

ARTIFICIAL SILK.

THE production of artificial silk is a problem which has occupied the attention of inventors from time to time during the last fifty years or more. Some who have made attempts to solve it have, as closely as possible, followed the natural production of the silk from the worm. How far they have succeeded is well known. As far back as 1843, Andemars, a Swiss, produced an artificial silk which, however, never came to anything. The next attempt of any note was made by Count de Chardonnet. Samples were shown at the last Paris Exhibition, some of which were very fine, yet we have heard nothing of it recently. Another method was invented by Du Vivier, some of whose samples we have seen. But the latest and, certainly, in our opinion, the most satisfactory is that of Dr. Lehner. This artificial silk is produced by an exceedingly simple process, and promises to be a great commercial success. That the inventor is not alone in his high estimate of the value of his production is proved by the fact that a company, with a capital of about £100,000, is already being formed for working the patent. We had an opportunity, a considerable time ago, of seeing samples of the yarn and fabrics and were supplied with a description of the machinery, but Dr. Lehner desired to fully complete his arrangements before making his invention public. The time having arrived, we have much pleasure in giving full particulars of what we consider a most valuable product. The machine for manufacturing the artificial silk closely resembles an ordinary spinning frame. An emulsion having been first made, it is put into a large glass vessel placed above the frame, along the back of which is a long glass tube, having outlets provided at regular intervals. Immediately under, and parallel with, this tube is a long trough divided into sections, corresponding with the outlets from the tube. To each outlet, an artificial silkworm is connected by the aid of india rubber tubing. The silkworms, which curve upwards at their terminations, rest within the trough. Each worm ends in a fine point, supplied with a small orifice, the size of the orifice being governed by the thickness of the strand to be formed by the emulsion passing through it. The trough contains liquid. Immediately above, and a little in front of the trough, is a glass rod reaching the full length of the machine. This rod is supplied at short intervals with projections, and glass guides are also placed before them. Next is a series of rollers, and under them the spindles, flyers and bobbins. In describing the operation of the machine, we will suppose we are composing a yard of twelve strands. The emulsion flows, without any mechanical pressure, from the glass vessel, along the tube, from which it finds its way into the artificial silkworms. The strand is taken up with a wire hook and passed over the rod, between two of the projections, and from thence through the guide. This operation is repeated with the other strands composing the one thread of yarn, each of which passes over the same guide, where, of course, they meet. They then pass in one thread over the roller to the flyer and bobbin. One point is very noticeable. In its original state we see a liquid compound, and yet, when the bobbins are reached, the yarn is almost dry, no apparatus being required to effect this. We regard this as a remarkable feature and one in which the inventor is well ahead of previous inventors.

A further process is necessary so that there shall be no tendency to inflammability. This process attains its object perfectly. We made our own tests, taking a piece of cotton fabric and one made from the artificial silk. With a lighted cigar,

holes were made in each. In the former, of course, burning continued until the whole fabric was consumed. In the latter, burning ceased the moment the cigar was removed from contact with the fabric. Cotton yarns were burned in a gas jet, with what result everyone knows. Artificial silk yarns were tested the same way. The burning ceased immediately the yarns left the flame. We may, therefore, consider this silk non-inflammable.

A great point in any artificial product is its price. Unless it can be manufactured satisfactorily at a cost very greatly below the genuine article, there is no benefit to be derived from it. The cost price of the present article is surprisingly low, as is evidenced from the report shown to us, which has been prepared by Cross & Bevan, analytic chemists, 4 New Court, Lincoln Inn, London.

We were shown some beautiful yarns, both in fine and coarse counts, the lustre of which surprised us. They take dyes wonderfully well. Almost every conceivable shade, from a bright lustrous black, and purple, and blue, to the most delicate tints, was passed before us. Yarns have been dyed by independent firms and passed on to various manufacturers, who have utilized them as they thought proper. The result is that a great variety of fabrics can be seen, proving the wide field open for the artificial silk. We saw handkerchiefs which it is almost impossible to differ from the genuine silk article; cotton fabrics, striped with the new yarn; muslin treated in a similar manner; a beautiful piece of upholstery fabric in a delicate shade; another cloth showed the yarns utilized for crewel work. There were also trimmings and tassels for upholstery purposes, and even gloves. Judging from the variety of samples, we have no hesitation in saying that this artificial silk should be the means of promoting a new industry. In the superseding of silk, the new yarn will not play a very important part. There is scarcely a fabric for wearing, upholstery, or other useful purposes, which is not capable of being greatly beautified by the use of the artificial silk, and it is in this direction that the inventor and the company hope for success. The ultimate fate of the invention cannot, of course, be foretold, but its prospects of success appear to us to be of the best.—Textile Review.

HAMILTON BOARD OF TRADE.

The annual meeting of the Hamilton Board of Trade was held Monday. The election of officers resulted in H. N. Kittson being re-elected to the office of president; Archdale Wilson, vice-president; C. R. Smith, secretary-treasurer; John Knox, W. H. Gillard, George Roach, T. C. Bruce, Alex. Turner, J. J. Mason, W. E. Sanford, T. H. McPherson were elected members of the council for the ensuing three years. The Board of Arbitrators, appointed for three years, will be composed of B. E. Charlton, R. A. Lucas, W. H. Gillard, and J. M. Lottridge. At a meeting of the council, held immediately afterwards, President Kittson informed the members that he had interviewed the Mayor upon the question of toll roads, and had found that the City Council's views on this subject coincided largely with that of the board, and he had every hope that a settlement would be come to. A discussion upon the proposed Intercolonial Conference took place, several of the members expressing themselves as being averse to some of the objects of the conference, among these being the procuring of a discriminating tariff between Great Britain and the colonies.