

37.—PRESERVING FISH IN SCOTLAND BY THE ROOSEN PROCESS.***By OSCAR MALMROS.**

[Dispatch No. 70 to the State Department.]

Referring to my former dispatches inclosing articles by Prof. J. Cossar Ewart, on the preservation of fresh fish,† I now submit the following facts bearing upon the practical working of the "Roosen process" mentioned in Professor Ewart's communication :

1. A number of dried ling, preserved according to the above process, were dispatched from Glasgow, in an ordinary wooden box, without the usual tin lining, in a sailing vessel to Melbourne, Australia, and on arrival there were found to be good. The ordinary mode of transit is in tin-lined and hermetically sealed boxes, which entail in this country an expenditure of £4½ [\$21.90] per ton; and it has been found that the fish, after crossing the equator, take on a red fungus which destroys their value. The commercial advantages of the new process are therefore considerable.

2. A box of dried ling similar to the one sent to Australia, and preserved at the same time, was lately opened in Edinburgh in the presence of several officials connected with the fisheries in Scotland or otherwise interested in the experiment. The box was perforated so as to admit air, and although the fish had been caught nine months ago, and had been kept in a damp warehouse, they were generally in a fair condition. Before being packed in the box, the fish were about two days in a solution of boracic acid and salt water, under a pressure of six atmospheres, or 90 pounds, to the square inch.

3. While the foregoing experiments relate to the preservation of dried fish, an experiment with fresh fish seems to have been equally successful. The fish in this instance selected for trial was fresh salmon which had been subjected to the "Roosen process" for three weeks. Its quality was tested by practical men of considerable experience and knowledge of fish, such as the manager of the Highland Fisheries Company, members of the Scottish Fisheries Board, the president of the Edinburgh Fish Trade Association, a member of the Iceland Fishing Company of Glasgow, and others possessing similar qualifications for forming an authoritative opinion on the subject. In the opinion of these men, the uncooked salmon could not be distinguished when placed in the market from fresh fish. Cuts of the same lot of salmon were also tried grilled and hot-boiled, and it was admitted that the fish had lost none of its flavor by the process. An opinion was also expressed by one of these gentlemen that by and by Columbia River salmon preserved in this manner might be sold in Edinburgh at 1 shilling [24 cents] a pound.

* Invented by M. August Roosen of Hamburg.

† See F. C. Bulletin, 1886, p. 65.

The cost of the utensils required for the preservation of fish according to the above process amounts in this country to £6½ [\$31.63], the cost of a cask being £4; and of a pressure-pump £2½. The cask is very strong, made of steel, and reckoned to last for at least five years. It is capable of containing 300 pounds of fish, requiring 3 pounds of the "Roosen" antiseptic. One pump is of course sufficient for a large number of casks. If the cost of the utensils is distributed over the five years, the annual expenditure for their use will be 26 shillings [\$6.32], so that in case the cask is filled only once a year the cost per pound of the fish for the use of the utensils is only a trifle over 2 cents; but as the cask may be filled during a year say twenty times, the cost per pound is reduced to about one-tenth of a cent.

UNITED STATES CONSULATE,

Leith (Edinburgh), Scotland, April 29, 1886.

38.—STATISTICS OF THE FISHERIES OF THE PROVINCE OF BRITISH COLUMBIA FOR 1885.*

By GEORGE PITTENDRIGH,

Inspector of the Fisheries.

Statistics of vessels, nets, establishments, and men engaged in the fisheries of British Columbia during 1885.

8 steamers and steam auxiliaries, from 3 to 50 tons }	\$54,600	
26 schooners, from 5 to 80 tons }		
867 fishing boats }	44,195	
190 canoes. }		
42 flat-boats or scows	5,430	
		\$104,225
961 salmon nets, 275,800 yards	114,750	
37 herring seines	4,680	
5 herring nets, 700 yards	2,500	
81 fish seines, 7,061 yards	7,975	
3 eulachon nets	175	
		130,080
25 salmon canneries, estimated value	449,500	
1 oil factory, Queen Charlotte Islands	10,000	
1 oil and scrap factory, Burrard Inlet	45,000	
1 floating cannery and oil factory	60,000	
Various salting stations	11,000	
		575,500
Total value		809,805
Sailors		90
Fishermen and native hunters, with sealing fleet		1,740
Shoremen		960
Total number of men engaged		2,820

* These statistics have been furnished by Captain Pittendrigh, who also states that turbot have been discovered on the Pacific coast, Mr. William Vennan, a reliable fisherman, having taken one outside of Burrard Inlet, near Spanish Bank.