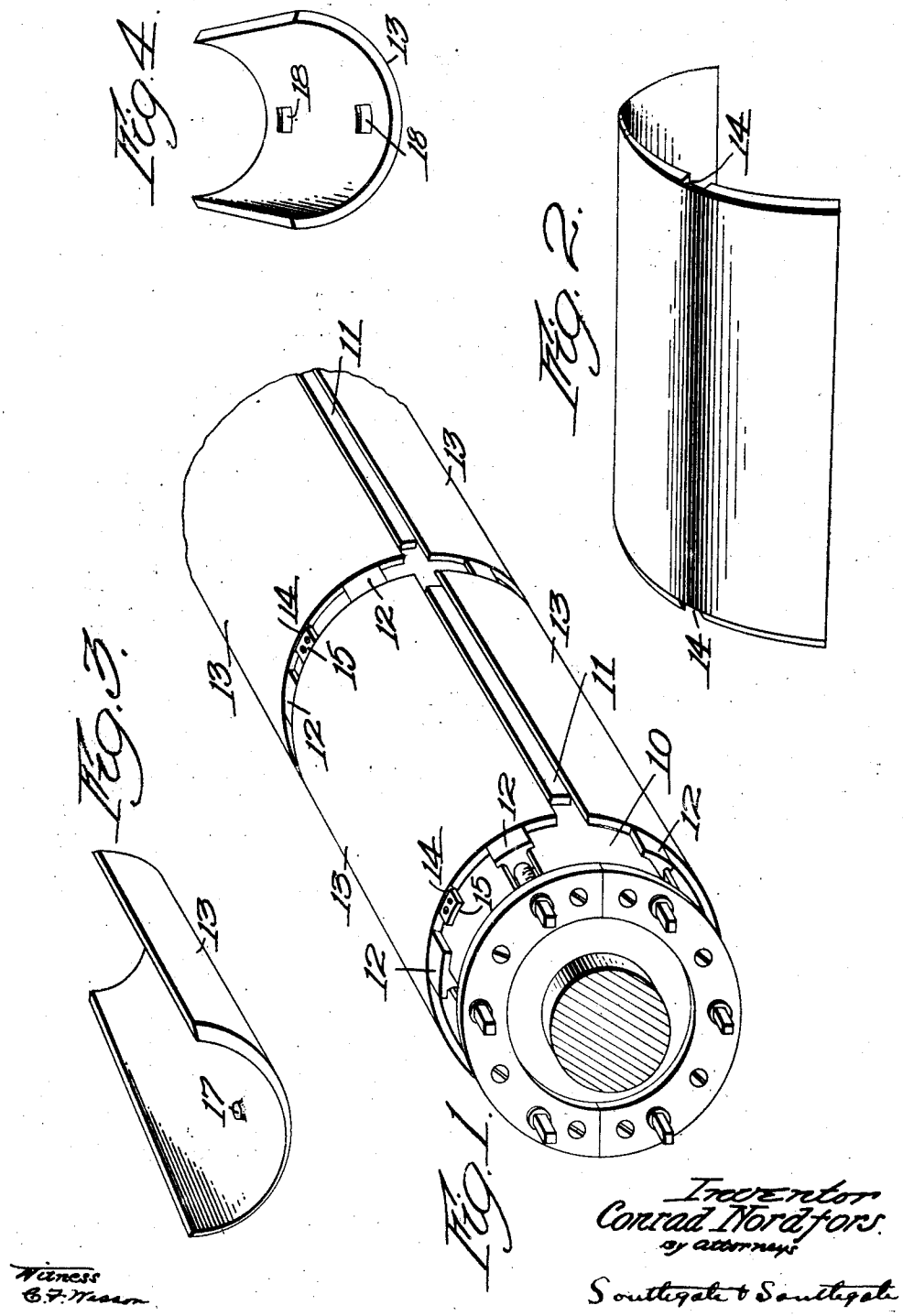
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MEANS FOR PREVENTING CREEPING OF PRINTING PLATES.

APPLICATION FILED OCT. 18, 1918.

**1,344,648.** **Patented June 29, 1920.**




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CONRAD NORDFORS, OF JERSEY CITY, NEW JERSEY, ASSIGNOR TO WOOD NEWSPAPER MACHINERY CORPORATION, OF NEW YORK, N. Y., A CORPORATION OF VIRGINIA.

## MEANS FOR PREVENTING CREEPING OF PRINTING-PLATES.

1,344,648. Specification of Letters Patent. **Patented June 29, 1920.**

Application filed October 18, 1918. Serial No. 258,685.

*To all whom it may concern:*

Be it known that I, CONRAD NORDFORS, a citizen of the United States, residing at Jersey City, in the county of Hudson and State of New Jersey, have invented a new and useful Means for Preventing Creeping of Printing-Plates, of which the following is a specification.

This invention relates to printing presses and particularly to the positive prevention of the creeping of the semi-cylindrical plate on its cylinder. There is a tendency for these plates to creep or drift back on high speed presses. The usual clamps that are provided for holding their beveled edges down do not grip hard enough to prevent this creeping and have no positive means for resisting it, as it takes place in the direction parallel to the gripping surfaces. The margin bars which run parallel with the axis of the cylinder and separate the plates would serve to propel the plates and assist the clamps in keeping them in position if it were not for the fact that there is a tendency for the two cylinders to roll the plates out more nearly flat. This raises the forward and rear edges of the plate, and as the plates pass through between the two cylinders first one edge and then the other is forced firmly against its cylinder. The opposite edge is forced outwardly. In other words, the front edge of the plate is depressed as the front edge comes into the nip between the cylinders and then it moves up again as the impression progresses. As the plate leaves contact with the impression cylinder the front edge reaches the limit of its rise.

If the plates are placed in contact with the margin bars the edge will sometimes spring up until it creeps up on the bar and breaks. For the same reason the rear margin bars cannot be relied upon to act as a constant propelling force for the plate. Therefore the plates are usually so placed on the cylinder as not to touch either the forward or rear margin bars. The end clamps ordinarily have to be depended on not only for clamping the plates down, but for propelling them with the cylinder.

This invention is designed to eliminate dependence on the plate clamps for propulsion and to provide means for positively preventing the circumferential creeping of the plates, so that they cannot drift back against the margin bar.

Further objects and advantages of the invention will appear hereinafter.

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

Figure 1 is a perspective view of a part of a plate cylinder with a preferred embodiment of this invention applied thereto;

Fig. 2 is an external perspective view of the plate showing how it is modified in accordance with this form of the invention;

Fig. 3 is a perspective view of the inside of a semi-cylindrical plate showing another form of the invention, and

Fig. 4 is a similar view of a third form.

In the form shown in Figs. 1 and 2, the cylinder 10 is shown as provided with the usual margin bars 11 and plate clamps 12 for holding the beveled edges of the plates 13 in position. Each of the plates is provided with a notch 14 near the center of each of its curved beveled edges. A key 15 is shown as firmly secured to the plate cylinder at each end of the plate and fitting in the notch 14 so as to hold the plate against drifting or creeping. These keys are located at the ends of the cylinder and between the separate plates also. It will be seen that they constitute positive means for preventing this difficulty, because they have an abrupt forward edge engaging directly behind a correspondingly abrupt surface of the notch.

In Fig. 3 I have shown a modification consisting of a solid lug 17 cast on the inside surface of the plate and adapted to fit into a hole or recess (not shown) in the plate cylinder for the same purpose.

Another form in which the invention can be carried out is shown in Fig. 4 in which the plate, instead of being provided with a lug, is provided with a recess 18 on the concave surface not extending clear through the plate. A permanent key or projection (not shown) on the plate cylinder enters this recess and holds the plate.

With this invention it will be seen that the plate is positively held against creeping or drifting. Although neither the forward nor the rear edge of the plate necessarily holds tight against the cylinder during the impact of the impression cylinder when it strikes the on-coming edge of the plate and when it leaves the plate, nevertheless the plates are held positively by these means.

Although I have illustrated and described

only three forms 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 details of construction herein shown and described, but what I do claim is:—

1. The combination with a plate cylinder, a plate thereon, margin bars, and a plate secured on the cylinder out of contact with a margin bar, of means for positively preventing the plate from drifting back against a margin bar.

2. The combination with a plate cylinder, a plate thereon, and margin bars, of fixed means independent of the margin bars for positively preventing the circumferential creeping of the plate.

3. The combination with a plate cylinder, of a curved plate thereon having beveled curved edges and a notch in the beveled edge of the plate, and means on the cylinder engaging in said notch for preventing the creeping of the plate on the cylinder.

4. The combination with a printing plate having beveled edges and plate clamps for engaging said beveled edges and holding the plate down on a support, said plate having an abrupt shoulder transverse to the general direction of said beveled edges, of means for engaging said shoulder and positively preventing creeping of the plate in the direction of said beveled edges.

In testimony whereof I have hereunto affixed my signature.

CONRAD NORDFORS.