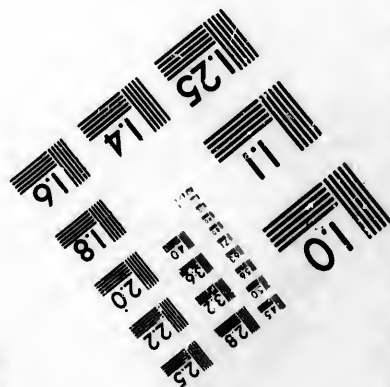
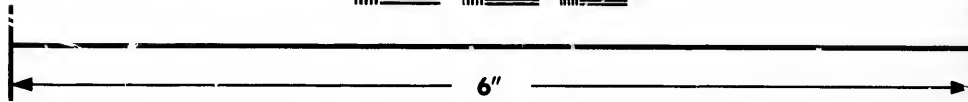
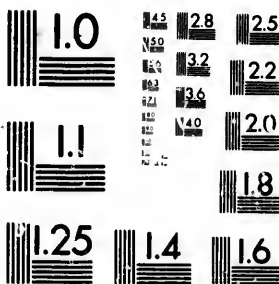


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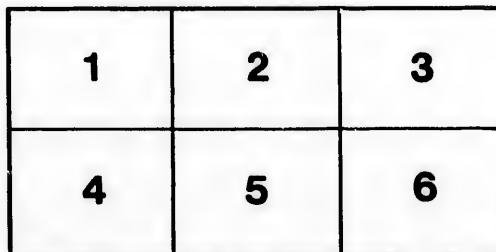
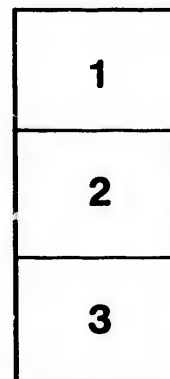
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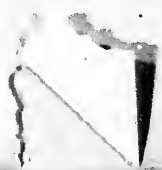


SALMON

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COLUMBIA RIVER



MON FISHING



ILLUSTRATED
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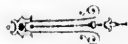




PREFACE

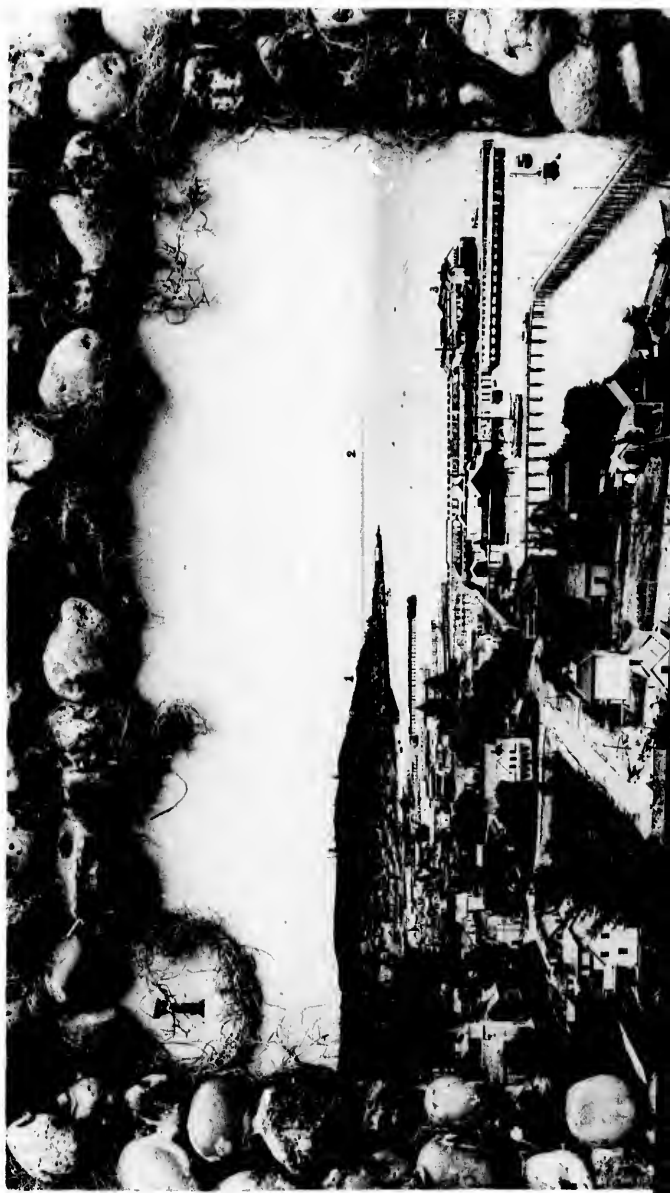
THE attractiveness of exhibits is in some measure as well as to the interest which they are capable of affording, as the case may be, of the articles exhibited at the World's Fair in Chicago was a notable instance of more wide-spread attention than any other of the kind in the animal, vegetable or mineral kingdoms. The interest of the age in the industrial, mechanical and domestic thought, is easily explainable: In addition to the views of the fishery, the great salmon fishing industry in a unique manner, a series of photographs of the fishery, an unending source of admiration and instruction, these views bound in album form have been so successful as to yield to a demand which has become almost insatiable. In presenting this work to those unfamiliar with the salmon fishing industry, it gives a sight into the various methods of catching the fish, and the practical operation of the cannery from the river to the market. Numerous articles on the subject of salmon fishing, with a thorough yet conservative description, the attractive and convincing proofs of its absolute value, the photographic views with which the work is illustrated, showing the daily routine of work throughout the industry, to avoid both exaggeration and the advertising character of the work, interested in salmon canning. With this explanation, it will prove, in some small degree, both interesting

PREFACE.



exhibits is in some measure proportionate to their rarity, which they are capable of inspiring by reason of the beauty or of the articles exhibited. Oregon's Fisheries display at the Fair is a notable instance of this fact, for it attracted probably more attention than any other of the almost innumerable collections from other general kingdoms. That an exhibit of fish should prove so successful in terms of competition with the highest achievements in mechanical and decorative arts, however anomalous at first sight, is not surprising. In addition to a large and varied assortment of members of the salmon fishing industry of the Columbia River was explained by means of photographic views, the work of the writer, proving the value of the industry and instruction. Since that time (1893), the calls for information have been so numerous that the author has concluded to become almost imperative, and publish the series, together with the illustrations. In presenting this volume it is the author's intention to give a complete salmon fishing industry on the lower Columbia, a slight introduction to the methods of catching the Chinook and other varieties of salmon in the great river of the west, together with an explanation of the spawning habits of the salmon until it is ready for the market. The articles on the subject have been written heretofore by competent writers, and this modest little volume will stand alone as the only work containing a complete and conservative description of Columbia river salmon fishing, with the proofs of its absolute correctness contained in the series of photographs which the work is illustrated. All of these views were taken during the fishing season, and due care has been taken to avoid the advertising of the business of any of those directly interested. With this explanation the author trusts his efforts will be both interesting and instructive.

J. H. BRATT.





PHOTO

.. BY ..

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Astoria, Or.

Astoria Fro

ASTORIA'S commanding location as the Pacific Northwest is too generally recognized to require a further increase of her commercial relations with the world, or more especially since the completion of the Astoria Canal, defying more eloquently than pen can describe the advantages of commerce, and pointing with prophetic certainty that it will not be amiss, however, to emphasize the fact that the harbor on the Pacific coast north of San Francisco, and by the latter, among which may be considered the most beneficial to shipping after an extended voyage of several hundred miles, a body of water eight miles in width, and a depth of several rivers of the world—a river which with its drainage covers about one per cent of the entire United States)—Astoria, on the North Pacific Coast must be admitted to possess the advantages bestowed by nature with such a facility, and surmountable between her and the goal of the world, forward with confidence to an early realization of her position in the commercial marts of the world from the excellence of the Royal Chinook Salmon, and other salmon of the world and caught only in the Astoria Bay, the canning industry has been extensively carried on, and produces, of course, the chief business of the city, and producing an annual revenue of over \$1,000,000, and the highest price in both home and foreign markets.

- I Smith's Point.
- II Tanzy Point, Fort Stevens and Jetty in the Distance.
- III Canneries and Net Racks.

Astoria From the East.

1

ing location as the future maritime metropolis of the Pacific, generally recognized to require any extended description, the international relations with other countries during the past ten years, the completion of the great jetty at the mouth of the river, testimony can describe to her paramount importance in the world with prophetic finger to a certain glorious future. It may emphasize the fact that Astoria has indisputably the finest harbor north of San Francisco. She has, too, advantages not possessed elsewhere which may be considered the fresh water of the great Columbia, so after an extended voyage. With a river frontage of almost six and eight miles in width, a location at the gateway of one of the finest rivers which with its tributaries drains a territory comprising 25 per cent of the United States)—Astoria's claims to future maritime supremacy cannot but be admitted as reasonable and the logical outcome of her nature with such a lavish hand. With no obstacles not easily surmountable and the goal of her ambition, Astoria's 10,000 citizens look forward to an early realization of their brightest hopes. Astoria's name in the annals of the world first became famous because of the unrivaled Chinook Salmon, which is the acknowledged superior of all salmon in the world and caught only in the waters of the Columbia. The salmon has been extensively carried on here for over two decades, and constitutes the principal business of the city, giving employment to nearly 4000 persons, and producing an annual revenue of over \$2,225,000. The Chinook salmon commands a high price in home and foreign markets, its superiority consisting in firmness

and Jetty in the Distance.

of flesh, a delicacy of flavor peculiarly its own, developed Chinook varies greatly in weight, 75 being taken, and the smallest being in the fish, however, weighs from 22 to 25 pounds, a year, according to the opinions advanced by various times branded young fish in such a manner when again captured, and by that means fur of the cherished theory that the Chinook salmon only returns to its native waters to spawn, and four years.

In addition to the Chinook, three other varieties of salmon are taken in the Columbia river, viz: The Blue-back, the Steel-head and the Coho, which are scarcely equal to the Chinook, are superior to it and command a price accordingly. A comprehensive view of the salmon industry of the Columbia, may be obtained from the fact that there are sixteen canneries located on the Astoria, Washington shore at intervals for many miles up the river. The total catch of salmon during the last eleven years (from 1884 to 1894 inclusive) was 924,464 pounds or over half a million cases yearly. It is interesting to note, that the season of fishing has a duration of four months, beginning August 10th, after which date and until the first of October is the season of salmon. Fall fishing (during the months of September and October), is carried on to some extent by a few canneries. The season from August 10th to April 10th is generally the best, the season usually being so light as to render profitable.

There are three devices for catching salmon. These are the gill-net, the trap and the seine. The gill-net is confined to such an extent as to render it unprofitable, and is used with great financial success to the owners of the fish. Of the fishing

peculiarly its own, and its large proportion of oil. The fully
greatly in weight, 75 and 80 pound specimens occasionally
allest being in the neighborhood of ten pounds. The average
22 to 25 pounds, and is supposed to have attained its fourth
ons advanced by students of piscary, some of whom have at
ng fish in such a manner as to make them easily recognizable
y that means furnished circumstantial evidence in support
at the Chinook salmon, with comparatively few exceptions,
raters to spawn, and that maturity is reached in the space of

Chinook, three other varieties of salmon are taken in the Colum-
bia, the Steel-head and the Silver-side. These varieties, while
Chinook, are superior to all other salmon except the latter, and
greatly. A comprehensive idea of the magnitude and importance
of the Columbia, may be readily gathered from the fact that there
are located in Astoria, while several others dot the north or Washing-
ton many miles up the river. The output of these canneries for
the years (from 1884 to 1894 inclusive) reached the magnificent total of 265,
half a million cases yearly. The fishing season proper, it may
be said to have a duration of four months, beginning on April 10th and ending
on September 10th the law prohibits the taking
(during the months of September, October and part of Novem-
ber) to the extent by a few canners, but the practice of suspending opera-
tions from April 10th is generally followed, the run of fish during the fall
season is so light as to render packing operations unprofitable.
The various devices for catching salmon in use on the Lower Columbia river,
such as the trap and the seine. On the upper river, where the stream is
so rapid as to render the fish-wheel practicable, the latter device is
of great success to the owner, and resulting in merciless and indiscrimi-
nate killing. Of the fishing gear in use on the Columbia during the regu-

lar fishing season, it is estimated that there
These, together with the boats, have a value a
and represent probably one-third of the capita

Astoria From

THIS view shows where the proposed sea-wa
row neck of land known as Tongue Point a
From this point to the westerly end of the ci
a distance of nearly six miles, the water vari
and is of sufficient area to accommodate the c

J. O. Hanthorn

J. O. Hanthorn's Cannery, located at th
familiarily known as Upper Astoria.

The location of the canneries with refer
determined by the channel, the course of w
ous in places and deflected by the rocky pro
reason the subject of this illustration, as wil
from shore, the intervening space between
a roadway and net racks. The latter is an i
used in drying and repairing the nets. Du
standard, this cannery packs about a quarte
employment for 300 persons, including mer
These include receiving, weighing, dressing,
ing, labeling and packing (in cases of 48 po
for shipment.

estimated that there are 1500 gill-nets, 20 seines and 300 traps. Boats, have a value approximately of over half a million dollars one-third of the capital invested in the industry.

Astoria From the West.

II

the proposed sea-wall will be begun on the East near the narrows as Tongue Point and so called from its tongue-like formation. At the westerly end of the city, at that portion known as Smith's point, in the narrows, the water varies in depth from 25 to 55 feet at low tide, and is deep enough to accommodate the combined navies of the world.

O. Hanthorn's Cannery.

III

Cannery, located at the eastern end of the city, or in what is known as the Narrows, near Astoria. The cannery is situated on a point of land, the course of which, like the shore-line, is somewhat tortuous and is bounded by the rocky promontory known as Tongue Point. For this reason, as will be seen, is built on piling some distance from the shore, the space between the cannery and the shore being utilized for the purpose of drying the nets. The latter is an indispensable adjunct of every cannery and is used for drying the nets. During a season in which the catch is up to the mark, the cannery packs about a quarter of a million pounds of fish, and furnishes employment for many persons, including men, boys and girls, in the different departments. The work consists of weighing, dressing, cleaning, cutting, canning, soldering, steaming (in cases of 48 pounds each), after which the salmon are ready for market.



J. H. BRATT,

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Descriptive Photo Album of Columbia River Fishing Scenes.

for Bratt's

Elmore's Ca

IV

But two of the canneries doing an extensive work are shown in this work. These will, however, be shown in the next view. This view also shows [1] Scarborough Hill, the hill is naturally covered with nature's verdant carpet, as is the wooded Washington shore; [2] Desdemona Island, the island and south channels of the river a short distance from the location of Fort Canby; [4] Point Adams, the Point Stevens, one of the most beautiful of the government wharves and jetties; and [5] the entrance to the Columbia river.

The cannery in the foreground of the picture is of the kind in operation on the lower river. It is now in operation and it is 57,500 cans of one pound each, which would produce, if obtained, to nearly 6,000,000 pounds for the season. The large canning establishments can obtain salmon at a price so great as to reach the limit of their capacities from day to day, so great as to compel packers to limit each of their catches of salmon on the Columbia, i. e., the price paid for the salmon steadily increased since the inception of the canning industry. The pound is the ruling rate. This is fixed by the National Cannery Union, an organization established in 1886 and which is now in operation.

In addition to the island (Desdemona) referred to in the last view, sand can be seen in the Columbia between Astoria and Sand Island, and has a length of three miles. Its existence is also due to the action of the north wind. Forward of this island almost all the trap fishing is done in the lower Columbia. The traps, to the number of thousands, known as Baker's Bay, and dot the water at the mouth of the river westward of Scarborough Hill and eastward of the mouth of the river.

Elmore's Cannery.

IV

doing an extensive business in Astoria are prominently will, however, be sufficient for purposes of illustration. Scarborough Hill, the graceful slope of which is peren- verdant carpet, as if to relieve the otherwise monotonously [2] Desdemona Island, a sand formation between the north er a short distance below Astoria; [3] Cape Disappointment [4] Point Adams, the promontory on which stands Fort tiful of the government reservations, and the government o the Columbia river.

ground of the picture is the most westerly establishment of lower river. It was established in 1876, and its daily capac- and each, which would amount, if the supply of fish could be pounds for the season. It is seldom, however, that any of ents can obtain sufficient raw material to enable them to cities from day to day, although at times the run of fish is to limit each of their boats to a given number. The price i. e., the price paid by the canner to the fisherman, has e inception of the canning industry, until now five cents per his is fixed by the Columbia River Fishermen's Protective ublished in 1886 and having a present membership of 1800.

l (Desdemona) referred to above, another and larger tract of mbia between Astoria and the ocean. This is known as th of three miles, with a breadth of less than one-half mile. e action of the north and south channels. To the north- l the trap fishing is carried on, as well as much of the sein-

The traps, to the number of 300, are located in what is dot the water at close intervals over the large expanse ll and eastward of Fort Canby.

Drying and Mending

V

Gill-nets vary in length and depth according to the water in which he proposes to operate. Few are of the proportion are 1800 feet, and have a depth of 100 feet. An important item of expense, and not infrequently a man will abandon his net in order to save what is intended to be attendant upon fishing near the ocean being more likely to be taken. The more venturesome of the men all sail out to the river; some sail boldly out to the ocean at the first of the flood tide, when salmon are usually taken. Breakers at Sand Island and too often fall victims.

The size of the gill-net mesh is determined by the size of the fish from 7 to 10 inches. During the early part of the season a mesh of 7 inches is generally used, but from June to August, when the fish are larger, a mesh of 10 inches is used. A man who possesses a net of each class, uses that having the least cost from \$275 to \$300, and consists of from 100 to 200 pounds of rope (on which are attached the lead and floats) to 200 pounds of lead and 450 to 550 floats. The floats are lines attached to top and bottom respectively. The twine is a fine solution, and by this process the twine is made to be less readily seen by the salmon as they head. The twine is renewed several times during a season, and produces a good serving effect on the twine. With the best of care, after two years' use, being frequently broken, it is used in the freshet season. The work of repairing, which requires considerable time, and must be done with great care, and the smallest defect remedied.

ing and Mending the Nets.

V

and depth according to the means of the owner and the to operate. Few are less than 1400 feet long, while a large d have a depth of from 20 to 35 feet. A large gill-net is an , and not infrequently the hardy fisherman is compelled to save what is infinitely more precious—his life—the risks of the ocean being many, without regard to what care may be taken. Men allow their nets to drift across the entrance of the bay out to the ocean and endeavor to secure a haul before the salmon are usually plentiful; while still others approach the bay too often fall victims of their own temerity.

The mesh is determined by the caprice of the owner, and varies during the early part of the season the small mesh net is most common. In August, when the fish are uniformly large, those who use that having the larger mesh. The material in these nets and consists of from 190 to 240 pounds of twine, 140 to 150 (are attached the lead sinkers and corks or cedar floats), 160 to 150 to 550 floats. When a net is made and the cork and lead sinkers are attached to the bottom respectively, it is immersed in a tank containing tanning liquor. In this process the twine is hardened and colored in such a way as to make the net more visible to salmon as they head up stream. The tanning process is repeated every season, and proves a source of economy, because of the consequent durability of the net.

With the best of care a gill-net becomes almost worthless when frequently broken by large fish and torn by snags during the season of repairing, which is performed on the net racks, requires to be done with great care, every portion being minutely examined and remedied.

Loading th

VI

This illustration shows the manner in which is transferred from the rack into the boat. The together, the whole body of the net being gathered together by the boat-tender, who with the greatest precision disposes of it in a manner as to make the casting of it a simple

Fishing With

VII

The subject of this photograph is a fisherman making another drift or starting for the cannery (most of the salmon fishing being done during the winter) by his good or ill luck on previous occasions, passing for or against certain portions of the river. The boat is allowed to drift four or five miles and the man in the attendant or boat-puller to row across the current to the boat and pays out the net, taking care to see that it does not come entangled. On the end first let out is attached the other end is secured in the boat, and as soon as the net is the evenly distributed weight of the lead-line is maintained in position for its entire distance. From time to time the net is examined. By raising it slightly in places where fish have been captured, and if so, they are released. When light approaches the work is abandoned by the fisherman for rest after depositing their catch at either the cannery or hastily improvise canvas coverings for their comfortable sleeping quarters, where they are

Loading the Nets.

VI

the manner in which the net, after being repaired and dried, is placed into the boat. The sides, or cork and lead lines, are placed into the boat. The net being gathered in and passed over the roller to the greatest precision disposes of it in the stern of the boat in such a manner as to make the loading of it a simple task.

Fishing With the Gillnet.

VII

A photograph is a fisherman hauling in his net preparatory to returning for the cannery. In shaping his program for the night (being done during darkness), a fisherman is frequently guided by previous occasions, past experiences tending to prejudice him in various directions of the river. After being cast, the net is sometimes several miles and the modus operandi is as follows: Directing the boat across the current, the fisherman stands in the stern of the boat, taking care to see that the lead-line and cork line do not bend and the first let out is attached a small wooden buoy, while the boat, and as soon as the net has been cast the drift begins, the fisherman stands in the stern of the boat, holding the net in a perpendicular position. From time to time the boat is rowed along the cork-line and the net is slightly in places, the fishermen ascertain whether any fish are being taken and if so, they are removed and the drift proceeds. As day-break is abandoned by most of the men, some going to their homes to get their catch at either the cannery or fish station, while others, who remain, coverings for their boats and convert them into moderately comfortable quarters, where they are rocked quietly to sleep after their morning





J. M. BRATT,

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Astoria, Or.

meal has been partaken of. Every boat is provided with provisions, rendering a trip home for food unnecessary, should the station and resume their toilsome work after the business are uncertain, catches being made while at other times barely sufficient are secured t

Coming in with

VIII

Residents of Astoria are treated daily during the fishing season, and one of whose beauties they never weary of gazing upon. On the fishing grounds, it is not unusual to see as many as 50 white sails glistening in the sun and forming a picture

Waiting for the

IX

The boats are here reproduced as they lie at anchor after their catch has been unloaded at the fishing station. The boat sail, and is securely fastened in a manner convenient for the man. The photograph was taken near Sand Island, a resting place for the men, and on the comparative quietude of these little floating homes may be seen.

Fishing Station

X

The photograph shows the Receiving Scow, where the fishermen and trappers deliver their catches to those who have such stations convenient to the fishing grounds.

every boat is provided with stove and cooking utensils, unnecessary, should the men prefer to leave their fish at home to do some work after partaking of food and rest. The profits of the catches being made occasionally aggregating 3000 pounds, sufficient are secured to pay the repairs to the net.

Dealing in with the Catch.

VIII

is treated daily during the fishing season to a picturesque scene they never weary. Going to and returning from the fishing grounds to see as many as 500 boats scudding briskly along, their sails up and forming a picture that delights the eye.

Waiting for the Tide.

IX

are used as they lie at anchor waiting for the ebb tide after the fishing station. The awning is sometimes made out of canvas fastened in a manner peculiar to the Columbia river fishermen near Sand Island in Baker's Bay, which is a favorite fishing ground on the comparatively placid waters of which hundreds of boats may be seen.

Fishing Station.

X

is the Receiving Scow, or Fishing Station, where the gill-netters, bring their catches to those of the canners who find it advisable to transport them to the fishing grounds. In addition to being a great





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accommodation to the fishermen, canners find the reluctance of many of the former to return daily to plentifully. Where a scow is converted into a fish boat, two rooms is built on deck. One of these rooms serves the other is used as a kitchen and for sleeping aparted and weighed when received, and the station is a plunger in which the fish are brought to the canner.

Seining---Loading

XI

This method of taking salmon is generally a process of verses are sometimes met with. The seiners are met with the water is low, but an early summer following heavy during the winter previous, invariably causes a heavy injury to the seiner. The outfit of a seiner consists of a scow and a flat-bottomed boat, and his operations are on portions of the beach or slightly submerged islands. The opportunity of hauling up the seine and removing the fish are about 1500 feet long, and vary in depth from 15 feet. They contain 650 pounds of twine, 200 pounds of rope, and upwards of \$1000. The photographs were taken at

Pushing O

XII

The launching of one of the flat-bottomed boats is a process of ing that is not accomplished without much difficulty. After being loaded (with the seine) the boat is launched

...n, canners find the outlay profitable, because of the re-
to return daily to the city when salmon are running
converted into a fishing station, a small house containing
e of these rooms serves for a receptacle for the fish, while
nd for sleeping apartments. Salmon are classified, coun-
and the station is visited daily by a gasoline launch or
ought to the cannery.

g---Loading the Seine.

XI

...on is generally a profitable one, although financial re-
The seiners are most fortunate during those years when
summer following heavy falls of snow in the mountains
riably causes a heavy freshet and consequent financial
of a seiner consists of ten men, four horses, seine, a large
and his operations are necessarily confined to favorable
submerged islands, which at low tide afford an oppor-
nd removing the fish. The seines used in the Columbia
in depth from 15 feet at the ends to 160 feet in the center.
ne, 200 pounds of rope and 150 pounds of lead, and cost
aphs were taken at Sand Island seining grounds.

Pushing Off.

XII

...flat-bottomed boats used by the seiners, is an undertak-
hout much difficulty and expenditure of muscular force.
eine) the boat is left stranded until the tide is flooding,

when the crew await their opportunity and take advantage of them in getting it sufficiently far out to permit of the

Taking out the S

XIII

On starting out to make a haul, one end of the seine is hitched to a horse, while the boat's crew row out until the boat is rowed down stream and gradually shoreward until the seine forms a semi-circle. Another horse is then caught up the beach. As soon as there is room, a third horse, No. 2, then No. 1 is taken off the end and follows No. 3 to the beach, which is but 200 feet wide, is reached. Meanwhile the seine has gradually been hauled down stream until the ends

Hauling In.

XIV

This photograph shows the hauling ashore of the seine formed as described in the foregoing.

The Haul.

XV

When the seine has been hauled in so that the lead is at the center, or widest portion still remains in the water, the seine reaches shore in due course, and the fish taken out. These hauls are generally made between tides, and for a good catch be considered a good catch, from three to four hauls made

ity and take advantage of the receding waves to assist
at to permit of the use of the oars.

ing out the Seine.

XIII

ul, one end of the seine is left on shore, and to this a
ew row out until all the seine is in the water. Then
gradually shoreward until, when the beach is reached,
her horse is then called into requisition, and is driven
oom, a third horse is attached about fifty feet behind
d and follows No. 3, and so on until the head of the
s reached. Meanwhiie the other end of the seine
eam until the ends meet, thus completing the circle.

Hauling In.

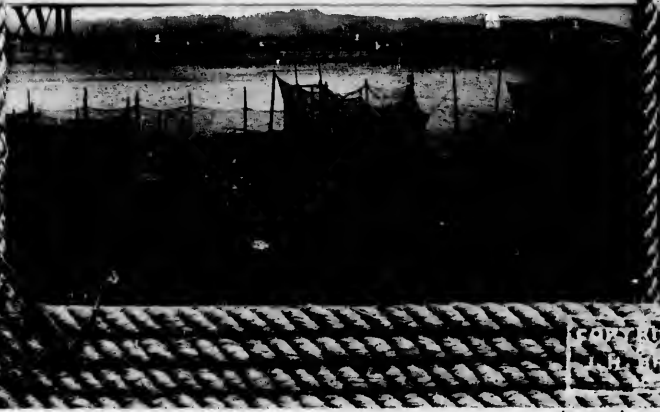
XIV

uling ashore of the seine after the circle has been

The Haul.

XV

d in so that the lead and cork lines are on the shore,
mains in the water in a bag-like formation. This also
the fish taken out, when the work is again begun.
reen tides, and for one "outing" 1500 pounds would
ree to four hauls made each outing.



J. H. BRATT,

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Ask for Bratt's Descriptive Photo Album

XVI



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The Seiner's S

XVI

These scows are the abode of both man and horse in one of which, the men cook and sleep, the other usually kept near shore and rest on the sand at low tide

Trapping.

XVII

If a good location can be secured the fish trap is a device in use on the lower Columbia. The first cost is high and is often destroyed by the large quantities of drift that are brought down by the force of a six miles per hour, occasionally lodge between the piers and soon demolish the entire structure. This means a loss of money and indirectly very much more. The trap consists of a heart, the tunnel and the pot. The lead is formed into a line 300 feet long, and along these, from the sand or high water mark, stretching netting which has been preserved for the purpose of preservation. At the end of the lead is the heart or trap web, in the shape of the organ from which it is named. At the narrow end, the heart opens into the tunnel, which is and tapering toward the pot, a distance of ten feet. The tunnel is almost two feet in diameter, the other end is a pot where the fish are secure, the action of the water on the small openings being such as to make escape almost, if not quite, impossible. Against the web with which the lead is constructed, in a few moments are in the heart following the lead, in a few moments are in the heart and by the means of escape, they reach the opening known as the

the Seiner's Scow.

XVI

both man and horse, and are divided into two parts, and sleep, the other serving as a stable. They are generally built on the sand at low tide.

Trapping.

XVII

Among the fish traps is the most profitable salmon catching trap in Alaska. The first cost is considerable, and frequently traps quantities of drift that are carried toward the ocean in freshets driven by the force of a current having a velocity of five or six feet per second. The trap is suspended between the piles on which the trap is suspended, and is a simple structure. This means a direct loss of from \$600 to \$1000.

The trap consists of four parts, viz: The lead, the heart, the tunnel, and the netting. The lead is formed by driving a row of piles from 200 to 300 feet from the sand or bottom of the river to a point above the heart which has been previously coated with tar for purpose of preventing the heart from being washed away. The heart is a rectangular frame of netting, also constructed of netting, and is the organ from which it derives its name. At the lower end of the heart is a tunnel, which is also formed of web without ends, and has a length of ten feet. At its junction with the heart, the diameter is four feet, but once inside, the diameter is reduced to two feet, the water on the small aperture through which they enter is most, if not quite, impossible. Salmon when they run head is constructed, immediately head for deep water, and, when the heart is in the heart. Swimming around this looking for an opening known as the tunnel, and through this they dash

into the pot. The latter portion of the trap is forty feet from the bottom of netting, so that when the fish are removed they are out of the water. Altogether the trap is an ingenious and abundant source of revenue, if its location is good, and its property escape destruction from the causes referred to, perhaps be better understood by referring to the plan of A. S. Tee, civil engineer, of Astoria.

Lifting the Trap

XVIII

The operation of removing the salmon from the trap is effected by the raising of the pot out of the water. This done, the fish are easily reached. A single trap requires the attention of one man, and is usually paid from \$40 to \$50 per month each, but can, in some cases, be used as a trap.

Unloading the Boat

XIX

This shows the manner of unloading the boats, and the manner of unloading the boats, at the cannery. Lines with hooks and baskets attached to the boats, and in a few minutes are sufficient to transfer the catch to the cannery, where they are weighed and then left in charge of the cleaners.

Columbia River Fishing Boats

XX

The boats used by the fishermen of the Columbia River are of a peculiar construction, and especially adapted to the service in which they are employed, with a view to enable them to live through the storms of the lower Columbia, and are the outcome of continued experience. They are known universally as the Columbia River fishing boats.

f the trap is forty feet square, and unlike the heart, has a
he fish are removed it is only necessary to raise the pot
e trap is an ingenious device, and one that proves an
e location is good, and the owner fortunate in having
om the causes referred to above. Its construction will
referring to the plan over this photograph, drawn by Mr.
ia.

Lifting the Trap.

XVIII

he salmon from the trap is simple, being performed by
e water. This done, the fish are as if in a huge dip-net
trap requires the attention of two men. These are usu-
nth each, but can, if necessary, attend to more than one

Loading the Fish.

XIX

loading the boats, when the fish are brought direct to
and baskets attached are let down to the boat and a few
the catch to the cannery, where they are immediately
of the cleaners.

A River Fishing Boat.

XX

men of the Columbia are of a design peculiar to them-
he service in which they are engaged. They are built
ive through the storms occasionally prevalent on the
ome of continued experiments for many years. They
umbia River fishing boat, are pointed at each end, 25



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XX

XXK

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feet long, with a beam of from seven to eight feet, and cost \$250 each. When well handled, taken by the men, too often result in fatal accidents. river fishermen, due almost entirely to accidents during exceptionally stormy seasons has been known to be engaged. Sudden squalls are of course responsible for a majority of the fatalities are generally due to carelessness or a combination of both. The more daring drifters drifting too close in shore, perish in the attempt to breakers the chances in favor of rescue are exceedingly small. crews of Fort Canby and Point Adams comprise the main branches of the life-saving service on the Pacific coast. A helping hand can be outstretched to the unfortunate fisherman by temerity.

A Choice Specimen

XXI

The great size sometimes attained by the Chinook is shown in reference to the accompanying photograph, which picture was taken for the purpose of showing the size of a Chinook of more than average weight.

Scow Town

XXII

Many of the unmarried fishermen reside in the city in the necessity of paying house rent, while enjoying the advantage of being able to change its location at will, by taking their scows wherever fancy dictates. The owners of the scows or beach their homes near each other, and he

seven to eight feet, have a carrying capacity of 6000. When well handled they are safe boats, but the great risks result in fatal accidents. The mortality among Columbia entirely to accidents or foolhardiness, is usually high, and in has been known to reach almost 3½ per cent of the men of course responsible for the capsizing of many boats, but e generally due directly to either inexperience or foolhardi-. The more daring of the men favor the shoal water, and erish in the attempt to recover their nets. Once in the of rescue are exceedingly doubtful, and while the life-saving ut Adams comprise probably the best drilled and equipped ervice on the Pacific Coast, lives are frequently lost before a ched to the unfortunate ones who are victims of their own

A Choice Specimen.

XXI

attained by the Royal Chinook will be understood by ref-
photograph, which represents a 65-pound specimen. The
pose of showing the comparative dimensions of a genuine
e weight.

Scow Town.

XXII

shermen reside in these floating houses and thus avoid the
t, while enjoying the dual pleasure of owning a home and
ion at will, by taking advantage of the high tides and towing
ctates. The owners, if of like nationality, as a rule anchor
each other, and hence the name of Scow Town. The above

shows such a scene, and the original is to be seen in a more distinct view of one of these scows, manufactured in a tasty manner, will be seen by reference to Illustration XXIV.

Chinook Salmon

XXIV

This represents a cannery scene with a quantity of Chinook to be cleaned, the beautiful specimen in the foreground being a length of 48 inches with a girth of 44 inches. It is a choice specimen of the king of food fishes, weighing about 25 pounds.

Steelhead Salmon

XXV

Steelhead Salmon, fifteen and twenty pounds in weight, is a Chinook in color and flavor, but is not so rich in fat. The fact that the head and back are steel color. This is a variety of the Chinook, seldom weighing more than ten or fifteen pounds.

NOTES

Having critically examined and carefully read the contents of this book describing the Columbia River Salmon fishing industry, I find the same to be correct.

original is to be seen near the Scandinavian Cannery. A
of these scows, many of which are built in an exceedingly
y reference to Illustration No. 23.

Chinook Salmon.

XXIV

ry scene with a quantity of Royal Chinook Salmon previous
l specimen in the foreground weighing 74 pounds and hav-
h a girth of 44 inches. Illustration No. 25 shows another
of food fishes, weighing 72 pounds.

Steelheads.

XXVI

n and twenty pounds. This species is not unlike the Royal
but is not so rich in oil as the latter. It is so called from the
are steel color. The steelhead does not attain the great size
ighing more than forty pounds, and more frequently less

NOTE.

etfully read the contents of this Descriptive Photographic Album, illustrating and
fishing industry, I find the statistics and statements contained therein authentic and
HOLLISTER D. MCGUIRE,
Oregon State Game and Fish Protector.

