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WORKS: WOODSIDE, L. I.

Belgian Lace Making.

The present number of lace makers in Belgium is stated to be 45,000 women and girls, as compared with 150,000 in 1875. At Turnhout, 2,500 lace makers produce "la dentelle de Malines," a superior article both in design and workmanship, but the majority produce "point de Paris," used for household furnishings; "point de Lille," sold in Holland and Brittany for trimming the characteristic caps worn by native women; "point de Binche" and torchon lace. The lace makers begin their apprenticeship at six to eight years of age, although the legal age limit is nine years. Their hours are from 6.30 to noon and 1 to 7 p. m. in summer, and in winter 8 a. m. to 10 p. m. They earn from fourpence to fivepence a day; the more expert earn sevenpence. The maximum wages paid to the most experienced lace makers never exceed fifteenpence a day, and out of 2,500 workers only about twenty are paid the maximum. Children up to twelve years of age and even older are paid tenpence per week. Relatively to its value, the lace makers producing the Malines lace are the most poorly paid. All lace makers are paid by the ell, the Flemish ell being 27 in. Those working in the schools earn less than those working for a local agent. It is largely due to the existence of intermediaries, or "middle-men," that wages are low. According to the American Consul at Liège, lace schools are either maintained by religious institutions, or are directed by more or less expert lace makers, who gather together the pupils, girls of different ages, in their dwellings, small workmen's houses, added to which are the workrooms into which the chil-Often 70 or 100 workers are dren are packed. crowded into a space that would barely suffice for 20 people to move about in. The rooms are not heated. At nightfall the benches are ranged along the wall, and upon small round tables a petroleum lamp is placed, with flasks of clear water arranged so that the light traverses the water and falls on the lace-pillows of the workers. Lace workers attending these schools pay about fifteen pence per month. The director of a school must turn over all work to the agent, so that sales in the open market are excluded. All lace produced is offered for sale whether good, bad or indifferent, a fact, it is claimed, has depreciated the industry and maintains the low scale of wages that prevails. The lace maker's skill is only developed mechanically, anything like artistic training being lacking, which partly accounts for the large amount of inferior lace found on sale. For improving the condition of the lace workers, and lending support to one of the oldest and most attractive of Belgian industries, a new school has been organized that will consolidate all existing schools and employ those teachers now working separately.

## An American Dyestuff Investigation.

Extensive investigations into the properties of different dyes have just been undertaken by the American Bureau of Standards, the first subject to be taken up being an inquiry into the spectral transmissivities of dyes. This work is of the utmost importance to the dye industry, and the Bureau, in a recent report, made the following statement regarding its plans:—

The present pronounced interest in the development of the industry has emphasized the need of accurate and reliable data on the properties of dyes. Dyes owe their color to, and are characterized by their remarkable selected absorption for light of differene frequencies (spectral colors), that is, light of certain spectral colors is freely transmitted by the dye, while light of other spectral colors is strongly absorbed.

The color of the dye is a composite effect of the various spectral colors, and so it happens that two dyes which match in lamp light may not match in daylight. To insure a match in all lights, the "transmissivities" of the dyes for all spectral colors must be the same. For the purposes of identification and analysis of the dyes, reliable data on the transmissivities for a wide range of frequencies—even outside the visible spectrum—are of recognized importance, but little information of this sort is available.

During several years past, the Bureau has been making extensive and elaborate preparation for a systematic investigation to obtain this data. The preliminary work is now finished and the investigation proper, in co-operation with the Bureau of Chemistry, has been in progress for a month or two. The Bureau of Chemistry is providing known analyzed samples and the Bureau of Standards is determining spectral transmissivities at various temperatures and concentrations throughout the visible and into the ultra-violet and infra-red.

The dyes just at present in the course of investigation are the "permitted food colors." Others will be taken us as rapidly as the work can be done. It is expected that the whole investigation will extend over a period of years more or less continuously; but partial reports will be issued from time to time, as the data are available. The data will be in the form of tables and curves giving the specific transmissivities over a wide range of frequencies in the form which will be convenient for the practical purposes of the dye analyst as well as for theoretical discussion of the nature of absorption and its relation to constitution. It is hoped that the first of these reports can be submitted for publication this year.