

has been looming through the years, and already it is drawing upon Lancashire and her staple industry.—From the *Textile Mercury, Manchester*.

MILLING FAST SHADES ON WOOLEN YARNS.

For the production of check, spot and figure effects in woollen fabrics for dresses, suitings, etc., it is necessary to use dyed yarns in the weaving thereof, and as these cloths have to be passed through various finishing operations after weaving, more or less involving the use of water, soap, alkalis, etc., it is a matter of importance that the yarns should be dyed with colors that are fast to such operations, all of which may be comprised under the general term milling, so that one color does not run into another color and stain it. The dyer has nowadays no difficulty in selecting dyes which will produce sufficiently fast colors to stand milling operations; in fact, there is a great range which are absolutely fast to even the severest milling. Particularly is this the case with the series of alizarines, which, on the whole, are the fastest colors known, but these require a double process of mordanting and dyeing in order to apply them to the wool, and for labor, steam materials, etc., this involves extra cost, therefore woollens dyed with the alizarines cost more than is the case with other dyes. It is proposed here to detail a method or methods of dyeing a number of useful shades on woollen yarns which, while they are very fast to light and milling sufficiently so for all practical purposes, yet are less costly to produce than if the alizarine were used.

The methods will be described in the form of recipes, as follows:

Pale Grey—(For 100 lbs. yarn).—

Prepare a dyebath with

- ¼ oz. Diamine Fast Red F,
- 1½ oz. Anthracene Blue C,
- 10 lb. Glauber's salt,
- 3 lb. acetate of ammonia.

Enter the goods at 140 deg. F., raise to the boil, work for one-half hour, and add

3 lbs. acetic acid.

Work one-half hour longer, allow the bath to cool down to 160 deg. F., then add

1½ oz. bichromate of potash.

Raise again to the boil, work twenty minutes, lift, wash and dry. The work can be done on sticks in a hand dye-vat, or in a yarn dyeing machine, as may be most convenient.

Deep Crimson—(For 100 lbs. yarn).—

Prepare a dyebath with

- 2 lb. Wool Red B,
- 3 oz. Anthracene Blue C,
- 10 lb. Glauber's salt,
- 3 lb. acetic acid.

Chrome after dyeing with

1½ lb. bichromate of potash, as described above.

Pale Grey—(For 100 lbs. yarn).—

Prepare a dyebath with

- ¾ oz. Anthracene Acid Brown R,
- ½ oz. Anthracene Blue C,
- 10 lb. Glauber's salt,
- 3 lb. acetate of ammonia,
- 2 lb. acetic acid and chrome with
- 2 oz. bichromate of potash.

Walnut Brown—

- 2 lb. Anthracene Acid Brown R,
- ½ lb. Anthracene Yellow BN,
- 1 lb. Anthracene Blue C,
- 10 lb. Glauber's salt,
- 5 lb. acetic acid, chroming afterwards with
- 2 lb. bichromate of potash.

Dark Moss Green—(For 100 lbs. yarn).—

Prepare a dyebath with

- 6 oz. Anthracene Acid Brown R,
- ¼ lb. Anthracene Yellow BN,
- 1¼ lb. Anthracene Blue C,
- 10 lb. Glauber's salt,
- 5 lb. acetic acid, chroming with
- 1 lb. bichromate of potash.

Bright Green (For 100 lbs. yarn).—

Prepare a dyebath with

- 1¼ lb. Brilliant Milling Green B,
- 1 lb. Anthracene Yellow BN,
- 9 lb. Anthracene Blue C,
- 10 lb. Glauber's salt,
- 3 lb. acetic acid, chroming with
- 1 lb. bichromate of potash.

Dark Blue—(For 100 lbs. yarn).—

Prepare a dyebath with

- 1½ lb. Anthracite Black B,
- 9 oz. Formyl Violet 10 B,
- 10 lb. Glauber's salt,
- 5 lb. acetic acid.

Work at the boil for three quarters of an hour, then add ¼ lb. bisulphate of soda to exhaust the bath. Chrome with

2 lb. fluoride of chromium.

Gold—(For 100 lbs. yarn).—

Prepare a dyebath with

- 2 lb. Anthracene Yellow R,
- 10 lb. Glauber's salt,
- 5 lb. acetic acid, chroming with
- 1 lb. bichromate of potash.

Dark Walnut Brown—(For 100 lbs. yarn).—

Prepare a dyebath with

- 3 lb. Anthracene Acid Brown SW,
- 10 lb. Glauber's salt,
- 5 lb. acetic acid.

Chrome with

1½ lb. bichromate of potash.

Bright Yellow—(For 100 lbs. yarn).—

Prepare a dyebath with

- 2 lb. Milling Yellow O,
- 10 lb. Glauber's salt,
- 5 lb. acetic acid.

Blue Black—(For 100 lbs. yarn).—

Prepare a dyebath with

- 5 lb. Anthracene Chrome Black 5B,
- 10 lb. Glauber's salt,
- 5 lb. acetic acid.

Chrome with

1½ lb. bichromate of potash.

Deep Black—(For 100 lbs. yarn).—

Prepare a dyebath with

- 5 lb. Anthracene Chrome Black FE,
- 10 lb. Glauber's salt,
- 5 lb. acetic acid, chroming with
- 1½ lb. bichromate of potash.

The Anthracene Chrome Blacks are really excellent black