May 12, 1931. H. A. W. WOOD 1,805,197

WEB GUIDE ROLLER

Original Filed May 15, 1928

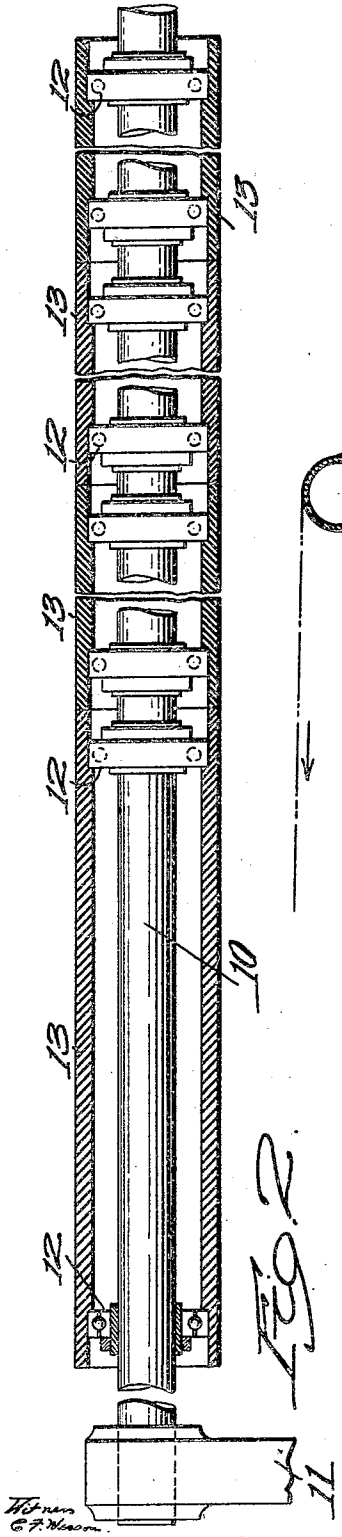


Fig. 2

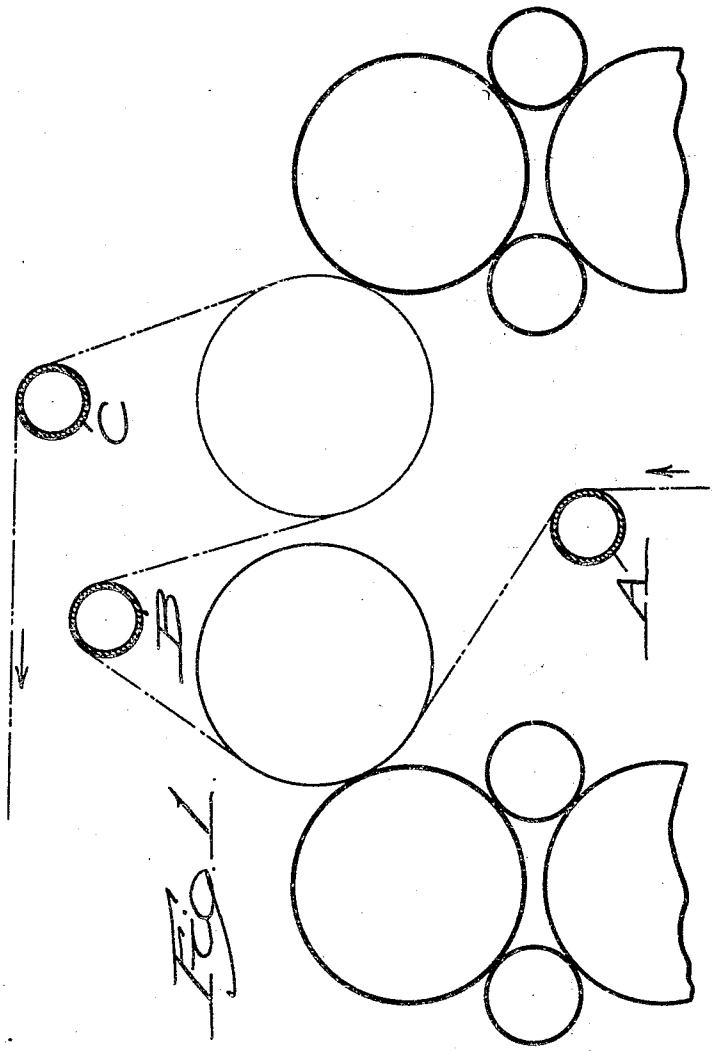


Fig. 1

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UNITED STATES PATENT OFFICE

HENRY A. WISE WOOD, OF NEW YORK, N. Y., ASSIGNOR TO WOOD NEWSPAPER MACHINERY CORPORATION, OF NEW YORK, N. Y., A CORPORATION OF VIRGINIA

WEB GUIDE ROLLER

Application filed May 15, 1928, Serial No. 277,959. Renewed October 4, 1930.

This invention relates to rollers over which the web passes in a printing press.

The principal object of the invention is to avoid the necessity of subjecting the web to an excessive strain in passing over the guide-rollers when a narrow width web is employed and to reduce breakage from that cause.

Other objects and advantages of the invention will appear hereinafter.

Reference is to be had to the accompanying drawings, in which

Fig. 1 is a diagrammatic side view of a part of a printing press showing several places in which this invention can be employed; and

Fig. 2 is a longitudinal central sectional view of a guide-roller constructed in accordance with this invention.

As is well known, the web used in a newspaper printing press generally is four pages wide. It often occurs, however, that fewer than the maximum number of pages are required, in which case a web is run through the press three, two or even one page wide. It has been customary heretofore to run the narrow web over the full width roller. This of course necessitates the narrow width web running these rollers and subjects the web to a strain which I find to be unnecessary. When a quick stop is desired, the web is strained to the breaking point very often as the momentum of the roller must be overcome by the friction of the web upon it.

These guide-rollers are employed at various points in the printing press, as for example the rolls A, B and C in Fig. 1. To overcome this difficulty at each of these points, I provide a central shaft 10 which is fixed in stationary position on the frame 11 of the press. Upon it I place a series of anti-friction bearings 12 spaced at suitable distances along the shaft 10 to which the inner races are clamped. The outer races of these bearings support, at their ends, a series of pipe sections 13, each rotatable on its own bearings and independently of the other sections. Each of these sections has a length equal to the width of one page.

In this way it will be seen that a web less than full width will run on one, two or three of these pipe sections 13 and any section or sections of pipe roller not covered by the web will not be rotated. For this reason no additional strain will be placed on the web and when a quick stop is made practically all the tendency to tear due to the overcoming of the momentum of the long heavy guide-roller will be eliminated. It also eliminates the driving of a long four page wide roller entirely from one end as is the case sometimes when one or two page widths are being run.

Although I have illustrated and described only one form of the invention, I am aware of the fact that modifications can be made therein by any person skilled in the art without departing from the scope of the invention as expressed in the claims.

Therefore, I do not wish to be limited to all the details of construction herein shown and described, but what I do claim is:—

1. As an article of manufacture, a guide-roller for a printing press comprising a series of independent roller sections each rotatable independently of the others and each of a length equal to one page width of the web.

2. In a guide-roller for a printing press, the combination with a stationary shaft, of a series of pairs of anti-friction bearings clamped on the shaft, and a series of independent pipe sections each connected with a pair of said bearings.

3. In a guide-roller for a printing press, the combination with a stationary shaft extending across the press, of a series of pairs of anti-friction bearings clamped on the shaft, and a series of independent pipe sections each connected at its ends with the outer races of a pair of said bearings, whereby all of said pipe sections will be capable of rotating independently of each other.

4. As an article of manufacture, a guide-roller for printing presses comprising a series of independent roller sections each rotatable independently of the others.

5. As an article of manufacture, a guide-roller for a printing press comprising a series of independent roller sections arranged end to end, each rotatable independently of the

others and each of a length equal to one page width of the web.

6. In a guide roller for a printing press, the combination with a stationary shaft, of a plurality of anti-friction bearings clamped on the shaft, and a plurality of independent pipe sections each connected with one of said bearings.

7. As an article of manufacture, a guide roller for printing presses comprising a series of independent roller sections each arranged end to end and rotatable independently of the others.

8. In a guide roller for a printing press, the combination with a stationary shaft, of a series of independent roller sections arranged end to end on said shaft, and each rotatable independently of the others.

9. As an article of manufacture, a guide roller for a printing press comprising a series of independent roller sections arranged end to end, each rotatable independently of the others.

In testimony whereof I have hereunto affixed my signature.

HENRY A. WISE WOOD.