

No. 819,412.

PATENTED MAY 1, 1906.

O. ST. L. DAVIES.
ORNAMENTING PILE FABRICS.
APPLICATION FILED OCT. 6, 1904.

FIG. 1

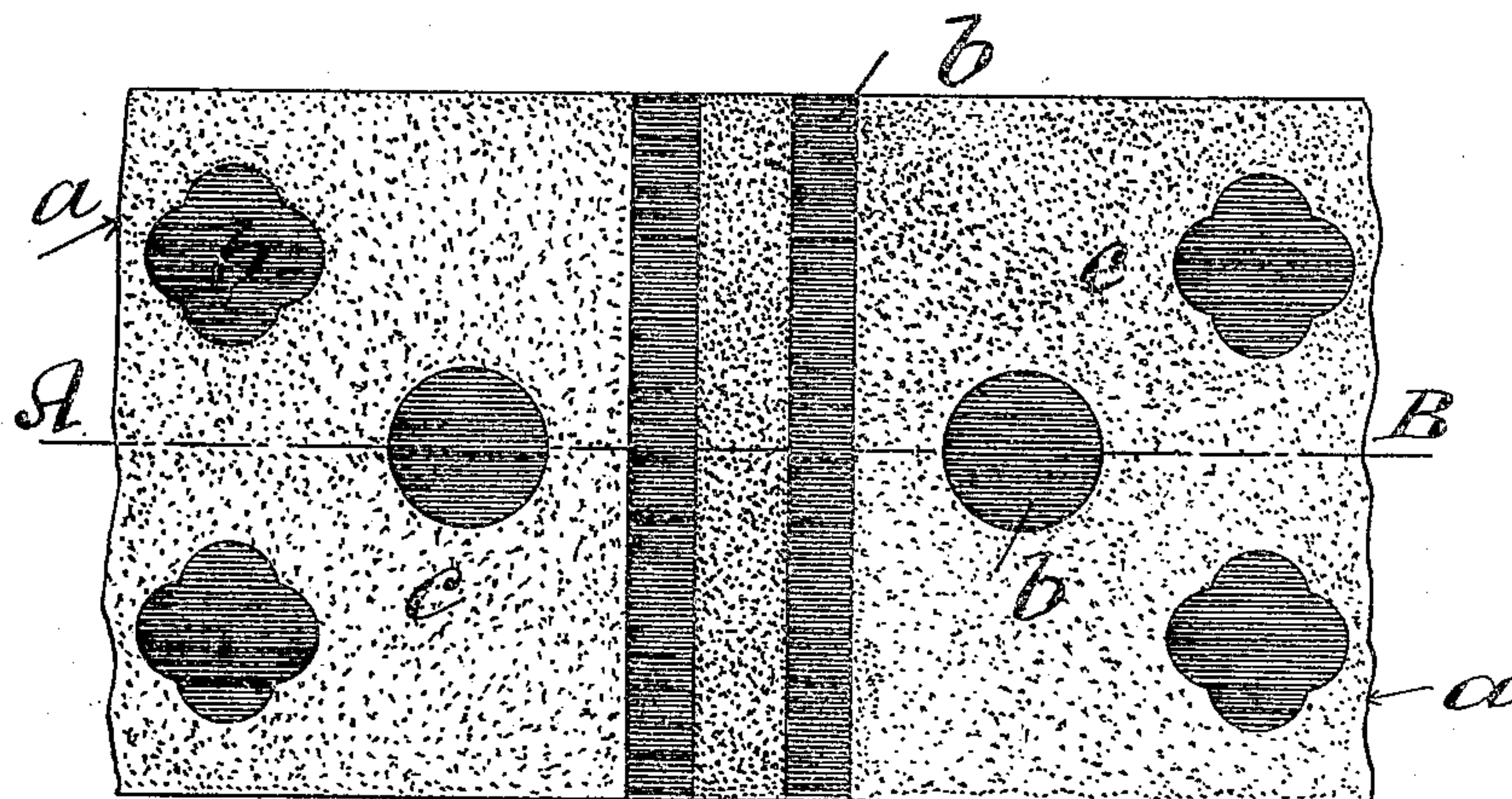


FIG. 2.



FIG. 3.

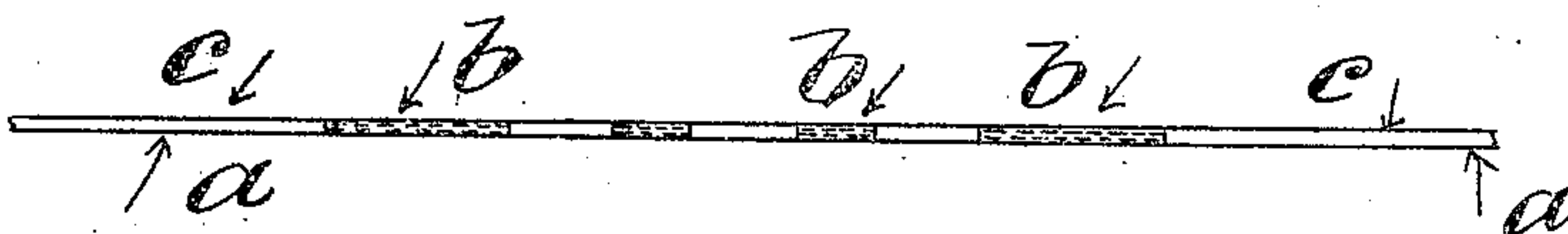


FIG. 4.



WITNESSES.

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OSWYN ST. LEGER DAVIES, OF CASTLETON, ENGLAND.

ORNAMENTING PILE FABRICS.

No. 819,412.

Specification of Letters Patent.

Patented May 1, 1906.

Application filed October 6, 1904. Serial No. 227,512.

To all whom it may concern:

Be it known that I, OSWYN ST. LEGER DAVIES, calico-printer, of the Castleton Print Works, Limited, a subject of the King of Great Britain, residing at Castleton, in the County of Lancaster, England, have invented new and useful Improvements in Ornamenting Pile Fabrics, of which the following is a specification.

10 This invention has reference to pile fabrics and other piece goods; and it relates particularly to the production of ornamental designs or patterns thereon for the purpose of enhancing the appearance of such pile and
15 other goods and for the obtainment of new and telling effects.

According to my invention I propose to first protect the pile and define the design or ornamentation and then to burn or singe
20 away or destroy the pile or a portion of the pile upon such goods at suitable intervals, according to the scheme of ornamentation or decoration, the pile in parts being absolutely unaffected, while in other parts, as stated, it
25 is burned or partly burned away. Where the pile is unaffected, it stands out in strong relief, while where burned or singed or destroyed a marked contrast is obtained and in some cases a variation in shade, the alternate
30 preservation and destruction of the pile giving a richness and a novelty of appearance to the resulting piece.

Having explained the object of my invention, I wish to state that I may carry out
35 such object in various ways and by a variety of means, and I will with the aid of the annexed drawings indicate with sufficient clearness one way in which the result aimed at by my invention may be achieved.

40 In the said drawings, Figure 1 shows a piece of pile fabric printed upon with gum thickening or its equivalent to protect the pile in parts and define the ornamentation and ready for the unprotected pile to be destroyed. Fig. 2
45 is a sectional view of Fig. 1 on the line A B. Fig. 3 is a sectional view and shows the unprotected pile singed away. Fig. 4 shows in section the finished fabric with what was the protected pile restored to its normal level.

50 In one arrangement I print the pile goods to be treated in accordance with my invention in any ordinary printing-machine with a thick gum or paste, which is applied to the pile side of the fabric in its passage through
55 the machine, which gum or paste is then dried. The roller or rollers used may be ordinary

printing-rollers engraved with a suitable design or designs, the gum or paste being printed on by the rollers in accordance with the desired character of the design or ornamentation which will correspond with the design of the rollers. The gum may be ordinary gum thickening well known to calico printers. It will be understood from what has been said that this printing on defines
60 the pattern and occurs on the fabric *a* at such intervals or in such situations as are to be unaffected by the subsequent burning or singeing treatment. In the drawings these intervals are marked *b*. The printing on of the
65 gum or paste has the effect of flattening or depressing and protecting the pile at the desired intervals, leaving the remainder of the pile *c* unprotected, so that when the piece is subsequently subjected to a heated singeing
70 plate or roller the unprotected pile at *c* is singed or burned away, as will be understood. This burning or singeing we have found to be well effected by means of an internally-heated singe plate or roller, the
75 piece after printing and drying being guided partly around or in contact with such internally-heated plate or revolving roller by means of adjustable bars or rollers or equivalent devices, which allow of the extent of contact of the piece with the roller being varied.
80 Instead of using one internally-heated plate or roller it may be found that more than one such plate or revolving roller may be used with advantage.
85

The burning or singeing process for removing the unprotected pile (however performed) having been completed, the piece is washed or treated to get rid of the paste or gum, being finally dressed or finished or otherwise
90 subsequently treated, as required, so that what was formerly the protected pile now stands up in relief, as shown in Fig. 4.

In the carrying out of my invention I may use any ordinary or convenient printing arrangement for printing on the gum, and I may use specially-engraved rollers having the pattern standing out in greater relief than is the case with the usual run of printing-rollers. For the burning or singeing I prefer
105 a singeing plate or roller in which a considerable and uniform heat can be maintained.

In lieu of or in addition to the paste or gum any suitable chemical solution or paste of a non-inflammable character may be printed
110 on the pile or other goods, and the goods preparatory to being treated in accordance

with my invention may be subjected to any process or processes for producing varied or colored or other effects thereon, or color may be added to the gum.

5 The invention is applicable not only to velvets and velveteens, but to other pile goods, whether of cotton, wool, silk, &c., or admixtures of these. The invention may also be used in connection with fabrics other than
10 pile fabrics, strictly speaking—as, for instance, it may be used in connection with flannelettes—to remove portions of the pile produced in the raising-machine, and in such a case it may be found that a gas singeing-
15 machine would serve well to remove the light unprotected pile.

In treating pile fabrics under this invention the degree of severity in the burning or destruction of the pile may vary in a piece—
20 as, for instance, the pile may remain intact, be wholly burned or destroyed, and be partially burned or destroyed at different intervals in the one piece, such result being obtained by varying the severity of the burning
25 or pile-destroying treatment or by modifications in the gum-printing.

I declare that what I claim is—

1. The method of producing ornamental patterns or effects on pile goods consisting in
30 printing the pile fabrics in parts only and on its pile face with a protecting medium which

where applied incases and protects the already existing pile and defines the pattern and thereafter singeing the piece to remove the unprotected portions of the pile by pass- 35
ing the coated piece over a singeing-surface and finally removing the protecting medium from the preserved pile and raising and restoring such preserved pile to form the pile portion of the pattern substantially as de- 40
scribed.

2. The method of producing ornamental patterns or effects on pile goods consisting in printing the pile fabrics in part only and on its pile face with a gum thickening which 45
where applied incases and protects the already existing pile and defines the pattern and thereafter singeing the piece to remove the unprotected portions of the pile by pass- 50
ing the coated piece over a singeing-roller and finally removing the gum thickening from the preserved pile and raising and restoring such preserved pile to form the pile portion of the pattern substantially as de- 55
scribed.

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

OSWYN ST. LEGER DAVIES.

Witnesses:

RICHARD WEBSTER IBBERSON,
ALFRED YATES.