SB 253

.C18

Cameron, A
The cultivation of
flax. 1852

SB 253

.C18

Copy 1

THE

CULTIVATION OF FLAX,

AND PREPARATION OF

FLAX COTTON

BY

THE CHEVALIER CLAUSSEN PROCESS.

NEW-YORK.

1852.

By Wm. Cameron.

New-York :

PRINTED BY JOHN A. GRAY, 54 GOLD, COR. FULTON STREET.

1852.

manufacturing purposes. The object, then, of this breaking or partial cleaning, and which may be called the preparatory stage in the process, is to reduce the bulk and weight of the material to be afterwards operated upon, to render its transport less costly to the grower, and also to permit him to retain a portion as chaff, useful for mixing with other cattle food; thus returning to the soil a large proportion of the crop, which hitherto has been entirely abstracted from the soil, or rendered valueless by the process of steeping. The manufacturer or person employed to prepare the Flax for him also derives an advantage from this arrangement, inasmuch as he is enabled to steep a larger proportion of pure fibre than formerly in the steeping-vats, and the chemical agents employed, whether fermentative or otherwise, are enabled to act more rapidly and more directly upon the fibre than when in its whole or unbroken state. It is also adapted in this stage for manufacture into Canvas, Sail-cloth, Cordage, and other coarse kinds of fabrics. In the same room were two cutting-machines for reducing the length of the fibre when required for preparation for cotton and woolen machinery.

"Having shown the means by which the Flax required for steeping was prepared, the visitors were led into the steeping-rooms, where Dr. Ryan exhibited some Flax in the course of boiling and steeping in cold water, in the unbroken as well as broken state. When boiled, the period of operation is about four hours; when steeped in cold solution of caustic soda, it is not sufficiently steeped in less than twenty-four hours. By the present mode of steeping, the period occupied ranges from three days to six weeks. The contents of one of the vats having been sufficiently boiled, it was taken out and placed in a bath slightly acidulated with sulphuric acid. After drying, the fibre was fitted for the further process of scutching and cleansing.

"Having gone through the whole of the steps required to produce the fibre for the linen manufacturer, the 'cottonizing' process was next explained. The Flax having been partially cleaned and boiled, precisely as in the case of the long fibre, it was placed in the first of a series of six vats containing a cold solution of soda and water, in which it remained till fully saturated. Thence it was removed into vat No. 2, with a solution of sulphuric acid, where it remained as long as any bubbles of carbonic acid rose to the surface. It was in this vat that what is called the 'splitting process' takes place, and where the mechanical action of chemical forces is so beautifully illustrated. The effect was almost instantaneous. The character of the Flax fibre became at once changed from that of a damp aggregated substance to a light expansive mass of cotton-like texture. Its specific gravity was completely altered, and the mass, which at first lay submerged beneath, gradually floated like an expanding sponge to the surface of the fluid. The result was generally and loudly cheered by all present. For the purpose of removing any superfluous acid, and to carry the separation a stage farther, the fibre was immersed in a second vat of a weak solution of carbonate of soda. It was then ready for washing, carding, and spinning, in the same manner as ordinary cotton.

"A third, equally interesting and not less important process shown, was that of bleaching fibres, yarns, and fabrics. Under existing systems, the time consumed in bleaching a piece of linen occupies from three weeks to as many months. Under the Chevalier Claussen system, the period required is not more than as many hours, while the chemical ingredients employed, so far from injuring the material, greatly improve its quality. The rapid change in the color, as in the previous instance, of the texture of the substance, was warmly applauded.

"The bleaching process concluded, the visitors were shown into the 'carding-room,

३३३५३
८/८

where a number of machines, such as 'devils,' 'carders,' and others usually employed in the respective branches of manufacture, were shown at work.

"We may state that jute, hemp, and various other fibrous substances were shown to be capable of being treated upon the above process, and that, in answer to several questions, it was stated that the 'Flax Cotton' and 'Flax Wool' could be prepared at prices not exceeding 3*d*. per pound.

The profits to be obtained from the preparation of Flax Cotton are such as to offer the greatest inducements for persons to embark in the undertaking, as shown in the following estimate of the cost of production and value of the article :

Five tons of Flax Straw, at \$10,	-	-	-	\$50 00
Ingredients employed, Labor and Interest on				
Capital invested,	-	-	-	60 00
				<hr/>
				\$110 00
One ton of Flax Cotton, at 10 <i>c</i> . per lb.	-	-	-	200 00
				<hr/>
Profit on 1 ton,	-	-	-	\$90 00

In England, where they have to pay at the rate of from \$15 to \$20 per ton, the cost of production is only 6*c*., and the market value of it in the prepared state is 12*c*., leaving a profit of 100 per cent.

I am credibly informed that abundance of Flax Straw can be had in Ohio at \$5 per ton. When farmers find it profitable for them to raise Flax on account of the seed alone, and place no value upon the straw, I think it would be within bounds to base our calculations on obtaining straw for Flax Cotton purposes at \$5. You will perceive that in the above statement I value Flax Straw at \$10, which is the maximum price paid for it in this neighborhood.

The Scotch patent has been sold for 25,000*l*. sterling, (\$125,000,) and from good authority I learn that double that amount has been given for the French patent. Mr. E. G. Roberts has sold the right in this country for the States of Maine, New-Hampshire, Vermont, Massachusetts, Connecticut, Rhode Island, New-York, and Illinois, and is negotiating with several parties for other States. Applications have been received for every State in the Union, even Oregon not excepted.

ALLAN CAMERON.

LIBRARY OF CONGRESS

00014379903