

WHY SILK AND WOOL ARE EQUALIZERS OF TEMPERATURE.

It appears that the electrical properties of certain animal tissues were given to them for a purpose, for these properties are closely connected with the suitability of such tissues for use as a protective covering. Says the Literary Digest: It has long been noted that silk and wool (both animal products), become electrified by friction; while linen, hemp and cotton (of vegetable origin), are totally without electrical properties. The well-known French physicist, Charles Henry, has been experimenting to see whether this property may not be connected in some way with the ability of silk and wool to maintain a constant temperature, which makes them so useful as clothing, either natural or artificial. His results are thus communicated to La Nature by M. Henri Coupin:

"M. Henry tried in the first place to increase the electric properties of silk to a considerable degree and at the same time, if possible, to amplify its thermic qualities. He succeeded by incorporating with silk a

neutral preparation that had no effect upon its appearance. The electrical properties of this silk were much more marked than those of ordinary silk. . . . It was found that when this highly electric silk is heated it cools more rapidly than ordinary silk, and when it is cooled it cools less quickly than the ordinary kind. The electric properties of silk thus tend to assure constancy of temperature, producing cold upon elevation of temperature and heat upon cooling.

"M. Henry explains the mechanism of this autothermic regulation by means of electric discharges. When the tissue is heated, the air included in the interstices expands; it thus is forced out of the tissue, rubs against it, and is electrified; being electrified it discharges upon the tissues; but this movement determines a current of air at the surface of the tissue and consequently a cooling. When the tissue is cooled, the air in the interstices contracts, and thus again rubs and is electrified. It then discharges toward its point of departure. The air thus sets up a vibration and prevents the access of cold air from the exterior, producing a relative heating. To sum up, in elec-

trifiable tissue there is during heating a tendency to cooling, and during cooling a tendency to heating."

ELECTRICAL DEVELOPMENT IN CANADA.

The Niagara Falls Park Commissioners have practically agreed, after some modifications, to the plans for developing power on the Canadian side proposed by a syndicate of capitalists, including gentlemen from New York, Buffalo, and Canada, represented by General Field of Buffalo. The financial terms have also been definitely determined upon, and it only now remains for the engineers of the syndicate to prepare an agreement and specifications in order that the whole matter may be submitted to the Ontario Government for their ratification. Unless some unforeseen hitch occurs, there is every likelihood of an industrial development nearly equal to that which has been effected at Niagara Falls, N.Y., making of it a populous and progressive town, taking place on the Canadian side of the river.

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