

Dec. 22, 1925.

1,566,441

R. J. SMOTHERS

WEB GUIDE

Original Filed April 2, 1924

Fig. 1.

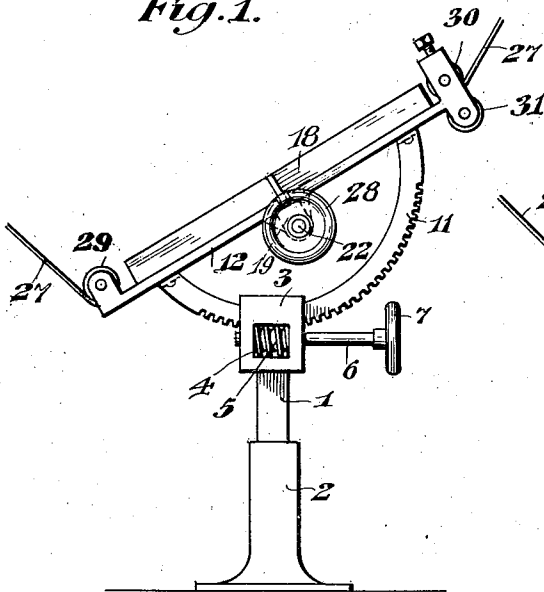


Fig. 2.

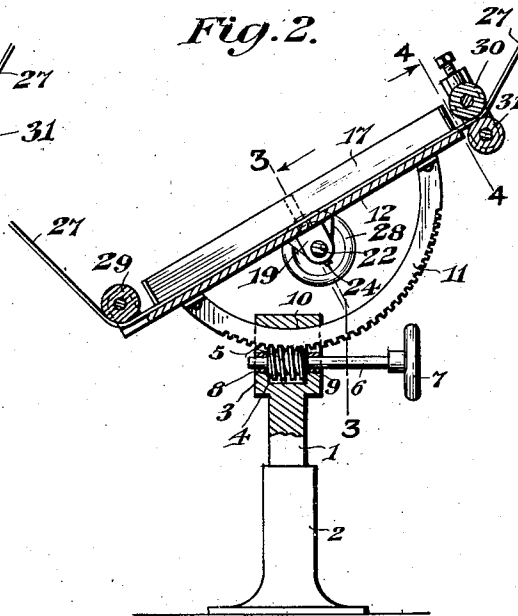


Fig. 3.

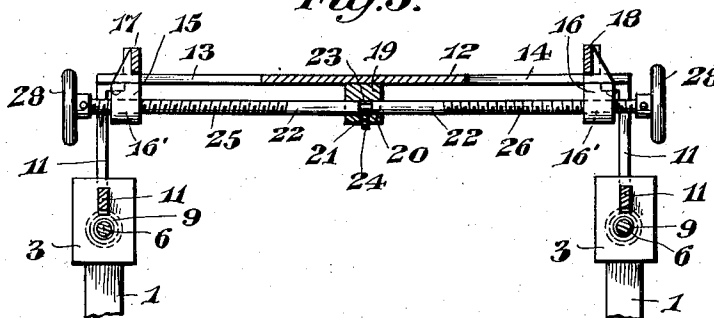
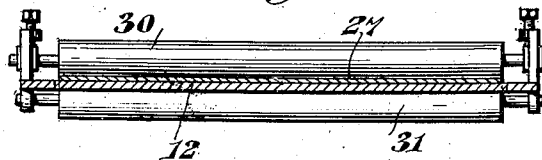


Fig. 4.



INVENTOR.

Robert J. Smothers,

BY

Geot. Kimmel,

ATTORNEY.

Patented Dec. 22, 1925.

1,566,441

UNITED STATES PATENT OFFICE.

ROBERT JARVIS SMOTHERS, OF HOLYOKE, MASSACHUSETTS, ASSIGNOR TO JAMES T. ROBINSON, OF HOLYOKE, MASSACHUSETTS.

WEB GUIDE.

Original application filed April 2, 1924, Serial No. 703,776. Divided and this application filed December 18, 1924. Serial No. 756,779.

To all whom it may concern:

Be it known that I, ROBERT J. SMOTHERS, a citizen of the United States, residing at Holyoke, in the county of Hampden and State of Massachusetts, have invented certain new and useful Improvements in Web Guides, of which the following is a specification.

This invention relates to a web guide and is a division of the subject matter of my application filed April 2, 1924, Serial Number 703,776, and the invention has for its object to provide, in a manner as hereinafter set forth, a web guide for directing the web upon the impression cylinder of a printing press at the desired point, so that the web will not contact with a transfer roll before it is directed onto the impression cylinder to prevent any possibility of the web being blurred or damaged from the color on the transfer cylinder, under such conditions insuring satisfactory printing when the work is completed.

Further objects of the invention are to provide, in a manner as hereinafter set forth, a web guide for the purpose referred to, which is simple in its construction and arrangement, strong, durable, compact, readily adjustable, thoroughly efficient in its use, readily installed with respect to the cylinders of a printing press, and comparatively inexpensive to set up.

With the foregoing and other objects in view, the invention consists of the novel construction, combination and arrangement of parts, as hereinafter more specifically described and illustrated in the accompanying drawings, wherein is shown an embodiment of the invention, but it is to be understood that changes, variations and modifications can be resorted to which come within the scope of the claims hereunto appended.

In the drawings wherein like reference characters denote corresponding parts throughout the several views:—

Figure 1 is a side elevation of a web guide, in accordance with this invention.

Figure 2 is a sectional elevation thereof.

Figure 3 is a section on line 3—3, Figure 2.

Figure 4 is a section on line 4—4, Figure 2.

Referring to the drawings in detail, the guide consists of a pair of vertically adjust-

able telescopic standards each formed of an adjustable upper section 1 and a fixed lower section 2. The upper end of the section 1 is enlarged, as at 3, and the said enlarged upper end is formed centrally with a chamber 4, in which is arranged a worm 5, carried by a shaft 6, provided with a hand wheel 7. The enlarged upper end 3 of the section 1 is formed with a pair of horizontal openings 8, which communicate with the chamber 4 and each of which has arranged therein a bearing 9 for the shaft 6.

The enlarged upper end 3 of the section 1, above the chamber 4, is formed with a segment-shaped slot 10, through which extends a semi-circular rack bar 11, meshing with the worm 5, and by this arrangement when the shaft 6 is actuated the engagement of the worm 5 with the teeth of the bar 11 will shift the latter for the purpose of adjustably positioning the web guiding member at the desired inclination. The bar 11 is carried by said guiding member.

The web guiding member consists of a rectangular plate 12 formed with a pair of aligning oppositely extending slots 13, 14, through which depends a pair of shifting members 15, 16, each having its lower portion formed with an opening 16, having the wall thereof threaded. The threads within the shifting member 15 are oppositely disposed with respect to the threads in the shifting member 16. Carried by the member 15, at the upper end thereof, is a retaining bar 17, which is disposed upon the upper face of the plate 14 and extends lengthwise with respect thereto. Secured to the upper end of the member 16 is a retaining bar 18, which is arranged over the upper face of the plate 14 and extends lengthwise with respect thereto.

Formed integral with the lower face of the plate 12, centrally thereof, is a hanger 19, provided with a passage 20 and an opening 21 which communicates with the passage 20.

Extending through the passage 20 is a toothed operating shaft 22 for simultaneously shifting the members 15 and 16 towards and away from each other. The shaft 22, centrally thereof, is formed with a peripheral groove 23 into which extends a retaining pin 24, which threadedly engages with the wall of the opening 21. The pin 24, in con-

nection with the groove 23, arrests lengthwise shifting of the shaft 22 relative to the hanger 19.

The shaft 22 is formed with a pair of threaded end terminal portions 25, 26 and with the threads of the portion 25 oppositely disposed with respect to the threads of the portion 26. The threaded portions 25 and 26 engage with the threads of the members 15 and 16, and the arrangement of the threads is such that when the shaft 22 is revolved in a clockwise direction the members 15 and 16 will be shifted towards each other and when revolved in an anti-clockwise direction the members 15 and 16 will be moved away from each other, whereby the retaining bars can be set at the desired position, and such position would be that the distance between the bars would equal the width of the web 27, so that the travel of the web 27 over the guiding member or plate 12 will be such that its side edges will be engaged by the bars 17 and 18, whereby the web will be guided, due to the inclination of the plate 12, to be properly positioned upon the impression cylinder and free of the transfer cylinder.

The shaft 22 projects outwardly from each side of the plate 12 and is provided at each end with a hand wheel 28 for the convenient operation thereof. The lower end of the plate 12 is provided with means to support an idler roll 29 against the lower face of which travels the web 27, and supported from the upper or forward end of the plate 12 is a pair of superposed tensioning rolls 30 and 31 between which passes the web 27. Suitable means is provided for adjusting the roll 30.

The construction provides means for positioning the plate 12 not only at the desired height, but also at the desired inclination, so that the web 27 will be guided for the purpose of properly positioning it upon the impression cylinder prior to the action of the transfer cylinder of the press and which prevents the web from being blurred or damaged from the color, and it is thought that the many advantages of a web guide, in accordance with this invention, can be

readily understood, and although the preferred embodiment of the invention is as illustrated and described, yet it is to be understood that changes in the details of construction can be had which will fall within the scope of the invention as claimed.

What I claim is:—

1. A web guide for the purpose set forth, comprising an angularly adjustable web supporting plate, and a pair of web retainers adjustable towards and away from each other and positioned over the upper face of the plate.

2. A web guide for the purpose set forth, comprising an angularly adjustable web supporting plate, a pair of web retainers adjustable towards and away from each other and positioned over the upper face of the plate, and vertically adjustable supporting means for the plate.

3. A web guide for the purpose set forth, comprising an angularly adjustable web supporting plate, a pair of web retainers adjustable towards and away from each other and positioned over the upper face of the plate, an idler roll at the rear end of said plate, and web tensioning means at the forward end of said plate.

4. A web guide for the purpose set forth, comprising an angularly adjustable web supporting plate, a pair of web retainers adjustable towards and away from each other and positioned over the upper face of the plate, vertically adjustable supporting means for the plate, an idler roll at the rear end of said plate, and web tensioning means at the forward end of said plate.

5. A web guide for the purpose set forth, comprising a web supporting plate, means for angularly adjusting said plate, a pair of web retainers positioned over said plate, means for adjusting said retainers towards and away from each other, supporting means for said plate, an idler roll supported over said plate at the rear end thereof, and web tensioning means at the forward end of said plate.

In testimony whereof, I affix my signature hereto.

ROBERT JARVIS SMOTHERS.