A Stranded School of Whales and What It Means

By H. J. Shepstone

ON several occasions considerable numbers of blackfish, a medium size member of the whale family, have come ashore on different parts of the New Zealand coast. It is doubtful, however, if ever there was such an extraordinary sight witnessed as was seen towards the end of June last when a large school of whales, numbering no less than 150, were found stranded at a place called Je Arai Bluff, on the extreme northern portion of the west coast of North Island. They were first seen by a Maori lad while riding along the beach at dusk on June 22nd last.

The tide was low, and stretching for miles between the white surf of the long rollers and high water mark, lay literally hundreds of whales of the blackfish species, of all sizes, from fifteen feet to monsters of thirty feet and upwards. Many were still alive and still blowing sand and water at intervals. The helplessness of these monsters was pitiable to witness, and many survived for several days. A count revealed the startling fact that within a radius of three miles of Je Arai Bluff over 150 of these monsters were stranded, while on the coast for miles north and south lay an occasional whale.

The oil of the blackfish is valuable, almost as much prized as that obtained from the humpback whale. Indeed, had these creatures come ashore in any other place they would have been looked upon as a valuable asset. But Je Arai Bluff is one of the most isolated spots in New Zealand, and on considering the scheme commercially, it was at once recognized that the carriage of a trying-out plant to the spot and the cartage of the oil when tried out would go far to wipe out any profits the operations would yield. Therefore, no white men considered it good enough to attempt to turn to account the misfortune of the stranded monsters.

There were, however, many features about the proposition which, apart from the profit to be made, especially appealed to the Maoris. The fact that they would enjoy an out-door picnic on the shore for several weeks and live on a diet of the highly esteemed "Johera" shell fish (a large white clam of excellent flavor which abounds on the beach here) proved irresistible, and as Jekas, a native settlement of the Aupuri tribe, is not far from Je Arai Bluff, a number of them determined to see what they could do with the stranded whales. No proper trying-out plant was available, and so the Maoris left their settlement for the scene of action with every conceivable style of camp oven and pot imaginable. They also carted out their water tanks to hold the oil.

The first duty was to select the most sheltered spot, rig up every available pot for trying-out, put the tanks in position, erect a rough cutting-up bench of driftwood, and collect a quantity of firewood. These duties performed the butchers were now ready to start actual operations. The wooden trolley used in these parts, consisting of a square, strong, wooden body set on four solid wooden wheels was driven alongside a whale. Huge strips of the blubber were hacked

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1. Near view of some of the stranded whales. 2. Cutting up the blubber prior to boiling down same. 3. Pouring the oil into tanks prior to putting it into barrels.

Activities in the path of stranded whales

Strange armor from the Gilbert Islands, made of cocoanut husk and fish skin

Rare South Sea Armor

By Francis Dickie

THOUGH natives of the different groups of islands far flung across the broad South Pacific were continually at war with each other for centuries, and still are in some regions, only one tribe ever rose to the height of invention of armor. This tribe was the Gilbert Islanders, and even they only turned out a few suits owing to the great work entailed in manufacture. The brown fabric covering encasing the body and legs was made out of coir string taken from the husk of the cocoanut, so closely woven as to make a protection stronger than board and having greater lightness to recommend it. A further breastplate, invulnerable to any native weapon, was made from the dried skin of the stingaree, or ray fish, one of which is shown beside the armor. This skin dries hard as metal.

The suits were limited in number. Each village was the proud possessor of one. At times quarrels and argument arose between rival villages over hunting rights, stolen women and similar things. But the inhabitants did not all go to war. Each village chose its most doughty warrior, the bravest and the biggest, and this man was arrayed in the village armor, and went forth and met the champion of the rival place, and the winner of the fight brought to his village the right in the quarrel or argument which had caused it.

In the last few years peace has settled over the Gilberts. The armor has ceased to be manufactured, and the few suits that were have all been siezed upon by collectors of the very rare. The one shown in the picture is from the world's greatest private museum of Frank Burnett, at Vancouver, Canada. The crossed weapons in front of the armor are made of wood edged with sharks' teeth capable of delivering a terrible, jagged wound. The weapon at the other side is a shark-tooth spear. Around the figure's head is a necklace of human teeth, a very large one. In the Gilberts it is extremely valuable, particularly of late, as the ending of war has caused a shortage of human teeth! Such necklaces are the dearest possession of women, and a warrior that could give a large one was sure of his best girl's favor. The one shown in the photograph is of enormous proportions, and is as rare and difficult of obtainment as is the strange armor told about herewith, in which Gilbert Island knights followed practices almost the same as those common among the chivalrous warriors of old France and England.

Getting Out Knots

IT is often a difficult business to get rid of knots especially if these are of long standing. By following the plan indicated it is a simple matter to free the hardest knots whether these be in straps, harness, rope, cord, or anything of a similar nature. As a first step place the knot on some hard surface and give it a good hammering on all sides with a mallet or a thick piece of wood. Now boil up a little water with soap in it sufficient to make rather a cloudy solution. Then soak the knot for two or three minutes in the liquid. At the end of this time it will be found that it can be quite easily untied, often enough with the fingers. The loosening can be done with some sharp implement.

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A Stranded School of Whales and What It Means

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off and when the trolley was loaded the blubber was carted back to headquarters where it was cut up in small pieces and fed into the miscellaneous array of try-pots which were kept going day and night for weeks. The oil was stored in the tanks as it was tried out.

The Maoris were severely handicapped. It was impossible to work at stripping the blubber at full tide, but the biggest handicap was the lack of suitable large pots for trying-out. With four large pans the Maoris could have tried out practically all the stranded whales, but with only the small domestic utensils available they had not tried out half the school when the monsters were in such a decomposed state as to be of no further use. In all, the results were about forty gallon-kegs of good oil, worth about £15 or £16 a ton. It was very creditable, considering the primitive plant available, and with proper trying-out gear one can easily see that the proceeds would have been trebled.

Latest Patent Decisions

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pioneers in the art.—*Consolidated Window-Glass Co. v. Window-Glass Mch. Co.* U. S. C. C. A. of Pa.

Proof of Prior Use.—The controlling proposition involved in this appeal is the alleged prior public use of the process for manufacturing mineral wool, wherefor patent was granted to Parkison. The novelty of the patent consists in dropping or otherwise applying oil upon a stream of molten slag or scoria as it pours from the cupola in which it is melted, and is driven by a strong blast of air or steam into and through a nearby blow tube and into a chamber, whereby the finely divided films become coated with the vaporized oil, or the oily smoke created by combustion of the oil on its striking the highly heated stream, and thus rendering the filaments less brittle, and making the product waterproof. The evidence of prior use was by four witnesses, former employees in the factory of which the patentee Parkison was in charge, who testified with more or less positiveness for such use of oil for this purpose in that factory. The testimony of the witnesses was given several years after the alleged occurrence and was based on memory.

The decree of the district court is affirmed, and the Parkison patent is held to be valid and infringed. Proof of a prior public use of a patented article or process, to defeat the patent, must be such as to leave no doubt of the prior public use more than two years before application for the patent, and in general oral testimony as to date of such prior use should find corroboration in evidence of contemporaneous records, or memoranda, or physical exhibits.—*General Insulating Mfg. Co. v. Union Fibre Co.* U. S. C. C. A. of Ind.

Patent and Copyright.—Suits in equity by J. F. Wireback and T. D. Campbell and others, as the Maryland Orthopedic Co. The plaintiffs, who did a large business in making and selling orthopedic devices, were the proprietors of two copyrighted catalogues, each of which contained a number of cuts of the appliances in which they dealt. The drawing from which these cuts were made had been executed by persons specially skilled in such work, under the direction of the plaintiff, Wireback. For a number of years one Cox had been in the employ of the plaintiffs. Early in 1918 he spent a Sunday with the defendant Hoffa. They agreed that, in view of the World War, the business of making and selling artificial limbs would be profitable. They looked over the catalogues of the plaintiffs, and then and there made up their

minds to go into the business, Hoffa to furnish the money and Cox the experience.

The latter left the plaintiffs' employ, taking with him a number of their catalogues, and proceeded to get up an advertisement of the wares of the new concern. It is clear that he and Hoffa, together with the other defendants, who subsequently came into the scheme, expected to make and sell goods just like those of the plaintiffs. For that purpose, Cox went to the very concern that had printed the plaintiffs catalogue, and made a copy of some of the copyrighted cuts, especially those representing the patented extension shoe.

The plaintiffs are entitled to an injunction, and to a decree for the statutory one dollar for each of the infringing copies found in defendants possession, and for the destruction of such copies. Cuts designed and prepared by persons of skill and artistic capacity of articles of manufacture used to illustrate advertising catalogues, held subject to copyright under the Copyright Act.—*Wireback v. Campbell and others.* U. S. D. C. of Md.

Community Pumps for Irrigation

A SIGN of the times—the increased value of irrigation water measured by the crops it will help to produce—is to be noted in the successful adoption of community irrigation by pumping in the Terra Bella District of California, where an irrigation system of 12,000 acres has been devised. Irrigation water in America is commonly delivered by gravity from mountain reservoirs or dammed streams, reaching the land through ditches and wooden flumes. This method of delivery is wasteful, the method of conservation in reservoirs comparatively cheap. Community pumping is not less expensive, it is more so, but it is proving practical at Terra Bella. Prevailing economic conditions are enhancing rapidly the value of irrigation water, and it would not be strange if development of the available supply through use of community pumps should become common.

The Terra Bella plan has many interesting features. The community pump plan includes some thirteen wells and an infiltration gallery. Ten of the wells each test 100 to 177 miners' inches. The infiltration gallery provides approximately 250 miners' inches, and three wells near it an additional 100 inches. The wells range in depth from 521 to 1,090 feet.

The altitude of the lands to be irrigated runs from 462 to 811 feet, and for pumping the district is divided into five zones, with a pumping station for each. The main station takes water from the ten valley wells through 26,720 feet of collecting pipe, ten to thirty inches in diameter. This station irrigates 1,700 acres, and pumps water to a second pump, which irrigates 9,000 acres and delivers to pumping stations four and five. Station three is located at the infiltration gallery. The pumps are operated by electricity. In delivering irrigation water to the property lines of users, some fifty-eight miles of protected steel pipe is used. All water is measured by meters.

The filtration gallery is a feature of this community pump system. It was constructed by installing 3,630 feet of coarse, open-jointed cement pipes in the sands six to twelve feet below the bottom of a creek. These pipes lead to a sump from which the water is pumped.

Farmers using this system paid \$7.30 per acre foot for water last season. As the system is developed and employed to maximum capacity, it is believed this cost will be lowered.

Pumping in connection with irrigation is practiced by individuals in some localities, but its use in connection with a large community scheme has novel points. The obvious economies in it are sure to be considered thoroughly by dry climate farmers lacking a gravity supply of irrigation water.—*J. T. Bartlett.*

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