Aniline Black on Animal Fibres.

To develop an aniline black on wool or other animal fibres is by no means an easy operation. Silk is rather more easily treated than wool. Hurst, in his book on "Silk Dyeing," gives two processes for dyeing an aniline black on silk with fairly good results. Wool is much more troublesome to deal with, the latter material seemingly exerting a reducing action which prevents the proper development of the color. Lately, two processes have been suggested for the dyeing of aniline black on wool. One process, given by Bidet in a French journal, consists in handling the wool in a bath of 1,000 parts of water, 30 parts of aniline, and 100 parts of bichromate of soda. The proportion of water may be altered, in which case the time of working is increased. In this bath the wool is handled for some time until it becomes thoroughly impregnated with the dye liquor, and acquires a uniform yellow tint. So far, no black color is produced; to develop the black there is now added a little sulphuric acid in small quantities at a time; the black now begins to form, and soon the fibre acquires a deep black color, after which the wool is removed from the bath and washed, first with water, then with soap, then again with water, and finally dried. A previous treatment of the wool by a weak 2 p. c. nitric acid bath facilitates the process. A modification of the plan consists in first chroming the wool, working in aniline oil, then in an acid bath of aniline salt, and then chroming and finishing as above. Oehler has recently patented, in Germany, a process for dyeing aniline black on wool, which consists in giving the woo a preliminary treatment with chloride of lime and acid, then dyeing in a steam aniline black (prepared from aniline salt, chlorate of soda, and yellow prussiate of potash), steaming, passing through a bath of bichromate of potash to develop the black and prevent greening, and then washing, soaping, and finishing as usual. The following recipes will show the quantities which may be used:

2¾ lbs. aniline salt,
1 lb. chlorate of soda,
1¾ lb. yellow prussiate of potash,

are each dissolved in a little water. When required for use, the solutions are mixed with sufficient water to make up a bath of two gallons, in which the wool is padded; it is then dried, steamed, and chromed in the usual way.

An effort, with doubtful prospects of success, has been made in England to stop the practice of applying the term "merino" to hosiery which is known to be nearly all cotton. It would be well if all things in this world were called by their true names, but, in this age of show, imposition and struggle for cheapness, it is not done. However, there are few people at the present time who do not know that the merino finish of this class of hosiery is a mere effect, and that cheap goods going under that name are almost entirely cotton.

The changes that have taken place in the woolen trade of England in recent years show, in the first place, the value of technical training, and, in the second place, the necessity of keeping up with the movements of changing fashion as well as with the march of progress in machinery. At one time Bradford devoted itself to the manufacture of coarse worsted cloth to the exclusion of almost every other branch of textiles. Fashion changed in the course of years, and the people of the world sought the fine soft goods made in France. Bradford refused to do anything but go on making her coarse cloths, and sat mourning over a paralyzed trade till her work people were reduced to starvation. At last, she woke up to the need of a change. One of the manufacturers brought over French machinery and introduced there the French system, with the result that he made money, and it was not many years before Bradford had outstripped France in the new specialties. The achievement of English manufacturers in more recent years have been more marked since the spread of technical education, although the English are proverbially slow in the adaptation of foreign ideas. The value of technical training was never better demonstrated than in the case of the German dyestuff and chemical business. For years the German chemists experimented and labored incessantly in applying their scientific knowledge to the various industries, especially in the dyeing and color trades, with the result that to-day she stands at the head of the world in the production and application of aniline dyes, which she made a specialty. The lesson of all this to Canadian manufacturers is that they must lay the foundations now for technical schools and not lose sight of the changes and improvements that are constantly going on in other countries with whose products we have to compete. To use the slang of to-day, we must keep up with the procession.

Carbonizing Wool.

The removal of vegetable fibres, burrs, straw, etc., from wool is one of the principal requirements to be considered in manufacturing good cloth. Formerly these substances were taken out of the wool by the burler, but at present the so-called carbonizing process is used. The German method of carbonizing is thus described by the *Farber Zeitung*: For this purpose the wool is saturated with an acid or acid-forming fluid, and dried. The acid destroys the vegetable fibre, which can then be removed by picking or brushing. The concentration of the carbonizing fluid must be fairly high. When using mineral acids the fluid is prepared at 3° to 4° B., and chloride of aluminium 6° to 7° B. is employed.

It is important that the carbonizing fluid is kept at the same degree throughout the operation, for it happens quite often that the bath will show the same degrees Baumé as at first, when in reality the carbonizing has ceased. The operator is apt to forget that the material entered into the fluid introduces soluble substances, which pass into the fluid and keep the hydrometer steady, and even occasionally cause it to rise. When chloride of aluminium is used, the carbonizing fluid frequently registers the required number of degrees, whereas the active principle of the fluid or the bath has in large part been consumed. To prevent this occurrence, a cotton thread is fastened to the material to be carbonized, and as long as this thread, after drying, is corroded, the fluid may be used. When this is no longer the case, however, it is advisable to let the fluid escape. The cotton thread alone may also be dipped into the fluid and then dried. This simple test will show equally well whether the fluid is still useful or not.

The treatment and choice of the carbonizing agent should be adapted to the nature of the material—whether loose wool or piece goods. Crude, undyed wool is best treated