

### ACID COLORS IN WOOL DYEING.

The use of the so-called "acid colors" in dyeing of wool, requires the presence of a certain amount of free acid in the dye bath in order that the operation may proceed properly and produce level colors or shades. The addition of this acid is for a double purpose, first and of the most importance, to decompose the dyestuffs by forming a salt of the alkaline base and setting free the color radical, which has a much stronger affinity for the wool fibers than the dyestuff itself; and also to cause an opening out of the "scales" that cover the surface of the individual fibers, thereby allowing better penetration to the dye liquors. If an excess of acid is used, that is, more acid than will suffice to produce the results above noted, there is a strong probability that the fibers will become injured to such an extent that they may become troublesome in the weaving. As wool-dyeing generally proceeds at a boiling temperature, at which point it is quite soft and plastic, the presence of an undue quantity of acid will cause a permanent "set" to the fibers which will greatly impair its possibility of fulling, besides giving a very serious harsh feel which is quite undesirable. Owing to duration of time in which the wool is being subjected to the boiling acidified dyebath, and the usually short time of washing from the same bath, there always remains in the fibers a certain quantity of acid which manifests itself occasionally after the wool has been dried; and if our remarks apply to yarn, it will be found that one end of each of the hanks has become so much rotted by the drainings of the acid liquors toward the lower ends that the lot is quite likely ruined. As a rule, not more than 4 per cent. of acid should be used in the dye bath, and, if possible, as much less as possible, so as to be on the safe side, even if the dyeing should be prolonged. There are many new dyes which are applicable for wool, which can be dyed without the aid of free sulphuric acid, and are remarkable for their peculiarly level dyeing properties, but there is a strong feeling on the part of dyers to give up the old-established custom of using sulphuric acid. Many complaints, too, have been heard about the use of an excess of acid, when upon investigation it was found to be not an excess of acid, but an insufficient amount of washing.—Kuhlrow's German Trade Review.

### WASTE IN THE DYEHOUSE.\*

Could the walls of some dyehouses speak, and so be able to tell us their experience of the work being carried on within them and of the workers, many of them would tell tales of considerable waste of drugs and of hours of labor. The extravagance of many dyers is most reprehensible, and it mostly arises from the want of thought. A good dyer having finished off one lot of goods will reflect that he has got sufficient liquor left that, by the addition of a certain proportion, the old bath can be made to do service for another job, and he straightway sets to work to economize his drugs. A careless dyer will, however, either through ignorance or unconcern for his employer's interests, throw away his old liquor and prepare another bath for the next lot of goods. What a boon it is for master dyers to get hold of employees who will study the question of economy. No question of a few shillings extra per week should for one moment influence a master dyer in the selection of his hands if he be a wise man, for having the run of the drug room (as it is necessary his employees should have) they can either economize or waste his drugs just as they may seem disposed, and most frequently, we are sorry to say, they seem to prefer the latter course.

There have been dyers who practice the absurd system of measuring their drugs by hand instead of by weight. We are

aware that there are some hands who despise weights and scales and look upon them in the light of toys, and such dyers often go so far as to judge their fellow-workers' capabilities as soon as they go to the drug room. If they weigh their drugs they put them down at once as being inferior to themselves, who trust to their hands to determine the correct quantity of the dyestuffs being put into the copper. We would venture to say that there is no greater source of waste than this, and that system should be discontinued by every dyer that practices it. It is wasteful both in time and drugs. Let the reader give one moment's thought to the matter, and he will at once see the truth of this statement.

The dyer has so many yards of stuff to dye, and for his bath he requires a certain amount of several kinds of drugs. He enters the drug room and thrusts his hand into the casks and tins containing the drugs, and forthwith throws the drugs into the copper. What guarantee has he that he has taken up sufficient drugs or has not grasped too much with his hand? Absolutely none, and the consequence is that a deal of time is wasted in watching the goods in the copper to see if they are coming to the right shade. Perhaps he has too much blue or too much red, and then in goes some acid to get matters right. It is such a very simple matter, the despot of weights and scales says, to tone down the shade. That may be, but what does toning down the shade mean? It means the destruction of certain good coloring matters which have been added to the bath in excess of its requirements, and the waste of acid for that purpose together with an amount of time spent over the operation. No, the weights and scales dyer is not an inferior workman, but is justified in assuming the first position as a workman, and not the rule-of-thumb man. Such a man knows by the exercise of his thinking faculties that the goods before him, to get the desired shade will require so much of this drug and that acid, and to work he goes with his scoop and weights, and into his copper he throws his dyeing materials with an assurance that conceited handful brother never understands with his foolish reliance on the grip of his hands. Then, again, the latter runs a great risk of doing some injury to the goods by the use of too much dyestuff needing the addition of adjusting agents. Many jobs are seriously injured in this way. No argument whatever that will stand a moment's consideration can be urged against the use of weights and scales. Let then every dyer not already using them take to measuring his drugs and he will soon find out the advantage of so doing. There are some shades of color which are so delicate that no intelligible weight of the dyestuffs can be given for dyeing them. We allude more particularly to cream, pink, ecru, ivory, pale blue, and other light shades. In such cases we recommend dyers to keep in solution several of the colors that are most generally required. We advise the following to be dissolved and kept in some vessels ready for immediate use, viz., magenta, saffranine, violet, phosphine, soluble blue, brilliant green, which will answer for ivory, cream, ecru, mauve, pink and rose, on wool or silk. It is best to dissolve one ounce of each of the above mentioned dyes in a gallon of water, and to use a gill mug for measuring out the dye solution when required.

Port Dalhousie, Ont., voted a bonus of \$6,500 to the Toronto Rubber Shoe Co., May 21st.

Prescott, Ont., has given the Imperial Starch Co., Ltd., a site, valued at \$8,000, and tax exemption for twenty years. The town also agrees to furnish the company electric energy for one hundred lights and supply them with one hundred thousand gallons of water daily free of charge, for the period of twenty years. In return for this the company will grind 1,000 bushels of corn daily.

\*Reprinted from the Dyer and Calico Printer.