Oct. 6, 1925. 1,555,889

E. G. STAUNTON

MANUFACTURE OF WALL PAPER

Filed May 20, 1925

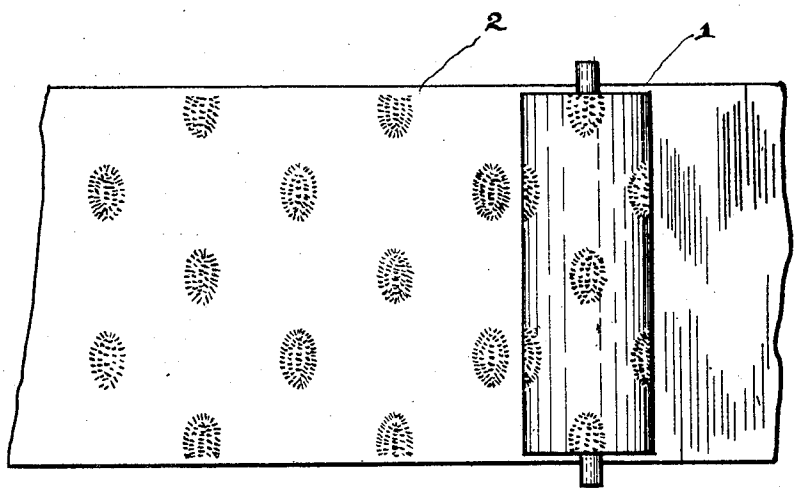


FIG. 1.

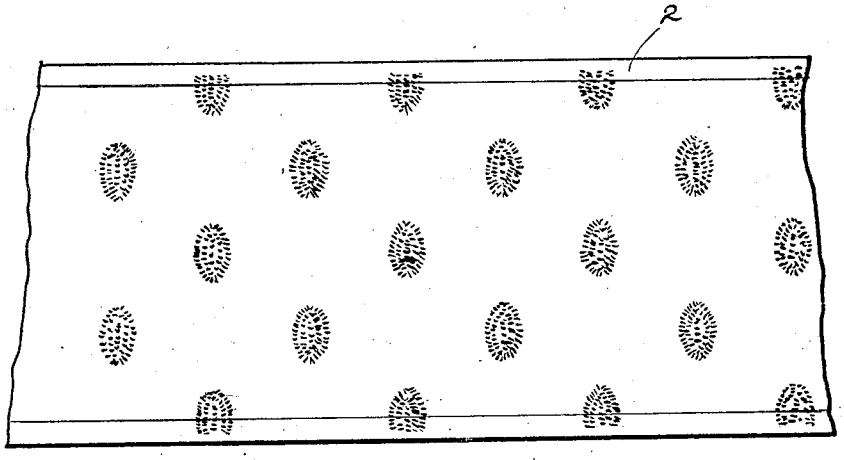


FIG. 2.

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Patented Oct. 6, 1925. 1,555,889

UNITED STATES PATENT OFFICE.

EDMUND G. STAUNTON, OF TORONTO, ONTARIO, CANADA.

MANUFACTURE OF WALL PAPER.

Application filed May 20, 1925. Serial No. 31,722.

To all whom it may concern:

Be it known that I, EDMUND G. STAUNTON, of the city of Toronto, in the county of York, Province of Ontario, Canada, a subject of the King of Great Britain, have invented certain new and useful Improvements in the Manufacture of Wall Paper, of which the following is a specification.

This invention relates to the manufacture of wall paper of the type in which the selvages are partly severed in the process of manufacture so that they are readily torn or knocked off when they are to be hung, thus saving the time and labor involved in trimming the selvages in the old fashioned manner still largely employed.

One method of semi-trimming is effected by means of the apparatus shown and described in my prior United States Patent No. 1,479,161, dated January 1st, 1924. By means of the apparatus therein set forth shallow grooves are formed extending part way through the paper and forming lines of weakness along which the selvages are easily severed from the web of paper.

I find in practice that the apparatus functions very accurately on paper which goes through a printing machine or other pattern making machine only once, but if the paper has to go through more than one printing machine or more than one operation trouble is at once experienced, since it is difficult to so groove or semi-trim the paper that the selvages will break off readily when required and yet will stand the extra handling during manufacture without prematurely parting from the web. If, to overcome this difficulty, the semi-trimming is effected after the paper has been subjected to one or more operations, great difficulty is experienced in securing accurate register so that the semi-trimming is effected exactly at the lines of delimitation between the pattern and the selvages.

It is of great importance that registration be exact, as otherwise, a narrow strip of white or ground color will be left at one side or the other which will show when the paper is hung.

It is not possible to avoid this by setting the grooving rollers closer together, as this narrows the width of the strip of paper exposed after hanging and cuts down the width of pattern so that adjacent strips will not match properly which, in most cases, would be very noticeable.

My object therefore is to devise a method of printing and semi-trimming which will enable semi-trimming to be effected at a late point in the process of manufacture without decreasing the width of the printed part of the paper which is exposed when hung and without leaving any part of the unprinted selvages integral with the body of the paper.

I attain my object by making the printing surfaces of the printing rollers slightly wider than the desired width of the paper when hung, the greater width being obtained by extending the pattern and partially repeating or widening any pattern figures adjacent the edges of the rollers beyond what is necessary for an exact match.

The paper employed may be of any suitable width, for example, the standard 22″ and the grooving rollers will be set to semi-trim an average ¾″ selvage at each edge. The width of the paper between the lines of weakness so formed will always be the same once the grooving wheels are set but the selvages may vary, at times one being slightly wider than the other, while a little later the reverse may be the case. It will at all times, however, be possible to keep the variation within such small limits that the widening of a part of a figure of the pattern at one edge and its narrowing at the opposite edge will not noticeably affect the matching when the paper is hung. The result is that the printed web of paper shows a selvage at each side and a line of weakness always within, or at least not outside of, the printed surface of the paper.

The invention is illustrated in the accompanying drawings in which—

Figure 1 is a plan view of part of a strip of wall paper and a printing roller in the act of printing the pattern on the paper; and

Fig. 2 is a plan view of part of a strip of wall paper after it has been "semi-trimmed".

It will be noted that at each end of the roller 1 the figure of the pattern has been slightly widened so that the unprinted margins 2 on the web of paper are somewhat narrower than usual.

It will also appear on inspection of Fig. 2 of the drawings that the grooves or lines of weakness are so positioned that, if perfect registration were possible, they would encroach evenly on the printed part of the web leaving removable selvages somewhat

wider than the unprinted margins. But the registration may not at all times be perfect, so that the semi-trimmed selvages may vary slightly in width, as shown, but will always include all of each unprinted margin the variation, however, being so slight that it will not be noticeable when the paper is hung.

It is possible by this method to entirely remove the selvages but, as this necessitates a very careful wrapping of the finished rolls to protect the edges of the paper, I prefer to leave the selvages attached but delimited by lines of weakness as described.

What I claim is:

1. A process of manufacturing a strip of wall paper which consists in printing the strip with a printing roller having its printing surface wider than the exposed width of the strips of paper when hung, but less than the total width of the strip and producing a line of weakness adjacent each margin of the strip, said lines of weakness being spaced apart a distance equal to the desired exposed width of paper when hung.

2. A process of manufacturing a strip of wall paper which consists in printing the strip with a printing roller having its printing surface formed with a repeat pattern and having its printing surface widened at each end beyond a suitable repeat by slightly extending the figures of the pattern, said printing surface being narrower than the strip, and producing a line of weakness adjacent each margin of the strip, said lines of weakness being spaced apart a distance substantially equal to a suitable repeat of the pattern.

3. A process of manufacturing a strip of wall paper which consists in printing the strip with a printing roller having its printing surface wider than the exposed width of the strip of paper when hung, but less than the total width of the strip and subjecting said strip to a trimming tool operation along a line adjacent each margin of the strip, said lines being spaced apart a distance equal to the desired exposed width of the paper when hung.

4. A process of manufacturing a strip of wall paper which consists in printing the strip with a printing roller having its printing surface formed with a repeat pattern and having its printing surface widened at each end beyond a suitable repeat by slightly extending the figures of the pattern, said printing surface being narrower than the strip, and subjecting said strip to a trimming operation along a line adjacent each margin of the strip, said lines being spaced apart a distance equal to the desired exposed width of the paper when hung.

Signed at Toronto this 22nd day of April, 1925.

EDMUND G. STAUNTON.