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FRONT FEED GUIDE FOR PRINTING PRESSES.

APPLICATION FILED JULY 23, 1915.

1,167,653. Patented Jan. 11, 1916.

Fig. 2.

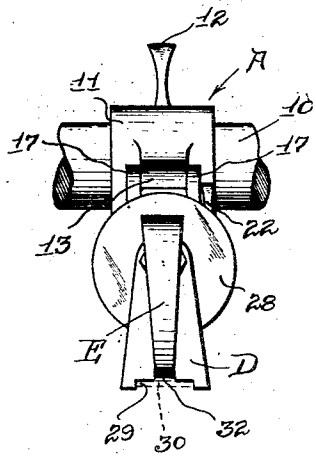


Fig. 1

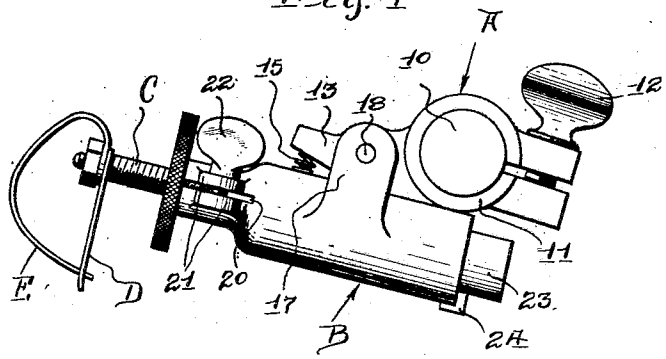
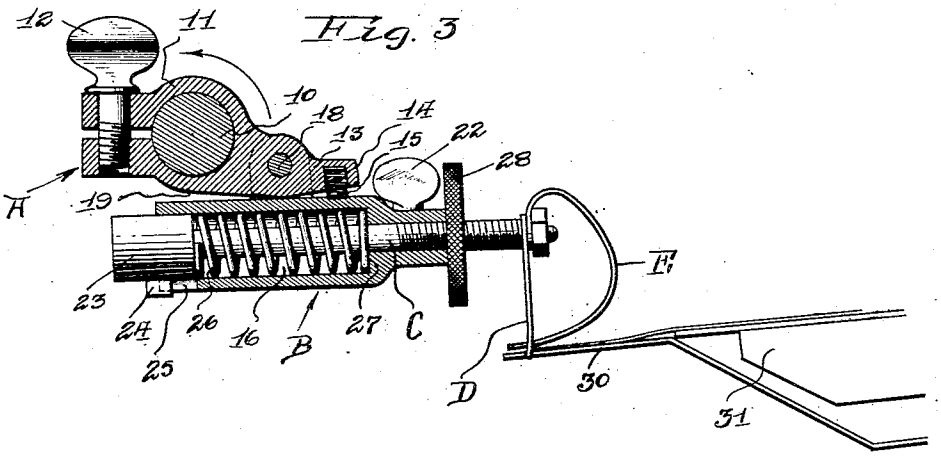


Fig. 3



Witnesses

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UNITED STATES PATENT OFFICE.

LAURITZ F. NIELSEN, OF ST. PAUL, MINNESOTA, ASSIGNOR TO OSTERLIND PRINTING PRESS AND MANUFACTURING COMPANY, OF ST. PAUL, MINNESOTA, A CORPORATION OF MINNESOTA.

FRONT-FEED GUIDE FOR PRINTING-PRESSES.

1,167,653. Specification of Letters Patent. Patented Jan. 11, 1916.

Application filed July 23, 1915. Serial No. 41,511.

To all whom it may concern:

Be it known that I, LAURITZ F. NIELSEN, a citizen of the United States, residing at St. Paul, in the county of Ramsey and State of Minnesota, have invented new and useful Improvements in Front-Feed Guides for Printing-Presses, of which the following is a specification.

My invention relates to improvements in front feed guides for printing presses. Its object is to provide a durable and efficient guide of this kind, capable of adjustment and adapted to be withdrawn from the edge of a sheet of paper, so as to leave undisturbed the position of said sheet until it is caught by grippers on a press cylinder.

In the drawings Figure 1 is a side elevation of my improved front feed guide; Fig. 2 is a front elevation thereof and Fig. 3 is a central sectional view showing the same in position to guide a sheet upon a feeding table.

Referring to the accompanying drawings, my invention consists essentially of a clamp A adapted to be secured upon a rock shaft 10 in a press frame, a barrel B pivotally suspended beneath said clamp, an adjustable guide stem C in said barrel, a guide plate D on the guide stem and a depression finger E also on said guide stem. The clamp A is a casting comprising a split bearing 11 fitted with a thumb screw 12 for tightening the same and a shank 13 integral with said bearing, said shank being formed with a socket 14 in its lower side near the end thereof, to receive the coiled spring 15 as hereinafter specified. The barrel B is a casting formed with a cylindrical bore 16 which is larger at one end of the barrel than at the other. Arms 17 formed upon the sides of the barrel overlap the sides of the shank 13 on the clamp A and are pivoted to said shank by a pintle 18.

The lower side of the shank 13 is beveled upward toward its ends from a point beneath the pintle 18 to permit the barrel B to swing with respect to the clamp A. The beveled side of the shank above the rear of the barrel is adapted to engage the top of said barrel and form a stop 19 to limit its tilting movement in one direction. The coiled spring 15 seated in the socket 14 in the shank 13 bears downward upon the forward end of the barrel B and operates to tilt said barrel and swing the rear end thereof against the stop 19 on the shank 13.

The side of the barrel at one end is split by a kerf 20 and lugs 21 formed on said barrel upon opposite sides of said kerf receive a thumb screw 22 which is designed to compress the end of the said barrel as will hereafter more fully appear. The guide stem C is slidably mounted in the bore 16 of the barrel B the forward end thereof projecting beyond the front of said barrel. A plunger head 23, fitting in the bore 16, is secured to the stem C and is furnished with a lug 24 slidable in a slot 25 in said barrel to hold the stem C against rotation. A spring 26 coiled about the stem C rests in the bore and is held between the shoulder 27 and the head 23, thus operating to push the guide stem rearwardly. A set nut 28 is threaded on the forward end of the guide stem C and bears against the end of the barrel B. The turning of this set nut 28 in one direction permits the rearward movement of the guide stem C by the action of the spring 26 and the turning of said nut 28 in the other direction moves said guide stem forward against the action of said spring 26.

The thumb screw 22 is employed to clamp the end of the barrel upon said guide stem and secure it after the desired adjustment is made by the manipulation of the set nut 22.

The guide plate D depending from the forward end of the stem C is formed with a notch 29 in its lower edge to receive a feeding bar 30 at the edge of a feeding table 31. Said guide plate D is also formed with a second notch 32 at the upper edge of said first mentioned notch 29, said second notch being adapted to receive the lower end of the depression finger E which is secured to the guide stem C and curved downward therefrom.

In use a plurality of guides are secured upon the rock shaft 10 which is turned by old and well known mechanism. The operation of the guides is of course identical, and the use of one only will be described. The clamp A is adjusted upon the rock shaft 10 and secured by tightening the thumb screw 12, in position so that the guide plate D bears upon the bar 30 on the feeding table and the barrel B is tilted against the action

of the spring 26 as shown in Fig. 3. The thumb screw 22 is loosened to permit the desired adjustment of the guide stem C by the manipulation of the set nut 28 after which said set screw 22 is tightened to lock said guide stem. A sheet of paper, fed toward the guide, passes between the depression finger E and said bar 30 and is arrested by the guide plate D. As the rock shaft 10 is turned to raise the guide (see arrow in Fig. 3) the barrel B is tilted by the spring 15 until it strikes the stop 19 on said shank 13 (see Fig. 1), at which point in the operation the barrel is lifted. This tilting movement of the barrel B causes the guide plate D to slide on the bar 30 away from the edge of the sheet of paper, thereby leaving said sheet in proper position to be grasped by grippers on an impression cylinder. As the rock shaft 10 is returned to original position the stop plate D is pressed against the bar 30 and the barrel B is tilted against the action of the spring 15 to the position shown in Fig. 3, where the guide is ready to receive the next sheet of paper.

Having described my invention what I claim as new and desire to protect by Letters Patent is:

1. In a front feed guide for printing presses, the combination with a rock shaft and feeding bar of a clamp adjustably secured upon said rock shaft, a barrel pivotally suspended beneath said clamp, a guide stem adjustable longitudinally in said barrel and provided with a dependent guide plate adapted to engage said feeding bar, and a compression spring interposed between said clamp and barrel, said spring being adapted to tilt the barrel upon the initial upward movement of the guide, whereby the guide plate is withdrawn from the edge of a sheet before said plate is lifted.

2. In a front feed guide for printing presses, the combination with a rock shaft and feeding bar of a clamp adjustably secured upon said rock shaft, a barrel pivotally suspended beneath said clamp, a compression spring interposed between one end of said barrel and said clamp to tilt the former with respect to the latter, a stop on the clamp to limit the tilting movement of the barrel, a guide stem slidable longitudinally in said barrel, means to prevent the turning of said stem, a second spring, within the barrel, coiled about the stem and operating to move the stem in one direction, a nut threaded on the stem and abutting against one end of said barrel, said nut being adapted to permit the movement of said stem by said spring, also to check said movement and further to shift the stem against the action of the spring, a guide plate depending from the stem and arranged to bear upon said feeding bar, a depression finger on the stem to guide a sheet as it is fed toward said plate, said compression spring being adapted to tilt the barrel during the initial upward movement of the guide, so as to withdraw the guide plate from the edge of said sheet before said plate is lifted.

In testimony whereof, I have signed my name to this specification in the presence of two subscribing witnesses.

LAURITZ F. NIELSEN.

Witnesses:
F. C. CASWELL,
JOHN E. STRYKER, Jr.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."