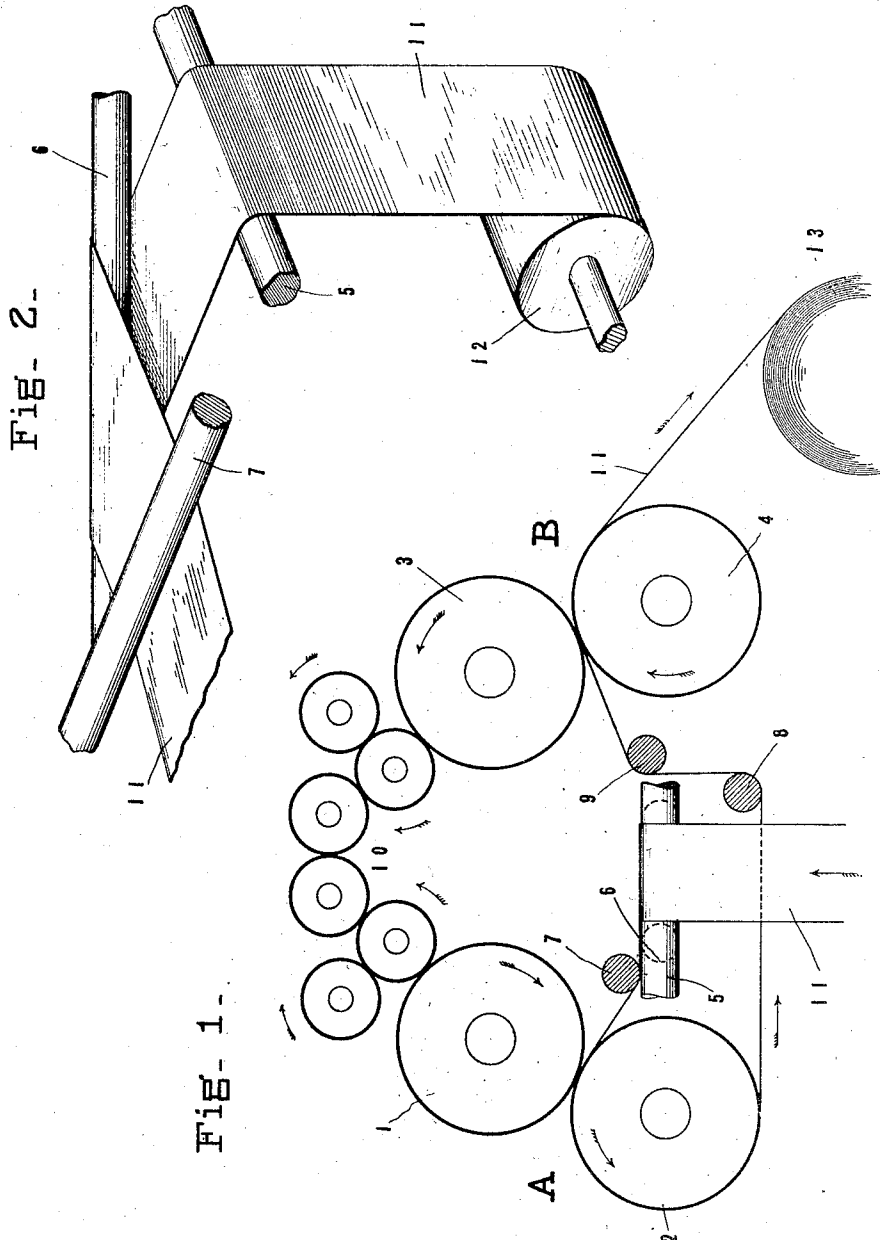


W. A. PRINGLE.
 PRINTING MECHANISM.
 APPLICATION FILED OCT. 20, 1906.

946,808.

Patented Jan. 18, 1910.



WITNESSES
J. P. [Signature]
Arthur T. [Signature]

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UNITED STATES PATENT OFFICE.

WILLIAM A. PRINGLE, OF NIAGARA FALLS, NEW YORK, ASSIGNOR TO THE CARTER-CRUME CO., LIMITED, OF NIAGARA FALLS, NEW YORK, A CORPORATION OF CANADA.

PRINTING MECHANISM.

946,808.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, WILLIAM A. PRINGLE, residing at Niagara Falls, in the county of Niagara and State of New York, have invented certain new and useful Improvements in Printing Mechanism, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to printing mechanism and one of the objects thereof is to provide a convenient and compact arrangement of the printing couples of a perfecting printing press.

Other objects will be in part obvious and in part pointed out hereinafter.

The invention accordingly consists in the features of construction, combinations of elements and arrangement of parts which will be exemplified in the construction hereinafter set forth, and the scope of the application of which will be indicated in the following claim.

In the accompanying drawings, wherein is illustrated one of the various possible embodiments of this invention, Figure 1 is a view illustrating diagrammatically the relative arrangement of the printing couples and the means for feeding the web thereto; Fig. 2 is a view in perspective of the means for guiding the web to one of the printing couples.

Similar reference characters refer to similar parts throughout both views of the drawings.

Preliminary to a description in detail of this embodiment of my invention with reference to the accompanying drawing, it may here be noted that this invention seeks, in general, to improve upon the arrangement of the printing couples of a perfecting printing press in the interest of economy of space, and it should be apparent from the following description that this and other desirable ends are attained herein in an exceedingly simple manner.

Referring now to the drawing, A indicates a printing couple comprising a form cylinder 1 and an impression cylinder 2, and B indicates a second printing couple comprising a form cylinder 3 and an impression cylinder 4. These printing couples are spaced apart as shown and are arranged with the axes of revolution of the several

cylinders in parallel relation. Arranged intermediate the printing couples are a plurality of rods designated by the numerals 5, 6 and 7, said members being disposed substantially in triangular relation as shown, and adapted to guide the web to printing couple A. Also arranged between the printing couples are a plurality of guide rods 8 and 9 which are arranged in parallel relation with the axes of revolution of the form and impression cylinders thereof and are adapted to guide the partly printed web from printing couple A to printing couple B.

In order to provide for a supply of ink for the form cylinders 1 and 3, a plurality of inking rolls 10 are positioned above the printing couple, and intermediate the same, said inking rollers being arranged in serial relation and receiving ink from a common source. Each of said form cylinders is in peripheral contact with one member of said series.

Having thus described the relative arrangement of the several devices constituting this embodiment of my invention, the operation thereof, which should be largely obvious, is substantially as follows: The web 11, which is received from any suitable source of supply, as roll 12, passes over guide rod 5 and then under and over guide rod 6, which is disposed at substantially 45° to guide rod 5, whence it passes under guide rod 7, arranged in parallel relation with the axes of the form and impression cylinders of printing couple A, whereby one side of the web will receive impressions from the form cylinders. The web then passes about impression cylinder 2 and is received under guide rod 8 and over guide rod 9, whereby the opposite side of the web is presented to form cylinder 3, whence the web passes to accumulating roll 13 on to mechanism adapted to perform other operations thereon.

It will thus be seen that I have provided an arrangement of the form and impression cylinders which constitute the printing members of a perfecting printing press whereby great economy in the use of space will be effected and whereby the direction of feed of the web may be effectively changed and guided to the members of the first printing couple. The form cylinders of both the printing couples are also inked in an exceedingly simple manner.

As many changes could be made in the above construction and many apparently widely different embodiments of this invention could be made without departing from the scope thereof, it is intended that all matter contained in the above description or shown in the accompanying drawings shall be interpreted as illustrative and not in a limiting sense.

It is also to be understood that the language used in the following claim is intended to cover all of the generic and specific features of the invention herein described and all statements of the scope of the invention which, as a matter of language, might be said to fall therebetween.

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

In mechanism of the class described, in combination, a plurality of printing couples spaced apart from one another and each comprising a form cylinder and an impression cylinder, the axes of revolution of the several cylinders being in parallel relation to one another, and the distance between the axes of the form cylinders being less than the distance between the axes of the impres-

sion cylinders, mechanism arranged intermediate said printing couples adapted to receive and change the direction of feed of a web, whereby the same will be received between the first of said printing couples to receive printed impressions upon one side thereof, a roller arranged intermediate said printing couples adapted to receive and guide the web from the first of said couples, said roller being located adjacent the second of said couples, a second roller adjacent said second couple and adapted to receive the web from said first roller to guide the same to said second printing couple whereby the opposite side of the web will receive printed impressions, common inking means for said printing couples located intermediate the same, and an accumulating roll upon which said web is adapted to be wound after passing through said second printing couple.

In testimony whereof I affix my signature, in the presence of two witnesses.

WM. A. PRINGLE.

Witnesses:

T. D. SUTHERLAND,
W. GREIG.