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## THE CANADIAN TEXTILE DIRECTORY

A Handbook of all the Cotton, Woolen and other Textile manufac tures of Canada, with lists of manufacturers' agents and the wholesale and retail dry goods and kindred trades of the Dominion, to which is appended a vast amount of valuable statistics relating to these trades Fourth edition now in hand

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## CONTENTS OF THIS NUMBER:

) ·	AUF	PAGE 1
American Textile Patents	21	Literary Notes 30
Among the Mills	:33	Looms, Uniformity in 28
Australian Wool Markets	23	Mill Hands in India 14
British Texule Trade with Can-		New Steam Cloth Sponger and
ada, , ,	4	Finisher 19
Canadian l'atents, Recent	19	Primitive Spinning Loom 13
Chemicals and Dyestutts	25	Raw Fur Market Report 25
Cleaning Recipes	18	Silk Factory, A Japanese 28
Dry Brushing for Finishing	2	Silk, History of
Dyestuffs, New	24	Sizing Woollen and Worsted
Electricity in Mills	1	Warp
Fashions in London	18	Spanish Textile Industry 13
Flamish Lace Industry	17	Specks, How to Prevent 10
Foreign Textile Centres	30	Textile Design 17
How Yarn is Numbered	11	Turkish Carrets, About 12
Interest Rules, Some Excellent.	21	Washing of Wool 3

## ELECTRICITY IN MILLS.

B. A. Dobson a short time ago read a paper before the Bolton, Eng., Technical School on "Hunndity in Cotton Spinning." Speaking of the interference of electricity with the working of cotton spinning mills, he said that if the conditions gave perfect liberty to the electricity every process employed would suffer in the result. He had seen recently constructed mills, especially fireproof ones, where every shaft, column and beam was charged with electricity to such an extent that the cotton fibres stood out from the iron work to the distance of at least three inches-radially to the centre of electric attraction. An infallible and ready proof of the existence of the electricity was in carefully observing the iron work of the machines. Of course,

in all mills there was a certain amount of loose fibre called "fly" floating in the air. If it was found on any of the iron work standing straight up from the surface like the bristles of a brush, there was no necessity for further argument—the presence of electricity was declared. Very often this came from the slipping friction of the driving straps, and was conveyed, say, from the driving-shaft pulley to the pulley of the machine, charging the body of metal with latent electricity, which in its turn affected every fibre in its passage. Mr. Dobson had tried on one or two occasions to extract the electricity from the machine, with considerable success. Thus, with a copper wire attached to any part of iron work, forming what is termed "earth," by placing the other end of the wire near the inside of the leading strap, the electricity was taken from the strap and prevented from going into the machine itself. On a revolving flat carding engine, which was so charged by electricity that the fly on the flats stood straight up from the wires, he had been able by the movement of the wire to make this fibre rise and fall at will. In combing machines, where it was desired to comb as much width of lap as may be practicable for the length of the roller, this action of electricity was very marked and became of great importance.

A very large and eminent spinning firm in America had a number of combers made to comb the same width of lap as they had seen successfully combed in a mill in this country; but after a year's trial they found so much difficulty and so much waste made that they went to the extreme course of sending their manager to England to see again the machines which had served as a sample for the giving of the order, to ascertain if they did work as satisfactorily as the firm had supposed. They found that the machines did so, and the firm were forced to the conclusion that they would have to comb a lap one inch narrower than was usual in Lancashire, on account of the effect of the latent electricity upon the loose fibres of cotton. The action was to separate the fibres. Fibres under this influence could not be brought together; consequently, more room was required for the operation.

What was true of the card, comber, and drawframe, was also true of the fly-frames and spinning machines. But in the spinning machines the presence of electricity was shown by the accumulation of fly on the working parts-the rough, furry character of the