Aug. 24, 1954 L. VALOIS 2,686,971

ADJUSTABLE LETTERING SCRIBER

Filed July 28, 1952 2 Sheets-Sheet 1

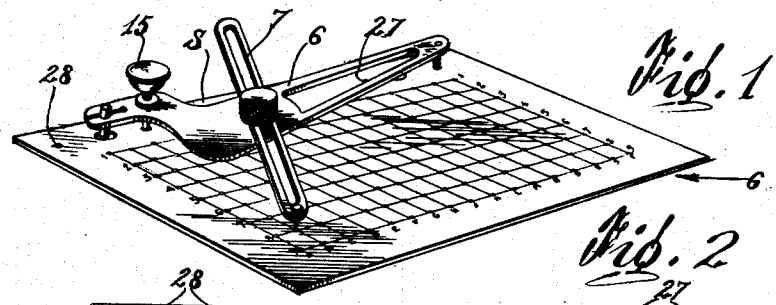
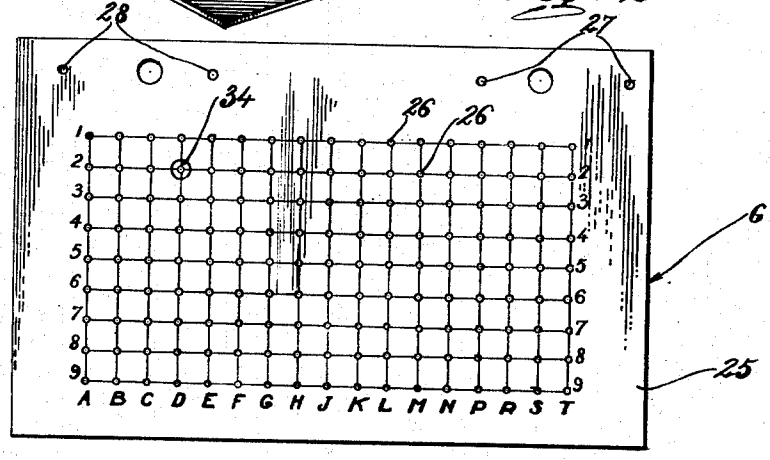


Fig. 1

Fig. 2



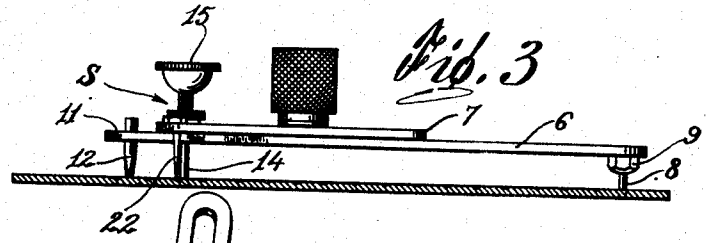


Fig. 3

Fig. 4

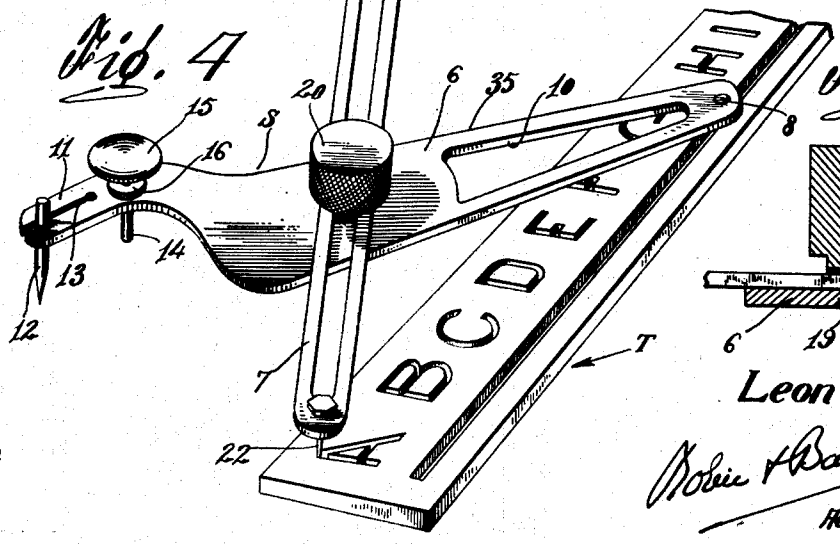
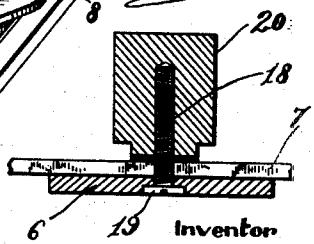


Fig. 5



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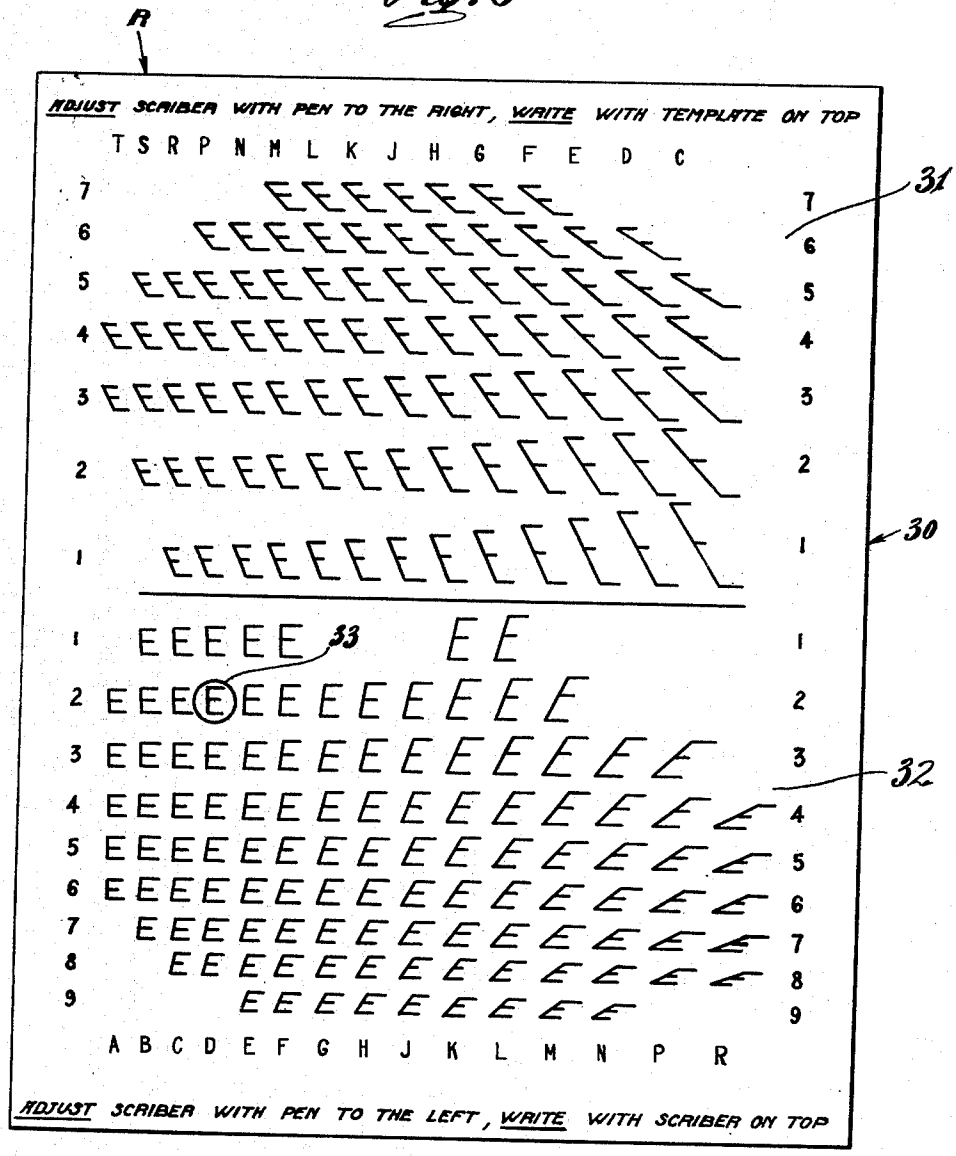
Attorneys

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Fig. 6



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ADJUSTABLE LETTERING SCRIBER

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Application July 28, 1952, Serial No. 301,186

4 Claims. (Cl. 33—23)

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The present invention relates to scribing instruments and, more particularly, such instruments as are used by draftsmen and others for lettering, inscribing or marking drawings and documents.

The general type of instrument noted above has been known for some time and has evolved from the typical scriber which consists, essentially, in a flat bar forked at one end and carrying a tail pin at the other. One arm, or the lower arm, has a tracer pin and the other, or free, arm a scribing instrument such as a pen, pencil or the like.

As the tail pin is being guided in a straight groove of a template, the tracer pin is made to follow, or trace, graphic symbols impressed in intaglio into the template, parallel to and above the guiding groove. Obviously, the free arm of the fork will follow this movement imparted to the tracer pin and accurately reproduce said movement as letters, signs and other graphic representations found on the template.

Improvements of this basic design permitted changing slightly the spacing between the arms of the fork, by pivoting one of said arms (preferably the tracer arm) onto the body or bar of the scriber. This modification allows a small change to be obtained in the slant, or inclination, of the characters reproduced, whereby some variety of lettering is possible from a single template, or lettering guide. United States Patent No. 2,011,195, dated August 13, 1935 is fairly representative of such a scriber having a lower adjustable arm.

Although a scriber of the character above is very useful for a number of purposes, it is more or less limited in its scope by the template used: in other words, a template can be used for a narrow angular variation of the characters only, even though an adjustable scriber, such as disclosed in United States Patent No. 2,011,195 be used. Consequently, when of necessity, letters, ciphers or other graphic signs are required to be inclined very widely from the accepted normal slant, it becomes impossible to use normal templates; special templates are required in great number or lettering and other graphic representations have to be drawn free-hand.

The present invention has been conceived as an improvement over the conventional lettering scriber described above, for the express purpose of inclining, at will, letters and other characters required on drawings, maps, graphs and other documents. More particularly, the improvement envisages the inclination of characters either to

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the right, or left, of a vertical upright position, at angles with the horizontal varying from 90° to somewhat less than 45°. Furthermore, the wide range of inclinations noted, on either side of the vertical, is obtained from a single template or lettering guide only, for a relatively large proportion of character changes also, in the upright direction. Obviously, such wide angular displacements are not within the scope of the known manual scribing devices reviewed above.

In an application for patent dated May 5, 1951, Serial Number 224,773, now Patent No. 2,636,271, issued April 28, 1953, the applicant has disclosed a drafting instrument, of the planograph class, whereby a drawing may be retraced with unidirectional dimensional changes only; with this instrument isometric drawings, pictorial perspectives and block diagrams are easily possible. The result might be a contour map retraced so that a block diagram is obtained, or other spatial extensions of planar drawings resulting in a number of planes projected in space at various angles. The lettering required for identifying such planes may require angular inclinations quite out of the ordinary, in order to look natural on such drawings. The present invention is easily adaptable to this type of graphic representations and extends considerably the usefulness of simple scribing devices using letter guides or templates.

The primary object of the invention, therefore, resides in the provision of an improved adjustable scriber conceived for simply, efficiently and considerably increasing the scope of such conventional scribing instruments having a tracer pin, movable in character grooves of a template, and a tail pin movable in a groove parallel with the line of lettering.

Another objective of the invention is the provision of a scriber of the character described above with which letters and characters can be inclined, at will, either to the right or left of a vertical position, using for that purpose one single conventional template or letter guide.

A further object of the invention contemplates a simplified version of the conventional scriber with, however, a greatly increased scope of usefulness.

Still another object of the invention relates to a lettering scriber of the type described which is sturdy, light, easily adjustable and even less expensive to produce than the conventional types.

Other objects and advantages of the invention will be described further, or become apparent, during the description to follow.

As an example, and for purposes of illustration

only, an embodiment of the invention is shown in the annexed drawings, wherein:

Figure 1 is a perspective view of a scribing device according to the invention and being adjusted, or set, over a setting-up grid;

Figure 2 is a plan view of such a setting-up grid, or grating;

Figure 3 is an elevation of the scriber in the position of Figure 1, over the grating shown in section;

Figure 4 is a perspective view, enlarged, of the scribing instrument of the invention, in lettering position over a conventional letter guide or template;

Figure 5 is a vertical section through the knob locking in place the composite members of the scriber; and

Figure 6 is a plan view of a reference sheet, or table, showing the various character inclinations possible with the scriber of the invention, or range thereof, the characters being disposed on said sheet in progressively inclined positions and arranged to correspond with the ruling of the setting-up grid.

Referring to the drawings, wherein similar reference characters represent corresponding parts throughout, the reference character S designates generally the scriber of the invention, as a whole, the letter T the template or letter guide, while G indicates the setting-up grating and R the reference sheet or table.

As shown to advantage in Figure 4, the scriber S is formed of a body 6 and a tracer bar 7. Said body is a generally triangular, or tapered, flat bar terminated at its pointed end with a tail pin 8. For replacement purposes, said pin 8 may be threadedly secured to the bar by means of the retaining nut 9. For purposes of legibility and lightness, the body 6 may be provided with an opening 10 thereby forming a frame-shaped tail portion.

The other, wide, end of the body is formed with an offset extension arm 11, said extension being substantially in line with the upper edge of the body bar, as shown in Figure 4 and forming an elbow shaped scribing portion. The arm 11 is intended to carry a scribing member, such as a pen, ball point pen, pencil lead holder and the like, a simple pointed lead 12 being illustrated in the drawings. Said scribing member may be inserted in an aperture at the end of the arm and frictionally held therein; longitudinal slot 13 is provided for that purpose, although more friction may be obtained through the instrumentality of a screw (not shown) exerting closing tension on both sides of slot. Immediately at the rear of the slot there is a threaded hole in the arm, in which hole a pin 14 is threadedly engaged, said pin being terminated in a cupped head 15 and locked in position by the lock nut 16. Approximately in the middle of the body portion comprised between the arm 11 and the aperture 10, there is threaded a central, vertically mounted screw 18, the head 19 of which is recessed underneath the body bar, as shown in Figure 5. This screw is adapted to receive a knurled knob 20 for clamping the tracer bar which is the characteristic feature of this invention.

This tracer bar carries the reference character 7 in the drawings and is so called because it supports the tracer pin which is used for tracing the indicia on the lettering guide. Said bar 7 is frame-shaped, being slotted longitudinally for receiving the screw 18 and is consequently movable axially as well as pivotally around said screw which then acts as a pivot. The length of said tracer bar is also chosen such that the tracer pin 22, at one end thereof, can clear the tail pin end of the body bar, as the tracer bar is swung from one side of the body to the other.

Because the radius of the tracer bar is variable at will, that it is capable of moving arcuately around the pivot screw for at least 325°, the said bar can assume an almost infinite number of positions around the screw 18. Thus, due to the particular design and mounting of the tracer bar on the body 6, the position of the tracer pin, with respect to the tail pin and scribing member, can be changed over such a wide range that a correspondingly wider choice of letter slants can be obtained from a single template. This will be readily appreciated by any one who has had occasion to use the conventional adjustable lettering scribers.

In order to tabulate the continuously variable adjustments of the scriber of the invention, into a readily reproducible number of letter styles, or slants, a setting-up grating or gauge plate has been conceived which is shown in Figures 1 and 2. Said grid "G" consists of a sheet 25 of suitable material having a quadrillé of lines, each intersection of which carries a small cavity, or depression 26. The horizontal lines are identified by numbers and the vertical lines by letters (see Figure 2). The top of the sheet is provided with marginal holes 27, arranged in pairs at the right corner and with holes 28 at the left corner. The said holes are pilot holes for positioning the body of the scriber over the sheet G, the distance between the rightward holes 27—28, or the leftward ones for that matter, being exactly the distance between the tail pin 8 and the pin 14 of the scriber.

The reference record, or sheet, R is a tabulation of the letters obtained when the scriber in set in accordance with the grating G: this sheet is divided into two main classifications. The upper half 31 of the sheet 30 comprises the representation of letters or characters leaning leftward, while the lower half 32 of said sheet is reserved for characters having a position extending from the vertical to a rightward slant or inclination, excepting the upper left hand corner wherein the letters are slightly inclined leftward.

It will be noted that the characters of sheet 30 are lined and spaced in accordance with the system adopted for the grating: the horizontal lines carry numerals, while the vertical columns are identified by letters. Therefore, it is a feature of this system that any letter chosen on the part 32 of the sheet 30, for instance, corresponds in location with the similarly identified depression 26 on the grating G. For example, the letter E within the circle 33, in the "D" position of line 2 of the lower half 32, represents the style or inclination of lettering obtained when setting the scriber, as shown in Figure 1, so that the scriber pin 22 engages the depression 26 within the circle 34 of Figure 2. Said circle 34 will be seen to occupy position "D" in line 2 of the grating; there is, therefore, perfect equivalence between the tabulation of sheet R and the gauge or grating G.

It must be noted, however, that the setting-up of the scriber is important because, as can be appreciated from the printed instructions on sheet 30, the scriber can be used either above or below a letter guide or template. In Fig. 4 the scriber is shown above a letter guide T, in conventional manner; but, for the lettering style

shown in the upper half 31 of sheet 30 the scriber is used below the letter template. Obviously, when so used, the scriber bar must be swung around and past the tail pin so that the scriber pin 22 may occupy a position above the upper edge 35 of the scriber, as seen in Figure 4. It follows, automatically, that the scriber must be adjusted, or set, in a different manner whenever the characters to be scribed must be inclined to the left or to the right.

The positioning holes 27—28 are provided for the specific purpose of locating the scriber body in one fixed position, as the scriber bar is adjusted to register with the desired depression 26. But, as noted previously, each hole 27 or 28 of one pair is intended to co-operate with the corresponding hole of the other pair. So, to adjust the scriber for the character styles of the lower half 32 of sheet R, the scriber is adjusted on the grating with the scribing instrument 12 to the left. This means that pins 8 and 14 will occupy the right holes 27 and 28, respectively.

Conversely, for the styles of upper half 31, the scriber must be adjusted with the point 12 to the right and consequently, the pins 14 and 8 will now be reversed and occupy, respectively the left holes 27 and 28.

In the position last noted above, the scriber appears upside down, that is: with the edge 35 downward.

Although the description of the scriber adjustment may appear elaborate and complicated, it is nevertheless very simple with the proper gauge and reference sheet, the required position on said gauge being obtained at a glance from the showing of reference table R.

In use, the operation of the scriber of the invention does not differ in any material respect from the customary scribing instruments now on the market; consequently, any operator proficient with the manual scribers presently available should be equally proficient with the scriber of the invention, notwithstanding the extended scope of the said scriber affording freer rein to an imaginative operator.

The versatility of the scriber of the invention is a matter of importance, judging from the efforts made so far to produce such an article. The patent literature contains many and varied examples of scribers ingeniously conceived for obtaining a wide range of letter inclinations, such instruments being actually marketed with integrally-provided, fixed provisions, so that vertical, italic and slant lettering may be made with the same lettering guides.

Unfortunately, however, the said known scribers have no way of extending the inclinations they are capable of, without major redesign, and, for all their limited scope, they are more complicated and expensive than the simplified scriber of the present invention.

Summing up the construction of the scriber in question, it will be seen that it consists of a simple, flat, tapered body having a tail pin at the tapered end and an offset arm carrying a scribing lead, or pen, at the other. Somewhat to the left of the center between tail pin and pen, there is mounted a vertically upstanding threaded pivot carrying a threaded knob and an elongated, narrow, longitudinally slotted bar carrying a tracer pin at one end.

The tracer bar is adapted to be clamped in any position by the knob and is of dimensions such that the tracer pin can clear the tail pin as the bar is swung around its pivot, at fully extended

position. Consequently, the tracer pin can be positioned either above, or below, the tracer body and, obviously, the radius of the tracer bar is variable at will.

From the foregoing, it should be apparent that the present invention is an advance in the art of manual scribing devices for lettering and other purposes. With its use, a competent operator should be capable of choosing at will suitably inclined characters from a wide selection available from a single lettering guide, or template. This selection, furthermore, should be simple, without complications and the instrument capable of responding at least as well as the other conventional devices with which said operator is familiar.

Obviously, the present invention fulfills all objectives above.

It must be understood, also, that various changes as to the shape, size and arrangement of parts can be resorted to without departing from the spirit of the invention, or the scope of the subjoined claims.

What I claim is:

1. A scriber, comprising a body having a tail portion and a scribing portion, a scribing member at one end of said scribing portion, a tail pin carried by said tail portion, a tracer bar located upon said body and having an elongated slot formed therein, a pivot member carried by said body substantially between said portions and extending into said slot, means connected with said pivot member for clamping said tracer bar, said tracer bar projecting on both sides of said body, a single tracer pin carried by one end of said tracer bar and located on one side of said body, the maximum distance between said tracer pin and said pivot member being substantially greater than the distance between said pivot member and said tail pin, whereby said tracer pin may be swung by said tracer bar around said pivot member past said tail pin from one side of said body to the other side of said body.

2. A scriber comprising a elongated body, a scribing member at one end of said body, a tail pin secured to the other end of said body, a tracer bar located upon said body and having an elongated slot made therein, said slot having two ends, a pivot member carried by said body intermediate its ends and extending through said slot, means connected with said pivot member for clamping said tracer bar on said body, a single tracer pin carried by one end of said tracer bar, the distance between said tracer pin and the end of said slot remote from said tracer pin being greater than the distance between said pivot member and said tail pin whereby said tracer bar may be swung around said pivot member past said tail pin from a position in which said tracer pin is on one side of said body to a position in which said tracer pin is on the other side of said body.

3. In a scribing device having a body, a tail pin at one end thereof and a scriber arm at the other end, a pivot pin upstanding from said body medially between said arm and said tail pin, an elongated tracer bar having a longitudinal two-ended slot through which said pivot pin extends, said bar slidable longitudinally of and movable pivotally about said pivot pin, a locking knob engageable with said pivot pin for clamping said tracer bar in position on the body, and a single tracer pin carried by one end of the tracer bar, the distance between said tracer pin and the end of said slot remote from said tracer pin being greater than the distance between said pivot pin and said tail pin, whereby the tracer pin can be

locked selectively in any position corresponding to arcs 325° maximum and any radii comprised within the length of the slot of the tracer bar.

4. A scriber, comprising a body having a tail portion and a scribing portion, a scribing member at one end of said scribing portion, a tail pin carried by said tail portion, a tracer bar located upon said body and having an elongated slot formed therein, a pivot member carried by said body substantially between said portions and extending into said slot, said tracer bar projecting on both sides of said body, a single tracer pin carried by one end of said tracer bar and located on one side of said body, the maximum distance between said tracer pin and said pivot member being substantially greater than the distance between said pivot member and said tail pin, whereby said tracer pin may be swung by said tracer bar around said pivot member past said tail pin from one side of said body to the other side of said body.

References Cited in the file of this patent

UNITED STATES PATENTS

Number	Name	Date
2,011,195	Keuffel	Aug. 13, 1935
2,557,152	Smith et al.	June 19, 1951

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Number	Country	Date
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434,528	Germany	Sept. 25, 1926