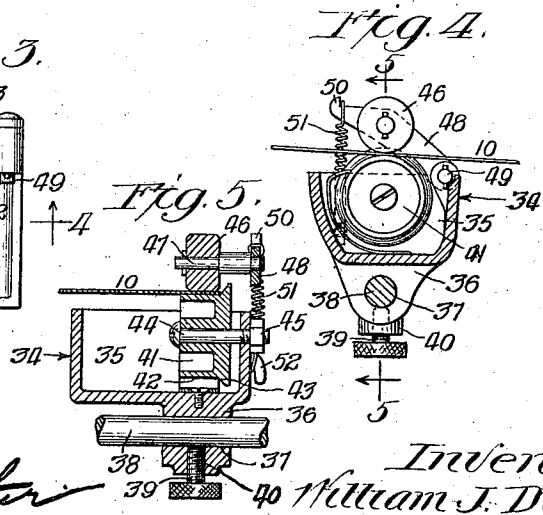
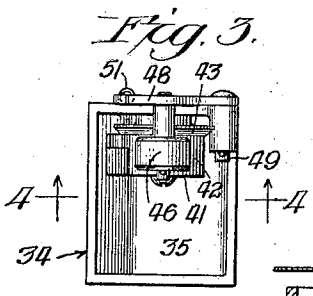
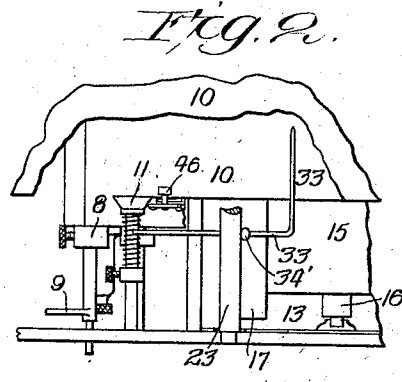
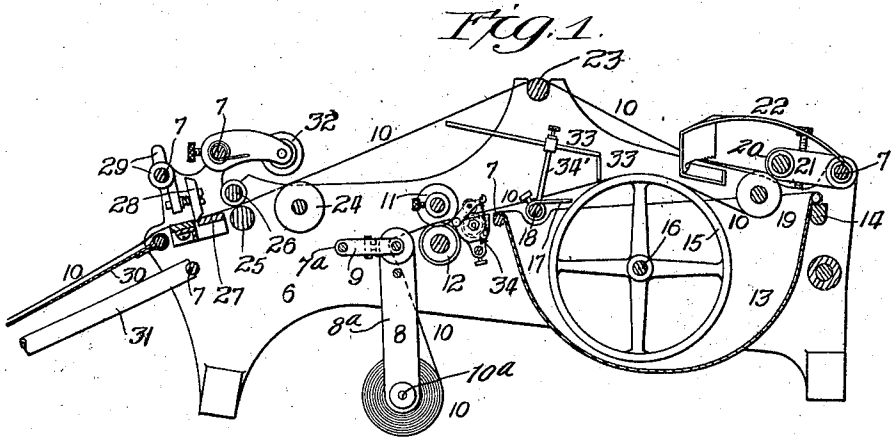


W. J. DUNN.
 EDGE STAINING DEVICE FOR TRIMMED WALL PAPER.
 APPLICATION FILED FEB. 28, 1916.

1,237,246.

Patented Aug. 14, 1917.



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UNITED STATES PATENT OFFICE.

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EDGE-STAINING DEVICE FOR TRIMMED WALL-PAPER.

1,237,246.

Specification of Letters Patent. Patented Aug. 14, 1917.

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To all whom it may concern:

Be it known that I, WILLIAM J. DUNN, a subject of the King of Great Britain, residing at Montreal, in the Province of Quebec and Dominion of Canada, have invented certain new and useful Improvements in Edge-Staining Devices for Trimmed Wall-Paper, of which the following is a specification.

The present invention relates to a device or appliance for placing coloring matter of the same character as the background of wall-paper to the side trimmed edges thereof.

One object of the invention is to provide an appliance which will apply a coloring matter to the side trimmed edge of wall-paper as it is fed through a trimming and pasting machine.

A further object of the invention is to so construct such appliance that it will apply the coloring matter directly to the side edge of the paper, thus eliminating the white or off-color streak along said trimmed edge, which would otherwise appear when the paper is placed upon the wall.

A further object of the invention is to provide a simple and compact appliance for doing this work, and to provide means for pressing the paper into constant contact with the coloring matter distributing member of such appliance.

A further object of the invention is to provide a flange or shoulder on the color applying member, which will act to place the coloring matter along the trimmed side edge without applying it to the decorated surface of the paper, and also serve as a guide in the forward travel of the paper.

A further object of the invention is to so arrange and mount the appliance of the present invention as to enable it to be adjusted to accommodate different widths of paper.

The invention further consists in the features of construction and combination of parts hereinafter described and claimed.

In the drawings:

Figure 1 is a cross section of a wall-paper pasting and cutting machine equipped with the appliance of the present invention;

Fig. 2, a plan view of a portion of said machine, showing the appliance of the present invention;

Fig. 3, a plan view of the appliance of the present invention;

Fig. 4, a section on line 4-4 of Fig. 3, looking in the direction of the arrows; and

Fig. 5, a section on line 5-5 of Fig. 4, looking in the direction of the arrows.

The edge-staining or coloring device of the present invention is specifically adapted for use with that type of wall-paper, trimming and pasting machines in which side trimmers are provided for cutting off the margin of the paper to leave the edges perfectly smooth and parallel, in order that when the paper is hung, the edges abut rather than overlap, this abutting of the edges being in accordance with the most modern practice of hanging wall-paper.

It has been found in practice that in trimming the marginal edge of wall-paper, a white line or surface is produced along such trimmed edge, with the result that when the paper is hung, a division line is formed between each strip or section of paper, by reason of the white or off-color edges produced by the side trimming operation coming together. This exposed line of contact disfigures the appearance of the paper and tends to destroy the continuity of the design or pattern. It is therefore highly desirable that these white or off-color edges produced by the side trimming operation be of the same color and character as the body of the paper, thus producing, when the paper is placed upon the wall, a continuing expanse of colored background and eliminating the white or off-color division lines. Heretofore this tinting or coloring has been done by hand, which is a slow and tedious operation, and not in every instance successful as to the results sought.

The principal object, therefore, of the present invention is to apply the proper tint or color to the trimmed side edge of the paper by mechanical means and in a regular and uniform manner, and to carry on this operation simultaneously with the feeding of the paper through the machine, entailing no further operations than are gone through in the ordinary preparation of the paper for hanging by the use of such machines.

Although the present invention has been illustrated in connection with a certain type of wall-paper pasting and trimming machine, it is to be understood that the par-

particular mechanism shown and described is only for the purpose of showing one means of practising the invention; and the invention is not limited thereby except as some portions of the mechanism may be claimed broadly for the purpose of making an operative combination.

Referring now to the drawings, and particularly to Figs. 1 and 2, the machine which the present invention is shown as employed, consists of side plates 6 joined together by suitable tie rods 7; and suspended from a rod 7^a held in the side plates is a hanger 8 comprising arms 8^a held in place by means of straps or links 9. These straps are removable to allow one or both of the arms 8^a to be removed and permit the mounting of fresh rolls of paper. This hanger serves to carry a roll of wall-paper 10 which is mounted on a rod 10^a. Mechanism for trimming the sides of said paper is shown, comprising a cutting disk 11, acting upon a backing roll 12, both disk and roll being provided with overlapping circular cutters. A tank 13 for a pasting medium is also carried by these side plates and is supported by suitable cross supports 14. Adapted to revolve partially within and partially without this tank is a paste applying wheel or roller 15, mounted upon a shaft 16, which latter is suitably driven. A scraper 17 is provided for removing the surplus paste from the pasting roller 15, which scraper is mounted upon a rocking cross-shaft or bar 18. A feed roller 19 is provided, with which coöperates a pressure roller 20, carried by an arm 21, said pressure roller 20 serving to distribute and thin the paste evenly over the face of the paper to which it has been applied by the roller 15. A scraper 22 for each side edge of the paper is provided for removing any excess paste from the marginal edges of the paper, so that when the paper is hung, this paste will not be squeezed out and onto the outer surface of the paper.

The paper, after leaving the scrapers 22, passes over a supporting rod 23, thence over a roller 24, and between discharge rollers 25 and 26. After leaving said discharge rollers, the paper passes across a plate or table 27, above which is located a cross-cutter 28 actuated crosswise of the paper by a handle 29. The paper then passes onto an apron 30, which is supported by a suitable support 31. Located above the roller 24 is a shiftable cutter 32, one for each side of the machine, for cutting off sections from the paper of such width as may be desired. A guide or indicator 33 mounted upon a standard or support 34 is provided, which is for the purpose of enabling the operator to determine at what point in the pattern each length of paper is to be severed in order to have the pattern match properly.

All of the foregoing described parts are mechanism which go to make up a practical machine for trimming and pasting wall-paper, as is fully shown and described in my co-pending application, Serial No. 80,929, filed by me February 28, 1916, and entitled Machines for trimming and pasting wall paper, but, as heretofore stated, the precise mechanism shown and described is not to be considered as a limitation on the present invention, but is merely shown and described for the purpose of indicating one type of machine with which the present invention may be practically employed. Therefore, no detailed description of the operation of these parts, or illustration thereof, is believed to be necessary in connection with the present invention.

The subject-matter of the present invention is illustrated in detail in Figs. 3, 4 and 5, and comprises a receptacle 34 formed with a well 35 for the purpose of receiving a suitable stain or coloring solution. Extending from the lower end of the receptacle 35 is a lug 36 formed with a hole 37 extending therethrough. This hole receives a rod 38 secured to the plate 6; and the lug 36 is tapped, as at 40, to receive a set screw 39 for locking the receptacle 34 to said rod. By means of this arrangement, the receptacle can be adjusted back and forth on the rod 38, so as to properly position it with respect to the side edge of different widths of paper.

Mounted within the receptacle 34 is a roller 41, against the surface of which operates a scraper 42; and this roller is formed with a shoulder 43, which provides a surface that will contact the trimmed side edge of the paper and apply color thereto, and which also serves as a guide for the paper as it is passing through. The roller is mounted to revolve upon a stem 44, and, as shown, is locked in place by a locking member 45. As will be seen, the roller revolves partially within and partially without the well 35 of the receptacle 34, and it is this member which acts to apply the tinting or coloring matter to the trimmed side edge of the paper.

Referring now to Fig. 5, it will be seen that when in operation, the paper extends across the surface of said roller and abuts against the shoulder 43. This shoulder tends to apply coloring matter directly to the trimmed side edge of the paper, which edge is the part that shows white or off-color when the paper is applied to the wall, and hence is the surface it is important to treat. The paper is held in contact against the roller 41 by means of a pressure roller 46 mounted upon a stem 47, which is carried by an arm 48 pivoted as at 49, and held under downward tension by means of the spring 51, which is secured at one end by a hook

50 on the arm 48, and at the other end by a lug 52 on the side of the casing 34.

By referring now to Fig. 1, it will be seen that the color applying mechanism of the present invention is placed in advance of the side trimming cutters 11, so that the coloring matter is applied after the side trimming operation, as, of course, is essential, since it is the side trimming operation that produces the objectionable white or off-color edge. It is also to be noted that the color applying mechanism is located rearward of the pasting appliance, so that the paste is applied after the edge has been tinted or colored.

It will be apparent from the foregoing description that, as the paper is fed through the machine, the trimming rollers 11, one at each side of the machine, serve to trim both side edges thereof, and each edge of the paper is then subjected to the action of the roller 41 (there being a roller for each edge), whereby coloring matter is placed upon both of the trimmed edges, staining or coloring the edges the same color as the background of the paper. It is apparent that this work is carried on continuously as the paper is fed through the machine, and that the paper does not have to be subjected to any further operations, save the usual operations of feeding the paper through the machine.

By applying the coloring or tinting matter in the manner set forth, such matter is applied only to the under face and side edge of the paper, and is not placed upon the decorated surface of the paper, which would be objectionable, in that it might become smeared in the later operation of applying the paper to the wall. Although the mechanism has been described with considerable detail, the use of other and equivalent means is contemplated, and, in fact, the invention is not limited other than may be set forth by the terms of the appended claims.

I claim:

1. In an appliance of the class described, the combination with paper-feeding mechanism, and mechanism for trimming the side edge of the paper, of means for applying coloring matter to said trimmed side edge, substantially as described.

2. In an appliance of the class described, the combination with paper-feeding mechanism, mechanism for trimming the side edge of the paper, and means for applying paste to the paper after the side trimming operation, of mechanically operating means, located between the side trimming mechanism and paste-applying mechanism, for applying coloring matter to the trimmed side edge, substantially as described.

3. In an appliance of the class described, the combination with paper-feeding mechanism, and mechanism for trimming the side edge of the paper, of a receptacle for col-

oring matter, located in advance of the side trimming mechanism, and means for extracting the coloring matter from said receptacle and applying it to said trimmed side edge, substantially as described.

4. In an appliance of the class described, the combination with paper-feeding mechanism, and mechanism for trimming the side edge of the paper, of a receptacle for coloring matter, located in advance of the side trimming mechanism, a roller operating partially within and partially without said receptacle, and means for holding the paper in contact with said roller, whereby coloring matter is applied to the trimmed side edge of the paper, substantially as described.

5. In an appliance of the class described, the combination with paper-feeding mechanism, and mechanism for trimming the side edge of the paper, of a receptacle for coloring matter, located in advance of the side trimming mechanism, and means for extracting the coloring matter from the receptacle and applying it to the trimmed side edge and under face of the paper, substantially as described.

6. In an appliance of the class described, the combination with paper-feeding mechanism, and mechanism for trimming the side edge of the paper, of a receptacle for coloring matter located in advance of the side trimming mechanism, means for extracting the coloring matter from the receptacle and applying it to the trimmed side edge of the paper, and spring-pressed means for holding said paper in engagement with said coloring matter applying means, substantially as described.

7. In an appliance of the class described, the combination of paper-feeding mechanism, mechanism for trimming the side edge of the paper, means for applying coloring matter to said trimmed side edge, and means for adjusting said coloring matter applying means to accommodate different widths of paper, substantially as described.

8. In an appliance of the class described, the combination of paper-feeding mechanism, mechanism for trimming the side edge of the paper, a receptacle for coloring matter, means for extracting coloring matter from the receptacle and applying it to the trimmed side edge of the paper, a member on which said receptacle is mounted, and means permitting adjustment of said receptacle upon said mounting to accommodate different widths of paper, substantially as described.

9. In an appliance of the class described, the combination with paper-feeding mechanism, and mechanism for trimming the side edge of the paper, of a receptacle for coloring matter, means for extracting coloring matter from the receptacle and applying it to the trimmed side edge of the paper, a de-

pending lug from said receptacle having an opening therethrough, a rod extending through said opening, and means for locking said receptacle to said rod in desired position to conform to the width of the paper operated upon, substantially as described.

10. In an appliance of the class described, the combination of paper-feeding mechanism, and mechanism for trimming the side edge of the paper, of a receptacle for coloring matter, located in advance of the trimming mechanism, and a flanged roller mounted partially within and partially without said receptacle for applying the coloring matter to the trimmed side edge of the paper, substantially as described.

11. In an appliance of the class described, the combination of paper-feeding mechanism, and mechanism for trimming the side edge of the paper, of a receptacle for coloring matter, located in advance of the trimming mechanism, a flanged roller mounted partially within and partially without said receptacle for applying the coloring matter to the trimmed side edge of the paper, and a spring-pressed member above said roller for holding the paper in contact with the surface of the roller and against the flange thereof, substantially as described.

12. In a device of the class described, the

combination of a receptacle for a tinting medium, an endless member adapted to receive said medium on the outer surface thereof, a flange on the endless member, and means for maintaining a trimmed sheet of paper with its trimmed side edge against said flange, whereby the tinted medium is applied to said edge, substantially as described.

13. In a device of the class described, the combination of a receptacle for a tinting medium, and means for applying such medium to a trimmed side edge of wall paper, said means comprising an upper and lower member between which the paper passes, and means associated with the lower member for contacting said trimmed side edge and applying the medium thereto, substantially as described.

14. In a device of the class described, the combination of a receptacle for a tinting medium, a roller rotating partially within and partially without said receptacle, a flange on the roller for applying the tinting medium to the trimmed side edge of the paper and for guiding the paper in its passage, and means for maintaining the paper in engagement with the surface of the roller and with the flange thereof during the tinting operation, substantially as described.

WILLIAM J. DUNN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."