

Apr. 10, 1923.

1,451,204

C. CHISHOLM
FLEXIBLE PRINTING FORM

Filed Apr. 8, 1922

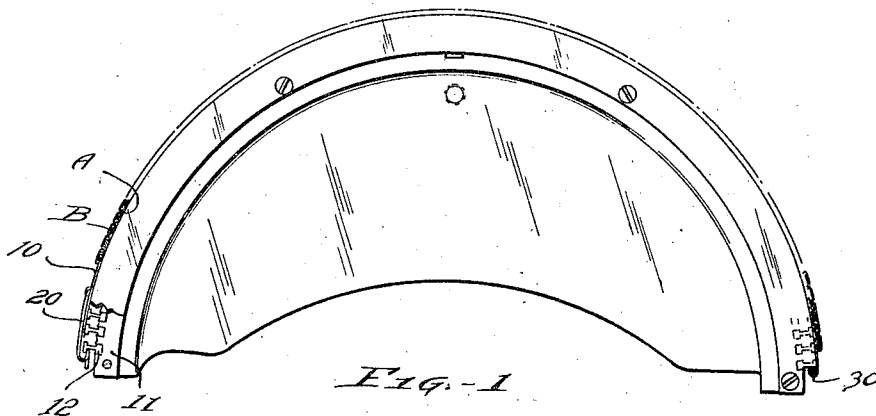
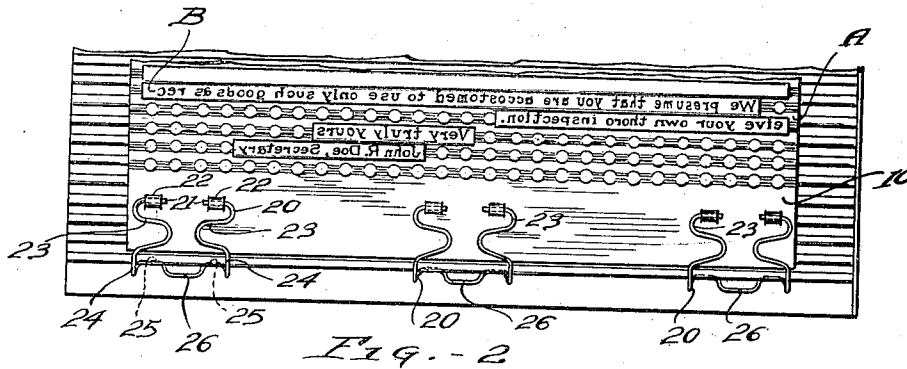
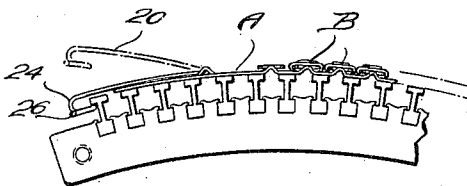
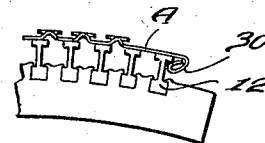


FIG. 3

FIG. 4

INVENTOR
Clifton Chisholm
BY Walter Macklin,
ATTORNEY'S

UNITED STATES PATENT OFFICE.

CLIFTON CHISHOLM, OF CLEVELAND, OHIO, ASSIGNOR TO THE AMERICAN MULTIGRAPH COMPANY, OF CLEVELAND, OHIO, A CORPORATION OF OHIO.

FLEXIBLE PRINTING FORM.

Application filed April 8, 1922. Serial No. 550,802.

To all whom it may concern:

Be it known that I, CLIFTON CHISHOLM, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented a certain new and useful Improvement in Flexible Printing Forms, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings.

This invention relates to printing devices and has particular reference to means for securing a printing member upon a printing bed.

The general object of the invention is to provide releasable means whereby a printing member, such as a flexible form, may be readily and easily secured upon or detached from a printing bed.

A further object of my invention is to provide a releasable catch for a flexible printing member, whereby the member may be held on the rails of a printing machine, such as a multigraph.

A further specific object of the invention is to provide means for attaching a flexible plate carrying embossed strips to a multigraph drum in such a manner that the attaching means will not interfere with the effective operation of the printing surfaces, which may scatter only a slight distance above the plate.

Other objects of the invention will be apparent from the following specification, taken in connection with the accompanying drawings, wherein Fig. 1 is an elevation of a segment of a printing drum showing my invention applied thereto; Fig. 2 is a fragmentary plan view of the printing drum showing a flexible printing member secured thereto by means of my holding means; Fig. 3 is a fragmentary view of a portion of the segmentary printing member showing the manner of securing a flexible member on the drum by means of my invention, and Fig. 4 is a detail in elevation.

Referring to the drawings by reference characters, I have shown a printing member at 10 which may comprise a flexible blanket made of sheet metal or other material having means thereon for engaging printing members. I have shown the blanket as comprising a member such as shown in the prior application of W. J. Demming, Serial No.

462,173, filed April 18, 1921 and B. J. Craig, Serial No. 493,830, filed August 20, 1921. It is to be understood however, that my invention is applicable to other forms of printing members than that described in the applications mentioned. In the blanket shown, the body portion A of the blanket is provided with a plurality of rows of upstanding projections to which suitable embossed printing members B may be secured.

Referring again to the drawings, I have shown a segmentary printing member at 11 which is shown as provided with T rails 12 thereon. Such a drum is in common use in multigraph machines and is well known in the art. In order to secure the printing blanket 10 to the drum, it is necessary to provide fastening means which are disposed below the printing surface of the drum so that in the act of printing the fastening members will not interfere. It is also desirable to provide these holding members between the ends of the printing surface of the blanket, thus obviating the necessity for increasing the length of the blanket.

The fastening members are here shown as comprising loop-shaped members 20 which may be constructed of resilient material. The ends 21 are shown as secured beneath upstruck lugs 22 on the printing blanket from whence the fastening member extends in reverse curves 23 to straight portions 24 which are shown as parallel one with the other. The fastener is then looped back on itself to provide engaging portions 25 and then is again bent to provide an intermediate portion 26 which facilitates removal.

I now contemplate using my improved fastening means at one end only of the blanket; the other end of the blanket being provided with a folded-over portion, shown at 30, which is adapted to engage the head of one of the rails 12.

For the standard width of printing drum blanket, I have found that three of the fastening members 20 may be used to secure good results, but any other number may be used, if desired. The fastening members 20 are made of spring wire and the reverse loops and curves of the fastening member are such as will give it sufficient elasticity and resiliency to allow it to be sprung over the rail.

To secure the blanket upon the drum, the loop 30 is placed against one of the end rails of the drum and the blanket is laid upon the drum. The fastening members 20 are then extended and slipped around the end T rail, as shown in Fig. 1, and the blanket thus secured in place. When it is desired to remove the blanket, this may be readily done, by pulling on the intermediate portions 26 of the fastening members with the fingers or by inserting a small implement, such as a screw driver in the loop 26, whereupon by using the top of the T rail as a fulcrum, the fastening member may be readily removed.

From the foregoing description, it will be apparent that I have invented a fastening means for a printing member which may be economically made; which firmly secures the printing member in place and which can be very readily operated.

Having thus described my invention, I claim:

1. In combination with a printing bed, of a printing member mounted on the bed and having fastening means secured to it, said means including one portion which engages the member beneath the printing surface and another portion which engages the bed beneath the surface thereof which supports the printing member.

2. In combination with a printing bed, of a printing member having a movable fastening means thereon, said means being adapted by movement relative to the printing member to engage beneath a ledge on the type bed.

3. In combination with a curved bed, a flexible printing member mounted on said bed, and means secured to the printing member for securing said printing member to said bed, said means being disposed below the level of the printing surface and adapted to engage a ledge on the printing bed.

4. In combination with a printing bed having type rails thereon, a printing member on said bed, and means secured to said printing member for attaching said printing member to said bed, said means being disposed below the level of the printing surface and comprising a resilient portion adapted to engage a type rail to secure the printing member in place.

5. A printing member comprising a metal body portion having a plurality of characters thereon, means on one end of said member for engaging a printing bed, and a resilient hook secured to the opposite end of said member and movable to a position to engage a printing bed.

6. A printing member comprising a flexible plate having struck up projections and embossed strips held by said projections, and fastening means for securing said printing member to a printing bed.

7. A printing member comprising a body

portion having rows of struck up projections and a plurality of embossed character strips thereon, and means for securing said member in a curved form on a curved printing bed.

8. The combination with a printing drum, of a flexible plate having struck up projections, embossed printing strips mounted on said projections, and movable means secured to the plate and adapted to engage the drum nearer the axis thereof than the printing surface.

9. In combination with a rotary printing drum having T rails thereon, a flexible metal blanket secured to said drum, said flexible blanket having type engaging means thereon, a plurality of rows of type secured to said means, said flexible blanket having means adjacent ends for engaging T rails of the drum.

10. In combination with a rotary printing drum having T rails thereon, a flexible metal blanket secured to said drum, said flexible blanket having type engaging means thereon, a plurality of rows of type secured to said means, said flexible blanket having means on one end for engaging one of the T rails, and movable means on the drum adapted to resiliently engage another of the rails to hold the printing member in position.

11. A printing member, a fastening member adapted to secure the printing member to a printing bed, said fastening member comprising a strip of resilient material bent to form resilient side portions disposed in a single plane and an engaging portion disposed in a plane beneath the plane of the side portions.

12. A printing member comprising a flexible plate and embossed strips thereof, a fastening member adapted to secure the printing member to a printing bed, said fastening member comprising a strip of resilient material bent to form resilient side portions, and an engaging portion disposed in a plane beneath the plane of the side portions said engaging portions being resiliently connected to the side portions.

13. In combination with a rotary printing drum having rails thereon, a flexible printing blanket having means at one end for engaging one of the rails, and a spring clip disposed beneath the level of the printing surface at the other end of the blanket and adapted to engage a rail to secure the blanket in place.

14. In combination with a rotary printing drum having type rails thereon, a flexible printing member having means integral therewith for engaging one of the rails, a spring clip disposed beneath the level of the printing surface and adapted to engage a rail to secure the printing member in position, said member comprising a strip of spring metal bent to form a portion dis-

posed upon the top of the blanket and an engaging portion extending beneath the blanket.

5 15. A flexible printing blanket having upstanding ears near one edge, and a wire fastening device comprising a hooked resilient loop having its ends mounted in said ears.

10 16. The combination with a rotary printing drum having type rails thereon, of a flexible plate having struck up projections, embossed printing strips mounted on said projections, said plate having struck up ears

near one edge, and a spring wire clip having its ends mounted on said ears and normally disposed beneath the level of the printing surface and adapted to engage a rail of the drum, to secure the printing member in position, said clip being bent to form a serpentine portion disposed upon the top of the blanket and an engaging portion extending beneath the blanket.

In testimony whereof, I hereunto affix my signature.

CLIFTON CHISHOLM.