

LIII. *Specification of the Patent granted to Mr. WILLIAM GILLISPIE, of Anderston, near Glasgow, Calico-printer; for his Invention of an improved Method and Process of printing, colouring, or staining, Linens, Calicos, or other Cloths.*

Dated April 30, 1799.

TO all to whom these presents shall come, &c. Now KNOW YE, that I the said William Gillispie, in pursuance of, and in compliance with, the said proviso, in the said letters patent contained, and the purport and true intent and meaning thereof, and of his Majesty's said most gracious intention, do, by this instrument in writing, under my hand and seal duly executed, describe and ascertain the nature of my said invention, and the methods by which the same may be performed; that is to say: The method or process which I have invented, is chiefly distinguished from the method or processes already practised in painting cloths, by its enabling the painter, on coloured grounds, to produce figures
or

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or spots, consisting of white, with or without a variety of colour, or coloured figures or spots; and to place these figures or spots, whether they consist of white, or any colour or colours, upon the goods, in as exact and determinate a correspondence of situation, with regard to each other, as the coloured figures painted on white grounds in the ordinary way. For obtaining which object, instead of using bleached cloths in their simple whitened state, and printing, impressing, or laying on them, in this state, such substances as are fit for making the particular spots or figures, meant to be impressed or represented on the said cloth, capable of being dyed, and of retaining colours; and instead of printing, impressing, or laying on the said cloths, in the said whitened state, such acids, or other substances, as are capable of preserving the particular spots or figures, so meant to be impressed or represented on the said cloths, from being dyed, that is, preventing them from retaining colours, and consequently keeping the said last-mentioned spots or figures white; I first, by means of a blotching machine, or by any other convenient method, impregnate the cloths I am to print with a proper mordant or colour-fixing substance. I then dry the cloths; and afterwards rinse or otherwise free them from the gum, or other superfluous matter mixed with the mordant.

mordant. Then, after again drying and properly smoothing them, I print, impress, or lay on such parts of the cloths as I wish to remain ultimately white, some vegetable acid, or other substance capable of discharging the mordant, or of destroying its effects in fixing colours on the parts so printed, impressed, or covered with such vegetable acid, or other substance. If I wish to have another colour or other colours on the said cloth, besides the ground-colour and white, then, either before or after laying on the said acid, or other substance for destroying the mordant or its effects, I print, impress, or lay on the cloths, such other mordant or mordants as may be necessary and proper for producing, along with the ground-colour, and the figures or spots in white produced in the way above mentioned, when the cloths are dyed, a variety of colours, or spots or figures, on the part so printed, impressed, or covered with such other mordant or mordants. If I do not wish to produce any white figures or spots on the cloth, I omit the process above detailed for this purpose, namely, the printing, impressing, or laying on the cloths some vegetable or other acid, or other substance capable of destroying the mordant, or the effects of the mordant, with which they are first impregnated; and, in this case, I print, impress,

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prefs, or lay on the cloths the other mordant or mordants above mentioned; which produce, when the cloths are dyed, a variety of colours or figures on the parts so printed, impressed, or covered with this other or last-mentioned mordant or mordants. The number and variety of spots and figures may be thus multiplied and varied at pleasure, by the application of appropriate or corresponding mordants. After the cloths have undergone the operations above mentioned, in the different cases above detailed, they are dried, and then rinsed and cleaned, and afterwards dyed, or the colours raised, in the usual or common way.

The above I consider to be an accurate specification of my invention: that it may, however, be more easily and fully understood, the following is a detailed account of an operation of printing by this method. After the cloths have been whitened, bleached, or fitted as usual for printing, they are run through a blotching machine, or otherwise impregnated with a mordant or colour-fixing substance; such mordant being varied, according to the particular colour intended to be afterwards dyed, or brought up, by means of proper dying stuffs, well known to printers. The cloths are next to be dried, and then rinsed through warm water, with or without
other

Other ingredients commonly used for cleaning them from the gum, or other superfluous matter mixed with the mordant. They are then dried and calendered, or otherwise smoothed and prepared, so as to fit them for the application of the blocks or plates for printing. I then print, impress, or lay on such parts of the cloths whereon I wish to produce white spots or figures, a discharging acid, or proper substance, thickened properly with gum, or other fit substance; and, if no other colour is wanted besides the ground colour and white spots or figures, the goods are dried, then rinsed, and afterwards dyed as usual. If other colours, or coloured figures or spots, are wanted, then, before removing the goods from the table or press, the proper mordant or mordants for such other colours are printed, impressed, or laid on those parts of the cloths where such colours, or coloured figures or spots, are wanted, with proper blocks or plates, so as to make these other colours, or coloured figures or spots, correspond with the white spots or figures that will arise from the application of the discharging acid or substance. Sometimes it is expedient, before printing, impressing, or laying on the discharging acid or substance on the parts of the cloths to which it is to be applied, to print, impress, or lay the other mordant or mor-

dants on those parts of the cloth where the other intended colours, for coloured spots or figures, are meant to be impressed or represented, which may be occasionally varied, as circumstances may require. In either way, an exact correspondence of situation is obtained between the white and coloured spots or figures. If no other white spots or figures are wanted, the use of the discharging acid or substance is omitted. When the goods have remained a sufficient time to fix or dry, after the operation, they are rinsed and cleaned, and afterwards dyed with the usual materials, and in the usual way fitted for raising the colours which are produced by the mordant or mordants with which they have been impregnated, impressed, or printed. When the dying is finished, they are to be rinsed in warm water with bran, or other cleaning material; and, in many cases, it is necessary and useful, both for clearing the white spots or figures, and reducing the colours to the intended shade, to pass the cloths through a proper quantity of oxygenated muriatic acid, or its compounds; after which, rinsing in clean water will make the goods fit for drying and finishing. In witness whereof, &c.