

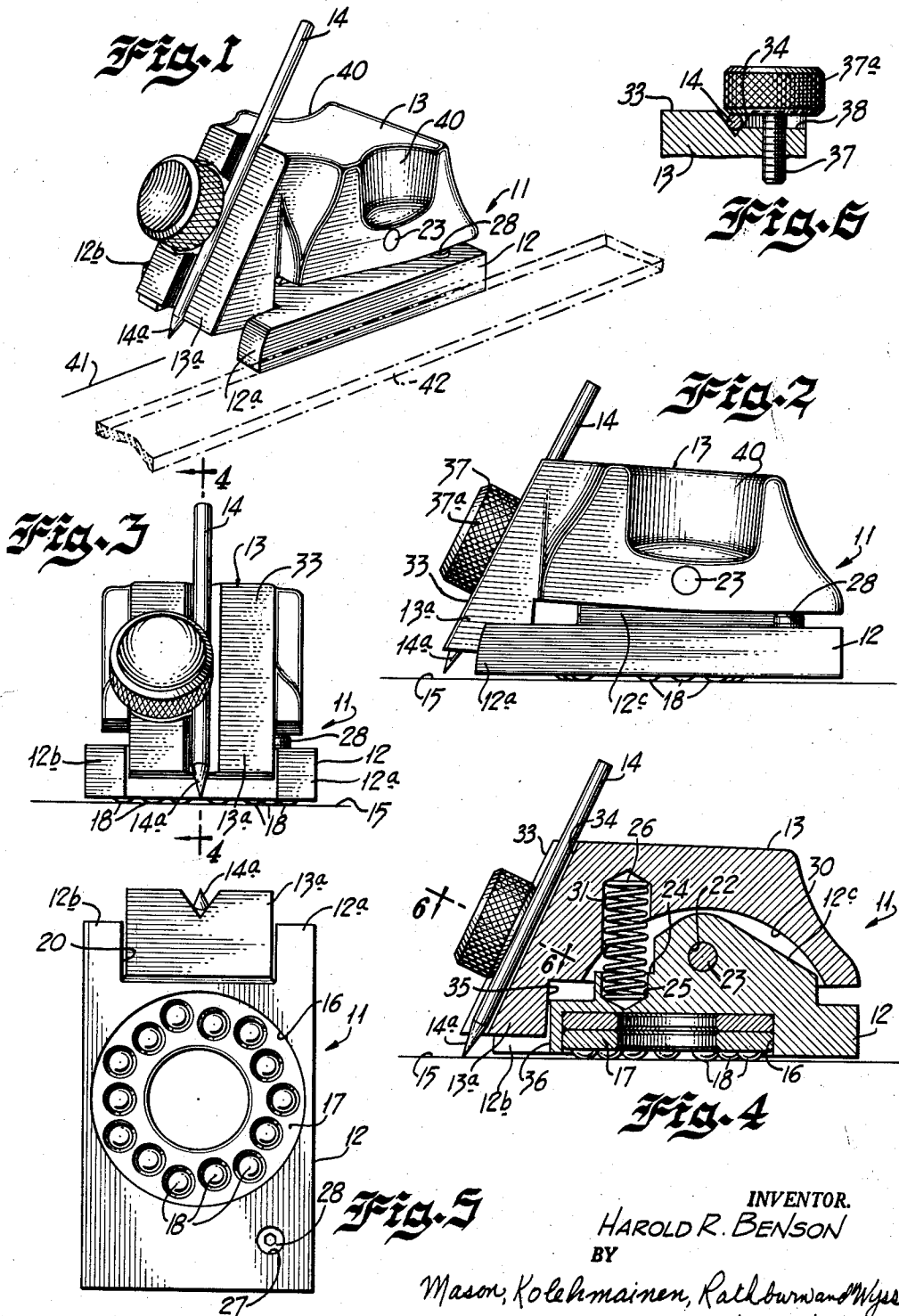
May 19, 1964

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Filed Dec. 19, 1961



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Filed Dec. 19, 1961, Ser. No. 160,578
3 Claims. (Cl. 30-164.9)

The present invention relates to a scriber particularly useful in the graphic arts industry.

In the graphic arts industry, particularly in connection with plate making and similar operations, it is necessary to employ line up tables, stripping tables and the like. Many times it is necessary to perform accurate scribing operations and no truly satisfactory scriber is available. Such scribers should be capable of receiving a great variety of writing instruments, such as pens, pencils, scribing tools and the like, and their usefulness is further enhanced if they are suitable for receiving knives or other instruments. The convenience of the user and the quality of his work is further increased if the scriber moves easily in any direction over the underlying surface without injuring the same in any way or causing accidental markings or cuts thereon. Furthermore, it is desirable to provide a scriber in which excessive manual pressure exerted by the user thereon is not transmitted to the point of the writing or scribing utensil attached thereto.

Accordingly, it is an object of the present invention to provide a new and improved scriber.

It is another object of the present invention to provide a scriber capable of holding any one of a great variety of instruments for writing, marking or cutting on a surface.

A further object of the present invention is to provide a scriber which may be easily moved in any direction on a level surface.

Another object of the invention is to provide a scriber which will mark the underlying surface only when actuated by downward pressure.

Still another object of the present invention is to provide a scriber in which the carrier is spring-loaded to resist downward pressure.

Another object of the invention is to provide a scriber in which excessive pressure exerted thereon by the user is not transmitted to the scribing portion of the device.

Further objects and advantages of the present invention will become apparent as the following description proceeds and the features of novelty which characterize the invention will be pointed out with particularity in the claims annexed to and forming a part of this specification.

For a better understanding of the present invention, reference may be had to the accompanying drawing in which:

FIG. 1 is a perspective view of the scriber of the present invention shown adjacent a straight edge and indicating a mark made therewith on a suitable surface;

FIG. 2 is a side elevational view of the scriber of the present invention when resting on a surface but not performing a scribing operation;

FIG. 3 is a front elevational view of the scriber of FIGS. 1 and 2;

FIG. 4 is a sectional view taken along line 4-4 of FIG. 3 but with the scriber shown in the position it assumes when performing a scribing operation;

FIG. 5 is a bottom view of the scriber of the present invention; and

FIG. 6 is a fragmentary sectional view taken along line 6-6 of FIG. 4.

Briefly, the present invention pertains to a scriber 11 having a base or carriage 12 slidable in any direction and a scribing tool supporting means 13 pivotally mounted to the carriage 12. The supporting means 13 is adapted to

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receive and retain a scribing tool 14 in the form of a pen, pencil, knife, etc. so that the point 14a thereof when properly attached is normally out of contact with the underlying surface indicated at 15 in FIGS. 2, 3 and 4 of the drawing. Pressure applied to the front portion of the supporting means 13 is necessary to make such contact and a stop is provided preventing excessive pressure from being transmitted to the point 14a of the scribing member 14.

Considering the invention in more detail, the scriber 11 includes the generally rectangular base or carriage 12, illustrated as having straight, parallel, longitudinal sides. As best shown in FIGS. 4 and 5 of the drawing a circular recess 16 is provided in the under side of the base or carriage 12. A ball bearing supporting ring 17 supporting a plurality of spheres or ball bearings 18 in a generally circular arrangement is press-fitted or otherwise secured within the recess 16 so that the ball bearings 18 support the base 12 slightly above the level of the surface 15 supporting the scriber 11, as clearly shown in FIGS. 2, 3 and 4 of the drawing. It is desirable to have the ball bearings spread over a substantial area of the bottom of the base 12 in order to minimize the risk of accidental tilting of the base during the operation of the scriber which might result in undesirable marking or injury of the underlying surface 15. The ball bearings 18 effectively provide wheels for the carriage 12, and since they can rotate in any direction this permits easy movement of the scriber in any direction and prevents spurious marking on the underlying surface 15.

The base or carriage 12 is provided at the forward end thereof with a pair of spaced integral projections 12a and 12b defining a notch 20 therebetween (FIGS. 1 and 5). Also, the base or carriage 12 includes a central integral, somewhat triangular shaped projection 12c extending from the top center and defining a pivot support for the scriber supporting means 13. Projection 12c includes a transverse opening 22 for receiving a pivot pin 23. The forward portion of projection 12c adjacent notch 20 is stepped as clearly indicated at 24 in FIG. 4 of the drawing and a spring receiving recess 25 is provided in the step for receiving one end of a coiled compression spring 26. The base 12 is also provided with a tapped opening 27 (FIG. 5) adjacent the rear for receiving an adjustable stop member 28. In a device built in accordance with the present invention, stop member 28 was a screw adjustable in opening 27 by using an Allen wrench, the screw being accessible with respect to said wrench from the underside of base 12. The base or carriage 12 may be formed of any suitable material, such as metal, plastic, or the like, preferably formed as a cast or molded element.

The scribing tool supporting means 13 may also be formed as a cast or molded element of metal, plastic, or the like, and includes on the under side thereof a first recess 30 (FIG. 4) for receiving projection 12c. The side walls defining recess 30 are provided with aligned openings for receiving the ends of pivot pin 23, whereby supporting means 13 is mounted for limited pivotal movement about the horizontal axis of pivot pin 23, and, consequently, is pivotally mounted to the base or carriage 12. A second recess 31 is also provided in supporting means 13 forwardly of pivot pin 23, which is in effect a continuation of recess 30. The other end of compression spring 26 is received in recess 31, whereby supporting means 13 is continuously biased in a clockwise direction, as viewed in FIG. 4 of the drawing, about the pivotal axis of pivot pin 23 against the stop provided by adjustable member 28.

For the purpose of supporting a suitable scribing tool, a particular one being illustrated as 14 in the drawing,

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the forward portion of supporting means 13 defines an angularly disposed plane surface 33 having substantially in the center of the surface a longitudinally extending V-notch 34. The surface 33 terminates in a projection 13a receivable in the notch 20. The rear of the projection 13a defines a shoulder 35, best shown in FIG. 4 of the drawing, which is adapted to engage with a surface 36 defining the rear of the notch 20. Engagement of the shoulder 35 with the stop surface 36 limits the pivotal movement of supporting means 13 about pivot pin 23 in a counterclockwise direction, as viewed in FIG. 4 of the drawing. In order to support any suitable scribing member in the V-groove 34, there is provided a clamping screw 37 threadedly mounted in the supporting member 13 to one side of the V-groove 34. Preferably the angularly disposed surface 33 is provided with a recess 38 for receiving the enlarged head 37a of clamping screw 37. A substantial portion of the head 37a of clamping screw 37 overlies the V-groove 34 for clamping into this groove a pen, a pencil, a scribing tool, or any similar device. The scribing tool, such as 14, is clamped in such a position that upon depression of the forward portion of supporting means 13, the point 14a of the scribing tool will engage the surface 15, as clearly shown in FIG. 4 of the drawing. In order that the scriber 11 of the present invention may readily be grasped by the operator, the supporting means 13 is preferably provided with finger engaging recesses 40 on either side thereof.

In view of the detailed description included above, the operation of the scriber of the present invention will readily be understood by those skilled in the art. Briefly, however, a suitable scribing member, such as 14, is clamped in the V-groove 34 by the clamping screw 37 in such a position as to make the desired mark on the surface of the member being scribed when the operator pivots the supporting member 13 in a counterclockwise direction about pivot pin 23, as viewed in FIG. 4 of the drawing. Such a mark is designated as 41 in FIG. 1 of the drawing. Moreover the longitudinal sides of the base 12 are adapted to be guided by any suitable straight edge, such as indicated as 42 in FIG. 1 of the drawing. In view of the ball bearing rollers 18, the scribing tool will slide in any direction over the surface to be scribed and as soon as the operator releases the device, the point 14a of the scriber will move out of engagement with the surface 15 being scribed due to the action of spring 26. The scriber of the present invention has particular utility in the graphic arts industry in connection with line up tables, stripping tables and the like, but obviously it has application for use in many drafting operations. The scriber, moreover, is very simple and compact, may be manufactured at low cost, and due to its sturdiness and simplicity will give long years of trouble-free operation.

While there has been illustrated and described a particular embodiment of the present invention, it will be apparent that many changes thereof will occur to those skilled in the art, and it is intended in the appended claims to cover all those changes and modifications as fall within the true spirit and scope of the present invention.

What is claimed as new and desired to be secured by Letters Patent of the United States is:

1. A scriber comprising a base means, supporting means associated with said base means and provided with a forward angularly disposed plane surface having a longitudinally extending V-groove substantially in the center

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thereof, a clamping screw having an enlarged head threadedly mounted in said supporting member to one side of said V-groove, said surface having a recess for receiving said enlarged head, a substantial portion of said head overlying said V-groove for clamping a scribing tool in said V-groove, and means for supporting said scriber for movement over an underlying surface.

2. A scriber comprising a base member provided with a circular recess in its underside, a ball bearing supporting ring secured in said recess, a plurality of ball bearing rollers carried by said ring in a generally circular arrangement and spacing said underside from an underlying surface, said base means being provided with a projection defining a pivot support, a scribing tool supporting member having a recess provided in its underside for receiving said projection and provided with a forward, angularly disposed plane surface having a longitudinally extending V-groove substantially in the center thereof, pivot means extending through said supporting member and said projection for pivotally interconnecting said base member and said supporting member, and a clamping screw having an enlarged head threadedly mounted in said supporting member to one side of said V-groove, said plane surface having a recess for receiving said enlarged head, a substantial portion of said head overlying said V-groove for clamping a scribing tool in said V-groove.

3. A scriber comprising a base member, means for supporting said base member for movement over an underlying surface, said base member including an upward projection defining a pivot support, a scribing tool supporting member having a recess in its underside for receiving said projection and provided with a forward portion having a plane surface angularly disposed in relation to said underlying surface, said plane surface having a centrally disposed longitudinal V-groove therein for receiving a scribing tool, pivot means extending through said tool supporting member and said upward projection for pivotally mounting said tool supporting member on said base member, clamping means for adjustably securing said scribing tool in said V-groove, spring means engaged between said base member and said tool supporting member for biasing the forward portion of the latter upwardly away from underlying surface, and stop means engageable between said tool supporting member and base member for limiting the downward relative pivotal movement between the forward portion of said tool supporting member and said base member.

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