(No Model.) 2 Sheets—Sheet 1.

A. DITSON.

PRINTING PRESS ATTACHMENT.

No. 418,944. Patented Jan. 7, 1890.

Fig. 1.

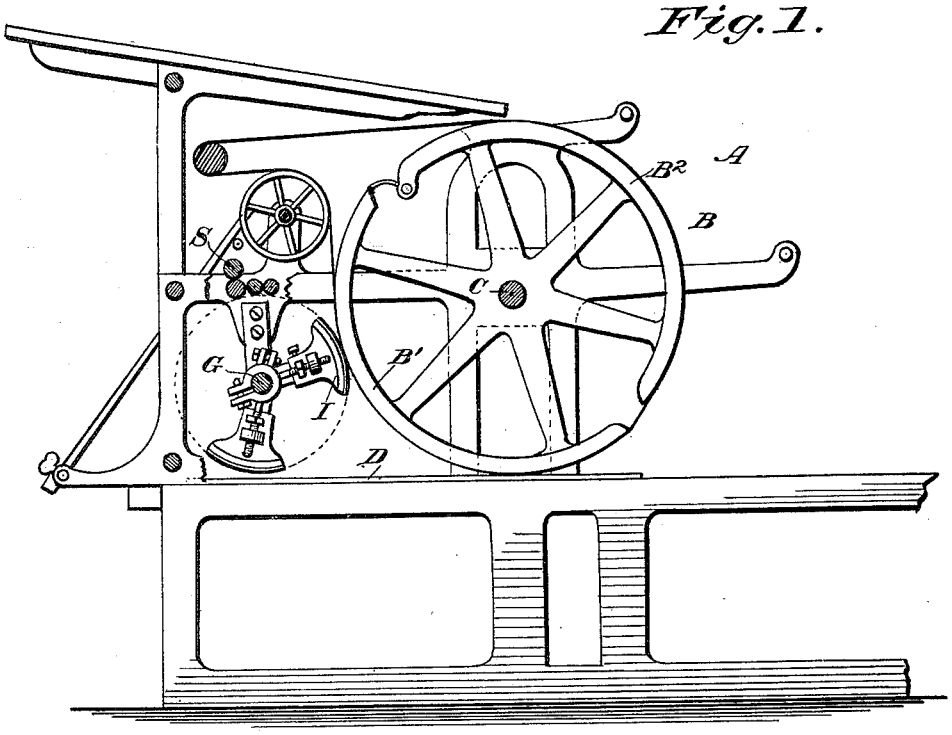


Fig. 3.

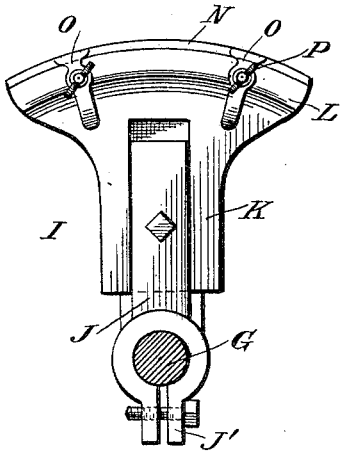
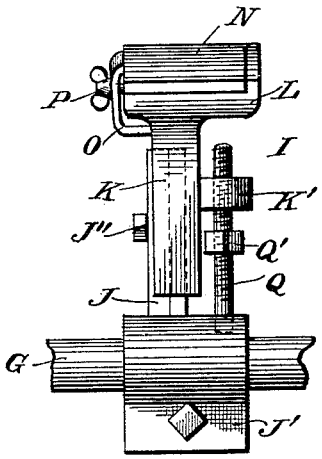


Fig. 4.



WITNESSES:

Phil C. Dieterich

C. Sedgwick

INVENTOR

A. Ditson

BY Munn & Co.

ATTORNEY

(No Model.) 2 Sheets—Sheet 2.

A. DITSON.

PRINTING PRESS ATTACHMENT.

No. 418,944. Patented Jan. 7, 1890.

Fig. 2.

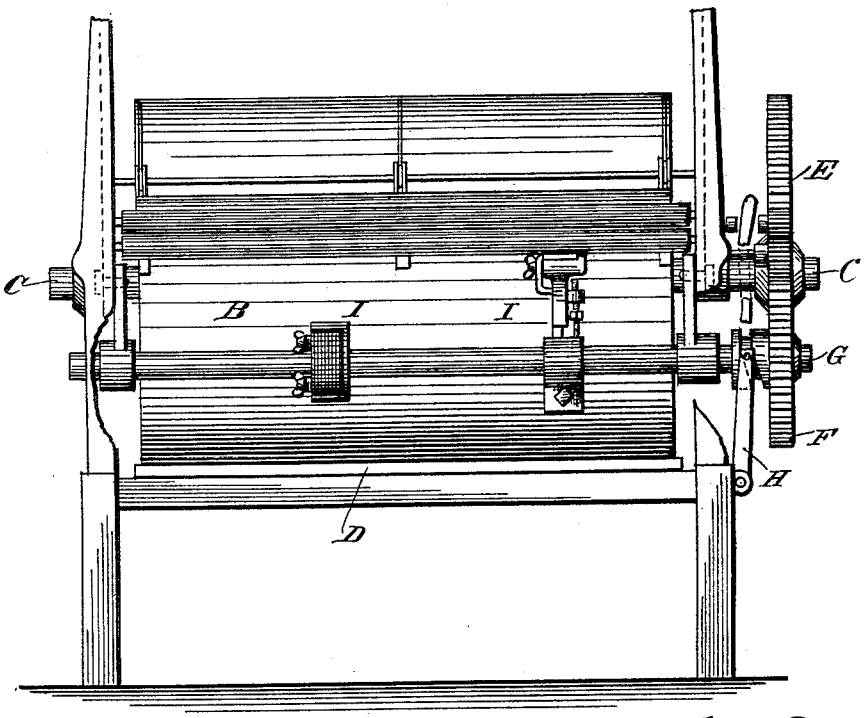


Fig. 5.

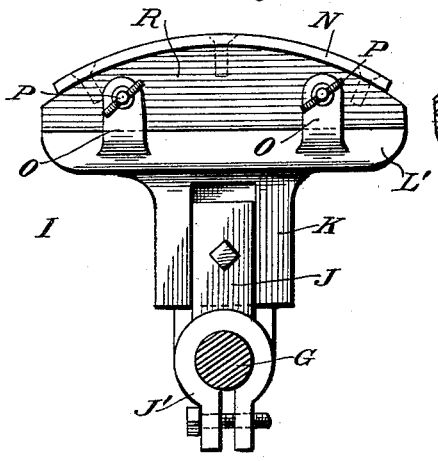
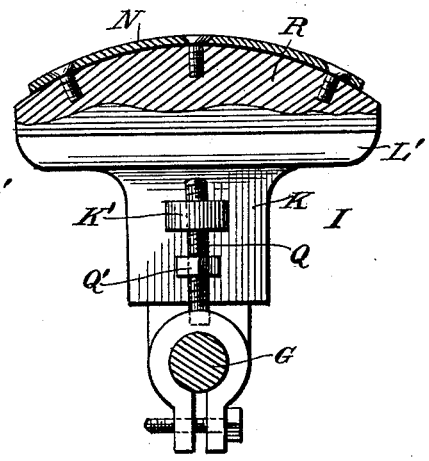


Fig. 6.



WITNESSES:

Phil. C. Dieterich.

C. Bedgwick

INVENTOR:

A. Ditson

BY

Munn & Co.

ATTORNEYS.

UNITED STATES PATENT OFFICE.

ALLEN DITSON, OF LARNED, KANSAS.

PRINTING-PRESS ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 418,944, dated January 7, 1890.

Application filed April 14, 1889. Serial No. 308,445. (No model.)

To all whom it may concern:

Be it known that I, ALLEN DITSON, of Larned, in the county of Pawnee and State of Kansas, have invented a new and Improved Printing-Press Attachment, of which the following is a full, clear, and exact description.

The invention relates to cylinder printing-presses, and its object is to provide a new and improved attachment, which is simple and durable in construction and permits the printing of any matter, from a single line to one or more columns, on any desired part of the sheet, in a color different from the color in which the body of the sheet is printed.

The invention consists of certain parts and details and combinations of the same, as will be fully described hereinafter, and then pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of the improvement as applied, parts being in section. Fig. 2 is an end elevation of the same with parts broken out. Fig. 3 is an enlarged side elevation of a cylinder-segment. Fig. 4 is an end elevation of the same. Fig. 5 is a side elevation of a modified form of the same, and Fig. 6 is a rear side elevation of the same with parts in section.

The cylinder printing-press A, of any construction, is provided with the cylinder B, mounted to turn with the shaft C, held on the main frame and deriving its motion in the usual manner. The cylinder B is provided with the usual rim-sections B′ and B^2, of which the former carries the paper onto the form D, held on the bed, which is mounted to travel longitudinally under the cylinder B. The other rim-section B^2 is somewhat smaller in diameter, so as not to touch the type when the bed is returning.

On one outer end of the shaft C is secured a gear-wheel E, meshing into a gear-wheel F, secured on a shaft G, mounted to turn in suitable bearings secured to the main frame of the printing-press A. The shaft G carries the printing attachment or attachments I, each of which is either formed as a cylinder or as a segment of a cylinder, as illustrated in the drawings. The shaft G may be located in front of the cylinder B or in the rear directly under the fly, as shown in the drawings.

Each printing attachment I, when made as a segment of a cylinder, as shown in the drawings, is provided with an arm J, having a clamp J′, by which the said arm is clamped onto the shaft G at any desired place and in any desired position. On the arm J is mounted to slide an arm K, adapted to be secured in place by a suitable set-screw or other means, screwing in the arm J and against the said arm K.

The outer end of the arm K may be formed in the shape of a segment L, as illustrated in Figs. 3 and 4, or in the shape of a straight plate L′, as illustrated in Figs. 5 and 6. In the former case the type N is bent to the periphery of the segment L and fastened on the same by suitable clamps O, pressing against one side of said type and secured in place by means of a wing-nut P. Any suitable means may be employed to fasten the type N in place on the periphery of the segment L. The type is preferably a stereotype-plate; but regular type may be set up on the segment L and fastened in place on the same, if desired.

On the arm K is formed a lug K′, in which screws a screw-rod Q, one end of which rests in the clamp J′, and is provided with an offset Q′ for conveniently turning the screw-rod Q. The latter serves to adjust the arm K on the arm J so as to make a good impression.

In the modification shown in Figs. 5 and 6 the plate L′ is adapted to receive a segmental wooden block R, on the periphery of which is nailed or otherwise fastened the stereotype-plate N. The wooden block R is held in place by the clamps O and the wing-nuts P. The cylinder or cylinder-segments are adapted to roll off with their peripheries on the periphery of the cylinder-section B′.

The gear-wheel F is preferably of a diameter about half that of the gear-wheel E, so that the shaft G makes two revolutions for one revolution of the shaft C. The diameter of the cylinder or cylinder-segment I is about half that of the cylinder-section B′, so that the plate N rolls off at the same speed on the periphery of the cylinder-section B′.

The plate N on the printing attachment receives its ink from the inking-rollers S, of any approved construction, and deriving their ink from a suitable ink-fountain, all arranged in close proximity to the printing attachment I. The color supplied to the inking-rollers S is preferably different from the color employed for printing the body of the sheet.

On the frame of the printing-press A is pivoted a lever H, provided with a pin engaging a cam-groove formed on the hub of the gear-wheel F. The free end of the lever H engages by a fork the shaft of the ink-distributing roller, and when the gear-wheel F is rotated the said roller is moved sidewise to more evenly distribute the ink.

The operation is as follows: When the printing-press A is set in motion in the usual manner, the sheet of paper is drawn onto the periphery of the cylinder-section B in the usual manner by the grippers from the feed-table. The type-bed operates in conjunction with the cylinder-section B′, so that an impression is made when the said sheet of paper is carried over the type. When the operator desires to print certain matter in a different color from the color on the body of the sheet, he removes certain of the matter from the type-form D and fills the space thus made with furniture. The desired matter is then formed in the stereotype-plate N, secured to the cylinder or cylinder-segment I. The operator then adjusts the cylinder or cylinder-segment on the shaft G in such a manner that the plate N will print on the sheet carried by the cylinder-section B′ in the very space left by the matter removed from the type-form D. As the cylinder or cylinder-segment with its type or plate N can be adjusted by the clamp J′ to any desired position on the shaft G, the matter on the cylinder or cylinder-segment will come onto the exact spot of the sheet desired. As two or more such cylinders or cylinder-segments can be employed on the shaft G, any desired matter may be printed in different colors at any desired place on the sheet, it being understood that this matter had previously been removed from the form D.

It will further be understood that the printing-cylinder or cylinder-segment L makes two revolutions for each revolution of the cylinder B; but it prints only once, as the diameter of the section B^2 of the cylinder B is less than the diameter of the section B′, and consequently the type or plate N does not touch the periphery of the said cylinder-section B^2.

I do not limit myself to the special construction shown in the drawings and described above, as the construction of the device may be varied according to the form of press to which it is to be applied.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

1. In a printing-press attachment, an arm having an attaching-clamp at its inner end, and a second arm adjustable longitudinally on the first arm and provided with a curved type-holding outer end, substantially as set forth.

2. In a printing-press, an attachment comprising a shaft, an arm J, secured adjustably thereon, a type-carrying arm K, adjustable longitudinally thereon and provided with a threaded lug K′, the screw Q, and the nut Q′, substantially as set forth.

3. In a printing-press attachment, the combination, with a shaft mounted to turn, of an arm adapted to be clamped on the said shaft, a second arm held adjustably on the said first-named arm, type secured on the segmental periphery of the said second arm, and means, substantially as described, for holding the said type in place, as set forth.

ALLEN DITSON.

Witnesses:
JESSE DITSON,
I. S. MCFARLAND.