CHAPTER IX.

COAST TOWNS OF ALASKA.

THE natural port from which to sail for Alaska, and from which to supply the Alaskan trade, is Seattle. A number of boats sail every week in the year as far north as Skagway and Seward. Often these are vessels that have seen better days on the Atlantic Ocean, and have deteriorated to a point where the insurance companies will no longer insure them for the rough waters of the Atlantic, and are sent around to the smooth waters of the Pacific, where the companies will again take the risk of insuring them. During the year in which I sailed to, and returned from, Alaska, five of these old ships were wrecked, with considerable loss of life. At no place in

the world have I seen so many wrecked vessels as were beached on

practicable to apply our marine laws to the boats making Alaskan ports on account of the conditions being so entirely different. It would save many lives and hundreds of thousands of dollars if our Government would chart the bottom of the inland sea that leads to Alaska, instead of wasting big sums of money in surveying routes for impossible railroads that will never be con-

It is im-

the shores of Alaska.



Metlakatla, a thousand miles up the coast from Seattle and the first point one touches in Alaska, is one of the most interesting places I

FATHER DUNCAN, THE GRAND OLD MAN.

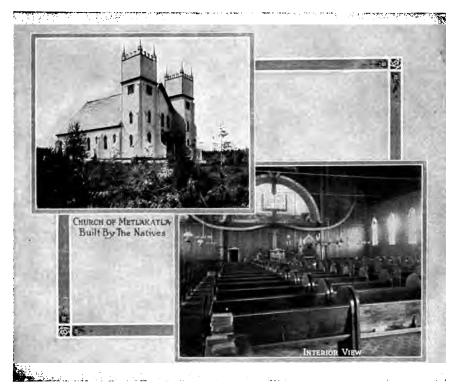
structed.

88 ALASKA

visited while in our Northern possession. It is a one-whiteman-and-1,500-Indian island. The white man is Father Duncan, and he is both the spiritual and temporal ruler of the town and island. He came out as a missionary from England over sixty years ago and began work with the Indians in British Columbia. He did not like the laws or conditions in British Columbia, so he petitioned Uncle Sam to let him use this island, to which he moved his Indian followers and where he has conducted his work and lived his life in his own way. He was formerly a tanner by trade, had good Scottish commercial ideas, and has demonstrated what really can be done with the Indian when in honest, competent hands. The chief industry of the island is fishing. All business is carried on in Father Duncan's name for the benefit of the community, and the cost of maintaining the schools and church, local government, fire department and local improvements is paid by Father Duncan is now over eighty-five years of age,



EXCURSION PARTY ON STEPS OF FATHER DUNCAN'S CHURCH AT METLAKATLA.



and it is a serious question as to what will become of the Indians when he dies, as there seems to be no strong character in sight to take his place.

I asked an Indian what denomination or creed they belonged to. He said the only creed they had was the Bible. He did not know what the word creed or denomination meant. That is typical of Father Duncan. He has taught the life of Christ without partiality. A few years ago some politicians wished to reorganize the island and place it exclusively under United States laws as to schools, government, etc. Father Duncan stated that he had \$80,000 in the bank at Seattle, and owned all the industries, but was willing to turn over legally everything he had in the world to his Indian followers, if the



A GENERAL VIEW OF



GENERAL VIEW OF JUNEAU,



KETCHIKAN AND ITS HARBOR.



THE CAPITAL OF ALASKA.

WRANGELL, ALASKA, PHOTOGRAPHED AT 10:30 P. M.

meddlers would not disturb him in his school or church work as long as he lived. He is a strange, genuine, wonderful old man, and everything he does rings true.

The real commercial metropolis of southeastern Alaska is Ketchikan, a bustling town of over 2,000 population. Again, salmon fishing is the chief source of revenue, although some quartz mines have been developed near this point. The local newspaper was doing well—which is the best evidence of a live community.

The next port north at which we stopped was Wrangell, which has a population of 800. We arrived after 10 p. m. and here I had my first experience in taking photographs that late in the evening. At one time it was quite an important point where miners left for the Klondike or the northern Canadian interior. Many good stories were told by old miners of what Wrangell had been when it was a "wideopen" town. Here, also, I was introduced to my first totem pole. They hope to develop a good water power here and establish a pulp and paper mill, if the conservation



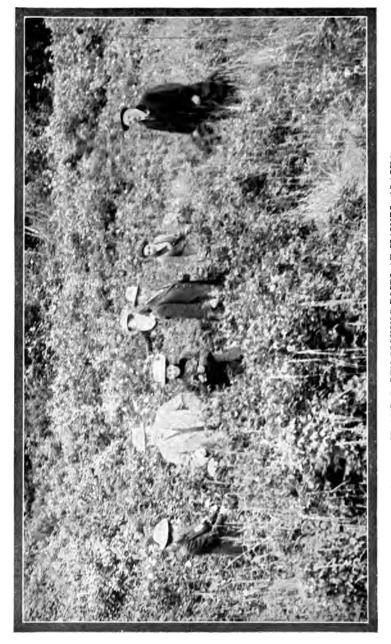
regulations of the United States Government will permit them to develop their local resources. There is a large quantity of spruce and pine in the vicinity suitable for pulp wood. When I was there the tide was out and the beach was covered with crabs and the smell of dead fish and refuse from the canneries was everywhere. There are many nice people living in Wrangell for whom one cannot help feeling sorry. The Stikine River comes in at this point, furnishing splendid salmon fishing during the season.

Petersburg, our next stop north, is headquarters for halibut fishing. Large canneries have been established there. They also have a sawmill which runs the year around. The best time for halibut fishing is during the winter months. Much of the halibut served in Chicago and New York hotels comes from Alaskan waters. In a single day over 1,000,000 pounds of halibut has been landed on the docks at Seattle from Alaska. The population of Petersburg is about 1,000.

The next port north is Juneau, the new capital of Alaska.



THE GOVERNOR'S MANSION AT JUNEAU.



MR. BOYCE AND PARTY PICKING ROSES AT HAINES, ALASKA.

The old capital was Sitka. Juneau was the only town I visited in Alaska that was really booming; it has a population of about 4,000. The first Legislature of Alaska met at Juneau in the winter of 1912-13. While in conversation with a prominent lawyer here, Judge Jennings, I remarked that he bore the same name as a friend of mine, Charlie Jennings, who was a good poker player, and I hinted that perhaps he was also skilled in the game. His laconic reply was: "Yes, what I make playing poker I lose practicing law."

After the port of the great Treadwell mine, which I described in the chapter on mining, the next town of importance up this coast is Haines. Fort William H. Seward is located here, with a detachment of soldiers. Chilkat River enters the sea at this point, and the Indian reservation of the same name is located up the river. Here the Government erected good buildings for the Indians, who promptly abandoned them, and the buildings are now falling into ruin. This is a fairly good agricultural country for some miles around. The cleanest cabin I was in while in Alaska, spotlessly clean in this instance, was owned and occupied by C. H. Anway. (See picture on page 66.) He is growing rich selling strawberries. The only thing he seemed to lack was a wife. I covered the country around Haines in an automobile, finding the region level and the roads good. The snow-capped mountain scenery is truly magnificent. The officers and their families at the fort afford considerable society for the community.

Skagway is no doubt remembered by readers as the point from which miners in 1897-98 worked their way, through almost indescribable hardships and difficulties, across White Pass into Yukon Territory during the Dawson placer-mining boom, with this town as the base of supplies. Near this place I saw a lonely grave at the foot of a tree, on which had been carved a cross marking the grave of a prospector who committed suicide after he had lost for the third time his complete outfit in trying to get across the Pass. He left a note in which he had written: "H—l cannot be worse than this; I'll take a chance."

Skagway at one time had a population of 5,000 or 6,000. It now has possibly 2,000. It is the head of navigation, and the terminus of the White Pass & Yukon Railroad. Many stories, both dramatic and humorous, are told about this town, when every other building was a saloon and dance house and gambling joint. One narrative, I remember, was that of a certain tenderfoot who one day came rushing in headlong flight around the corner of a building and bumped into the sheriff. The sheriff grabbed the frightened fellow and yelled angrily:

"Where are you running to and what's the matter?"

"I am trying to keep two men from getting into a fight," panted the tenderfoot.

"Who are the men?" demanded the sheriff.

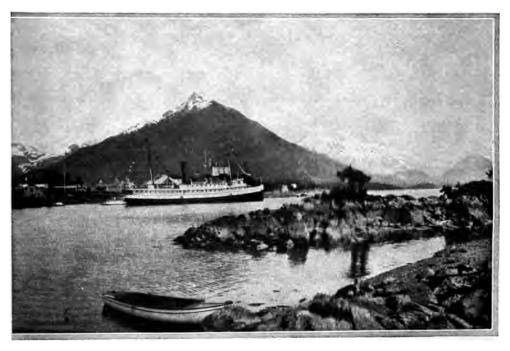
"I am one of them!" gasped the tenderfoot and fainted.

Coming back southwest from Skagway we reached Sitka, the old Russian and American capital of Alaska, which I



VIEW OF THE TOWN OF

described in a previous chapter. Here we left the "inside passage," and sailed for Cordova, 350 miles northwest of Sitka. This town, situated on a good harbor, impresses one as having a future of considerable importance, owing especially to the great copper and gold mines possible to reach through the only real railroad in Alaska, the Copper River & Northwestern, which starts here, running 196 miles northeast. It is owned and operated by the Guggenheims and the Morgans, as I have previously mentioned, to get out the ore from their great Bonanza copper mine at Kennecott. A branch of this road is the most natural outlet for the great coal fields located about 200 miles from the coast. When I was in Cordova there were but few men left in the region, owing to the latest placer-mining strike at Shushana, accessible from the terminus of the Copper River & Northwestern Railway. Cordova, built on the side of a mountain, is very picturesque. Two vast



SITKA AND ITS HARBOR.



GENERAL VIEW OF THE



A BIRD'S-EYE VIEW



TOWN OF VALDEZ, ALASKA.



OF SEWARD, ALASKA.

glaciers, the Childs and the Miles, are located forty miles up the Copper River from here.

Prince William Sound, on Alaska's central southern coast, affords a great and well-protected harbor. Cordova is on the southeast shore of the Sound and Valdez is on the northeast, only about forty miles as the crow flies, but 100 miles by water and almost impossible to reach by land, owing to the many glaciers. Valdez is at the end of the Government trail from Fairbanks. People here told me that Colonel Richardson, at the head of the Government Improvement Department in Alaska, has spent \$2,000,000 on a trail between Valdez and Fairbanks, less than 400 miles away, and except in winter, when you can go any place in Alaska on ice and snow, it is a mighty poor trail. It is the same old condition of politics and favoritism under which poor pioneer settlers are imposed upon. A part of Valdez is wet during several months in the summer as the result of the seepage of water from a glacier. The United States Government made an appropriation of \$50,000 to protect the town. The "protection," which I saw and photographed, consisted of some brush placed on the ground and bowlders piled on top to keep it there. It is a signal example of where the people's money goes in Alaska. Valdez has a population of approximately 2,000.

Latouche is on an island of the same name, 100 miles from Valdez on the northwest corner of Prince William Sound.



DUTCH HARBOR ON

There is nothing there but a copper mine of very low-grade ore, running from $2\frac{1}{2}$ to 5 per cent. I was informed that this ore is carried for practically nothing, as ballast for ships, to the smelters in the State of Washington.

There was a time when it looked as if Seward, seventy miles west of Latouche, and the most westerly open-the-yearround port on the mainland coast of Alaska, would become a town of importance, and, except for the conservation and reservation policy of the United States Government in tving up the natural resources of Alaska, there would doubtless be several thousand prosperous people at the present time in this town. At one period the population of Seward numbered some 2,000, today it is about 700. The Alaska Northern Railway, constructed northward from Seward for nearly 100 miles, has been practically confiscated by the United States because it could not pay the annual Government tax of \$100 per mile. Why railroads in Alaska should pay the Government \$100 per mile per year for the privilege of opening up new country is one of the strangest of the many puzzles presented by American statesmanship.

One hundred and seventy-five miles southwest of Seward we came to the great island of Kodiak, which I described in the chapter on Alaskan farming. Dutch Harbor is on Unalaska Island, at the passage between the Pacific Ocean and Bering Sea. It is a well-protected harbor, where the weather is never



UNALASKA ISLAND.



NATIVE CHILDREN AND MIXED RACES, UNALASKA MISSION.

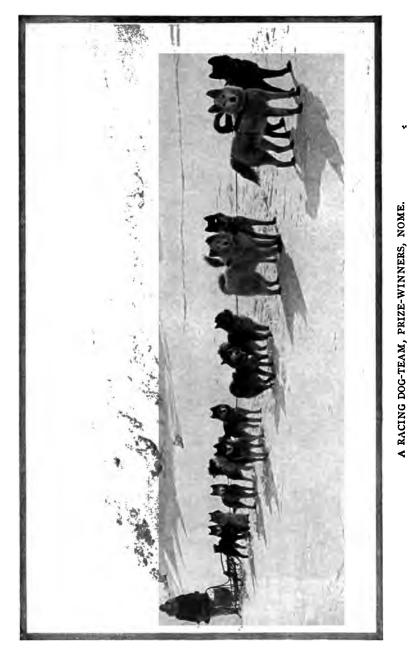
very cold, and it is nearer to Japan than to the United States. It was an important base of supplies when Russia owned Alaska and is now used by the United States Government in connection with the revenue cutter service.

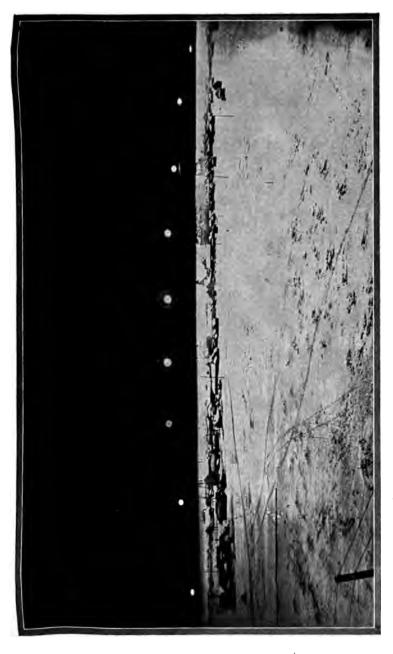
Seven hundred and fifty miles north we came to St. Michael, a very old Russian trading post near the mouth of the Yukon. In the summer time river boats on the Yukon meet the ocean-going steamers at this point, transferring passengers and freight. St. Michael has a rather shallow harbor and will, in my opinion, never be a port of very great importance. One of the chief attractions on shore seems to be bears trained to drink beer, the bears being chained to posts in front of saloons. Tourists, through curiosity, are induced to buy bottles of beer for each thirsty Bruin, a source of considerable

are now practically exhausted. The buildings of Nome are of temporary construction, even the Government structures being made out of flimsy material, and the population, at one period over 12,000, when I was there was less than 1,000. There is no harbor at Nome. Ships drawing more water than a rowboat or shallow barge anchor out in the open, two or three miles from the rough shore, which is constantly being beaten by waves. Every person who attempts to land on shore from a boat gets soaking wet from the flying spray. A pier has

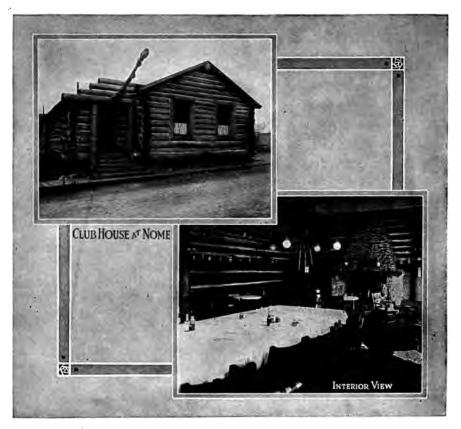


LANDING PASSENGERS BY AERIAL TROLLEY AT NOME.
PHOTOGRAPHED DURING A FOG.



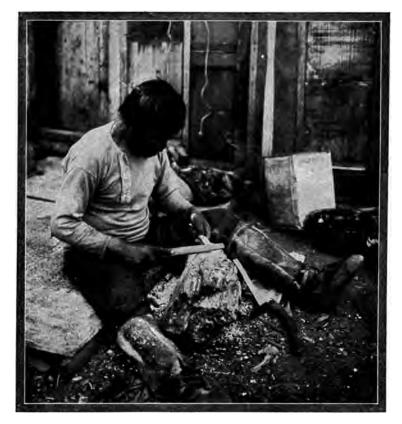


PICTURE OF THE SUN'S CYCLE, TAKEN EVERY HALF-HOUR IN NOME, JANUARY 2D. SUNRISE AT IO A. M. SUNSET AT 2 P. M.



been constructed a half-mile from the shore, where passengers and freight are landed from lighters plying between the ocean-going vessels and the pier. From this pier one is carried by an aërial tramway to a high dock on the shore. When I went ashore some of my fellow passengers refused to risk their lives by this method of transportation, although I think they were needlessly alarmed.

Dog racing on the ice in the winter furnishes the residents of Nome their most absorbing sport. The Kennel Club of Nome occupies much the same position as do the jockey clubs of big cities. One of the rules of the club is that all dogs must



ESQUIMAU IVORY CARVER, NOME.

be registered when they start and be brought back dead or alive, to prevent substitution. Racing dogs have been sold in Nome from \$250 to \$1,200 each. From six to twelve dogs are hitched to a sled. The Derby is run late in the winter to Candle Creek and return to Nome, a course of over 400 miles. "First money" ranges from \$2,500 to \$10,000. Every person in Nome talks "dog" the same as they talk "horse" in Kentucky. It is a striking example of man's ability to extract thrills and excitement from almost any environment.

CHAPTER X.

TYPES AND SCENES.

WHEN one makes a long journey through a great, strange country like Alaska, certain striking objects are encountered and scenes witnessed which do not readily fit into the regular narrative, yet that are important and remain vivid in one's memory. I shall mention a few such items here.

Dropping down the deadly quiet Yukon River late one summer evening, we came to Nulato, where there was an Indian missionary school, church and cemetery. In the purple half-light and mysterious loneliness of the mountain region, the scene was weird and different in many aspects from any other place I had ever visited. I took a photograph which shows a portion of the cemetery, a number of Indian tombs crowning a hill, all constructed on top of the ground. What the camera does not convey to the reader is the fact that each small house for the dead, marked by a cross, was painted a distinctly different color. The sun, burning low on the horizon line, reflected from these uncanny dwellings of the dead all the hues of the rainbow. This glow of vivid colors about the crude tombs where the forms of men lay lifeless produced a strange effect upon the mind. It was much like bedecking a corpse with many-hued ribbons, and you can fancy how strange a sight that would be. If it were the intention of these Indians to make their last resting place so conspicuous that Gabriel could not miss them on the morning of the resurrection, they have certainly succeeded. When the Great Angel finally arrives and proceeds to "page" the sleepers of Alaska he can hardly miss them.

The ice glaciers of Alaska are among the most impressive and curious natural formations that I have seen anywhere.



INDIAN GRAVES ON HILL ABOVE NULATO.

One of the largest of these is the great Childs Glacier on the Copper River. Many of the glaciers abut upon the ocean, and it is rarely that one finds in the interior upon a river forty miles from the sea a "live" glacier, traveling at the rate of four feet every hour, as does the Childs Glacier. It is impossible for any photograph to show more than a small portion of this tremendous formation. It is over 300 feet high, and has a face wall abutting on the river several miles in width, and extends sixty miles back into the valley and high up a mountain side. Quite a "block of ice," you see. Every few minutes thousands of tons of ice break loose from the wall or face of the glacier and rush down into the water with a noise like thunder or the booming of cannon. The plunge of these gigantic masses into the river raises the water until it washes across the 1,500 feet of distance between the wall of ice and the opposite rocky shore and sends waves hundreds of feet up the river bank. In fact, it is dangerous to stand close to the river unless one is a good "sprinter." The play of nature's forces here is so grand that the spectacle becomes fascinating. People stand by the hour waiting and watching for the pale blue masses of creeping ice to break loose, fall and plunge roaring into the river. The boom and shock are fairly stunning.

As I stood there looking at the towering glacier an old story that I had read somewhere came to my mind. It was the tale of a young married couple who on their bridal journey visited a "live" glacier, that is, a moving glacier as distinguished from a glacier that becomes obstructed and remains motionless. As the bridal pair were "honeymooning" about upon the glacier, the husband slipped and fell into a deep crevasse from which his body could not be recovered. The bride, naturally, was heartbroken. However, her grief was slightly assuaged when a wise old professor informed her that the body of her young husband would be frozen and preserved, much as if he had been placed in cold-storage, and that in forty years that portion of the glacier containing the body would reach the sea and the remains could be recovered. The professor added that prob-

ably the physical life of the young man would be locked and held in a state of suspended animation, and it was barely possible that he would regain consciousness when he was "thawed out." So, sustained by hope, the bride remained true to his memory for forty years. Just as the long period of waiting was ended the crevasse in the glacier reached the seashore, precisely as the professor had figured, and the cold-storage husband came to light. Also, as the great man had predicted, the frozen man awoke to life when they thawed him out. The wife was an old woman while the husband was, naturally, still a young man. It looked like tragedy, but the writer of the story was resourceful. The wife by practicing mental suggestion, New Thought, and a species of Christian Science, had kept herself young and beautiful, and the strangely reunited pair finished the wedding journey that had been interrupted forty years before, came home and went to keeping house, and lived happily ever after. Of course, the story was perfectly easy to believe. However, standing there and looking up at the cold and frowning face of the Childs Glacier, it



TOURIST PARTY AND A PORTION

occurred to me that if the young cold-storage husband had been released from the sort of grinding and crashing crevasses that were yawning above the Copper River, he would hardly have been worth thawing out.

But to be serious. The moving glaciers of Alaska are not only beautiful and amazing, they are sometimes a menace. An instance is that of the railroad bridge over the Copper River. This is the largest and most expensive bridge in Alaska. It is 1,500 feet long and cost \$1,500,000. It is located between the Childs and Miles glaciers, and was erected in the winter, the work being carried forward upon the ice. The contractors narrowly escaped failure, as they succeeded in getting the last span of the bridge in position only an hour before the ice went out of the river. When the bridge was located at this point the Childs Glacier was nearly three-quarters of a mile distant. Now it is only 1,200 feet away and is creeping nearer with the passing of each year. I stood upon the bridge with the railroad superintendent, and I asked him what they would do in two or three years, when the gigantic moving wall of ice



OF THE GREAT CHILDS GLACIER.



COLUMBIA GLACIER, PRINCE WILLIAM SOUND.

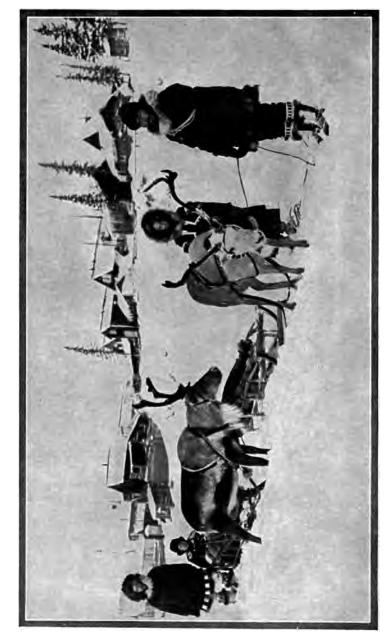
reached the abutments of the bridge. For answer he only shook his head and walked away.

On Prince William Sound, near Valdez, our steamer took on ice for the ship's use directly from a glacier. It is called the Columbia, and is one of the most beautiful in Alaska. This glacier is four miles long and 300 feet in height, and continually huge masses are breaking from its face and falling with thunderous crashes into the sound. It is a common practice for ships to take on ice from a certain part of this glacier. The Columbia is a "live" glacier. Where a "live" glacier forms, the land beneath it is always sloping, and the glacier keeps pushing forward by reason of more ice continually forming behind it. A "dead" glacier is a river of ice dammed in a pocket, or where the land beneath it slopes downward toward a mountain or some high point. In southeastern Alaska alone there are 170 glaciers of sufficient importance to have received names. The glacier crop never fails.

I was surprised at the tameness of the reindeer of Alaska.



A HERD OF REINDEER ON THE BANK OF THE YUKON.



A SAMPLE OF ALASKAN REINDEER TRANSPORTATION.

When we were going down the Yukon, several herders went up into the hills and drove four or five hundred down to the river bank for us to inspect. Ten years ago the United States Government imported from Siberia 1,280 head of reindeer, which is practically a domesticated caribou. When the last reindeer census was taken there were forty-six herds in Alaska, containing 33,000 animals. The natives own 60 per cent of the herds and the missions and the Government own most of the remainder. The reindeer was imported because the enormous destruction of game, seals and walrus had reduced the natives to the verge of starvation. These hardy animals, in addition to furnishing the natives with food and clothing, are largely used for transportation, having taken the place of dogs in drawing sleds in many districts. One of the contradictions found in Alaska is that the reindeer thrive better on dried moss found under the snow than on green foodstuffs.

It is estimated that Alaska has grazing ground sufficient to support 10,000,000 to 20,000,000 head of reindeer, and indications are that the industry will extend over the entire Alaskan Peninsula and many Northern localities not yet occupied. The export of reindeer meat, with its by-products, is expected to form an important item in Alaska's undeveloped resources. In Norway and Sweden smoked reindeer tongues are sold at markets everywhere, and reindeer skins are marketed all over Europe, being worth in their raw condition from \$1.50 to \$1.75 each. The skins are used for gloves, riding trousers and



BISHOP PETER TRIMBLE ROWE.

the binding of books. The hair is utilized in many ways and from the horns is made the best variety of glue.

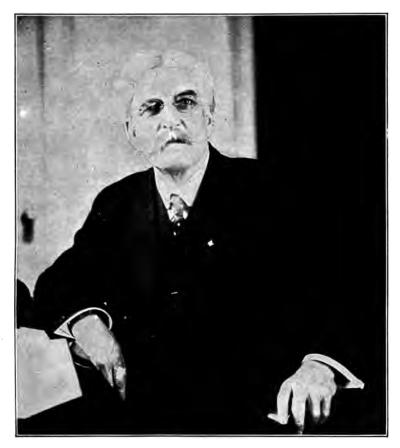
Alaska has had in the past and has today men of unusual character, some brave as lions, some tenacious as bulldogs, some unscrupulous as Satan, and some as unselfish and kind as the Man of Galilee. Among this latter

class is the best loved man in Alaska, Bishop Peter Trimble Rowe of the Protestant Episcopal Church. He is the most trusted man in all this land of distrust. The shy Indian child, or abused, hungry, outlawed dog, comes to him in confidence. The "busted" miner or down-and-out "bum" almost feels the touch and presence of his childhood's mother when near him. God was good to Alaska when He sent Bishop Rowe to represent Him. He was there before gold was discovered, before he was a bishop. He has pulled his own sled with only a poor Indian to help him over thousands of miles of unbroken, snowy trail. He has frozen and starved with the poor, been the honored guest of the rich and the host to everybody white man, Indian or half-breed. He has not been particular about creeds, nor has he favored, as many missionaries do, only the "members of the church." He first considers the temporary or worldly need of those with whom he comes in contact, and afterward explains that this was what Christ taught: "Feed My Lambs."

If Alaska were made into a United States colony, as it should be, he would no doubt, if he would accept, be the first Governor elected by the whole people. He understands the whole country's commercial needs better than all the political officers and officials sent from Washington. If the "Great White Father" would ask the advice of Peter Trimble Rowe, Alaska would get what every honest man wishes it may have—a square deal.

Another able and popular man is Hon. J. F. A. Strong, first Governor of Alaska since full territorial government went into effect, who was appointed in the spring of 1913 by President Wilson. He is a pioneer Alaskan settler. He started a newspaper at Skagway before the rush into Dawson in 1897. Realizing the great opportunities for making a quick fortune at Dawson, he started over the White Pass, packing his outfit and trying to get through a small printing plant with the first rush in 1897. After encountering hardships which none but a thoroughbred frontiersman could have overcome, he succeeded in getting to Dawson and there established his newspaper.

Like everybody else, he went into mining and did placer mining with his own hands. From Dawson, Canada, he went down the Yukon and up the Tanana. He ran another newspaper at another point in interior Alaska—the name of the town I have



HON. JOHN F. A. STRONG, GOVERNOR OF ALASKA.

forgotten. From that point he went to Nome and was there during the boom, conducting the most influential newspaper in such a broad-gauged way that he accomplished a great deal of good in that camp, which was torn and rent by factional

fights for many years. No doubt his wise counsel prevented much bloodshed. Although always a Democrat and true to his party at a time when the Republican administration fully controlled the Alaskan situation, he retained the respect and confidence of every one. From Nome he went to Juneau, the present capital of Alaska, and started another daily paper, and with the change of national administration was the most logical man in all Alaska for the position of first political Governor. He lives in a beautiful home in Juneau erected by the United States Government as the residence of the Governor, and he and his charming wife occupy the first position in social life as well as government. He is a real pioneer, understanding the needs of the country, and, unless overruled at Washington, will be able to do a great deal for Alaska. Although he is only about fifty years of age the hardships of this new country have turned his hair snowy white; he has the military carriage of an officer in the regular army and all the diplomacy of a statesman.



INDIAN GIRLS SEWING AT SITKA MISSION SCHOOL.

is an honest man and, irrespective of party, was the choice of the people of Alaska for Governor. President Wilson never made a more popular appointment.

If the good intentions of our Government and the missionaries produced such results in Alaska as they do at home, the native Alaskan child would have a good start in the world. But when you consider the "world" they start in, their blood and surroundings, they have precious little chance of success after the only happy days they ever know—their school days during which they are guarded and cared for mentally and physically and get a start that would be promising anywhere.

The Greek Catholic Church, which first took Christianity to Alaska, in the early days of Russian occupation, maintains missions at a dozen localities, and now nearly every Christian denomination is represented by one or more missions. More than a score of native schools are maintained under the control of a commissioner of education, most of them being at the mission stations, but despite all efforts of the missionaries, a great many native children are still out of reach of educational facilities. However, the attempt at industrial education of the natives has met with considerable success at some missions. The United States Government also spends a large amount of money on the native Alaskans for food, clothing and schools. My observations led me to believe, however, that as usual only a relatively small percentage of this money reaches its intended purpose.

Having shot big game in nearly all parts of the world, the opportunities for this sort of sport in Alaska interested me. Investigation convinced me that Alaska is one of the finest natural hunting grounds in the world, as bull moose, brown, black and grizzly bears, mountain sheep and goats, caribou, deer and other big game, as well as many varieties of smaller game, are so numerous in many parts of the Territory that sportsmen rarely fail in getting good results. Under the game laws, nonresidents must obtain hunting licenses from the Governor, and on the Kenai Peninsula they must employ registered guides. The big game hunting season opens on

August 1st and lasts four months. During the closed season bears, moose, mountain sheep and other game may be killed by miners and explorers in search of food, but cannot be shipped from the Territory.

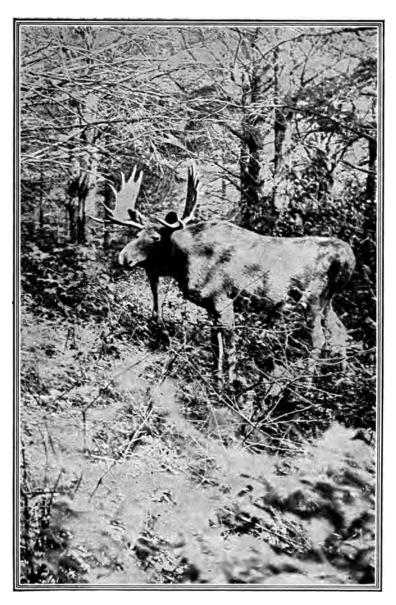
In the number and variety of its bears, Alaska is without a rival. Scientists report that there are thirteen varieties, but these are classified into four general types—brown, black, grizzly and polar bears. Brown bears, which are noted for their size and ferocity, are most numerous in southeastern Alaska. A variety of the brown bear, called Kodiak, is found on the island of that name. Black bears roam in many parts of the Territory, but are especially common in the southeastern region. Grizzly bears are found along the coasts and in the interior. Polar bears, the largest of all, confine themselves chiefly to the ice floes of the Bering Sea and Arctic Ocean. The polar bear does not hibernate in winter, but remains on the



AN ALASKAN BROWN BEAR.

ice and lives on seals and fish. In Nome there are a number of noted polar bear hunters.

The moose is the largest hoofed wild animal in North America, and ranges throughout the timbered portion of Alaska. with the exception of the southeastern coast region. Because of the fact that few men will kill a cow moose, these animals have not diminished like the caribou. The caribou of the plains roam the barren North in the summer and return southward in the winter. For years great herds have been killed off at the southern feeding grounds, but there are said to be millions more in the far North. The caribou are not so wary as the moose, but



SNAPSHOT OF AN ALASKAN BULL MOOSE.



MOUNTAIN GOATS FROM SUMMIT OF WHITE PASS, ALASKA.

the species found in the woodlands is more difficult to hunt than the plains variety, being wilder and also having the protection of the foliage. In the southeastern coast region there are many deer of the blacktail variety. The blacktail ranges farther north than any other American deer.

The mountain sheep of Alaska are nearly pure white, more graceful, somewhat smaller and with more slender horns than the Big Horn or Rocky Mountain sheep. They are most numerous about the main divides and the higher peaks, and hunting them is one of the most exciting sports. Mountain goats are abundant in regions where there are few mountain sheep. The mountain goat of Alaska resembles the chamois of Europe.

There are four varieties of fox in Alaska, one being the red

fox; the others are the silver-gray, the cross and the black. The selling of fox skins has become a most profitable industry. Large shipments, increasing in quantity with each year, are made from Alaska. There are many fox farms and the development of the industry is giving employment to many people. Fox farming is principally confined to the black and silver-gray varieties. Other valuable fur-bearing animals which are plentiful in the Territory are the lynx, mink, otter, and marten, or American sable. The stoat, or ermine, is found in some parts of Alaska. There is a bounty on wolves, which have practically exterminated the small deer in southeastern Alaska. The wolverine is encountered in many parts of the country, where it lives chiefly as a scavenger.

Of all the birds of Alaska the ptarmigan are the most interesting. They have served as food for many a prospector and explorer in the far North. The color of their feathers



STUFFED ALASKAN PTARMIGAN, SHOWING THE PLUMAGE OF THE DIFFERENT SEASONS.

changes from a tortoise-shell in the summer to a beautiful white in the winter. While it is difficult to see them when they are on the snow, they are easy to kill except in the mating season, as they do not flee when one approaches them, and it is often possible to knock them over with rocks and sticks. The mother birds are cunning when protecting their nests, however, endeavoring to lead visitors as far away as possible. Nature has provided these birds with a covering for their legs of hairlike feathers, to protect them from the severe cold. There are five varieties of grouse in Alaska, one of the best known being the blue grouse.

Ducks, geese, plover, snipe, brant and many other species of birds are found upon almost all of the lakes and streams. Near St. Michael a tract of country equal in extent to fifty by one hundred miles square, and particularly fitted for the purpose by reason of its swamps and waterways, has wisely been set apart as breeding ground for the above species of feathered creatures. Hence, you see, duck shooting and kindred sports promise to continue good.

Apropos of duck shooting, an Alaskan friend of mine related to me how an official tenderfoot from Washington, D. C., came out to his town on a Government mission. My friend took the official out duck shooting. The official had never before in his life fired a gun at a flying bird, but the first duck he shot at fell dead to the ground.

"Well, you got him!" exclaimed my friend in surprise.

"Yes," replied the tenderfoot, "but I might as well have saved my ammunition, the fall would have killed the duck anyhow!"

His mental processes were about on a plane with the reasoning of persons who believe that, as in the case of Alaska, a country can be wisely governed and provided for by statesmen who never saw it and live 5,000 miles away. I am glad to note that Franklin K. Lane, United States Secretary of the Interior, now openly admits this view of the case.

A strictly constructive program of development should be adopted for Alaska, a scheme that will release and bring the

energies of Alaska herself into action. So far as possible the resources of Alaska should be set free from Government restrictions, and the development of the country left to Alaskans. If the Government should build railroads in Alaska, let us be sure that it goes no further than that, giving every one an equal opportunity in the matter of rates and business rights, and keeping political favoritism out of the situation. Individuals prompted by individual interests will always develop a new country more rapidly than Government agencies, if the individuals are not overtaxed or hampered by unjust and restricting laws. Remember that Alaska is the largest body of unused and neglected land now belonging to the United States. The demand



ALASKAN BALD EAGLE.

for homes in the "States" is greater than the supply. Alaska should be opened up rapidly and upon a liberal and perfectly fair basis of opportunity to all. Many brave and energetic people are already there, many more of like character will follow when the Government's policy becomes sane and liberal instead of hurtful and restrictive. Above all. Alaska's need is to be constructed into a colony, with very limited connection with Washington, D. C., that the Alaskans themselves may develop and control their country according to their ambitions and needs. It is quite true that Alaska on August 24, 1912, was created a Territory, with a Legislature of its own, but the act creating it a Territory states that "it shall be a Territory, under the laws of the United States, the government of which shall be organized and administered as provided by law." Hence the United States Government holds the whip hand. However, the first Legislature that convened at Juneau, in the spring of 1913, did well, though Congress has the right to annul any of its acts.

Twenty-three members attended the meeting of the first Legislature. The election was held in November, 1912, and complete returns did not reach Juneau until February 12, 1913, as the ballots and registers had to be transmitted through the mails overland in winter. If the vote had been close in any district there would have been trouble, for it was impossible to issue election certificates until the members apparently elected had arrived at the capital. Senators and Representatives from the Northwestern (Nome) District traveled with dog teams to the head of the sleigh-stage line at Fairbanks, a distance of from 700 to 900 miles, then followed the stage trip of 360 miles to Valdez and a voyage by steamer from Valdez to Juneau, about 700 miles. One Senator walked over the frozen trail several hundred miles, stopping at road houses on the way. His official mileage allowance was 15 cents a mile. The distance traveled by the members, to Juneau and returning to their homes, averaged 2,451 miles, or an average allowance for traveling expenses of \$367.65. On account of the time consumed this would hardly pay their board bill en route.

There is no strong political party in Alaska—the residents of a Territory do not vote in national elections—and so the main question in the mind of each Legislator was "What is best for Alaska?" instead of "How can I serve my party?" A lawver was President of the Senate and a miner was Speaker of the House. The Legislature enacted eighty laws. The first law, No. 1, granted women in Alaska the same right to vote as the This Legislature also furnished Alaska with longneeded public health statutes, laws for bank regulation and for relief of the poor; created a territorial treasury, made important amendments to the mining laws, which had been imposed without regard to conditions in the Territory, enacted an employers' liability law and revised licenses and taxes. The Legislature was confronted with the difficulty of raising revenues in a Territory whose population is small and whose developed resources are already taxed heavily under United States laws for the benefit of our rich National Government, but the new revenue law is not regarded as being vicious and is expected to yield \$240,000 a year. The Legislature authorized appropriations amounting to \$60,000 a year for two years. One of its most important acts was the passing of a poll tax law for the construction of highways. The new tax of \$4 per capita is being collected with little trouble, so universal is the demand for real roads in Alaska. Even with the drawback of a Government 5,000 miles distant the Alaskans are hopeful.

And now reluctantly my pen and Alaska part, but not forever. How can I forget this big, poor, rich Territory? So long as I can secure the public ear through my pen and voice will I try to help Alaska to her own, so long will I advocate the making of Alaska a colony of the United States instead of a Territory. This country of contradictions, with the Arctic Ocean on one side and warm Japan Current on the other; this far North country of perpetual spring and winter; this country of glaciers and strawberries; this land of the midnight sun and sunless midday; this country of highest mountains and deepest sea; this country of longest rivers and fairest flowers; this country of wildest animals and tamest seals; this country where the reindeer gets fatter in the winter than in the summer; this country of richest mines and poorest transportation; this country of bravest men and lowest outcasts-may you some day be intrusted to work out your own salvation, as you alone can do it, with Uncle Sam lending you a helping, not a hindering, hand.

THE PANAMA CANAL ZONE AND REPUBLIC OF PANAMA

Canal Zone, contains 286,720 acres—United States paid Republic of Panama \$10,000,000 for the land, paid France \$40,000,000 for Canal work and Panama Railway—Panama Railway, 48 miles long—Canal 50 miles long; cost to United States over \$400,000,000, cost to France \$340,000,000; total final cost, including interest, over \$1,000,000,000—People employed in Canal during construction 40,000—Governor, Colonel George W. Goethals. Republic of Panama, area 32,000 square miles—Present population, estimated, 400,000—Free public schools 364—Chief resources, bananas, coffee, cacao, coconuts, cattle, rubber, vanilla, sugar, valuable woods, tobacco, pearls, minerals, excepting coal—Exports, 1913, \$4,234,010; imports, \$23,547,000—Capital, Panama City, population, estimated, 50,000—Governor, until 1916, Belisario Porras.

CHAPTER I.

THE CANAL AND REPUBLIC.

I T WAS my good fortune to go through the Panama Canal Zone on foot at the beginning of my travels in South America, over three years ago, and to study in this intimate way the work on what has been justly called the greatest engineering feat mankind ever attempted. When I was there in 1911 the Big Ditch was only partly completed, a vast army of men was busy with excavators, explosives and dredges, our engineers were in the midst of a struggle with Nature that called into play every resource of modern science and skill. Returning to the Isthmus recently, I saw the barriers torn away and the Canal an accomplished fact, a wonderful new highway "free and open to the vessels of commerce and war of all nations on terms of entire equality," in accordance to the provisions of our treaties.

Though cargo ships are being floated from ocean to ocean,

there is much work to be done and many details to be completed before the plans of the Canal builders are fully realized. Nature has not yet been permanently subdued by the engineers. The great expenditure of treasure is by no means ended. But in giving the world this object lesson in American enterprise, ingenuity and perseverance, we have let no monetary considerations stand in our way. I can only repeat what I said



PROFILE MAP OF THE PANAMA CANAL.

two years ago in *Illustrated South America*. "We are shortening distance and thereby saving time, and, consequently, lengthening human lives. We must take our reward and satisfaction in that. . . . The final, ultimate effect on humanity of the expenditure of money by Governments must, of course, be considered, rather than whether or not the expenditure will make returns in cash, for the civilizing and broadening of the minds of men is, in the final analysis, the true profit."

The Panama Canal Zone is the most important of our outlying possessions. In many respects it is the most vitally valuable bit of land owned by the United States, internal or external. Because this peculiarly important possession of ours cuts directly through the heart of the Republic of Panama, from which country we obtained it, and because the United States has guaranteed the independence of this Republic in which the Canal Zone lies, it is only proper to take a glance at the land in which we have planted this great enterprise. The Republic of Panama is distinctly a United States dependency, and when one promises to "shoulder the



MR. BOYCE ON THE BAYANO RIVER, INTERIOR PANAMA.



NATIVE VILLAGE ON THE BAYANO RIVER, INTERIOR OF PANAMA REPUBLIC.

fights" of a country, however small, that country becomes interesting.

The Republic of Panama is not of very great area, though it embraces within its limits practically the whole of the American Isthmus. The area of the country is approximately 32,000 square miles. This is an estimate only, as no actual, careful survey has ever been made. Its total land frontierthat is, between Costa Rica on the north and Colombia on the south—is about 350 miles, while its combined coast line upon the Atlantic and Pacific Oceans aggregates 1,245 miles. Its greatest length is about 430 miles, with a varying width of 37 to 110 miles. Both coasts are studded with islands and indented with bays. The islands have been estimated to number something over 1,700, small and great. A backbone of mountains runs throughout the length of the country, rising into peaks at some points and falling to comparatively low elevations at others, as in the pass of Culebra, which we pierced in digging the Canal.

The country is bisected with hills and valleys, running up into the mountains, with alluvial stretches of level land along the seacoast upon either side. From this crooked, rambling

land 300 streams flow into the Pacific Ocean and 150 into the Atlantic Ocean waters. The slopes of the mountains and much of the low lands are covered with jungle and forest. This, briefly, is the topography of the Republic, the "baby brother" we have pledged ourselves to protect.

It has improved since we began associating with it. The Panama of today "shows off well" in contrast with the Panama of vesterday. While little more than a decade has passed since it became self-governing, its improvement and progress are very marked. All investigators agree on this point. Panama people may not exactly like to have it openly stated, but the fact remains that the rapid and great improvement in their national life could hardly have taken place without the helpful influence of their big Northern neighbor. we indirectly helped them to independence and separation from Colombia the history of the Isthmus was one of bickerings and revolutions. Since the bloodless revolution of November 3, 1903, which set them free, they have had peace, and have reaped the harvest of peace, which is progress.

One important thing we did, we made it possible for them to disband their standing army. This they did in 1904. This was a distinct blessing, since it is a fact that the army in almost every Latin-American country is a bone of contention between the rival political parties. Whichever party wins over the army is practically assured of gaining the Presidency and offices, and incidentally the treasury. Within a year after Panama gained its independence the Commander-in-Chief of the army laid a plot to overthrow the President of the Republic. The United States Government told him plainly that if he made a single move we would take charge. "wilted" and quit. The standing army was no longer of any use in gathering political spoils, so it was disbanded. point of fact, the Republic of Panama needs no army, since its peace and defense are guaranteed by the United States.

The human element of this tropical dependency of ours consisted of 386,745 persons, according to the last census taken, which was in 1911. This included 36,000 Indians, and 50,000

people under the jurisdiction of the Canal Zone. The latter number, which has greatly diminished since the practical completion of the Canal, should, of course, be deducted from the enumeration. Still, counting its natural increase since the last census, the Republic probably contains close to 400,000 people. The native inhabitants are mingled Spanish, Indian and Negro, speaking a Spanish dialect. There are some immigrants from Europe and the United States, and some 3,500 Chinese.

The country is divided into seven provinces, administered by Governors appointed by the President of the Republic. The principal towns are Panama City, upon the Pacific side, with an estimated present population of 50,000; Colon, on the Atlantic, with 25,000 or more; David, in the northern part, with something over 10,000; Los Santos with 8,000; Santiago, with some 7,000, and Bocas del Toro, built up by the banana interests of the United Fruit Company, with 6,000. Some of these cities have grown with great rapidity since the advent of the Canal builders in 1904. The city of Panama then had about 20,000 inhabitants, an old-fashioned, unsanitary Spanish town. Now it enjoys most of the conveniences of other modern cities, including taxicabs and an electric street railway. Colon also is rapidly being modernized. Their nearness to the eastern and western terminals of the great Canal of course stimulates them; to be near a big, vital thing like the Canal naturally "starts things."

However, outside the big centers, the wheels do not turn very rapidly. The great lack is adequate transportation facilities from the interior to the ports. One sees far too



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CORNER OF A PUBLIC SQUARE IN PANAMA CITY.

much produce going to market on pack-ponies and two-wheeled ox-carts over very poor roads. When Panama became a republic there was scarcely a road in it worthy of the name. Recently they have begun to "get busy" in road-building, the Government assisting with large sums of money. They have improved the cities, and are beginning to realize that to sustain the cities they must help the country, where agriculture has been in a primitive, backward condition.

Since the North Americans arrived in 1904, the Panama people have constructed municipal buildings, including school-



RAILWAY STATION, PANAMA CITY.

houses, in all of the important towns; a \$1,000,000 national palace and theater in Panama City, a national institute for boys costing \$800,000, and numerous other fine improvements, but they are painfully "shy" on railroads. Outside the Canal Zone line, they have only about 150 miles of track, consisting mainly of the United Fruit Company's road and branches in the province of Bocas del Toro, prin-



CITY HALL, PANAMA CITY.

cipally a banana-carrying road. However, the present administration of the Republic is planning the building of several electric lines, which, when they materialize, will aid the much needed development of the country.

They have a lot of resources in the Republic; bananas galore, coffee and cacao, sugar, tobacco, mahogany and other valuable woods, and almost every common mineral except coal. It is an old volcanic region with a rich soil, and all it needs is the application of muscle and brains. It is begin-



A GLIMPSE OF COLON HARBOR.



UNITED STATES LEGATION BUILDING,
PANAMA CITY. BUILT BY
THE FRENCH.

ning to look as if these requisites were going to be brought to bear.

They have some wise laws and a pretty sound constitution. The President of the Republic is elected for a term of four years and cannot succeed himself, which tends to curtail political plotting. He is elected by popular vote, and is assisted by three Vice-Presidents and Cabinet of five members. The law-making body consists of a single National Assembly containing twenty-eight members elected by the people. present incumbent of the presidential chair is Dr. Belisario Porras, an able and progressive

Financially the little Republic is in good condition, its total

governmental revenues for 1913 amounting to \$5,300,000, with a budget of expense estimated at \$3,840,000. It has no national debt and is not likely to contract one. Evidently we are to be free of monetary trouble concerning it, at least for some time to come. Agriculturally the soil of the Republic has hardly been scratched; its immense resources in fruits have only been developed in respect to the banana, the United Fruit Company having shipped from the Bocas del Toro district alone last year over 6,000,000 bunches of that fruit; it has capacity for the raising of beef cattle by the million, though it has at present probably not more than 100,000 within its limits. Plainly the Republic has a future if it can once get started, and there are signs that it is getting under way.

This is a very brief outline of the country in which we

have planted our gigantic enterprise, the Canal, the country we have contracted to protect and to insure a continuous peace.

At present the task is almost nothing; what the future may bring forth no man can tell. Our guardianship of the Republic is a mild one, but necessity might compel us to shut out intruders, safeguard the health of the Republic, or supervise its elections, though it is not the wish or intention of the people of the United States to annex Panama. At present we have all the fish we can fry; what may be the inclinations or desires of our children's children, however, we do not know. We hope it may not be conquest, only helpfulness and peace.

Having hurriedly sketched the country containing the Canal, we will return to the "Great Furrow" itself. It is worth looking at and justifies "tall talk."

The history of the Isthmus and the building of the Canal is a kind of wonder story, the story of a world-dream that continued through 400 years and finally came true. The early Spanish explorers had a vision of it. Balboa's first report to Spain, after he had climbed the forest-covered hills and discovered the Pacific, was accompanied by a recommendation that a canal be immediately dug across the Isthmus. Evidently Balboa, or rather Saavedra, his lieutenant, who



A STREET IN COLON.

made the suggestion, did not wholly appreciate how difficult the job would be. What the Spaniard had in view was a sea-level canal, and when one considers, for instance, the excavation of Culebra Cut with the tools of Balboa's day, one sees that the explorer's recommendation was slightly premature. It is an interesting fact, however, that in Balboa's time the hydraulic lock system had been invented. The great locks of the Panama Canal are the same in principle as a lock produced four centuries ago by Leonardo da Vinci, the great Italian artist-engineer, for lifting vessels over elevations—a most important discovery, but the Spaniards seem not to have considered it. At any rate, they dismissed the canal project; some historians say because of the adverse influence of the Church. The wise Spanish bishops, quoting Sacred Scripture, declared, "What God hath joined together let no man put asunder." Then again, long-haired professors told the public that if a canal were digged across the Isthmus it would change the Gulf Stream and make an iceberg out of England! Their acumen was about on a par with that of a certain Western woman who, when told of the trouble and unsanitary conditions at first encountered on the Isthmus, said, "Well, if it was so hot and unhealthy, why on earth did they go away off down there to dig the Canal, anyhow!"

As was natural, almost immediately upon its discovery the Isthmus of Panama became an important trade route between the Atlantic and the Pacific. The principal modes of transit were mule trains, canoes and small boats part of the way, and often human backs. Out of this traffic grew the first European settlement on the mainland of America, the old city of Panama, founded in 1519. For over 150 years Panama remained the chief city on the Pacific Coast. The Europeans found it difficult to believe that there wasn't some natural waterway across the Isthmus. In fact, some of the early maps published in Europe showed an imaginary "Strait of Panama." Finally they got it through their heads that the barrier between the two oceans was a real one. After that the idea of cutting a way through never wholly died.

Surveys were first made by the Spanish in 1581. They reported that the scheme was impossible. Then the idea simmered for over a century, when it took root in the mind of a famous Scotchman, William Paterson, the founder of the Bank of England. Paterson's project was to establish a settlement on the Isthmus, cut a canal, and through its control "hold the key to the commerce of the world." The great banker's idea is the one we should now develop, by making the Canal a port free of import and export custom duties, as I will later point out. Paterson's attempt failed; at that time the carrying out of so difficult and tremendous an engineering feat was impossible.

Again the Spanish surveyed the Isthmus for a canal. That was in 1771. The movement ended in smoke, and once more the idea simmered. Then in 1855 Americans opened a railroad across the Isthmus. The exploration and surveys for this railroad are said to have cost the life of a man for every tie.

Ferdinand de Lesseps, builder of the great Suez Canal, formed a company in Paris in 1877 to dig a shipway through the Panama Isthmus. Actual work was started in the next year. A red letter day on the calendar of the De Lesseps company was January 20, 1880, when, in the presence of a dictinguished gathering, the engineers fired the first blast for tearing a way through Culebra Mountain. But after seven years, when the impossibility of building a sea-level canal within the estimated twelve years became apparent, De Lesseps quit the project. It was announced that the work could not be completed for the estimated cost of \$240,000,000. for the very good reason that \$300,000,000 had already been spent. The company went into bankruptcy. In 1894 a new French company started work again, but in five years' time little was accomplished, and finally operations ceased.

CHAPTER II.

BUILDING AND OPERATION.

EVERY one is so familiar with the story of how we obtained the Canal Zone and "made the dirt fly" that it is not necessary to go into extended detail here. In 1904 the rights and property of the French companies were taken over at an agreed price of \$40,000,000, that being the extravagantly appraised value of the initial excavation work, the Panama Railroad, maps and data, buildings and machinery. Territorial rights came to the United States from a treaty with the new Republic of Panama, which came into being through a revolt from Colombia. Colombia had refused to grant us the rights necessary to insure our position in constructing the The treaty with Panama included the payment of \$10,000,000 and an annuity of \$250,000, to begin nine years after the treaty was signed. At the conclusion of negotiations the rival Nicaraguan Canal project was discarded and the United States was ready to begin digging, assured of the use and absolute control of a canal zone ten miles wide across the Isthmus, having an area of 286,720 acres, and jurisdiction over waters three miles from either side of the zone. By a new treaty recently signed between the United States and Panama, we are given sovereign rights in the waters of Colon and Ancon, the harbor towns at the ends of the Canal. This settles the last question as to complete American control of the waterway.

The decision that made Panama a high-level lock canal was not made by Congress until 1906. In the meantime yellow fever and malaria had caused alarming mortality, the same terrors which baffled the French having appeared in the workers' camps, and the problem of safeguarding health loomed up as greater than the one of engineering. Vigorous

sanitary measures were undertaken. Colonel William C. Gorgas began his remarkable work, and through his untiring efforts and those of his able assistants, the Canal Zone was made a safe place in which to work. Without these brave, skillful men of the medical department, the building of the Canal would not have been accomplished. The death rate in the Canal Zone is lower than in most American cities.

In 1907 came the man who has really built the Canal. Colonel George W. Goethals of the United States army headed a commission which took the place of the first one, on which men had been appointed from civil life. Colonel



COLONEL WILLIAM C. GORGAS, THE MAN WHO MADE THE CANAL ZONE SANITARY.

Goethals and the new Commission have been united in action and unusually efficient. Colonel Goethals is now Governor of the Canal Zone.

When the Government steamship Ancon made her trip through the Canal August 15, 1914, officially opening the new ocean highway to traffic, many notable people were there. The most modest man was one holding an umbrella over his head and keeping as much in the background as possible. That was Colonel Goethals. His country has learned to appreciate his worth, quiet though he has been about the work and the trials he has had. The task in itself has been of a magnitude that is difficult to realize, and in addition there have been the influences of tropical conditions, of Government control and of uncertain labor markets to deal with. For the efficient Goethals and those under him there is all honor. The mistakes that have been charged have been dwarfed by the successes of the herculean undertaking, and in the history of

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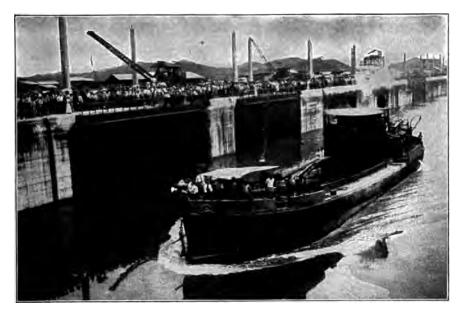
the Canal's construction, we are glad to state, there is not the smallest blot of proved corruption or graft, excepting in the company stores run by the Panama Railroad, which is owned by the United States Government.

At times as many as 45,000 men have been employed on the Canal. The average number has been 40,000. It should be kept in mind, too, that the work had to be carried on at a distance of two thousand miles from the base of supplies.

When the Canal was officially opened, a little more than



COLONEL GEORGE W. GOETHALS, CHIEF BUILDER OF THE CANAL.



THE FIRST BOAT, A GOVERNMENT LIGHTER, PASSING THROUGH MIRAFLORES LOCKS.

ten years after American work began on the Isthmus, over \$400,000,000 had been expended by our Government. Much remained to be done, including dredging, the extent of which nobody could forecast, deepening of the channel for the largest ships, completion of fortifications and buildings, beautification and numerous other "final touches." It was originally estimated that it would cost \$157,000,000 to build the Canal. After spending a good deal of time on the Isthmus three years ago, investigating and drawing conclusions to the best of my judgment, I made this estimate: "When the project is entirely finished, over \$1,000,000,000 will have been invested by the United States and France." I have no reason to change my opinion now, when the total already is \$740,000,000, adding the \$400,000,000 we have spent to the \$340,000,000 spent by the French, and adding interest on the money spent up to

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date, it will be seen that the total rises already close to \$1,000,000,000.

The original estimate on the cost of digging missed the mark so widely because the American engineers were unacquainted with the materials of which the whole country of the Canal Zone is made—lava ash. Before the major portion of



THE GREAT CUCARACHA SLIDE.

the excavating was done it was necessary to remove many million cubic yards of slide material upon which the engineers had never figured. They learned that in order to reduce the pressure so the water would hold the soil back they must materially increase the excavation, and even with the grade greatly reduced the slides came with disconcerting frequency.

When the Big Ditch was opened to traffic, Colonel Goethals

pointed out that the earth had not reached a state of equilibrium, and that probably it would be necessary to continue dredging for many months. It was hoped that these earth movements would not be so extensive as to interfere with navigation, though the channel at several points in Culebra Cut necessarily would be reduced considerably in width for a while. Just two months after the opening of the waterway, rains caused a serious landslide north of Gold Hill, where the earth reaches its greatest height on the Isthmus. Thousands of cubic yards of rock and dirt entered the channel,



BLOWING UP THE DIKE AT MIRAFLORES WITH 40,000 POUNDS OF DYNAMITE, BEGINNING THE INFLOW OF WATER CONNECTING THE TWO OCEANS.

completely blocking it for a distance of 1,000 feet. Ships passing through when the slide occurred were forced to wait until the great dredges could reopen the channel, an operation which consumed much valuable time.

The total excavation in the Canal has been over 232,000,-000 cubic yards, with Culebra Cut, nine miles long, the most

difficult and uncertain part of the work. Here over 30,000,000 cubic yards of material, lying outside the intended banks of the Canal, was swept down into the cut. The excavation in the cut represents about one-half of the digging done by Americans. Slides frequently put the railroad system out of commission. Often they wrecked dirt trains and steam shovels. The work of removing the débris at Culebra took up many months. Colonel Goethals did the best he could, however. As an illustration, in 1909 the cost of removing a cubic yard of slide material was around 78 cents for the whole cut. slides more troublesome in 1912 the cost was forced down to 55 cents. Fourteen per cent of the total excavation of 1013 was from slides. The Canal locks were ready ten months before Culebra was in shape. But for the slides, ships would have been going through that much earlier. And when the passage of ships became possible, dredges were still at work in the cut.

The length of the Canal from deep water to deep water is fifty miles, and from the two shore lines, forty miles. It takes ten hours to make the trip. (It requires only sixteen hours for ships to pass through the Suez Canal, eighty-six miles long, but there are no locks.) Vessels passing from the Atlantic to the Pacific successively go through the approach channel in Limon Bay, onward seven miles to the Gatun locks, where three locks lift them eighty-five feet to the level of Gatun Lake; thence through the lake to Bas Obispo and Culebra Cut; thence through the cut for nine miles to Pedro Miguel, where they are lowered thirty feet by lock to a small lake; thence one and a half miles to Miraflores, where two locks in series drop them to the Pacific level; passing out into the Pacific through a channel about eight and a half miles long. This channel has a bottom width of 500 feet. The channel in Culebra Cut has a minimum bottom width of 300 feet.

Gatun Lake was formerly the valley through which the turbulent Chagres River flowed into the sea. The problem of controlling the flood waters of the river was most difficult, for the heavy tropical rains come down the mountain sides

into the narrow valley with such force that the river has been known to rise more than twenty-five feet in twenty-four hours. To control the flood the great Gatun Dam was built, holding back the waters and forming Gatun Lake, which has risen to cover about 164 square miles. The spillway of Gatun Dam, made of concrete on a rock foundation, permits the flow of 154,000 cubic feet per second. The normal flow through this spillway operates the hydro-electric plant which supplies power and light for the operation of the Canal, there being enough power available for any probable demand for years to come. Nearly everything about the Canal is run by electricity, and recently the engineers have been considering substituting electric power for steam on the Panama Railroad. The entire length of the Canal is so well lighted that passage at night is practically as safe as during the day.

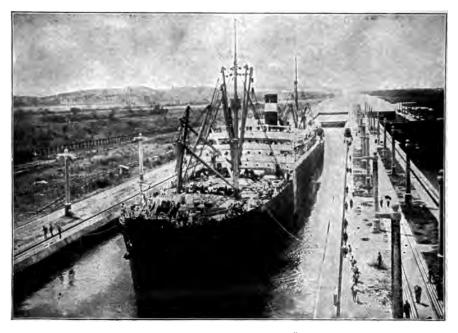


THE COMPLETED GATUN LOCKS, LOOKING NORTH TOWARD THE ATLANTIC ENTRANCE.

150 PANAMA CANAL ZONE AND REPUBLIC

In passing through Gatun Lake, vessels get valuable service for which no additional charge is made. One of the most expensive items of salt-water navigation is the accumulation of barnacles on ships' bottoms, which in time become so numerous as to impede the progress of even a powerful steamship. For this reason ships have to go into dry dock and get scraped at regular intervals. Fresh water, however, is fatal to the barnacles. The vessels going through Gatun Lake are thus relieved of their troublesome burdens of marine mollusks.

The Gatun locks comprise the largest monolithic concrete structure ever built. Like the locks at the Pacific end, they are built in pairs, to reduce the danger of accident and increase efficiency. Five different lengths of chamber are provided by intermediate gates, so that there is no waste of water or time, such as would be the case were a 500-foot ship lifted in a 1,000-foot chamber. The weight of the largest Gatun lock



STEAMSHIP "ANCON" PASSING THROUGH GATUN LOCKS, JUNE 11, 1914.

THE FIRST LARGE SHIP TO PASS THROUGH.



THE STEAMSHIP "SANTA CLARA" ENTERING MIRAFLORES LOCKS UNDER TOW OF ELECTRIC LOCOMOTIVES, JUNE 19, 1914.

gate is 1,483,700 pounds, and it cost a little over four cents a pound. There are forty-six lock gates in the Canal, all made of steel plates, riveted to structural steel frames. Their total weight is 118,488,100 pounds. Vessels are raised or lowered in the locks at the rate of three feet a minute. All gates and valves are operated by electricity.

Vessels are not permitted to pass through the locks under their own power, but are towed by electric locomotives, four to a ship. These are among the most interesting features of the Canal, but one does not hear them called electric locomotives there. When I was a boy in Pennsylvania I used to like to follow the tow path of the canal until I met a canal boat, and got a chance to help drive the mules. It was nearly as much fun as riding the elephant on circus day. In my mind

the mule is identified with canals. So I was not surprised that everybody else, including the makers of the electric locomotives, as they watched these wonderful little engines at work, spoke of them familiarly as "the mules."

The "mules" cost \$13,217 each, and there are three dozen of them. They run on tracks laid on the lock walls and have gear wheels operating on racks between the rails, to keep them from being pulled off the tracks by the towing strain. Should a towing line break, the ship can be prevented from colliding with the lock gates by chain fenders which extend a hundred feet ahead of each gate. Emergency dams can be swung into place in the event of any accident to the gates.

There are certain works which were in use in the final stages of the construction work of the Canal that can be cleared away. One of these is the pontoon bridge. The roadway of the Panama Railroad had to be shifted many times during the construction, but it was an important aid, and continues to be. The sight of a train crossing the pontoon bridge at Paraiso was novel.

At Colon, on the Atlantic, or rather at Cristobal, they were recently working on the big coaling station, building the reloading bridge. The station at Colon has a storage capacity of five hundred thousand tons of coal, and the station at Balboa, at the Pacific end, has a capacity of three hundred thousand tons. The Canal Commission will sell coal to any vessels wanting it, but there will always be a hundred thousand tons in reserve for the United States navy, ready for emergency.

I noted also the work being done on the wireless stations at Colon and Balboa. Wireless telegraphy has so many uses that the Government found it necessary to assert its right to control this means of communication. With the responsibilities that it has at Panama it could not afford that its equipment should be incomplete. The Canal stations are now in communication with the great tower near Washington, D. C.

CHAPTER III.

TOLLS AND A FREE PORT.

I T IS difficult to estimate what the traffic through the Canal is going to be in the future. The European nations having gone to war just when the big waterway was opened for their cargoes has upset all calculations. That the tolls would pay operating expenses seemed doubtful. However, though the European war had largely curtailed shipping activities, Colonel Goethals reported as this book was sent to press, that the Canal traffic was exceeding expectations, indicating that within a year the tolls might pay operating expenses, but, of course, no interest on the enormous investment.

In accordance with the Canal Act of August 24, 1912, the following rates of tolls are to be paid by vessels passing through the Canal:

- 1. On merchant vessels carrying passengers or cargo, \$1.20 per net vessel ton—each 100 cubic feet—of actual earning capacity.
- 2. On vessels in ballast, without passengers or cargo, 40 per cent less than the rate of tolls for vessels with passengers or cargo.
- 3. Upon naval vessels, other than transports, colliers, hospital ships and supply ships, 50 cents per displacement ton.
- 4. Upon army and navy transports, colliers, hospital ships and supply ships, \$1.20 per net ton, the vessels to be measured by the same rules as are employed in determining the net tonnage of merchant vessels.

For a fair-sized freight vessel, it is estimated, the tolls amount to about \$5,000. This is, of course, only a nominal charge, considering that ships save a 10,000-mile voyage around South America, but it is probably all the traffic will stand. Operating expenses of the Canal are estimated at about

\$4,000,000 a year. The interest on the huge investment, however, is \$20,000,000 a year, indicating a continuous fixed charge of nearly \$25,000,000 per year, which in time will bring the American cost of the Canal to my estimate of \$1,000,000,000.

The Canal rules require tolls to be paid in cash, except that in the case of steamship companies having boats frequently using the Canal they may be paid by check or draft, if prompt payment of same has been assured by depositing with the Canal authorities at least \$15,000 worth of acceptable bonds.

Upon my last visit I found that the Canal Zone had changed materially since I first saw it. Then it was filled with clusters of buildings, created by the Canal Commission, in which to house the workers and officers. And there were the native villages and the natives themselves. Some of these villages were along the route of the waterway, and as the construction progressed they were drowned out, or would have been, had not the Canal Commission moved them away. It is the idea of Colonel Goethals, the chief builder of the Canal and present Governor, that the Zone should be denuded of human habitations. That is naturally the military idea, but the Canal is for commerce. So on either side of the Canal I found only tropical jungles and wilderness. Many people have argued that the Zone lands ought to be settled upon and cultivated by Americans. This will be done some day. Colonel Goethals is firmly of the opinion that this priceless piece of work can better be defended by leaving the obstructing jungle on either hand. Knowing what that jungle is, I agree with him that it would beat barbed wire entanglements in keeping a foe at a distance, but this is a peace Canal.

One of the new sights to me was the fortifications in the Bay of Panama. The fortifications are upon the islands of Perico, Naos, and Flamenco, which were ceded to the United States as part of the Canal Zone. The islands occupy a position in the Pacific commanding the western approach to the Canal. Some of the largest guns and mortars ever constructed are already being placed in position upon these

islands. At Balboa, on the mainland, another set of fortifications will be established, while on the Atlantic side there will be forts on Margarita Point, north of Colon, another on Toro Point, across the bay from Colon, and one on the mainland at Colon. In the neighborhood of the canal locks at Gatun, Miraflores, and Pedro Miguel, there will be con-



VIEW IN THE JUNGLE OF THE PANAMA REPUBLIC.



structed strong field defenses to provide against possible attacks by landing forces. In these fortifications strong sections of the United States army are to be maintained. Of course, detailed description or photographs of these fortifications are not permitted by the Government, which is right. However, we may rest assured that big things are being done, since about \$4,000,000 has already been expended on the project, Congress having appropriated over \$10,000,000 for these prime defensive works.

But to revert to the Canal. I do not want to offend my South American friends by calling any of their countries a part of our own chain of United States colonies; they are not; but in watching the first freight vessels go through the Canal, and in talking of prospective cargoes, it occurred to me that these West Coast countries might, in point of results, be considered our commercial colonies, or, if they prefer to put it the other way, they might call us their commercial colony. The Canal traffic, at any rate, is going to bring us closer together.

I heard, while at the Canal, that the port of Guayaquil, Ecuador, at last is going to sanitate itself so as to get some of the benefits of the Big Ditch, and to insure the better marketing of its cacao, rubber, coffee, hides, ivory nuts, and Panama hats, in the United States. Peru is also considering making Callao a port capable of taking care of big vessels that could bring out her cargoes of copper, wool and sugar. Chile, since my visit to that country, has made a good deal of headway with the port of Valparaiso and has also improved some of her other ports. Chilean nitrates were among the first cargoes that went through the Canal, and these are being followed by copper from the great Guggenheim mines, and by other products. This is only the beginning of a vast volume of commerce flowing between South America and the Especially must this come true since the United States. European war opens the way for augmented trade between our nation and the republics to the south of us.

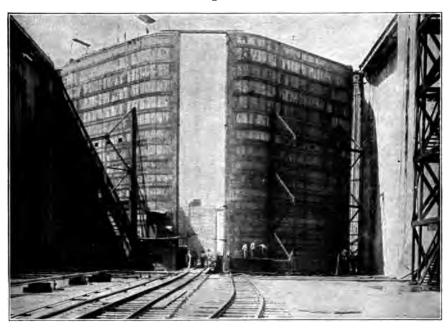
In order to stimulate this trade, and make our huge Canal investment profitable to us, I am confidently putting forward

a plan to make the Canal Zone a *free port*, and, through the influence of this fact, to create a world-wide city at the Canal for the exchange free of duty of our commodities with the South American republics and other nations.

I here quote from an address which I made a year ago before the Southern Commercial Congress at Mobile, Alabama, and which was published afterward by the United States Senate as Senate Document 333:

"The definition of a *free port* is: 'A harbor where the ships of all nations may enter on paying a moderate toll and load and unload. The free ports constitute great depôts where goods are stored without paying duty; these goods may be reshipped free of duty. The intention of having free ports is to stimulate and facilitate exchange and trade.'

"There is no reason why the Canal Zone cannot be made into a city of 500,000 people in twenty years and produce sufficient income from dockage, tolls, taxes, rents, leases, etc.,



UPPER GATES OF GATUN LOCKS, PARTLY OPEN. TAKEN BEFORE WATER WAS LET INTO LOCKS.

to pay the interest on at least the original capital invested by the United States. We have 286,720 acres inside the Canal Zone. Already many millions of dollars have been spent to make the Zone sanitary and a desirable place to live in the year round. Nearly all of this will be a complete loss unless we build a great city there. The Panama Railroad, for which we paid millions and spent millions more to move and rebuild, will be a 'white elephant' on our hands, on the basis of investment, unless we build a big city at that point.

"Through the stimulus arising from making the Canal Zone a free port, a great commercial city can be built along the whole Canal from one end to the other with docks everywhere. This city would become a great commercial clearing house not only for the merchants and manufacturers of North, Central and South America, but for the whole world. Trade in every republic on the American Continent is necessarily more or less restricted by a protective tariff, therefore, we need one spot, at least, for free exchange. It it just as necessary as a clearing house for the great banks in our big cities.

"Remember, the entire Canal is a land-locked, fresh-water harbor, berthing the largest vessels in the world, where barnacles can be scraped off the bottoms of ships—an advantage possessed by only one other great inland port city in the world. The building of a big metropolis on the Canal Zone is no experiment, no wild theory. It has been successfully worked out and proved by Germany and England and a number of smaller countries.

"The only way to create a big city at the central point between North and South America, the Atlantic and Pacific Oceans, the Far East and the Far West, is to make the Canal Zone a free city and free port. By this I mean free from import or export duties into and out from the Canal Zone. This will not affect the primary question of tolls for passing through the Canal. If created a free port and protected through international treaty, so it could not be affected by changes in our administration or home policies, merchants and manufacturers from all over the world would build factories

and warehouses and establish branches and agencies at this World Center for quick distribution, delivery and sale. Many South Americans would establish agencies and branches there to reach the world's commerce. In fact, it would become an immense World's Department Store where everything for the use of the people of all nations could be found. It would



PEDRO MIGUEL LOCKS AT NIGHT, SHOWING ELECTRICAL ILLUMINATION OF THE CANAL.

become the greatest transshipping port in the world, especially as many boats suitable for the Pacific Ocean are not seaworthy or insurable on the Atlantic Ocean.

"As lawyers put it: 'What you have been saying is testimony—give us evidence of what a free port or city will do toward creating a metropolis of half a million in a few years.' Here is the evidence: Hamburg, Germany; Copenhagen, Denmark; Gibraltar; Hong Kong (formerly Chinese, now British); Singapore; Punta Arenas, Chile; Aden, on the Red Sea, and the Island of St. Thomas, near Porto Rico.

"After Great Britain had taken Gibraltar from Spain, and that country would not deal with Gibraltar, the Sultan of Morocco forced the British Government, in 1705, to make a free port of Gibraltar by refusing to supply the food necessary to maintain the fortress, unless all import and export duty was taken off. The law of necessity caused the most powerful Government in the world, more than two hundred years ago, to establish the first free zone on a little rock pile three miles long by one-half mile wide, controlling the entrance to the Mediterranean Sea. Here is Lesson No. 1, that should not be overlooked. Today there is a population of 27,000 at Gibraltar and over 4,000,000 ship tonnage is cleared yearly. As there is no duty, only a tax on tobacco and liquors, there are no statistics on the annual business.

"Hamburg, Germany (before the 1914 war), was a notable example of the benefits of free exchange. Hamburg, through this wise policy, became the greatest port in Europe. In 1888, 2,500 acres of the harbor of this inland city were set apart as a free harbor, where ships could unload and load without custom duties. A gigantic system of docks, basins and quays was constructed at an initial cost of \$35,000,000, which at present-day cost would be double. A portion of the old town containing 24,000 people was cleared to make room for this great project. After that Hamburg grew enormously, reaching the third position as a port in the world, with over 1,000,000 population, being the second largest city in Germany. Without question the free zone of the harbor had a great influence on the expansion of Hamburg as a port.

"Copenhagen is the most important commercial town of Denmark. The trading facilities were greatly augmented in 1894 by making a portion of the harbor a free port. It has had a marked effect on the trade of Copenhagen and Denmark.

"Hong Kong Island and City is a British possession acquired from China in 1841. Hong Kong is a free port and has no customhouse, and its commercial activities are chiefly distributive for a large portion of the Far East, much as the Panama Canal Zone would become if made a free port. The

only commodity that pays a duty at Hong Kong is opium. Owing to the fact that it is a free port, official figures on its trade cannot be had, as in the case of ports that collect custom duties, but since it was made a free port the population has increased from a few thousand to 456,739. From this port there is an immense exchange of commodities between Great Britain and her colonies, the ports of China, Japan and the United States. This fact, investigation shows, is largely due to the advantages arising from the fact that the port of Hong Kong is free from custom duties to all nations.

"Singapore is another good example. It is the capital of the British Straits Settlements, and lies about midway between Hong Kong and Calcutta, India, and close to the Malay Archipelago. It is less than 100 miles north of the equator, or 500 miles farther south than the Panama Canal Zone. has good advantages of position, but above all, the policy of absolute free trade has made Singapore the center of a transshipping trade that is surpassed in the Orient only by Hong Kong and one or two of the great Chinese ports. The continuously rapid growth of Singapore and the Straits Settlements, of which it is the capital, has fully demonstrated the wisdom of this policy. In 1819 when the region was ceded to Great Britain that portion of the country had almost no business or population. At present Singapore's free exports and imports exceed \$500,000,000 annually, or about one-seventh of the total imports and exports of the whole United States. There are no custom duties except on opium. The population is about 275,000. Neither Hong Kong nor Singapore is as well situated for international trade or enjoys as good and healthful climate as the Panama Canal Zone.

"Port Saïd is another case in point. The building of the Suez Canal created the city of Port Saïd on a sandpile at the entrance to the Canal from the Mediterranean Sea, with fresh water 125 miles away. It is about the "livest wire" of any city in the world—at least, that I have ever visited. It has over 100,000 population, and except for an Egyptian duty on

many articles would be a great trading center for others than tourists.

"Aden, situated on a strip of British territory in Arabia, on the Red Sea, where nothing grows and fresh water must be brought a long distance, has 50,000 population on account of its being a free port and city.

"Punta Arenas, Chile, on the Straits of Magellan, the farthest south of any city in the world, is a free port and city, and has a population of 15,000. I was surprised at its importance and its fine stone buildings and good streets. The only local support of Punta Arenas is wool and sheep, mostly from the old Patagonia country of Argentina and the island of Tierra del Fuego. Its importance arises chiefly from its being a free port, permitting a Chilean city to trade duty free with Argentina.

"The free exchange of commodities, on account of there being no duty, import or export, put the island of St. Thomas, near Porto Rico, belonging to Denmark, on the map. It is a good example of what no export or import duty will do for a poor, out-of-the-way island. Nearly every excursion to the West Indies docks there to trade. Its one port carries the largest stock and does the greatest Panama hat trade in the world. Many vessels coal there. It has a great trade with all the West India Islands.

"England has tried out the free port and free city idea thoroughly and this is what the Encyclopedia Britannica says: 'In countries where custom duties are levied, if an extension of foreign trade is desired, special facilities must be granted for this purpose. In view of this a free zone sufficiently large for commercial purposes must be set aside. English colonial free ports, such as Hong Kong and Singapore, do not interfere with the regular home customs of India and China. These two free harbors have become great shipping ports and distributing centers. The policy which led to their establishment as free ports has greatly promoted British commercial interests."

I was fully convinced after visiting Singapore and Hong

Kong during the past year, that we should make the splendid port of Manila a free port and city, or we can never expect to secure, develop and hold our share of the trade of the Orient. Secretary of State Bryan stated to me that he strongly favored this policy in the development of our colonies, and the Panama Canal Zone is our most important colony.

This question is a paramount one in the development of our commercial relationship with South America and other countries; besides, it will make the Panama Canal pay. If we do not act soon some other country owning one of the West India Islands, well located to trade with ships passing through the Canal, will take advantage of the situation. Already the Panama Republic intends to benefit from our investments in the Canal by creating a free city bordering on the Canal Zone. We should not stop short with the completion of the Canal, but continue the great enterprise to a more notable, as well as profitable, conclusion, by extending our commerce and trade, not only with South America, but with the entire world. I sincerely hope it may never be necessary to use the big Canal to pass our navy quickly from the Atlantic to the Pacific, and vice versa, in times of war. But if the necessity arises, without question we will find it "mighty handy."

The Panama Canal is the greatest industrial undertaking ever attempted and successfully carried to completion by any nation of the world, and we should all feel proud of our country, and that we are citizens of the United States of North America.

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AND

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Mr. Boyce, for his papers, personally visited all the Colonies of the United States, and wrote Travel Articles that were more popular, when printed in serial form, than his South American Stories. Possibly this was because they were about countries under our flag. He felt his work would not be complete unless he included the Dependencies of the United States. He returned to Cuba, after some years' absence, but did not have the time to visit the Dominican Republic or Haiti, but had the work done for him by competent employés. does not seek to take more than the credit of carefully editing the copy and subject treated on these two Dependencies. The success attained in producing "Illustrated South America" led Rand, McNally & Co. to take the publication of the "United States Colonies and Dependencies," also. The first edition is ten thousand copies; retail price \$2.50. If it is as good a seller as "Illustrated South America" other editions will be printed.

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