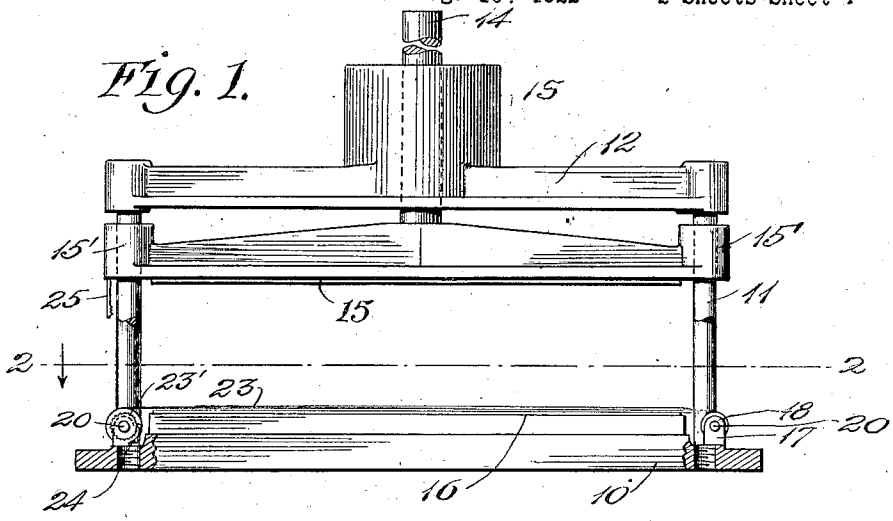
April 15, 1924. 1,490,083

J. B. BARNETT

PRINTING PRESS

Filed Aug. 15, 1922 2 Sheets-Sheet 1

Fig. 1.



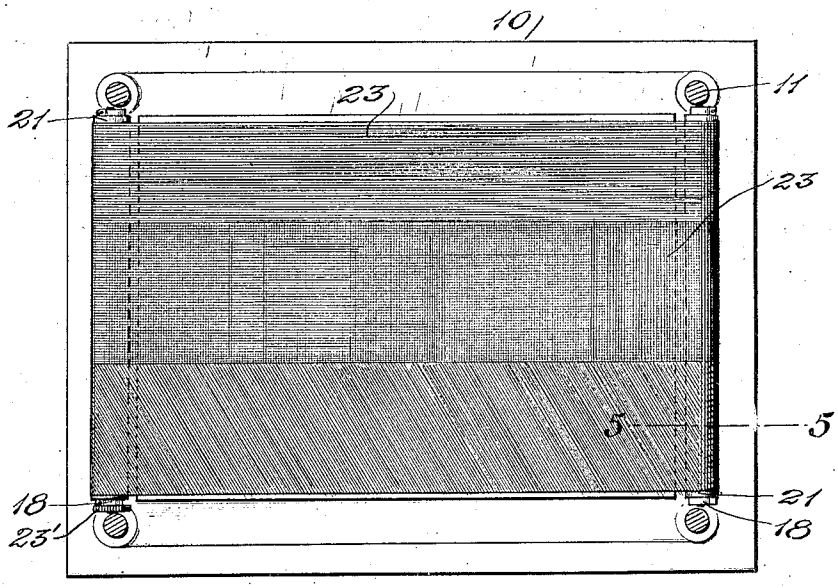


Fig. 2.

Inventor
John B. Barnett.

Attorney

April 15 , 1924. 1,490,083

J. B. BARNETT

PRINTING PRESS

Filed Aug. 15, 1922 2 Sheets-Sheet 2

Fig. 3.

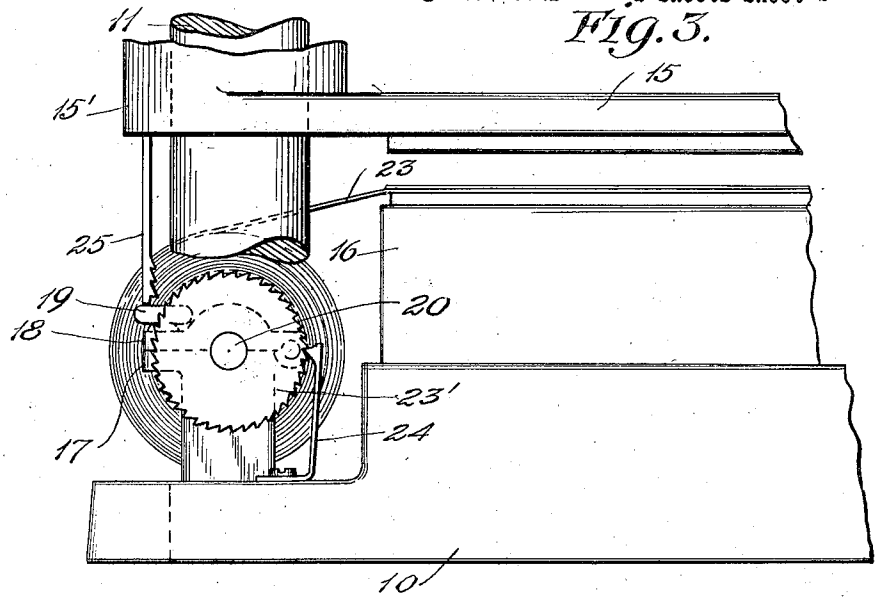


Fig. 4.

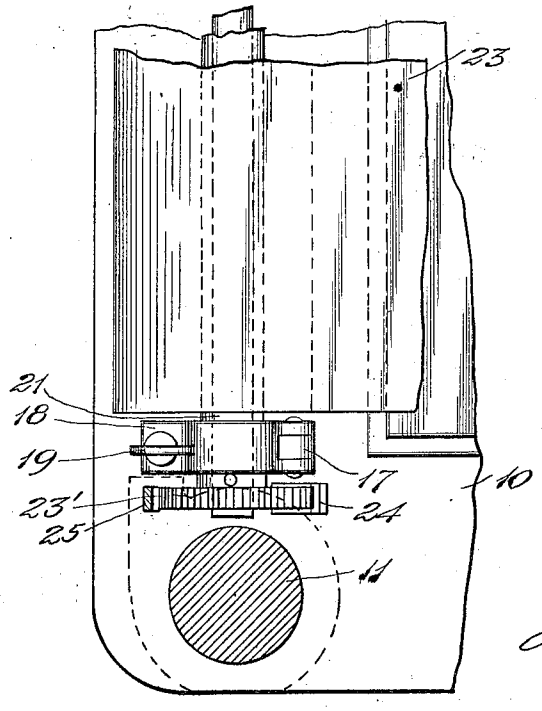
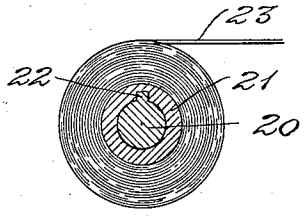


Fig. 5.



Inventor
John B. Barnett.

Attorney

Patented Apr. 15, 1924. 1,490,083

UNITED STATES PATENT OFFICE.

JOHN B. BARNETT, OF NORWOOD STATION, PENNSYLVANIA, ASSIGNOR TO PHILADELPHIA ELECTRO PRINTING PRESS & MFG. CO., OF NORWOOD STATION, PENNSYLVANIA, A CORPORATION OF DELAWARE.

PRINTING PRESS.

Application filed August 15, 1922. Serial No. 581,961.

To all whom it may concern:

Be it known that JOHN B. BARNETT, a citizen of the United States, residing at Norwood Station, in the county of Delaware and State of Pennsylvania, has invented certain new and useful Improvements in Printing Presses, of which the following is a specification.

This invention relates to the art of printing and has special reference to a method and apparatus for multi-color printing.

One important object of the invention is to provide an improved and simple method whereby different parts of the same printed sheet may be printed in different colors at one and the same time on an ordinary platen press.

A second important object of the invention is to provide an improved apparatus applicable to an ordinary platen press for producing simultaneous multi-color printing.

A third important object of the invention is to provide a novel arrangement of printing press particularly adapted for multi-color printing wherein a ribbon is employed to provide the necessary printing ink, the ribbon being of two or more different colors.

With the above and other objects in view as will be hereinafter apparent, the invention consists in general of certain novel details of construction and combinations of parts hereinafter fully described, illustrated in the accompanying drawings and specifically claimed.

In the accompanying drawings, like characters of reference indicate like parts in the several views, and:—

Figure 1 is a side elevation of an apparatus for carrying this method into effect, certain of the parts being shown in section.

Figure 2 is a section on the line 2—2 of Figure 1.

Figure 3 is an enlarged detail showing a certain ribbon feed used herewith.

Figure 4 is a plan view of the ribbon feed shown in Figure 3.

Figure 5 is a transverse section through one of the rolls.

In the apparatus herein disclosed for carrying out this method there is employed a press having an ordinary flat base 10 from which standards 11 extend upwardly and are connected at their upper ends by a top 12. This top supports a shield or casing 13 preferably containing a solenoid as disclosed in my copending application executed of even date herewith and bearing the Serial No. 581,962 filed August 15, 1922. This solenoid is provided with a plunger core 14 carrying a platen 15 having sleeves 15′ guided by the standards 11. At 16 is the type bed at each end of which is a pair of aligned bearings consisting of lower bearing members 17 having caps 18 hinged thereto and secured in position by some suitable means as for instance the thumb screws 19. In these bearings are mounted shafts 20 whereon slide hollow rollers 21 which are keyed to the shaft as at 22. These rollers carry the multi-colored ribbon 23, the different colors being arranged on the ribbon in longitudinal bands. On one of these shafts 20 is fixed a ratchet wheel 23′ which is engaged by a stop pawl 24 fixed on the base 10, the pawl being a spring pawl. Fixed on the platen is a reciprocating pawl 25 which, when the platen moves downward, engages the ratchet 23′ and rotates the same so as to draw the ribbon over the type bed thus exposing fresh ribbon with each reciprocation of the platen. With this arrangement it will be obvious that the printing is effected in a manner similar to the printing by a typewriter or "multigraph" but it will be particularly noted that, due to the employment of a multi-colored ribbon and the production of an impression simultaneous across the width of the ribbon the resultant printing matter is also multi-colored, the effect being capable of being made highly artistic by employment of appropriate color on the ribbon. It will be noted that wherever the expression "multi-colored ribbon" is used throughout this specification there is meant to be either a single ribbon impregnated in strips with inks of different colors or a plurality of ribbons arranged side by side so that they substantially constitute a multi-colored ribbon. Also it will be noted that in place of using a ribbon any flexible multi-colored sheet may be used, such as paper similar to the ordinary carbon paper, only colored with more than one color.

There has thus been provided a simple and efficient device of the kind described and for the purpose specified.

It is obvious that minor changes may be

made in the form and construction of the invention without departing from the material spirit thereof. It is not, therefore, desired to confine the invention to the exact form herein shown and described but it is desired to include all such as properly come within the scope claimed.

Having thus described the invention what is claimed as new, is:—

In combination, a press having a flat bed provided at its corners with guide means, a platen slidable on said guide means to and from said bed, a pair of rollers each journalled at a respective end of said bed, an inking ribbon having a plurality of strips or zones of different colors and having its opposite ends wound on respective rollers, a ratchet carried by one of said rollers, a stop pawl mounted on the bed and engaging said ratchet, and an actuating pawl fixed to the platen and engageable with said ratchet, said actuating pawl comprising a straight spring bar provided on one side with a series of ratchet teeth complementary to the teeth on the ratchet.

In testimony whereof I affix my signature.

JOHN B. BARNETT.