No. 671,464

15 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 a simple device to prevent the accidental displacement of the tail pin from the horizontal groove. Accordingly, that end of the body with which the tail pin is carried is weighted.

Another object of the invention is a body member with which the writing instrument and guide pins are carried which can be conveniently held in the hand and manipulated. The body is, therefore, shaped to fit the hand and has portions for convenient grasp by the fingers.

The invention also seeks a construction permitting of interchangeability of writing instruments of different size and character with provision for firmly holding the instrument in position. To this end, a portion of the body is preferably apertured to receive the writing instrument and means are provided to clamp or otherwise retain the same in the aperture.

It is also an object of the invention to insure the facility of movement of the writing instrument over the writing surface. Accordingly, the body member is supported at a predetermined and adjustable distance above the writing surface.

A further object of the invention is to support the body member in such a manner proximate the writing instrument while, at the same time, accommodating the adjustment to lettering of varying widths. In practice, the body member is formed with a plurality of apertures at varying distances from the writing instrument adapted to selectively receive a raising screw.

The invention also seeks 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 the scribing device in plan;

Figure 3 is a fragmentary sectional view showing the writing instrument and raising screw, taken on the line 3—3 of Figure 2;

Figure 4 is a fragmentary sectional view taken on the line 4—4 of Figure 2 and showing the tracer pin;

Figure 5 is a fragmentary sectional view taken on the line 5—5 of Figure 2 and showing the tail pin and means tending to retain it in the horizontal groove;

Figure 6 is a fragmentary view showing, in perspective, the relative positions of the writing instrument and raising screw when large characters are to be formed; and

Figure 7 is a fragmentary view similar to Fig. 6 but showing the position of the parts when smaller characters are to be formed.

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. 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 comprises a body member, Figure 2, 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 2, the scribing device occupies generally the position it assumes when used to inscribe characters. The arm 24 will be referred to as the near arm since it occupies the position nearest the user and the arm 25 as the remote arm since it is farther away from the user when inscribing characters.

The near arm 24 is provided near its extremity with an aperture 27 (Figure 4), conveniently threaded to removably receive a threaded screw plug 28 having a slotted head for a screw driver

and receiving, in an axial passage 29, 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 character to be reproduced by the writing instrument. The inclination and proportions of the character grooves bear a definite relationship to the angular relation of the longitudinal axis of the body 11 when guided by the horizontal groove, the spread of the arms 24, 25 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 of increased thickness as viewed in Figure 3, 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 is illustrated as formed with a positioning shoulder 34 by which the effective length thereof from the body is determined and is tightly received in a hollow threaded shank 35 of relatively greater diameter. The screw 35 is threaded into an aperture 36 disposed, preferably, on the longitudinal axis of the body and proximate the end remote from the arms 24, 25 and extends upwardly a material distance above the upper surface of that end of the body.

The tail pin slides freely in the horizontal groove 18 of the template 16 as the tracer pin 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. Conveniently, this plug 38 is formed with a threaded cylindrical recess 39 adapted for threaded engagement with the screw 35. 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 as shown, for comparison, by the letters "L E" of Figures 6 and 7. However, characters of relatively greater difference in size and line thickness than those illustrated are capable of being made with this invention. While any writing instrument, 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 41 and tubular ink delivering nozzle 42. A rod like cleaning device 43 (Figure 3) is disposed within the tubular portion 41, 42 and is of 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 43 rests on the writing surface 9 and the lower edge of the delivery tube 42 is slightly above the surface 9. To retain the parts in such relative position, a raising screw 45 is carried with the remote arm 25.

The arm 25, Figure 3, is provided with at least one and preferably two or more threaded apertures 46, 47 at different distances from the pen 41, 43. The raising screw comprises a threaded shank 48 for reception in the apertures 46, 47, and a blunt bearing end 45 which rests and slides over the surface 9. It has a head 49, conveniently knurled, by which the shank 48 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 45 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, as at 53, Figure 3, and on the median line the arm 25 is slotted with a relatively wide slot 54 from the end inwardly on a diameter of the aperture 53, 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 in the aperture 53 and hold it in position.

When a small size pen is used such as that numbered "1" in Figure 7, the raising screw is placed in the nearest aperture 46 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 pen is used, such as that numbered "8" in Figure 6, making a line of relatively great width, the raising screw would when a letter such as the "E" were being made, wipe into the letter and cause a blot. It will be seen that the center line of aperture 46 intersects the inscribed letter "E". In order to avoid this, the raising screw is moved into the aperture 47 further away from the pen and thus the raising screw may be adjusted both vertically and laterally with respect to the writing instrument.

It will thus be seen that a scribing device has been provided in which the body may be readily cast of relatively light metal. By its shape, it is conveniently held and manipulated by the user. By the weighted end, the tail pin is retained in the groove during movement of the device and by means of the raising screw, the pen is maintained at the proper relative position with respect to the writing surface with little effort on the part of the user. The draughtsman is not limited, by the scribing device of this invention, to any particular size, weight or inclination of lettering, all such being determined by the character grooves of the template.

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 elements 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. A scribing device comprising a body having at one end a tail pin for reception in a template groove, a tracer pin carried proximate the other end for reception in a character groove in the template, a writing instrument carried with the last named end but spaced from the tracer pin and comprising a delivery tube and a freely movable rod therein and an adjustable device carried with the body proximate the writing instrument to support the lower edge of the delivery tube at a fixed elevation in spaced relation to the writing surface.

2. A scribing device comprising a unitary elongated body having at one end a tail pin for re-

ception in a template groove and spaced diverging arms at the other end, means carried with one arm to support a tracer pin for reception in a character groove in the template, means carried with the other arm to support a writing instrument comprising a delivery tube and a freely movable rod therein and means carried with said last named arm to support an adjustable device to support the lower edge of the delivery tube of the writing instrument at a fixed elevation in spaced relation to the writing surface.

3. A scribing device comprising a unitary elongated body having at one end a tail pin for reception in a template groove and spaced diverging arms at the other end, means carried with one arm to support a tracer pin for reception in a character groove in the template, means carried with the other arm for the support of a writing instrument comprising a delivery tube and a freely movable rod therein, and means adjustably carried with said last named arm to support the lower end of the delivery tube of the writing instrument at a fixed elevation in spaced relation to the writing surface.

4. A scribing device comprising a unitary elongated body having at one end means to support a tail pin for reception in a template groove and formed with spaced diverging arms at the other end, said body having a portion of increased thickness with sides diverging toward the diverging arms for convenient grasp of the fingers, means to support a tracer pin carried proximate the end of one arm for reception in a character groove in the template and means substantially at the end of the other arm to removably support a writing instrument.

5. A scribing device comprising a unitary elongated body having at one end means to support a tail pin for reception in a template groove and formed with spaced diverging arms at the other end, means to support a tracer pin carried proximate the end of one arm for reception in a character groove in the template, means substantially at the end of the other arm to replaceably support a writing instrument comprising a delivery tube and a freely movable rod therein, and means carried with said last named arm to adjustably support the lower end of the delivery tube of the writing instrument at a fixed elevation in spaced relation to the writing surface.

6. A scribing device comprising, in combination, a unitary elongated body having at one end means to support a tail pin for reception in a template groove and formed with spaced diverging arms at the other end, means to support a tracer pin carried proximate the end of one arm for reception in a character groove in the template, means substantially at the end of the other arm to replaceably support a writing instrument and a writing instrument comprising a delivery tube the lower end of which is adapted to be slightly raised above the surface when characters are formed thereby and a freely movable rod therein, the end of which contacts with the surface to deliver the ink in the tube thereto.

7. A scribing device comprising a body having at one end a tail pin for reception in a template groove and spaced diverging arms at the other end, said body having a portion of increased thickness with sides diverging toward the diverging arms and a concave upper surface for convenient grasp of the fingers, a tracer pin carried proximate the end of one arm for reception in a character groove in the template, means carried with the end of the other arm to support a writing instrument comprising a delivery tube and a freely movable rod therein at least one aperture formed in said last named arm and an adjustable device in the aperture to support the lower end of the writing instrument at a fixed elevation in spaced relation to the writing surface.

8. A scribing device comprising a body having at one end a tail pin for reception in a template groove and spaced diverging arms at the other end, a tracer pin carried proximate the end of one arm for reception in a character groove in the template, means carried with the end of the other arm to support a writing instrument comprising a delivery tube and a freely movable rod therein, at least one threaded aperture formed in said last named arm and a raising screw threaded into the aperture to support the lower end of the writing instrument at a fixed elevation in spaced relation to the writing surface.

9. A scribing device comprising a body having at one end a tail pin for reception in a template groove and spaced diverging arms at the other end, a tracer pin carried proximate the end of one arm for reception in a character groove in the template, means carried with the end of the other arm to support a writing instrument comprising a delivery tube and a freely movable rod therein, at least one threaded aperture formed in said last named arm, a raising screw having a blunt end to bear on the writing surface and threaded into the aperture to support the lower end of the writing instrument at a fixed elevation in spaced relation to the writing surface and a lock nut to secure the raising screw in adjusted position.

10. A scribing device comprising a body having at one end a tail pin for reception in a template groove and spaced diverging arms at the other end, a tracer pin carried proximate the end of one arm for reception in a character groove in the template, means carried with the end of the other arm to support a writing instrument, a plurality of apertures formed in said last named arm at different distances from the last named means and an adjustable device adapted to be selectively received in the apertures to support the writing instrument at a fixed elevation with respect to the writing surface.

11. A scribing device comprising a body having at one end a tail pin for reception in a template groove and spaced diverging arms at the other end, a writing instrument carried with one arm, the other arm being formed proximate its end with a threaded aperture, a threaded head for reception in said aperture and a tracer pin carried with said head for reception in a character groove in the template.

12. A scribing device comprising a body having at one end a tail pin for reception in a template groove and spaced diverging arms at the other end, a writing instrument carried with one arm, the other arm being formed proximate its end with a threaded aperture, a threaded slotted head for reception in said aperture and a tracer pin carried with said head axially thereof for reception in a character groove in the template.

13. A scribing device comprising a body having spaced diverging arms at one end, a tracer pin carried proximate the end of one arm for reception in a character groove in the template, means carried with the end of the other arm to support a writing instrument, a threaded aperture formed in the other end of the body, a tail

pin having an end for reception in a template groove and a threaded portion received in the threaded aperture and extending thereabove and a weight having a threaded recess to receive the threaded portion of the tail pin.

14. A scribing device comprising a body having spaced diverging arms at one end, a tracer pin carried proximate the end of one arm for reception in a character groove in the template, means carried with the end of the other arm to support a writing instrument, a threaded aperture formed in the other end of the body, a tail pin having an end for reception in a template groove, a tubular threaded portion received in the threaded aperture tightly receiving the tail pin and extending thereabove, said tail pin being formed with a squared portion whereby the tail pin may be rotated and a weight having a threaded recess to receive the threaded portion of the tail pin.

15. A scribing device comprising a body having at one end a tail pin for reception in a template groove, a tracer pin carried proximate the other end for reception in a character groove in the template, a writing instrument carried with the last named end but spaced from the tracer pin and comprising a delivery tube and a freely movable rod therein and means carried with the body proximate the writing instrument to support the lower end thereof at a fixed elevation in spaced relation to the writing surface.

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