I. L. G. Rice.

Inking App's for Color Printing.

No. 108,630. Patented Oct. 25, 1870.

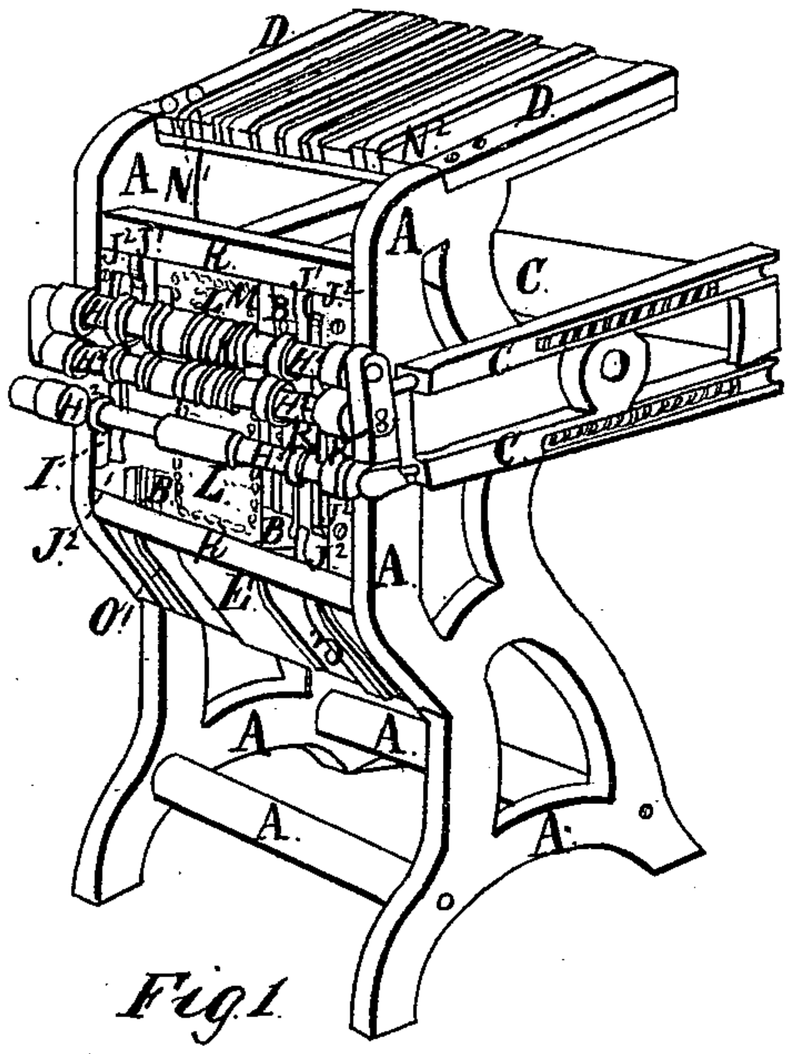

Fig. 1.

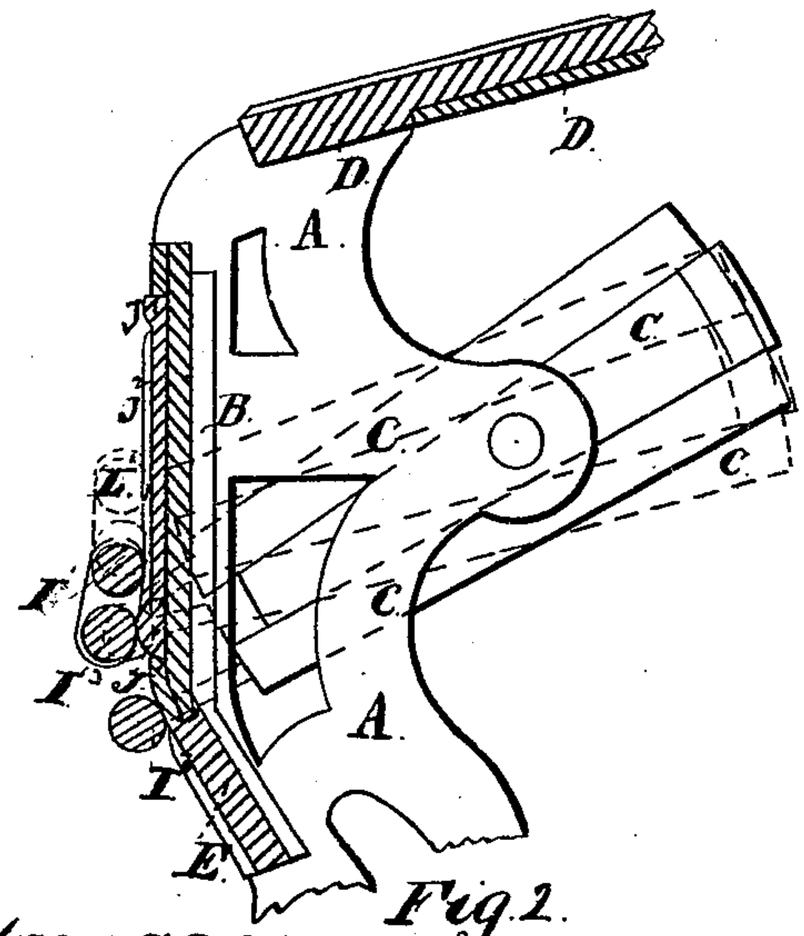

Fig. 2.

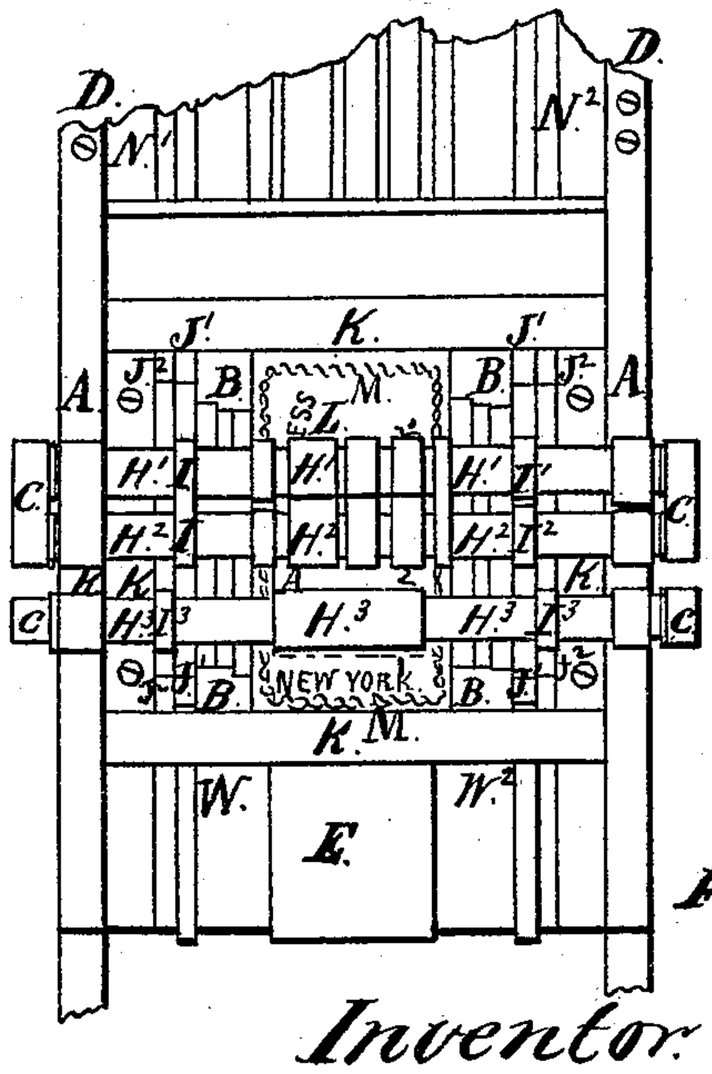

Fig. 3.

Witnesses.
Edward E. Rice
Clara E. Rice

Inventor.
Israel L. G. Rice

UNITED STATES PATENT OFFICE.

ISRAEL L. G. RICE, OF CAMBRIDGE, MASSACHUSETTS.

IMPROVEMENT IN INKING APPARATUS FOR COLOR-PRINTING.

Specification forming part of Letters Patent No. **108,630**, dated October 25, 1870.

To all whom it may concern:

Be it known that I, ISRAEL L. G. RICE, of Cambridge, in the county of Middlesex, State of Massachusetts, have invented a certain Improved Inking Apparatus for Printing-Presses, of which the following is a specification:

My invention relates to an inking apparatus for printing-presses by means of which a single form, containing lines of printing-types that are set up, and that have a rule or border around them, may be inked in such a manner that the types will print in one or more colors, and the rule or border will print in a different color from the types that are inclosed by it, at one impression.

For a better understanding of this invention I would call attention to the inking apparatus for which a patent was granted to me, bearing date of April 20, 1869, and also to the inking apparatus for color-printing for which a patent was granted to me April 19, 1870, and to the inking apparatus for which an application for a patent was filed April 27, 1870.

The nature or principle of this invention for which I make application for Letters Patent is this: It is a simple and easily-worked apparatus, by the use of which a form containing a border and type may be done at one impression. It is an attachment that may be put on any printing-press. The drawing refers to an attachment put upon a Gordon-Franklin press. I use the inking apparatus referred to above in connection with this. This apparatus consists of simply putting upon the inking-roller shafts or cores small wheels or rollers, one at the ends of each shaft, and then putting down blocks for these inking-rollers' wheels or rollers to run over. These blocks I put in the frame that the ink-tables are in, and also in the iron chase in which the types and rule or border are locked up. These blocks are made of different heights, high ones being placed wherever it is required that the inking-rollers should be raised above either the form or ink-tables, and low blocks being placed at points where it is considered necessary that the rollers should come down and touch the types.

Figure 1 is a perspective view of a machine embodying my invention. Fig. 2 is a sectional side view of the same. Fig. 3 is a plan of the same.

A is a portion of the frame of a Gordon-Franklin press. B is the bed of the press. C is the carriage that contains the inking-rollers. D is a frame that contains sectional ink-tables. E is an ink-table, on which the lower roller distributes ink. H^1 H^2 H^3 are the inking-rollers. I^1 I^2 I^3 are wheels or rollers on the shafts of the inking-rollers. J^1 J^2 are the raised blocks. K is the chase, in which are the types L and border M. N^1 N^2 are raised blocks or strips of metal upon the ink-table bed D, to keep the under inking-roller from coming in contact with the inking-table E. W^1 W^2 are strips or blocks of metal to prevent the upper rollers from coming in contact with the inking-table E. The raised blocks J^1 J^2 are made so that they can be put in at any particular point within the iron chase, and then readily secured in their places by wedges or other means; but the strips N^1 N^2 and W^1 W^2 are intended to be permanently fastened upon the attachment. The wheels or rollers I^1 I^2 I^3 should also be permanently fastened upon the shafts or cores of the inking-rollers.

To use the invention I proceed as follows: Having placed the form upon the stone to lock it up, I put inside the chase the raised blocks J^1 J^2. To find their proper position, I observe the form, and consider that the upper inking-rollers H^1 H^2 must only ink the lines of types or border that run at right angles with the inking-rollers, and that the lower rollers must ink everything that is to be printed from that is parallel with the inking-rollers. I then put the raised blocks J^1 J^1 beside the line of border that is parallel with the inking-rollers, and put the raised blocks J^2 J^2 beside the lines of types and the border that is at right angles with the inking-rollers.

The wheels or rollers I^1 I^2 are not in line with the wheels or rollers I^3. The object of this is so that they will not roll over the same raised blocks. The inking-rollers H^1 H^2 are furnished with ink by the patented apparatus referred to. The inking roller H^3 is supplied with ink from the ink-table E, or from a cylinder with a fountain placed in its stead. This cylinder should be made to revolve very rapid,

so that, when the inking-roller H^3 comes in contact with it, it will revolve rapidly also, and become covered with ink.

As the press is run, the inking-rollers continually pass over the form, and over the raised blocks the rollers on the shafts or cores of the inking-rollers pass, raising the inking-rollers up to clear those parts which the different rollers are not intended to ink. Thus, by these means, a border and lines of printing-types entirely inclosed by the border may, on an ordinary press, and with but one form, one impression, and with the usual number of inking-rollers to pass over the form, be printed with the types in various colors, and the border in a different color from any of the lines of types inside of it; as, for instance, if we want to print the lines inside with the colors green, black, orange, and purple, and put a red border around them, we put upon the inking-rollers H^1 and H^2 the red ink that is to ink one side of the border; next we put the green ink that is to ink the line of type; then the black, orange, and purple inks that are to ink the types; and then the red to ink the border.

The inks are put in their proper places by the apparatus referred to. The red ink alone is put upon the ink-table E, to ink the upper and lower lines of border.

I claim—

The employment of inking-tables D E, rollers H^1 H^2 H^3, and movable and fixed blocks J^1 J^2, for printing lines of type, and a border around them, in several colors, and by the same impression, when locked within a single form, a different-colored ink being upon the border from that upon any of the lines of type, if so desired, substantially as shown and described, and for the purpose specified.

ISRAEL L. G. RICE.

Witnesses:

EDWARD E. RICE,

CLARA E. RICE.