The Year's Operations at Seton Lake Hatchery.

The accompanying illustry the sacking illustry the sacking for the year on the fishing industry the sacking for the year on the fishing for the year

as the year's work at the hatch ery. The situation of the hatche ty is unable to find time to visit.

The illustrations show the worl; of reached and deposited their ova upon spawning. spawning the female salmon at the hatchery. Another of the fillustrations shows the weir at the head of the taining pond. The third cut gives a view of the nursery which Mr. Babco tk constructed at the hatchery to reside at the moneys that the district the passage of any fish.

The successful opening up of the struct the passage of any fish.

More than 200,000 sockeye passed into the district that did not catch its two hundred in that did not catch its two hundred in the district. The result was that very salm the did not catch its two hundred in the district the passage of any fish.

Mr. Gavin Hamilton, a well-known resident of the district that did not catch its two hundred in the district that did not catch its two hundred in the district that did not catch its two hundred in the district that did not catch its two hundred in the distr the young fish during their stay at the deposit their spawn in its headwaters Quesnel section and all the other abled to pass the fishing grounds.

SETON LAKE HATCHERY-SPAWNING SOCKEYE-WATER SHOWN IS THE RETAINING POND-FISH TO

THE LEFT ARE SPAWNED OUT FEMALES.

A brief description of the nursery at mon in the Fraser district of the prov- work of procreation.

the Seton lake hatchery is warranted ince was 837,489 cases, and in the Puget

any other nursery known to me. The 1,684,611 cases of sockeye salmon which

waters of Lake creek, a quarter of a were running to the Fraser. While the

mile below the hatchery, are divided by pack of this year does not equal that

an island into two channels. Across the of four years ago, it should be remem-

head of the wider of these channels we bered that the pack of 1901 was by far

constructed a dam which served to the largest in the history of the indus-

dry. The bed thus exposed was ap- Beginning with the first appearance

proximately 1,400 feet long by an aver- of the sockeye in Julan de Fuca Strait,

age width of 70 feet. It was covered early in July, I followed the run over

with boulders and coarse gravel. Every the entire fishing grounds, and up

kind of fish remaining in the bed of the through the channels of the Fraser to

stream was then removed and we built the spawning grounds. Knowing that

at intervals nineteen cross-walls with the run of sockeye on the fishing

the heavy boulders. At the lower end grounds this year was so abundant

another dam was constructed through during the first fourteen days of

or over which the predaceous fish in August (which included two weekly

the main stream below could not pass. closed periods of 36 hours), that the

The water was then turned back into fishermen were limited to two hundred

the channel and make to flow through to the boat by the majority of the can-

wire screens of mesh sufficiently small ners, I was not surprised to find that

to prevent any fish from entering the the number of breeding sockeye upon

nursery. The cross-ways of rocks the spawning grounds over the entire

backed up the water in the channel watershed was very great, and that the

leaving twenty large pools of an aver- five hatcheries operating there were

age depth of two or more feet. Into filled to their utmost capacity with

this nursery the young sockeye were sockeye eggs. Every lake and tribut-

carefully placed. The nursery being any stream of the entire Fraser dis-

free from all forms of predatory fish trict was abundantly sown with sock-

the young salmon are fully protected eye spawn this year. Lakes and

from their greatest enemies. During streams which had been absolutely

the day care is exercised to prevent barren of breeding sockeye in each of

their destruction by water birds, chiefly the past two years, were thor-

the michievous but very interesting oughly seeded this year. A com-

and tuneful water-ouzel which is so parison of the abundantly seeded

common along the streams of this spawning grounds and the well filled

vicinity during the winter. We con- hatcheries of this year, with the un-

sider the nursery one of the most valu- sown, unproductive spawning beds and

eye salmon to the Fraser river led mises well to all concerned.

he young fish during their stay at the spanning grounds were well seeded, to find the best measures for their per- and that each of the five hatcheries lo- Wednesday, Thursday and Friday, salmon which entered Quesnel lake month the run was, in the opinion of salmon, from the fish held in the re-August 2nd, 3rd and 4th. From 6 a. m. of Saturday, August 6th, until 6 p. m. of Sunday, August 7th, fishing was discontinued, and the salmon had a clear way in our own waters. From 6 p. m. of Saturday August 6th, to 6 a. m. of Monday, August 8th, in the contiguous waters in the state of Washington the same state of affairs prevailed. The vast numbers which passed up the river during those hours cannot be estimated. Upon resuming operations on Sunday night, August 7th, our fishermen found the river still filled with fish their nets catching all the canners could handle. Under such conditions it is not a violent supposition to suppose that great numbers passed above the fishing limits and thence to the spawning grounds. I followed this run up through the great canyon of the Fraser, above Yale, and I have never seen a salmon river so congested with If these conditions obtained every year it is evident there would no longer be any difficulty for sufficient fish to pass the fishing grounds and reach the spawning beds. I do not, however, deem it fitting or proper for me, in this report, to enter into a discussion of the matter of regulations, since I am a member of a commission which was appointed by the Dominion government to inquire into and report upon these very matters, together with many others concerning the fisheries of the province. The sessions of his commis sion are now in progress, and its report will be made to the Dominion government within a year, which, it is anticipated, will deal exhaustively with all questions concerning the fisheries. A similar commission has been appointed by Governor Mead, of the state of Washington, to confer with the Dominion commission. As both the province and the state of Washington are equally concerned in conserving

commodation at the building. He says to all concerned that the run of sock- district was thoroughly stocked this each shall enact. eye salmon to the Fraser this year was year, and that the run in the future to During the summer of 1904, it will be the ladder. It ran red with them." The eggs began hatching in Novem- large. The history of the runs of sock- result from this year's spawning pro-I wish here, by way of emphasis, to works department, and myself, at once brevity, often called "the home stream" from the fact that it is quite unlike | Sound district 847,122 cases; a total of call attention to the fact, as I did in proceeded to the dam.

The accompanying illustrations are for the year on the fishing industry the claimed that the product of the year's and others and more restrictive ones the river filled with spawning fish theorist to explain. hatchery 44,150,000 sockeye e gs and both sides of the international line, thousands of the ecessary to the perpetuation of their year since the dam was finished that lake) of spawning grounds of the The release of this large number natchery 1, 10, 100 society 1, 100, 100 spring salmon egg The 1, 100 spring salmon egg The 1, 100 spring salmon egg The 1, 100 spring salmon egg The 2, 100 small, and the result will be that there will be the there will be a very large number lil east the lake, must be of incalculable value, and saw the fish freely passing through.

The lake, must be of incalculable value, the lake, must be of incalculable value. This territory in 1901 was rend
The lake, must be of incalculable value, the lake, must be of incalculable value, and saw the fish freely passing through.

The lake, must be of incalculable value, and saw the fish freely passing through. The lake is the canners could not handle all the dampeter with the lake, must be of incalculable value. The lake is the canners could not handle all the dampeter with the lake, must be of incalculable value. The lake is the canners could not handle all the dampeter with the lake, must be of incalculable value. The lake is the canners could not handle all the dampeter with the lake, must be of incalculable value. The lake is the canners could not handle all the dampeter with the lake, must be of incalculable value. The lake is the lake, must be of incalculable value. The lake is the lake, must be of incalculable value. The lake is the lake, must be of incalculable value. The lake is the lake, must be of incalculable value. The lake is the lake, must be of incalculable value. The lake is the lake, must be of incalculable value. The lake is the lake, must be of incalculable value. The lake is the lake, must be of incalculable value. The lake is the lake, must be of incalculable value. The lake is the lake, must be of incalculable value. The lake is the lake, must be of incalculable value. The lake is the lak ered barren because the sockeye were four days of the season the canners the fishway. There were no more fish the fisheries department of the prov- Anderson lake and its tributaries The situation of the hatche ry is described as perfect for the put poses intended, and at the same time is said intended, and at the same time is said in accomplished nothing else of the fisheries of the province in the insheries department of the province in intended and its tributarie described as perfect for the put poses including the insheries department of the province in the inshe intended, and at the same time is said to be one of the most beautiful: pots to ascertain as accurately as possible in consequence died in great numbers to ascertain as accurately as possible in consequence died in great numbers to ascertain as accurately as possible in consequence died in great numbers to ascertain as accurately as possible in consequence died in great numbers to ascertain as accurately as possible than the restoration of the Quesnel of Seton lake, we again, on September the number of adult salmon which portion. The illustrations show the worl to freeched and deposited their ova upon at two hundred. During these days which reached there passed steadily up The illustrations show the worl; of reached and deposited their ova upon spawning.

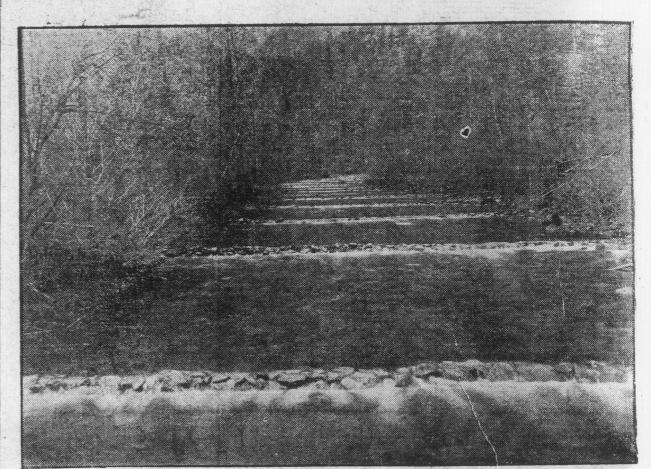
The illustrations show the worl; of reached and deposited their ova upon spawning.

The successful opening up of the spawning grounds. In a previous the spawning the female salmon at the spawning grounds. In a previous the spawning the female salmon at the spawning grounds. In a previous the spawning the female salmon at the spawning grounds. The successful opening up of the spawning the female salmon at the spawning grounds. The successful opening up of the spawning the female salmon at the spawning grounds. The successful opening up of the spawning grounds are spawning to the spawning grounds. The successful opening up of the spawning grounds are spawning to the spawning grounds. The successful opening up of the spawning grounds are spawning to the spawning grounds. The successful opening up of the spawning grounds are spawning to the spawning grounds. The successful opening up of the spawning grounds are spawning to the spawning grounds are spawning to the spawning grounds. The successful opening up of the spawning grounds are spawning grounds. The successful opening up of the spawning grounds are spawning grounds. The successful opening up of the spawning grounds are spawning grounds are spawning grounds. The successful opening up of the spawning grounds are spawning grounds. The spawning grounds are spawning grounds are spawning grounds are spawning grounds.

and has furnished me with an inter- the river about the 15th of September.

If in the four years of its existence the fish there congregated to pass in

We secured the bulk of our socker



SETON LAKE HATCHERY-NRSERY LOOKING UP STREAM, SHOWING CROSS WALLS OF ROCK

this year. He describes the run of many careful and experienced observ- taining pond at the hatchery. The balacter, and is described by Mr. Babcock petuation, and to test the effectiveness cated on the watershed were filled with in his annual report as having been of the regulations now in force." cated on the watershed were filled with eggs to their full capacity, we may a satisfactory adjustment may be sockeye from the 10th of August until ers on the lower river, as great as the lower river, as great as the eggs to their full capacity, we may a satisfactory adjustment may be It is a martter of common knowledge safely assume that the Fraser river reached as to the regulations which "There were days when the fish were canners were unable to handle the fish, seines drawn below the weir placed two or three feet deep going through Comparatively few of the canners near the mouth of Portage creek. cared to use them, as they claimed The collection and care of these eggs Since 1898 the majority of the sock- they were soft and unfitted for can- necessitated the employment of a co structed a fishway on the dam built by eye which passed up to the Quesnel ning. I visited the lower river during siderable number of men. Thirty-three The hatchery building, though 210 those interested to anticipate the large feet long by 40 feet wide, was not sufficiently large to accommodate all the river, in react every one on both success that the perputation of this fish and many on the dam built by the dam dead below it without spawning, though 210 those interested to anticipate the large dam ded below it without spawning, the run and examined the fish. They dam ded below it without spawning, the run and examined the fish. They dam ded below it without spawning, the run and examined the fish. They dam ded below it without spawning, the run and examined the fish. They dam ded below it without spawning, the run and examined the fish. They dam ded below it without spawning, the run and examined the fish. They are the fish of the fisheries young fish until they had grown large sides of the international line, had great industry can be insured beyond way were attached to my report of last the salmon fishing industry there has spawning. Their scales were deeply force was gradually reduced. enough to be safely liberated. The first made extensive preparations to handle all question only in case such fishing year. During the spring floods of this grown up a more or less prevalent imbedded in the flesh, and covered Spring Salmon (O. tschawytascha thirty millions hatched were trans- the fish, and the pack was fully up to regulations are enacted and enforced year, when the gates of the race of theory that only those salmon which with mucus; their jaws were hooked ferred to a nursery constructed in the expectations. The catch is set forth in as will permit a sufficient number of this dam were raised, the division wall are hatched on the spawning beds of a and distorted, and their outward color creasing each year, and every effect the division wall are hatched on the spawning beds of a land distorted, and their outward color creasing each year, and every effect to a nursery constructed in the expectations. creek bottom some quarter of a mile the cannery pack which is attached to adult fish to reach the spawning of the fishway was destroped. As soon stream return to the same place at indicated that they had been in fresh should be made to enlarge the run this report. The pack of sockeye sal- grounds each year to carry out their as I was informed of this fact, Mr. F. maturity to deposit their eggs, and water for a considerable time. As I this fish, as well as to adopt measurements and their eggs, and water for a considerable time. C. Gamble, engineer of the lands and which theory is, for the purpose of have above stated, comparatively few for extending their propagation in of our canners packed any of these Fraser river district. It is well kn theory. According to this theory, there fish. The fishermen sold the most of that this species of our salmon their catch to American canners. The not, as a rule, spawn in the tribut great majority of the fishermen with les of the Fraser which head in whom I discussed this feature of the larger lakes. The present hatche run were of the opinion that while are all located on lake-fed streams there may always be found a few that a very limited number of sockeye running in the last of Septem- salmon spawn is taken and hatched ber of the big year runs, they had them. From investigations which

> grounds. Notwithstanding their poor easily be operated by the force employcondition, they passed up through the ed at Seton lake hatchery. great canyon of the Fraser, above Yale, and on reaching the confluence | CASTLE'S GRUESOME SECRET. of the Fraser and Thompson rivers almost all passed up the Thompson to Armor And Skeletons Found in Irish Shuswap lake. Very few of the run went up the Fraser above this point. So far as I have been able to learn, this While digging on land near French is the first year in which any consid- park, County Roscommon, Ireland, erable number of sockeye has been laborer discovered a cavern with noticed in the Shuswap lake section arched roof, about 6 feet in de after October 1st. Mr. David S. Mitchell, the competent led to an old castle, about a qua and observant superintendent of the of a mile distant.

Dominion hatchery at Salmon Arm, The underground passage is assures me that this late run was equal | built, and some of the walls bear to in numbers to the great run of August of inscriptions, while at a of this year. There was no similar run point a number of skeletons and b to the Shuswap lake section in October were found, together with a quarter of 1901. In fact, very few were seen of metal, which proved to be there at that time. In Ocober of 1901 and weapons, evidently of great there was a big run of sockeye to the quity. Seton Lake district, but there was no | An old legend in connection with noticeable run there this year in that castle runs to the effect that ages

Seton Lake Hatchery.

I am gratified to report that the sea- tle, and being driven into the pas son's operations at the Seton lake it was closed up at either end by hatchery were entirely satisfactory. foes and the warriors were thus left During the season we secured and suc- their death. cessfully placed in the hatchery 44,-150,000 sockeye eggs, and 1,465,000 spring salmon eggs, a total of 45,615,000 eggs. The sockeye began arriving at the hatchery on July 28th. Approximately value of machinery thus far import four hundred reached the station on for these industries is in the neigh that day, and for the next few days the retaining pond, at the outlet of the lake, until the end of September, when the run slackened.

On August 24th the retaining pond became so crowded with fish that a section of the upper weir was opened, and upwards of 40,000 fine fish were permitted to pass into Seton lake. On August 26th we again opened the weir and permitted 50,000 more fish to pass through for the same reason. These 90,000 salmon were prevented from

being far advanced towards pay list of October. Thereafter the

The value of the spring salmon i never seen such fish in the river in such have made in the past two years I vast numbers in any previous year satisfied that a suitable site for after the 15th of August. I followed spring salmon hatchery exists on a tr this September run to the spawning butary of Bridge river, which could

Cavern.

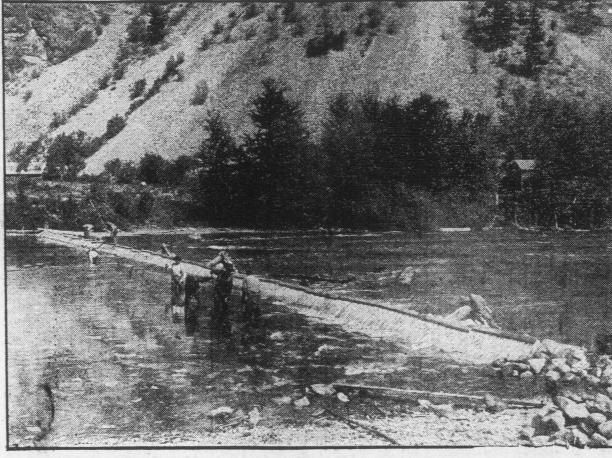
From this a narrow winding pass

the remains of one of the most p ful of the Connaught clans took re in this castle after their defeat in

It is stated that the capital inviin industries and agriculture in amounts to about\$300,000,000, and that hood of \$40,000,000.

Russia has a larger proportion blind people than any other Europe country; two out of every 1,000 are sight

FINE FOOTWEAR Ease, Elegance, Economy



SETON LAKE HATCHERY, SHOWING WEIR AT HEAD OF RETAINING POND ON LAKE CREEK.

able adjuncts of the Seton lake hatch- the empty hatcheries of the past two ery. Without its aid we could not have years, should be an impressive object successfully handled this year the large lesson to the fishermen, the canners amount of fry hatched there. These and the general public. young salmon in the waters of the nursery are reared as nearly in a state fish which reached the spawning of nature as could well be conceived. There exists an abundance of natural food, and as soon as the fry become removed or opened and the little salmon will be at liberty to go where they please. All but ten millions of the fry hatched at the hatchery this year will be reared in the nursery In the course of Mr. Babcock's report

below the hatchery building.

shut off all the water and leave its bed try.

PATERSON'S FINE FOOTWEAR Ease, Elegance, Economy

grounds this year equals that of four years ago-the last big run-for con vincing evidence is available from sevfree-swimming fish the dams will be eral sections to show that the run was not so large. There is also abundant evidence to prove that the run to Shuswap lake section this year was greater than four years ago. In no sec-

It cannot be said that the number of

It is practically impossible to deternine accurately whether the number of fish which reached the spawning grounds this year equalled that of 1901, or not, because the number of fish distributed over the entire watershed of the Fraser district can only be approximately determined where the numbers are so great. But even if the ran was less, it may reasonably be

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my report of 1902, that "no regulations | The fishway proper had not been in- | could be no run of sockeye to the that cover every season alike can be jured. After watching the water pass Quesnel Lake district this year, bemade that will adequately meet the over it we determined that there was cause no spawn to produce a run had remarkably varying conditions known no necessity of restoring the destroyed been deposited there since 1898, access they came irregularly. On August 4th to exist on the Fraser. There should wall. We submitted instead a much to the spawning grounds above the the run increased, and from that date be seasons and regulations provided lower one, which proved to be entirely dam having been denied them, and there was a steady stream passing into tion except the Shuswap Lake district for the river applicable to the years adequate. The fishway enabled every there this year will certainly be a difthat are known as those of abundance, fish which reached the dam this year ficult matter for the "home stream" to pass to the water above. The sockeye reached the dam in good numbers on August 10th. From that date until the end of August enormous numbers came up the river and passed, without hindrance, through the fishway. I visited this district during the last days of August, first going to the Horsefly river, one of the largest tributary streams of the Quesnel lake. I found

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PATERSON'S

TWO MEN KILLED AN

Demonstration by Roum alists Against Use of

THREE HUNDRE

Language at Buc

VOL 35

Vienna, March 27 .rioting occurred at Bu mania, last night, and e conflict between the ric troops during which t killed and over three wounded.

The trouble arose over tion of Roumanian natio he use of the French performance at the The Ladies' Charity S under the patronage Maria, wife of Prince heir presumptive to the mania, advertised the play in French, and the ionalists gathered abo and became so threater vere summoned and fir the demonstrators Over a hundred person

FATAL FIRE IN

Four Firemen Killed a jured During Conf New Yor

New York, March 2 were killed and about men and citizens inju fire accompanied by plosions that demoli actory building at Be ing streets in the G district on lower west damage which is estin \$300,000 to \$400,000, was was declared by Ch lue to the explosion neath tons of debri when the flames we yond control and thre the entire block. O taken out of the build almost instantly. T three comrades were the fire was over, c

wreckage of floors an Three hundred men in the factory during when a slight expl one of the upper floo stantly the whole st reach the streets by greater number were refuge on fire escape mained huddled toge ing assistance, until arrived. Before the run up, policemen, fin teers formed a human the wall of the factor handed down to saf thirty girls who wer fire escapes on the sec jumped into the life s piles of bedding hast heaped on the sidewa

Within ten minutes of the building had h safety and unhurt, jured. The alarms succession and severa men were rushed to trol the panic strick thronged all the stree of the factory.

All the adjoining tendered vacated and this been accomplished wall crushed in the up row of seven tenen street, a moment late neross the street, sett enveloped the buildi within a few minus break when a terrific red, followed in rap four more, the last of to shake buildings for The factory was oc pire Art Company and Company which own

WARNS PEA

The Czar Says Thos in Disorders Wi Punish

St. Petersburg, Mar Nicholas in receiving peasants from Kazai employed a new and He said nothing their land hunger, the inviolability of p the peasants that agrarian disorders an of property would no ed in the most severe communities participa orders would be depr tance of the peasant

The papers continu rumers of Premier W which they say has b emperor, but not act

THEATRE DE

Meriden, Conn., Marc theatre on Church splayhouse in the city, fire this morning, and to reach nearly \$200. how the fire started.