Nov. 28, 1939. B. E. VAN ALSTYNE 2,181,615

LINE INDICATOR FOR SIDEWISE OPENING BOOKS

Filed May 15, 1939

Fig. 1.

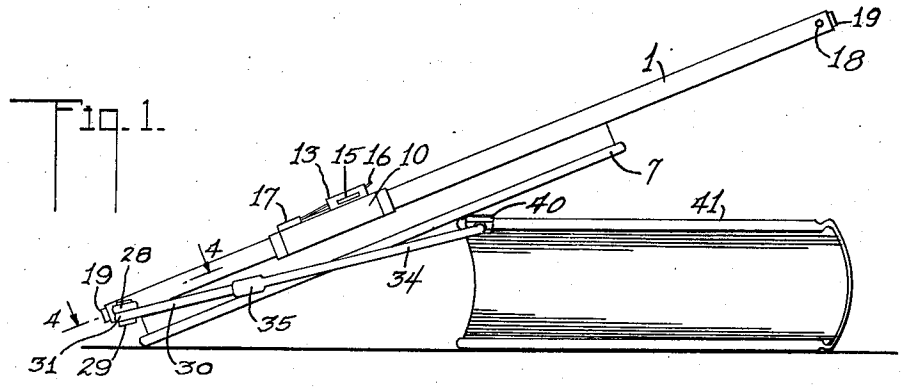
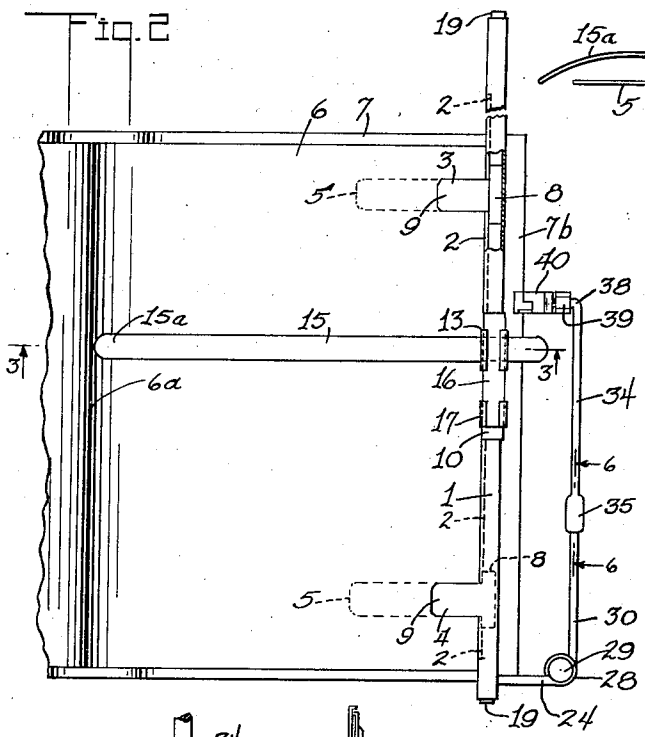


Fig. 2.



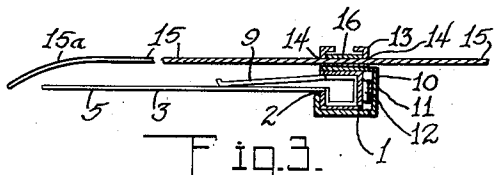


Fig. 3.

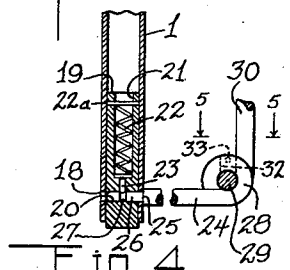


Fig. 4.

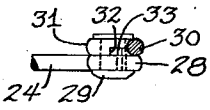


Fig. 5.

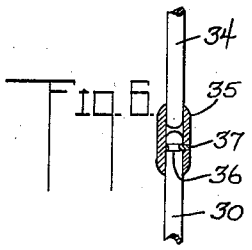


Fig. 6.

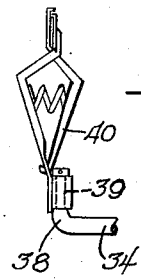


Fig. 7.

INVENTOR.
BONNIE E. VAN ALSTYNE
BY
Munn, Anderson & Liddy
ATTORNEYS.

Patented Nov. 28, 1939 2,181,615

UNITED STATES PATENT OFFICE

2,181,615

LINE INDICATOR FOR SIDEWISE OPENING BOOKS

Bonnie E. Van Alstyne, San Francisco, Calif.

Application May 15, 1939, Serial No. 273,613

8 Claims. (Cl. 120—28)

My invention relates to improvements in a line indicator for sidewise opening books, and it consists of the combinations, constructions and arrangements hereinafter described and claimed.

An object of my invention is to provide a line indicator for sidewise opening books which is an improvement over the invention shown in my co-pending application on a Line indicator, Serial No. 230,844, filed September 20, 1938. In the co-pending case, I show clips movable toward a common base for gripping a paper between the clips and the base. The clips are carried by a guide bar for a line indicator, but they are not adjustable along the bar.

In the present form of the invention, I show two spring clips that are slidably mounted in a guide bar and these clips are designed to yieldingly engage with one or more pages of a sidewise opening book and to hold the guide bar adjacent to the side edge of the page being copied. The adjustability of the clips in the guide bar adapts the device to be quickly secured to a page regardless of the size of the page.

A further object of my invention is to provide a device of the type described in which the line indicating member comprises a deformable strip. This strip is slidably mounted in a carriage which in turn is slidably mounted on the guide bar. The line indicating member or strip may be bent into different curved shapes to conform to the curvature of the page being copied and the strip will hold its shape so that it will be positioned adjacent to the entire length of the line.

I also provide novel means for anchoring the line indicator to the cover of the sidewise opening book and this will permit the line indicating member to be manually moved from line to line without the guide bar exerting any pulling force on the one or more pages to which it is attached. The pulling force is taken up by the anchoring means. The anchoring means may be secured to another book if desired, rather than to the cover of the book being copied, and the other book can further act as a support for holding the first book in the proper inclined position. The anchoring means is removably secured to either end of the guide bar and this adapts the device to be secured to either the right or left hand pages of an open book.

Other objects and advantages will appear in the following specification, and the novel features of the device will be particularly pointed out in the appended claims.

My invention is illustrated in the accompanying drawing forming a part of this application, in which

Figure 1 is a side elevation of the device shown attached to one book and anchored to a second book;

Figure 2 is a plan view of the device shown secured to a single book;

Figure 3 is a section along the line **3—3** of Figure 2;

Figure 4 is a section along the line **4—4** of Figure 1;

Figure 5 is a section along the line **5—5** of Figure 4;

Figure 6 is a section along the line **6—6** of Figure 2; and

Figure 7 is a side elevation of the anchoring clip.

In carrying out my invention, I provide a guide bar shown at **1** in Figures 1 and 2. This guide bar is preferably made from a sheet of metal that is bent to form a bar that is substantially square in cross section. Figure 3 shows how the bar **1** is provided with a slot **2** along its inner upper edge and Figure 2 illustrates how the slot **2** extends substantially throughout the length of the bar.

The bar slidably carries two clips shown at **3** and **4**. Both clips are identical to each other and therefore a description of one will suffice. The clip **3** has a long arm **5** designed to extend under a page **6** in a sidewise opening book **7**. The long arm **5** is integral with a body portion **8** of the clip and this body portion is substantially square in cross section and is designed to slidably contact with the interior surface of the bar **1**. The body **8** is longer than the width of the arm **5**, see Figure 2, and this will give the body a length sufficient to hold the clip against angular swinging while permitting the clip to be moved along the bar **1**.

The clip has an upper short arm **9** that is also integral with the body **8** and this short arm extends over the top of the page **6**. Since the slot **2** in the bar **1** extends substantially throughout the length of the bar, the clips **3** and **4** may be moved into any desired position along the bar. This arrangement permits the clips to grip the page **6** at any desired place. Figure 3 shows the slot **2** as being disposed near the top of the bar and on its inner side. This will position the arms **5** and **9** of the clips close to the top of the bar and therefore the page **6** will be held close to the bar top.

I will now describe the line indicating means and this comprises a carriage **10** that is slidable

along the bar 1. The carriage is shown in cross section in Figure 3 and it will be noted that it slidably engages with the top, bottom and the side wall furthest removed from the page 6. A portion of the carriage also engages with the inner wall of the bar, but this portion does not extend across the slot 2. The outer wall 11 of the carriage is spaced a slight distance from the adjacent outer wall of the bar 1 and a leaf spring 12 is disposed in this space and yieldingly engages with the bar wall in order to frictionally hold the carriage in adjusted position.

The top of the carriage has a spring-retaining member 13, see Figures 2 and 3, with openings 14 in its sides for slidably receiving a line indicating strip 15. A leaf spring 16 is anchored to the top of the carriage 10 at 17 and extends over the strip 15 so as to frictionally hold it in adjusted position. The strip is made of material that can be bent and will retain its bent form. I have clearly shown this feature in Figure 3 where the end of the strip is curved at 15*a*. It should also be noted from Figure 3 that the carriage 10 is movable along the bar 1 so that the strip 15 can move past either or both of the clips 3 and 4, if desired. The bar 15 is shown curved at 15*a* in Figure 2 in order to conform to the curvature of the portion 6*a* of the page 6.

It is possible to use the bar 1 with its line indicating means without resorting to an anchoring means for the bar, but I have found that better results are obtained in moving the line indicating strip when an anchoring means is used. Each end of the bar 1 is provided with an opening 18 for receiving the anchoring means. In Figure 4, I show how each end of the bar is closed by means of a plug 19 and this plug has an opening 20 aligned with the openings 18 in the bar. The plug also has a bore 21 for receiving a coil spring 22 and this spring bears against a pin 23 that has its free end extending a slight distance into the opening 20. The other end of the spring rests against a pin 22*a*.

The anchoring means itself consists of a rod 24 provided with a shoulder 25 and a reduced portion 26. The diameter of the reduced portion is the same as the diameter of the opening 20 and therefore the rod 24 may be secured to the bar 1 by merely moving the reduced portion 26 into the aligned openings 18 and 20. The shoulder 25 limits the inward movement of the rod. The reduced portion 26 has an annular groove 27 that is positioned in line with the spring-pressed pin 23 when the rod 24 is in place. The spring 22 will cause the pin 23 to enter the groove 27 and to yieldingly hold the rod 24 against accidental removal while permitting the rod to rotate about its axis. In this manner the rod 24 may be removably secured to either end of the bar 1.

The free end of the rod 24 has a circular portion 28, see Figures 4 and 5 for receiving a rivet 29. A second rod 30 is also provided with a circular portion 31 and this curved portion has a recess 32 formed therein, see Figure 5. A pin 33 is carried by the circular portion 28 and extends into the recess 32, to limit the swinging of the rod 30 about the rivet 29. This construction permits the rod 30 to have a limited swinging movement with respect to the rod 24.

The rod 30 has a swivel connection with a clip-carrying rod 34, see Figure 6. The rod 34 carries a casing 35 for rotatably receiving the end of the rod 30. The rod 30 has an annular groove 36 which receives a pin 37 carried by the casing. In this way, the rod 34 may be rotated with respect to the rod 30.

In Figures 2 and 7, I show the free end of the rod 34 bent at 38 and swivelly connected at 39 to an anchoring clip 40. The clip 40 is shown in Figure 2 attached to the cover 7*b* of the book 7. In Figure 1, I show the same clip 40 secured to the cover of a second book 41. The book 41 also holds the book 7 at the proper angle.

From the foregoing description of the various parts of the device, the operation thereof may be readily understood.

The clips 3 and 4 are first adjusted on the bar 1 into the proper positions and then the clips receive one or more pages 6. This causes the bar 1 to be placed close to the side edge of the page. The anchoring clip 40 may now be secured to the book cover edge 7*b* and this will prevent the bar 1 from moving longitudinally when the line indicating strip 15 is manually moved along the bar 1. The strip 15 is curved to conform to the curvature of the page being copied and it will hold the shape into which it is bent.

It is possible to secure the device to the left hand page. When this is done, the bar 1 is inverted and the carriage 10 will cause its strip 15 to extend over the left hand page. The anchoring means is preferably transferred to the other end of the bar and the rod 24 is inserted in the other opening 18.

When the anchoring means is secured to another book, such as the book 41, it holds the book 7 against slipping and the latter book is also supported at the desired angle. It will be noted from Figure 3, that the strip 15 is free to move over the clips 3 and 4 without interfering with them in any manner. The clips 3 and 4 and the strip 15 are quickly adjustable to any size book page 6. The clips keep the page 6 close to the strip 15 at all times. The strip 15 is deformable and is yieldingly held in adjusted position in the carriage 10.

The line indicating strip 15 has a portion projecting to the right of the member 13 in Figure 2. This projecting portion can be used as a hand grip for moving the indicator along the guide bar 1. The strip 15 is also adjustable to accommodate pages of different widths. The aligned rods 34 and 30 have a limited swing with respect to the rod 24 in order to prevent the aligned rods from swinging into too great an angle with respect to the rod 24.

Although Figure 1 shows the guide bar anchoring means extending from the lower end of the guide bar 1, it may be advisable to secure the rod 24 to the other end of the bar when it is necessary to apply the anchoring clamp 40 to a different portion of the supporting book 41. The rotation of the rod 24 in the guide bar 1, the limited swinging motion between the rods 30 and 24, the swivel connection between the rods 30 and 34, and the swivel connection between the rod 34 and anchoring clip 40, permit a wide variety of positions to be assumed by the anchoring means so that it may be quickly changed to different positions as required by the size of the book being copied and the size of the supporting book. The rod 24 may be inserted into the opening 18 from either side of the bar 1.

While I have shown only the preferred form of my invention, it should be understood that various changes or modifications may be made within the scope of the appended claims without departing from the spirit of the invention.

I claim:

1. A line indicator for a sidewise opening book comprising a bar, clips slidable along the bar and designed to secure the bar to a page, a carriage movable along the bar, and a line indicating strip adjustably secured to the carriage and being freely movable over both clips.

2. A line indicator comprising a hollow bar having a slot extending substantially throughout the length thereof, clips having portions slidable within the bar with page-gripping arms projecting through the slot, and a line indicating strip slidably secured to the outside of the bar, the strip being free to move past the clips.

3. A line indicator comprising a hollow guide bar rectangular in cross section and having a slot on one side, the slot being disposed near the top wall of the bar and extending substantially throughout the length of the bar, page-gripping clips having portions slidable in the slot and contacting with the inner surfaces of the bar, said clips having spring arms lying substantially parallel with the top wall, and a line indicating strip slidably secured to the outside of the bar where it may freely pass over the clips, said strip extending across the top wall of the bar and lying close to the page gripped by the clip arms.

4. In a line indicator, a guide bar attachable to a book page, a line indicating strip slidably connected to the bar, an L-shaped anchoring member having one leg removably secured to either end of the bar, the other leg having a limited swinging connection with the first leg and carrying a clamp at its free end.

5. An anchoring means for a line indicator comprising a bar having an opening at each end, a rod removably disposed in either opening, cooperating means carried by the bar and rod for holding the rod against accidental removal while permitting the rod to rotate, a second rod pivoted to the free end of the first rod, means for limiting the swinging movement between the rods, and a clamp swivelled to the free end of the second rod.

6. An anchoring means for a line indicator comprising a bar having an opening at each end, a rod removably disposed in either opening, cooperating means carried by the bar and rod for holding the rod against accidental removal while permitting the rod to rotate, a second rod pivoted to the free end of the first rod, means for limiting the swinging movement between the rods, and a clamp swivelled to the free end of the second rod, said second rod being formed of two parts rotatably connected together, the rotatable connection holding the two parts in alignment with each other.

7. In a line indicator, a guide bar having transversely extending openings at both ends, an anchoring means for the bar and including a rod insertable in either opening and having an annular groove disposed within the bar when the rod is disposed in either opening, and a spring pressed pin associated with each opening and adapted to enter the groove for holding the rod against accidental removal while permitting it to freely rotate.

8. In a line indicator, a guide bar, a carriage movable along the bar, a line indicating strip adjustably carried by the carriage and having a portion extending beyond the carriage that constitutes a handle for moving the strip and carriage along the bar.

BONNIE E. VAN ALSTYNE.