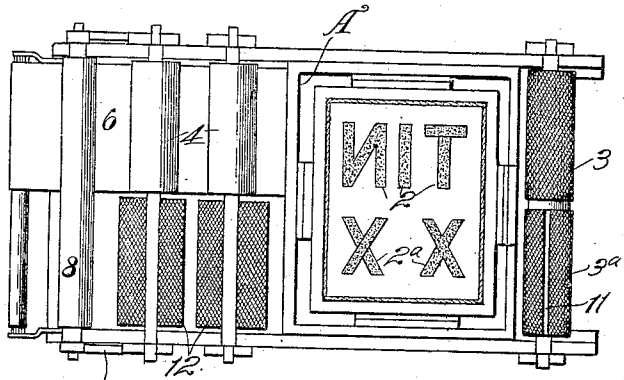
No. 876,643. PATENTED JAN. 14, 1908.

C. S. HEERMANCE.

WATER COLOR PRINTING.

APPLICATION FILED FEB. 25, 1907.

Fig. 1.



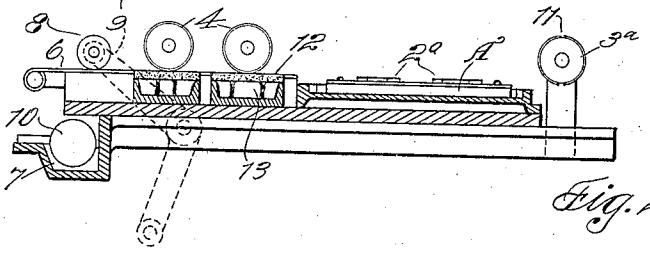


Fig. 2.

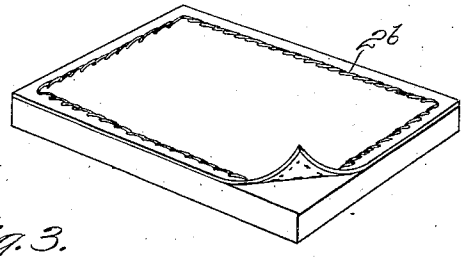


Fig. 3.

WITNESSES:

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CHARLES S. HEERMANCE, OF SAN FRANCISCO, CALIFORNIA.

WATER-COLOR PRINTING.

No. 876,643. Specification of Letters Patent. Patented Jan. 14, 1908.

Application filed February 25, 1907. Serial No. 359,064.

To all whom it may concern:

Be it known that I, CHARLES S. HEERMANCE, citizen of the United States, residing at the city and county of San Francisco and State of California, have invented new and useful Improvements in Water-Color Printing, of which the following is a specification.

My invention relates to improvements in the printing of characters of any description, and in one, or a variety of colors, at a single impression.

It consists in making the printing surface or form of felt or equivalent soft absorbent material; and in the employment of similar soft or absorbent superposed rollers whereby ink of different colors may be applied to form a variety of shades and colors which will merge into or be variously disposed with relation to each other, or a single color applied.

It consists in the combination of parts, and in details of construction which will be more fully explained by reference to the accompanying drawings, in which—

Figure 1 is a plan view. Fig. 2 is a side elevation partly in section. Fig. 3 is a perspective of a printing surface.

In the drawings I have illustrated the manner in which my invention is carried out. Upon a movable form A of any well known character is fixed the printing surface 2 which I employ. This surface is made of any suitable fibrous and absorbent material raised above the general level, and capable of receiving any ink or combination of inks which may be applied therto by inking rollers as at 3, to which the ink is distributed through similarly constructed absorbent rollers 4 located above the printing surface.

The bed 6 and the form in the same plane, reciprocate beneath the rollers 3 and 4, and ink is distributed and applied to the bed 6 and printing surface from the ink fountain 7 through the agency of a roller 8 journaled upon the ends of arms 9 which are fulcrumed to a stationary part of the press frame so that when the bed advances to the right the roller 8 will be allowed to drop down upon the fountain roller 10, to receive a coating of ink therefrom. When the bed returns to the left, the roller 8 will be lifted to pass over the end and upon the top of the bed, and the bed on its return will apply ink to the rollers 4 which in turn distribute it to the roller 3 the ink will be applied to this roller and thence to the printing surface 2, when the latter is reciprocated beneath said latter roller.

In order to apply colors separately to parts of the printing surface, I have shown a roller 3^a mounted in line, and upon the same axis with the roller 3. This roller has its absorbent surface made in sections with the edges separated by narrow open spaces as at 11. That portion of the bed which is in line with this sectional roller, carries absorbent pads 12, having surface areas equal to the areas of the roller sections, and beneath each pad 12 is an ink-well 13. These wells may each contain a different colored ink which will be absorbed by the respective pads, and transferred to the sections of the roller 3^a which are caused to register with the pads by any suitable mechanical device actuated in unison with the reciprocations of the bed. By this arrangement each color will be applied to a corresponding portion of the printing surface 2^a. In order to use the ink wells and pads as shown, the rollers 4 are discontinued, and the shafts only, extend above the pads 12, thus leaving space for the wells and pads.

In Fig. 3 I have shown the form which carries the printing surface, and a raised border 2^b which may be made of any ornamental or fanciful description. The surface of the form is non-absorbent, and this border is raised above it to conform to the level of the printing surfaces 2—2^a. This border being in the nature of a thin absorbent filament or filaments, cannot be glued to the form surface as the fixing material would so harden it that it would not absorb the ink or color. I therefore affix it by stitching it through the parchment, or non-absorbent surface, thus leaving the exposed part soft enough to absorb the ink, and to imprint the design, pattern, or border, as desired.

In order to apply a number of colors, I have heretofore employed a number of containers for ink of different colors, so disposed with relation to each other that different colors being placed in each container, with means for raising the ink therefrom, and a porous or fibrous absorbent form or surface being disposed above and in contact with such a device, the various inks will be absorbed and diffused through the form, with the resultant shading, intermingling and distribution of the color as required by the character of the work to be done.

Having thus described my invention, what

I claim and desire to secure by Letters Patent is—

1. In a printing apparatus, a reciprocating bed, a printing form, ink-wells and superposed absorbent pads carried thereby and so disposed as to be saturated from the wells, a distributing roller having its periphery formed of separated absorbent surfaces, each registering with one of the pads.

2. In a printing apparatus, a reciprocating bed, a printing form or surface, ink-wells and superposed absorbent pads carried by the bed, a roller revoluble in the plane of travel of the pads and form, said roller having its peripheral surface covered with separated sections of absorbent material, and each section having its area of the size and registering with the pad from which it receives its supply.

3. In a printing apparatus, a reciprocating bed, a printing form or surface carried thereby, continuous surfaced inking and distributing rollers journaled above one portion of the bed, and a fountain and supply means therefor, ink-wells and superposed absorbent pads carried by the other portion of the bed, and a roller with independent inking sections on its surface, said sections registering with corresponding pads and sections of the form.

4. In a printing apparatus, a form having a non-absorbent base and raised absorbent printing surfaces, an ornamental border and like raised portions formed of absorbent filaments stitched through the base, a reciprocating bed upon which said form is carried, and ink and color supply devices therefor.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

CHARLES S. HEERMANCE.

Witnesses:
L. H. NOURSE,
FREDERICK E. MAYNARD.