Purse Seines to Lobster Pots
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by

F. H. WOODING

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The big Pacific seine boat, Maple Leaf C, made its way slowly through Ogden Channel, just south of Prince Rupert.

In the wheel house Captain Mel Stauffer puffed slowly on his pipe. It was an average day on the "Inside Passage" and the skipper was out for fish. Beside him were most of the instruments of modern commercial fishing—ship-to-shore telephone, radar, echo-sounder and automatic pilot. Of these, only the echo-sounder was in operation, its mechanism moving continuously as it recorded on paper the nature of the ocean floor below.

Suddenly it began showing a dark mass. Was the vessel over a shoal, in danger? Captain Stauffer studied the lines intently and excitement lit up his face as he ordered the engines stopped.

"Fish", he said. "We're over a big school!"

What happened during those next twelve hours made history in the commercial fishery of British Columbia. With little more to go on than native intuition and faith in a small scientific instrument the skipper directed his crew to lay out the ship's 1,650-foot purse seine. In a matter of minutes the net had encircled a seething mass of small, silvery fish and the rings of the purse, 36 fathoms down, were drawn together to form a closed pocket. Inside that trap, with hardly enough room to move a fin, were 1,450 tons of herring!

It was a tremendous set; so big, in fact, that Captain Stauffer, realizing the inability of his own vessel to handle the load, sent an emergency call over the radio-telephone to other seiners operating for the same company to speed to his aid. This help was sorely needed, for not only was the harvest a valuable one but there was very real danger that at any moment the fish might stampede to freedom and a $15,000 net would be badly damaged.

Meanwhile the work of brailing the herring...
into the hold of the Maple Leaf C went on. So thick were the fish that it was necessary to fetch out the ship’s hoses and direct streams of salt water into the net to provide air to keep them alive. By the time the Maple Leaf C was filled, other carrier boats had drawn alongside to relieve the pressure. When the net was emptied, half a day later, practically every pound of the 1,450 tons had been taken. Landed at plants at Namu, Alert Bay and Vancouver, the haul had a value of about $35,000.

While the Maple Leaf C set a new record for British Columbia herring seiners, single catches of several hundred tons of herring are not uncommon on the Pacific Coast with this type of net. Of its efficiency there is no doubt and perhaps it is an outstanding example of man’s ingenuity to devise ways of capturing fish in commercial quantities. Nearly two billion pounds of fish are taken each year by Canadian fishermen from both the Pacific and Atlantic oceans and from inland waters. To garner this great harvest, an amazing variety of boats and fishing gear is used. There are nets to snare the fish by the gills, nets to hold them in box-like traps and nets to pocket them in a purse-like bag. Baited hooks, trolls, spears, harpoons, rakes and dredges also play an important part in landing the catch.

CATCHING FISH WITH BAIT

Perhaps the simplest way of catching fish—and one that is familiar to most of us—is with a hook, baited with something to lure the fish to bite.

Long ago commercial fishermen developed a multiple-hook line known as a set-line, long-line or trawl. Off the British Columbia coast, halibut are caught entirely this way. In the Maritime Provinces and Newfoundland, it is an age-old method of capturing cod, halibut, haddock and is just as popular today in certain communities as it was in the days of sail, although more modern methods have since been introduced. The long-line consists of strong rope made up in lengths of 300 feet. Into this ground-line, as it is called, are spliced the “gangens” or “snoods” of lighter line, to which the hooks are attached. Baited with pieces of herring, squid or clams, these long stretches of line-and-hooks are set out over the sea-bottom where bottom-feeding fish such as the halibut, cod, haddock, hake, pollock, cusk and others of their kind are likely to be looking for something to eat.

The Pacific halibut are big fish and call for heavier lines and hooks than those for cod and haddock. In contrast to the Atlantic operation, fishing for halibut in Pacific waters is a fully mechanized operation. Motor-propelled vessels navigate over the
Above:—How halibut long-line fishing gear is rigged and set off the Pacific coast.

Inset:—Landing a Pacific halibut.

Below:—In Atlantic long-lining from dories for cod, haddock, etc. the lines and hooks are lighter than those used for halibut.
grounds, and the lines are hauled in with powerful winches. Several lengths of ground-line are joined together so that one boat might pay out over the stern from two to eight miles of line with from 700 to 3,300 baited hooks on it. Light anchors at intervals keep the line stretched along the ocean floor and a buoy, fitted with a pole and a flag, marks one end of it. After the gear has remained in the water for an hour, or several hours, the lines are hauled back over the side of the vessel and if the skipper who directs the operation knows his ground, and the time, tides, currents and other factors are right, there will be plenty of fish to disengage from the hooks, to dress and pack in ice down in the hold.

The halibutters are some 40 to 80 feet in length, with crews of from four to twelve men. Most of them are owned and operated by the fishermen themselves. The smaller boats fish the inshore areas, the larger craft venture far into Alaskan waters. Prince Rupert, Vancouver and Victoria are the principal home ports of the Canadian fleet.

Miles of Hooks and Lines

In Atlantic fishing the fishermen of Newfoundland, the Maritime Provinces and Quebec, set the long-lines or trawls from many types of boats. Some are open motor-boats which stay fairly close to the home port and tie up every night in the many snug coves which characterize that coast. Some are small powered schooners which remain at sea two or three days. Such schooners carry from two to four small boats called dories which are launched from the mother ship and are each manned by two men who set and haul in the lines by hand. Some are big schooners ranging from 100 to 145 feet in length, which fish the offshore "banks". They carry from eight to twelve two-man dories, which are constructed so they can be "nested" one inside the other when not in use. When the dories are launched, each one sets as much as two and a half miles of baited hooks. In the years past, when the Bluenose made famous this particular type of ship, sail was used entirely to propel these craft to and from the grounds.

When power came in, the style of fishing did not change. New vessels held closely to sailing hull lines, adding more beam and length to carry the increased weight of motor and fuel and give more fish-carrying capacity. They carry but little sail on their two short masts nowadays—just enough canvas to assist the engines in fair winds and to keep the vessel moving under control when the engines are stopped.

On the passage to the fishing grounds, the crew overhaul their gear. Approximately 18 miles of line with 30,000 or more baited hooks are distributed over the fishing ground in one set by a single schooner. This gives some idea of the extent to which the luring of fish to take a hook is carried out. Of course there is not always a big fish dangling on every one of these hooks. Many hooks are untouched, many have the bait removed by cunning fish and many have dogfish, sculpins, lumpfish and other species which are worth little or nothing at the fish market.

In addition to the arduous and hazardous life of deep-sea fishermen, the dory fishermen have extra discomforts and perils. Rolling and pitching in a small open boat on the broad Atlantic would not be too happy an experience for most of us. Many men have been lost by losing touch with the mother ship during sudden fogs and snow-squalls. With the adoption of motor power in the fleets, the radio which warns of approaching storms, and direction-finding devices, the risks are reduced. But the dory fishermen still have to rely on their own individual skill and their own high degree of independence. Real skill is especially needed in launching dories and returning them to the schooner deck, and in keeping the small craft from capsizing or swamping in heavy seas.

Like the sports fisherman who pulls a "plug" or "spinner" lure through the water to attract his quarry, the commercial fisherman finds trolling a useful method of catching fish. But he goes one better than the angler, trailing as many as 18 spoons behind his boat. Spring and coho salmon on the Pacific Coast frequently react to the flash-
Trolling for Pacific salmon.

ing lures and a considerable fleet of salmon trollers make a good living for their owners in British Columbia waters. Albacore tuna—sleek, streamlined Pacific coast fish—are also caught by trolls. The boats used are small power vessels, with two or three-man crews. The trailing lines are set from as many as four or six long poles, extended from the sides of the boat in such a way that the lines will keep clear of one another. Trolling equipment is quite elaborate with winches connected to the boat’s engine and independent spools for each line. A clutch controls each spool and any one of the lines may be paid out or hauled in without interfering with the others.

Baited Traps for Lobsters

Although long-lines and trolling lines are the main methods of luring fish, there is another method which falls within this category. It is the baited trap, used in the lobster fishery around the coasts of the Maritime Provinces and in the Gulf of St. Lawrence—the greatest lobster grounds in the world. Long ago, fishermen found that although the lobster could not be lured to bite on a hook, it could be induced to crawl into a box-like trap inside of which a piece of herring, mackerel, a small flounder, or a cod’s head was placed as bait.

Fishermen make these “pots” with wooden laths and a mesh of twine. The lobster, smelling the bait, crawls through a funnel-shaped opening in the netted end of the trap and cannot easily get out. These simple contrivances are highly efficient since over 40,000,000 lobsters are hauled from Canadian waters annually. The traps are weighted, usually with flat stones, to keep them on the bottom, and their location is marked with buoys. They are set singly or on a line with as many as fifty or sixty on a single rope. Motor boats are usually used to service the traps and some have power driven winches to haul them up. It is said that there are some two million

A fisherman and his son lay lobster pots. The pots are tied to a trap line, then pushed free of the boat.
lobster traps owned by Canadian fishermen. They are not all in operation at one time, however, because open seasons vary in different localities. Many traps are also kept in reserve as replacements.

Another crustacean, the crab, is also caught by baited traps as well as by ring-nets. The ring-net, with bait placed in the centre of it, is lowered to the bottom. The crab crawls on and is drawn to the surface, his ultimate destination usually being the cannery.

SNARING FISH WITH NETS

The use of a baited hook or trap in harvesting Canadian waters calls for some voluntary action on the part of the fish. Productiveness is therefore limited since fish are not always hungry or in the mood to chase some enticing object even for the fun of it. By far the largest number of fish, therefore, is caught by nets of some kind or another. There are many different net-made contrivances and these catch fish in different ways. In some cases the fish swim blindly into them, becoming entangled in their meshes. In others they are diverted from their course by a barrier across their path, leading into a trap of netting, or they may be surrounded with a bag of netting from which there is little chance of escape.

Despite the fact that fish have eyes and, according to fisheries biologists, most of them can see quite well, millions each year blunder into thousands of yards of nets which are set out like underwater curtains. Made of fine linen, nylon or cotton twine netting, light and strong, the gill-net, as it...
is called, seems practically invisible to the fish swimming towards it. Their pointed heads go through one of the diamond-shaped meshes until they can go no further. They try to back out, but their gills—which keep opening and closing if they are to live—get caught and they are there until they are "husked out" by the fishermen.

The size of the mesh depends on the kind of fish it is designed to catch. Fisheries regulations prohibit the taking of immature fish and therefore the mesh must be large enough to permit the young ones to escape. Gill-nets are most useful in catching surface-swimming fish such as salmon, herring, mackerel, smelts, whitefish and lake trout; they also catch cod and pollock. Even the belugas of Hudson Bay, which sometimes weigh up to 1,800 pounds, are caught in a type of gill-net. As there is a great deal of difference in the sizes of these fish, a considerable variation exists in the size of the mesh, depth and length of gill-net employed. But the general rig of the net is the same. The top is kept up by a series of floats made of cedar, aluminum, plastic, cork or glass and the bottom kept down by lead weights or stones. This arrangement holds the net vertical in the water.

Gill-nets used in a unique fishery in the Cumberland Basin at the head of the Bay of Fundy are rigged high on poles firmly set in the ground between high and low tide marks. The tides of Fundy rise and fall as much as 30 feet and shad are caught in the nets when the tide is in. When the tide goes out, fishermen drive a wagon and team of horses out from shore, climb up ladders to reach the nets, and remove the fish.

A large share of the British Columbia salmon catch is accounted for by the gill-net fishermen. The nets are set across the inlets and mouths of rivers into which the salmon are travelling to spawn. Small powerboats are used, the gill-net being paid out over a mechanically-operated wooden drum in the stern. The nets are set to drift with the current of the river, or the tide, and for this reason are sometimes called drift nets. The gill-net is a popular device in the freshwater fisheries of the Great Lakes, Great Slave Lake in the Northwest Territories and other inland lakes of Canada. Sizable steam or motor vessels as well as smaller power-boats make daily trips to the fishing areas. Sometimes the nets are joined end to end, stretching many miles over the fishing grounds. In the Great Lakes the mechanical gear used for hauling in the gill-nets has been highly developed.
The Prairie Jigger

An ingenious device known as a “jigger” enables freshwater fishermen to hang a gill-net under the ice during the winter months. Said to be evolved by an Icelandic fisherman in Manitoba, the “jigger” consists simply of a cedar plank about six feet long, slotted to receive a wooden lever. When a net is to be set under the ice of a frozen lake, a hole is cut and the jigger is thrust under. The plank floats hard against the ceiling of ice but it can be propelled forward by the wooden lever. The lever is operated by a rope worked by the fisherman. The noise it makes enables the fisherman to follow its course and when it has traversed the required distance, another hole is cut to recover it and the attached line. This line is then used to thread the net under the ice. Winter fishing in the Prairie Provinces is an important industry since the cold weather provides nature’s own deep freeze to permit the shipment of fish to market in prime condition.

Fish Traps

Nature gave to fish a habitat out of sight of man. But long ago man learned of their movements and habits and has since used this knowledge to great advantage. For ages fish have been snared in devices which involve the principle of diverting them from their course by a barrier across their path. These devices are known as trap-nets, pound-nets or weirs. The design of a fish-trap is quite simple. In places where fish are known to cruise near the shore searching for feeding or spawning grounds, or merely moving with the currents, a barrier is stretched outwards from the shore to deeper water. It consists of poles or stakes.
driven into the bottom and wire, fibre-netting or brush filling the gaps. At the outer or offshore end of the barrier is the trap, an enclosed space, constructed the same way and gained by a narrow opening. This space is lined with a net so rigged that it can be closed like a bag and lifted. There are many variations in the designs of the traps at the end of the barrier. In the Great Lakes fisheries, the fish-traps are called pound-nets. On the Atlantic coast they are called weirs and used chiefly for taking sardines and herring. On the British Columbia coast there are a few salmon traps.

Fish-traps are costly to build. The initial investment may run anywhere from $500 to $50,000—sometimes more—according to trap size, design and nature of the area. In places where tides or currents are strong, heavy construction is necessary. For instance, the salmon traps on the west coast of Vancouver Island are probably the most expensive structures of their kind in our commercial fisheries. The stakes used are bigger and longer than telephone poles and are installed with pile-driving equipment. In Newfoundland where trap-fishing for cod is quite extensive the traps are held in place by anchors and floats rather than stakes.

Many good trap fishing areas are exposed
"Seining the weir" is the term used for taking in the catch—sardines in this instance.

to heavy seas and often the traps are damaged or swept away entirely, making the cost of upkeep and replacement heavy. In winter they are unrigged and the netting and equipment are fetched ashore. In the spring, stakes which have been carried away by the ice or heavy seas have to be replaced, the brushwork repaired and the netting rigged again in preparation for the new runs of fish. Even after all this expenditure of money on labour and material, the fish may fail to appear.

The bag-net is another fixed apparatus to snare the unwary fish. It is popularly employed in fishing for smelts or tomcods during the winter months in tidal rivers such as the Miramichi in New Brunswick. As its name suggests, it is a bag of netting with a round or square mouth of varying dimensions, equipped with a funnel of netting leading into the roomy closed end of the bag. It is rigged between two poles and lowered through the ice into the water with the mouth facing the tidal current. The force of the water extends the net and it is ready for the catch. In the New Brunswick smelt fishery a more highly developed smelt trap-net that can be set in open water is replacing this gear.

In the freshwater fisheries of Ontario and Quebec, the fyke-net or hoop-net is operated in much the same way. It is a tunnel of netting distended by hoops and fastened to stakes driven into the bottom of the lake. It has an open circular mouth with wings of netting serving as leads at each side and it ends in a closed cone. The fish are deflected through a narrow throat rigged inside until they find themselves stopped by the closed end.
Eskimos, who have always depended on fish for food, make rock dams across narrow estuaries. These dams are flooded at high tide and fish pass over them. When the tide is running out it falls below the dam level and the fish are impounded. This same principle is also used in catching flounders and other fish in the Bay of Fundy.

**Surrounding Schools of Fish**

Perhaps the most productive method of catching fish, but a costly one from the point of view of expenditure on gear, is the use of a net or seine in such a way as to sweep them into a large pocket or bag. The apparatus used this way includes the purse-seines, drag-seines and otter trawls.

The purse seine is used extensively for catching schooling fish like Pacific salmon, herring, and pilchard. The seine, frequently as long as a city block, is rigged like a gill-net with corks and lead sinkers but it also has a stout rope threaded through rings along the lead line with which to "purse up" or close the bottom of the seine when a school of fish has been surrounded.

The vessels engaged in purse seining in British Columbia are power craft from 60 to 80 feet in length, broad-beamed and square-sterned and fitted with a platform aft which, mounted on a pivot, can be turned in any direction. The net is paid out from this turn-table. When a school of fish is "spotted" the vessel executes a wide circle around it. A skiff or rowboat is launched to take one end of the seine and eventually the parent craft runs out the whole of the net and joins up with the skiff bringing both ends of the net together. The bottom of the net is closed by power winches, and the mesh is hauled aboard until the fish are enclosed in but a small portion of it. By this time they are a solid flashing milling mass alongside the vessel. A dip-net or "brailer" operated by power speeds them to the hold.

Until a few years ago the success of a purse seiner's day depended upon the ability of the skipper to sight a school of fish big enough to make a set worth while. But the invention of the echo-sounder has eased the skipper's burden. Schools of fish can now be located even in darkness or fog with the aid of this electrical apparatus which was originally designed to record water depths below a ship's keel. In echo-sounding an electrical transmitter sends a sound through the vessel's bottom. This is reflected from...
the sea-floor—in the manner of an echo from a mountain—and is picked up again by a receiver in the vessel’s hull below water. The lapse of time between the transmission and reception of the sound is automatically translated into terms of depth, in fathoms or feet, which may be read on a dial or from a sheet of paper. Anything which interferes with the transmission of sound towards sea bottom is recorded by the echo sounder and fishermen have learned to recognize the patterns recorded by schools of fish passing under the ship’s keel. Today the echo-sounder is widely used by fishing craft.

Once the fish have been located, there is still the job of surrounding them with the great unwieldy net and pursing it up before the whole school escapes. This calls for speed and co-ordination by all concerned. Frequently the school evades the encircling maneuver. At other times the fish will “dive the twine” and make their way through the partially-closed bottom. There is plenty of excitement in this form of fishing and a lucky and smart crew can make some enormous hauls of fish. Thousands of salmon can be taken at one “set”.

Some of the vessels engaged in purse-seining salmon and herring in British Columbia are owned by the fishermen themselves, but a great many of them are owned by the companies because the investment necessary is exceedingly heavy. Nowadays a fully-equipped vessel can cost as much as $100,000, while a salmon net comes to between $5,000 and $7,000. A herring net may cost up to $15,000.

The drag seine involves a less complicated procedure. There is no purse line on the bottom and one end of the net is made fast ashore while the other is carried out in a small boat to surround the school of fish. Newfoundland fishermen use the drag seine extensively for capturing the tiny smelt-like caplin.
Dragg ing the Ocean Floor

One of the most efficient and most extensively practised methods of catching saltwater fish like the cod, haddock, flounders, hake, pollock, rosefish and other bottom-feeding species consists of dragging a huge bag-like net over the ocean floor. This is called otter-trawling. Steam or motor driven vessels, stoutly constructed with either steel or wooden hulls, and running on the average from 75 to 140 feet in length, are used and the gear is “shot” out and hauled in with powerful winches. The trawl net is actually cone-shaped, its mouth held open by two wooden wings about the size of barn doors. These are called otter-boards and when the vessel steams ahead and begins to tow the trawl, the boards act like kites and spread the mouth of the net to its widest extent. When this method was first invented in England more than eighty years ago, it was called beam-trawling because the net was held open by a wooden spar.

As the lower edge of the net’s mouth drags along the bottom, it naturally has to be very strong to stand the wear and tear. It is constructed of heavy wire cable strung with hardwood rollers to ease the friction. The upper lip of the net is buoyed up with floats. The fish which are scooped up from the ocean floor, find their way into the apex of the cone called the “cod-end”. 
When the net is hauled aboard after a drag of an hour or two, the cod-end is hoisted with a winch and tackle, a draw-robe is pulled and the captured fish are spilled into pens on the vessel’s deck to be sorted, dressed, washed and stowed in ice down in the hold.

This trawl gear is also fitted in smaller craft known as “draggers”. During the second world war, the Department of Fisheries of Canada granted subsidies to enable Atlantic fishermen to build draggers to improve the Atlantic industry’s catching efficiency. This assistance was continued in the post-war period and now extends to boats of the dragger class between 45 and 65 feet in length and to larger boats if owned by groups of fishermen. There is quite a fleet of these draggers now operating off the north shore of New Brunswick. Flounder draggers also operate off Nova Scotia and Prince Edward Island.

Admitted to be a highly efficient catching apparatus, the otter-trawler has practically superseded hook and line methods in Europe and is to be found in use by every nation which conducts a deep-sea fishery of importance. Great Britain, the United States, Germany, France, Belgium, the Netherlands, Spain, Portugal, Denmark, Norway and the Soviet Union all employ great fleets of them ranging from 125 to 250 feet in length fitted with every modern device to facilitate navigation to distant fishing grounds and every convenience for the crew and for the handling of the cargo. Trawlers from many of these countries fish the various banks off the coast of Newfoundland and Nova Scotia.

But up to and including World War II otter trawling in Canada was restricted to about 10 large vessels on the Atlantic coast, and not more than half a dozen small craft on both ocean coasts. The Canadian fishing industry has been slow in adopting this highly efficient method of fishing, not only because of the heavy expenditure involved in obtaining suitable vessels and gear, but because there was opposition by some hook-and-line fishermen who believed that their livelihood was threatened. On the other hand, many wished to employ trawlers and argued that this method assured a regular supply of fresh fish to the market. The trawler can go to sea and catch fish in any kind of weather up to a gale and does not have to depend on supplies of bait. The subject has been a controversial one for a quarter of a century on the Atlantic Coast.

In post-war years, the legislation restricting the operation of trawlers has been relaxed to some extent by the Department of Fisheries and there is evidence that the trawler, in the Atlantic fisheries, is being accepted as an important implement in the stabilization of production so necessary to the operation of a modern fishing industry.

**CAPTURE BY DIRECT ATTACK**

So far we have taken a brief look at the way men catch fish for food by luring them with bait or netting them. A more elementary method, long used by the Indians, is to catch them by hand or spear them. In the far north Eskimo spear the Arctic char and on the Atlantic coast fishermen spear flounders and eels in shallow water.
Canadian fishermen employ the same principle in taking swordfish and whales with harpoons. The harpoon used by the whaling ships which operate off the coasts of Newfoundland and British Columbia is a formidable weapon, about four feet long and weighing about 130 pounds. It is fitted with an explosive head and wings that spring open upon entering the whale.

The harpoon used in swordfishing is a more modest affair but still a deadly weapon.

The swordfishing schooner is rigged with a "look-out" post aloft on its foremast and a small platform, called a "pulpit", on the outer end of the bowsprit. The man in the look-out post scans the sea for the fish when they are sunning themselves or swimming close to the surface. Another fisherman mans the pulpit armed with a long pole, the end of which is fitted with an iron or steel rod. A detachable barbed dart of bronze, to which a strong line is attached, is socketed on the end of the rod. When the boat comes within striking distance of the unsuspecting swordfish, the man in the pulpit drives the dart into its body. The pole is immediately withdrawn and the wounded swordfish, with the dart buried in its back, frantically takes off to put as great a distance as possible between it and its attacker. It cannot go very far or fast, however, because the other end of the line is fastened to a wooden keg or buoy which acts as a drag. A dory is launched and a fisherman pulls toward the buoy and secures it. Then the line is hauled in and the exhausted swordfish is brought alongside.

Raking Shellfish Beds

A specially-designed pair of tongs or a chain-meshed dredge are the less exciting but highly profitable means of taking oysters and scallops. Fishing for scallops is a cold, wet occupation since the best grounds are the exposed waters of the Bay of Fundy off the Nova Scotia coast near Digby. The scallop dredge is a chain-meshed bag, fixed to an iron frame. Several of these are dragged over the sea bottom by diesel-powered boats and are hauled up by power-driven winches. The dredge picks up a lot of rocks and debris in addition to a number of unwanted aquatic animals and the fishermen have to sort the wheat from the chaff, so to speak, each time the dredges are emptied on deck.

Oysters are taken from the bottom by long tongs manipulated by hand from open boats. They are also taken by dredging apparatus somewhat similar to the scallop drag. Clams and quahaug are dug out with rakes and forks of various kinds when the tide is out. When the grounds are submerged and fishing has to be done with boats, the rakes are fitted with long handles.

Development

These, then, are the principal methods of fish-catching in Canada's commercial fish-
There is no doubt that new methods will constantly be introduced and tried since the fishing industry is progressive and attempts to reduce the cost of capture while increasing the efficiency of the apparatus employed.

Lending a helpful hand is the Fisheries Research Board of Canada, the scientific branch of the Department of Fisheries of Canada. Only a short time ago, the Board successfully demonstrated to the inshore fishermen of St. Mary Bay and Minas Basin in Nova Scotia, how flounders could be caught in quantity by the use of small dragging gear. Demonstrations of the use of powered haulers in small line-fishing boats led to their widespread adoption in the Atlantic inshore fishery. Tests have been conducted with the two-boat mid-water Larsen trawl and with drift-nets as a means of catching herring. Experiments have been sponsored by the Board and the Department to test the efficiency of long-line fishing for cod off the coast of Newfoundland.

Canada's Fishing Fleet

The most recent statistics indicate that Canada's commercial fishing fleet numbers more than 40,000 vessels and boats of all kinds ranging in size from the steam trawlers to row-boats.

This represents an investment of something like $60,000,000 including the gear and equipment, but not the shore establishments. About 110,000 men derive all or part of their living from the Canadian commercial fisheries. Some keep to only one branch of the industry such as the crews of vessels engaged in deep-sea fishing. Others turn from one branch to another with the seasons.

Many fishermen, on the other hand, combine farming with fishing. Some cut wood in the winter when ice interferes with the fishing. Some earn thousands of dollars a year and others make but a bare living. Fishing is a gamble—either a feast or a famine in many cases—but it offers a rugged, out-in-the-open, independent life which has a distinct appeal to many men. They are the sturdy types who find a fascination in the adventurous gamble—in matching their skill, wits and strength against the elements. They are good citizens and good Canadians.