

strongly, the body of the cloth will invariably dye more or less, and with heavy cloth, teased well not only on the surface, but also somewhat on the back, the dye will penetrate still more readily. If the felt of the surface is thoroughly loosened and laid in nap by the teasing, the penetration of the dyestuff is greatly facilitated. The loosening and laying in nap of the felt also has the advantage of clearing away many impurities, particles of soap, etc., which cling to the felt. This process will be still more effective if the cloth, after nap-teasing, is immersed for one or two hours in boiling water, passed through rollers and squeezed out, and afterward rinsed with a fuller's earth solution in the washing machine—a manipulation to be highly recommended.

Another reason for the imperfect dyeing of vat-blue goods is that they are not subjected to a mechanical working during the operation of dyeing. This process would be very effective where the bath is not boiled, which diminishes its power of penetration into the cloth. Ordinarily, the cloth is either drawn about with hooks in the vat, or alternately beamed upon a reel in the bath while being unwound from another underneath the surface of the bath. By this process it is exposed to the action of the bath for a short time only, and at a length of about half-a-yard at a time.

When thorough dyeing is desired, the bath reel should always be connected with a pair of squeezing rollers between the two beaming rollers, and the cloth should be passed through in such a manner that it remains as long as possible in contact with the vat liquor. The absence of such an arrangement is a great objection to many piece-dyeing machines. The squeezing rollers also require a stationary spreader, without which the cloth would run into a rope and become full of creases. These, in consequence of the high pressure and the temperature in the vat, would become so pronounced that they could afterwards be removed only with great difficulty, and sometimes they might permanently injure the cloth. Such a spreader would have to work in the contrary direction to the winding of the cloth upon the other roller.

Reference may be made to the simple piece-dyeing machines with squeezing apparatus used many years ago. The primitive form was, of course, crude. A pair of wooden squeezing rollers, weighted with a protecting board or lattice which reached very near the lower roller, to prevent the wrapping around of the cloth, was the original contrivance. The cloth, which lay freely in the vat, was prevented by a wire netting underneath from coming in contact with the sediment, and was kept stretched before the rollers by two workmen. Only heavy goods could be blued in these machines. Finer cloths, flannels, worsteds, etc., became entangled about the rollers, and were thus frequently injured, in spite of the lattice or doffers. The cost of labor was an important item, as it required at least three workmen to tend this machine. But the color produced was much clearer and more uniform, and, moreover, the cloth dyed through much better than with the modern apparatus, which is constructed on the principle of alternate beaming. The small undyed spots which are frequently seen now were then hardly known, even with goods that were less clean.

These old machines have lately been reintroduced in an improved form, and many practical dyers prefer them to those of any other pattern. The squeezing rollers on the latest apparatus of this style are better adjusted. One of them is generally clothed with india-rubber. A stationary spreader does the opening and smoothing, and a special arrangement, consisting of two smaller rollers, receives the cloth from the squeezing rollers, so constructed that it cannot adhere to and wrap around them. The advantages of such an apparatus are very great. The cloth, even if indifferently moistened in its passage through the squeezing rollers which are located in the bath, is dyed more uniformly, and is forced to absorb the vat liquor. The pieces issue well dyed from this apparatus. Dark selvages or light spots and flecks are rarely seen. The penetration of the dye is thorough by reason of the pressure.

Another important advantage is that the pieces lie open in the vat during dyeing, and for this reason the vat liquor penetrates more readily. This style of dyeing causes the cloth to absorb more dyestuff. The apparatus is easily driven by a belt from the main shaft.

## RETIREMENT OF JAMES SCOTT & SON.

A long and honorable business career is closed by the retirement of James Scott & Son, retail dry goods dealers, Toronto. Mr. Scott started business in 1850, in the same block in which his business remained till its close this month. He had not been in good health for some time past, and decided to give up business, selling out his stock to W. A. Murray & Co., his son also retiring with him. Solomon has said that a good name is rather to be chosen than great riches, but Mr. Scott's career is not only a proof of this proverb, but shows that a good name in business may create the riches, which are a secondary consideration in the wise man's view. Mr. Scott made money in business simply because the customers who came to know him could depend absolutely on his representations. He had the same run of customers, in the main, year in and year out, and many a citizen has taken his retirement as a personal loss. Many an incident has occurred within the last few days in connection with the "selling off," showing how complete was the confidence which Mr. Scott's name inspired in those who had been so many years in the habit of buying goods there. The mercantile community can ill spare such men from the ranks of trade. We understand that Thomas Glass, who has been for twenty-five years continuously in the employ of the firm, and who is almost as well known in the business as Mr. Scott himself, will go into the employ of W. A. Murray & Co.

THE new sets of samples received by J. Ironside Thomson, Toronto, from his foreign agencies, show the great progress made in German fancy fabrics each season. Winzer & Wecker, of Chemnitz, whom Mr. Thomson represents, are producing some beautiful lines of hosiery in lisle thread, maco, etc., their stainless colors being a noteworthy feature of these goods. W. Theodor Gey, of Gera and Langenberg, also show through Mr. Thomson some striking novelties in dress goods, which are sure to be eagerly sought after on the Canadian market. The goods of E. Steger, Annaberg, and Gebruder Bochmann, which Mr. Thomson handles for the Canadian trade, are also very handsome this season.

SPEAKING of the "gelsoline," the new fabric or material prepared from the fibre of the bark of the mulberry tree without the intervention of the silk worm, a technical journal says there are three absolutely distinct fibres procurable from that tree. Thus, in addition to the ordinary silk, a strong and thick fibre for certain purposes is obtained by killing the silk worm and drawing the thread out of its inside. In the preparation of the gelsoline the bark is rotted and the fibre treated after the manner of flax, and after purification with soap and soda is ready for the weaving shed—some works in Italy. It appears, already producing thousands of yards of the woven fabric for upholstery purposes. This new material is said to be ten times as strong as middling Orleans cotton, and is obtainable at one-tenth the price of flax. Being perfectly round the fibre insures a close fabric.

THE Canada Suspender Co., of Quebec, assigned last month with liabilities of \$35,847, and assets of \$15,000. Kent & Turcotte, of Montreal, were appointed provisional guardians. The following is a list of the principal creditors, who are chiefly in Montreal: Glover & Bruns, \$826; Gault Bros. & Co., \$1,768; Greenshields, Son & Co., \$1,680; Greene Sons & Co., \$794; Mark Fisher, Son & Co., \$2,078; James Johnston & Co., \$5,734; Wm. Agnew & Co., \$1,489; Caverhill & Kissock, \$879; Henri Duverger, \$589; F. F. & C. B. Kelly, \$300; John MacLean & Co., \$530; Thos. May & Co., \$1,541; H. A. Nelson & Son, \$312; M. L. Schoman, \$249; Skelton Bros., \$511; Watterson & Auldjo, \$423; Kyle, Cheesebrough & Co., \$741; Alp, Racine & Co., \$457; Robert Linton & Co., \$1,100; H. S. Scheyer & Co., \$490; H. B. Muir & Co., \$462. Some complications are expected to arise in connection with this failure. An investigation into the business methods of the company is now going on in the Quebec Supreme Court at the instance of J. Johnson, of Montreal.