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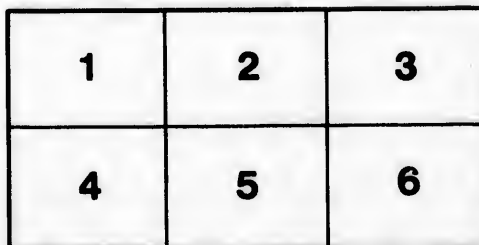
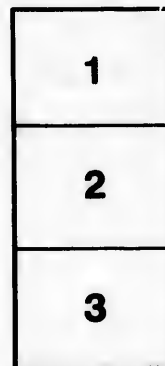
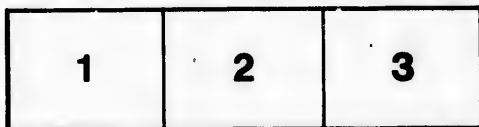
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**SOME ACCOUNT**  
**OF THE**  
**SEAL FISHERY OF NEWFOUNDLAND,**  
**AND THE**  
**MODE OF PREPARING SEAL OIL;**  
**WITH A**  
**STATEMENT OF THE ADVANTAGES OF ARCHIBALD'S PATENT**  
**STEAM PROCESS FOR RENDERING SEALS AND**  
**OTHER ANIMAL OILS.**

**EDINBURGH:**  
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SOME ACCOUNT  
OF THE  
SEAL FISHERY OF NEWFOUNDLAND.

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THE seal fishery of Newfoundland has now become the most important part of the trade of that colony. Although not so extensive a staple, or so generally followed as the cod fishery, yet, when the capital and time employed, and the almost certain and immediate return for investment are taken into consideration, it is by far the most profitable part of the business of that colony, or perhaps any other part of the British Empire.

A quarter of a century ago, there were only about 50 vessels, varying from 30 to 60 tons burthen, engaged in this branch of trade; but within that period it has been gradually increasing. In the year 1850, the outfit for this fishery from Newfoundland consisted of 229 vessels, of 20,581 tons, employing 7919 men. The number of seals taken was 440,828. According to the Custom-House returns for that year, the total value of skins and oil produced from the seal amounted to L.298,796. In the present year, 1852, the outfit consisted of 367 vessels, of 35,760 tons, employing about 13,000 men. The returns and value of this year's fishery have not yet been ascertained. Although it was a disastrous season, in respect to loss of vessels, yet the catch of seals upon the whole was above an average one, there being from half to three-quarters of a million seals captured.

The vessels engaged in this business are from 75 to 200 tons



burthen. Those lately added to the sealing fleet, and which are now considered of the most suitable sizes, range from 130 to 160 tons. Vessels of this size carry from 40 to 50 men. The season of embarking for the voyage is from the 1st to the 15th of March. The voyage seldom exceeds two months, and is often performed in two or three weeks. Several vessels make two voyages in the season, and some perform the third voyage within the space of two months and a half.

The seals frequenting the coast of Newfoundland are supposed to whelp their young in the months of January and February; this they do upon pans and fields of ice, on the coast, and to the northward of Labrador. This ice, or the whelping ice as it is termed, from the currents, and prevailing northerly and north-east winds, trends towards the east and north-east coast of Newfoundland, and is always to be found on some part of the coast after the middle of March, before which time the young seals are too young to be profitable. The young seal does not take to the water until it is three months old. They are often discovered in such numbers within a day's sail of the port, that three or four days will suffice to load a vessel with the *pelts*, which consist of the skin and fat attached, this being taken off while the animal is warm; the carcase, being of no value, is left on the ice. The young seals are accompanied by the old ones, which take to the water on the approach of danger. When the ice is jammed, and there is no open water, large numbers of the old seals are shot. The young seals are easily captured; they offer no resistance, and a slight stroke of a bat on the head readily dispatches them. When the pelts are taken on board, sufficient time is allowed for them to cool on deck. They are then stowed away in bulk in the hold, and in this state they reach the market, at St Johns and other ports in the island. Five-sevenths of the whole catch reach the St Johns market. A thousand seals are considered as a remunerating number; but the majority of the vessels return with upwards of 3000, many with 5 and 6000, and some with as many as 7, 8, and 9000. Seals were formerly sold by tale; they are now all sold by weight,—that is, so much per cwt. for fat and skin.

The principal species captured are the hood and harp seal. The bulk of the catch consists of the young hood and harp in nearly equal proportions. The best and most productive seal taken is the young harp. There are generally four different qualities in a cargo

of seals,—namely, the young harp, young hood, old harp and bed-lamer (the latter is the year old hood), and the old hood. There is a difference of two shillings per cwt. in the value of each denomination.

The first operation after landing and weighing is the skinning, or separating the fat from the skin; this is speedily done, for an expert skinner will skin from 300 to 400 young pelts in a day. After being dry-salted in bulk for about a month, the skins are sufficiently cured for shipment, the chief market for them being Great Britain. The fat is then cut up and put into the seal-vats.

The seal-vat consists of what are termed the crib and pan. The crib is a strong wooden erection, from twenty to thirty feet square, and twenty to twenty-five feet in height. It is firmly secured with iron clamps, and the interstices between the upright posts are filled in with small round poles. It has a strong timber floor, capable of sustaining 300 or 400 tons. The crib stands in a strong wooden pan, three or four feet larger than the square of the crib, so as to catch all the drippings. The pan is about three feet deep, and tightly caulked. A small quantity of water is kept on the bottom of the pan, for the double purpose of saving the oil in case of a leak, and for purifying it from the blood and any other animal matter of superior gravity. The oil made by this process is all cold-drawn; no artificial heat is applied in any way, which accounts for the unpleasant smell of seal oil. When the vats begin to run, the oil drops from the crib upon the water in the pan; and as it accumulates it is casked off, and ready for shipment. The first running, which is caused by compression from its own weight, begins about the 10th of May, and will continue to yield what is termed *pale seal oil* from two to three months, until from 50 to 70 per cent. of the quantity is drawn off, according to the season, or in proportion to the quantity of old seal fat being put into the vats. From being tougher, this is not acted upon by compression, nor does it yield its oil until decomposition takes place; and hence it does not, by this process, produce pale seal oil. The first drawings from the vats is much freer from smell than the latter. As decomposition takes place the colour changes to straw, becoming every day, as the season advances, darker and darker, and stinking worse and worse, until it finally runs brown oil. As this running slackens, it then becomes necessary to turn

over what remains in the vats. The crib being generally divided into nine apartments or pounds, this operation is performed by first emptying one of the pounds, and dispersing the contents over the others, and then filling and emptying them alternately until the entire residue, by this time a complete mass of putrefaction, is turned over. By this process a further running of brown oil is obtained. The remains are then finally boiled out in large iron pots, which, during the whole season, are kept in pretty constant requisition for boiling out the cuttings and clippings of the skinning and other parts of the pelts, which it is not found advisable to put into the vats. The produce of this, and the remains of the vats, are what is termed the boiled seal oil. These operations occupy about six months, and terminate towards the end of September.

During the months of July, August, and September, the smell and effluvia from the vats and boiling operation are almost insufferable. The healthy situation of St Johns, from its proximity to the sea, and the high and frequent local winds, is doubtless the cause of preventing much sickness at this season of the year. I have never known any disease or epidemic attributable to such a cause. The men more immediately employed about the seal-vats have a healthy and vigorous appearance.

Some improvement has taken place since the great fire of 1846, when all the seal-vats in the town were destroyed. Many of the manufacturers have erected their new vats on the south or opposite side of the harbour; but there still remain sufficient vestiges of the seal trade to cause a summer residence in the town of St Johns anything but desirable. Even the country, for several miles around St Johns, affords no protection from these horrible stench. The animal remains from the vats, and the offal from the cod-fish, are found to be such a valuable manure, that they are readily purchased by the farmers in the neighbourhood; and from whatever quarter the wind blows, the pedestrian in his rural walk has little chance of breathing a genial atmosphere.

After a year's residence in Newfoundland, the attention of the writer was turned to some mode of improving the manufacture of the seal oil. The result of several experiments upon the different qualities of seal's fat, satisfied him that the whole produce of the fishery, if taken while the material is fresh, as it generally arrives

in the market, and subjected to a process of artificial heat, was capable of yielding, not only a uniform quality of oil, but the oil so produced much better in quality than the best prepared by the old process, and free from the unpleasant smell common to all seal oil. His subsequent experiments resulted in the invention of a steam apparatus for rendering seal and other oils, which has been found to answer an admirable purpose, and for which he has received letters-patent under the Great Seal of the Island of Newfoundland, securing to him the right of his invention for fourteen years.

The advantage of this process must be manifest, when it is understood that twelve hours suffice to render the oil, which by the old process requires about six months; that a uniform quality of oil is produced, superior to the best *pale* by the old process, and free from smell; that a considerable per-centage is saved in the yield, and what is termed *pale seal*, produced from the old as well as from the young seal. (The sample herewith sent is from the old hood seal.) Besides, if this process were universally adopted, the manufacturing season would cease by the 31st of May, and the community would be saved from the annoyance attending the old process.

The chief market for seal oil and skins has hitherto been Great Britain and Ireland; a few cargoes occasionally go to the continental cities. This year, for the first time, a new market for seal oil has been opened in the United States, owing to the greatly increased consumption of oil in that country, together with the failure of their whale fishery. Upwards of 2000 tons of this year's produce have already been shipped to that country. The latter shipments, however, have not realised to the shippers the prices of the first, from the fact that, upon the trial of this oil, although it was found to be valuable for its combustible qualities, yet in a hot climate it was altogether unfit for domestic purposes, on account of its singularly offensive smell.

In the United States the great consumption of oil is for domestic purposes; the chief cities only as yet being lighted with gas, and that but partially, from their constant increase. Candles, unless of the most expensive kind, will not suit that climate, particularly in the summer season; and hence oil and camphine, where gas is not used, are the chief ingredients for lamps. All animal oils used in that country, whether of sperm, right whales, or lard, are rendered

by artificial heat, and are in consequence free from the unpleasant smell of our cold-drawn seal oil.

From his having exhibited samples of his oil in America, the subscriber has fully ascertained that, on account of its yielding so brilliant a light, and producing no offensive smell, it will command a much higher price than the best *pale*, prepared by the cold-drawn process.

SAMUEL GEORGE ARCHIBALD.

St Johns, Newfoundland, 1st August 1852.

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