

ging and spars, binnacle and wheel and rudder,—all were in perfect order, as also were the sailors' kits, and even the savory dinners set out in the fore'sle. In the neat little cabin was the sewing machine of the Captain's wife, and under its needle a baby's nightgown. In the chart room the chronometer ticked cheerily; a cash box was found well filled; and the log book was found posted to within forty-eight hours of the visit. Every record showed the passage uneventful and favorable. Indeed, the searchers could see at a glance that the trim ship had passed through no storm. Of piracy or murder or a struggle of any kind, there was no evidence. Yet thirteen living creatures had disappeared as if spirited away into the great deep by some agency not of this earth.

The United States Government spared no efforts to solve this, one of the strangest of all the sea's mysteries; but no clue has ever been found.

Story of the Resolven

NOT less unearny and disturbing was the story of the brig Resolven, Newfoundland for Labrador, which was picked up one sunny August day by the British gumbot Mallard. The Resolven too had her sails set, her side lights burning, her galley fire lighted as if for dinner. Everything, as in the case of the Marie Celeste, was in perfect order, and a big bag of gold, supposed to have been for the purpose of buying a cargo of fish, was found lying intact in a locker. The warship towed the brig back to St. Johns, and there everyone awaited news of the eleven men of the crew. But nothing has been heard of them from that day to this.

These cases are the stranger when one remembers what terrible sufferings sailormen have endured and lived through. One May day four years ago the Norwegian schooner Zigen was almost knocked to pieces in a hurricane. For six days her twelve hands were afloat on the derelict hull, lashed by gales and snow storms.

The humble and pathetic group gathered on the quarter deck, and the Captain actually read the burial service, believing their death was only a matter of minutes. Yet even while he was reciting prayers a steamer's smoke appeared on the horizon, and before long the big Pennsylvania bore down on them and took off the despairing mariners. The Zigen was the worst kind of derelict—wooden built and lumber laden. For that reason she haunted the sea for many a day. Iron ships will open up and

sink rapidly, but the stout planks of a wooden vessel give her rare buoyancy against the onslaughts of the sea, and she is virtually unsinkable if the whole of the interior is likewise of timber.

Every derelict has its own story, some more terrible than others. That of the bark Florence E. Edgett, wrecked in the Caribbean in 1902, is remarkable. She left Nova Scotia for Buenos Ayres; and besides the crew of ten carried also the Captain's young wife, a girl of twenty-three. A couple of months later came the dread hurricane, that left only jagged stumps instead of masts, swept overboard the deck load, demolished the bulwarks, uprooted the deck houses, flooded the holds. And yet even with cabin and fore'sle awash, and most of the provisions ruined, the ten men and a girl remained by their ship for four long weeks, rigging jury masts to work her toward land, and burning flares of distress by night. It would be difficult to describe the long days in an open boat across hundreds of miles of stormy ocean, with each individual reduced to a drink of water and three ounces of bread a day, and with a tropic sun blistering every exposed part of their bodies. During the whole forty days between the fatal storm and the sighting of land they saw not one ship. Yet they were saved; and the derelict they left behind was sighted many times. She drifted at last into the Sargasso Sea, which seems to lure all these carcasses to its tangled and matted bosom. No doubt a storm drove her forth again,—another recruit for the sea's army of destruction.

Touring in Groups

IT is amazing how numerous are these dangerous I waifs. One February day the ship Inchisla beheld three derelicts at once—two water logged schooners and a brig turned upside down. And the Strathmair beheld one vessel burning, and another alongside her dismantled off Cape Cod. Many a narrow escape too is recorded from these perils. One night the steamer Virgil passed between the two masts of a sunken derelict, and yet most marvelously escaped injury.

The distance covered by a derelict depends upon her condition. Some will drift a mile a day, others will make a hundred. One of them with sails set will follow a course as closely as though a human hand was at her wheel; another will, as has been shown, zigzag through every sea. It is said that thirty per cent. of the floating derelicts are seen upside down, and that in such a way as to be able

to rip the bottoms out of ships that collide with them.

Now each maritime nation attends to its own derelicts, and even sends out warships to demolish them with big guns or torpedoes; or the derelict may be destroyed by fire or by ramming. That they offer a very serious passive resistance, however, will be seen by the painful experience of the United States cruiser Atlanta. She sighted the derelict British schooner Golden Rod one day, floating bottom upward near the New South Shoal. And since the American seaboard is especially afflicted with derelicts, the naval Captains have orders to destroy them on sight.

For this reason the Atlanta opened fire upon the Golden Rod. Something like forty shots were put into the hulk, but only four exploded in her. Still she showed no sign of sinking, and then it was decided to ram her. The first blow sliced off the derelict's stern; a second sheered away another section; and the third impact caught her amidships and bore her along for some distance.

A Discomfited Warship

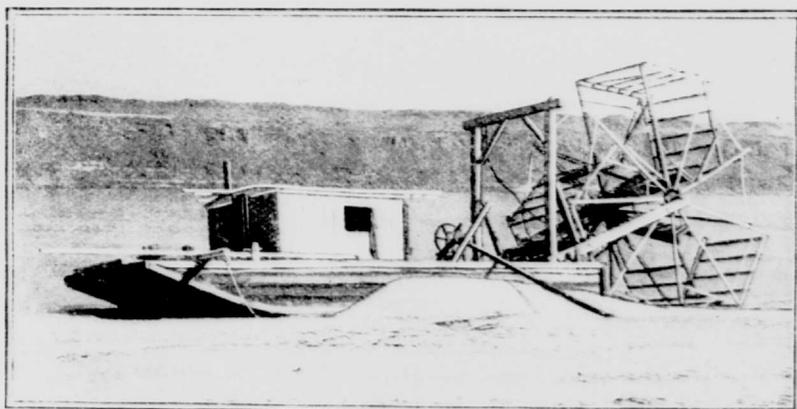
THE fourth stroke split the Golden Rod in two, while the fifth tore off her under body and scattered her cargo of barrels on the sea's face. Unfortunately it was seen that this work had seriously strained the cruiser's stem, and she was forced to go into dock on reaching port, where it was found that she had sustained considerable damage.

Now, however, the Government has decided to build for the revenue cutter service a vessel of an entirely new type, expressly for destroying derelicts. She will have a steaming radius of five thousand miles without stopping to coal; and among her equipment are several powerful derricks, together with the most improved life saving apparatus, and a magazine filled with gun-cotton and other high explosives, which if scientifically distributed would clear all the lanes of navigation of this terror of the sea. This new enemy of derelicts will have her field clearly marked by Nova Scotia on the north, the Bahamas on the south, and mid Atlantic on the East.

The other side of the ocean will be patrolled by derelict hunting ships of Great Britain or other European Powers; from which it will be seen that all the Governments are thoroughly alive to the importance of clearing the seas of hapless hulks, which at present are in effect dumb, helpless pirates, preying upon the commerce of all nations.

SINGULAR WHEELS OF FORTUNE

By DAY ALLEN WILLEY



AMONG the strangest fish that swim the seas are the salmon. In the days when only the Indian speared them, long before the white man knew of the rivers which flow from the Rocky Mountains into the Pacific Ocean, the natives of the Pacific Northwest regarded them as they do today, with awe; for where they go into the ocean is as much of a mystery as how they so often return to the place where they were born. This may be hundreds of miles from the sea in some little creek flowing into the Columbia, the Fraser, or other river of the Northwest where the water is so shallow that the fish frequently ground owing to their size and, unable to go farther, die a miserable death after they have deposited their eggs.

Old salmon fishers say that not one in twenty of the females ever return to the ocean after they have started up the rivers and creeks to the spawning grounds, for the reason that they become so battered and bruised in forcing their way along the rocky channels against the swift currents, and because so many become the victims of the Wheels of Fortune if they do not end their existence in the shallow water.

The Western man knows salmon by several different names; for fully a dozen species are caught in the streams which flow into the Pacific as well as in the bays and sounds which are tributaries to the great ocean. Some may not weigh over half a dozen pounds; but the king salmon, or quinnat, well deserves his name, for sometimes he grows to such a size that he tips the scale beam at fifty pounds and over. While all of the different species travel to some unknown place in the ocean at least once a year, the king salmon as well as some of its smaller brethren invariably return to fresh water, and, as already stated, frequently ascend the rivers and creeks, trying to get to the place where they first swam when hatched from the egg.

Just how they know the location where they are born and can return to it or near to it is a puzzle which the scientists have not yet solved; but this fact has been proved by salmon which when young were caught by fish culturists and marked so that they could be identified later. Sometimes they are marked by attaching small metal tags bearing a certain number to the gills or round the tail. These numbers are carefully recorded, and the place where the fish was replaced in the water is

also noted. The fisherman who takes a salmon marked in this way sends the tag to the fish culturists, and so it is that this wonderful instinct of the species has been discovered.

When the annual movement of the salmon from the Pacific up the rivers and creeks to the spawning ground is at its height, the waters of the smaller streams often fairly teem with the fish, and the little brooks and other tributaries up which they force their way are at times almost choked with the schools, so that the farmers and those near the streams can actually take them out with their hands and with nets.

This migration of the salmon is well worth telling about, for the reason that it has created what are called Wheels of Fortune in the Northwest. Really the wheel is a net; but a net which is built in a circular form so that it somewhat resembles the framework of the familiar paddle wheel attached to steamboats. Imagine the paddle wheel with its rim partly covered with stout wire netting, and you have a rough idea of how this curious Wheel of Fortune looks. It is divided into three or four sections, the wire netting extending over a portion of the rim, also the sides, and kept rigid by a framework of tough wood which is sometimes braced with iron rods. This framework rests upon an axle placed in the center of the wheel.

The sides of the wheel are tightly closed by wire; but about one-half of the end of each compartment is left open. The net is employed principally upon the Columbia River, where hundreds are in use,

especially in the vicinity of The Dalles and above this formation. As the wheel is operated entirely by the current of the river, it must be placed where the movement of the water is sufficiently rapid to revolve it. The salmon wheels are of two kinds, one having a movable base and the other fastened to the shore or to cribwork projecting from the bank. The shore wheels are by far the largest, some of them being fully fifty feet in diameter.

The wheel is suspended in a stout framework, each end of the axle being set in grooves, so that it can be moved up or down by the use of a block and tackle attached to the top of the framework. The apparatus is raised or lowered to such a degree that about four feet of the wheel is continually submerged, the submerged portion acting like the paddle of a steamboat wheel.

As the wheel revolves in the water, each of the compartments into which it is divided is successively submerged, the motion of course being down stream. The salmon in their ascent, going in the opposite direction, strike the rim of the wheel, or pass into one of the compartments. If they hit against the netting and fall away from it, they drop into the opening, as each projects beyond the netted portion of the rim. As the wheel turns, the imprisoned fish are swung round with it, and drop into a trough in the bottom of the compartment. Through this they slide into a larger trough, and then also by gravity are deposited in the fish collector.

Such is the number of the fish passing up the river during the run season, that from a single wheel fifty tons have sometimes been taken in twenty-four hours, as the fishing can be carried on at night by means of artificial illumination.

These Wheels of Fortune are so large that the king salmon falls a prey to them, for the reason that, owing to its size, it hugs the shore of the river when going up stream in order to avoid the stronger current in the middle. Therefore, it frequently gets directly in the way of the wheel, and during the time when the fish are most numerous sometimes a wheel will enmesh a dozen fifty-pound king fish in twenty-four hours. As they are worth, before cutting up and cleaning, from two to four cents a pound, the wheels earn a large revenue by capturing this species alone, although everything that swims in these rivers can be taken in the automatic fish traps.