

WEST COAST FISHERIES



Research . . and SALES

How big a factor Research has been in the growth of the Salmon Industry, no one can accurately say. How big a factor it will be for future growth is impossible to foretell. But no one will question that the role of Research has been an important one—and that it will continue to show its benefits where they count most, *in sales*.

Forward-looking salmon canners have associated themselves with the American Can Company because it is a source of Research information as well as fine containers—as evidenced by the Report on Retort Equipment and Operation, recently released. Working on specific problems of individual canners, working on problems that face the entire industry, Canco Research Laboratories have demonstrated their value more times than one. They stand ready to prove their helpfulness to you.

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SIX NEW ATLAS INSTALLATIONS

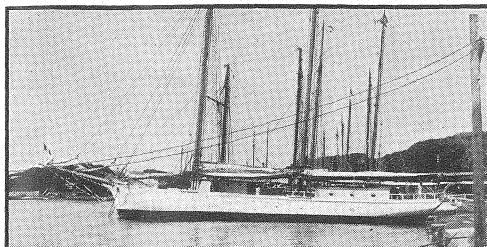
for a variety of services in a variety of ports

THIS review of some of the varied types of craft in which Atlas Diesels have been installed in recent months is striking evidence of the widespread use to which Atlas Diesels are constantly being adapted, in many parts of the world.

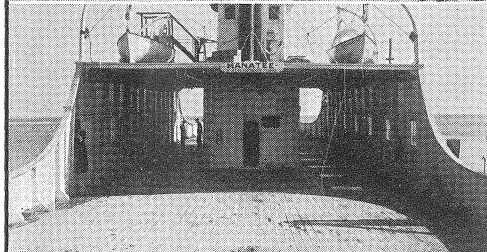
In the service of the French Government, in the South Seas, is the "Zelee". In Florida is the Tampa Bay Ferry & Transport Company's ferry, "Manatee". Operating in the open ocean waters around Hawaii, is the U. S. Engineer Department vessel, "Mamala". In the Matson Navigation Company's trans-oceanic liner, "Mariposa", the Atlas Diesel is furnishing auxiliary power. In the fleet of the San Francisco Bar Pilots is the "California". Towing banana barges, near Frontera, Mexico, is the Standard Fruit & Steamship Company's tug, "Frontera".

That Atlas Diesels continue, year after year, to occupy such an eminent position in the marine engine field is due to the fact that they have proved, in actual service, all over the world, that they can be depended upon to "stand the gaff", under the most severe conditions.

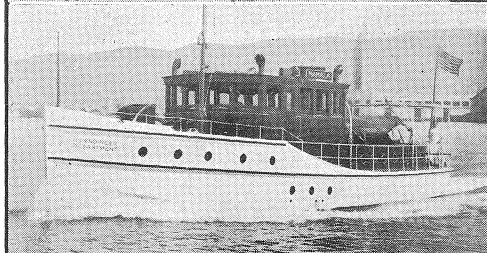
Specify Atlas Diesels for your next boat, or convert your present one to Atlas Diesel Power. Write for complete facts. Atlas Imperial Diesel Engine Co., Oakland, California. Branches and distributors serve the entire world.



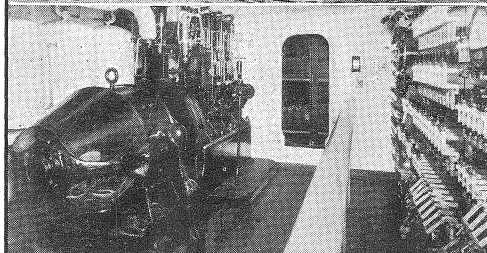
"ZELEE"



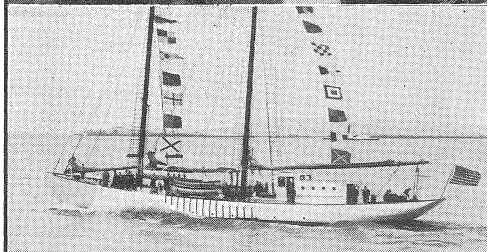
"MANATEE"



"MAMALA"



"MARIPOSA"
auxiliary



"CALIFORNIA"



"FRONTERA"

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ATLAS IMPERIAL DIESEL ENGINE CO.

Diesel Engines

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West Coast Fisheries will be glad to receive any information which will be of interest and value to the industry.

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Two dollars per year brings you twelve regular issues and the Annual Deluxe Reference Number. You can't afford to be without it. Subscribe now!

SERVICE to the fisheries industries in interesting and accurate news, in practical information on production, in discussion of handling and merchandising problems, in fostering progressive movements for betterment of the business—these are the aims and primary purposes of West Coast Fisheries magazine.

DURING the years it has been published, the journal has been a prominent factor in the industry, serving as its editorial voice, promoting modernization of methods and equipment, pointing the way to greater stability, efficiency and profit.

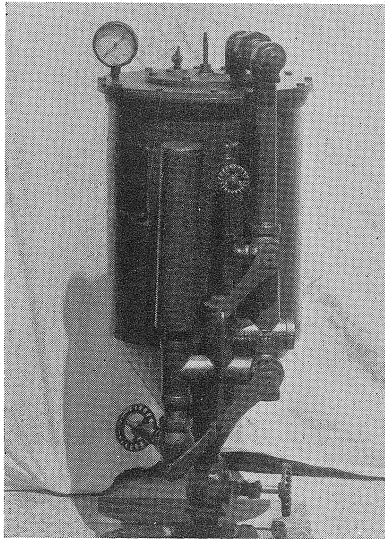
WEST COAST FISHERIES magazine will continue to serve faithfully the best interests of the great industry it represents. It will continue its high editorial standard, its scintillating news personality, its wealth of practical trade information. It will maintain its position as the industry's champion in every step of advancement and its defender against all unfavorable influences.

NOW—more than ever—West Coast Fisheries magazine merits the active support of every factor connected with the fisheries.

WEST COAST FISHERIES

124 WEST FOURTH, LOS ANGELES, CALIFORNIA

“A REAL PAL IN THE ENGINE ROOM”



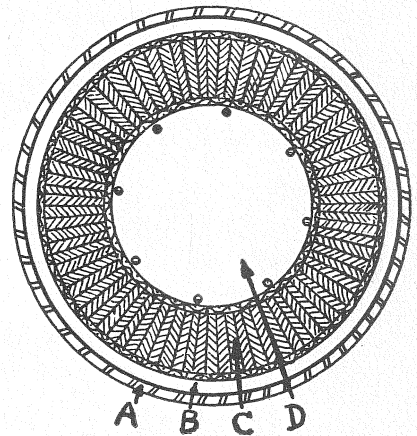
The SENTINEL Oil Filter

That is what George Hamano, Chief Engineer of the tuna bait-boat “Panama” had to say about the Sentinel Oil Filters. To quote him further—“It is quite some time ago that the filters were paid for in the actual saving of oil alone, not to mention the great saving on the bearings, cylinder liners and various other parts of our engines. The fuel filter is a real pal in the engine room. We have never had to pull a nozzle on account of a plugged hole in the tip. At one time we got water in the lubricating oil and had it not been for our lubricating oil filter taking this water out it is hard to say what would have happened to our engine.”

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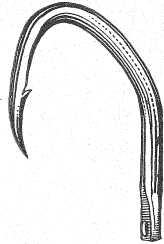
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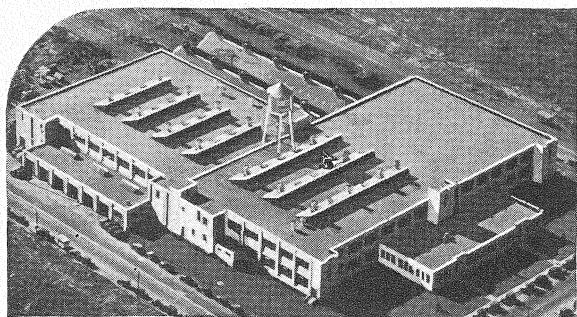
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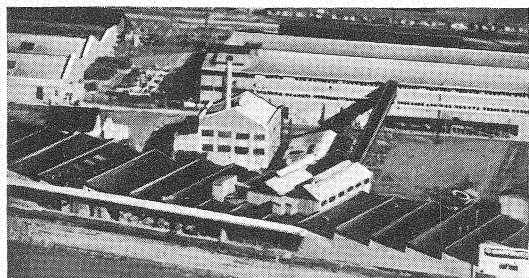
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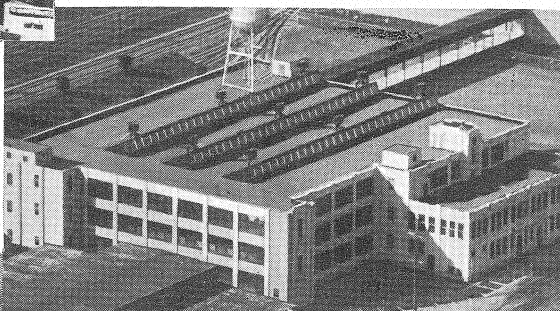
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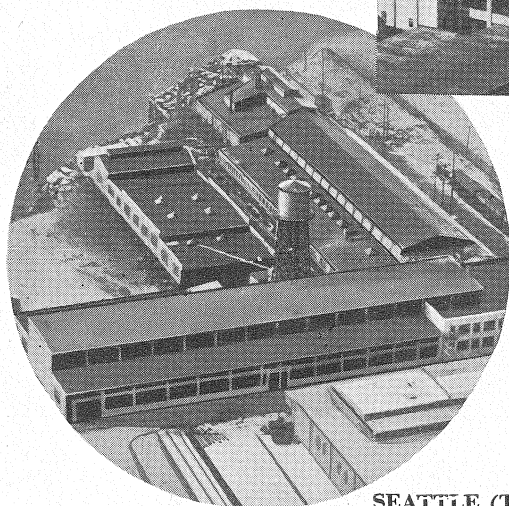
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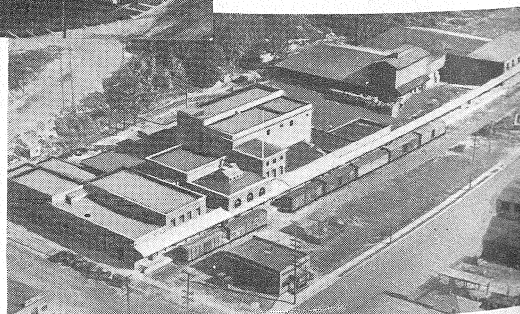
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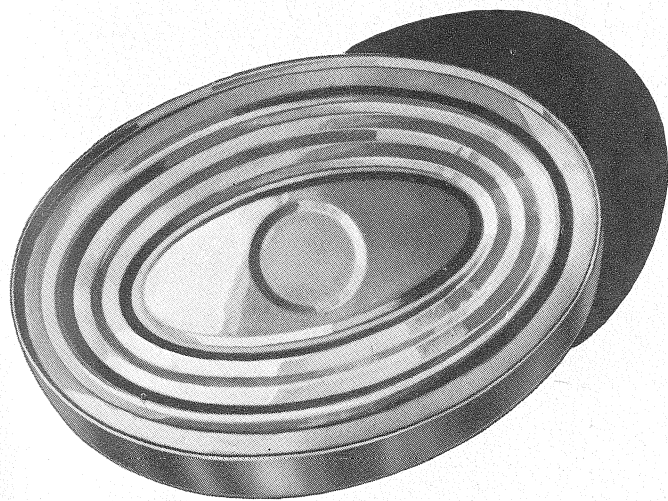
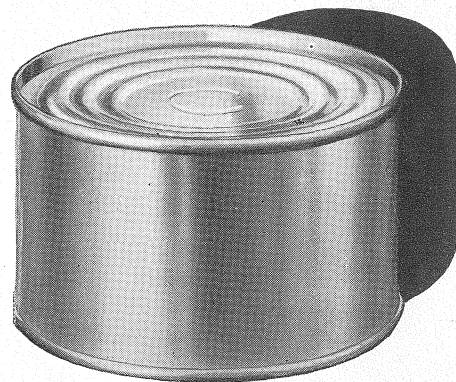
you well . . .

THESE are definite reasons why more Packers every year, are turning to Continental.

In meeting the exacting demands of modern merchandising, Tuna—Salmon and Sardine Packers require correspondingly greater service in cans, shipments, and filling and closing machines. Continental is well prepared to supply every modern need.

For instance, where service is a vital factor, the five modern Pacific Coast Plants, located at strategic points, enable Continental to meet any unusual demands for cans. Continental's unequalled Closing Machines and Fillers reduce costs by greater speed and steady efficiency.

In short, Continental has the resources and an experienced staff of "Partners in the Business" who are helping Tuna—Salmon and Sardine Packers, by close personal attention to their requirements.



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You can expect increased dependability, lower maintenance expense and less operating attention when a Fairbanks-Morse Diesel engine powers your craft.

Here's the reason. The simplicity in design of these F-M Diesels reduces maintenance to a minimum. The fewer the parts, the less to get out of order. Compare the two-cycle, airless injection F-M Diesel with engines of more complicated design. See for yourself how this simple construction eliminates a large number of moving parts.

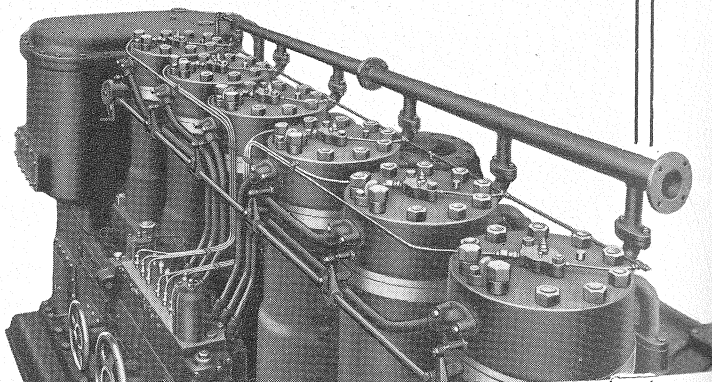
For instance, air inlet and exhaust valves with the attendant lay shafts and cams are eliminated. The airless injection of fuel requires no complicated, high pressure air compressors. Because there are no complicated parts requiring adjustment, attendance costs are at a minimum. Best of all evidence of the advantages of Fairbanks-Morse simplicity is found in the operating records of thousands of F-M Diesels in service on land and water. You place yourself under no obligation by inviting

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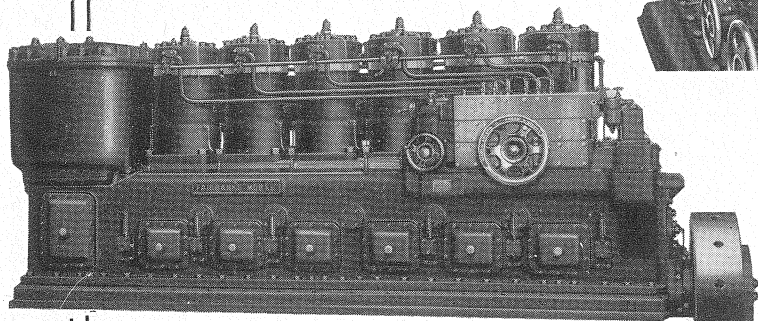
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This view of the top of an F-M Diesel engine illustrates the simplicity of construction resulting from the two-cycle principle.



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WEST COAST FISHERIES

WEST COAST FISHERIES is glad to publish contributed articles believed of interest to its readers whether or not views expressed coincide with its policies, but takes no responsibility for statements in such contributions.

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Open-Ocean Reduction Ship

By GEO. ROGER CHUTE

TREMENDOUS IMPETUS was given to the industry of rendering oils and fats from marine animals when American fishermen of Nantucket Island and, later, New Bedford, broadened their original modest occupation of catching whales from shore-stations, and actually went to sea in sailing ships, on long cruises, to render blubber in great pots carried in bricked-up furnaces on deck.

Discovery of petroleum put an end to the calling, but less than a century later the business of pelagic reduction of ocean animals was revived by Norwegians. These maritime folk equipped large steamers with modern rendering machinery, which, in company with three or more small harpoon-gun-carrying "killer-ships", voyaged away into remote places in unfrequented seas, there to shoot whales on an unprecedented scale and make oil on a "mass-production" basis. This manner of doing was extraordinarily profitable—almost all of the Norwegian factory-ships (and there came to be a large fleet of these costly vessels) made such remarkable earnings that annual dividends of 100 per cent became usual.

Fishermen of California now propose to apply Norwegian methods of whale-ship management to high-seas operation of fish-reduction vessels, and to manufacture oil and meal from fish in much the same way as the Norsemen have contrived to make whale products on a large scale. Thus the sea-going mother-ship is no longer to be identified solely with the whaling industry, but is to participate in the harvest of fish as well.

A Profitable Precedent

Reduction of sardines by floating mother-ships has been practiced off the California coast for some time, the principal vessel engaged in the occupation being Stanley Hiller's steamer, "Lake Miraflores". Varying success has attended his attempts to found the enterprise upon a sound economic basis, but despite all the vicissitudes incident to pioneering a new endeavor he is declared to have emerged from last season's run with a satisfying profit. Purse-seine fishermen, who supplied "Lake Miraflores" with sardines, have observed with keen interest the functioning of the floating renderer, and ambitious captains among them have conceived the plan of forming a co-operative company wherein fishing craft will be owners of the factory-ship, and the boats will receive the profits of the season's operations, ac-

ording to the percentage of the total catch which each contributes.

"We find ourselves in a position where other men own all the canneries and all the other markets for the fish which we catch," says a leader among the boatmen. "All that we possess is invested in our vessels and equipment, and we have imposed confidence in the fish manufacturers to the extent of placing ourselves in such position that if they choose not to buy our catch, we starve. It now has happened that so little fish is acceptable by the usual purchasers that we have no means whereby to live, and having been thus forced to a solution of our dilemma without help from anyone, we have determined to undertake manufacturing our own fish, and see whether or not it will be possible to subsist without charity, and to send our children to school wearing shoes."

The Whaler "Lansing"

In selecting a vessel suitable to their purposes, the fishermen chose the steamer "Lansing", well-known to every West Coast boatman as Captain F. K. Dedrick's whale-oil factory-ship. This steel craft is of 4,613 gross and 2,841 net tons; it was constructed at Newcastle, in Wales, in the year 1900. Measuring 389 feet in length, it is of 47 feet beam, and 27 feet depth. These dimensions differ from those of "Lake Miraflores" in that "Lansing" is about 100 feet longer, though of exactly the same width. At one time the steamer was employed on this coast as a Union Oil tanker, its hold being segmented into various compartments suitable for carrying fluid cargo. This provision made it exactly suitable for the purposes of Captain Dedrick, head of California Sea Products Company, the only transient whaling operator on the coast in recent times. During a number of years the ship, in company with a trio of harpoon-boats, has made seasonal headquarters in the vicinity of San Clemente Island, and also at various points along the coast of Baja California, Mexico—especially in Magdalena Bay. Having been maintained in perfect condition during all this service, "Lansing" was considered ideally adaptable to the fishermen's purposes, and was acquired by purchase for conversion into a fish-reduction mother-ship.

Strictly Co-operative

Years ago Capt. Jacob ("Jack") Berntsen, master and owner of the famous diesel-powered purse-seiner "Mabel", re-

turned to San Pedro after a winter's season in the Monterey area, enthusiastic beyond description over the quantities of pilchards which he declared he had seen in the Gulf of the Farrallones. There seemed to be no limit to the dimensions of the schools, he averred, and from that time onward he took exception to all declared policies of the California Division of Fish & Game, wherein authorities advocated extreme caution in the manner of utilizing the local pilchard resource.

"I have been fishing sardines in these waters for nearly 20 years, and I never in all my life saw such masses of fish as are to be seen schooling in the vicinity of Point Reyes," stated the master seiner. "I know how much fish a boat can carry, and I also know that if the whole fleet were to work on that population it could not carry all of the fish to port in any man's lifetime. Only a fisherman, who knows how to judge tonnages of swimming pilchards, can have any comprehension of the hundreds of thousands of tons of sardines that can be seen there during a single night when they are near the surface."

Berntsen was first in the south to advocate floating reduction ships, for when he became convinced that the abundance of the sardines could not for a long time be impaired, he thought it unfortunate that the people were not being benefited by the marine resource which he considered to be wasting along the coast. Not until the current economic subsidence did he gain attentive listeners, however, but when canneries closed their doors, or greatly curtailed their scale of operations, boat-owners and captains gathered around to hear Berntsen's proposal that a fishermen-owned fish-reduction factory be founded. No outsiders were to be admitted to the company—only purse-seiners which would catch fish, and a few men who would lend their professional services to the project, would have title, or voice in its control. Balance of power was to be retained by the boat captains themselves, and at the conclusion of a season's run the profits would be divided according to the catch harvested by each stock-owning purseboat.

High Seas Operation

Twelve or 15 seining craft would be required to provide sufficient daily fares to warrant the operation of so large and costly a plant, and all this fleet of turn-table boats, as well as the factory-ship itself, would conduct its work on the high seas, beyond the terri-

torial jurisdiction of the state of California or of the United States itself. Functioning in international waters, where the vessels of any and all countries may come to fish at will, the firm still is entitled to the use of American harbor facilities, and may operate as an American high-seas activity without molestation from state agencies.

The correctness of this attitude has been borne out by decisions in several legal contests that have arisen through attempts of the California Division of Fish & Game to regulate the activities of "Lake Miraflores". In matters of the assumption of extra-territorial authority, federal courts have made clear the rights of all persons and all nations legally to make use of the high seas and all that they contain, and have delineated to local governmental agencies the limits to which they properly may go—which is to say, the territorial boundaries of the state and nation. By virtue of these judicial pronouncements, "Lake Miraflores" still is operating, and the redoubtable example of the Hiller enterprise has indicated to the purse-seine fishermen that there is substance in the claim that no authority exists which may forbid an orderly and proper exploitation of whales, sardines, or other resource encountered in the waters of the open ocean.

Japanese Monopoly

"Four or five years ago Japan was a principal purchaser of American-made fish meal," Captain Berntsen has said. "California supplied practically all of this requirement, which was an important assistance to our fishery corporations. Recently, however, Japan has thrown her sardine fisheries open to manufacturers of rendered products, and now makes no purchases from us at all. Instead, by engaging in wholesale meal-and-oil manufacture, Japan has been able to go greatly to under-cut our prices that today practically all American users of fish meal are obtaining their supply from the Orient. Thus our shore plants lie inactive because of regulatory state statutes which compel the canneries to pack in tin a certain proportion of all fish landed, and American money is being shipped to Japan for meal which we very well could make for ourselves. Statistics of the Bureau of Foreign & Domestic Commerce show that during last year 30,000 tons of Japanese meal were imported into our country. This amount, added to 13,500 tons imported from the reduction plants of British Columbia, equals a total which, when translated into terms of raw sardines, amounts to about 250,000 tons! In other words, we are buying that quantity of sardines from foreign countries at a time when our own fishery is decadent and almost wholly unexploited. The purpose of our company is to make at least some use of our pilchards, give remunerative employment to several hundred skilled seinemen who are now in desperate circumstances, and keep American money circulating in California instead of sending it into places from which it will never return.

"The fishermen's attitude is based upon the experience which was theirs last winter, when the largest plants on Fish Harbor placed the boats upon a 25-ton daily catch limit. Of course, that is not a living wage, and much suffering among the people resulted. Because of lessened markets there seems to be no hope for increased volume in this winter's operations, and most of the boatmen think that they can foresee even smaller daily

catch-limits than those imposed last season. This prospect is terrifying to the seinemen having families, for not a crew-member in the fleet earned more than \$500 last sardine season, and many were paid much less.

"It is our hope to utilize a considerable number of the largest seineboats in our high-seas activity, which will relieve the canneries of these biggest producers of catch and enable them to allow larger daily catch-limits to the smaller boats remaining. This will make it possible for the crews of the cannery craft to earn enough so that they can support their families, and relieve the tension and stringency all around."

Commissioning the Renderer

Negotiations for the purchase of "Lansing" were entered into early in the year, but final consummation of options was not effected until June. Thereafter the steamer was moved to the Moore shipyard, where the hull and machinery were finally inspected before payment was made. Examination revealed the hull to be in exceptionally well-preserved state, while the English-built triple-expansion steam power plant was declared in perfect condition and ready for immediate use.

As a first procedure toward preparing "Lansing" for its contemplated service, the whale-meat mincer ("Hamburger-machine"), digesters ("blubber-pots"), bone-saws and other cutting-in and trying-out equipment was removed. All this preliminary purging was completed at the Moore yard, whereafter the vessel was steamed up, and navigated to San Pedro. There its conversion to new purposes was continued. Under the direction of the officers of Fishermen's Products Co., Inc. (as the co-operative is called), the heavily-beamed and thickly-planked cutting-in superstructure and deck were removed, this to facilitate installation of fish-reduction machinery. Approximately \$100,000 is being expended in outfitting the vessel.

"Three modern-type fish presses, each of 15 tons capacity per hour, will be shipped on the main deck, aft," states Berntsen. "Cookers and dryers will be arranged conveniently near, the whole installation being just about the same as can be seen in the reduction department of any large cannery ashore. We hope to have 15 large seiners fishing for us—11 have become a part of the company already. To unload the sardines from the purseboats, and elevate them to the factory-ship, we shall use a centrifugal pump and long suction-hose, very similar to the equipment that has proven so satisfactory aboard 'Lake Miraflores'. In our tanks we can store 600,000 gallons of oil, and we have cargo space for a quantity of meal equivalent to what will have been produced when our oil tanks are full. We propose to operate far to northward, where the fish are big, fat, and obtainable in large amounts. We shall be outside the zone of operations of cannery craft, except those that come out upon the high-seas to catch their fish."

Work on the ship is progressing at rapid rate, and all indications are that it will be ready for commissioning in late August. The owners plan on making an experimental run about September 10, at which time the moon will be right, so as to have all the machinery broken-in and functioning smoothly in readiness for the next succeeding "dark". "Lansing's" crew will consist of 65 men, who, at an average salary of \$120 monthly, will draw a pay-roll of \$7,800. Fifteen seineboats

will carry 160 fishermen in their crews, so that the total floating complement will amount to 225 men.

Officers of the enterprises are: Capt. Jacob Berntsen, president; Capt. Martin Swanson, master of "Lansing"; James Lockhead, manager; Steve Freze, plant superintendent; J. Johnson, chief engineer. Stockholding fishing captains are: Andrew Zitco, Frank Grgas, Nick Dragich, Pete Dragich, Joseph Giaconi, Nick Peregich, Nick Mezin, and Frank Mezin.

"Lansing" will headquarter in San Francisco, where its oil and meal will be landed for shipment to consuming markets. It is the belief of the fishermen that they will be able to manufacture oil and meal sufficiently cheaply so that they will be able to sell their products in competition with Japanese imports, which at present have a practical monopoly of the American market.

"EMPEROR", San Pedro purse-seiner, filled and sank at 6:30 a. m. on the morning of July 12, the accident being due to undetermined causes. The loss took place six miles east of Santa Barbara Island, for which the crew headed in the vessel's skiff after having to quit the seiner as she settled beneath the surface. About 10 a. m. the men were picked up by the U. S. Coast & Geodetic Survey vessel "Virginia", to attract whose attention a signal had been made by hoisting a white shirt on the end of an oar. Word of the happening being wireless to San Pedro, both a U. S. Coast Guard craft and the tug "Peacock" went to the indicated spot, but nothing could be seen of "Emperor" except its turntable floating on the sea. The Van Camp Insurance agency at San Pedro had insured the vessel.

"POINT LOMA", tunacraft of San Diego, went ashore in Baja California, Mexico, on June 30, and was totally wrecked. The accident took place on the mainland of the peninsula, at a point just inside San Roque Island. On July 7 the Merritt-Chapman-Scott salvor, "Commissioner", put to sea to attempt to save something from the wreck, Capt. Robert Gardner being in charge.

"We found the wreck at the spot indicated," states the Captain. "But already the hull had entirely broken up, and nothing could be saved. We went ashore, landing at the beach in front of the Mexican lobster camp, and walked down to the wreck. The whole starboard side of the vessel had come ashore in one piece—a thing which I never in my life had seen before—for the boat had split down the middle and floated away in chunks. The after-deck had come in as a single piece, and the bait-tanks were on it, like a bungalow surrounded by a sidewalk. The engine was a distance off-shore, and in heavy surf, so that we could not get it."

"YOLANDA", San Pedro market boat, was wrecked during the first days of July, and is reported as a total loss. Captain Terry carried insurance for his vessel, the Gilbert Van Camp agency having underwritten the risk.

"FIVE BROTHERS", market craft of San Diego, was recently destroyed by fire, and Charles Briggs, insurance surveyor and adjuster, has reported the vessel a total loss.

Improve Fish Handling Methods

DEVELOPMENTS in systems of shipping fresh fish, improvements in communications, use of better packaging and processing methods, and adoption of new and more efficient equip-



Ulpiano Larco, official of S. Larco Fish Co., Santa Barbara

ment marked the fresh fish industry of the West Coast during 1931-32. These forward strides are the more remarkable when it is remembered that although volume of sales has remained fairly constant, the margin between first cost and final sales prices has been diminished by unfavorable economic conditions.

Teletypes Installed

Since fresh fish is one of the most perishable of food commodities, the speed with which it is sold and transmitted has an important bearing upon its quality and, therefore, upon the satisfaction of customers and prices which may be obtained from them. For this reason, the machine developed by engineers of Postal Telegraph and Western Union and known as the teletype has been given a hearty welcome by fresh fish shippers of the West.

The teletype resembles a typewriter in appearance, although somewhat more complicated in mechanism. Stenographers in offices of fish shippers type out telegraphic messages upon its keyboard, and these at once are transmitted by telegraph to the city in which the intended receivers are located. If the receiver of such a communication also has a teletype, the message is routed directly to his offices and received upon his own machine, appearing in typewritten form. If he is not equipped to receive it, it is handled in the same manner as an ordinary telegram, first being telephoned to him and then being delivered in typewritten form by a messenger.

"The principal reason for installation of teletype machines in the offices of large telegraph users is for the purpose of eliminating messenger pickup and delivery service, thereby reducing the time and number of handlings which results in retarded transmission time between the point of origin and point of delivery," explains the San Francisco city superintendent of one of the two great com-

munication firms. "The teletype machines are used daily, furnishing a 24-hour service, and all telegrams sent and received are handled over the teletype machine, which affords its users a direct and private wire connection between their offices and our central operating department.

"Telegrams addressed to those having teletype machines bear the symbol 'PXX' in place of a street or building address, which enables us to route the message when received at point of delivery to our private wire department with a minimum delay. The symbol 'PXX' indicates the general private wire address of all teletype customers, thereby making it unnecessary for us to consult any of our records as to how the message is to be routed."

Speedy Messages

"The teletype has enabled fresh fish dealers to speed their communications to



Crad Meredith, president of Meredith Fish Co., Sacramento

such an extent that they feel perfectly secure in reaching out for markets today which they would not have attempted to reach yesterday," states another telegraph official. "It is not unusual for a fish merchant to quote his market and receive his answers within 30 minutes to all parts of the coast. The virtues of the teletype become two-fold on Terminal Island (California) and similar locations which, because of topographic positions, handicap transportation of communications."

Among fisheries organizations listed in the "Timed Wire Service Directory" as having teletypes at the beginning of 1932 are the following:

California: Matt N. Blumenthal, fish broker, Los Angeles; Kelley Clarke Co., fish brokerage, Los Angeles; Rule & Son, marine insurance, Los Angeles; Hovden Food Products Corp., fish canner, Monterey; Westgate Sea Products Co., fish canner, San Diego; Continental Can Co., manufacturer of containers, San Francisco; Henry Dowden Co., seafood brok-

erage, San Francisco; Fairbanks, Morse & Co., engine manufacturer, San Francisco; A. Paladini, Inc., fresh fish shipper, San Francisco; Coast Fishing Co., fish canner, Wilmington; French Sardine Co., fish canner, Terminal Island; Pacific Coast Fish Co., fresh fish shipper, San Pedro; Pioneer Fisheries, fresh fish shipper, San Pedro; Southern California Fish Corp., fish canner, Terminal Island; Standard Fisheries, fresh fish shipper, San Pedro; Star Fisheries, fresh fish shipper, San Pedro; Van Camp Sea Food Co., Inc., fish canner, Terminal Island; Halfhill Packing Corp., fish canner, Long Beach.

Oregon: Anderson Fish Co., fish canner, Astoria; Burke Packing Co., fish canner, Astoria; Columbia River Packers Association, fish canner, Astoria; Charles Feller, Inc., fresh fish shipper, Marshfield; Winship Fish Co., fresh fish shipper, Marshfield.

Washington: Calvert Co., brokerage, Seattle; Chase Fish Co., fresh fish shipper, Seattle; Continental Can Co., container manufacturer, Seattle; F. A. Gosse Co., brokerage, Seattle; Haines Oyster Co., seafood shipper, Seattle; Jackson Fish Co., fresh fish shipper, Seattle; Main Fish Co., fresh fish shipper, Seattle; McCallum, Legaz Fish Co., fresh fish shipper, Seattle; Ocean Fisheries, fresh fish shipper, Seattle; Ripley Fish Co., fresh fish shipper, Seattle; San Juan Fishing & Packing Co., fish canner and fresh fish shipper, Seattle; Sebastian Stuart Fish Co., fish canner and fresh fish shipper, Seattle; Troyer Fox Manufacturing Co., manufacturer of cannery equipment, Seattle; United Pacific Fisheries, halibut cooperative shipping organization; Washington Fish & Oyster Co., fish canner and fresh fish shipper, Seattle; Washington Iron Works, engine manufacturer, Seattle; Whiz Fish Products Co., fresh fish shipper, Seattle; York Ice Machinery Co., manufacturer of refrigerating apparatus, Seattle.



Geo. J. Christo, manager of Santa Cruz (California) Fisheries

"It is a pleasure to write you testifying to the important part the . . . teletype machine plays in our business," states Lionel Shatz, secretary of A. Paladini, Inc., San Francisco, in a recent letter to one of the communication organizations.

"In the fish industry, owing to the perishable nature of the commodity we handle, it is essential that we have rapid communication with our branches and our customers. The teletype has provided very speedy telegraphic communication, and we have benefited tremendously by the installation. The service accorded via this private teletype wire between the central operating department and our office has been excellent and very much appreciated."

Quick-Freezing and Filleting

The trend toward packaged fish, both frozen and fresh, has been noted in western fisheries during the past year and promises to bring to housewives seafoods of far better quality than the old-time, hastily-butchered, carelessly-handled products.

In the laboratories of Richmond Chase Canning Co., San Jose, a demonstration of the use of dry-ice in freezing abalone, rock-cod and flounder was held on August 5, 1931. Present were representatives of A. Paladini, Inc., San Francisco; L. T. Critchlow, Marine Machine Shop, Monterey; Zellerbach Paper Co.; Fibreboard Products, Inc.; West Coast Fisheries magazine. The demonstration proved highly successful and convinced those present that use could be made of solidified carbonic gas for that purpose.

"Nordic" fillets, packaged fish from the East Coast, were distributed in California by Meredith Fish Co., Sacramento; S. Larco Fish Co., Santa Barbara; Superior Seafood Co., Ltd., Los Angeles; Peoples Fish Co., San Diego.

Packaged seafoods, both frozen and fresh, are here to stay and students of commercial fisheries prophesy that the demand for fish which has been filleted and wrapped in waxed paper or cellophane will grow rapidly within the next few years. Packaged fish may be marked with company brands, thus permitting advertising of brand names and developing of a permanent group of customers for the products of one company.

General Foods Corp. has patented a new portable quick-freezer which permits freezing fish or other products at the source of supply.

Organization Changes

Pacific Mutual Fish Co. Monterey, established a branch at San Luis Obispo, California, chiefly to obtain abalones.

Santa Cruz Fisheries, cooperative organization, recently was established by Santa Cruz Commercial Fishermen's Association. Floyd Uhden is president of the association, while George J. Christo, former cannery and fresh fish sales executive, has been named manager.

Central California Fish Co., Monterey, purchased Lewis Fish Co., from Manuel Lewis, former owner. The store, which is located on Fishermen's Wharf, has been renamed, Bay Fish Market, and Mike Bomarito, also one of the purchasers, is retail sales manager.

San Pedro Fish Co. was incorporated with Matt Zovich, Blaz Vitalich and Nick Ursich as stockholders.

Clare Small became a part owner in Star Fisheries, San Pedro.

New fish markets were established at Santa Barbara by Salvatore Castagnola and at Santa Cruz by John Herman.

Higashi Fish Co. recently opened a new retail market in the corner of its wholesale plant.

Oyster Firm Rebuilds

"Rock Point Oyster Co. has rebuilt and refurbished its opening house and packing house, not in a pretentious way but large enough to take care of any potential demands of the market," says E. N. Steele, president of the Olympia, Washington, firm. "Its construction has in view enlargement in case of necessity. Everything is sanitary and conforms with all rules of the state board of health. This company secured Certificate of Health No. 1 from the State of Washington, it being the pioneer company in the production of Pacific oysters, and it has at all times been a strict observer of rules and regulations of the health department.

"The company has a large quantity of choice oysters available for particular markets. The problems insistent to growing an oyster suitable to meet the demands of the choicest trade largely have been solved, and all that now is necessary is recovery of economic conditions and consequent stabilization of the markets."

Planters Oyster Co., Port Norris, New Jersey, also was rebuilt during the year. This action was made necessary by a fire in October which did \$15,000 worth of damage.

Willapoint Oyster, Inc., installed a canning line at its headquarters at Willapa Bay, Washington. The new equipment gives it a capacity of 200 cases of one-pound talls a day.

Plans for Next Year

"It is likely that within the coming year we shall install machinery for packing opened oysters in waxed paper cups, as customers now are taking to that style of package because they are assured of fresh stock of quality," states Frank H. Elsworth, president of J. & J. W. Elsworth Co., New York City. "During the latter part of the season ending May 15 we went into the matter in a small way, sending out about 30,000 dozen cups. Our plan met with instant approval from fish dealers, butchers, groceries and delicatessen stores, for handling the package is the only operation. There is no liquid, just 18 ounces of solid meat weighing nine ounces net. Naturally, we feel that there will be a demand for the cups in the West. The oysters used will be our regular 'Red Cross' brand."

"We have not made any improvements during the last 12 months, believing . . . that for the last three years we have operated the best-equipped oyster-opening plant on the Atlantic Coast . . . Our methods of dredging, opening, grading as to size, packing and shipping, are the last word. This also applies to our shell oysters, which are carefully selected and graded as to size. Our shell oysters are to be found in the markets of Great Britain, Ireland and Sweden.

"Our oysters and our methods of handling them have the approval of the federal, state and New York City authorities having supervision over the handling of foods."

New Equipment

Waterfront Fish Co., Seattle, during the last year installed a new 1½-ton

Baker ice machine. This is used to cool both a holding chamber and a sharp-freezing room.

Whiz Fish Products, Inc., Seattle, added a new Reo truck to its delivery equipment.

Frank Spenger Co., Berkeley, California, installed a new sharp-freezing room.

Fresh fish wholesalers of Northern California recently dedicated a new animated fresh fish sign in San Francisco to advertise their products. It is estimated that 5,000,000 persons (allowing for many duplications, of course) will pass that spot every day.

A new fish-scaler was introduced to the trade by N. A. Strand & Co., Chicago. It consists of an electric motor, a flexible metal cable and a small metal cylinder having diamond-shaped teeth. It is the cylinder which removes the scales.

New Freezer

Seaport Crown Fish Co. installed an Otteson brine freezing plant in its establishment on the new municipal fish wharf at Vancouver, British Columbia.

Pacific Mutual Fish Co. installed a new 4-ton ice machine and built cold rooms measuring 14x24 feet in its San Luis Obispo plant, mentioned previously in this article.

During the late fall San Francisco International Fish Co. began operation of a refrigerated truck from Santa Cruz, California, to inland points. It is refrigerated with dry-ice.

C. Stagnaro Fish Co., Santa Cruz, has been busy remodeling its fishing barges and other sport fishing equipment.

Whiz Fish Products, Inc., Seattle, rebuilt the loft of its building into dressing rooms and other facilities for its employees.

Charles Feller, Marshfield, Oregon, repainted his plant and other equipment recently.

New Product

Nehalem Bay Fish Co., Wheeler, Oregon, recently began marketing smoked salmon. The fish is caught by Nehalem Bay boats, processed, put up in small packages and distributed to the retail trade.

"Twin," Seattle purse-seiner, was brought to Marshfield, Oregon, to be operated as a trawler. It arrived late in April, 1932, and soon after was put to work. Its early runs were reported as quite successful.

Alaskan Glacier Seafood Co., with plant in Petersburg, Alaska, and offices in Seattle, Washington, introduced "Frigid-Zone" canned shrimp meat to the trade during the past 12 months.

Plant Changes

Higashi Fish Co., Monterey, California, during September, 1931, moved its offices and built an addition to its freezing equipment. The firm now is supplied with a freezing room which is suitable for handling squid, barracuda, sardines and other locally-caught fish. The York compressor installed two years ago is operating the new room as well as the company's other refrigerated chambers.

Alioto Fish Co. and Castagnola Brothers, Fishermen's Wharf, San Francisco, both obtained larger quarters last year as a result of an increase in the size of the building which they jointly occupy.

Pacific Mutual Fish Co., Monterey, renovated its plant early in the 12-month period, moving its offices.

Noteworthy Cannery Improvements

DURING the past decade fish canners of the West Coast engaged in a long period of development. New plants were constructed, machinery of the latest type was installed, and systems of operation were brought to the highest point of efficiency. This condition obtained particularly among the tuna, sardine and mackerel canneries of California, but it was generally prevalent throughout the salmon plants of Oregon, Washington, British Columbia and Alaska as well.

Because of this policy of gradual improvement, it has not been necessary for the canning industry to make drastic changes in its equipment during the past 12 months. Many executives were content with freshening up their plants with new paint. Others made changes in systems of packing. Still others installed new machinery and effected changes in their products.

New Sardine Pack

Among firms making the most revolutionary changes was Hovden Food Products Corporation (formerly K. Hovden Co.) of Monterey, California. Last summer this firm introduced its new "steam-grilled" oval sardines. The pack is an adaptation of the famous Hovden "pre-fet" sardine described in WCF for September, 1930. The new method allows the filled cans of fish to pass through a steam-cooking device on eight successive trips, four in an upright position and four upside-down, thus allowing water and other residue to flow off and leave only pure and thoroughly-clean fish.

Recently the Hovden Monterey plant began putting up prepared fish-bait-sardines in glass. The product is declared to have enjoyed ready sale.

"At the present time we are removing the old reduction plant and are preparing to put in necessary equipment and make the necessary alterations for preparation of new products," stated William O. Lunde, secretary-treasurer, in June, 1932.

All-Metal Brine Tank

"An all-metal brine tank installation recently completed, from which there is expectation of more rapid and effective results, covers, for the most part, changes taking place in our plant at the present time," stated Edward David, president of Del Mar Canning Corp., Monterey, on June 20, 1932. "This improved process, eliminating as it does the old type wooden tank, has been under consideration for some time and is one that should greatly improve the quality of the pack passing through."

The new system, in which sardines are heated in 90-degree brine, is expected to cause the fish to go into cans in much better shape than heretofore. Link-belt Co. did the work, under supervision of President David and Superintendent C. C. Hill.

Another Del Mar improvement was made last fall when a new condenser was installed for removing odors from the stack of its reduction plant. The method, worked out by David, washes the smoke with clean salt water as it comes up the stack; a Fairbanks-Morse pump supplies the water. The job cost \$2,000.

Much of the experimental work in connection with the production of new packs

is not sufficiently developed to occasion comment at the present time," continues the Del Mar chief executive. "Some of those contemplated, while affording much improvement over present packs, have not been brought to a state of perfection sufficient to warrant placing them for general discussion at the present time."

Use of Agar-Agar

An experiment of considerable importance, perhaps one of those referred to by Edward David, is that of using agar-agar jelly (made from seaweed secured off the coast of California) as a substance in which to pack sardines. A study of the possibilities of this type of pack was begun at the suggestion of Capt. Ralph Classic of California Commercial Fisheries Bureau, Monterey. The jelly was flavored with lemon syrup, adding a tart flavor which always seems to make seafoods more tasty. In addition to this advantage, the agar-agar was found to hold the sardines solidly in place, preventing them from breaking up as sometimes occurs with loose packs.

Sardine packers of California during the past year also were considering changing the shape of the cans in which their products are put up. The pound and half-pound oval cans, once used to hold salmon steaks, have proved fairly satisfactory insofar as holding the fish is concerned. However, several canners have felt that old-time packs of sardines, put up in these containers, gave the industry a black eye from which it will find it hard to recover unless a new type of can is adopted. In spite of the improved methods used today by Monterey and San Pedro packers, it is believed that housewives continue to associate the oval tins with the old, loose, often poorly-cleaned packs introduced when the sardine industry was younger.

Deodorizing Tower

Carmel Canning Co., Monterey, during the last year built a new deodorizing tower, under supervision of J. R. Perry. Water from Monterey Bay is discharged over the top of the tower and travels down over baffle-plates, washing out offending odors and gases from smoke which comes up the structure.

Bay View Packing Co. is the new name of Monterey Sardine Products Co., Monterey. The firm was purchased by John H. Batinovich and associates, fishing vessel owners from the Northwest, in November, 1931.

One of the early improvements of the new company was construction of a 3.6x6.8x80-foot deodorizing plant. A four-inch centrifugal pump supplies a stream of water which is ample to kill all offensive odors and gases. Another change was the building of new offices for cannery officials.

Frank E. Raiter, president of San Xavier Fish Packing Co., Monterey, joined with others in forming Monterey Peninsula Packing Corp., Ltd. Plans called for erection of a fruit and vegetable cannery just outside of Monterey proper. An important benefit from the new firm is that it will permit San Xavier to add variety to its line of products, thus aiding both in selling and shipping. Raiter has been named president.

Southern and Northern California share honors in introduction of new-model American Can Co. vacuum oval closing machines. Five of these ultra-modern pieces of equipment were placed in the Monterey plant of California Packing Corp., while Van Camp Sea Food Co., Inc. caused eight to be put in its NK plant on Terminal Island.

New Closing Machines

The new machines are valued at \$10,000, and cost \$1,000 each to install. In plants using them, the cans are packed with fish, then go to the sealers where the lids loosely are clinched in place. An Ingersol-Rand type 15 vacuum pump then exhausts the air, creating a vacuum of from 4 to 10 inches as desired. A No 1 Western oval closer is geared direct to each of the new Universals, and after the air has been removed the cans pass through this apparatus and have their lips rolled tight.

Two good reasons for installation of the new American Can Co. equipment are given by Karl Stromson, general superintendent of Van Camp Sea Food Co., Inc. In the first place, the vacuum closers are more efficient; in the Van Camp NK plant eight universals do the work which formerly required 14 Max-Ams. But the chief argument is that much more vacuum can be obtained than is possible through the use of exhaust boxes. As a result, cans processed by the new Universals will stand transportation to high ground and in rarified atmospheres which would cause other packs to bulge and "weep."

Laboratory Service

Spaulding Inspection Bureau, Inc., was formed in San Pedro during 1931 by W. H. Spaulding and Dr. Norman Hendrickson. Previous to organization of this institution, Spaulding had had ten years of experience in cannery inspection—five with National Cannery Association and five with the federal government. Hendrickson had been with United States Bureau of Chemistry, National Cannery Association and Tuna Packers Association of California. The firm established itself in the well-equipped laboratory in the building of General Fisheries Corp., San Pedro, and there has been of service to fish canners in checking packs, analyzing supplies and giving advice upon other matters of concern to the packing industry.

Brokers are said to have given Spaulding Inspection Bureau much encouragement, stating that they are highly appreciative of having expert inspection service available in the tuna industry.

General Fisheries Corp. during the year installed a new mackerel-cleaning machine, designed to turn out a better product and do the work more efficiently.

Hawaiian Tuna Packers, Ltd., with headquarters in Honolulu, during 1931-32 began work on its new canning factory. The plant is being built on Kewalo Basin, Sampan Harbor, and officials of the firm say it will be modern in every respect.

Scrap-loading Device

"The only change that has been made in mechanical operations of our cannery is the automatic loading of the scrap as it comes from the cleaning tables," states

Wiley V. Ambrose, president of Westgate Sea Products Co., San Diego.

"Heretofore, all scrap was delivered at the open end of the cleaning tables by automatic conveyors and shoveled into trucks for delivery to the reduction plant. As all of our scrap now is being contracted to a central reduction plant, Oliver Oil & Meal Co., a cross-conveyor has been installed which automatically loads the scrap in the trucks. As usual, the cost of this installation was about twice that which we figured, yet there is a saving in the equipment used for hand work as well as the labor necessary for handling the same."

Lawrence Oliver's plant, referred to in the paragraph just before this, also was improved during the year. New refining equipment was installed which is designed to increase the vitamin D content of Oliver tuna oil. Dr. Roger Truesdail of Pomona College has made tests of the new product and it is said to be superior to any similar oil on the market today.

American Can Co. recently completed a new can factory at Honolulu, Hawaii. It has several other plants in the islands—one at Kohala (Island of Hawaii), two on the island of Maui, one on Kahului and one on Kauai.

Continental Can Co. during 1931-32 appointed Stuart C. Thompkins West Coast sales manager for its products.

Several Southern California canneries brought out pet foods during the year. One of the most successful of these was "Balto", introduced to the trade by Coast Fishing Co., Wilmington. Another was "Two-Day" cat and dog food, produced by French Sardine Co., Terminal Island.

Franco-Italian Packing Co., Terminal Island made some changes in the arrangement of its plant. The alterations were made particularly to make working conditions better for the employees.

One of the finest and most sanitary fish-packing tables on the "Tuna Coast"

is to be seen in the plant of Boyd Packing & Distributing Co., Ltd., Hueneme. It was made by the plant's standby crew during the lull between sardine and tuna seasons. Built up from a framework of angled steel, the table has three separate decks. The lowest of these is broad and roomy—the place where the women fish-packers work. As in all packing tables, a conveyor runs down the center. Supported on a bridgework that spans this transmitter, a second deck is arranged at a higher level. Both this and the bottom plane are covered with long sheets of monel metal. The third deck, 20 inches wide, is of natural wood, unvarnished. The table is 60 feet long.

Boyd Packing & Distributing Co., Ltd., uses five Continental Can Co. oval sealing machines in its sardine line. These were loosened from their foundations during the first part of 1932, after sardine operations had ceased, and sent to Continental's Monterey headquarters to be overhauled and tuned up for the next run. Outside of minor adjustments, the machines were found to be in good working order.

Not only in canneries and equipment firms, but also in related industries, are improvements to be found. Long Beach Salt Co., Long Beach, California, during 1931 installed a new elevator with screen room and new modern screens to produce better and more clearly-defined grades of salt. This work was completed in September, 1931. The company also constructed a new loading machine for bringing salt from the field to the mill, this being finished during August, 1931.

A British Columbia Skeena River cannery during the past season put up an experimental pack of salmon without skins. The fish was washed in water under pressure, then was skinned by women workers using wooden tools and palm knives, after which it was handled in the usual manner.

Washington Fish & Oyster Co., Seattle, completed renovation of its one-line salmon-cannery in time for use in the 1931 season. Continental Can Co. and Troyer-Fox equipment is used.

Nakat Packing Corp. purchased the plant and machinery of Swift Arthur Crosby Co., Hecate Island.

Wards Cove Packing Co. plans for the 1932 season called for construction of a new 140x70-foot warehouse, 100x50-foot dock and a new boiler house.

President S. Humphrey of London Fish Co., Ltd., Vancouver, recently installed two American Can Co. half-pound flat and tall salmon canning lines in a fish stall 40 feet square. The installation was made at his establishment on the municipal fish wharf at Vancouver, B. C., and was made to pack Fraser River blueback.

Cured and smoked fish operators also made changes during the year. "This firm has led all codfish package producers on this coast in adoption of cellophane packages," states J. E. Shields, president and manager of Pacific Coast Codfish Co., Seattle. "All our packages of codfish now are cellophaned, resulting in a much larger volume of business during the warm weather in 1932 than in 1931, 1930 or 1929, in spite of the depression experienced by other lings.

"By discarding the older smaller vessels," he continues, "we have assembled on the 'Sophie Christensen' this year the largest outfit ever sent codfishing from any American port, any year, any ocean and port. Without a marked reduction in the earnings of the individuals we expect to produce the lowest per-ton-cost fish since 1913. In short, instead of dispatching the old-time hand-pulling rig, we have sent to sea a veritable floating power fishing machine, and expect to produce the largest trip of salt codfish ever produced in an American vessel, barring nothing."

Announces New Salmon Specialties

G. P. HALFERTY & Co., producer and distributor of canned seafoods, has announced two new specialty salmon packs which are being sold under the brand name "Smart Set". These are designed to set a new standard for quality and delicacy, one of the two using an original process for which application for patent has been made.

The two new Halferty products are called "Salmon for Salad" and "Individual Salmon Steak". Salmon for salad is described by Guy P. Halferty, president of the Seattle (Washington) firm, as follows:

"Salmon for salad is entirely new. Only the most desirable portions of beautiful, prime, ocean-caught salmon are used. Skin and bone are removed, and the meat then is diced and packed into inside enamel cans lined with pure parchment paper—an appropriate container for the recognized quality of the product. It is as clean and dainty as any tid-bit ever sold over a counter. The process is original and application for patent has been made." The fish is packed at the Halferty cannery at Ilwaco, Washington.

To accompany "Salmon for Salad" in the "Smart Set" line, individual salmon steaks are being put up in handsome,

lithographed, quarter-pound oval cans, each of which contains an individual serving of choice fish. This product is designed for the hostess who wishes to give well-appointed dinners in which salmon is the main course.

The quarter-pound round pack of "Smart Set" salmon which was introduced last season also will be continued. It now is being placed in lithographed cans, to conform to the other packs of the same brand.

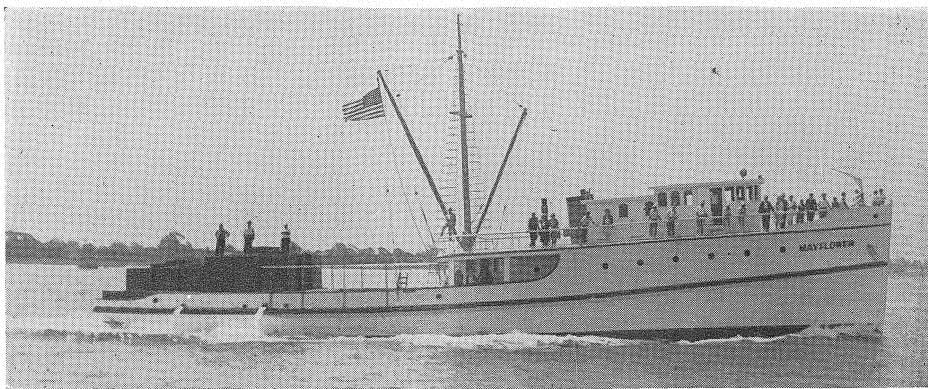
"The method of catching, handling and canning salmon is a very interesting process," states Halferty in commenting upon his new products. "The industry plays an important part in the commercial life of the Pacific Coast and the entire nation.

"With few exceptions, the whole fish, outside of the head, tails, entrails and fins, is canned and classified as such and such grade, which 99 out of 100 persons know nothing about. Like many important food items, there are portions of each salmon which are superior to the other parts of the fish. In the industry, it has not been the practice to select the portions that are most desirable or suitable for certain uses.

"From the distributor's point of view,

salmon for salad means more than something new to offer the public. It is agreed that it is one of the most progressive steps ever to be taken in presenting the 'king of food fishes'. Selected and prepared for a specific use, it brings the housewife her favorite fish to her table in an easier and more interesting form and without the distasteful skin and bone.

"We announce these products with full confidence. We take the fresh, delicious salmon and bring to the public in these two items all the ocean-fresh flavor retained in an attractive and appetizing form. We are confident that these products will take their places alongside of our other nationally-known items—'Pioneer' minced sea clams (maintaining leadership for almost 40 years), 'Show Boat' salmon and 'That's Mine' salmon. "Smart Set" salmon will be sold through exclusive retail distributors in each market, each of whom is required to contract for a supply fitted to his sales opportunity. The dealers will be provided with display cartons and other dealer-helps which will aid them in merchandising. "Salmon for Salad" will sell for 20 cents in half-pound flat cans, and "Salmon Steaks" for 15 cents in quarter-pound ovals.



"Mayflower," largest vessel ever built to serve as a tunaship. The big cruiser was commissioned during the past year in San Diego

New Ships and New Equipment

COMMISSIONING of several large Southern California tunaships and a number of smaller vessels at various points along the coast marked the past 12 months. In addition, many other fishing craft purchased and installed new engines and gear, and manufacturers of such equipment made numerous changes in their organizations and products, in order better to serve the fisheries industries.

It is indicative of the strength and integrity possessed by firms supplying gear and equipment to the fisheries that they have continued to progress and have maintained themselves in spite of the fact that the last year has been one of relative quiet in the fishing industries. Only organizations which render definite services are able to weather times of economic distress, and the fact that these companies almost universally have escaped serious injury is proof of their stability.

Largest Tunaship

"Mayflower," largest vessel ever built to serve as a tunaship, was among the craft commissioned during the past 12 months. The big cruiser measures 135 x 28 x 14.5 feet. It was built in San Diego, California, by Campbell Machine Works, under the direction of David and George Campbell and Manuel Madruga. Equipment includes a 450-h.p. Union diesel, a 15-ton York ice machine, Westinghouse generators and motors, five flasks of Lux CO-2 fire protection. The commissioning was in August, 1931.

"City of San Diego," another fine San Diego tunacraft, also was commissioned in August. Its specifications include a Model 37, 460-h.p., 5-cylinder-and-scavenger Fairbanks Morse main diesel; twin 60-h.p., Model 40, 4-cyl. Fairbanks Morse auxiliary diesels; Fairbanks Morse bait pumps and d. c. generators; a 2-cyl. 5½ x 5½ Baker ice machine, installed under supervision of Ben F. Duncan of Los Angeles; a Sharples centrifuge for purification of lubricating oil; an Ingle oil-burning range; whistle from Allan Cunningham, Seattle; General Electric switchboard panel; Link-Belt bearings. The cruiser was constructed in the yards of San Diego Marine Construction Co., under the watchful eyes of Dean B. Johnson and Bruce Davis.

"Santa Margarita," another August-

commissioned tunaship, came from the yards of Al Larson on Fish Harbor, Terminal Island, California. Atlas-Imperial Diesel Engine Co. built and supplied the big 350-h.p. main diesel and the twin 30-h.p. auxiliary diesels with which the ship is equipped. Other specifications are: 1,000-watt Stone "Foglite" and other electrical installations by Russ Schwarz of Wilmington; 6-ton, 4½ x 4½-inch Baker ice machine, installed by Ben F. Duncan of Los Angeles; CO-2 fire protection; Bruce Davis winch and windlass; oil-burning range from the San Diego factory of Ingle Manufacturing Company.

San Francisco Vessel

"City of San Francisco," said to be the largest fishing vessel ever constructed in the city from which it takes its name, was fabricated in the yards of Genoa Boat Works, owned by G. and J. Baviacqua, at Fishermen's Wharf. It is a billet-head, live-bait tunaship, and measures 92 x 23 x 6½ feet. Equipment is as follows: 300-h.p., 6 cyl. Western Enterprise main diesel; 53-h.p. Western Enterprise auxiliary diesel; Cyclops Iron Works ice machine; No. 118 Ingle oil-burning range; Westinghouse motors; Ets-Hokin & Galvan electrical work; Exide "Ironclad" batteries; Pitchometer Propellor Co. wheel. The main propulsion engine was installed at Union Iron Works.

"Buccaneer," 72 x 17½ x 8-ft. purse-seiner, was built in the yards of Western Boat-Building Co. of Tacoma back in February, 1931, but was not commissioned in Northern California waters until August, when it was brought down to fish for "Lake Miraflores," the floating reduction plant operated by Stanley Hiller and Santa Cruz Oil Company. The "Buccaneer" has the following equipment: 135-h.p., 4-cyl. Washington main diesel; Ritchie compass; Seth Thomas clock; Standard Fixture Co. plumbing; Allan Cunningham air whistle; Link-Belt chains and shafting; "Gold Medal" webbing from Cincotta Brothers of San Francisco; rope from Tubbs Cordage Co., San Francisco.

Small Boats

Many smaller craft also were added to the fleets of West Coast fishing craft

during 1931-32. Among them are the following:

"Badger": powered with a 66-h.p. gas engine; constructed at Anacortes, Washington; will operate out of Seattle.

"Ediz": powered with a 16-h.p. gas engine; built in and will operate out of Port Angeles, Washington.

"Evelyn Grace": 18-h.p. gas engine; built at Metlakatla, Alaska; will fish out of Ketchikan.

"Progress": 57-foot purse-seiner built by the Barbey yards in Seattle; the main prime-mover is a 75-h.p. Atlas Imperial diesel.

"Mary Eleanor": powered with a 40-h.p. gas engine; built at Metlakatla, Alaska; will fish from Ketchikan.

"O. J. No. 1": an unpowered scow built at LaConnor, Washington; will be used out of Seattle.

Another from Metlakatla

"Verna": powered with a 75-h.p. diesel; built in Metlakatla, Alaska; fishing out of Ketchikan.

"Frances": built at Tracyton, Washington; registered out of Seattle; powered with a 20-h.p. gas engine.

"Margaret H.": built in Everett, Washington; fishing out of Seattle; has a 34-h.p. gas engine.

"Evon": built in Seattle, to fish out of Ketchikan, Alaska; powered with a 16-h.p. gas engine.

"Mary Susan": built in Tacoma; powered with a 20-h.p. engine.

"Aniakchak": built at Friday Harbor, Washington; Seattle is its home port; it has a 15-h.p. gas engine.

"Okeh": built in Seattle; 16-h.p. gas engine.

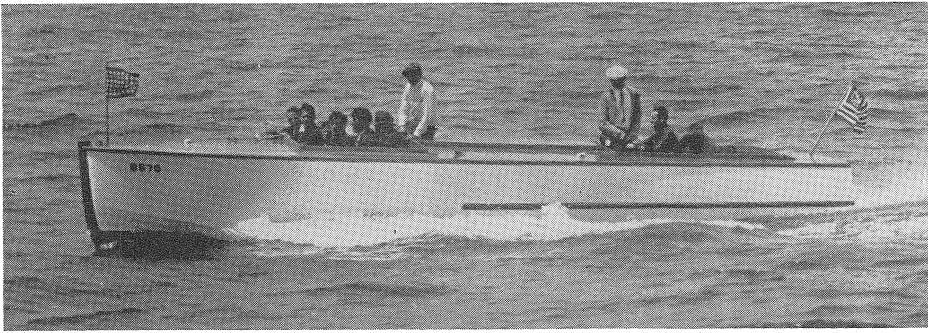
New Trollers

Erik Lindstrom of Grays Harbor, Washington, during the past year received his handsome new 44 x 11½ x 6-foot troller. Johnson Shipyard of Tacoma, Washington, built the boat, and Richard Froboese Co. of Seattle supplied the 30-h.p. Bolinders diesel with which it is powered.

"Jerico": troller built at Hoonah, Washington; has a 12-h.p. gas engine.

"Foster": 52-foot Grays Harbor troller; valued at \$12,000; powered with an 80-h.p. diesel; it is of the Columbia River double-ender type.

A. W. Shipley recently received a new 33-foot troller from the John Fosse boat



"Miss Stagnaro II," speedy passenger-launch operated by C. Stagnaro Fish Co. of Santa Cruz, California, between the shore and its fishing barges eight miles at sea. A Hall-Scott gas engine drives the boat at 22 miles per hour

yards at South Bend, Washington; it is of the Columbia River type.

L. Rogness of Ketchikan in March received his new 34-foot troller from the John Flem yards of Salmon Bay, Seattle. It is powered with the 16-h.p. Palmer engine which formerly was in the troller "Valiant."

Harbor Improvements

Cooperation of federal and local governmental agencies during the past 12 months has resulted in construction of new breakwaters and dredging of channels and harbors for the benefit of the coast's fishing fleets.

To protect the numerous sardine and market craft that make their anchorage, a heavy stone breakwater is under construction at Monterey, California. The work officially began on December 17 after H. A. Greene, so-called father of the seawall, had tipped the first load of stone into place. Now Monterey officials are seeking to have the projected barrier increased in length, using as their chief argument the fact that the cost is considerably below that figure for the job.

Construction also is under way on the new \$660,000 breakwater at the entrance of Alamitos Bay, California. This should be of benefit to fishermen operating out of Seal Beach and vicinity.

Fort Bragg, California, home of a considerable flotilla of salmon boats, has a new harbor. The old jetty has been removed and replaced with a new breakwater which extends 400 feet offshore. Behind this a channel has been dredged for 1,400 feet into the harbor. The cost was \$178,000, defrayed by federal appropriation; \$10,000 per year for upkeep also has been provided.

Improve Fish Harbor

Still another California harbor improvement is the construction work on the new Fish Harbor (Terminal Island) breakwater. San Pedro's great fleet of sardine, mackerel, tuna and market-fish vessels proved much too large to be accommodated in the old anchorage, so Los Angeles Board of Harbor Commissioners voted funds to build a new barrier out beyond the old sea-wall. This will double the Fish Harbor moorage and afford adequate protection for all types of fishing craft.

San Francisco Board of Harbor Commissioners in August undertook a project to pave Jefferson Street (near Fishermen's Wharf), provide more berths for the fleet of crab and salmon boats, and to make other improvements of benefit to the fisheries industries.

Santa Cruz municipal wharf was greatly improved during the latter part of 1931 and now is described as "just as good as new."

Equipment Firms Busy

In addition to supplying machinery and gear for new vessels, as described earlier in this article, equipment companies who cater to the fisheries industries have been active in strengthening their organizations, introducing new products, improving those already well known to fishermen and in other ways better fitting themselves to serve fishermen. It is impossible to describe all the work that has been done during the year, but some of the highlights may be presented briefly.

Ingle Manufacturing Co. of San Diego enjoyed a busy year. Its executives adapted its oil-burning ranges so that water-heaters may be installed in pilot-houses and crew quarters and operated from Ingle-sized galleys. Cincotta Brothers of San Francisco, Pacific Marine Supply Co. of Seattle, Lee T. Critchlow's Marine Machine Shop of Monterey, and R. L. Prewitt of Santa Barbara were announced as Ingle representatives. Seal-oil was tested and found a satisfactory fuel for Ingle ranges. A new Ingle stove, called No. 112, was introduced for use aboard trollers, market craft and other small fishing boats; in tests by dietitians it was shown to be effective, economical and pleasant to use.

Paint Improvement

International Paint Co., Inc., is the new name recently adopted by International Compositions Co. of New York; the new designation was selected because it is believed to be more closely identified with the products manufactured by the firm. A. M. N. Holzapfel, president, describes recent improvement in his well-known marine copper paint as follows:

"Copper and anti-fouling paints, unlike most oil paints, depend to a great extent on thickness of dried paint film for efficiency; in short, if without interfering with spreading capacity, it would be possible to apply one coat of copper paint of a thickness twice as great as one ordinary coat, then both in theory and in practice its efficiency and durability would be considerably enhanced. With this in mind, our paint chemists set themselves the task of making a copper paint which would spread equally as easily as ordinary copper paints and which when dry would leave a film appreciably thicker than normally obtained. This has now been accomplished and it is a fact that

the dried film of International is from 10 to 25 per cent thicker than any similar coatings.

"In addition to this particular improvement, a vast advantage is found in our copper paint by the use of an exceptionally fine grade of copper, which is practically resistant to settling, even after several years. . . . The advantage of this is seen when one considers that even distribution of the poisons in the paint film is one of the most important factors in the efficiency of an anti-fouling coating."

Electrolysis Prevention

One of the evils which ship-owners have had to fight continually is that of electrolysis. This action, resulting from a number of causes (chief of which are induced currents from electric motors and wires, electrolytic activity from placing two unlike metals in the salt solution of the sea, frictional electricity), pits and eventually destroys propellers, bolt-heads and other exposed metal parts on ship bottoms and throughout the vessels.

A Seattle manufacturing firm was formed not long ago to distribute and install its patented disks designed to eliminate the ravages of electrolysis. Its modus operandi is relatively simple: By a series of wired electrical connections it shifts the entire activity of electrolysis from parts of the ship to the metal disks installed at various points in the hull.

Representatives have been appointed in important cities of the coast. Among the most active of these is Hervey N. Petrich, Southern California distributor. Sub-distributors in California are Russ Schwarz in San Diego and Lee T. Critchlow in Monterey.

Engine Firm Busy

Atlas Imperial Diesel Engine Co. made a number of engine installations in West Coast fishing vessels during the year. Garbutt & Walsh installed an Atlas in "New Harbor," 47-foot vessel it constructed. A 50-h.p., 3-cyl. Atlas Imperial diesel was installed by Peter Rask of San Diego in "Unione No. II," owned by Tony Gialalone. A larger installation was that aboard the tunacruiser "Santa Margarita," in which a 350-h.p. main diesel and two 30 h.p. auxiliaries were placed.

The Terminal Island staff of Atlas Imperial Diesel Engine Co. invented a new automatic cut-off valve, a modification of a switch used for other purposes. This device automatically cuts off the flow of fuel oil as soon as the lubricating oil or water supply fails, in that way insuring the engine against damage from that source.

Russ Schwarz during 1931-32 became representative for several firms, whose products he will distribute from his San Diego and Wilmington plants. His staff of electricians and mechanics also made installations of motors and wiring aboard many of the fishing craft of Southern California. During middle 1931 he moved his Wilmington establishment to a more central location, thereby also gaining more shop room and better display space.

Improve Machinery

"We have during the year made improvements in some of our machinery to enable it to take a wider range of sizes of mesh and heavier sizes of twine, thus

increasing our facilities for supplying certain heavier sizes with larger sizes of mesh than we were able to do previously," states an official of The Fish Net & Twine Co., whose representative on the coast is John H. Davis co., of San Francisco. "This applies particularly to cotton seine and trap netting. We have also greatly improved our equipment for stretching the knots out tight and making the meshes perfectly square. This work can now be done much more quickly and perfectly than it has been done in the past. In the manufacturing of gillnetting, we have also devised attachments on these machines that make the meshes more perfectly square and produce a much better net for practical fishing purposes."

An achievement of Shockey Boiler Works was construction of the largest fuel tanks ever built in San Diego. These were four in number, with total capacity of 25,000 gallons, and were for installation in "City of San Diego," tunaship. Shockey also built seven fuel tanks for "Mayflower," tunaship.

The past year was one of expansion for Hemphill Diesel Engineering Schools. The Seattle school was moved to new and larger headquarters, affording more machine shop space and better classrooms. In addition, a new school was opened in Los Angeles, fully equipped to instruct in the operation of gas and diesel engines and ice machines.

Gas Engines

Hall-Scott gas engines won popularity in a number of fields, according to vessel operators. Water taxis of Los Angeles and other Southern California ports found them especially satisfactory, but they were used in many types of boats.

A recent installation was that aboard "Miss Stagnaro II," owned and operated by Stagnaro Fish Co. of Santa Cruz, California. "This boat operates in a shuttle service between the shore and Stagnaro's fishing barges eight miles out at sea, taking people to and from the shore," explains C. G. Patch, Hall-Scott assistant sales manager. "She is powered with a 100-h.p. HSM-6 Hall-Scott direct-drive, 6-cyl. engine, and does 22 miles an hour at 2000 r.p.m. The lines are good for this type of service, there being little slap or pounding when going through choppy water. Construction of this boat may be credited to Earnest Philbrook of Santa Cruz, who had a great deal to do with the design and actual assembly. The planking is cedar, the decking is of one-inch strips of mahogany and cedar, polished to a high finish."

Boat Yards Busy

In San Diego both Campbell Machine Works and San Diego Marine Construction Co. have been kept busy with jobs of various sorts. So too have Peter Rask and the Robbins yard. During the latter part of 1931, the Robbins firm moved its foundry and made a number of other changes in its plant.

In San Pedro, Harbor Boat Building Co. undertook a job of some size when it converted the former submarine chaser "Eagle" into a tunaship, installing live-bait tanks and making other necessary changes. Another of the many jobs taken care of during the year was installation of a 10-h.p. Falcon gas engine as auxiliary aboard the tunaship "Progress." Other Terminal Island and vicinity yards also were busy with delivery of new equipment, painting and alterations.

In the Northwest, Barbee Drydock and Shipbuilding Corp. reported in the fall that its winter fishing-vessel mooring business had increased by more than 50 per cent over previous years. Bruer & Seimer Co. of San Francisco was kept busy during the winter with repairs and alterations of the fleet of paranzella trawlers operating out of that port. Astoria Marine Construction Co. of the Oregon city during the winter opened sales offices in Portland. In Aberdeen, Wilson Marine Corp. was established by Frank L. Wilson in the old Grays Harbor Motorship Corp. yards; it has two sets of marine railways.

Tests Bottom Paints

Under the supervision of its chief chemist, Asher J. Cohen, C. A. Woolsey Paint & Color Co. of Jersey City reports that it has inaugurated a new and extensive series of tests on wood and steel bottom paints.

"The Woolsey company, which as will be remembered offered to the trade this season a guaranteed wood bottom paint called 'Toxicop,' since 1853 has made a special study of marine paint requirements," states the report. "In these new tests, the waters of North Carolina have been selected as affording an ideal testing ground, due to the noted severity of marine conditions in that section. As in previous tests, a large number of wood and steel panels have been carefully painted with Woolsey bottom paints, including those already in established use as well as new developments still in the experimental stage. The panels will remain submerged for eight to ten months and frequent inspections and studies will be made during this period."

Woolsey, in addition to "Toxicop," added "Caw-Spar Marine Varnish" to its line of marine paints. The new product is said not to turn white from water, to stand exposure for 12 months, to be waterproof and to withstand oils and greases. F. D. Pettit was named sales-manager of the firm during the past 12 months. Other important events on the Woolsey calendar were the display at the annual motor-boat show held in New York City early in 1932 and the three-day sales convention at Jersey City during the closing days of 1931.

Insulation

Mundet Cork Co. for some time has supplied a considerable part of the sheathing employed by tunaships and other vessels having insulated holds. During late 1931, however, the firm was called upon to install its block cork in the hold of "Martha Buehner," ship com-

missioned by Shin Shibata to bring up frozen shrimp from Topolobampo, Mexico, to California ports. The work was handled by R. P. Mason, Mundet engineer, who completely shielded the hold from heat.

Mundet Cork Co. has eleven factories in Europe, one in Canada and two in the United States.

Cork Insulation Co. officials state that its Seattle branch placed insulation aboard the motorship "North Star," operated by the Bureau of Indian Affairs of United States Department of the Interior. "We understand," explains a company official, "that the 'North Star' will be used between Seattle and Pt. Barrow for transportation of cargo and passengers. The vessel is to carry both general and refrigerated cargo; the entire after hold is insulated with corkboard furnished and installed by our company."

New Type Corkboard

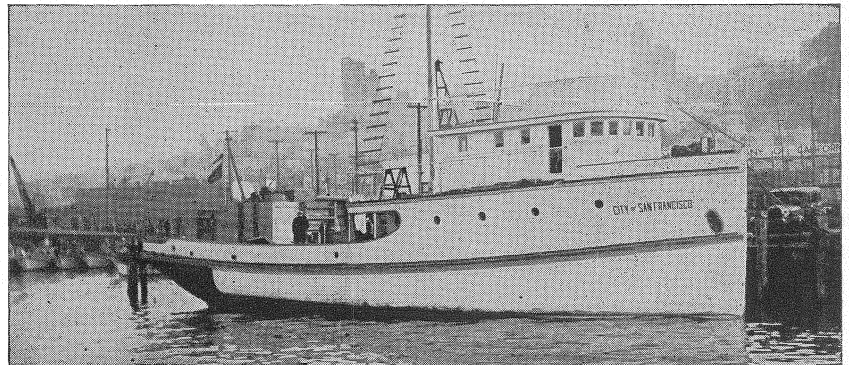
Armstrong Cork & Insulation Co. of Lancaster, Pennsylvania, during 1932 announced a new type of corkboard during the past year. The new product, called "Armstrong's Super-Service Corkboard," is described by Ralph Winslow as follows:

"For many years it has been recognized that the worst enemy of insulation is air infiltration with its consequent deposit of condensation at zones within the insulation where the temperature is below the dew-point. Attempt has been made with more or less success to overcome this fault by the use of hot asphalt erection and emulsion finishes. The new corkboard, protected against infiltration, is lighter than regular corkboard, and consequently has a lower coefficient of heat conductivity. Six inches of 'Super-Service Corkboard' has an insulating efficiency equal to that of seven inches of standard corkboard.

"The real feature, however, of 'Super-Service Corkboard' is the fact that the air and moisture-proof coating has been applied at the factory. This coating is firmly keyed into the surface and, being entirely free from breaks and 'pinholes,' provides complete protection against infiltration of air and moisture. The asphalt in the coating is especially formulated to withstand low temperatures without cracking or peeling. The finish has a stiffening effect, so that, in spite of the lower density of the corkboard, it is equal in strength and rigidity to standard corkboard."

New Representative

Paul W. Hiller, M.E., Wilmington en-



"City of San Francisco," largest fishing vessel ever constructed in San Francisco; it was commissioned last fall

gineer and marine sales representative, during 1931-32 was appointed distributor for Kelvinator refrigerators in addition to his line of paints, cordage and other equipment.

Allan Cunningham, Seattle, built the big winches for the three liners "Mariposa," "Monterey" and "Lurline," built in the East. His firm also equipped "Zapora," vessel under charter to International Fisheries Commission, with one of its winches. Another Cunningham winch was built for the new laboratory ship "Catalyst," which will operate out of Seattle for the fisheries laboratory recently erected on the University of Washington campus.

Central Sheet Metal Works, San Diego, built tanks and stacks for a number of fishing craft during 1931-32. Among its jobs was that of fabricating the stacks for the giant tunacruiser "Mayflower."

Among Cincotta Brothers' products which enjoyed popularity during 1931-32 was its new waterproofed submarine sardine light and cable. One of these was furnished Capt. Nick Milosevich for use on his 72-foot purse-seiner "Buccaneer."

Distributes Cleaner

Fishing vessel owners, cannery operators and proprietors of fresh fish establishments during the past year were introduced to the cleaner distributed by Turco Products, Inc. This firm, with headquarters in Los Angeles, also maintains offices in San Francisco, Oakland, Portland and Seattle. Its cleaner is said to be unusually efficient, one spoonful being sufficient in a bucket of water. Marine Hardware Co. and Curry Supply Co. of San Pedro are co-distributors. An event in the Turco year was a two-day sales convention held in Los Angeles on December 28 and 29.

Sunde d'Evers Co., Seattle, outfitted the "Wawona," codfish schooner operated by Robinson Fisheries of Anacortes, with several Everude outboard motors for use on its dories.

Sharples Specialty Co., with West Coast headquarters in San Francisco, announced a new model oil-purifier designed to remove undesirable sediment and other materials from diesel fuel and lubricating oils. It is known as the "En Bloc" model and is a complete unit, requiring but two pipe and one electrical connections. The centrifuge used develops a force over 13,000 times that of gravity.

Thomas Machine Works, Terminal Island, California, added a number of pieces of new equipment during the year. The plant also was rebuilt.

Aids Government

Linen Thread Co. was able to be of material assistance to United States Bureau of Fisheries during the past year. The problem at hand was protection of immature haddock on the East Coast, this species being threatened with extinction because the trawls took young and old alike as they were dragged over the sea bottom. W. C. Herrington, a West-Coast-trained scientist, was placed in charge of experimental work, and gear was furnished by Linen Thread Co.; a new trawl was designed which it is believed will eliminate the trouble.

Linen Thread Co. moved its Los Angeles headquarters to 122 East Seventh.

Union Oil Co. in October celebrated its 41st year as a producer and distributor of fuels, lubricating oils and greases. The firm began with a capital of \$5,000,000; now it has \$125,000,000 capital stock

and offices and stations in Pacific Coast states, British Columbia, Alaska, Hawaii, Australia, New Zealand and a number of other countries. L. P. St. Clair, president, makes his headquarters in Los Angeles.

Bottled Gas Co. of San Diego announced a method whereby an ordinary range, burning any type of fuel, may be adapted to use bottled gas.

Seattle Firms Merge

Evans-Bardon-Greaves Co. is the name of the new firm formed by merger of J. S. Evans Co. and Bardon-Greaves Co., both Seattle manufacturers of trolling gear. Officers are: J. S. Evans, president; D. M. Bardon, vice-president and general manager; Fred G. Greaves, secretary; Miss Ann Rodd, treasurer.

Seattle offices of Norman S. Wright Co. tell of an unusually large order secured during the past year. It was for 60 bales of Wall No. 1 marine unspun oakum. Nordby Supply Co. was the purchaser.

Pitchometer Propeller Co., Alameda, in addition to wheels previously mentioned, installed a propeller aboard the purse-seiner "Lucky Star." The 64-inch wheel was built and installed in two days. Pitchometer propellers won fame during the year through being used by many champions in outboard motor races.

Novel Sardine Pump

An innovation of 1931 was development of a new pump by Fairbanks, Morse & Co. and Lee T. Critchlow of Monterey to remove sardines from net to hold and from hold to unloading hopper. The centrifugal apparatus was tested aboard Capt. Frank Lucido's seiner "Pal" and proved quite successful.

Other events of interest in connection with Fairbanks-Morse were: Installation of F-M diesels aboard the new Los Angeles pilot boat, "Helen C. Porter," and the San Diego quarantine boat, built in San Francisco; announcement that A. W. Thompson has been placed in charge of manufacturing operations for the company, with headquarters in Chicago; installation of a 100-h.p., 4-cyl., 2-cycle diesel aboard the Prince Rupert purse-seiner "Zenardi," which also was equipped with a three-bladed wheel from Coolidge Propeller Co. of Seattle; election of Robert H. Morse, son of C. H. Morse, the founder, as president after having been with the firm since 1895.

Protecting Bait

"Aboard tunaships we understand that one auxiliary requiring unending 24-hour operation is the live-bait tank circulating pump," states Raymond G. Ellis of Electric Storage Battery Co., Philadelphia. "The Exide floating system and battery would protect this pump automatically (with no manual switch-throwing) if the generator set stopped accidentally; or with a battery of sufficient capacity—power for the pump and other auxiliary equipment could be supplied over a long enough period to enable generator shutdowns for repair work."

Marine Hardware Co., San Pedro, supplied much "Gold Medal" cotton netting to fishermen. It also distributed many other products used on seiners, live-bait craft and market boats. Among numerous installations was that of an Oxo gas burner aboard the fishing vessel "Patricia."

Manila Bolt Rope

"While bolt rope is not a new com-

modity in the rope-making field, there have been several definite changes in its construction," states Herman D. Nichols of Tubbs Cordage Co., San Francisco. "Previous to its entry in the fishing field, bolt rope was generally very soft-laid, so that it might easily be sewed into sails. Now, however, the fishing industry has required bolt rope of other lays, some of them many times harder than that used in sail-making. Tubbs Cordage Co. has responded with cordage in several types of lay to meet the following requirements:

"Drag lines—bolt rope used on drag seines or trawls for bottom fishing must be very hard-laid to withstand abrasive wear from rocks, sand and on winches.

"Purse-lines—four-strand bolt rope used on purse-seines generally is specified as hard-laid, due to the ability to withstand abrasive wear.

"Buoy lines—generally ordinary three-strand manila rope of regular lay is used for buoy lines. This line often is treated "Green Rope", copper-oleated manila, or "Brown Fisherman's" rope, two Tubbs' specialties, although occasionally bolt rope of the old, or sail makers', lay is used. This is extremely inadvisable where winches are used. The lay should be medium hard.

"So we see that bolt rope now has become much like a steak: You may order it under-done, soft, medium or well-done, hard. Due to these various types of lay, users should be particular in ordering to specify just what is desired. Tubbs Cordage Co. tries to anticipate every need of rope-users."

Tests Paint on Trip

An interesting feature of the year for Tarr & Wonson, Ltd., Gloucester, Massachusetts, was the series of tests made of its marine copper bottom paints made by Capt. Robinson aboard his 32-foot boat "Svaap". Capt. Robinson was at sea for two years in all, and during his long voyage, in which he visited many lands, he had opportunity to try out many brands of marine paint. According to officials of the Gloucester firm, he found their paint gave the most satisfaction of any used.

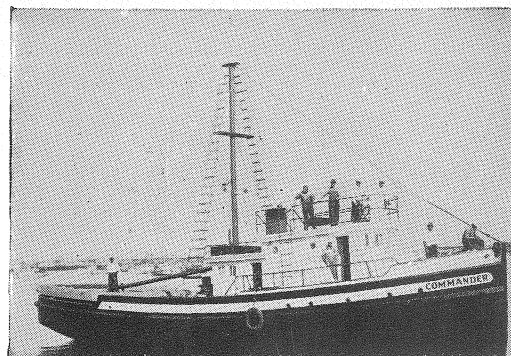
Tarr & Wonson, Ltd., of which A. S. Wonson is general manager, was founded 70 years ago. West Coast distributors include: C. J. Hendry Co., San Pedro, San Francisco, Terminal Island and San Diego; W. P. Fuller Co., in the prominent coastal cities; Weeks-Howe-Erickson Co., Inc., San Francisco; Jones-Moore Paint House, Inc., San Diego; Fellows & Stewart, Inc., Wilmington, California.

A TARIFF ON CRAB, fresh, frozen or preserved, is a possibility, it is indicated by an investigation recently ordered by the United States Tariff Commission.

The investigation is to cover differences in cost of production and similar facts and conditions, on "crab meat, fresh or frozen (whether or not packed in ice), or prepared or preserved in any manner, including crab paste and crab sauce, being wholly or in part the growth or product of the United States, and of and with respect to like or similar articles wholly or in part the growth or product of competing foreign countries."

All parties interested will be given opportunity to be heard at a public hearing on the investigation, which will be held October 4, 1932, at the Tariff Commission offices in Washington, D.C.

San Pedro Purse-Seine Craft "Commander" Is Wrecked



"Commander," San Pedro purse-seiner which was lost in June on Punta San Roque, Baja California

HOMEWARD-BOUND with a full load of fish, the San Pedro purse-seiner "Commander" went aground on Punta San Roque, Baja California, and was totally lost early in June. In addition to the vessel, which was one of the finest seiners in Fish Harbor, a fare of \$4,400 worth of yellowfin was sacrificed to ill fate—a catch exceptionally rare in these days of acute tuna scarcity. Attempts to salvage the wreck proved entirely fruitless.

"Commander" was the joint property of Capt. Bernard Carr, master, and Roy Ketnich, both of San Pedro. The complement was wholly Jugoslavian except for "Red" Griffin, dieselman, who brought to port the most comprehensible account of the happening:

"We left San Pedro at 8:00 o'clock on the night of May 30 and ran 1,400 miles SE before hitting the fish. When we found them we found plenty; we filled her up with fine tuna; she carries 55 tons when fully loaded; then we headed for home. It was one of the most successful trips in the history of the vessel, and with more than \$4,000 worth of fish we saw a good pay-day ahead.

"I was on watch in the engine-room at the time we were wrecked. It was 12:45 at night, and I was to be relieved in 15 minutes. The first impact was a broadside blow that failed to stove her in. Then she hit again—more toward the bows this time—and started to sheer off into deep water. Up at the wheel they got her hard-over, and she was just getting headed out to sea when she hit again, this time back aft. The stern swung in against a big rock and the propeller struck so hard that it killed the engine. I got busy trying to start the diesel again, which was a 4-cyl. 175-hp. Western-Enterprise, when they began yelling from up on top to "give them some power." I had just gotten her ready to turn over when they shouted down to me a second time that they were quitting the ship, and for me to hurry up out of there if I was going along.

"You see, what happened was what always occurs in accidents of this kind—the ship was supposed to be on course, but just the same she found the land. She was in the breakers, being thrown in-shore, at the time she first hit, and once she was aground the seat went clear over her. Then the crew came charging out on deck and tried to launch the seine-skiff, and for awhile it seemed as if the skiff would get smashed before anybody got into it. It almost got away from them three times, but then a wave

carried it forward into deeper water, and the crew put off. All this happened in less than 10 minutes, and because everybody was in bed when it commenced, excepting those of us who were on watch almost nobody had on any clothes to speak of. I was wearing a thin undershirt, dungarees and slippers. Carr and Ketnich, who had bunks in the pilot-house on the top deck, had had time to get into most of their clothes, but some of the men were in underwear, and bare-footed. Well, we all got into the boat without anybody being hurt. I had to jump to get aboard.

"We were running home in company with 'Aleksandar I,' which was following us about a mile astern and somewhat more to seaward. When we hit, the man at the wheel blew distress signals, and they heard us, so stood by. We rowed out to seaward, but we had left so quickly that we didn't have even a flashlight to signal with, and the only thing that we had that would do was an oily rag that I kept in my pocket to wipe the engine with. I happened to have a few matches that hadn't gotten wet yet, so we made a light with the rag, and 'Aleksandar I' picked us up.

"For 18 hours we stood by the wreck. About 8 in the morning the night-mist cleared away so we could see the wreck lying stern-to against a great rock, the bow toward the sea. So we took the skiff and went back to see how she was, and to try to save the seine, and by coming up from the lea side we were able to get close enough so that I could jump aboard. Whenever the breakers came I climbed into the rigging. But it was impossible to go below, for she had filled and foundered where she lay. It looked as if one side was pretty badly damaged, for there were holes chewed through, and the seas were washing the tuna out of her. The water was full of our big fish, drifting toward the shore. Pressure from the breakers had blown off the hatch-covers, too, and the water was boiling out of the hold like geysers whenever the seas struck. I got the end of the seine free, and the men ashore took hold of it. Between waves I loosened the web, and they hauled it landward, but the water went clear over me time after time until finally the crew thought I would be washed overboard, I guess, and called me off.

"We didn't know it then, but 'Reliance' was in the vicinity, and had seen us at a distance. Shortly after the wreck, Paul Verney, skipper of the cruiser, happened to notice the hull in the surf. He did a fine thing then, for he thought that the crew must be afloat in the skiff some-

where around there, so he stood by, coasting up and down, while keeping all hands aloft in the rigging, looking for castaways. Paul didn't know that 'Aleksandar I' had picked us up and taken us on in. He tried to come in close with his big ship, but there was low mist, and the sea was so rough that he was afraid to venture too near the rocks. We had seen him to seaward the day before, but had mistaken the vessel for the old 'Hermosa.' Anyway, although he could not get close enough to make out the name of the wreck, he wirelessly in repeated reports that some craft had been lost, and was fast on the rocks 40 miles south of Turtle Bay."

Responding to this information, the Merritt-Chapman-Scott corporation dispatched its salvage-tug, "Commissioner," to the scene, Capt. A. C. Wilvers in charge. The salvors made good time to the place of the accident, but on arriving found the wreck to be in such a location, and in so battered a condition, that nothing could be saved.

"Red" Griffin, to whom WCF credits the reporting of this marine mishap, is quite something of a Robinson Crusoe when it comes to experiencing shipwreck. We learn that he was engineer aboard "San Joaquín" at the time the Japanese master and crew piled her up on the Coronado Islands, Mexico. "Red" refused to quit the ship, thinking it safer to stay with the sinking hull than to trust himself to a skiff managed by excitable Orientals. Resultant from his behavior, when salvage craft arrived they found the engineer splashing around in commandeered hip boots, up to his middle in deepening sea water, while deliberately and cheerily going about the very necessary business of cooking himself ham-and-eggs for breakfast in the nearly-swamped galley.

But past fame holds nothing for "Red" in comparison with his recent feat. As has been told, he and others returned to the wreck when daylight came, intent upon saving whatever property they could. Failing in other larger purposes, "Red" at least contrived to salvage the ship's medicine chest. Not that he undertook to bear the thing away in his arms, or to leap across a widening expanse of mad sea-water with a trunk-like box balanced on his shoulder, but rather that he cleverly saved the contents by drinking them all himself—wherefore he no doubt was stimulated to jump an extra fathom or two, and to sing cheery chancies as the foundering hulk disappeared from view in the morning mist.

Earthquake and Typhoon

By GEO. ROGER CHUTE

TUNA BEING EXCEPTIONALLY scarce in northern latitudes, fleets of West Coast cruisers recently have been compelled to navigate into far places in search of fares. Numbers of ships which never before have felt the necessity of leaving local waters at this season, have abandoned local banks in disgust and ventured across the perilous "Tehuantepec Latitudes" to investigate the abundance of fish on equatorial grounds.

"We have just gotten back from the Galapagos Islands, where we satisfied ourselves that almost nothing was to be found there, either," stated Capt. Walter Morgan, commander of the cruiser "Chicken of the Sea", flagship of the Van Camp fleet. "This trip our vessel ran clear to southward of the equator, and while cruising among the shoals around the islands we sighted 'San Lucas', 'Asama', and 'Columbus'. These ships had almost no fish at all, and nobody knew what to do next. Of course, where there is no fish it is impossible to catch any, so we hunted for a better spot, and were lucky enough to catch considerably more than 100 tons.

"But while still in the neighborhood of the islands we decided to go ashore to stretch our legs. We had been there six or seven times before, but this was the first occasion when we happened to run across any of the famous dwarf penguins of the place. On Albemarle Island, I think it was, we found a pair of these man-like birds, and we walked right up to the hen and lifted her off the ground without her showing any fear of us. But the drake was of a different disposition, and it took the whole crew to corral him. We all turned out in a big drive, ran him up a long lagoon, and finally got him cornered in a little cove where we captured him with a sardine dip-net. We proposed making pets of the two, and when reaching home to deliver them to the zoological society, but unfortunately the hen could not endure the heat of the waters outside the Humboldt Current, and the drake went mad and jumped overboard in the big typhoon that we ran into on the way home."

Manzanillo for Fuel

After having been at sea more than 30 days, "Chicken of the Sea" ran short of diesel fuel. Standing in for the Mexican port of Manzanillo, the real adventure of the trip commenced. Again quoting Morgan:

"We were on a course for Manzanillo, to bunker, and were about 20 miles from shore when, at 3:00 o'clock in the morning we felt a terrific impact followed by a series of violent lurchings and hammerings. All hands tumbled out of bunks and made for the boat-deck, for everybody was sure that we had struck bottom. My bunk is abaft the wheel-room, and I jumped to the engine-room telegraph and signalled to stop the diesel. Positive that we had struck a reef I had the engine run full astern, but nothing further happened. Then it occurred to me that the diesel might have thrown a

con-rod, or that perhaps the propeller might have struck a log or derelict and have lost two blades, so we stopped the machinery and barred-over the engine. It seemed to be in perfect order, and the ship was riding easily in the sea, so we sounded the bell but found that she was making no water. Then we got out the lead and tried for bottom, but at 100 fathoms we still had no land. Starting up the engine we proceeded at reduced speed toward shore, and entered Manzanillo Bay at 6:00 in the morning—the whole crew standing-by nervously all the while."

Leon Segal, wireless telegraph operator aboard the cruiser, supplements the skipper's account by saying:

"Right after we felt the shock I called KPH at San Francisco and asked if any report of an earthquake had been received from off southern Mexico, and he answered 'no'. That did not satisfy me, so I kept listening in, and presently I heard the United Fruit packet, 'Antigua'. By her note I knew that she was near, so I called her operator and he said yes, he had felt the tremors. Next morning I talked to one of the tunaships about it, and from him the word got around through the fleet, so that one by one they called me and each wanted to know all about it. When we arrived home I found that Los Angeles papers had printed a front-page story which reputedly was based on advices coming from us through Mackay, but that was incorrect and a mistake, for I was refused permission to send out dispatches except at the regular rate of 22 cents a word."

Manzanillo "Aplastado"

Besides requiring fuel for the diesel, Captain Morgan needed a haircut. Arrived in Manzanillo, he set out up the principal thoroughfare of the town, and was amazed at the spectacle which the place presented to his eyes.

"The pueblo was in an uproar. People had gotten out of the tumbling-down adobes and were encamped in the middle of the street. The earthquake that we had felt 20 miles at sea had just about wrecked the place, and the natives were scared into paroxysms of religious dread. Walls were falling out upon the sidewalks and dwellings caving in. We saw a corpse—that of an old Indian woman—who had been killed when the tile roof of her mud shanty had dropped upon her, killing her in her bed. There were holes in the street—long cracks that the shifting earth had opened up. I went through the whole mess, looking for a barber shop."

Segal locked up his wireless transmitter and followed the "Old Man" up town. His observations were that:

"All along the shore were six-inch fissures in the ground. The pavement was broken up, too, and the little narrow-gauge railroad that ran through the street was twisted so that I doubt if it can ever be used again until it is entirely rebuilt. The breakwater had settled four feet and had been broken off sharply in two places. I talked with a bar pilot who told me that one lagoon-head had entirely closed, while a short

distance away a new estero had been formed when the ocean flowed into an area which had settled below sea level, thus forming a new estero. In the street were tents and improvised shelters of all sorts, and lots of beds screened over with 'mosquiteros' (mosquito nets) but no other protective covering. It was a strange spectacle, for the atmosphere was charged with dread expectancy—they all sat there waiting for the next 'quake.

"Well, they didn't have to wait long. I was in the center of the pueblo in the morning when another jolt upset upright objects and sent pedestrians staggering. Everybody ran into the street, dropped on their knees, and began praying in frenzied fashion. Captain Morgan was in the barber chair at the time, and the fellow with the razor let out one agonized wail shouted '¡Vamos!' to the skipper, and bolted for the great outdoors. The praying and crying kept up for a half hour after the tremor had subsided, and it all went to show how frazzled-out are the nerves of these poor natives that have been experiencing this sort of thing until they all are about crazy."

Into the Hurricane

After bunkering 2,000 gallons of fuel, "Chicken of the Sea" was ready to put to sea. However, meanwhile word had reached the port that a terrific typhoon was sweeping up the coast, and that no shipping should be permitted to clear the harbor while the menace lasted. Storm pennants were flying from the signal-halyards of the Mexican custom house, and the tunacruiser was forbidden to depart until the peril be passed. Accordingly, the vessel lay in all during Saturday, but just before dawn on Sunday morning the hook was stealthily gotten aboard, and the craft slipped to sea unseen.

"I figured that the storm had passed to southward of us, for where we were it was quiet and calm except for a long S.E. swell," relates Morgan. "We ran more than 75 miles to sea when the wind hit us, about 10 o'clock. In a short while the waves were running 20 to 40 feet high, each one breaking at the top. We had never seen anything like that before, and had to turn and run before it, meanwhile dumping water from our after bait-tanks. Because of the direction of the wind we were driven 70 miles off course, up into the Gulf of California, and it was the greatest joy-ride any of us had experienced. When the ship would run over the crest of a wave it would plane down the forward slope like a Honolulu kanaka surf-boarding down the face of a Waikiki comber, and the boat would pick up speed until doing 15 knots at the least calculation. Our average speed is 10.3 knots, but while running in front of that hurricane our vessel made more than 12 knots while the wind lasted. All through it we had two men at the wheel, for had she broached-to in the trough we would have taken them clear over, and probably have been swamped by the second or third wave that hit us. The

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A scene in the fields near Monterey, California, where men are spreading out squid to dry it in the sun preparatory to shipping it to the Orient

Monterey Squid For Oriental Market

THE squid fishery continues to be the largest fishery at Monterey, having taken its place next to the sardine industry since the time when salmon fishing at Monterey began to decline.

The squid industry was started many years ago by the Chinese. In recent years a Chinese merchant by the name of Wing Chong has increased the demand for dried squid in the Oriental markets, until the fishery has reached its present status. Several new firms have in recent years become interested in preparing squid, not only for the foreign markets, but for local consumption.

Two small canneries at Monterey, which are owned and operated by Japanese, are canning squid for their people in this country.

A large eastern fresh fish concern, during the last few years, froze several hundred tons of the fish, which were sold in this country. Fresh squid, when properly prepared, is very tasty, especially when fried in pure olive oil.

Production Short in 1932

Squid fishing season at Monterey generally begins in April, a month after the sardine season terminates, and ends during the first part of July. During the 1931 season the squid fishing declined as shown in the figures given below, and the 1932 season is said to be off another third.

1928	935,590 lbs.
1929	1,866,846 lbs.
1930	6,422,104 lbs.
1931	1,068,806 lbs.

Wing Chong is drying about one hundred tons per day and this season has improved his process by taking the larger squid and splitting them. In this manner the fish are cleaned and prepared for drying in a much more sanitary manner than formerly.

Squid are caught with lampara nets in the same manner as sardines. The fishermen make all of their catches at night and near the shore. From fifteen to twenty-five tons for one boat crew is considered a fair night's catch, although as high as forty tons have been caught at one time.

Fishermen formerly received \$11.00 per ton for their squid. This price has decreased to \$8.00 per ton during the present season, due to the depression and exchange ratio.

Five men make up a fishing crew and about forty boats operate during the squid season at Monterey. All the squid catch at Monterey is unloaded at the Fishermen's Wharf, where the fish are hoisted from the boats into hoppers and drained. Trucks then haul the squid to the drying fields.

Major Portion Sundried

Eighty per cent of the squid received is sun dried for the Oriental markets. All of the drying is done in fields adjacent to Monterey where ten or more acres of land are used. The process of sun drying is simple and rapid. Squid lose eighty-two per cent in weight during the drying process, which under ideal weather con-

ditions, takes from five to six days. It is a simple process because the fish are spread and scattered on the ground and turned each day to expose all surfaces of the flesh to the sun.

After drying, the squid are raked into piles and carried in baskets to one large pile. They remain in the large pile for nearly a week and undergo what is termed the sweating process. The squid, after drying, pass through a cleaning machine, before bundling and packing.

This cleaning machine consists of a shaker, which cleans the squid of dirt and grass gathered while on the fields. The squid after cleaning, are pressed into bundles and wrapped in burlap. These packages weigh from two hundred to two hundred and ten pounds each. The market value of this product is six cents per pound at San Francisco.

Artificial Drying Unsatisfactory

Artificial drying of squid has so far been unsuccessful. The sun dried squid, although poorer in appearance, weigh more than squid dried by artificial heat and bring the same market price. It is hoped, however, that a greater price may be obtained for the larger squid, which after being split, are more carefully handled and treated.

Wing Chong's order with the Monterey Sardine Fishermen's Organization is for one hundred tons of squid per day and he has taken deliveries since April 15th. This all means the employment of over three hundred people, thus helping the unemployment situation in Monterey.

Earthquake—Typhoon

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thing that was in my mind all through the blow was that the big passenger liner, 'President Hoover', was southward bound, heading right into this weather enroute to Panama. I was wishing that I could see her busting into them with her high, flared bow. It must have been terrific, and just like a series of bomb explosions when she hit those tremendous seas. I tell you, they were 40 feet high."

"Every body who goes to sea tells lies about storms, and I never have taken any stock in this chatter about 'mountainous seas' and 'swells that ran as high

as the mast,'" declares Leon Segal. "I have been going in deep-water ships quite awhile, and have crossed the Tehuantepec Gulf on three trips aboard the 'Chicken of the Sea', but this hurricane was an eye-opener for me. It lasted 18 hours, and while at its height the swells were 30 feet higher than the bait-tanks. If the West Indies have anything worse than that to offer, I'll stay on this side of the Panama Isthmus—which I propose to do anyway. But even so, we came through it without material damage, which was better luck than many of the tunacraft reported. Morgan knows how to handle his ship, and she is an exceptionally strong boat, too."

Best of all, "Chicken of the Sea" dis-

charged a 125-ton fare of yellowfin, and Superintendent Karl Stromsen of the Van Camp canneries declared that every fish in the load arrived in perfect condition, buffeting seas and earthquakes notwithstanding.

MEAL, OIL and salt fish sections of Canadian Manufacturers' Association held their annual meetings not long ago in Vancouver, British Columbia. J. A. Birks of Northern Fishing Co. was elected chairman of the section for 1932-33, and R. Nelson of Canadian Packing Corp. was appointed vice-chairman. Members of the executive committee are J. J. Dorsey, J. J. Petrich, L. N. Hill and A. J. Blackwell.

FISHY and OTHERWISE

EUGENE D. BENNETT, for the past five years attorney for California Fish & Game Commission, tendered his resignation at a meeting held June 28. Bennett plans to devote his time to his private practice. No action was taken on the resignation, it being deferred until his successor is selected.

GEORGE W. COBB, American Can Company's general sales manager since 1923, retired June 1, after being connected with the industry for half a century.

He has been a frequent visitor to the Pacific Coast, where he has a multitude of friends among the canners. He is particularly famous for his stock of witty stories, from which he always is able to produce a new one at each suitable occasion.

His father established Cobb Preserving Co. at Fairport, N. Y., and he spent some time with this business. Later he became associated with the late Charles M. Ams, and together they developed the Ams can until Sanitary Can Co. was organized.

After this company was purchased by American Can Co in 1908, Cobb became assistant general sales manager and continued in this capacity until his appointment to the general sales managership in 1923.

STANLEY JORGENSEN, son of Captain and Mrs. A. Jorgensen, and Raymond Mitchell, son of Mr. and Mrs. Ray Mitchell, of San Pedro, left on the tanker "South Africa" June 9 for an eighty-day trip to China and Japan.

MISS DORIS OLIVER, daughter of Lawrence Oliver of American Fisheries Co., succeeded herself as queen of the Mainland Portuguese Fiesta at San Diego on May 29. Little Doris was queen last year, when she was selected by Joe Miller, her maternal grandfather. This year Lawrence Oliver was president, "and naturally I chose no one but my own little girl," says he. This is the first instance in which a girl has had the honor of being festa queen two times in succession, either in the Mainland celebration or in that of the Point Loma colony.

EARL M. NIELSEN, superintendent of the San Diego plant of K. Hovden Co., states that on the 23rd of April his cannery received first fares of quarter-oil sizes of sardines. "We have 'Rosalia Madre,' 'Unione No. 1,' and 'Unione No. 2' working for us—they all are lámpara seiners," says Nielsen. "Since they began bringing in the fish we have been packing about 250 cases of 'Portola Brand' quarter-oils daily, all of this quantity being Hovden's special 'French Style' and 'Garnished' packs. All our fish is being seined in the open ocean, six or seven miles toward the Mexican boundary from the Coronado Hotel—we pack no bay-caught fish at all. The boatmen say that there are plenty of fish out there; so we anticipate enough of a pack to fill our orders this year." This sudden appearance of suitable packing stock is a great relief, for during many months no suitable fish could be found anywhere.

W. R. MORSE, president of Triton Oil & Fertilizer Co., 101 Beekman St., New York City, and head of the association of eastern menhaden-oil producers, writes to a West Coast inquirer that prospects for a busy season on the Atlantic are nil. Only the most courageous producers of menhaden meal and oil will exert any effort to function this season, he says, and these on greatly reduced scale. What Morse says can be accepted as fact, for he is the most alert and best-informed observer on the eastern seaboard.

CAPT. H. B. NIDEVER, formerly in charge of Commercial Fisheries patrol in the San Pedro district, was a visitor in his old stamping-grounds during three weeks of June. "Skipper" divided his time between San Diego and the Terminal Island canneries, at both of which places he was warmly greeted by the many packers who recall his honest and efficient administration of the patrol office.

HARRY A. IRVING, head of the fish-packing and distributing agencies which bear his name, has been a sojourner in the San Pedro district during the past month. Irving is getting his Fish Harbor plant—known formerly as the Linde Packing Corporation—into operating condition. The whole waterfront is watching his movements with unconcealed interest, the exact nature of his plans being a mystery to everyone.

THE LINEN THREAD Co. has instituted an "Eat more Fish" campaign under the leadership of Samuel Barbour, general sales manager, whose headquarters are in New York.

The slogan of the company is "Eat More Fish. It is delicious; it is nutritious; it is healthful." This campaign will be nationwide in scope, and branches of the company throughout the country will participate in it. An attractive sticker carrying the slogan is being put on every letter mailed from all their offices, and on all packages sent by express or parcel post. The West Coast campaign is in charge of Frederick W. Winsor, manager of the San Francisco office.



"**GOODIE**," the affectionate name by which all of her acquaintances and fellow-workers know Mrs. Ida Goodwin, has still further endeared herself to the folk who labor beneath her directorship in the fish-packing plants of Terminal Island. "Goodie" is forewoman at one of the packing tables in the Van Camp "International" factory, where she has been working for so many years that some of the other old-timers declare that she was there when Houssels built the place. Anyway, during these stringent times "Goodie's" crew has been laid off, and since few or none of them have been able to obtain work in the other big Van Camp plant, numbers of them are without water, light, and food in their homes. Knowing this, the grand little old woman has been assisting her co-workers, sending assistance to them as her limited means makes possible.

A. L. LARSON, shipwright of Fish Harbor, locked up his calking-mallet over the last week-end in June and skipped out for the trout streams of the High Sierras. With him went his cronies—the usual gang that has been doing this same thing for 15 years—Tom Smith of Wilmington Boat Works, Edgar Holland of San Pedro Marine Hardware, and Fred Ashbridge of Ashbridge Boat Building Company, Wilmington. The quartet were headed for a new place this time—some remote and distant valley where a road had been put through by a private mining company only this spring. In the high and hidden recess of the range they found excellent fishing, and besides feasting upon their catch, brought home as many limits as they dared.

D. W. BRANCH of Libby, McNeill and Libby, recently was in Ketchikan while on a visit to the company's canneries, including the plant at George Inlet.

MAX FREEMAN of Superior Sea Food Co., Los Angeles, was seriously ill for a month or more, but now is back on the job looking as fit as ever and, it is hoped, feeling so.

NICK KUGLIS of General Fisheries Co., San Pedro, was not at his office June 16. Why not? It was a big day—his daughter was graduated from high school, and he was on hand for the graduation exercises.

MANUEL ("FRESADO") SILVA, skipper of the tunacruiser "Santo Amaro," had the misfortune to suffer the loss of his father, who was resident in Madeira, last February. The old gentleman was prominent in his island district, being a mariner and diver of fame as well as owning the sloop "Fresado"—largest sailboat in the fishing fleet of the group. It was in this same craft that San Diego's well-known master tunaman gained early experience, for at the age of 18 he had complete charge of the vessel, his father having retired in his favor. The old man's quitting the sea was hastened by the fact that he sustained lasting injury when he dived overboard after a lost lámpara net, and followed the sinking gear many fathoms deep, until recovering it. Although a veteran diver, Silva emerged from the surface bleeding at ears, eyes, nose and mouth. He never fully recovered from the shock of the terrific pressure to which he had subjected himself. His son, who now skips "Santo Amaro," was also a diver. In Madeira lobsters are caught by hand, rather than in traps. The burrows of the fish are discovered by peering into the sea with water-telescopes, after which the fisherman dives down through the glass-clear water and, reaching into the hole, pulls out the protesting crustacean. Sometimes a diver will bring up three or four or even five of the fish at a single sound, and depths of six or seven fathoms are usual. Occasionally, however, a venturesome youth will risk going much deeper, and when high prices urge the men on they often descend to 15-fathom depths. For this reason those San Diego tunamen who hail from Madeira are exceptionally able swimmers, and no lobster dare feel safe when walking the ocean floor beneath the long keel of "Santo Amaro." But the Madeira men say that West Coast lobsters are not like the kind they knew at home—the island sort had great, menacing claws, exactly like those of Boston, Halifax and other North Atlantic ports.

S. S. WHITEHEAD, of the scientific staff of California Fisheries Laboratory at Terminal Island, a few months ago was ordered to give up work and submit to complete rest as prescription against a seriously advanced case of pulmonary consumption. Whitehead went to a sanitarium somewhere near his home at Redwood City, and in a surprisingly short time showed distinct signs of recovery. Recent reports are that he is almost wholly well again, and soon will be back at the laboratory, continuing life-history studies into the habits and breeding of California's most important commercial fish species.

HERMAN A. WALKER, employee of Nakat Packing Corp. at Union Bay, Alaska, suffered a sprained back the middle of June and had to be taken to the hospital in Ketchikan.

RICHARD STACKPOLE is working this season in the cannery at Waterfall, where his father is superintendent.

L EONARD E. WOOD, formerly vice-president and general manager of the California Packing Corporation, is the new president of the company, succeeding Robert M. Barthold. The latter is now chairman of the board of directors, and will continue in active service.

The position now held by Barthold recently became vacant through the death of Robert I. Bentley.

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L IONEL SHATZ, well known secretary of A. Paladini, Inc., San Francisco, recently was ill for six weeks following an operation. He is back at the office now, as full of vim and vigor as ever.

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CAPT. CARL BRUNTING, Star & Crescent representative, deputed from San Diego for a long trek by automobile via Mexicali, Brawley, Indio, Coachella and other points not very far removed from Gehenna. Carl was out in guise of missionary, trying to convert the date-growers and melon-farmers of Imperial Valley to the persuasion that ocean fishing from a Star & Crescent barge is the "ne plus ultra" of recreational sport. He told them how cool it was aboard Oakley Hall's "Point Loma," to which they answered indignantly that no climate could be so perfect as their own. The skipper then set out for Yuma, making the 65 miles from El Centro to the Arizona city in 55 minutes. Arrived in the Colorado River metropolis, he found the mercury at 109 degrees, but the hotel manager wouldn't turn on the fans because he said it wasn't summer yet. It took Carl only a couple of hours to get on higher ground, and when he emerged in the temperate belt once more it was at San Bernardino. In two days he wheeled over 980 miles of state roads!

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SAM HORNSTEIN, head of Coast Fishing Company, Wilmington, was in San Francisco during the closing days of June. Business, as usual.

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JACOB ("JACK") BERNTSEN, master purse-seine fisherman of San Pedro who has been the moving spirit in urging the materialization of the floating reduction-ship idea in the south, recently has been so beset with applicants for jobs aboard the mother-ship "Lansing" that his patience has been taxed to the limit. So, rather than submit to it longer, the skipper took his family and disappeared toward an unknown destination on July 6, it being his purpose to permit some others of the company's officers to experience a part of these hard-times pleadings for employment.

* * *

MISS DOROTHY WOOD, mermaid of Cabrillo Beach (San Pedro) and daughter of the president of Southern California Fish Corporation, abandoned the breakers of her favorite strand to become an equestrienne in the mountains that abut the Lake Arrowhead resort. However—sayeth the comely maid—the kelpy whiskers of Old Father Neptune seem good to her sight once again, for after an initial experience with the prancing centaurs of the rocky defiles of Lake Arrowhead, the girl swimmer returned to her home as lame as though having been cudgelled.

* * *

KARL STROMSEN, general superintendent of Van Camp Sea Food Co., Inc., availed himself of the lull in packing which the failure of the local bluefin tuna run has produced, and buzzed away toward the mountains in the Stromsen family chariot. He went first to Gilman Hot Springs—up there in the San Jacinto Mountains, somewhere back of Hemet—and after a week at the baths will journey on to Lake Arrowhead, where he will file a new point on the champion fish hook of the place. Herman Ellis, head mechanic of the Van Camp plant at Fish Harbor, has a fine cabin up there, and Karl is going to move in and feel like an old-time trapper for a week or two.

* * *

FISH IN RESERVOIRS of Los Angeles are getting too thick and numerous, it is said, so the waters have been seined and the fish given to the needy. The fish were getting so thick that the city's water supply was in danger of pollution.

PETER LORENZEN, accountant for the Royal Fish Co., of Prince Rupert, B. C., made a flying trip to Vancouver late in June.

* * *

AUL HILLER, official starter for the Olympiad elimination races, set two fleets of yachts straining away on recent around-the-island cruises. One of these was a contest to circumnavigate San Clemente Island, and the other was to circle Santa Catalina Island. Both were sailboat races.

Paul has very clearly defined concepts of fair play and sportsmanship in all goodfellow competitions. Speaking of the cheap fraud recently perpetrated upon the sport of boxing in America he said: "A sure way to put pugilism on an indisputably honest basis would be to adopt the axiom of 'No knockout, no decision.' Of course, the referees would be entitled to step in at any time and put a stop to the bout, if it were seen that both contestants were groggy and spent, or if for other humane reasons there was no real reason for permitting the contest to continue."

* * *

LUIS BERNSTEIN, a member of the staff of International Marine Products Co., Ltd., during late June returned to Wilmington headquarters after having travelled southward into Baja California as far as Punta Abreojos.

"I went down on the fishboat 'M. K. No. 1,' which was being sent south from San Diego to bring up a load of canned abalone from the Turtle Bay cannery," states Luis. "But when we reached Turtle Bay we found the abalone not quite ready, so having a little time we went on south. Word of the wreck of the 'Commander' had reached us, and we kept a sharp lookout for it without being able to see it. We had heard that it had gone adrift, and was floating around at sea, a derelict. Through the glasses we saw tanks high on the shore at Punta San Pablo, but the crew said that these were from the old wreck of the 'Greyhound.'"

* * *

HAROLD MORGAN, head dieselman and part owner of the San Pedro tunacruiser "Chicken of the Sea," was taken to the hospital when the vessel made its cannery wharf late in June. Infection in a laceration of the knee was the cause of the hospitalization, the fisherman not wishing to take any chances with so dangerous a malady as fish poisoning. Intensive treatment while the ship lay in port, discharging, was believed to be a guarantee that the wound would be healed sufficiently so that the big fisherman could with safety return with the ship on its next voyage.

* * *

OLAF FLOE and Hans Floe are at the Hawk Inlet cannery this season, where Olaf is superintendent.

* * *

NEW MACHINE SHOP equipment representing an outlay of \$5,000 has just been installed in the sheds of Harbor Boat Building Company, Fish Harbor, San Pedro. The largest single piece of machinery is a big motor-driven lathe whose working dimensions are 24 inches by 16 feet. This giant tool cuts within a quarter-thousandth of an inch when working on shafting two feet in diameter, declares John J. Martin, of the company. "And that's somethin'," he declares.

Besides the big lathe the shop has been equipped with a motor-driven milling machine and with an unusually large power hack-saw. Out in the blacksmith shop a power hammer has been moved in, so now forgings of almost any character can be handled.

* * *

DONALD FRY, mackerel-investigator of the State Fisheries Laboratory at Terminal Island, was part of a fishing party that mushed into the High Sierras during the week-end of July Fourth. Alongside a creek Don found a bush behind whose protecting camouflage he approached, made a cast, and hooked the biggest bull-trout in the stream. The sport was at high pitch when a 4-foot rattler that had been snoozing under the bush awoke and began wagging his tail, whereat Don made a broad jump that would make an Olympiad contestant blanch with dismay.

LARRY W. HOLLAND, superintendent of Southern California Fish Corporation, trekked up into the High Sierras during early June to take part in the opening of the trout season. Says that he and Ed Uhlmann of the Uhlmann Canning Machinery Company and Bill Steinkamp (warehouse foreman of Southern Cal.) made the jaunt in company with Dominick Sardisco, a gentleman of Roman descent. The party penetrated the mountains as far as the South Fork of the Kern River, and after negotiating a private road that had just been built by a mining company at a cost of \$80,000, arrived in Kennedy Meadows. "All the time that we were in there we didn't see anybody except the local settlers," says Larry. "And we got all the trout we could eat, and plenty to bring home. Heretofore whoever wanted to reach that country had to pack in. The fish are big, and the streams icy cold. Tenderfeet might be afraid of the place because there are lots or rattlesnakes all along the streams, but there is no real danger, for the snakes get out of your way just as fast as they can navigate, and you have to move quickly to kill one. They are going to make a landing field, and then we are going to fly in."

* * *

HENRY W. ABTS, sales manager for Franco-Italian, has been travelling throughout the east during more than a month. His office reports that he seems to have hit it rich, for despite the reputed inertness of the market he continues to do a lot of business. Indeed, his successes have been so pronounced that he has advised headquarters of his intent "to stay awhile."

* * *

HERVEY M. PETRICH, that blue-eyed, smiling, and debonaire exponent of Marine Electrolysis Eliminators in the San Pedro district, is about to depart for native haunts in the Tacoma region—but only for a brief visit, fortunately. This assurance brings a sigh of relief to many, for when Hervey leaves town it is like when the fleet is away—there just isn't anything doing, and the streets are filled with those who pine and sigh. But never mind, "Pete" soon will be back, with a new batch of Electrolysis Eliminators under each arm, and then the old seaside village will re-assume its accustomed spirit and gaiety, for "Pete" is a sort of human elixer—his presence eliminates all sorts of ills, electrical or not.

* * *

RUTH PRIFOGLIE, she who presides at the switchboard of Van Camp Sea Food Co., Inc., headquarters at San Pedro, is one who is famous for the nature and extent of her vacations. Last year she made a steamship trip that turned out to be both wet and amazing, and at the present time she is travelling "somewhere in the East." Instead of having only the usual fortnight in which to revive her human self for a renewed round of monotonous duty, Ruth has obtained six weeks of leave, and is going to view a large portion of these hallowed Jew Nited States before returning to the Terminal Island capital of tuna.

* * *

JACK FREENEY, accountant for Franco-Italian, Fish Harbor packers of tuna products, states that Independence Day was balm to his job-ridden soul. The Glorious Fourth gave him opportunity for demonstrating freedom from alarm-clock vassalage, for he smote Big Ben in the inferior maxillary, and despite whatever kind of bells, whistles, and bursting cannon-crackers, slept the whole day through.

* * *

JOHAN RADOS, president of Harbor Boat Building Company, Fish Harbor, motored to Seattle and Tacoma on a vacation-and-business trip during late June. The exact nature of his business interests was not ascertained, but it is understood that he transacted important portions of it on the Canadian side of the line. Well, anyway, although he drove up in his automobile, John is demonstrating again the sagacity of a logical head, for after all his urgent matters are settled he is not going to fight traffic all the way home, but is coming by steamship instead!

Death Takes Cannery President

RESIDENTS OF MONTEREY in particular and fisheries men in general were greatly shocked to learn of the sudden death early on the morning of June 21 of William A. Oyer, president of Custom House Packing Corp., sardine canning organization of Monterey. Oyer had been ill only a brief period, and his many friends were completely unprepared for the unhappy announcement of his passing.

Oyer had been active in the affairs of Custom House Packing Corp. since it first was organized. His efforts were united with those of other prominent citizens of the vicinity in securing funds for erection of the modern and efficient plant which the corporation owns, and as a result a large part of the stock is owned by residents of Monterey and vicinity. He was rewarded for these early services by being named first vice-president. Other officers at that time were: Harry P. McLaughlin, president; P. H. Oyer, second-vice-president; J. L. White, secretary-treasurer.

Stockholders named Oyer president of Custom House at the annual meeting held in May, 1931, at the same time that they chose the following: E. E. Littlefield, vice-president; Alfred Furlong, treasurer; E. R. Martin, secretary; J. L. White, accountant; Charles Wilson, packing foreman. The new chief executive held the post with which he had been honored



William A. Oyer, late president of Custom House Packing Corporation, Monterey

until his death; during his term as president he assisted in a reorganization which he described as having the stockholders take up the indebtedness on the plant in the way of trust deed issued in baby bonds. "This places our financial condition in good shape as soon as we realize on stock on hand," he explained.

William A. Oyer also served as Monterey's chief of police, and it, therefore, was fitting that many executives of the city's government and other prominent citizens should pay him honor at his funeral, which was held two days after his death. Active pallbearers were Hon. J. A. Bardin, W. G. Hudson, E. G. Hatton, E. R. Martin, Clyde A. Dorsey and M. W. McMenamin. Honorary pallbearers were Dr. J. P. Sandholt, mayor of Monterey; Carmel Martin and E. E. Littlefield, councilmen; T. P. Joy, former county clerk; Manuel Perry, superintendent of streets; Sergeant Fred Moore, Monterey police department. These and many others paid tribute to their late friend's qualities as a man, a city official and a business executive.

Oyer was a member of the Masonic lodge of Salinas, and that organization conducted the funeral rites.

G. L. Barney was named to succeed Oyer as president of Custom House Packing Corporation. It is not expected that any radical changes in administration of the organization will be made.

Fish Oil Outlook Brightens

FISH CANNERS of San Pedro and Monterey regions were encouraged late in June when California State Fish & Game Commission gave its permission for straight reduction of 75,000 tons of sardines. The decision followed a long period of consultation between commissioners and representatives of the fish-packing industry.

The cannerymen went to the meeting with the request that they be permitted to reduce 185,000 tons of sardines into meal and oil, without conforming to the fish and game ruling which compels them to pack 13½ cases from every ton of fish taken. Their arguments were (1) that their only chance to make a profit at present was through sale of fish meal and oil and (2) that they could not compete with Japanese meal and oil producers as long as the 13½-cases-per-ton rule was in effect.

They divided their requests for reduction permits as follows: Coast Fishing Co., Wilmington, 17,500 tons; California Packing Corp., 30,000 tons for its Terminal Island plant and 10,000 tons for Monterey; Sea Pride Packing Corp., Ltd., 10,000 tons each for its three plants in Monterey, Wilmington and Terminal Island; Custom House Packing Corp., Monterey, 10,000 tons; Carmel Canning Co., Monterey, 10,000 tons; Franco-Italian Packing Co., Monterey, 14,000 tons; Southern California Fish Corp., Terminal Island, 15,000 tons; French Sardine Co., Termi-

nal Island, 20,000 tons; Van Camp Sea Food Co., Inc., 30,000 tons for San Diego and Terminal Island; Monterey Canning Co., Monterey, 13,000 tons.

Fish and game officials stated that the amount of fish requested was too high, and they therefore placed the limit at 75,000 tons, to be divided among the cannerymen as they wished. The commission also granted renewal of the reduction permits of Globe Grain & Milling Co. and of Bay-side Fish Flour Co., both with plants in the Monterey region, thereby permitting each firm to reduce 7,500 tons of sardines during the coming season, which is from November 1 to March 31 in Southern California and from August 1 to February 15 in the northern part of the state.

Failing in their fight to obtain a large amount of fish for reduction, the best alternative for sardine packers seems to be improvement of their oil so that they may obtain better prices for it. This outlook is indicated by the plans of Sea Pride Packing Corp., Ltd., with its recently introduced "Calistar" brand sardine oil. "Calistar" has been developed after two years of research by Dr. Elton Hogg of Hayward, California, who for the past decade has been interested in development of a superior domestic product to compete with imported Norwegian cod-liver oil.

So far, "Calistar" has been distributed as a food for poultry and livestock, but Harry A. Irving, head of H. A. Irving

Co. of San Francisco and an official of the Sea Pride organization, states that soon he expects to start merchandising the fluid for human consumption. That it is well-worthwhile to take the place of cod-liver oil in the American diet is indicated by the fact that commercial sardine oil has been found equal in vitamin content to the best grade, especially-prepared Norwegian cod-liver product (see previous issues of WCF). Since 10,000,000 gallons of cod-liver oil are sold annually in the United States, the potential market is tremendous, especially when it is remembered that sardine oil has the following sales arguments: (1) lesser price, (2) better flavor, (3) domestic production, (4) probable higher vitamin content.

Following are figures on fish oil production for the first quarter of 1932 (figures are in pounds):

Species	Production	Consumption	Stocks
Cod, Cod-liver....	373,556	2,559,300	9,484,933
Menhaden		4,609,309	4,779,434
Whale		11,994,544	110,945,694
Herring, sardine....	6,223,515	14,987,173	69,454,251
Sperm		220,968	2,796,817
Other	51,338	438,298	5,271,696

Imports of foreign fish oils in the three-months period were made up of 5,328,000 pounds of cod oil, 2,222,715 pounds of cod-liver oil and 2,384,212 pounds of other fish oils. Exports of foreign fish oils totaled 55,170 pounds and domestic fish oil exports were 90,108 pounds.

C A N N E R S

Are Agriculture and Fisheries Related?

FOOD IS THE FIRST consideration of all mankind. There are two main sources, the land and the sea. Early man lived by the chase and by fishing; indeed, it is likely that man first obtained more of his food from the water and the beach in the form of fish and shellfish than he did from the forest, due to the greater ease of capture. In those early days the products of both land and water were common property or belonged to the one finding, taking or capturing them. Agriculture and animal husbandry gradually developed and most of the land and its products came under private ownership.

Agriculture, or water farming, is practiced to a limited extent, most notably in the case of oyster farms and fish ponds. Fish culture is practiced, but for the most part the young fish are released into public waters and become common property. Therefore the water and its products are still largely in the ancient status of common ownership.

Development of Husbandry

When animal husbandry took the place of the chase and agriculture was substituted for the gathering of scattered wild fruits, cereals and vegetables, many of the uncertainties and hazards connected with the procurement of land foods were eliminated. True, there are enough risks left to still render farming something of a speculation. However, most of the uncertainties, hazards, risks and perils formerly connected with fishing still are retained. Hidden beneath the surface, which give few signs of their presence, schools of food fish are free to come and go in the fenceless waterways. Localities of abundance today are places of scarcity tomorrow. From one trip the fishing boat comes back almost swamped with an overload; from the next, riding high and empty. It is unnecessary to speak of the perils of the fisherman; no fishing village but has its row of stones by empty graves, the bodies lost at sea.

Products of the fisheries constitute one of the country's greatest natural resources. Besides foodstuffs, many other objects of value are added to the wealth of the nation—sponges, shells, furs, seaweeds, pearls, etc. The foodstuffs are particularly valuable since they are immensely rich in iodine, calcium, phosphorus and other mineral substances and vitamins essential to the growth of the body and the maintenance of health. Many land products, grown on a deficient soil, are lacking in these necessary elements and a diet containing liberal quantities of sea foods is much safer than one made up exclusively of land foods.

There is hardly a state in the Union which does not have a more or less developed fishing industry based either on salt-water fishes, fresh-water fishes or shellfish. In many sections, such as the New England, Middle Atlantic and Pacific states, and particularly in Alaska, fisheries constitute key industries. The economic welfare of considerable areas and a wide diversity of business interests are dependent upon the prosperity of the fisheries.

Fisheries, Natural Resources

Natural resources are values produced by nature; they are not artificial or man-made. The fisheries fit the definition perfectly, and particularly so since they are practically incapable of being placed under the control of man. There are several factors which make this industry one of the most hazardous among the natural resource industries. . . .

There is perhaps no other industry in which the supply of raw materials is so uncertain. In the case of mining, prospectors have difficulty in locating veins of ore but, having once located them, they do not disappear but may be measured or estimated with a fair degree of accuracy. Most of the products of the sea are not stationary; a school of fish once located may disappear at any moment and if its size could be estimated the estimate would be of little value. The fisherman is certain of only the fish he has actually landed.

After the fish have been landed, they, in most cases, must be prepared for food or other use in some manner. For this purpose many canneries, filleting and refrigerating plants, salteries, smoke-houses and reduction plants for producing stock-feed, fertilizer and oils have been built. The location of these plants is determined by an estimate of the raw material available within reasonable distances. The failure of many such enterprises is due to a faulty estimate. In fact, the process of arriving at the available supply should hardly be dignified by the term "estimate"; the uncertainties involved make only a "guess" possible.

Factor of Competition

The fact that products of the water are common property makes competition unusually intense. No claim can be staked off and defended. The water swept by one man's nets today is swept by another's tomorrow. If one vessel or plant engaged in the fisheries begins to make a fair profit, or is thought to be making a profit, competing vessels or plants appear and the raw materials divided among several is not sufficient to produce a profit for any, much less for

THE FOLLOWING ARTICLE is a brief in favor of including the fisheries of the United States among the other natural resource industries to be affected by modification of the anti-trust laws as proposed by Referendum No. 59 of the Chamber of Commerce of the United States of America. WCF will welcome comment from its readers as to whether or not they favor this plan.

all. Not only is the competition for raw material intense, but the competition between the prepared products in the markets is even more intense. Codfish from Alaska competes with those from the Grand Banks, sardines from Maine with those from California, salmon from Alaska with those from the Columbia River, etc., and in turn each of these kinds competes with all the others.

The seasons during which many of the kinds of fish may be caught are extremely short and the entire year's supply must be obtained during that brief period. In that respect fishing resembles agriculture. In the case of salmon, the fishing in some districts is restricted to less than one month. A salmon packer operating in that district may have several hundred thousand dollars invested in supplies and in guaranteed wages to his crew and fishermen before he catches a single fish. Since the time is so short in many of these fisheries, the men engaged in them must estimate the requirements and state of the market far in advance.

Cooperative Conservation

Judicious conservation of natural resources is very desirable. In the case of living things, provision must be made for the insurance of future generations. Enough fish, for instance, must be permitted to spawn to keep the future supply of that raw material at the most profitable level. With land animals or plants, under rather exact control, such provision for future needs is comparatively easy. But with fish and shellfish, the common property of all who care to take them, the tendency is to forget conservation. And should one fisherman or firm engaged in the fisheries attempt conservation, the fish thus spared very likely would be taken by another less public-spirited, or less mindful of the dangers of over-fishing. Under competitive conditions, conservation arguments meet with little encouragement.

One thing that militates against conservation in some branches of the fishing industry is the shortness of the season. This encourages the building of plants of large capacity in order to pack as much as possible during the short season. When the supply of fish is plentiful, little harm is done. When the supply is short, the fishing gear is increased and operated more intensively in order to take every fish possible. Under these conditions the fishery in that district is jeopardized. The slogan "Food will win the war" was responsible for the rapid expansion of the fisheries in many districts, with the result that there still exists a large over-capacity of fishing boats

and plants for the preparation of fishery products. This highly-competitive over-capacity is a real menace to some branches of the fisheries. The tendency is to try to make a profit today regardless of what may happen tomorrow.

Anti-Trust Law Modification

Fishermen and those engaged in the preparation of fishery products are extremely individualistic, and the districts in which they operate are widely sepa-

rated. Attempts at conservation through cooperation in the past usually have been unsuccessful, due largely to the fear of coming in conflict with anti-trust laws. Any proposal to attempt to limit production through agreement among the producers has met with little favorable response for this reason.

Inability to arrive at some arrangement for limiting production, thus providing for a suitable escapement, increases the competitive spirit and each

attempts to exploit the fishery to the utmost. This perhaps is particularly true of the smaller operators, who frequently are poorly-financed and feel that they must take every fish possible, even when the supply is poor and there is grave danger of over-fishing. The failure of a company engaged in the fishing industry usually does not remove the physical equipment of the company from competition, since it is likely to be purchased at a low price and operated. The relatively small capital invested by the new owner enables him to sharpen the competition.

These conditions make some modification of the anti-trust law, so far as the fishing industry is concerned, very desirable. If the industry could agree to cooperate in conservation measures through a curtailment of its product under the supervision of a suitable tribunal, it could become better stabilized. Periods of glut and of scarcity could be ironed out with profit to both consumer and producer.

Fisheries Need Consideration

Those engaged in agriculture have been given special consideration as concerns the provision of the anti-trust law. There are many points of resemblance between agriculture and the fisheries. Both are food-producing industries and their products are in competition. Therefore should there be any tendency to advance prices on fishery products unduly, the attempt would fail through substitution of meat products for fish.

The legal right to effect agreements for exercising some cooperative control over production so as to more nearly balance consumption would improve condi-

(Continued on Page 29)

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This division of **CANNERS SECTION** relates news of developments in California's tuna-packing industry

TUNA

Seapride Plans Opening

RESUMPTION OF CANNING in the Seapride Packing Corporation plant at Fish Harbor was presaged by the arrival there of Harry A. Irving, owner, who put in a sudden appearance on the premises something more than a month ago. Since his advent, all has been bustle and activity around the factory, practically all the machinery and equipment in the institution having meanwhile been taken apart, reconditioned and reassembled.

"Tuna are exceedingly scarce, and the fishing ships are having an increasingly difficult time while trying to catch the necessary supply," states Irving. "The market has found this out, and consequently is very active—all the buyers are scrambling around, trying to get their orders filled, because nobody can say when the fleet will produce good catches of tuna again. The apparent complete failure of the local bluefin tuna run has done considerable to accentuate this sense of under-supply, of course, and if no close-to-home appearances occur dur-

ing the next 40 days it seems likely that the demand for tuna will exceed the supply all through next winter—and that's something, in these times!"

Irving's activities at Fish Harbor have been productive of much speculation among observers, it being wondered to whom he will look for a supply of fish. He has no fleet of his own, and so far as is known has no extensive line-up on contract basis, yet his definite preparations to commence packing bespeak a fixed project in mind. Of course, were a local run of either bluefin or striped tuna to develop, considerable quantities of "independent" fish would be available to any and all buyers, but it is not to be supposed that Irving is commissioning a cannery on no sounder ground than this. "Where will he get his tuna?" everyone is asking. "Will he operate wholly upon albacore imported from Japan, or has he a fistful of trumps that nobody can see?"

Seapride Packing Corporation, at Fish Harbor, is but one of a chain of plants whose out-put is distributed by Irving.

In Monterey he sells the pack of Carmel Canning Company, Custom House Packing Company, and Seapride Packing Company, of which latter he is owner.

"My San Pedro factory is a specialty plant," states Irving. "In it I produce only tuna products. The sardines here are so much smaller and leaner than those in the northern reaches of the coast that our customers prefer the Monterey product. However, we may concern ourselves with the San Pedro supply of mackerel, which is found nowhere else in such abundance and excellent condition."

M. L. Brenner, general superintendent for all Seapride factories, is now in the Fish Harbor plant, personally directing the overhaul of machinery and new construction. Hundreds of skilled fish-factory workers already have filed applications for employment, and Irving insinuates that the date is not distant when the engineer will pull the whistle-cord on the morning of the initial day's run.

Agriculture

(Continued from Page 28)

tions in the fishing industry. There would doubtless be fewer failures, with consequent loss of employment and economic upsets in the communities where the several fisheries were in operation.

The whole situation in the fisheries has been well summed up in the committee's report on Referendum No. 59:

"5. The chronic conditions of over-production, with resulting depression, causes waste of natural resources, loss of reasonable returns to the industries themselves and of wages and revenue to the communities in which the operations are carried on."

Conclusion

It seems, therefore, from the standpoint of national policy as well as of the economic need of the fisheries industries themselves, that any modification of the anti-trust law to permit agreements for the purpose of balancing production and consumption in the interests of conservation, stabilization and continuity of employment should certainly include the fisheries industries along with those concerned with forests and mines. As a matter of fact, it is believed that the fisheries industries are on more uncertain basis than those industries grouped about the forests and the mines. The uncertainty within the fisheries is greatly enhanced by the extreme individuality of the fishermen, whose characteristics in this direction have brought into our speech expressions like: "Go it on your own hook," "Paddle your own canoe," etc.

As in other natural resource industries, the larger operating companies, because of the very large investments involved, the large number of wage earners de-

pendent upon them and the widespread distribution of their products, usually more deeply appreciate the necessity of balancing production and consumption and of conserving the supply of raw materials than do the smaller companies. And, even though the latter may fully appreciate the situation, economic pressure may prevent them from curtailing production under present competitive conditions.

With the legal right to make agreements designed to more nearly balance production and consumption, it is believed that both large and small companies could operate successfully without hardship to either. The public interest must be and would be amply protected if such agreements were to be passed upon and approved by a competent and disinterested tribunal of government officials who knew the problems of the industry thoroughly and who, of course, would be active at all times in the public interest as well as in the interest of the industry.

"EUROPA", family-owned tunaship of the San Diego Italians named Crivello, seems to have been a principal sufferer during the sea-going tempest that swept over certain of the Baja California tunabanks during late June. According to reports of vessels which sighted "Europa" both during and after the storm, the ship lost all three of its anchors, had the protective canopy above the wheelhouse carried away, and suffered considerable damage to its bait-tanks.

"CHESAPEAKE", medium-sized market craft and lobster-transporter of San Diego, has been seized by U. S. Customs patrol allegedly while attempting to smuggle contraband into American territory. The tender "Patricia" is held on a similar charge.

JAPANESE ALBACORE, to the amount of approximately 137 tons, was landed at San Pedro on July 15. Of this total Coast Fishing Company of Wilmington received 57 tons, while 40 tons each were delivered to Italian Food Products Company of Long Beach, and Southern California Fish Corporation of San Pedro.

CANNED CRAB MEAT stocks in Japan at the end of April, 1932, totaled 229,106 cases, compared with 229,297 cases at the close of the previous month.

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This division of **CANNERS SECTION** covers sardine packing in California and British Columbia

SARDINES

SARDINE CANNERS of Monterey still are working on their plan for a sales organization which will handle all of their packs (see WCF for June,

1932). While no definite agreement is known to have been reached, cannery met several times during June for further discussion of cooperative marketing and several executives gave it as their opinion that such a move was the best step which could be taken to stabilize market conditions, do away with present evils in the industry, and better prices.

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FIGURES on the 1931-32 pack of sardines in California which have been released by California Commercial Fisheries Bureau show that Southern California slightly increased its activities in this fishery, while Northern California curtailed its operations by approximately one-third as compared to the 1930-31 season, when 133,420 tons of fish were landed.

Monterey and Pittsburg produced 1,066,763 cases during 1931-32, far below the 1930-31 total of 1,831,032 cases. Production of sardine oil and meal was 2,755,282 gallons and 10,128 tons. In 1930-31 it was 4,127,555 gallons (1,372,273 gallons more) and 14,206 tons (4,078 tons more).

Los Angeles and San Diego cannery packed 789,455 cases, as compared to 741,060 cases in 1930-31. Meal production increased from 4,317 tons to 4,911, and oil from 630,011 gallons to 762,701 gallons.

MONTEREY BAY SARDINES

Leading Fancy Brands: EL CAPITAN, GRILL, EL MAR.

FISH OIL and MEAL



E. B. GROSS CANNING COMPANY

Sales Office and Plant: Monterey, Calif. Cable Address: "GROSS"

PHILIPPINE canned sardine market at the first of June was reported as "difficult." General consumption in April and May was reported as below that anticipated. Prices ranged from \$2.80 to \$3.60 per case of pound ovals. Demand for mackerel and shad continued slow, with prices steady at \$3.00 per case. The salmon market remained steady, with quotations at \$3.80 to \$4.00 per case for Alaskan fish and \$3.30 to \$3.50, duty paid, for Canadian.

F. E. BOOTH COMPANY, Inc.

Packers of

BOOTH'S BROILED SARDINES



FRUITS—ASPARAGUS—VEGETABLES
SHAD ROE

Canneries at Monterey, Pittsburg, Centerville

Fresh Fish Specialists

Wholesale and Retail Markets: San Francisco, Stockton, San Diego

General Offices: 110 Market St., San Francisco

CALIFORNIA sardine cannery are concerned over a recent ruling by a United States customs court which holds that "fish caught on the high seas by alien fishermen in vessels not proven to be of American ownership" are subject to duty. The duty rate at present is two cents on salmon, halibut, mackerel and swordfish taken beyond the three-mile limit; cod and "other fish" would be charged one cent duty, while sea herring, smelt, tuna, shrimp and other shellfish would be admitted duty free.

Sardines are not specifically mentioned in any of the above categories. It is therefore possible that they would come under the second classification, that of cod and "other fish," in which case sardine fishermen would be charged one cent per pound for their catches. Since \$6.00 per ton was the price paid during the last season, the addition of \$20.00 per ton duty obviously would mean cessation of all operations in this fishery by Japanese and other alien boat-owners.

J. P. Pryor, Monterey deputy collector of internal revenue, has asked United States Customs Department for a clearer ruling on this subject.

This division of CANNERS SECTION represents salmon packers of Alaska, British Columbia, Washington and Oregon

SALMON

SLIGHTLY OVER 200,000 cases of canned salmon was moved by members of Association of Pacific Fisheries during May, according to the monthly statement of 68 companies operating 147 canneries in 1931 with a total estimated pack of 5,900,000 cases, or approximately 85 per cent of the total American production. Figures at the first of June showed 2,122,044 cases on hand, as compared with 2,332,579 cases at the first of May.

Itemized accounts of stocks on hand at the beginning of May on the basis of 48 one-pound cans to the case, is as follows:

Grades or Varieties	Cases
Fancy red chinooks or kings...	53,923
Standard chinooks or kings.....	71,590
Pale chinooks or kings.....	9,089
White chinooks or kings.....	5,143
Puget Sound sockeyes.....	44,482
Alaska reds	417,102
Cohoes, silvers, medium reds...	151,850
Pinks	1,254,006
Chums	109,627
Steelheads	5,232
Total.....	2,122,044

BRITISH COLUMBIA CANNERS considered reduced commodity and fishing gear prices and the uncertain trend of the canned salmon market when they set a lowered scale of 1932 prices to be paid to the fishermen. Standing as follows: 27½ cents per fish for sockeye salmon (2½ cents below 1931), cohoes 12½, pinks 2, chums 4½, and 50 cents for red spring salmon. These gillnet prices are expected to apply to seine-caught salmon also in northern waters. Since salmon fishing on the Fraser does not commence until a later period, apart from bluebacks, efforts are being directed on the actual northern operations now under way. A leading production manager states that he feels certain these prices will stand up during the season despite press speculation to the contrary.

On the other hand, United Fishermen's Union (affiliated with Canadian Labor Congress) has applied for government arbitration on fixation of a higher scale, to be determined by such a board. No definite scale was suggested.

The report that Naas and Skeena River fishermen refused to put to sea for 27½ cent sockeye when the season opened on June 20, demanding 30 cents at least for cannery gear and 40 cents for independent lay, is true in substance but with one important qualification. Both sides agree that no state of strike exists. Adverse weather conditions, lack of fish as always during the first week and the fact that a \$275 gill net perhaps has but 14 weeks of life in two years operation, find both sides loathe to put out gear early, when no fish are striking.

The pilchard section of the United Fishermen's Union has requested \$2.50 per ton for pilchards; at present operators will not raise their offer of \$1.60 per ton and fishing is under way on those terms.—SHC.

EXPERIMENTS to determine whether or not hatchery-raised spring

chinook salmon of the Columbia River compare favorably with natural fish recently have been conducted in the plants of Columbia River Packers' Association and Union Fishermen's Cooperative Packers, Oregon firms. The work was directed by Hugh C. Mitchell, Oregon state superintendent of hatcheries; Chris Leinenweber, a member of Oregon State Fish Commission; and L. W. Hickey, superintendent of Klaskanine hatchery.

ISLAND FISH CO. of Astoria, Oregon, was incorporated during May by O. G. Graham, W. A. Graham and Henry Sherman to produce fresh and canned salmon. The Grahams own a number of fish-traps on the Washington side of Columbia River.

H. C. NUNAN, Ketchikan manager for New England Fish Co., recently announced to the press that his firm will operate only one cannery in American territory during 1932, that being the plant at Piller Rock on Columbia River. Canadian factories, however, will be opened. In a statement in The Ketchikan Chronicle, made after a southern trip, Nunan declares:

"While I would have much preferred to see them also in the United States, I am sorry to have to report that there really were many more signs of activity and optimism on the Canadian side of the line than on the American.

"There seems to be a belief on the Canadian side that Canada is considerably ahead of the United States in adjusting herself to the difficulties presented by the present depression, and that the prospects for the future are on the uptrend. I am a loyal American, but facts are facts, and that is the way they appeared to me.

"After leaving Ketchikan on the Northland two weeks ago we stopped en route at Prince Rupert for a short period while fish was being unloaded for shipment east.

"While there I had opportunity to discuss with people interested in the fish business the present depressed condition of the fish market, which is seriously affecting Prince Rupert, as well as all other ports.

"The general impression prevails at Prince Rupert, that under present conditions, with low prices on all commodities, and especially on eatables, that low levels for halibut and salmon are inevitable and cannot be remedied while heavy production continues, for some time to come. This is especially true with the advance of the season, with eastern fishermen dumping large quantities of mackerel, swordfish and other cheap east coast fish on the market to compete with our halibut and salmon.

"The fish dealers with whom I talked in Prince Rupert as a whole and individually deplored the fact that so much west coast halibut and salmon were being diverted away from established markets, and into the hands of brokers and commission men.

"In Vancouver I found quite a spirit of optimism among those engaged in the fish business, especially due to the belief

that the dominion was considerably ahead of the United States in making adjustments and due to the preferential tariff being put in effect to help Great Britain and her colonies. Their banking institutions were strong, and business seemed to be on the up trend."

The main topic of conversation with all business men in the Vancouver, British Columbia, district appears to be the coming imperial economic conference to be held at Ottawa in July. The Canadian chamber of commerce organizations, known as the boards of trade over there and the manufacturers associations, and others, are working on the problem of empire preference to assist in the stimulation of trade between Great Britain, her colonies and dominions.

"This economic conference, they believe, carries great optimistic possibilities, especially with reference to increased business in canned salmon, mild cured salmon and frozen fish, and they expect to see results soon thereafter in the stimulation of Canadian Pacific coast fish business.

"As a result of the fact that much of the over supply, which is stagnating American business, has been absorbed in Canada, Canadian Fishing Co., Ltd., subsidiary of New England Fish Co., was actively engaged in preparations for canning, mild curing and freezing operations at its various British Columbia stations. The canning of early fish was actively being carried on at the Vancouver cannery where bluebacks and spring salmon were being hand packed into one-pound talls.

"Much as I regret to have to say it, the same spirit of optimism does not prevail on the American side as on the Canadian side, especially among the people of the fish industry. It seems to be the general belief that the bottom has not been reached in the United States. There are still substantial quantities of mild cured salmon on hand; the packs of carried-over canned salmon are extremely heavy, and the packs of carried-over halibut, in many hands, is larger than usual.

"King salmon seems to be plentiful in all districts and are bringing low prices. One reason for the low price is that practically all of the fish have to be forced into fresh fish consumption or into cans. There is apparently very little desire to mild cure even at these low prices, and whatever talk one hears regarding future mild cure operations is not too optimistic. Prospective prices quoted for the finished product are low.

"On the Columbia river, New England Fish Co. is operating its Piller rock cannery, which has been in operation for 55 consecutive years. This cannery is packing Columbia river chinooks. It is the only cannery that New England Fish Co. will operate on the American side this season due to the market and the big carried-over packs in various hands. New England Fish Co. will maintain its selling organization at Seattle and its affiliations throughout the world, and will sell from the packs of other companies. It already has entered into contracts with a number of packers, especially of red salmon."

This division of CANNERS SECTION concerns producers of salted, cured, smoked and processed seafoods, fish meals and oils.

CURED FISH and FISH BY-PRODUCTS

MILD-CURE OPERATIONS this summer promise to be much below normal. The domestic market never has been able to absorb a large amount of light-salted salmon, and Germany, whose smokers have been the chief customers of West Coast mild-curing firms, is prevented from taking its usual quota by uncertain economic conditions.

Early in the year, California firms announced that they did not expect to put up any mild-cured salmon. However, since that time several firms have modi-

fied their plans, this change being due in part to heavy catches of fish which had to be handled in some fashion. A. Paladini, Inc., and F. E. Booth Co., Inc., each had put up several tierces by early June at Eureka, while Western California Fish Co. had processed 13.

AMERICAN PACIFIC Whaling Co. of Seattle has a fleet of four killer-ships in Alaskan waters this summer and is operating its shore plant at Port Hobron, Kodiak Island. The vessels were

dispatched from their moorage at Bellevue on Lake Washington during May and reached their northern headquarters late in the month.

Ships and their officers include: "Aberdeen," Capt. John Berntzen, master and gunner; "Westport," Capt. A. M. Storvick, master, and Chris Olsen, gunner; "Paterson," Capt. Peder Oness, master, and T. S. Christiansen, gunner; "Moran," Capt. H. Aaset, master and gunner. Thirty-five men are being used in the shore station.

It is expected that the new international convention to regulate whaling will be put into effect shortly. Hon. Hugh R. Wilson, American minister to Switzerland, signed the document on behalf of the United States recently, and ministers for Albania, Belgium, Czechoslovakia, Denmark (with a minor reservation concerning Greenland), Finland, Germany, Mexico, Netherlands (including Netherland West Indies and Netherland East Indies), Poland, Rumania, Switzerland, Turkey and Yugoslavia also affixed their signatures to the agreement. It was understood that Great Britain and Norway, the two principal operators of whaling ships, also were ready to adopt the convention.

The agreement applies only to baleen or whalebone whales, prohibiting the killing of calves or suckling whales, immature whales, and females accompanied by calves, and right whales, including North Cape, Greenland, southern right, Pacific right and southern pigmy right whales. It also requires fullest possible use of carcasses, including extraction of oil and (at shore stations) use of all residues. It also provides for collection of biological data and statistical information and urges payment of gunners and crews on the basis of the value of whales taken rather than on the number killed.

LIBBY, McNEIL & LIBBY, canning organization which operates salmon packing plants in the Northwest, maintained its 1931-32 sales volume and closed its fiscal year in good financial condition, according to E. G. McDougall, president. The annual statement shows current assets of \$34,736,307 against current liabilities of \$14,699,442, with resources of \$56,956,213.



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Fishing Quality Rope

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F I S H E R M E N

Burns Seal-Oil In Cook-Stoves

UP IN THE ARCTIC, where blizzards bury the houses in snow, and where winter lasts eight months of the year, man's great concern has been that of keeping warm. How to get heat, how to keep from freezing, how to live through until the coming of another spring, has occupied the attention of Eskimo, Siberian and Alaskan miner ever since races of men invaded the frigid areas around the pole. Where heat-producing means have been crude and inefficient, there the human animal has had to swathe himself in layers of fur; comfort and civilized living depend upon the availability of stoves, ranges, and other energy-radiating furniture, and upon a supply of fuel suitable to conversion into fire.

Far from land, in the heart of Bering Sea, lie the Pribilof Islands. These inconsequential land-bodies are barely detectable upon a globe, for they are situated in an isolated position in the vicinity of the fifty-fifth parallel of latitude, and just to eastward of the arctic jog of the International Date-Line. Treeless, devoid of cover, desolate and unpeopled save for a handful of Eskimo and a United States custodian and school teacher, the rocky islands never-the-less are noted for the migratory herds of fur-seals which each summer congregate there to tenant the ancient rookeries with which the shores are lined. Ever since the solemnizing of the international "Fur Seal Treaty", the United States Bureau of Fisheries has been custodian of the seal herds, and warden of their breeding-grounds. Officers of the Bureau superintend the annual enumeration of the rookeries, and direct the killing and skinning of non-breeding and superannuated stock.

Incident to the yearly harvesting of

pelts, several thousand skinned carcasses are produced, and the utilization of these has been a problem which for many years has engaged the attention of federal men. As early as 1918 a reduction plant was built on St. Paul's Island by Ray B. Bentley, expert millwright, machinist, canneryman and reduction-plant operator from southern California. Quantities of meal were produced, and this material was utilized in feeding foxes which are native to the place. With the meal was mixed some of the oil which likewise was produced from the bodies of the butchered seals. However, a large surplus of oil remained, and the profitable disposal of this quantity was a matter presenting a problem to the managers of the international enterprise.

In 1931 new and more efficient reduction machinery was installed on the Pribilofs. This was imperative, for the number of seals killed had increased annually until the quantity of carcasses had risen to important totals. Never-the-less, with prices for oil of all kinds rapidly declining, it was apparent to Henry O'Malley, federal commissioner, that to sell the seal oil at a profit—after having to transport it several thousand miles to market—was certainly a dubious undertaking. O'Malley therefore looked about for suitable disposal on the islands, and since more than enough oil was available for all fox-feeding purposes, he conceived the idea of utilizing the surplus for generating heat.

The fame of the Ingle oil-burning stoves and ranges already had spread into the region of the arctic, for patrolcraft of the Bureau of Fisheries have "Ingleized" galleys, and have been functioning with celebrated success. The San Diego firm of manufacturers therefore was in-

terrogated concerning whether or not seal oil could be burned in Ingle equipment, and the Bureau informed the makers that initial attempts to use crude oil in stoves adjusted for petroleum (diesel) fuel had resulted in some of the oil remaining unburned in the base of the Valjean-type carburetors.

"Send us two 5-gallon cans of your oil, and we'll gladly tell you whether or not it will burn," wrote Finlay M. Drummond, president of Ingle Manufacturing Company to C. W. Christoffers, federal official in direct charge of Pribilof management.

Compliance with the request was immediate. Then Drummond set his experimental staff to studying the new fuel, and this is what he says of it:

"We tested out the seal oil over a period of three weeks, using a 9-foot-long 2-oven range, a small 1-oven domestic range, and a water-heater. In all of these it worked out very, very satisfactorily. The crude seal oil gave off more heat than any other oil we have ever used. It was clean, practically smokeless and sootless, and was entirely without odor. In addition to these excellent qualities, it deposited hardly any—if any—residue.

"In consequence of these findings the Bureau of Fisheries has been burning crude seal oil in ranges and heating units on the Pribilof Islands for more than 9 months, and we understand that this has proven to be efficient and practical in every way, as well as highly economical. Because of the combustion principal of Ingle equipment, there were no adjustments to be made except to increase the diameter of the air-intake holes in the carburetor. Crude seal oil is heavier than ordinary diesel oil, so more air was required to get quicker generation."

A RECEIVER IN EQUITY for Halfhill Packing Corp., Ltd., was appointed July 16 by U. S. District Judge Casgrave, on petition of a creditor. Bond for the receiver, Julius E. Linde, was set at \$25,000.

The petition states that the Long Beach canning concern has assets of \$378,000 and liabilities of \$236,000, but that the receivership was advisable to conserve assets.

FAIRBANKS, MORSE & CO., diesel engine firm with headquarters in Chicago, Illinois, has announced its West Coast managers for 1932. Men selected to head the Fairbanks-Morse district offices are: V. E. Nittinger, Los Angeles; G. C. Green, San Francisco; Portland and Seattle (now combined, with Seattle as the central office), W. S. Corington; Salt Lake City, J. A. Pelty. Marine department heads are: J. N. Johnson, Los Angeles; R. Murray, San Francisco; G. E. Craig, Seattle.

In addition to full machine-shop facili-

ties in its district headquarters, Fairbanks, Morse & Co. also maintains a completely equipped shop at Fish Harbor on Terminal Island. A. S. Whitehead is in charge of the Los Angeles Harbor plant and is assisted by a staff of competent mechanics and engineers. Lines of parts are available at Terminal Island and at all district offices. The coast branches are but a few of the many maintained by the company, managers and representatives also being located at various points on the Great Lakes, East Coast and Gulf of Mexico.

In addition to diesel engines, which are produced for use in work-boats and pleasure craft as well as aboard fishing vessels, Fairbanks, Morse & Co. also produces pumps (steam, power, centrifugal and turbine), scales, electric motors and generators, and electric lighting plants.

"**JUGOSLAVIA**", that energetic San Pedro combination ship which by San Diego tunamen is, in dubious fondness, dubbed "Jug o' Saliva", made fast along

the bulkhead at Harbor Boat Building Co., Fish Harbor, during the week of July Fourth, while having its engine renovated. John J. Martin, staff member of the Harbor organization, explains that his firm has a new cleaning solution that is a "wow". It is a soapy sort of solvent that is kept hot while in use, and by employing a little engine and a centrifugal pump it is circulated through the cylinder-heads and manifold of a diesel—these parts having been removed from the engine, of course, and connected together by a series of hoses for the special purpose of effecting the cleaning operation.

"It works like a charm," says Martin. "Personally I don't know what the stuff is, but we have cleaned up a lot of engines with it recently, and it leaves them as bright inside as a five-cent piece. Thus far we have cleaned heads and manifolds on 'Asama', 'Costa Rica II', 'Bremen', 'Hawk', 'Theodore Foss', 'San Lucas' and several more. It is equally fine for the condensers on ice-machines, which likewise become inefficient because of incrustations on their cooling surfaces."

OYSTER DEVELOPMENTS near South Bend, Wash., in Pacific County, are proceeding at a steady pace and possibilities for profitable business next year are considered very good, according to information recently received from Nehalem Bay Fish Co.

Growers are working over their plantings, getting them in proper shape by breaking up clusters, etc., and are preparing the beds for the spat of the native oysters. It is hoped that a large amount of the second generation Pacific, transplanted Japanese oysters, will also develop.

Interesting results are reported by growers who have seeded their beds with the Pacific variety, on the basis of reports kept since the original plantings of the transplanted seed. Charles De Roose of South Bend planted 50 cases of Pacific oyster seed in March 1930, and this last season he harvested about 100,000 oysters

from an acre of ground near Stony Point. He still has a large number remaining to be harvested later.

Profiting by his experience, De Roose this year planted 40 cases, spreading them out over four acres. He and other growers have found their tendency is to plant too closely.

George Wilson, another old-timer in the game, has planted 100 cases of seed on his 100 acre holding south of Stony Point. With his son, Willard, he will operate an oyster shipping company next fall, under the name of George Wilson & Son. In addition to their own holdings, they will harvest the crop from the beds planted by E. A. Boatman a year ago, with 70 cases of seed.

Native oysters are showing a healthy increase, B. Haagensen reports. He has had beds off Bruceport for a number of years.

Many growers are now paying the

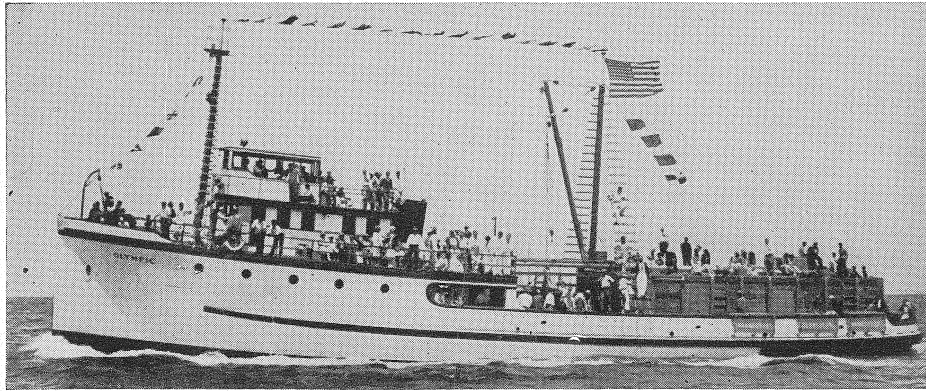
higher fast freight rate on seed oysters from Japan, as the slower transportation, which takes about 25 days, permits many of the young oysters to die enroute.

The favorable reception accorded Pacific oysters in American markets leads oystermen to believe next season will show a much better demand and higher prices.

ALL OIL TANKERS of the Lykes Line, which bases its fleet of seven big petroleum ships at Galveston, Texas, now have galleys equipped with Ingle oil-burning ranges. "Genevieve Lykes", last vessel of the flotilla to be "Inglized", received its No. 218 "Navy Destroyer Type" range from the San Diego manufacturers only a few days ago, and now has the new equipment installed and operating. The Lykes people were quick to adopt the Ingle stove, once its greater safety was demonstrated to them. Their ships carry cargoes of combustible petroleum distillates such as gasoline, and the danger of explosion is very great. Ingle ranges minimize this peril, for they use no gas or highly volatile fuel which might explode and ignite the ship's cargo.

"ALEKSANDAR I", which was running home from Baja California yellow-fin banks in company with the purse-seiner "Commander", detected the danger in the former ship's position and tried to signal it to alter course so as to keep farther offshore, state members of the crew. It was clear to the following vessel that "Commander" could not clear San Roque Island, and if it did not go ashore there would strike somewhere on the mainland south of Punta San Roque. But "Commander" was more than a mile in the lead, and because of distance, wind, darkness of night, and low-lying mist, "Aleksandar's" signals were not seen nor heard.

"IT'S SURE GETTING tough," opines Walter Morgan, master of "Chicken of the Sea", "when you see 23 vessels on Uncle Sam's Bank at one time, and all of them so hungry for fish that they are baiting hooks to catch skipjack—but that's exactly what we saw a few days ago as we came northward from the far-southern grounds. There they were, nearly two dozen of them, and as crazy to see fin as so many starving pelicans. The ones that had live-bait big enough were baiting hooks with it and trying to get a few pounds of skipjack aboard. If those aren't desperate measures, then we've never known what hard fishing is."



Tunaship "OLYMPIC", owned by Captains Zankie and Zuanich and one of the largest and newest of the fleet The Union Ice Company has been serving for years

"Union" Ice Lasts Longer

—it's packed so that it will—and there lies the secret.

Properly packed ice, such as Union, does not crystalize when crushed to fill the holds of fishing ships. Each fragment is a solid piece with all of its original refrigerating qualities intact within it.

So—when your profits depend so largely upon how your ice "holds" be sure you get the best—specify "UNION".

THE UNION ICE COMPANY

"Miles Made"

Flax

Salmon Twine

and

Gill Netting

MILES LINEN CO.

Salem, Oregon

This division of FISHERMEN SECTION is official publication for Purse-Seine Fishermen's Association of Seattle, Washington.

NORTHWEST

JAMES HUNTER, pioneer resident of Prince Rupert, died the latter part of June while aboard the halibut boat "Ring-leader", then engaged in fisheries patrol work.

Hunter was employed as engineer on the boat. Thomas D. Smith, owner and skipper of the "Ringleader", found him dead of heart failure in the morning, while off Banks Island.

HALIBUT SCHOONER "SPRAY", Seattle boat owned and skippered by Capt. W. Selset, ran aground on a sand bar at the end of Metlakatla Passage early in the morning of June 17. The vessel was coming in from the banks with 32,000 pounds of halibut. She was undamaged, and came off with the tide in time to sell her catch at the Prince Rupert exchange.

THE GRAYS HARBOR REGION of the Washington coast came into its own this year during the fresh salmon season, and showed greater activity than at any time in recent years.

In April and May some 400 boats, Columbia River trollers, etc., were basing at Grays Harbor, selling their catches here and at Westport. This was the first year when the Columbia River Diesel trollers came to this section in large numbers.

The increased activity here was due to a slight increase in price offered for delivery in Aberdeen over that of Westport, and because the Seattle price was not sufficiently higher to induce the boats to make the longer run to that port. John Hannula has been handling a good part of the catches coming in.

Residents of Grays Harbor hope to see their locality forge ahead again next year as an important fishing center, particularly in the spring and early summer, as the salmon seem to run off Grays Harbor earlier than elsewhere.

THE FIVE-YEAR PLAN of the U. S. S. R. called for a catch of 9,000 tons of fish in the first three months of 1932. Late reports announce that the plan was exceeded, the catch in Far Eastern waters being 9,483 tons. The Crimea catch amounted to 1,691 tons.

BOUNTY ON SEALS was restored by Oregon authorities May 1, after having been suspended since the first of the year. The five dollar bounty on seals will be paid on all killed since May 1.

CAPT. JOHN M. MORRISON, former Prince Rupert agent for the Deep Sea Fishermen's Union, has returned to nautical life, having assumed command of the service boat "Billmor" now in fisheries patrol work. Capt. Morrison was at one time owner and skipper of the halibut boat "D. S. T."

"ADDINGTON", halibut boat owned by Arnt Sevold of Juneau and his brother Ole Sevold, Seattle, recently went on the rocks at the north end of Dundas Island. She was taken to Prince Rupert for temporary repairs, and then left for Juneau, where overhauling was completed, and was outfitted again for the halibut banks.

DAILY FISHING COSTS, as calculated by British Columbia fishermen, provide an interesting sidelight on where the fishermen's money goes. Dundas Island fishermen say that their actual operating costs are \$3.57 per day not including any living costs not incurred in pursuit of their business.

The following costs were listed as for inshore fishing:

Gasoline for 10-hr. day (5 gals.)	.....\$1.15
Lubricating oil, grease	..... .10
Food	..... 1.00
Fishing Gear—	
Cotton, lines	..... .02
Cuttyhunk	..... .06
Lead	..... .03
Spoons	..... .09
Leader wire	..... .02
Swivel rings, etc.	..... .03
Polish	..... .01
Hooks	..... .04
Boat and Engine—	
Paints, putty, etc.	..... .10
Oilskins	..... .07
Anchor rope, etc.	..... .10
Engine repairs	..... .24
Batteries, etc.	..... .03
Cooking utensils	..... .01
Clothing	..... .33
Blankets, etc.	..... .02
Dentist, etc.	..... .12
Total	.....\$3.57

These expenses were said to be entirely apart from his family living costs.

"PROSPERITY", after fishing earlier in the season on the banks out of Seattle, has gone north and cleared from Ketchikan for the sea fisheries. The vessel is a halibut schooner, skippered by Capt. Nick Peterson. Boat, captain and crew are all old-timers in Alaska.

IVAR THOMASSEN, a gillnetter living on Zarembo Island at Scow Bay, has been missing since a searching party found his boat with the net half pulled in and one oar missing. He is survived by his widow and family living at Pearson, Wash.

A NUMBER of northern fishing boats have been chartered by the Canadian Fisheries Department for patrol work this summer. Among the halibut boats are the "Joe Baker", Capt. Clarence Campbell; "Ringleader", Capt. Thomas D. Smith; "H and R", Capt. Robert Shrub-sall; "Unome", Capt. David Ritchie. Service boats include "Billmor", Capt. J. M. Morrison; "Dixie Rupert", Capt. George Newcombe; "Ircne L.", Capt. Lorne Peek. The trollers are "Mabel", Capt. John Prescott; "Maivin", Capt. Jack McLeod; and "Seminole", Capt. Ivor Wick. Capt. J. W. Moorehouses's seine boat, "Ogden", also is under charter.

The patrol boats are being moored at the floats of Pacific Salvage Co. while in port at Prince Rupert. The Fisheries Department's own float was wrecked by a gale last winter, and was later towed to Digby Island.

CARMEL CANNING Co. of Monterey has moved its San Francisco offices to a room adjoining its old location at 110 Market Street.

PACIFIC MARINE SUPPLY CO., Seattle, who have recently become distributors of Ingle ranges, have opened a new sales and show room at 517 Pike St., in charge of Willis Nicely.

NINE CANNERIES on Skeena River, three on Naas River and two in the central area of northern British Columbia began operations shortly after opening of the sockeye salmon fishing season on the morning of June 20. The Skeena River plants which announced their intentions of operating were Porcher Island, Claxton, Carlisle, Port Essington, Balmoral, Haysport, Cassiar, Sunnyside and Inverness. On the Naas, Arrandale, Mill Bay and Wales Island were to run, with Butedale and Namu in operation in the central area. The total is three more than the number of plants which put up packs in 1931.

GEORGE GORDON BUSHBY, head of Rupert Marine Products, Ltd., of Prince Rupert, British Columbia, died during May after having operated a reduction plant at Tucks Inlet for 11 years. His death occurred in Victoria, following an operation.

UNITED STATES Alaska Packing Co., meal and oil firm, lost its appeal in the suit of eight herring fishermen who were seeking damages for alleged non-fulfillment of contracts and as a result will have to pay approximately \$60,000, according to information recently given to the press. Judgments vary from \$1,982 to \$10,658, and \$5,000 also is provided for attorney's fees.

BRITISH COLUMBIA'S OUTPUT of canned salmon in the five-year period, 1927-1931, averaged 1,540,744 cases annually. Despite the fact that market conditions resulted in the 1931 output being much below normal, the average production in 1927-31 was only 92,000 cases below the average for the preceding five years.

FROZEN FISH EXHIBIT in the Port of Seattle's Spokane street terminal has a new addition in the form of a young sperm whale, 14 feet long and weighing 1,300 pounds. The mammal was caught in a fish trap off Whidby Island in Puget Sound by Sebastian-Stuart Fish Co., which presented it to the Port.

Whales are rare in Puget Sound these days. Whaling in north Pacific waters has declined until now only two companies are engaged in this fisheries, the California Sea Products Co. of San Francisco, and the American Pacific Whaling Co. of Seattle. About 2,500,000 gallons of whale oil and 500 tons of bone meal and 2,000 tons of fertilizer are produced annually on the West Coast.

SALMON FISHERIES of the Columbia are to be included in a new textbook on biology now under preparation by Miss Frances D. Curtis, instructor in biology of University of Michigan's school of education. Information upon this subject recently was requested of Astoria, Oregon, chamber of commerce.

This division of FISHERMEN SECTION is
official publication for West Coast Fisheries
Association.

NO. CALIFORNIA

ALTERNATE SPECIE FISHING

operations were started in northern California waters recently, when two purse seiners began fishing alternately for sardines and halibut.

"Miss America", working for F. E. Booth Co., Inc., and "Francisco", delivering to Western California Fish Co., came to Eureka from Monterey in April. It is understood that they will continue the alternate operations for the remainder of the season.

The sardines, which are being put into storage for bait, are being taken on the southern Humboldt coast, off Shelter Cove.

"T. G. CONDARE" of the Standard Fisheries fleet at Eureka, was laid up for a short time during June with a damaged rudder. Repairs on this vessel were effected at Eureka, but the trawler E. Antoni of the same fleet, was sent to San Francisco at about the same time for engine repairs.

"ATTILIO PALADINI" was sent from Eureka to San Francisco in June for a complete overhauling, following installation of a new rudder to replace the one damaged previously off the Humboldt coast.

"Catherine Paladini", another trawler of the Eureka fleet of A. Paladini, Inc., replaced the "Attilio Paladini", and when the "Attilio" returned, the former also was to be sent south for complete repair work.

McPHERSON LOUGH was welcomed as a visitor in Eureka by his many northern California friends who knew him while he was stationed on the patrol in Humboldt county. Lough, who is a deputy state fish and game warden, is now stationed at Palo Alto.

FOUR OYSTER FISHERMEN

drifted on a barge in San Francisco bay the good part of a night, after the motor on their oyster barge failed. They were Attilio Civasco, Lloyd and Richard Woodworth, and William Strassovich, and were fishing for Consolidated Oyster Co. off Fuller's Point.

A CLASSIC MARINE BATTLE was fought at Salada beach, near San Francisco, last month, when a man-eating shark and a big bull seal clashed in a duel to the death.

Crowds of fishermen and bathers saw the spectacle a thousand feet off shore. The smaller fish had fled the scene with the arrival of the shark, so there was no fishing that day. The battle lasted more than an hour, the two giants lashing the water into foam. On the beach the next day was found the body of the seal with head and tail gone, the victim of the savage fish.

FISH ARE DUTIABLE if caught on the high seas by aliens in vessels not proved to be of American ownership, as provided in the tariff act, according to an announcement by the United States Custom Service. This is the result of a recent decision of the United States Customs Court to this effect.

ED V. MOODY, well known to many northern California fishermen, died last month at San Francisco. He was one of the organizers of the West Coast Fishermen's Association, and was formerly a deputy of the California Division of Fish and Game, stationed at Santa Cruz.

Moody was a familiar figure at Fishermen's Wharf in San Francisco, and had lately interested himself in organization matters for the crab and salmon fishermen.

FISH NET TREATMENT

DURING THE PAST several years the Bureau of Fisheries, with the assistance of commercial fishermen and net and twine manufacturers, has been investigating the causes of deterioration of fishing nets, and preparing and testing preservatives and methods which will aid in prolonging their useful life.

In a report issued by the Bureau, under Commissioner Henry O'Malley, it is pointed out that the investment in fish nets in this country amounts to about \$16,000,000, which represents 20 per cent of the annual value of the fish to the fishermen. Replacements may be necessary within a few weeks, although the heavier types of gear may last several seasons. For the webbing alone, the cost of depreciation is about \$7,000,000 per year, a figure which would probably be doubled if determined on the value of the completed net rather than the webbing.

Work has been carried out on the Pacific Coast, in Florida to Maine waters, in the Mississippi Valley and upon the Great Lakes. Results indicate that waste can be eliminated by proper treatment and handling of the nets.

The average service of heavy nets such as seines, pounds and traps, may be materially increased from one and one-half years present average, by the application of a toxic dye to the cotton during the manufacture of the thread, and by proper application of a specification coal tar for mechanical protection to the webbing. Individual requirements may be met by adding certain chemicals to the coal tar.

The care of nets after use has been found important in increasing their life. Light gear such as gill nets should be cleaned immediately after removing the fish, and the nets should be hung loosely in well ventilated shade. Special chemical treatment is recommended as beneficial in some cases.

It was also found in the work that the temperature of the preservative when applied is important. Temperature should be controlled in a water or low steam jacketed kettle, to a range of 180 to 220 degrees Fahrenheit.

Fishermen interested in detailed information may obtain it without cost by writing the Bureau of Fisheries, Washington, D. C., and asking for special memorandum No. 696-D.

FISHING BOAT FACILITIES on the Martinez waterfront was a topic of discussion at a recent meeting of the Martinez Chamber of Commerce. A committee was appointed to investigate the possibilities of constructing adequate facilities, and was composed of Leopold Stinchfield, Fred Hittman and Roy Davis.

JOHN SWANSON, San Francisco fisherman who lived at 1494 Turk St., drowned in the bay when he fell from his boat while he and two companions, Harry Buttmer and Frank Mungari, were repairing the motor. His body was found ten days later near the Berkeley shore. Buttmer and Mungari were obliged to spend the night in their drifting boat before being picked up.

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We use PORTERDALE SUPERIOR SEINE TWINE, because it is best.

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Netting for Haul or Drag Seines, Purse Seines, Gill Nets, and all purposes.

THE FISH NET & TWINE CO.

JERSEY CITY, N. J.

Coast Representative: JOHN H. DAVIS CO., 36 Spear St., San Francisco

This division of FISHERMEN SECTION is official publication for Monterey Sardine Industries, Inc.

MONTEREY

MONTEREY BREAKWATER fight has been carried to Washington, D. C., where another appeal will be made for extension of the 1300-foot breakwater now being built, to 1700 feet. R. M. Dorton, City manager, left Monterey early in June to attend a hearing before the board of army engineers on June 14, in an effort to secure reversal of the recent unfavorable report made by Col. H. A. Finch, district engineer. He is accompanied by R. L. Hughes, banker.

Surveys made over a number of years show that a breakwater less than 1700 feet in length is inadequate to protect the fishing and pleasure boat fleets of Monterey, and the large commercial craft which call at this port. Originally, a breakwater 2600 feet long had been recommended.

An additional sum of \$200,000 is being sought for adding another 400 feet to the present construction work. The principal arguments for extension are given as follows: the expenditure originally authorized was \$610,000, and a remarkably low bid has enabled the government to save more than \$200,000 on the present project; an expenditure of \$825,000 would be amply justified by present annual losses, which are estimated at \$57,800; the present protected area is not sufficient to accommodate all craft regularly calling at Monterey; nearly 50 per cent of the shore line is owned by the federal government; the extension of the sea wall would lessen the problem caused by the dumping of government sewage into the bay; and that a saving of about 25 per cent could be made by carrying out the extension at this time, while the contractors equipment is still in place.

DYNAMITING OF FISH by Uncle Sam's Pacific fleet of fighting ships and planes is to stop, according to word from Arthur A. Alstrom, superintendent of the State Fish Exchange for California.

Heavy losses have been noted in the past because of the detonations of the big guns or depth bombs used in war games practice too close to shore. As a result of complaints by Mr. Alstrom and other commercial interests, Admiral Frank H. Schofield, commander of the Pacific fleet, has ordered the navy vessels and planes to do their practicing farther out to sea, and away from the established commercial fishing areas.

ERASIMO FERRANTE, prominent member of Monterey's Italian colony and for years a leading figure in the sardine industry, succumbed to pneumonia at his home about six weeks ago. He had been a resident of Monterey for 20 years.

The surviving relatives are the widow, Mrs. Angelina Ferrante, two sons, Peter J. and Rosario Ferrante of Monterey; four daughters, Mrs. Mary Lomanto of San Jose, and the Misses Minnie, Angelina and Catherine Ferrante of Monterey. His brother, Antonio Ferrante, resides in Pittsburg, Calif.

A NIGHT COLLISION between the "Monterey" and the "New Moon" on Monterey Bay early in June, resulted in the near drowning of Capt. S. Garcia of the

former boat, and damage to his craft estimated at \$250.

According to reports, the "New Moon," owned by S. Russo and skippered by Capt. Joe Atiranga was about 200 yards off the new municipal fish wharf, hauling in a squid net. The "Monterey" is said to have crashed into the motionless boat, the shock throwing S. Garcia from the deck into the water. He was immediately picked up by the crew, however.

The "New Moon," which was not damaged, went on fishing, but two other fishing craft ran across the net later, injuring it.

CALIFORNIA FISHERMEN are well represented in Alaska this year. It is estimated that about 175 fishermen from Pittsburg, Calif., alone, are participating in the Alaska salmon fishing season.

FISHERIES SHORE GUIDE

NORTHERN CALIFORNIA

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Striped Bass, Salmon.
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444 Bay Street, San Francisco.

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Purse Seine, Half Ring and Lampara Nets. Bait and Crab Nets. Complete stock—Soft, Medium and Hard Laid Twines
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Propellers

Built, Repaired, Repitched for any Ship afloat.
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Thirty men went north aboard the "Bering," operated by the Alaska Packing Co., bound for Neknak on the Bering Sea. Fifty five went on the "Chirakof," owned by the Antioch Packing Co. The "Garcia" took 32 for the Neknak Packing Co. They are expected back some time in August.

Astoria, Oregon, sent 45 men from San Francisco in May, aboard the Alaska Packers Association steamer "Delarof." The Astoria men usually are employed by Columbia River Packers Association in Alaska, but as these plants were not operated this year, the Alaska Packers took part of the crew.

With them went Tom Wooton, veteran Alaskan cannery superintendent. This makes 26 years in Alaskan cannery work for him. He went to Nushagak to represent Columbia River Packers Association.

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MONTEREY

Salt

MONTEREY BAY SALT CO.
High Grade DEEP SEA SALT.
Coarse Ground Varieties.
Moss Landing, Monterey County.

EUREKA FISH PRICES to salmon fishermen were reduced to 3½ cents a pound the middle of June, with one-man boats being allowed to bring in 400 pounds and two-man boats 600 pounds.

Union fishermen refused to accept the price and the fleet was laid up for a week. The fish companies finally agreed to raise the scale to 4 cents per pound, and the boats again went to sea. The maximum poundage allowance was not changed, however.

SARDINE EXPORTS from San Francisco during May totaled 951,611 pounds, almost the same as those from

FISHERIES SHORE GUIDE

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Los Angeles, from whose port 923,000 pounds were shipped. Most of the San Francisco shipments went to the following countries: England, 218,000 pounds; Philippine Islands, 185,000 pounds; Dutch East Indies, 149,000 pounds; Belgium, 97,000 pounds.

"SUNKIST", San Pedro purse-seiner, was on the Al Larson railroad during June while having stern-gear tuned up. George Bentley, office manager of the yard, says the plant has been filled with small craft, all of them fishermen, but a good many of the sport-angling class.

AL LARSON, trout-fishing shipbuilder of Terminal Island, has hauled out one of the Andrew Larson fleet of sport fishing craft and put a crew to work installing a 4-cyl. 80-hp. yacht-type Atlas-Imperial diesel in it. Andrew Larson makes headquarters at Manhattan Beach, from which point he operates "America I"; "America II"; "America III"; and so on, in the lucrative business of taking fishing parties to sea. The vessel owner sees advantages in the economy to be had in diesel power, and in obtaining one of the Atlas-Imperial entirely-enclosed models he has a regular yacht engine in his boat.

METALLIC CANCER of stuffing-boxes and stern-bearings has been a source of much revenue to shipyards and drydocks during recent years. The eating away of stern-gear has been a chief cause for frequent hauling-out or dry-docking, and many ships found it imperative to have recourse to this procedure at least every 100 days. Now the disease has been greatly alleviated—and in many instances totally cured—by the installation of Electrolysis Eliminators, and boat owners are being spared one of the principal items of expense in the old-time maintenance budget.

Hervey M. Petrich, who is San Pedro agent for the Marine Electrolysis Eliminator of Puget Sound make, states that now a great proportion of the Fish Harbor fleets has his device aboard. Among the craft so equipped he names: "Senator", "Excellent", "San Lucas", "Reliance", "Commander", "Northwestern", "California II", "Western Pride", "Adventurer", "Sonny Boy", "Cobra" (of the Los Angeles County patrol), "Santa Margarita", "Bremen", "Old Timer", "Helen C. Porter" (pilot boat), "Patrol Boat No. 1" (Los Angeles Harbor Board), and a large number of yachts and big commercial carriers, among which latter class is the coastwise express steamer, "Yale". At San Pedro the H-10 Water Taxi Company is installing electrolysis eliminators on all its fleet of fast shore-craft, and on July 6 the purse-seiner "Rainbow" put the anti-metallic cancer apparatus aboard. Petrich says that the worse times get, the better business is, for when vessel owners have to get down to close figuring in order to keep their boats in commission they realize that they have to have the eliminators to cut down their costs of operating.

Galvanizing for Fishing Vessels

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FISH FREEZING PLANT of the Union Ice Company, at 640 South Fries Street, Wilmington, has been busily occupied handling numerous lots of miscellaneous fish during the last 40 days. Knud Jorgensen, superintendent of fish refrigeration, states that not less than 60 different lots have been dealt with by himself and his crew of "Eskimos". Much of it has been big shrimp from the Gulf of Mexico—it seems that shrimp production in that area is getting to be a year-around business. Local barracuda, white sea bass, and other local sorts have gone to make up the balance of the consignments.

EGGERT & PETERSON, ship-propeller engineers whose shop stands at 216 East "C" Street, Wilmington, had placed in their hands the "wheel" of the tunacruiser "St. Therese." They cut down its diameter, altered its pitch, and trued it up all around before returning it to its owners.

Another fishboat job that was handled in the shop was that of the new Western-Enterprise propeller for the seiner "Conquest." They finished the "wheel" before it was taken to the shipyard for fixing upon the shaft.

Approach of the speedboat regattas during the summer's Olympiad has brought a lot of racing propellers into the Eggert & Peterson plant. This is especially true of outboard rigs, of which a large number have been handled by the partners.

"CHICKEN OF THE SEA" dropped in at Cocos on its last equatorial cruise, and while in the vicinity of that famous "Treasure Island" which gained renown through the literary efforts of Robert Louis Stevenson, took time to anchor in Wafer Bay, which is headquarters for the Canadian expedition of treasure-seekers that passed through San Pedro last winter aboard a small, one-masted vessel.

"We met the gold-hunters, and were entertained by them," says Leon Segal, wireless telegrapher aboard the Morgan brothers' tunacruiser. "They brought out a wild boar to us—they had shot it somewhere in the jungle of the mountainside. They were short of provisions, and we gave them all that we possibly could spare. From the way they talked, all of them were homesick, but they weren't down-hearted, for they all felt sure that they had the \$100,000,000 treasure of the old pirate admiral, Morgan, definitely located. To do this they had employed a 'metalophone', or sort of magnetic machine or electrical affair, that they carried around the island with the help of 24 Costa Rican natives. It was the natives that ate up all their supplies, so they came out to our ship and asked me to send several messages for them, requesting the rest of the company back home in Canada, to forward more supplies. All of them were infatuated with Cocos Island, but they seemed anxious to get the treasure and get back home, just the same."

"THE BOATS ARE CRAZY for fish," says John Gabelich, captain of the San Pedro tunacruiser "Belle Isle". "When I crossed Uncle Sam Bank the other day there were 21 vessels on it, and all wild to get a few fish. Uncle Sam's seems to be the center of activity at present, but nobody is getting any real catches. Moreover, the seine-boats are commencing to go down there now."

This division of FISHERMEN SECTION
is official publication for San Pedro Fisher-
men's Cooperative Association

SAN PEDRO

UNION ICE HELPS

SPEAKING OF PRACTICAL charity, and at the same time of the characteristic heartlessness of large corporations, it is a soul-warming thing to note how greatly the Union Ice Company of San Pedro and Wilmington has contributed to the alleviation of misery among the destitute of the Harbor Area. This big concern, which supplies the ice with which the fleets of market craft and tunacruisers fill their holds before putting to sea in quest of fares, long ago initiated a standard policy of freezing fish for the Salvation Army and all other philanthropic organizations and agencies, without charge. In the quick-freezing rooms of the firm's plant at 640 South Fries Street, Wilmington, Superintendent Knud Jorgensen accepted whatever fish came to him, properly froze it, and stored it until the charitable institutions requisitioned it. A great amount of work was entailed, for usually the Salvation Army sent out releases only for small quantities at a time, but Jorgensen parcelled out the stock, and so assisted in providing food to the worthy who were in need.

"Mr. Ballinger, our chief in San Pedro, is the man who extended this service to the public," says Jorgensen. "He issued the orders which made the services of the Union refrigerators and crews available to the relief organizations of the harbor district. We have handled more than 60,000 pounds of 'charity fish' during the last six weeks, and there seems need for the work to be continued as long as there is a supply of free fish available."

Three or four months ago the largest single contribution was made to the charities when Capt. Frank Acalin, master of the combination tunaship "Acalin" delivered at the Union freezer a 10-ton lot of excellent yellowfin tuna. This was given to the San Pedro Community Warehouse, which thereafter apportioned it to the several relief societies which have undertaken administering to the impoverished of the community. Capt. Acalin's tuna long since has been given away, but other quantities have been received to replace the declining stock. Capt. Harry Groat, chief of the San Pedro office of the Commercial Fisheries Bureau of the California Division of Fish & Game, has directed his staff deputies to turn over to the Union refrigerator all seizures of illegal fish, and these quantities later are distributed by the Salvation Army and allied services.

Only a few weeks ago Capt. Frank Acalin made a second important contribution to public charities when he returned from a trip to sea with a number of "whale" bluefin tuna. These gigantic fish had been seined in the vicinity of Oceanside or La Jolla, and numbers of them exceeded 250 pounds in weight. It being illegal to make use of such large tuna for canning purposes, Capt. Acalin turned the fish over to Jorgensen for freezing for the charities. Twenty-two of the big scombroids still are in refrigerated storage, and from this supply constant withdrawals are being made as the need of the public requires it.

PAUL HILLER, Wilmington dealer in vessel equipment, temporarily left off his seagoing characteristics a week or two

back while he "stopped ashore" long enough to install fire-defensive equipment in the new Chrysler factory. Hiller put in a regular "Lux" outfit, with automatic controls, this equipment being provided especially for the protection of the enamelling ovens. In the event of a fire the "Lux" will extinguish the flames automatically, and without any injury to the enamel whatever. This, of course, is a great improvement over the use of sprinklers or other distributors of water, for the application of water often does more damage than the fire itself.

"SANTA MARGARITA" San Pedro tunacruiser, went to sea on June 18 after having changed crews and master. Capt. H. Falkenstein, formerly master of "Hermosa", took the vessel in charge and the Atlas-Imperial power plant was entrusted to the care of Johnny Cosgrove, that alert and competent young man who formerly was assistant dieselman aboard "Reliance". After seining bait at Magdalena the cruiser proceeded to the tuna banks, and on June 24 reported its position as approximately 500 miles south of San Pedro.

"WHITE STAR", largest purse-seiner ever built, now combination tunacraft of the Van Camp Sea Food Co., Inc., fleet, escaped from the path of the June hurricane without casualties. John Gabelich, captain of "Belle Isle", states that he saw the Van Camp craft during the height of the blow, but that after about 12 hours of it "White Star" left the offshore islands and did not return again while he was there.

"CENTRALIA", a steam vessel of about 175 feet, is being converted into a tuna bait boat at Craig Shipbuilding Co., Long Beach. The work is being done for H. C. Monstad, owner of the Monstad Fishing Pier at Redondo Beach, Calif.

Bait tanks, ice machine and gear from another boat are being installed in the "Centralia", and she will be ready for service about the middle of August.

It is said that W. L. Monstad will take the boat south after tuna, fishing in the vicinity of the Galápagos Islands. Fish taken will be brought to San Pedro.

"CHICKEN OF THE SEA" is supposed to have gotten its last fare from ocean banks somewhere off the Galápagos, but insistent rumor along Fish Harbor quay has it that the shrewd Morgan brothers didn't get the load there at all, but in the Gulf of Panamá instead. If this be true, nobody will be much surprised, for it has been common knowledge for some time that at certain seasons much tuna schools in the Panamanian Bight.

"OLYMPIC" AND "HERMOSA" seem to have made a mysterious disappearance together, and a good many seers along Cannery Row predict that when the pair reappears it will become known that the secret cruise was into the Gulf of Panamá, concerning which body of water there is much interested speculation during the present acute shortage of tuna.

"SOUTHERN CROSS" FIRE

"NORTHWESTERN," Seattle-built, and "Southern Cross," Japanese-owned, both operating out of San Pedro, decided to voyage down to the Galápagos banks a couple months ago. For sake of mutual safety, the Norsemen and Sons of the Rising Sun concluded to make the trip together, and did so. Finding fish, they never-the-less ran short of fuel before completing their fares, so stood across to the eastward for bunkering at Manzanillo. Enroute to the Mexican main a gasoline auxiliary in "Southern Cross" back-fired, igniting fumes in the engine-room and starting a blaze all along the port side of the cruiser.

Captain K. Matsuki, master, roused out all hands, got the pumps into action, and soon had hoses and bucket-brigades at work. Good progress was made toward extinguishing the blaze, but the fire had gotten in behind fuel tanks and into remote recesses where the water failed to penetrate. "Southern Cross" lay motionless on the sea, smoke pouring out of her, and the L. W. Ferdinand marine-gluie bubbling up from her deck seams, when "Northwestern" came alongside.

The Japanese had neither wireless telegraph, CO-2 fire extinguisher, nor lifeboat, so were wholly at the mercy of whatever mischance overtook them. "Northwestern," however, was outfitted in anticipation of all sorts of deep-water emergencies, and carried all three facilities cited as omissions aboard the other ship. Making fast to the distressed craft, "Northwestern" called upon all hands to get out of the engine-room, and as soon as the space was clear, discharged a metal flask of CO-2 into the burning ship. Instantly the fire was completely extinguished.

On reaching San Pedro temporary repairs were made, after which "Southern Cross" hurried back to the grounds where fish had been found. At the termination of that voyage, however, the cruiser made fast along the quay at Harbor Boat Building Company, Fish Harbor, and John Rados put engine-room and carpenter crews aboard. New frames, garboard, clamps, fenders, rails and planking are being installed on the port side as well as deck-beams and deck-planking. Repairs likewise are being made to the Western-Enterprise diesel, which suffered cracked cylinder-heads as a result of cold water being thrown around below decks. Captain Wilvers is the marine surveyor in charge, and he states that repairs will total several thousand dollars.

"Southern Cross" now carries complete fire-fighting equipment, three flasks of CO-2 extinguisher having been installed the instant the ship reached port, after the accident. All on board realized that, except for the presence of "Northwestern," every man of the crew would have perished.

"SAN LUCAS", cruiser of the Van Camp flotilla, is supposed to be in the Gulf of Panamá at present, it having been rumored that ships visiting the area surreptitiously during the last few months have found good stocks of tuna around the islands.

FISHERMEN'S CO-OPERATIVE Association, the purse-seiners' and market-fishermen's guild at San Pedro, has enlarged its offices into proportions both pretentious and court-like. As will be recalled, the Co-operative not long ago moved into the premises previously occupied by the fresh fish department of the Gilbert C. Van Camp Organizations, but since that time a crowded condition has existed. The union has so many members that whenever any considerable portion of them collect in headquarters, there is so much congestion that to move about is almost impossible. By shifting the position of several partitions the floor space of the offices has been quadrupled, and the improvement has been so marked that now the executives are considering a still farther enlargement, so that the

principal room of the guild can be employed as a council chamber in which general gatherings can be held.

JOHN MARK ROSEN, aged 38, and for five years office manager of Southern California Fish Corporation, Fish Harbor, died suddenly on June 29 from a cardiac attack. He had complained of being ill on Monday, June 27, and had gone home early. The next day he was confined to bed, and on Wednesday died.

Rosen was an easterner, educated in Washington, D. C., where he entered Civil Service and served the nation before, during, and after the World Conflict. Coming to California, he entered the employ of the then State Fish & Game Commission, and subsequently

went to work for Seacoast Packing Company prior to its purchase by California Packing Corporation. About five years ago he joined the Wilbur F. Wood staff, and continued there until the present. He leaves a widow and a nine-year-old daughter, Jean.

"NAVIGATOR", San Diego tuna-cruiser belonging to Manuel Freitas, was one of the southern fleet to be caught in the recent typhoon. According to accounts brought into port by several ships, Freitas was directly in the path of the hurricane two or three days, and was seen on all sides of the seaward islands. There were a lot of tuna-hunting "Flying Dutchmen" out in that tremendous blow.

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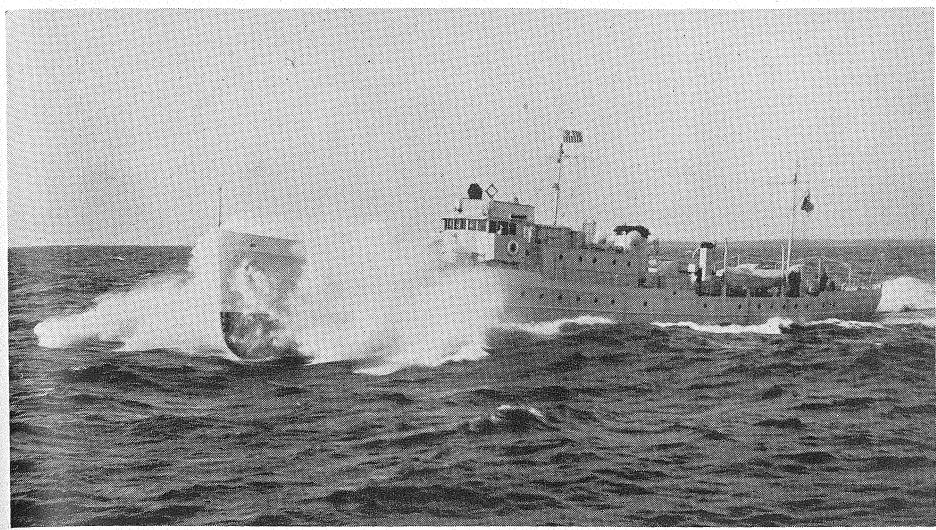
POWELL AT O'FARRELL

SAN FRANCISCO



This division of FISHERMEN SECTION is the official publication of American Tuna Fishermen's Association

SAN DIEGO



"Thetis," United States Coast Guard cutter recently launched at Bath, Maine. It is equipped with an Ingle oil-burning range

WAY BACK IN MAINE ("down in Maine", as they say in the East) a number of Coast Guard patrol boats are being built. Yet they sent clear to San Diego, about as far as they could get away from home in the United States, to get the galley ranges to go aboard them. Pacific Coast marine people rightfully feel proud that here in the West they have a plant producing ranges which are chosen for this service in nation-wide open competition.

The new vessels are 165 feet in length, of the type shown in the accompanying illustration. This is the "Thetis", recently launched at Bath, Maine. There are nine in all, seven being built at Bath, Maine, and two at Camden, N. J. Every one of them is being equipped with Ingle

diesel oil galley ranges.

According to Finlay M. Drummond, president of Ingle Manufacturing Co. of San Diego, these installations constitute a striking testimonial and noteworthy evidence of the high quality, efficiency and economy of this Pacific Coast made product.

In addition to the "Thetis", they are building at Bath, Maine, the following craft: "Aurora", "Calypso", "Daphne", "Hermes", "Icarus" and "Perseus". The two being built at Camden are the "Argo" and the "Galatea."

Ingle Manufacturing Co. has recently published a new catalog, in which boat-owners and fishermen will find information concerning the present line of ranges and the uses to which they are adapted.

"THEODORE FOSS", tunaship of Puget Sound origin, has been acquired by the junior Berg, whose father is manager of Foss tugboat interests at Tacoma. The new owner made a trip aboard the cruiser during May, and thereafter went north to the family seat, soon whereafter the change in title occurred. The vessel originally was purchased from the Foss concern by Halfhill, tuna packer of Long Beach.

ney. The wind drove the water with such force that the outside of the vessel was washed as white as if newly painted, and it entered Fish Harbor glistening like a yacht. Repairs were there made to the vessel, among these being several doors to companion-ways that had been blown off their hinges by the pressure of air.

"RELIANCE", Capt. Paul Verney, was caught at sea, on the tuna banks, by the recent Mexican hurricane. From 8 p.m. of one day until 6 a.m. of the next the typhoon was at its height, and during that time "Reliance" lost an anchor, 150 fathoms of stud-link chain, and had its metal-framed windlass carried away. Fresh-water tanks in the forepeak burst and spilled out more than half the vessel's supply, and in the diesel-compartment the fuel tanks liberated themselves from restraining brackets and light fastenings, and began moving about, as if after the engineer. Rain penetrated every crevice in the planking, so that a foot of water stood in the wheel-room, according to Captain Ver-



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Tuna Shortage Threatens

UNLESS THE TUNAFLEETS experience marked improvement in the productiveness of their endeavors, acute scarcity in all varieties of tuna inevitably must develop, state packers.

"Since January first, warehouse stocks have declined 200,000 cases, and at the beginning of July only about 143,000 cases remained in reserve," says Wilbur F. Wood, head of Southern California Fish Corporation of Fish Harbor. "We soon shall have nothing to sell."

"About the only product on the grocer's shelves that is not in glut, because of being over-produced, is tuna," declares W. J. Grinnan, foreign sales manager of Van Camp Sea Food Co., Inc. "Being accustomed to the situation arising from the depression, grocers find it difficult to comprehend how tuna can be a sole exception to an otherwise universal rule. The cause is simply stated: The tuna cruisers are finding it increasingly difficult to find schools, and the pack is dropping below the level of consumption."

"Summer is the time when our canneries customarily operate at full capacity, producing a pack in excess of immediate shipping requirements. This surplus serves to sustain public demand during winter months of scant production. But this summer there has been no surplus to lay away in warehouses—instead, stored stocks have had to be drawn upon until these have dwindled seriously. Were markets normal, or anything like normal, our present receipts of fish would be entirely insufficient, and we should have hardly enough output to supply the needs of California alone. Even as it is, our reserve supply is steadily being exhausted."

Bluefin Failure

Thus far the local catch has been a complete disappointment. Early in the season no bluefin showed in Guadalupe Island waters, and when finally a few appeared off Oceanside and La Jolla, they were found to be "whales" of 250-pound size. Martin Bogdanovich, president of French Sardine Company, once was a fisherman himself, and all packers along "Cannery Row" respect his judgment and hearken to his prognostications in these matters. Bogdanovich says that it is accepted by all seinemen that when "whale" bluefin are first to arrive, the season is certain to be a failure. Experience during 15 years of fishing has supported this observation, and the present season likewise bears it out.

During the first week in June there was considerable temporary excitement owing to the arrival of several small fares of bluefin, the total amounting to 22 tons—half a load for one boat, had it all been combined. But much of this was contraband, being over-sized, and was given to the Salvation Army for distribution to the charities. Since that time there have been spasmodic dabs of "kelp-huggers", but no real fares from the open sea. Total landings between January first and July first have amounted only to 155 tons.

With the season half over, and no schools showing yet, the fleet has left off cruising and is lying-in in disgust. Some 10 or 20 of the most venturesome captains are taking ice for expeditions to seaward banks, after yellowfin, but as yet

there has been no result from this endeavor, either.

Not One Albacore

A report was being circulated around Fish Harbor in early July that somebody had seen what he thought to have been an albacore jumping off San Clemente Island, but up till the fifteenth of the month there had been no commercial landings—not even one fish. Roy P. Harper, sales manager of Van Camp Sea Food Co., Inc., declares it as his opinion that there will be no more albacore on this coast until they quit the shores of Japan.

"We remember a time, years ago, when no albacore were here," he says. "During that period they were abundant on the coast of Japan. Then they came to California for a decade, and at that very same time none could be found by the Japanese fishermen. Some day they will return here, and then the Orientals will experience another shortage. It is a matter of cycles, not of extermination."

In the want of domestic production of white-meat tuna, importations from Japan are continuing on restricted scale. Practically all of the frozen stock is being received and packed by three companies, one each in San Pedro, Wilmington, and Long Beach.

Skipjack Disappear

During June there was a very encouraging showing of exceptionally excellent skipjack, several San Diego craft being fortunate enough to collect capacity fares of 17- to 25-pounders. The barometer of optimism took a sudden rise while the impression remained current that a big run was about to develop, but the large skipjack disappeared as suddenly as they had come. Since that time several fares of small and comparatively undesirable stock have reached port, and much of this amount was confiscated because beneath legal size-limits, or condemned because of having been crushed in transit.

Whatever catches of skipjack have been made thus far have been gathered from southern banks. As yet there have been no local showings, and with nothing migrating northward from southern waters, the prospects for the mosquito fleet look black for this August and September.

Yellowfin Fail to Migrate

Good catches of yellowfin were made by vessels visiting the equatorial banks around the Galápagos Islands about four months ago, but that fishing endured for no longer than was sufficient to permit the most agile cruisers to "get in" two voyages. Since that time there has been practically no fish anywhere between San Pedro and the coast of Perú. That this statement needs little qualification is borne out by the fact that practically all the ships are at sea, and every known bank has a flotilla sitting on it, watching for a sign. A few ships have been fortunate in happening upon schools, and poling capacity fares aboard, but these have been few, and the envied exceptions.

One factor tending to unsettle conditions was the terrific typhoon of middle June. The turmoil of the sea put an end to tuna showings for two weeks, besides doing considerable damage to the many craft that were caught in the hurricane.

Bait supply has been inadequate to

meet the demands of the 50 to 75 vessels levying toll upon it, and were tuna present in abundance the dearth of lure would be so great as to hinder the ships almost to the extent of the present scarcity of schools. Big ships, able to travel farther, are looking for sources of bait in new places. The Gulf of Panamá is one locality upon which big-ship masters are fixing much hopeful attention. Sardine-like fishes are said to abound there.

A recent development that is giving concern to the small-boat class of live-bait fishermen is that of San Pedro purse-seiners voyaging down to Uncle Sam and other Baja California banks, in an effort to round-haul yellowfin. "Flamingo," Capt. Nick Dragich, was one of the first to go. "Sea Ranger", Capt. Pete Dragish, was quick to follow, the two brothers working much together. Other craft making plans to follow the Dragich example were "Western Pride", "Sunkist", "Robin", "Horizon", "New Admiral", and a half dozen more. These will add to the congestion on the southern grounds, it having been reported that already 25 ships were lying on Uncle Sam Bank one day recently. It is said that at night the lights from the drifting craft resemble those of a city, and intercoastal freight and passenger vessels plying between California ports and Panamá are said to be detouring from the usual steamship track, which passes directly through some of the fishing grounds, so as to avoid the clustered fleet of tunacraft.

Trip-periods are lengthening, and costs of producing fish correspondingly increased. Recently "Reliance" entered port after a six-weeks' absence with 60 tons aboard—40 of it skipjack. It certainly is true that if fish fail to become more abundant, many of the smaller vessels will find it impractical to continue in commission. And unless there develops a sudden run of yellowfin and skipjack during August, Tuna Coast packers will go into the winter season with no other hope of meeting market requirements than what fares may be brought from far tropical waters by the comparatively few largest ships that have sufficient fuel capacity to enable them to voyage so far.

"CHICAGO", San Pedro seiner, hauled out on the marine railways of Harbor Boat Building Company, Fish Harbor, for complete overhaul. The 125-hp. 5-cyl. Union diesel was taken down and re-assembled and a new 20-hp. 4-cyl. gasoline auxiliary was installed. This little engine was shaft-connected to a pump of Harbor Boat Company's own make. Other major work on the vessel was a complete new line-shaft assembly together with a new clutch on the fore end of the main power plant. "Chicago" will always be remembered as the first West Coast tunaship to install out-board standing gratings, an innovation which was adopted by all the fleet until now few men remember that there was a time when all tuna was poled aboard by men standing on the in-board side of the bulwarks.

"SONNY BOY", one of the newest of the San Pedro round-haul fleet, put in at the Al Larson yard, Fish Harbor, for hauling out and a stuffing-box job.

FRESH FISH

Fish Dealers Aid Unfortunate

SO OFTEN during the present period of economic stress observers are apt to see only the commercial side of life and to forget entirely the field of unselfish service to humanity. Companies and individuals are so interested in protecting their own sources of income that many of them seem to have no time to aid less fortunate friends whose means of livelihood have been swept away.

It should be gratifying to all branches of commercial fisheries to note the fine spirit of kindness which has animated fishermen and distributors of fresh fish during these times. Throughout the entire coast every week thousands of persons are given fish of many varieties with which to sustain their families. Without this help, many of these undoubtedly would have been in much more severe straits today than they now find themselves.

San Diego

San Diego fresh fish dealers have given away quantities of locally-caught fish during the past two years. Whether or not the market is glutted, they have assisted the out-of-work families in their communities with many gifts of seafoods. They also have made donations to charitable organizations which are engaged in the work of feeding San Diego's poor.

An unfortunate phase of the San Diego work is the attitude taken by Mexican officials in that port. A case in point is that of the tunaship "Rome", which landed at San Diego on June 11. Included in its cargo were five tons of yellowfin, which could be sold neither to the canners nor to the fresh fish markets. Eager to help hungry San Diegans, the captain offered to give this fish away. At that time Mexican customs officials are said to have declared that they would not allow the fish to be landed unless the regular duty was paid on it. In spite of the fact that they were told how badly the fare was needed by the poor, in spite of the fact that they knew a large percentage of the needy were their own countrymen from Mexico, it is said that the Mexican officers refused to alter their stand, and the "Rome" therefore was forced to put to sea and dump the entire amount.

Union Ice Company

In San Pedro The Union Ice Co. has taken a leading part in helping handle fish for charity. In May Knud Jorgensen, engineer at the firm's Wilmington plant, received 30,000 pounds of fish: 14,000 pounds of tuna from Capt. Frank Acalin's vessel, "Acalin"; 8,000 pounds of yellowtail from Capt. Nick Mezetich's "Progress"; 4,000 pounds of mixed fish from a number of small market boats; 4,000 pounds from several of the San Pedro fresh fish dealers.

The fish usually is turned over to the



Knud Jorgensen standing beside stored frozen fish in a holding chamber of The Union Ice Co., Wilmington, California

Salvation Army or Family Welfare," explains Jorgensen. "We freeze it; then whoever is in need of food goes to the Salvation Army or Family Welfare and is given an order for fish. He then comes to our cold storage plant, presents the ticket or order, and we give him the fish. That seems the best way to distribute the seafood; we know that whoever gets it is in need and is entitled to it. Every day 10 or 20 people come to the storage plant for fish, so I am playing Santa Claus most of the time."

The Union Ice Co. makes no charge for this service, considering it part of its duty to the community. In the past six months it is estimated that more than 30 tons of fish have passed through the Wilmington plant to needy of San Pedro, Wilmington and vicinity.

Gifts from Seiners

During middle May the two San Pedro purse-seiners "Sea Ranger" and "Sun Rays" gave away close to six tons of yellowtail at San Pedro Municipal Fish Wharf, in front of the offices of Fishermen's Cooperative Association. Two days were required, Capt. Peter Dragich, Jr., disposing of 7,000 pounds from the "Sea Ranger" on May 17 and Capt. Nick Poncich giving out 4,000 pounds more on May 18.

The first day resulted in a mad rush, taken part in by several thousand men, women and children. Police and fishermen were unprepared for such a throng and were unable to handle it in an orderly manner. As a result, it is said that some received more than their share of the free food while others had to go without any. On the second day this situation was corrected, the crowd being forced to pass through the Fishermen's Cooperative plant in single file before receiving fish and being ushered off along the front of the wharf.

These donations of fish not only are securing seafoods for San Pedroans, but also are providing them with fruits and vegetables. Through cooperation of Salvation Army and other welfare workers, fish is being exchanged in inland towns for farm and orchard produce, which in turn is distributed among the needy.

Traveling Northward

Lauren M. Bowlus, proprietor of San Luis Fish Co. at San Luis Obispo, California, says that he would like the addresses of several firms now giving away fish, because "if business keeps up as it is at present we may be looking for some of it ourselves." Speaking more seriously, however, he states that his firm on a number of occasions during the winter gave fish and abalones to the San Luis Salvation Army to feed the large number of persons who call there for food.

"We are doing our share in helping out poor families and the unemployed by delivering fish to them," says George J. Christo, manager of Santa Cruz Fisheries, Santa Cruz, California. "There are welfare boards in this town and we have been helping them quite a lot with fish. Also, when anyone comes by and asks for fish, we have been more than glad to help him out. We believe that the West Coast fisheries are doing quite a lot of this work along the coast and they should be entitled to much credit."

Santa Cruz Fisheries is a cooperative organization operated by Santa Cruz Commercial Fisheries Association. Members of the association donate their surplus fish to the Daglish free welfare bureau, which not only is distributing fresh fish daily but by the end of May had put up 2,000 pounds of salt fish for winter.

Members of Monterey Sardine Industries, Inc., also are helping those who are out of work. Each morning, under the direction of Manager Joseph Cusenza, surplus fish is laid out in bins and is given to needy who call for it during the day. Mackerel, squid and many other species of seafood are distributed in this manner. In addition, it recently was reported that the fishermen's organization had donated \$50 to San Carlos Welfare Council to buy food for the poor; this is especially to be commended when it is

(Continued on Page 48)

*This division of FRESH FISH SECTION
relates news of distribution and products in
Alaska, British Columbia, Washington.*

NORTHWEST

DEEP SEA FISHERMEN'S Union decided a few weeks ago that all members must sell their catch through the new selling organization as proposed by F. J. Kwapil. Subsequently, a number of the boats were tied up as a result of poor market conditions. Consequently another meeting was held recently and the resolution binding the members to sell only through the new organization was rescinded, and the boats went out.

HALIBUT LANDINGS in the Northwest are considerably greater this year than last, according to government figures recently released. Up to the end of April, Seattle landings totalled 5,324,379 pounds as compared with 2,126,924 pounds for the same period of 1931. For the same period American landings at Prince Rupert were 1,631,900 pounds and Canadian 1,325,000. No halibut was landed up to this time at Prince Rupert in 1931, it is said.

Landings in Alaska for the year up to the end of April were 2,675,677 pounds, as against 3,574,558 pounds in the first quarter of last year. Vancouver landings were 217,700 pounds, against 384,000 pounds for last year's corresponding period. An increase was shown in Vancouver Island landings from 39,800 pounds to April 30 last year, to 55,800 pounds this year.

Later reports to June 15, show that to June 15 landings at Prince Rupert had reached a total of 5,496,060 pounds as compared with 6,386,540 pounds at the same date in 1931. American fish landings were 3,542,000 against 3,585,340 for last year, while Canadian landings totalled 1,953,750 in comparison with 2,801,200 up to the same date in 1932.

PRODUCTION CONTROL BOARD has requested halibut vessels, through the Deep Sea Fishermen's Union and the Fishing Vessel Owners Association, to lay up 30 days between June 15 and September 1, in order to help strengthen the market.

The boats are permitted to choose any time within this period for laying up, but are asked to lay up at least the full 30 days.

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HALIBUT PRICES have declined steadily since early in the season, but are believed to have struck rock bottom and many feel a strengthening in price will soon be evident.

Top prices in the last two months have been 8½¢ and 4¼¢, while the minimum scale has been 3½¢ and 1¢. An average probably would be about 5¢ and 2½¢. Prices at Seattle and Prince Rupert remain slightly higher than at Ketchikan.

J. E. BERG, manager of the Alaska Halibut Fishermen's Co-operative Company, reports that in spite of poor conditions, the owners of the halibut boats are more determined than ever to make a success of the cooperative venture.

Charles C. Hinde, an accountant formerly connected with the Bank of Anchorage and with the Bank of Seward, is now with the Marlyn Fish Company, Mr. Berg states, taking the place of F. R. Mitsch, who resigned June 1.

HEAVY LANDINGS OF HALIBUT by both American and Canadian boats at Prince Rupert, have been noted this season. Of the American fleet, the "Grant" brought in 107,000 pounds in three trips. The "Arthur H." had 73,000 pounds in two trips, and the "Tatoosh" brought in 72,000 pounds in three trips. This was up to the first of June.

The "Norma" and the "Reliance" had made five trips each up to this time, bringing in 36,500 and 35,900 pounds respectively. Other vessels having made four trips brought in the following total loads: "Emma", 53,000 pounds; "Grayling", 59,000 pounds; "Norland", 64,000 pounds; "Norma", 36,500 pounds; "Onah", 61,000 pounds; "Oceanic", 58,000 pounds; "Sirius", 35,500 pounds; "Tahoma", 67,000 pounds; "Viking", 44,000 pounds.

Among the Canadian fishermen, Capt. Tony Martinsen of "Livingstone" was the heaviest lander, bringing in 70,000 pounds in six trips. "Melville", Capt. John Ivarson, was next with 67,000 pounds in five trips, and "Lysekil" third with 66,000 pounds in three trips, up to the first part of June.

At this time seven trips each had been made by "Capella", "Gibson" and "Unome", who landed 48,000 pounds, 54,000 pounds and 54,000 pounds respectively.

HALIBUT CLOSED SEASON will be from November 1 to February 15, in accordance with the act recently passed by Congress for the protection of the northern Pacific halibut industry.

During this period it will be unlawful to fish, or to have aboard any halibut caught in the United States territorial waters, those waters contiguous to the southern and west coasts of Alaska and to the western coast of the United States. Violation may be penalized by a fine of not less than \$100 nor more than \$1000, or imprisonment for not more than one year, or both.

A PACKING PLANT for oysters, operated cooperatively, is soon to go into production at Everett, Wash., according to reports. It is expected that 200,000

cases will be packed in the first year, and 400,000 cases is planned as the ultimate yearly output. In connection with the plant and oyster bed development, \$1,500,000 is to be spent.

PRESENT CONSUMPTION of frozen Pacific salmon in Great Britain imported from Canada and the United States is from 60,000 to 70,000 cases of 100 pounds each per annum," states Joseph M. Tabor, director, George Tabor, Ltd., leading British fish brokers of Billingsgate. "There being a 10 per cent duty on American salmon, it is probable that future salmon trading will be done with Canada." Tabor adds that the first year's consignment from British Columbia should consist of from 2,000 to 3,000 tons, which would be 40,000 to 60,000 cases.

"There is no doubt whatever that brine-frozen Pacific salmon would, as it became known, rapidly take the place of sharp-frozen Pacific salmon, because the brine-frozen retains its flavor and quality far better than the sharp-frozen or air-frozen fish. We have proved that by importations of Hudson's Bay Company's Newfoundland salmon from the Atlantic," continues Tabor. "If the Pacific salmon were brine-frozen, a certain amount of propaganda and advertising would drive home the improvement of its quality".

The speaker has had seven years experience in the importation and distribution of salmon products, distributing to 40 or 50 cold storage plants throughout the counties of the United Kingdom and in Europe, from these depots supplying local cold storages with salmon in the best condition and with the least distributive costs.

"Nearly all frozen fish is sold at firm prices, and a price usually is set which holds firm perhaps for three months, six months, or even 12 months," declares Tabor. "A stock of brine-frozen Pacific salmon could be sold at an agreed firm price with rebate to the different classes of buyers according to the quantity they buy at a time or the quantity they undertake to buy for delivery over a period".

It is well to point out that such a scale of price rebates to salmon buyers usually is from one cent per pound to buyers of 25 cases up to four cents per pound to buyers of 500 or 1,000 cases of frozen salmon during the season.—S.H.C.

THE CLAM PACK of the Nootka Packing Co. at Masset, was 10,000 cases of halves this season, according to O. S. Morris, manager. This quantity is an increase over the 1931 pack, it is stated.

The Nootka plant is operating at half capacity on salmon this year, it is reported, and two seine boat crews will be used.

From six to eight clam packing plants on Grays Harbor operated this year, most of the activity being at Copalis. Packers paid seven cents a pound, but the digging was poor because of bad weather conditions. Total pack has not been announced, but is said to be considerably less than the 25,000 case total for 1931.

This division of FRESH FISH SECTION is of interest to Oregon distributors and producers of fresh seafoods

OREGON



Joseph Anderson

grounds. This request was granted. Now Barbey and CRPA wish to re-lease the area at a lower rate. Fishermen are opposing that plan on the basis that the new low rate will net the federal government but little in the way of income and will take from gillnet fishermen a valuable field of operations.

Oregon State Fish Commission met in Portland late in June and heard petitions for granting fish trap sites in new locations beside and east of Sand Island. No action was taken upon the question of granting or refusing them, however, since members of the commission wished

to visit the region and see for themselves whether or not it would be desirable to have traps there. "We shall not take any action on these applications until the entire commission has made a personal investigation of the proposed trap sites and until everyone interested has had an opportunity to be heard," stated Chris Leinenweber, member of the commission, shortly after the meeting. "We are also planning to join with the state land board in obtaining a complete survey from Harrington Point west; this can be used in the study of trap license applications for sites in this area."



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COAST FISHERIES
Reedsport, Oregon

WARRENTON FISHERIES Co. was incorporated during the latter part of June by Joseph, Albert T. and Genevieve S. Anderson of Warrenton, Oregon. The articles of incorporation provide for \$5,000 of capital stock and state that the firm will operate a fish cannery. The Anderson family long has been interested in the fisheries of Oregon.

COLUMBIA RIVER fishermen and cannery men are interested in two debates now taking place over fishing rights on the river. These are the re-leasing of Sand Island fishing grounds to canning companies for their exclusive use, and erection of fish traps at various points from Fort Columbia westward (in the vicinity of the island).

For a number of years Sand Island has been leased each season, Barbey Packing Co. and Columbia River Packers' Association having had it recently. This last season the two firms petitioned the United States War Department for permission to cancel their lease, saying that the rental rate was too high in comparison with profits obtained from the

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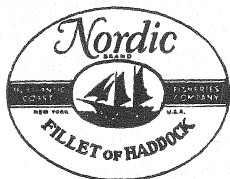
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Oysters in Japan. Under super-
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First prize 1930 Tokyo Oyster
Exposition. Original exporters,
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direct to grower via fast steamer,
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Excellent Flavor

U. S. Distributors

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Inc.**

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SAN FRANCISCO, CALIF.

EDWARD MUSTOLA, gillnet fisher-
man of Clatskanie, fell from his boat in-
to Columbia River and was drowned on
June 23. He was survived by his father
and mother, one son, five brothers and
four sisters.

FISH CATCHES in the Columbia
River region have not been particularly
good of late. Landings in May were
small, and the fish were of small size but
good quality. This partly was due to ab-
sence of large runs and partly to spring
freshets which brought with them much
driftwood and debris which damaged
nets and hindered operations.

Early in June catches showed a de-
cided increase both in number and size
of the fish. This continued through the
middle of the month, but as July ap-
proached the run again slackened.

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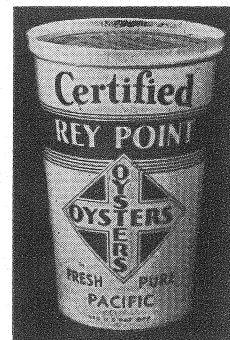
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FRESH FISH

Municipal Wharf, Santa Cruz



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From our own beds at Elkhorn Inlet,
Monterey Bay, California. Superior in
Texture, Appearance and Flavor.
Quarts, Pints and ½ Pints in attract-
ive lithographed containers, also Gal-
lons and ½ Gallons in tins.

Distributed by
San Francisco International Fish Co., San
Francisco; Santa Cruz & Monterey; Bay
Cities Oyster Co., San Francisco; Meredith
Fish Co., Sacramento, and A. K. Koulouris
Co., Ltd., Los Angeles, California.

**WEST COAST
OYSTER FARMS, Ltd.**
535 Washington St., San Francisco

This division of FRESH FISH SECTION is of interest to the Northern California producers and distributors of fresh seafoods

NO. CALIFORNIA

G. ALIOTO of San Francisco International Fish Co. and H. A. "Gus" Kessing of Western-California Fish Co., both of San Francisco, during June traveled to Sacramento to call on Dudley Moulton, head of California State Department of Agriculture. The two men, acting as a committee for the Northern California wholesalers, conferred with Moulton in regard to securing certain portions of the reserve fund collected under the Fish Exchange Act to be expended for the benefit of the state's commercial fisheries.

Following this conference, Paul W. Lownsbery sent out letters to fresh fish dealers of the state, urging them to request that these funds be made available for advertising fish. The suggested program calls for a variety of publicity methods over a considerable period of time.

"Naturally such matters are slow in developing," states Kessing, "but just as soon as we are in a position to give you details of our plans we shall advise you."

SAN FRANCISCO International Fish Co., San Francisco, recently withdrew from Eureka Fish & Packing Co., in which it has been interested with F. E. Booth Co., Inc., and opened headquarters in the plant of the Western California Fish Co., Eureka. The Booth offices will be maintained in the Eureka Fish & Packing Co. establishment. Harry Benson, formerly with San Francisco International, now is in the employ of Booth.

At the same time, San Francisco International opened a branch office at Shelter Cove, south of Eureka on the coast. Salvatore Russo is acting as Shelter Cove manager and is handling salmon received there.

DYERVILLE, California, is expecting to have a new industry established in its vicinity—that of raising trout for market. A San Francisco business man, A. Rotherman, visited the Northern California community late in May and stated that he planned to construct a large fish pond at Bull Creek.

EUREKA FISHERMEN'S Union on June 12 was notified by the five major fresh fish companies operating out of that port that the price of salmon had been lowered from 4 to 3½ cents a pound. The fishermen met to discuss the new offer, decided that they could not afford to operate, and G. A. Svenson, secretary, notified the wholesalers that his organization would be compelled to tie up its boats until the former price scale was restored.

Fishing accordingly was halted on that day and operations remained suspended until June 20. At that date the fresh fish firms stated that market conditions had been sufficiently improved by the lay-off to permit raising their rates to 4 cents; this offer was accepted by the union and fishing was recommenced. One-man boats are limited to 400 pound fares and two-man craft to 600 a day.

MISUNDERSTANDING as to the ownership of tideland near Eureka, Cali-

fornia, has secured for that city not only a large potential field for production of Pacific oysters but several acres in which oyster spat has been planted. This information recently was released by H. C. McMillin, biologist of United States Bureau of Fisheries.

According to McMillin, a crew of men under his direction planted several acres of tideland in the belief that it was state-owned and therefore, under terms of an agreement with the state, was open for oyster operations. Now it has been found that the city of Eureka is owner of the region, and it therefore will be necessary to reach some agreement with the municipality before further operations may be considered.

SAN FRANCISCO wholesale fresh fish dealers once again are using the oft-tried method of pooling operations of their paranzella trawlers during summer months. This time, however, two separate unions have been achieved, with one firm still working its boats independently.

Standard Fisheries and F. E. Booth Co., Inc., have joined in operation of one set of trawlers off Eureka. "Crescent No. II" was selected by Booth to work with "T. G. Condare" of the Standard fleet. "Junta" (Booth) and "E. Antoni" (Standard) are not being used.

Western-California Fish Co. and San Francisco International Fish Co. also have worked out a combination method of operating. The two San Francisco International trawlers, "No. VI" and "No. VIII", are being used at Eureka, while "Western No. I" and "Western No. II" have been taken to Santa Cruz to supply sandabs and flounders of smaller size than those taken in the more northern waters. Catches from both pairs of paranzella boats are being divided equally. "International No. V" is being maintained at Eureka as relief vessel.

A. Paladini still is handling its own drag-boats, which are being maintained off the northern coast.

H. A. KESSING of Western-California Fish Co. and W. S. Winter, vice-president and general manager of Northern California Fisheries Co., came to the aid of the city of San Francisco late in May when nine orphan seals which had been living at Steinhart Aquarium were threatened with loss of their food supply. The seals were not provided for in the city's budget, and Mayor Angelo J. Rossi therefore had been forced to decree that they must be returned to ocean waters, in spite of their popularity with visitors at the aquarium. At that point the two fisheries executives appeared upon the scene and stated that the five large San Francisco wholesalers would be happy to supply each seal with his daily ration of fish. They were sent to Dr. Barton W. Evermann (colleague of the late Dr. David Starr Jordan and director of Steinhart Aquarium) to arrange the proper diet.

L. GIOVACCHINI, formerly in charge of the fish and poultry department of Quality Market at Richmond, California, has leased quarters for a retail fish market in that city.

ASSOCIATED SPORTSMEN of California, powerful sports organization, has announced that it intends to work for legislation which will prohibit commercial sale of striped bass in the state. This warning is published in the May issue of *The Sportsman*, which, in commenting on appointment of a new striped bass committee, states:

"This will be one of the heavy committees during the coming year and will have charge of the campaign to prohibit the sale of striped bass. Joseph Springer again is its chairman and the committee is quite extensive, having representation from practically all of the points in the striped bass fishing area. This group will meet at an early date and get the ball rolling. Already some publicity material is being prepared and will be ready for distribution in the near future."

Later in the same issue appears the following:

"Assemblyman Charles W. Fisher of Oakland recently charged that commercial fishermen in the vicinity of Pittsburg were breaking the backs of striped bass under 20 inches in length and throwing them back into the water. He also called attention to numerous violations, both with set lines and nets, which have been used extensively for the illegal taking of striped bass.

"The commercial fishermen will deny all knowledge of any of these practices, but we all know that stripers have been plentiful in the markets. We know they were not taken legally with hook and line and we also know that these interests are making good their threats to violate this law if passed.

"It merely emphasizes what we have said many times before. Experience has shown that the only measures affecting commercial fishing which can be made effective are those which are made iron clad and free from the possibilities of abuse. Prohibit the sale and thereby eliminate the outlet for these illegally-taken fish."

In middle June commercial and sport fishermen met with California State Legislature's fish and game commission to discuss the matter. After both sides of the question had been heard, a committee of eleven, said to be composed of sport anglers, commercial fishermen and representatives of interested organizations, was appointed to draft a bass-conservation bill which will be satisfactory to both sport and commercial men.

WEATHER CONDITIONS govern the run of salmon, according to Carl Sutter of the Fidalgo Island Packing Company, it is reported from Ketchikan.

He believes that after schooling up for the season, the salmon follow the easiest course and will not make an effort to get into the spawning streams if faced with adverse prevailing winds or other such conditions.

As an example, the year 1927 was cited, when the southwestern Alaska run was poor and the Prince William Sound run was a flood. According to his theory, adverse winds drove the pinks off-shore and they headed into Prince William Sound.

Aid Unfortunate

(Continued from Page 43)

remembered that the 1931-32 sardine season was the poorest and least remunerative in years.

San Francisco Firms Help

"For many years it has been the practice of this company to make weekly donations of fish to several of the charitable institutions of this city," states H. A. Kessing of Western-California Fish Company. "For upwards of a year we have been daily furnishing an average of 300 pounds of fish to destitute families. The varieties as a general rule consist of trawler fish, of first class quality."

"While . . . our company and particularly our president, Mr. G. Alioto, do not seek any advantage from the little acts of kindness which are performed, there is no reason why it should not be known that . . . we have been giving away fish for years," explains Elmer J. Ely, secretary of San Francisco International Fish Co., Ltd. "Five thousand dollars is a conservative estimate, in dollars and cents, as to the value of what we have given away in fish each year for the past ten years."

"There is no organization in San Francisco depending on food contributions which cannot register receiving donations each year from us; among these are Girls' Sheltering Clubs, Sunshine Clubs and Columbian Park Boys. The 'White Angel', down on Embarcadero, has been receiving fish from us since the day the 'Jungle' was started, and so on right down the line. Not a day passes but from 15 to 20 poor devils come into our

store-room asking for fish and they all go away with all they can carry.

"As stated above, we cannot call any particular attention to the fish we are giving away at the present time because we have been doing the same thing ever since we started in business, and we shall continue to give fish away as long as we continue in business."

Line Waits for Fish

"Every morning at our Harbor plant there is a line of people waiting to get fish to take home to their families, and they always obtain this fish from us," adds I. Alioto, general manager of the harbor (fresh fish) branch of F. E. Booth Co., Inc. "Also occasionally we donate about 500 pounds of fish to the 'White Angel', who feeds a lot of the unemployed people who have no place to go and get food. All other fish dealers in San Francisco are doing practically the same thing we are."

"At the present (June) we are producing a lot of hook-and-line salmon in Eureka. Drag-boat fish for the last month has been mild-cured. When I say drag-boat fish, I refer to English sole, rex sole, sandabs, deep-sea cod, rockcod, codfish and halibut. This season in Sacramento River we had an overproduction of roe shad and salmon. No salmon has been mild-cured at this stage, either in the Sacramento River or any other station."

Eureka Fishermen's Union recently donated 200 pounds of salmon to Eureka Community Center, welfare organization. A. Paladini, Inc., has offered the Community Center use of its plant for cleaning and preparing salmon for storage; directors of the organization expect to put about eight tons of fish in storage for use in feeding unemployed Eureka during the winter.

In Sacramento

"Meredith Fish Co. for the last three years has been giving thousands of pounds of fish to the poor," states Azzie Meredith, secretary of the Sacramento firm. "Every Saturday whatever we happen to have over we put in a box and give to the poor."

"We had 4,000 pounds of frozen salmon, all good fish, which we cut up and gave to the poor. We also passed out 1,300 pounds of frozen striped bass and a lot of other frozen fish amounting to 1,500 pounds. We made a clean sweep of our ice boxes and every pound was given away."

"During the shad run we have had thousands of pounds of split shad and buch shad for which there was no sale, and every afternoon at three o'clock when we found that we were not going to sell this fish, we put it in the yard and allowed one fish to each person. There were times when we gave away 600 of these fish in a day. All told, we have given away thousands of pounds of fish in the last three years—how many we do not know."

"We do not give this information out to the general public, this being the first time it has been mentioned. If the fruit men and farmers would give to the needy all of their unsalable fruit and other commodities, more families that are going hungry today would have something to eat."

Oregon Charity

Charles Feller, Inc., has been doing its part to help those out of work, accord-

ing to word from Marshfield. "If the truth were known," stated Charles Feller recently, "probably a very fair proportion of the population of Marshfield has been subsisting on free fish this last month. Quite a quantity of fresh shad has been given away locally, directly to the needy or through the Salvation Army, and as far as we are concerned no one ever leaves this plant without something in the way of food if actually in need. However, it seems that sometimes—happily not frequently—some person will drive up with a new Buick and want some of the free fish, in which case, of course, he is turned down. But for those who need food, if we have no fresh fish on hand to give away, we usually can find a piece of frozen stock which will make a good meal."

Upon the recommendation of Columbia River Fishermen's Protective Union and other organizations, sometime ago Oregon state fish and game enforcement officials began distributing to the poor all fish which was seized because it had been caught illegally. In addition, all along the coast fresh fish companies and fishermen have been generous in supplying welfare groups with their products.

Northwest

In Grays Harbor, Seattle and other fishing ports of Washington, fishermen and fresh fish dealers have cooperated in disposing of surplus stocks in this fashion. The same policy has been observed in British Columbia and Alaska, and thousands of families owe many of their meals to the kindness of those who earn their livings from commercial fisheries. Just recently it was reported that Marlyn Fish Co., Ketchikan, had salted 5,000 pounds of fish and turned it over to charitable institutions for use during the winter. Ketchikan Cold Storage is storing the seafood without charge.

MRS. MILICA ACALIN, maternal head of the well-known San Pedro family of vessel owners and shipyard operators, died Sunday morning, July 3, at the San Pedro General Hospital. Funeral services were held at Mary Star of the Sea church, where a requiem was sung and high mass said, these religious observances taking place on the morning of July 6.

By rare coincidence all of the Acalin family was united at the time of the demise. Captain Frank Acalin, elder son and master of the family-owned tuna-cruiser "Acalin", was in port with his vessel, as was also Capt. Jerry Acalin, commander of the family's purse-seiner, "Garfield".

The senior Acalin, husband of the deceased, is owner of San Pedro Boat Building Company, which institution lies on the eastern bank of Fish Harbor. The family is Dalmatian, and the funeral was attended by so large a concourse that not all of those who gathered to pay respect to the deceased were accommodated within the church.

NEW MACHINE SHOP equipment representing an outlay of \$5,000 has just been installed in the sheds of Harbor Boat Building Company, Fish Harbor, San Pedro. The largest single piece of machinery is a big motor-driven lathe whose working dimensions are 24 inches by 16 feet. This giant tool cuts within a quarter-thousandth of an inch when working on shafting two feet in diameter, declares John J. Martin, of the company. "And that's somethin'," he declares.

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San Pedro, Calif.

This division of FRESH FISH SECTION describes production and sale of fresh fish products in Southern California

SO. CALIFORNIA

BARR WIEST & Co., seafood brokers, is the name under which one of Los Angeles' best-known fisheries executives now is doing business. Wiest, who for a decade has been engaged in the food brokerage business in Southern California, has established offices at 1209 South San Pedro Street, Los Angeles.

His connection with fisheries dates from 1923 when Fletcher, Wiest & Co. first entered the fresh fish business. At that time the new division was used to supply seafoods to those of the Fletcher-Wiest clientele of retail grocers who were equipped to handle fish; later other customers were secured and the seafoods branch soon came to occupy a place of great prominence in business of the firm.

Believing that they could work more efficiently if each were to specialize in a particular phase of the food-distributive industry, Barr Wiest and A. R. Fletcher divided their firm, the latter becoming interested in bakery supplies while the former continued to handle seafoods.

"Our offices were opened June 1," states Wiest. "We are handling only seafood products, these being fresh, frozen, cured and canned, and we are specializing in jobbing to the wholesale and distributive trades. We are representing 38 or 40 accounts. We also will carry consigned stocks of canned oysters, clams, shrimp and crab-meat, both Alaskan and southern, and canned salmon."

"Miss Kathleen Adair, who was with Van Camp Organizations for six and one-half years and later was with Fletcher, Wiest & Co., is with me now. Miss Adair has had a thorough education in distribution of fresh fish and is familiar with all phases of the business. We have a salesman out at present.

"Business must be gone after, but we have all our old accounts and some new ones."

ARTHUR A. ALSTROM, superintendent of California State Fish Exchange, traveled south from his San Francisco headquarters early in June to visit Los Angeles and San Pedro. Much of his time was spent in surveying conditions in the southern part of the state, in which work he was assisted by Walter J. Olson, in charge of the San Pedro Municipal Fish Wharf offices of the exchange. Conferences were held with prominent fish wholesalers and retailers and tentative plans were made for an advertising campaign similar to that begun some time ago in Northern California.

During the following week Alstrom went to San Diego, where he met with fish distributors and discussed their problems. He found that the two chief problems now confronting fresh fish executives are movement of more fish at a profit and balancing of supply and demand to avoid alternate gluts and periods of scarcity.

CHILE has granted a monopoly for drying hake for export. The concessionaire is obligated to obtain foreign markets for this fish, being prevented from selling to the domestic trade. He must export a minimum of 22,400 short

tons annually, beginning January 1, 1935; in February of that year he will begin to pay an annual export duty of five pesos (54 cents) per ton.

FIRE DESTROYED the plant of Grace Brothers Ice & Cold Storage Co., Santa Rosa, California, late in May. The loss, estimated at \$500,000, included eggs, meat, seafoods and other foodstuffs.

CHARLES S. REED, American vice-consul stationed on the island of Formosa, Japan, recently addressed San Diego Chamber of Commerce's board of directors upon the influence he expects Japan to have on the fisheries industries of the west coast of North America. He stated that the Orientals are making plans to extend their markets for canned, dried, salted and fresh fish, particularly in this country. He spoke of Formosa as the "treasure-house" of the Japanese empire because of its vast resources of sugar, rice, petroleum and fisheries.

UNITED STATES Bureau of Fisheries, in cooperation with South Carolina Food Research Commission, has been carrying on an investigation in which the anti-anaemic properties of oysters grown in the principal oyster-producing localities of the United States have been studied. These samples were studied from the standpoint of their iron, copper, and manganese content, since these elements have been found by various workers to be active in the formation of hemoglobin.

The analytical data from 22 samples of oysters taken from the Atlantic and Gulf coasts show that there is a great variation in the amount of iron and copper found in samples from different areas. The range for iron is from 21 to 105 milligrams per kilo expressed on the fresh basis; for copper, it is from 5 to 122 milligrams per kilo; for manganese, the range is much less, since all the samples are low in this element, from 1 to 4 milligrams per kilo. From the analytical data, it is possible to group the samples into three groups: (1) North Atlantic, low iron, high copper, and low

manganese; (2) South Atlantic, high iron, low copper, and low manganese; (3) Gulf, high iron, low copper, and high manganese.

Biological tests with anaemic animals demonstrated that all the oyster samples induced regeneration of hemoglobin. The rate of regeneration showed a direct correlation with the iron content of the samples. The copper content of the samples did not appear to be a limiting factor.

Thus we find the oyster a potent factor in combating any tendency toward nutritional anaemia induced by lack of iron in our diet.

PLACING FROZEN FISH in cold storage during periods of abundance for use in intervening intervals of scarcity is a practice which has progressed more rapidly within the last decade than at any previous period. In the year 1920, the cold-storage holdings of frozen fishery products amounted to 92,260,000 pounds, with an estimated value of \$10,856,000; in the year 1930 these holdings had increased 51 per cent to 139,297,228 pounds, valued at \$16,500,000.

One of the problems which has confronted the cold-storage industry from the early days is that of the prevention

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of evaporation of moisture, or water vapor, from products placed in cold-storage rooms. At present the only general practice calculated to remedy this difficulty is that of placing a glaze composed of a thin coating of ice on the surface of the fish immediately after freezing and before the fish are delivered to the cold-storage warehouse. The glaze, in time, evaporates; and, unless replaced at intervals, the evaporation is carried on to the fish. This causes dehydration of the flesh with loss in weight of the fish and, unless prevented, renders the product totally unsalable. Replacing the glaze entails added expense to the storage cost, since it means rehandling the fish. It also necessitates the frequent inspection of the fish in order to deter-

mine the condition of the glaze and to ascertain to what extent evaporation of the glaze has taken place in order to be prepared to make the replacement when the necessity arises. In actual practice this glaze has been observed to evaporate within periods varying from four to six weeks where the fish are exposed to the free circulation of the air in the storage room. While this time is extended somewhat in cases where the fish are stacked together or are packed in boxes lined with parchment paper, nevertheless, the evaporation progresses slowly.

As a result of research work by United States Bureau of Fisheries, it was found that this loss by evaporation could be minimized by the application of an oil glaze instead of ice glaze to the fish. This work is reported upon in Fisheries Investigational Report No. 9, entitled "Reducing the Shrinkage of Frozen Fish in Cold Storage", by James M. Lemon.

In this report Lemon states that all of the oils tested were superior for coating the fish to the common commercial practice of glazing the fish with a coat of ice for the prevention of moisture evaporation. The results indicate that unhydrogenated cottonseed oil is the most practical and desirable treatment of any of those employed, even though the least evaporation was shown by the samples treated with hydrogenated cottonseed oil; however, as has been pointed out previously, this treatment was inferior to the unhydrogenated oil due to the physical characteristics of the oil, the difficulties of its application and handling the fish so treated. Fish treated with a coating or film of unhydrogenated oil resisted the drying effect of the air in cold storage to a great extent. It did not have the undesirable physical properties as found in some of the other treatments. This film of oil was found to be better than a glaze of ice, for the reason that the oil does not evaporate and it is not necessary to replace it at intervals. The film of oil has no undesirable effect upon the appearance or flavor of the fish so treated, and the cost of the oil treatment compares favorably with that of placing a glaze of ice on the fish.

"LOIS S.", fishing ship wherein Capt. Guy Silva effected many improvements in the mechanics of tunafishing, and in which he established records as exploring navigator, recently was hauled out on the railways of San Diego Marine Construction Co. and subjected to complete reconditioning. The engine room was remodeled, and the main power plant torn down for rebuilding. The propulsion unit is a 4-cylinder 120-hp. Fairbanks-Morse diesel, and this is the first time in the six years since it was built into the ship that it has been taken down for repair. Valves were ground, cylinders bored, over-size pistons fitted, all new bearings put in, and a new-type counter-balanced crankshaft installed.

"All the old electric wiring was torn out and replaced with insulated conductors strung through grounded conduits," states Bruce L. Davis, master mechanic of the yard. "We re-aligned the main diesel, installed a 5-Kw. electric generating unit, and overhauled all pumps and motors."

"Lois S." was built in the yards of S.D. Marine Construction Co., and its record of sturdy service stands as high recommendation for the quality of the work of the shipwrights. It is one of the few square-frame vessels in the tuna trade.

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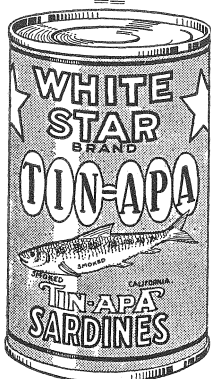
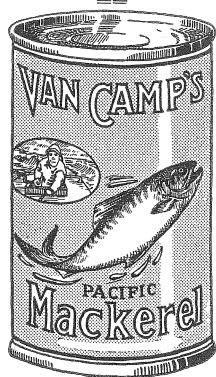
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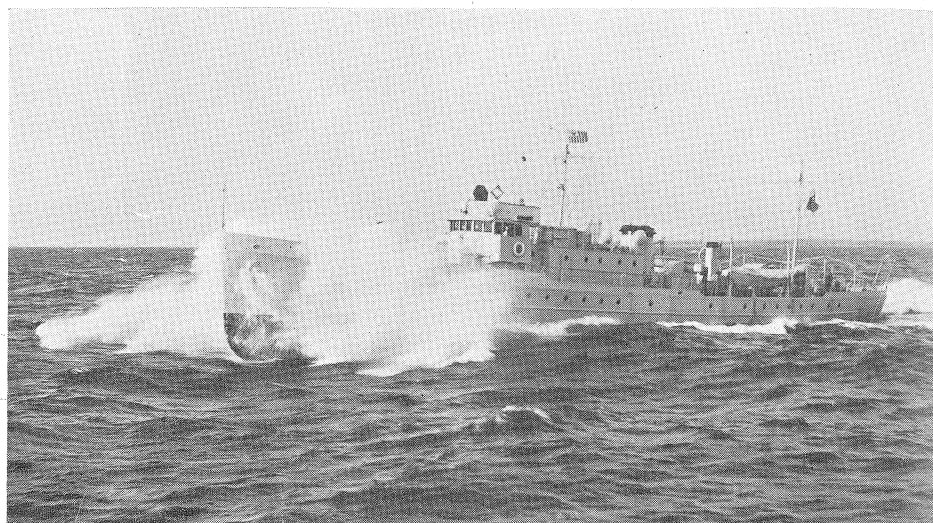
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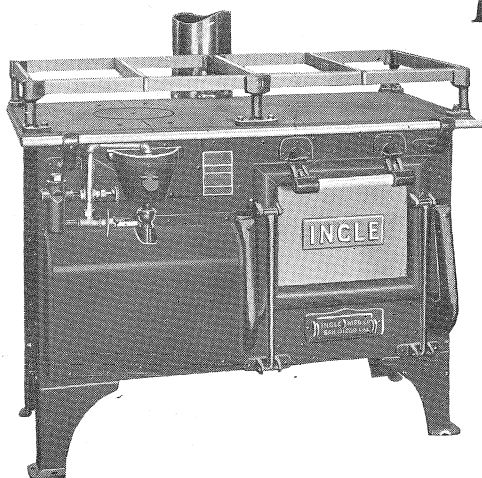
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