Jan. 15, 1957 E. C. WOOD 2,777,200

SCRIBER

Filed April 3, 1953 2 Sheets-Sheet 1

Fig. 1

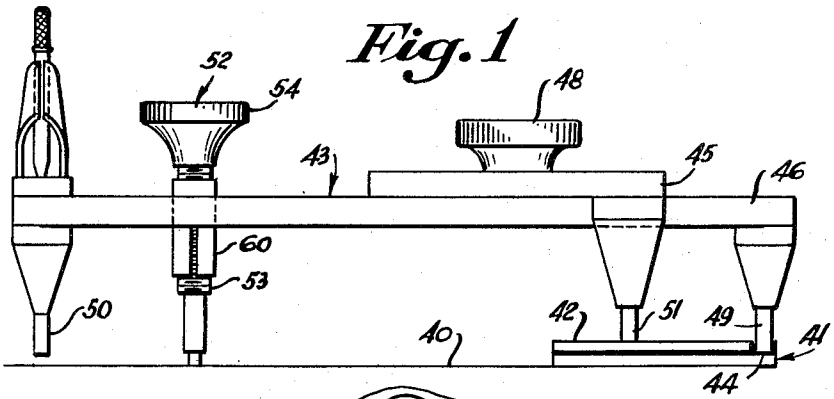


Fig. 2

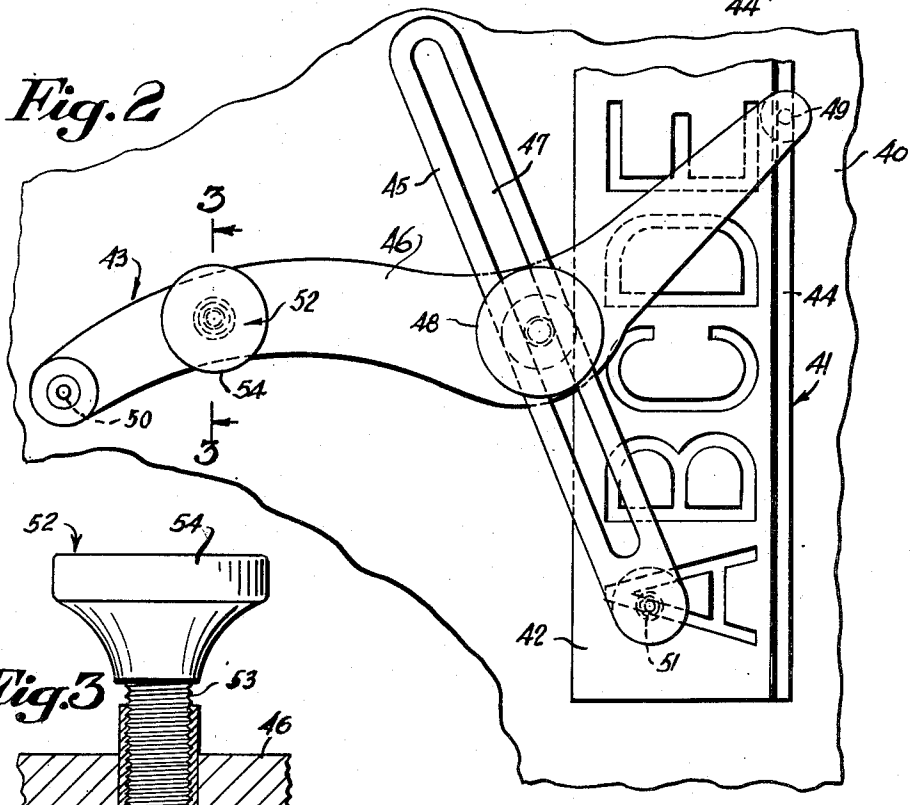


Fig. 3

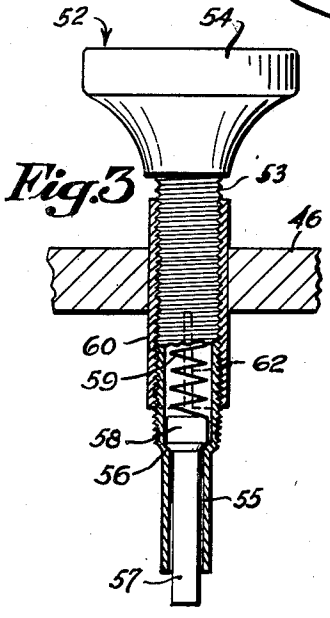
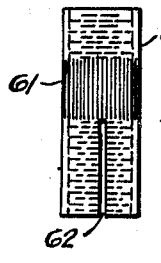


Fig. 5



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Fig. 6

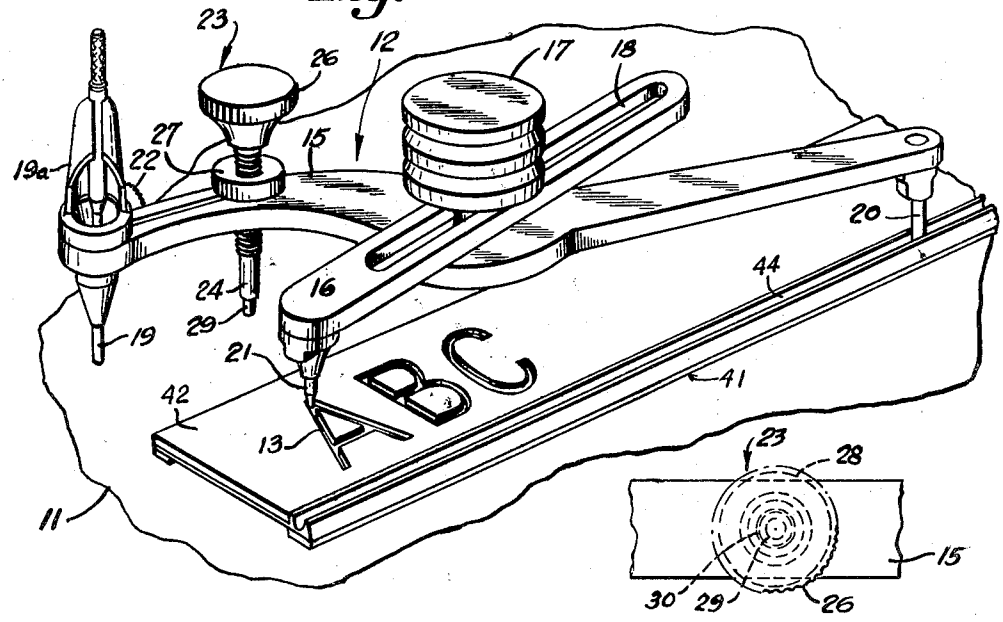


Fig. 7

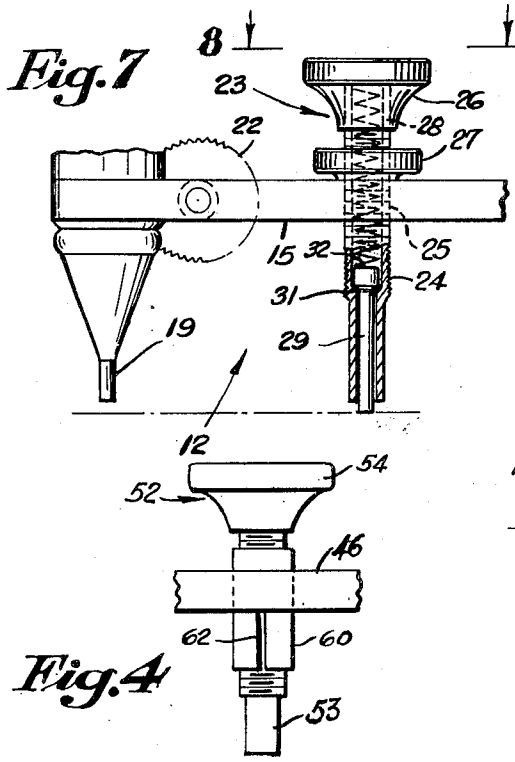
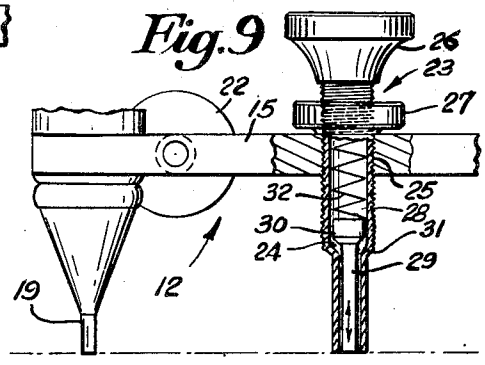


Fig. 4

Fig. 8

Fig. 9



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SCRIBER

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Application April 3, 1953, Serial No. 346,641

2 Claims. (Cl. 33—18)

This invention relates to improvements in mechanical lettering devices and, more particularly, to improvements in the scribers of mechanical lettering devices.

Known mechanical lettering devices are constituted of a templet and a scriber. The templet is an elongated rectangular body on which are spaced grooved characters, such as letters and numerals. The templet may be supported on a templet holder such as described in detail in applicant's copending application, Serial No. 90,611, filed April 30, 1949, and now abandoned. Along one edge of the templet holder is a longitudinal groove in which the tail pin of the scriber is inserted. Known scribers are constituted of a directing arm and a transcribing arm adjustably secured together or even fixed intermediate the ends thereof. At one end of the directing arm is a tracing point designed to follow the groove of the character on the templet being transferred. At one end of the transcribing arm is the previously mentioned tail pin designed to follow said longitudinal groove. At the opposite end of the transcribing arm is a pen point. At present, when the operator finishes making a character and desires for any reason to stop lettering either momentarily or for some time, the scriber must be set aside.

It is an object of the instant invention to provide a scriber in which a spring post is provided in the transcribing arm for automatically raising the pen point from the paper when the operator desires to stop lettering.

Another object is to disclose a scriber in which the spring post for automatically raising the pen point is so designed that pressure on the pen point can never exceed a predetermined limit.

Other objects of the instant invention will become apparent in the course of the following specification.

In the attainment of the aforesaid objectives, the improved scriber has a spring post adjustably inserted through the transcribing arm adjacent to and in spaced parallel arrangement with the pen point for automatically raising the pen point from the paper whenever the lettering operation is suspended. In the first embodiment, the spring post is constituted of an internally threaded sleeve inserted in the transcribing arm and held in place by any suitable means with at least the portion protruding below the arm longitudinally slit. An externally threaded cylinder is threaded through the sleeve and locked in any desired position therein by the spring-like character of the slit sleeve. Upwardly directed through the bottom of the cylinder is a bore constricted at the bottom. A plunger is slidably inserted in the bore, the plunger having a land formed on the inner end designed to engage the inner end of the constricted portion or shoulder in the bore when the opposite end of the plunger protrudes through the bottom of the bore for the maximum distance. A spiral spring between the inner end of the land and the opposed end of the bore maintains the outer end of the plunger normally protruding under tension through the bottom of the bore and retractile therein against the outwardly directed tension of the

spring. The second embodiment is like the first except that a lock nut on the externally threaded cylinder of the spring post is provided for tightening against the top of the transcribing arm in place of the slit sleeve for locking the cylinder in any desired position.

The invention will appear more clearly from the following detailed description when taken in conjunction with the accompanying drawings showing by way of example two embodiments of the improved scriber.

In the drawings:

Figures 1–5 show the first embodiment of the improved scriber constructed in accordance with the principles of this invention, and in which:

Figure 1 is an elevational view of the improved scriber with the plunger of the spring post extended and maintaining the pen point raised from the paper;

Figure 2 is a plan view of the scriber shown in Figure 1;

Figure 3 is a view along 3—3 of Figure 2 in part section and on an enlarged scale;

Figure 4 is an elevational view of the spring post shown in Figure 3 but with the plunger retracted for lowering the pen point to the writing position;

Figure 5 is an elevational view of the slit sleeve for locking the spring post in any desired position in the transcribing arm.

Figures 6–9 show the second embodiment of the improved scriber and in which:

Figure 6 is a perspective view of the improved scriber with the plunger of the spring post extended and maintaining the pen point in the raised position relative to the paper;

Figure 7 is an enlarged elevational view of the pen point and spring post shown in Figure 6 in part section;

Figure 8 is a view along 8—8 of Figure 7; and

Figure 9 is a view similar to Figure 7 but with the plunger of the spring post retracted for lowering the pen point to the writing position.

Referring now in greater detail to the first embodiment of the improved scriber shown in Figures 1–5, reference numeral 40 indicates a sheet of paper, 41 the templet holder, 42 the templet, and 43 the scriber.

The sheet of paper 40 may be any known type suitable for taking an ink impression.

The templet holder 41 is an elongated rectangular member having a longitudinal groove 44 adjacent one edge and described in detail in applicant's copending application Ser. No. 90,611, filed April 30, 1949, and now abandoned. The templet 42 is a rectangular member designed to be inserted on top of the templet holder 41 with one edge in juxtaposition with the groove 44. On the templet are the grooved letters of the alphabet (Fig. 2), and grooved numerals, etc., not shown in the drawing.

The scriber 43 is constituted of the known directing arm 45 and the transcribing arm 46. In the directing arm 45 is the usual longitudinal slot 47 through which the thumb nut 48 is inserted and then threaded into the transcribing arm 46 for adjustably locking the two arms together in any desired position for varying the slant and height of the characters transcribed to the paper from the templet.

At one end of the transcribing arm 46 is the depending tail pin 49 which is slidably inserted in the longitudinal groove 44 of the templet holder. At the opposite end of the transcribing arm 46 is the pen point 50. At one end of the directing arm 45 is the tracing pin 51 which is designed to follow the groove of the character on the templet being transferred. The tail pin 49, the pen point 50, and the tracing pin 51 are of known type.

Adjacent the pen point 50 and downwardly directed through the transcribing arm 46 is the spring post 52.

The spring post 52 is constituted of an externally threaded cylinder 53 fixed at the top to the thumb nut 54. Through the bottom of the cylinder 53 is a longitudinal bore 55 (Fig. 3) which is constricted at the bottom so that a shoulder 56 is formed. Slidably inserted in the bore 55 is a plunger 57 having on the inner end a land 58 (Fig. 3) which is in juxtaposition with the shoulder 56 when the outer end of the plunger protrudes for the maximum distance through the bottom of the cylinder. Maintaining the outer end of the plunger normally protruding under tension through the bottom of the cylinder and the land 58 against the shoulder 56 is a spiral spring 59 with one end against the inner end of the land 58 and the opposite end against the opposed end of the bore.

Maintaining the cylinder 53 downwardly directed and adjustable through the transcribing arm 46 and in spaced parallel arrangement with the pen point 50 is a slit sleeve 60. The slit sleeve 60 is inserted through an opening made through the transcribing arm 46 adjacent the pen point and is fixed in the arm by any suitable means, the means shown being the knurled surface 61 (Fig. 5). The sleeve 60 is internally threaded for the threaded insertion of the externally threaded cylinder 53 and has at least one longitudinal slit 62 which imparts in the sleeve a spring tension for securing the bottom of the cylinder in any desired position below the arm as later shown.

Referring now to the second embodiment of the improved scriber shown in Figures 6 to 9, the templet holder 41 carries the templet 42 and is located upon a sheet of paper 11, which may be any known type capable of taking an ink impression.

The improved scriber 12, like the scriber of the first embodiment, is constituted of the known transcribing arm 15 and directing arm 16 adjustably attached together in a known manner by the thumb nut 17 in coaction with a longitudinal slot 18 formed in the directing arm 16. At one end of the transcribing arm 15 is the depending pen point 19 and at the opposite end the tail pin 20 coacting with the longitudinal groove 44 in the templet holder 41. At one end of the directing arm 16 is the depending tracing point 21 coacting with the grooved characters 13 on the templet. A thumb nut 22 in the transcribing arm 15 secures the ink holder 19*a* in place.

A vertically adjustable spring post 23 is provided in the transcribing arm 15 and, like the spring post of the first embodiment, is so designed that when the scriber is free the spring post 23 will automatically raise the inking point 19 from the paper and when in operation will prevent undue pressure from being applied to the inking point.

The spring post 23 is constituted of an externally threaded cylinder 24 adjustably inserted through a threaded opening 25 formed through the arm 15 adjacent the transcribing point 19. Secured as desired to the top of the cylinder 24 is a knurled thumb nut 26. A lock nut 27 is threaded on the cylinder 24 below the thumb nut 26 for tightening against the top of the transcribing arm 15 after the cylinder 24 has been threaded through the arm 15 to a point where the bottom thereof will have approximately the same perpendicular distance from the bottom of the arm 15 as the bottom of the pen point 19, otherwise expressed, the length of the pen point 19 below the arm 15 is approximately the same as the corresponding length of the cylinder 24, even slightly less than the corresponding length of the cylinder so that the ink may flow freely through the pen point without being squeezed out by the pressure of the pen point on the paper.

A longitudinal bore 28 is formed through the bottom of the cylinder 24, the bore being constricted at the bottom as most clearly shown in Figures 7 and 9. Slidably inserted in the bore 28 is a plunger 29. A land 30 is formed on the inner end of the plunger 29 for reciprocal movement in the bore of enlarged diameter. Between the constricted and enlarged portions of the bore 28 is a shoulder 31 which in coaction with the land 30 prevents the plunger 29 from falling out of the bottom of the cylinder. Maintaining the outer end of the plunger 29 normally protruding under tension through the bottom of the cylinder and the land 30 against the shoulder 31, that is when the scriber is free as shown in Figure 7, is a spiral spring 32 between the inner end of the land 30 and the opposed end of the enlarged portion of the bore 28.

As thus described and illustrated, the only difference between the spring post of the first and second embodiments is in the means for holding the spring post in any desired position in the transcribing arm so that the bottom of the cylinder is equally spaced from the arm with the bottom of the pen point or even slightly below the pen point. In the first embodiment, the split sleeve is used for holding the bottom of the cylinder in the desired position while in the second embodiment a lock nut is used.

In operation, assume that the tail pin 49 of the first embodiment is inserted in the longitudinal groove 44 of the templet holder 41 or that the tail pin 20 of the second embodiment is inserted in the longitudinal groove 44 of the template 42 of the second embodiment. In actual practice some users will rest the index finger on the top of the knurled thumb nut 52 of the first embodiment or in the case of the second embodiment on the thumb nut 23. However, most operators will hold the nut 48, first embodiment, or the similar nut 17, second embodiment, between the thumb and the first and second fingers. Moving the tracing point of either scriber 43 or 12 around the groove of a character and pressing down sufficiently to retract the plunger 57 or 29 into the bore of the cylinder against the tension of the spring, the bottom of the inking point, providing the spacing of the cylinder below the arm has been properly adjusted relative to the bottom of the pen point, will be brought sufficiently in contact with the paper to trace the character of the templet on the paper. When the operator desires to stop lettering, simply by releasing the scriber, the outer end of the plunger 57 or 29 will automatically under the tension of the spring be forced through the bottom of the cylinder and raise the pen point 50 or 19 from the paper until the operator is again ready to resume lettering.

While there are above disclosed but a limited number of embodiments of the structure of the invention herein presented, it is possible to produce still other embodiments without departing from the inventive concept herein disclosed, and it is desired therefore that only such limitations be imposed on the appended claims as are stated therein.

What is claimed is:

1. A spring post for a scriber having at least one arm, the arm having a pen point adjacent one end and an opening adjacent the pen point; the spring post comprising an externally threaded cylinder, said cylinder having a thumb screw at the top and a longitudinal bore through the bottom thereof, the bore being constricted at the bottom and forming a shoulder therein, a plunger slidably disposed in the bore, said plunger having a land formed on the inner end thereof, the land being in juxtaposition with the shoulder when the outer end of the plunger protrudes through the bottom of the bore for the maximum distance, a spiral spring disposed in the bore intermediate the land and the opposed end of the bore, and an internally threaded split sleeve disposed in the opening coacting with the externally threaded cylinder.

2. A spring post for a scriber having at least one arm, the arm having a pen point adjacent one end and a threaded opening adjacent the pen point; the spring post comprising an externally threaded cylinder for the

threaded opening, the cylinder having a thumb screw at the top and a longitudinal bore through the bottom thereof, the bore being constricted at the bottom and forming a shoulder therein, a lock nut threaded on the cylinder intermediate the thumb screw and the arm, a plunger slidably disposed in the bore, the plunger having a land formed on the inner end thereof, the land being in juxtaposition with the shoulder when the outer end of the plunger protrudes through the bottom of the bore for the maximum distance, and a spiral spring disposed in the bore intermediate the land and the opposed end of the bore.

References Cited in the file of this patent

UNITED STATES PATENTS

512,718	Kleritj	Jan. 16, 1894
1,601,779	Thompson	Oct. 5, 1926
1,629,143	Bungart	May 15, 1927
1,901,908	Hoyos	Mar. 21, 1933
2,050,058	Keuffel	Aug. 4, 1936
2,491,770	Ross	Dec. 20, 1949
2,507,045	Parr	May 9, 1950
2,594,457	Kunzler	Apr. 29, 1952
2,686,971	Valois	Aug. 24, 1954

FOREIGN PATENTS

352,195	Germany	Apr. 22, 1922
974,678	France	Oct. 4, 1950
812,052	Germany	Aug. 27, 1951