Oct. 29, 1957 G. E. RUNYON 2,811,354

SNAP-ON BACK GUIDE FOR PRINTING PRESS

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FIG. 1.

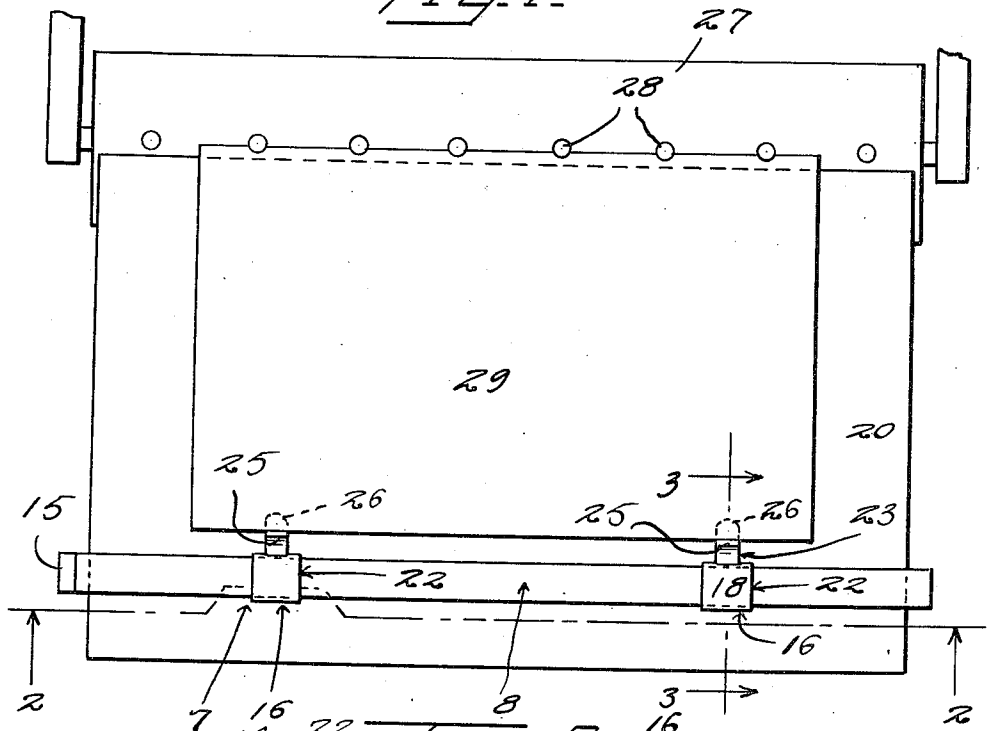


FIG. 2.

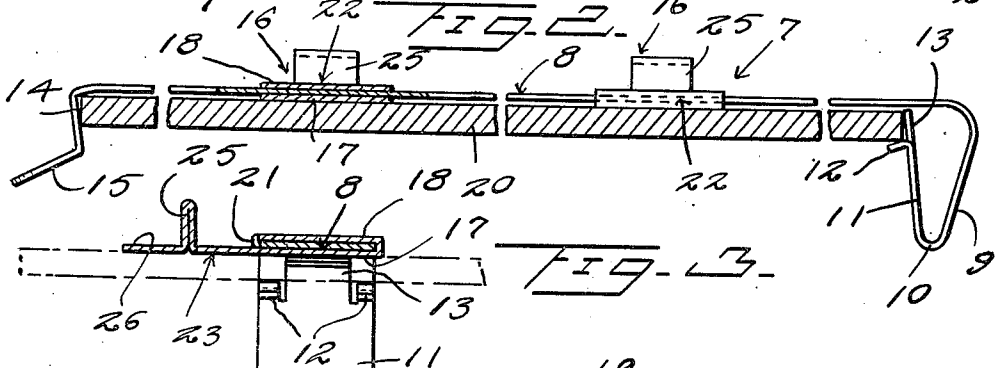


FIG. 3.

FIG. 4.

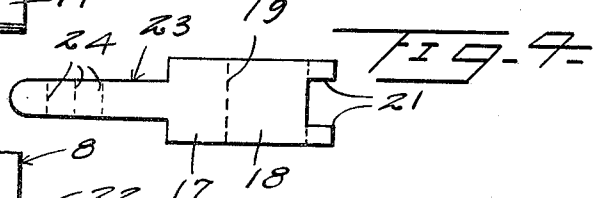
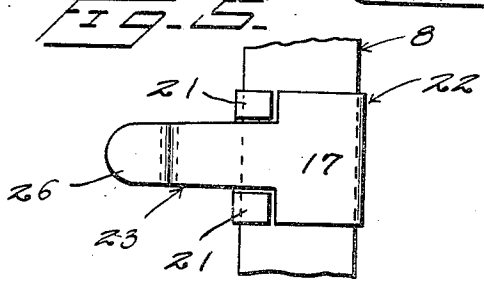


FIG. 5.



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SNAP-ON BACK GUIDE FOR PRINTING PRESS

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8 Claims. (Cl. 271—60)

This invention relates to a novel snap-on back guide for printing presses and which is primarily adapted to be mounted on the feeder board of a vertical printing press to function as a back guide for properly positioning the sheets fed from the feeder board to the printing cylinder and so that the leading edge of the sheets will be properly positioned to be engaged by the grippers of the printing cylinder.

It has been customary practice to drive tacks into the upper surface of a feeder board to provide stops for the back or trailing edge of sheets being fed from the feeder board to the printing cylinder grippers.

Accordingly, it is a primary object of the present invention to provide a back guide which will eliminate the need for resorting to this practice and which will save considerable time in providing a properly positioned back guide for sheets of any size.

Another object of the invention is to provide a novel detachable back guide for use with conventional feeder boards and which is adjustably mounted on the feeder board and includes adjustably mounted stop members for setting the back guide to accommodate sheets of any size capable of being handled by the feeder board.

A further object of the invention is to provide a back guide having novel means for resiliently retaining the guide in different adjusted positions and for enabling the guide to be mounted on feeder boards which vary in size.

Various other objects and advantages of the invention will hereinafter become more fully apparent from the following description of the drawing, illustrating a presently preferred embodiment thereof, and wherein:

Figure 1 is a top plan view of the back guide in an applied position;

Figure 2 is an enlarged fragmentary longitudinal sectional view partly in elevation thereof, taken substantially along a plane as indicated by the line 2—2 of Figure 1;

Figure 3 is an enlarged cross sectional view taken substantially along a plane as indicated by the line 3—3 of Figure 1;

Figure 4 is a plan view of a blank from which one part of the back guide is formed, and

Figure 5 is a fragmentary bottom plan view of a portion of the back guide.

Referring more specifically to the drawing, the back guide in its entirely and comprising the invention is designated generally 7 and includes a bar 8 formed from an elongated strip of a resilient material, preferably spring steel. The bar 8 at one end thereof is provided with a downwardly extending integral portion 9 which is inclined inwardly with respect to said bar so as to be disposed at an acute angle thereto. The downwardly extending portion 9 terminates in a U-shaped bend 10 from which projects an upwardly extending leg 11, constituting one end of the strip forming the bar 8 and which extends upwardly and inwardly relatively to the bar 8 in upwardly diverging relationship to the bar portion 9, so that said portions 9, 10 and 11 constitute a substantially V-shaped end portion of the strip forming the bar 8. The upper end of the leg 11 terminates beneath and slightly spaced from the underside of the top portion of the bar 8. Said upper end of the leg 11 is cut longitudinally near to but spaced from its side edges to provide side edge portions which are bent outwardly to form laterally spaced tangs 12, as best seen in Figure 3, which are disposed below and on either side of the narrowed upper end portion 13 of the leg 11. The other end portion of the strip forming the bar 8 is bent to provide a downwardly and inwardly extending hook or latch portion 14 which is disposed at an acute angle to the straight intermediate portion of the bar 8 and the terminal portion of the last mentioned end of the strip forms a downwardly and outwardly extending projection 15 which extends from the lower end of the latch or hook 14 to form a finger grip, as will hereinafter be described.

The guide 7 also includes at least two stops, each designated generally 16 and each of which is formed from an elongated piece of relatively thin material such as sheet metal as illustrated in Figure 4 including portions 17 and 18 bent along a transverse line 19 for positioning the portion 18 over the portion 17. The portion 17 is disposed against the underside of the intermediate portion of the bar 8 and between said bar portion and the upper surface of a conventional printing press feeder board 20. The portion 18 extends transversely across the upper side of the bar 8 and is provided at its outer end, which is located remote to the portion 17, with extensions located adjacent the side edges thereof, as seen in Figure 4. Said extensions are bent inwardly and back upon themselves around the bar 8 to form hooks 21 which extend along the underside of the bar to adjacent the portion 17, as seen in Figure 5. The portions 17, 18 and 21 when folded as illustrated in Figures 1 to 3 and 5 form a slide, designated generally 22, which engages slidably around the horizontal portion of the bar 8 which is located above the feeder board 20 for sliding movement longitudinally of the bar. Said slide has sufficient frictional engagement with the bar 8 to be normally maintained against casual sliding movement relatively thereto. Each of the stops 16 also includes an elongated tongue 23 forming an integral extension of the end of the slide portion 17 which is located remote to the slide portion 18. The tongue 23 is substantially narrower than the portions 17 and 18 and is spaced from the side edges thereof and extends from the bottom slide portion 17 outwardly between the hooks 21. The tongue 23, near its outer free end, is folded along the three transverse fold lines 24 to provide a two ply upstanding tongue portion 25 which is disposed transversely of the tongue 23 and which forms an abutment, as best illustrated in Figure 3. The tongue 23 includes an outer portion 26 disposed beyond the abutment 25 having a rounded outer edge, as best illustrated in Figure 5, for a purpose that will hereinafter be described.

The feeder board 20 is of a conventional size and shape and is supported in a conventional manner, not shown, with an inner edge thereof partially overlapping a printing cylinder 27 which is equipped with conventional grippers 28.

In order to apply the back guide 7 in a properly adjusted position, the printing press is placed in operation and the automatic feed, not shown, is allowed to feed a sheet of paper 29 into engagement with the grippers 28. As said grippers close on the leading edge of the sheet 29, the printing press is stopped. The tangs 12 are then hooked under the right-hand side edge of the feeder board 20, as illustrated in Figures 1 and 2, and the slides 22 of the stops 16 are slid along the bar 8 until said stops are

properly positioned relatively to the back edge of the sheet 29, as illustrated in Figure 1. The tips or outer ends 26 of the tongues 23 are slipped under the back edge of the sheet 29 and the guide 7 is then slid along the feeder board 20 toward or away from the cylinder 27 until the back edge of the sheet 29 abuts against the two abutments 25. When the guide 7 is thus disposed, the latch portion or hook 14 is sprung around the left-hand side edge of the feeder board 20 by manually gripping the finger hold 15 and the guide 7 is then completely applied. As the latch 14 is snapped over the left-hand edge of the feeder board 20 the leg 11 yields away from said latch 14 and toward the leg 9 and is placed under tension so that the portions 13 and 14, which are normally disposed slightly closer together than the distance between the edges of the board 20 which they engage, will frictionally engage or grip the board edges to retain the guide 7 immovably on the feeder board 20. The tangs 12 and latch 14 will also tend to displace the bar 8 downwardly toward the feeder board 20 and so that the slide portions 17 and tongues 23 will be maintained in frictional engagement with the upper surface of the feeder board to prevent sliding movement of the stops 16 longitudinally of the bar 8. With the back guide 7 thus mounted, the abutments 25 will function to properly position additional sheets 29 automatically fed to the feeder board 20 so that the leading edge of each sheet will be correctly disposed beyond the inner edge of the feeder board to be automatically engaged by the grippers 28.

It will also be readily apparent that the resilient leg 11 will enable the guide 7 to be mounted on feeder boards which vary slightly in length without requiring the use of a guide 7 having a longer bar 8. The guide 7 is also well adapted for use as a sheet positioner for platens of other types of printing presses.

Various modifications and changes are contemplated and may obviously be resorted to, without departing from the spirit or scope of the invention as hereinafter defined by the appended claims.

I claim as my invention:

1. A sheet positioning device for use with a printing press comprising an elongated bar adapted to extend across a sheet supporting board and having end portions adapted to engage opposite edges of the sheet supporting board for mounting the bar thereon, a plurality of sheet engaging members slidably supported by said bar above the board each formed from a single elongated strip and including a slide portion slidably engaging around both sides and both edges of the bar for adjustment of the sheet engaging member longitudinally of the bar and to prevent turning or transverse movement of said member relative to the bar, said sheet engaging members each including a tongue extending laterally from the bar and having an upstanding transversely disposed portion forming an abutment adapted to engage an edge of a sheet to be printed and coplanar end portions between which said upstanding portion is disposed.

2. A sheet positioning device as in claim 1, one of said end portions of the bar constituting a downturned portion having an inwardly and upwardly turned back terminal part forming an upwardly extending leg provided with an upper free end disposed beneath and spaced from

an upper portion of the bar and engaging one edge of the board, said leg being spring biased toward the other second end portion of the bar for retaining said end portions of the bar in engagement with opposite edge portions of the sheet supporting board spaced different distances apart and for causing the end portions of the bar to yieldably grip said edge portions of the board.

3. A sheet positioning device as in claim 2, said leg having struck-out tangs disposed beneath its upper free end and extending toward said second end of the bar and adapted to engage under a portion of the sheet supporting board.

4. A sheet positioning device as in claim 3, said second end of the bar including a latch portion extending downwardly and inwardly from the upper portion of the bar.

5. A sheet positioning device as in claim 1, each of said sheet engaging members having a folded end portion engaging the upper and lower sides and around one edge of the bar and having hook-like extensions at one end of said folded portion engaging around the other edge of the bar and combining with the folded portion to form said slide.

6. A sheet positioning device as in claim 5, said tongue extending from the opposite end of said folded portion between said hook-like extensions.

7. A sheet guide attachment for a printing press feed board comprising an elongated bar having a top portion adapted to be disposed over a portion of the upper surface of a feed board and having turned down ends adapted to engage opposite edges of the board for detachably mounting the bar thereon, one of said turned down ends having an upwardly extending resilient leg spring biased toward the other bar end and including an upper free end portion terminating beneath said top portion and yieldably engaging against an edge of the board, and a plurality of sheet positioning members slidably mounted on and embracing said top portion of the bar for adjustment longitudinally thereof and each having a tongue disposed below the level of the top portion of the bar and provided with an upstanding wall portion spaced from the ends of the tongue and laterally spaced from the bar and disposed parallel to the axis of the bar, said wall portions forming abutments adapted to engage against an edge of a sheet supported on the feed board and having portions resting on parts of said tongues.

8. A feeder board attachment as in claim 7, said resilient leg having a struck-out tang spaced from its upper end and adapted to bear against a portion of the underside of the feeder board.

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