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Alaska: Its Relation and Its Value to the United States

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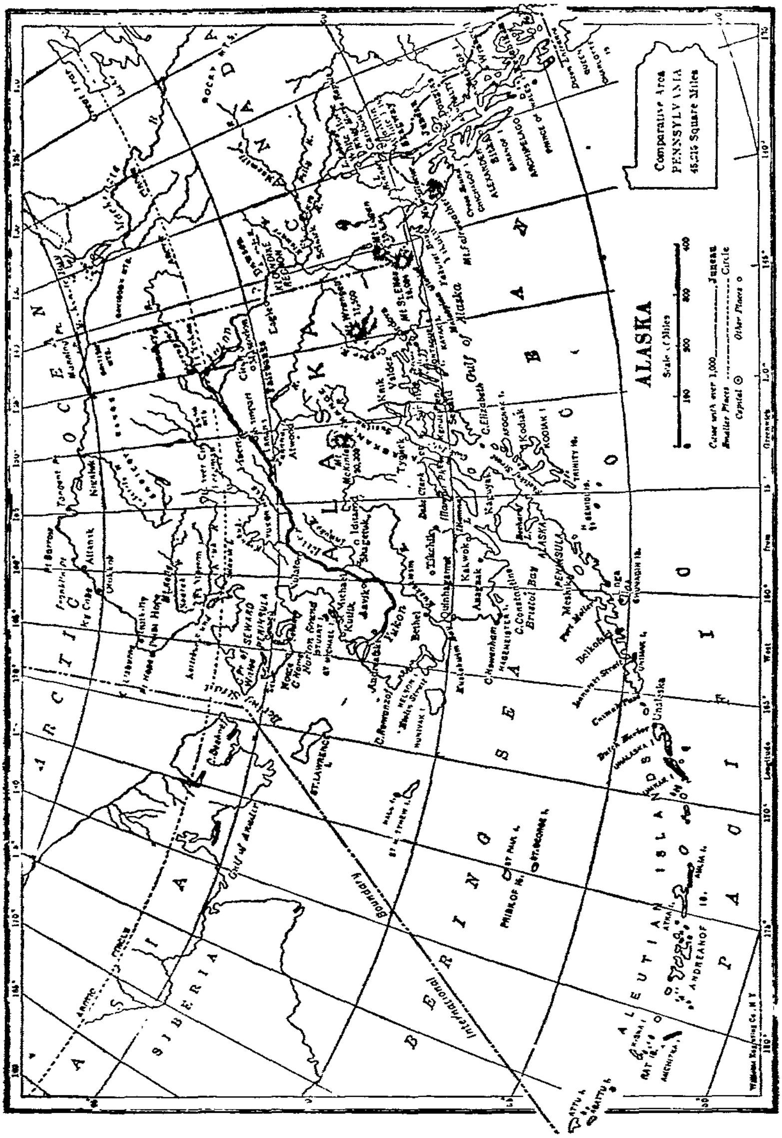
ALASKA, in its greatest extent, is included between the meridians of 130° west longitude and 173° east longitude and between the parallels of 51° and 72° north latitude. It is bounded on the north by the Arctic Ocean; on the west by the Arctic Ocean, Bering Strait and the Bering Sea; on the south and southwest by the Gulf of Alaska and the Pacific Ocean; and on the east by the Yukon Territory and British Columbia of Canada.

The area of Alaska is about 586,400 square miles or about one fifth of that of the United States. The popular conception of the size of Alaska is based on maps of North America, which always distort it. A map of Alaska, superimposed on one of the United States, shows that the distance from the easternmost to the westernmost point in Alaska is equal to the distance from the Atlantic to the Pacific Oceans at about the latitude of Los Angeles, and that its northernmost and southernmost points are nearly as far apart as the Mexican and Canadian boundaries of the United States.

The main mass of Alaska is nearly rectangular and is carved out from the continent by the Arctic Ocean on the North and the Gulf of Alaska on the south. An extension to the southeast is furnished by the so-called panhandle of southeastern Alaska, and to the southwest by the Alaska Peninsula and the Aleutian Islands.

Alaska is essentially a country of very bold relief. Along the entire southern coast line, mountain ranges rise, abrupt and rugged, direct from the sea. This continuous chain of mountains along the coast has done much to retard the development of Alaska, since it presents to the visitor a forbidding and discouraging aspect and it has always greatly increased the difficulties of access to the interior. Beyond these mountains, there lies a broad stretch of rolling upland country comprising the valleys of the Copper, Susitna and Nushagok Rivers. Beyond these valleys is the Alaska Range, which rises to great heights and may be called the backbone of Alaska. This range is


ALASKA
Comparative Area
PENNSYLVANIA
Gulf of Alaska
Bristol Bay
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broken up by numerous narrow, but excellent passes. Beyond the Alaska Range, there is a vast country which comprises the valleys of the Kuskokwim and Yukon Rivers, the lower valleys of which are flat delta. The Brooks Range, consisting of mountains that are neither especially high nor very rugged, separates these valleys from a vast stretch of rolling tundra which stretches to the Arctic Ocean.

The drainage of Alaska belongs to three divisions; the southern part, about one fifth of its area, drains to the Pacific Ocean; the great interior region, nearly one half of the area, drains into Bering Sea; and the rest of the area, its northern part, drains into the Arctic Ocean. The Yukon River, fifth in size in the North American Continent, rises in British Columbia, far to the southeast of all but the panhandle of Alaska, and flows into the Bering Sea. The Kuskokwim, also emptying in the Bering Sea, is second in size to the Yukon. It rises on the western slope of the Alaska range of mountains (the southernmost range) and its course is generally southwestly, about parallel to the Yukon. The drainage in the other two divisions consists of a large number of small streams which rise in the mountains near to the shore.

Alaska is often loosely referred to as an Arctic Province, yet three-fourths of its area lies within the North Temperate zone. There are three climatic provinces, in general, divided up as the drainage areas before described. The southern climatic province, adjacent to the Pacific Ocean, has a heavy precipitation, comparatively high mean annual temperature, cool summers, and mild winters. The second is the inland province lying beyond the coastal mountains and having small annual precipitation, comparatively warm summers, and cold winters; and the third, on the Arctic side, has a lighter precipitation, cool summers, and the coldest winters.

According to the census of 1920, the total population of Alaska was 55,036, representing an apparent decline of 9,320, or 14.5%, since 1910. However, as the census was taken as of January 1, the depth of winter, when only permanent residents could be enumerated, these figures should probably be augmented by many thousands, representing the annual summer migration to Alaska by miners, cannery employees, and others, but of course not including tourists. Based on the gross area, the density of population, or the number of inhabitants per square mile of territory in Alaska, was less than one-tenth of one per cent in 1920; in other words, the density of population in 1920 was equivalent to 10.74 square miles or 6,871 acres to each inhabitant. As a comparison, the density of population of Virginia is 57.4, and that of the whole United States is 35.5.

In order to discuss properly the relation of Alaska to the United States, it is necessary to go back in history and review the past of that territory and find out how the United States acquired it.

What is now the territory of Alaska was, until 1867, a part of the Russian Empire and was known as Russian America. The name, Alaska, is derived from the Aleut word "Alakshak" meaning "a great country or continent." The region was first visited by the Russian officers Bering and Chirikov, in 1741. Russian traders and trappers soon entered the country, and through their activities other nations became interested in this region. Spanish expeditions in 1774 and 1775 visited the southeastern shore, and in 1778 the English explorer, Captain James Cook, made extensive surveys of the coast for the British Government. The first settlement was made by the Russians at Three Saints, on Kodiak Island, in 1784; and in 1804, the Russian-American Company founded Sitka, making it the seat of the Government in 1805. In 1799, the trade and regulation of the Russian possessions in America were given over to the Russian-American Company for a term of twenty years, which was afterwards twice renewed for similar periods.

In 1821, Russia attempted, by ukase, to exclude foreign navigators from the Bering Sea and the Pacific Coast of her possessions, which caused a controversy with the United States and Great Britain. The question was settled by a treaty with the United States, in 1824, and one with Great Britain in 1825, by which an attempt was made to fix permanently the boundaries of Russian possessions in America.

After this settlement, the Americans and British, flocking into Alaska, made it so that soon there were few of the Russian ideals left there. The colony became a source of anxiety and expense to the Czar who found it necessary to find ways and means to prevent it from passing into the hands of his greatest rival in foreign colonization and trade, Great Britain. So, to prevent it from becoming a possession which would extend the frontier of that power to the Bering Strait, he was obliged to and did, on March 29, 1867, sell it to the United States for the sum of $7,200,000.

"The acquisition of Alaska was made with the view of extending National jurisdiction and republican principles in the American Hemisphere." (From President Johnson's fourth annual message, December 9, 1868.)

From 1867 to 1877, Alaska was nominally governed by the War Department, the troops being withdrawn in 1877. Thereafter, for two years, between 1877 and 1879, the Treasury Department, through a Deputy Collector of Customs, administered the affairs; this service being in turn succeeded by the Navy Department which had charge of

the territory until the arrival of civil officers appointed under the Act of May 17, 1884, to establish a civil government in the territory. Section 7 of this Act extended over Alaska the laws of the State of Oregon as far as applicable, created a judicial district and a land district, placed in force the mining laws of the United States, and gave the territory an administrative system.

The influx of settlers, after the discovery of gold in the Klondike, Yukon territory, in 1896, rendered more adequate laws necessary. In 1899 and 1900, Congress made provisions for a code of civil and criminal law, and in 1903 passed a Homestead Act. In the meantime, a serious boundary dispute had arisen between the United States and Canada, regarding the interpretation of the treaty of 1825. This was settled in 1903, by an agreement whereby the seacoast of Canada extended no farther north than 54° 30′.

By the Act of May 7, 1906, Alaska was given power to elect a delegate to Congress, and by the Act of August 24, 1912, provision was made for a territorial legislature of two houses, convening biennially on the first Monday in March, at Juneau, the capital, the sessions being limited to sixty days.

As now in effect, the territory has a Governor, appointed by the President of the United States, a Secretary, an Attorney General, a Territorial Treasurer, a Commissioner of Education, and a Commissioner of Health. It is divided into four judicial districts, each of which elects to the Territorial Senate one member, and to the Territorial House two members. All bills, after being passed by the territorial bodies, must be sent to the United States Senate for approval before becoming law. The Territory elects one delegate to the United States Congress, who may participate in debates but has no vote.

Alaska is of value to the United States mainly by virtue of her resources. The natural resources of Alaska are listed by the Alaskan Bureau in the following order: fisheries, minerals, timber, furs, agriculture, reindeer, water power, and scenery.

In taking up the study of the resources, a brief description of the means of transportation and a few of the difficulties encountered when the products are shipped out of the interior is necessary. There are two railroads in Alaska. One, the Alaska railroad, having a total mileage of 543, runs from Seward to Fairbanks. This railroad was built by the U. S. Government. The purposes and objects of the railroad, according to the original act, were to provide a supply of coal for the Navy; to provide for the transportation of materials and munitions of war (a remote contingency); and to aid in the development of the agriculture and mineral and other resources of Alaska and the settle-

ment of the public lands therein. The original bill provided for one thousand miles of railroad, but up to this time, only about half of it has been constructed and it has cost about twice as much as was contemplated for the whole thousand miles. The road is now costing the government about $4,000,000 per year to maintain and operate.

There are 1500 miles of wagon road and 8500 miles of sled roads and trails, throughout the territory. For the most part, they are practically unusable during the summer months, due to the thaw. The sub-soil never softens up so the top layer holds the water and a road or trail soon becomes a sea of mud. In the winter, when the snow is on the ground, all the trails can be and are used. Alaska is well provided with navigable streams which now serve the same purpose in the territory as did the rivers in the states before the construction of railroads. During the winter the streams are frozen over and, the ground being covered with snow, makes movement much less difficult.

The airplane is coming into use and there are now fifty marked landing fields in the territory. The plane has been used several times in the past year in emergencies and has proved its value to the country.

Communication is carried on by cable from the United States, by telegraph along the railroads, and by radio to almost every part of the territory.

In the last four years, exports of merchandise from Alaska have averaged $55,000,000 yearly. Contrary to the general belief, gold exports have decreased from one-half of the total in 1910 to about one-twelfth of the total in 1925. The predominance of the United States in Alaska's trade is striking and that predominance has been increasing. In 1910, the United States sent 97% of Alaska's imports and took 96% of Alaska's exports, including gold. In 1925, the corresponding proportions were 97½ and 98½. This situation is due to the fact that the white population and the capital in Alaska are almost exclusively American and that the United States is the nearest intensively developed industrial and agricultural country to Alaska.

For the fish industry, the territory may be divided up into three districts, the western, central, and southeastern districts, depending on their location with respect to the southern coast line. More than 90% of all the salmon caught is canned and shipped out of the country by boat. In addition to being canned, salmon is also cured, pickled, frozen, dried, dry-salted, and kippered. In 1924, the total output was, by number about 80,000,000 fish, valued at about $40,000,000. The total value of salmon shipped out of the territory to include 1924 was $517,128,390. The total to include 1908 was $92,836,983. The remaining $430,000,000 was divided up fairly evenly among the years, the

greatest output of any one year being in 1918, when it was $51,041,949.

In addition to the salmon industry, many other kinds of fish are caught in commercial quantities. Among them are herring with a 1924 catch valued at $2,500,000; halibut, $1,620,000; cod, $100,000; whales, $400,000; clams, $550,000; and shrimps, $180,000. The remainder of the fish crop includes crabs, trout, sable-fish, smelts, flounders, and red cod having a total value of about $69,000.

Sealing operations are carried on mainly in the Pribilof Islands. From 1868 to 1908, a total of 3,443,202 seals were killed in the waters around Alaska. They were hunted while going to the various islands in the Aleutian group in the late fall and while leaving there in the early spring. In this way, many of the females which were nursing young were killed and many of the young perished. In 1911, a convention between Great Britain, Japan, Russia, and the United States made the pelagic sealing unlawful north of the 30th parallel for 15 years. Then, to allow the seal herd to recuperate, the United States Government declared a closed season on seals for five years. The only seals allowed to be killed during this time were those needed by the natives for food purposes. Since 1917, the kill has been regulated by the government and the average annual kill has been about 20,000 animals. In 1926, it was estimated that the seal herd had about 800,000 animals in it, an increase of about 30,000 since 1924, and 500,000 since 1914.

Copper is found, as are nearly all the other minerals, in nearly every part of Alaska. The present output is mainly from the mines of the Kennecott Copper Company at Kennecott in Chitha Valley and from the mines at Latouche on the Prince William Sound. In 1925, Alaska produced 94,000,000 pounds of copper valued at about $10,400,000, an increase of about $700,000 over 1924. The total value of copper taken out of Alaska since 1867 is about $180,000,000.

Gold was first discovered in quantity on the Yukon in about 1880, and there followed one of the greatest periods of gold prospecting known to history, leading up to the great Klondike rush in 1896. Gold is found in almost every part of the territory and until 1916 it was the most productive metal mined there. In that year, the war demands for copper put gold in second place. At the present time, the most worked mines are in the Yukon Basin and on the Seward Penninsula. The Alaskan gold miner shares with his colleagues in the rest of the world the disability produced by the disrupted economic conditions which cause very high operating costs while the value of the product remains the same. Were it not for the improvement in transportation furnished by the railroads and wagon roads, which in certain districts

have reduced costs, Alaskan gold output would have been far less than it was. The production in 1925 was $3,323,000, a decrease of $350,000 from 1924. Since 1880, a total of $354,000,000 in gold has been taken out of Alaska.

Tin, platinum, and quicksilver have been mined in comparatively small quantities as by-products of the gold, silver, and copper.

A total of about 85,000 tons of coal, valued at about $415,000 was taken from eight mines in 1925. This was of the sub-bituminous quality and was used mainly within the territory. The most worked mines are along the Alaskan railroad and on the Seward Peninsula. Some coal is still imported, due to the long established market for it, but it is thought that it will not be long before no outside coal will be needed. The coal fields already known cover approximately 25,000 square miles. A law was made by Congress, in 1914, which limited the amount of land which one individual or one company could work. This was done to prevent one or two large companies from getting control of all the coal output and setting their own prices for it, and to satisfy public opinion in the United States. As a result, the high operating costs make it economically impracticable for promotion by private enterprise. The majority of the coal mining done at present is done for and by the Alaskan railroad. In 1923, 30,192 tons of coal were shipped into Alaska and in 1924, 31,663 tons.

The main part of the output of petroleum comes from the Katalla fields where sixteen wells are producing oil which is refined and disposed of in the local market, chiefly Cordova. The production in 1925 wa· 8000 barrels, which is only a small fraction of the petroleum products used in Alaska. The law regarding coal was also made to include oil, so at the present time, the development of this product is slowed down. There is a Naval Reserve District on the northern shore near Point Barrow which has been prospected and a small amount of oil and coal taken out for test purposes, but it has not been worked for commercial use up to this time.

Silver and lead have in the past years been produced as by-products from the gold and copper mines, but recent developments in the Hyder district have brought out increasing amounts of ore which carry silver and lead as its chief constituents. In 1925, the silver production was valued at $480,000 and the lead yield at $140,000.

Alaska has two distinct classes of forest growth, the "interior forest" which occurs over the greater part of the territory, and the "coast forest" which is confined to and is the prevailing type in southeastern Alaska and the Prince William Sound Region. The interior forest is for the most part on open public domain, while the coast forests have

largely been included in the National forests. In the interior forest, the stand is always light and the trees too small to be classed as saw timber. The principal kinds are the white spruce, white birch, balsam poplar, cottonwood, and larch. It is estimated that there is in Alaska, an area of 50,000,000 acres bearing about ten cords per acre. It is doubtful if this timber will ever reach general markets, but it is of high potential value for local use in connection with the development of the mining and agriculture resources of the vast region over which it occurs.

There are two National Forests comprising a total of 21,392,000 acres. These forests are in southeastern Alaska on Prince William Sound. They are set aside and placed under the supervision of a Forestry Bureau, which will insure a continuous forest productivity. Standing timber can be bought from these forests in any quantity but must be taken from the location indicated by the forest officials. The lumber industry is steadily expanding on the coast and an increasing number of saw mills are operating each year both for local trade and for shipment from the territory. Sitka spruce is the principal species cut. This is one of the most valuable trees in the United States or her possessions and is put to a wide variety of uses. The lower grades are used locally in large quantities for canned salmon packing cases. Much high grade material is shipped to general markets for use as interior finish and airplane parts. About 52,000,000 feet of timber were sold from the National Forests in 1924. The great future industry concerning the forests is the paper pulp industry. The National Forests are capable of producing not less than 1,000,000 tons of news print annually in perpetuity. A recent survey of water power in the National Forests has resulted in the finding of about 450,000 horsepower so far. This will no doubt be developed when the pulp industry develops.

There are in Alaska at the present time about 300,000 reindeer. They were first introduced around 1900, when it appeared that the natives were going to become extinct through lack of food. Since that time, they have furnished food and a means of transportation for the natives and have increased considerably. It is estimated that there are about 25,000 square miles of treeless country in northern and western Alaska which is worthless for agriculture and which would furnish pasturage for about 4,000,000 reindeer. It is possible that at some date not far distant, the United States may draw a considerable part of its meat supply from the reindeer herds of Alaska.

Agriculture, as a whole, is valuable in Alaska solely for the purpose of supplying the local market and that in part only. There

are a few successful farmers, all in well chosen localities in the vicinity of towns of considerable size. In considering the possibilities, it must be remembered that Alaska is remote from the great markets, that its population is scattered, its transportation limited, local markets few, and the installation of an agriculture plant expensive. Only the hardier fruits and grains can live. The United States government has experiment stations at various places throughout the territory and tests are made of all kinds of farm products to determine what the best growing crops will be.

Fox farming takes place mainly on the smaller islands of the Aleutian group in southwest Alaska. There are now 191 islands under lease and the improvements and stock represent an investment of $2,000,000. In addition to the fox pelts, there are also shipped out the pelts of wild fur-bearing animals which are taken by the Indians and trappers in all parts of the country. The total shipped out in 1925 were valued at $565,000.

In conclusion, it might be interesting to compare the purchase of Alaska with that of other parts of the United States which have been acquired at various times. The purchase of Florida was made in 1819 for the sum of about $5,000,000. Its population is at present about 1,350,000 and its estimated wealth about $2,500,000,000. The Louisiana purchase cost the United States $27,000,000. Since its purchase, it has been divided into eleven great states and parts of two others. The population is about 21,000,000 and its estimated wealth is about $60,000,000,000. Alaska was purchased for $7,200,000 in 1867, and at present with its population of about 55,000 does not make the good showing that the other two territories have. It is believed that the future is very bright for Alaska, and with the ever-improving means of transportation and the ever-improving roads and trails in Alaska, the population will gradually grow and the resources which have not as yet been fully developed, will begin to flow out of the territory, as in Florida and Louisiana, and in time Alaska will prove to be one of the most valuable of the United States purchases.

The Effect of Permanent Fortifications on Military Operations in the World War

Condensed Translation by COLONEL GEORGE RUHLEN, U. S. A., Ret.

THE May to December, 1927, issues of the bi-monthly military magazine, *Wissenschaftliche und Technische Mitteilungen,* published under the auspices of the Austrian War Ministry, contain an article in which the writer, Colonel of Engineers Karl Schneck, gives, in brief outline, a comprehensive summary of the influence exercised by permanent fortifications on military operations in the World War in countries of the participants where such fortifications played a part, from which the following extracts are taken.

The writer, accepting antewar designations, divides permanent fortifications into two principal classes: Seacoast and Inland, and again subdivides the latert into Ring Forts and Barricades or Barrier Fortifications. Ring forts were to protect and secure possession of important strategic points, stream crossings, railway and roadway junctions and the troops and supplies assembled there, and to defend of bases of aggression against enemy lines of approach. Barrier forts were to prevent the enemy from occupying important lines of invasion or attack and were to be considered applicable only where a turning or enveloping movement by major enemy forces with artillery appeared to be impossible, for example, in mountainous or lake and marsh regions.

European military states made a shift, soon after the introduction of rifled guns during the last half of the past century, from the bastioned fronts of Vauban and other illustrious military engineers to the belt fortification systems. The belt chains consisted of single forts at from three to five kilometer intervals and advanced from 3 to 10 kilometers beyond the real nucleus of the central fort. They were built with high profile with usually widely extended plans armed with from 20 to 50 wall guns, well manned and surrounded by a deep assault-resisting ditch. The German-French war of 1870-71 showed that fortifications of this class around Paris were soon silenced by the fire of rifled guns used against them, but it was not until about the middle of the 80's that the effect of these modern artillery arms had been fully recognized and, after high-explosive shells had been introduced, that one turned to armored forts. While the new system of armored forts was under way

modifications were advocated and introduced consisting in reducing the profiles, decreasing visibility, and arranging the belt units in checker-board formation with well concealed armored turrets, 500 to 1000 meters apart and in three or four lines and protected against surprise assault by well arranged obstructions.

About twenty years before the World War—in the middle 90's—all states except Belgium and Rumania took further steps in progressive permanent fortifications. The very expensive monstrous armoring against long-range armament was abandoned and the long-range guns were relegated to the medium and remoter terrain. Indirect firing, which permitted batteries to be placed in concealment well back, contributed largely to this change. Close and long-range guns in belt forts were abandoned and the system of separated close and long-range firing was adopted. The belt works became supports for close-range defense. They were usually supplied with 15-cm. mortars, 10-cm. howitzers, and machine guns in armored turrets for resisting assaults. They were also provided with infantry garrisons in bomb-proof casemates. The "Noyan" (core or nucleus enceinte of a detached fort) served as a protection for the kernel of the fort by means of flanked infantry stations. What has been said applies only to fortified places in maneuver areas. Mountainous regions, valleys, ravines, gorges, and such like required other processes.

Permanent fortifications suffered mainly from two misfortunes: 1. Great expense. 2. Inability to anticipate and prepare in time, except to a limited extent, for progressive development of weapons by changes adapted to meet such progressive development or by reconstruction. In consequence, not a single state could, at the outbreak of the war, show up a system of permanent fortifications complete in all parts and adequately adapted to then existing conditions.

The author here takes up serially discussion of and comment on fortifications of the countries engaged in the war whose fortified places played any part in war operations beginning with—

AUSTRO-HUNGARY

Galicia. The fortified places, Cracow and Przemysl were, considering modern fire effect, regarded as wholly out of date. The "belt" consisted of reconstructed old works into which numerous close combat points of support had been interpolated between the forts. Their armament was mostly 8-cm. guns in armored turrets for front attack and 8-cm. guns in fixed transformed armored casemates for sweeping over open intervals. The newer works barely sufficed to resist single

hits of 24-cm. mortars; they were, however, equal to the inferior Russian siege artillery.

Przemysl was enclosed by the Russians, September 21, 1914. They tried to gain possession of the fort by a quick energetic attack but neither the assaults in the last September days nor the bloody general attacks October 5 to 8, which caused frightful losses to the Russians, succeeded. They succeeded in penetrating the Siedliska group of works but were promptly driven out by a counterattack. On October 9, the Russians were compelled to abandon their investment in face of the approach of a relief army. Przemysl had tied up eleven Russian divisions and held up important lines of supplies so that the fortification permitted reestablishment of the Austro-Hungarian army and greatly facilitated reopening the offensive.

On November 9, 1914, Przemysl was again invested by eight Russian divisions. In this investment the Russians contented themselves with siege operations. Numerous major and minor sorties and attempts at relief were made by the Germans but without success. When all supplies had been consumed and a final sortie had failed the place was surrendered after the fortifications had been blown up, on March 22, 1915, after a siege of five months. Two months later, on May 14, Austrians and Germans appeared before Przemysl. The Russians attempted not only resistance by means of the restored fortification but also to make the place a base of offensive operations. During May, 1915, the Austrians and Germans succeeded in bringing heavy artillery to bear on the fort and, after heavy resistance on part of the Russians, it again fell into German hands on June 2, 1915.

The Mountain Front. The mountain regions, comprising the Carinthian and Tyrol fronts, furnished more favorable conditions for defense by fortifications than did those of Galicia. Firing on works in those regions began on the very first day of the declaration of war by Italy against the Central Powers and was continued for months. Some of the works counted 10,000 hits, but in spite of much heavy damage the energetic defenders always succeeded in repairing the injuries during intervals of fire and thus kept them tenable to the very last. Some of these works had their armaments removed and the guns used as auxiliaries to the weak mobile artillery in the valley districts. As a rule, the works, even though somewhat antiquated, fulfilled the essential purposes for which they were built—that of delaying the enemy and giving time for reorganization and readjustment. The forces were, in many instances, kept in activity well in advance of the fortifications so that they did not always come under fire but at the same time gave confidence as supports and protection in an emergency.

The forts on the Carinthian front fulfilled their purpose by preventing the Italians from making an energetic attack there.

The Balkan Front. The forts in Bosnia and in the Herzegovina comprised the belt fortifications Sarajevo, Mostar, Trebenye, and Bilak, and the land front of Cataro. They dated back to the 80's and were intended to protect the boundary line and as supports to local garrisons in case of revolts in the occupied territories. They were, in large part, built only as field fortifications. Sarajevo obtained four armored works in the 90's which had, however, become obsolete at the beginning of the war. Only the two forts at Trebenye and the land front of Cataro had anything like a modern armored work. They were both severely attacked by the Montenegrins but without the slightest success.

The Coast. Austria-Hungary held, on the Adriatic, the war ports Pola, Cataro, and a newer coast fort on the island, Lussin. The sea front of Pola was, on the whole, provided with modern equipments. The seacoast forts with 30.5-cm. and 28-cm. revolving armored guns, then a number of open batteries for 15-cm. cannon and 21-cm. mortars protected the ports. Two 42-cm. howitzers were added during the war. The land front had been sadly neglected, but a belt of field gun fortifications were placed in front of the old works.

The war port Cataro had only open batteries for 15-cm. guns and 21-cm. mortars. Its armament was also increased during the war by two 42-cm. howitzers. During the war, greatly contrary to expectations, there came no attacks worthy of mention against the coast fortifications nor any attempts at landing on any of the open coast intervals. Only in September, 1914, a French fleet detachment placed the wholly obsolete batteries of the port channel of Cataro under fire without causing damage worthy of note. The war port Pola was attacked twice by U boats but without success.

Summing up, it may be stated that *permanent fortifications* did, in spite of being so far behindhand and out of date, fully answer their real purpose—gaining time. They enabled their minimum garrisons, supported by the skeleton defensive works, to bring the opponent to a stand in almost every instance within the boundary areas. On the Isonzo front the bodies of the defenders had to do that work. Wherever permanent fortifications were wanting, as in Transylvania and the Galician frontier, the war was pushed well into the borders by the first assaults. It is, of course, self-evident that the successes attending permanent fortifications were due to the brave initiative of their defenders.

II. BELGIUM

The Belgian fortifications, Liège, Namur, and Antwerp, were from the time of Brialmont, about the middle of the 80's. On account of high profile and inadequate screening the 4 to 5-kilometer wide open or only partly covered works, devoid of all armoring for their protection, were wholly unable to resist successfully the attackers' heavy guns. The Germans attempted to take Liège with six piece equipped brigades. The attack occupied 12 days and required bringing up heavy guns before the forts were taken and the German West army could resume its advance march.

Namur was encircled on both sides and taken in five days. But even then the fortification had fulfilled its mission to this extent: strong forces (six divisions, two engineer regiments, and 230 heavy guns) were tied up and lost to the battle front.

After changeable fights in the area before Antwerp, the entire Belgian field army had withdrawn into the city and endeavored repeatedly to engage and neutralize large German forces by repeated sorties against their rear and their lines of communication. The German headquarters thereupon decided, on September 9, to take Antwerp. The fortification was obliged to surrender after a four-weeks' siege with heavy guns that laid the old works in ruins, but the Belgian army succeeded in getting away in time. The Germans were deprived of very important forces and supplies that were badly needed at the battle of the Marne but had been held up by the contest for the fortifications which, to that extent at least, had fulfilled their purpose even though they were not strong enough to protect Belgium against the breach of its neutrality.

III. FRANCE

The French eastern boundary was protected by a number of belt fortifications between which chains of barrier forts had been arranged. The southern part of this front, in the forest-covered Vosges and Argonne hills—Verdun—Toul—Epinal—Belfort—very strongly situated tactically and modernized in part by field fortifications, offered new support and safety to the badly beaten French First and Second Armies in the autumn days of 1914 and thus enabled them finally to bring the impetuously attacking German forces to a standstill. But on the other hand, in the north, the almost wholly superannuated fortifications and barriers, Longwy, Montmédy, Les Argelles, fell victims, one after another, to the effect of heavy long-range high-angle artillery fire and opened the heart of France to German invasion.

Lille had already surrendered without fighting. Rheims and Lâon were vacated voluntarily. Only Maubeuge resisted from August 27 to September 5. The German armies had passed by on each side leaving a division on guard.

Then, after Namur had fallen on September 5 and 6, heavy artillery broke through the chain of belt forts without difficulty. On September 7 the fortification surrendered with 40,000 prisoners and 400 guns to the attacker. Marshall Joffre said, in the court martial that tried the commandant: "the resistance of Maubeuge has released my army from several enemy divisions and especially from its heavy artillery and has therefore accomplished its end and contributed to our victory on the Marne."

The fortification of Verdun now formed the powerful point of support for the entire French army. Its possession was of greatest importance for the West front and it became the focus of bitter and bloody fighting. Its construction and armament, although containing some superannuated features, was, on the whole, superior to the Belgian and the other French fortifications. The Germans succeeded with bitter and horribly sanguinary attacks and assaults to gain much ground but were unable to accomplish the capture of the fort and at the end the whole chain of belt and barrier forts was again in the hands of the French.

IV. RUSSIA

Inasmuch as it was not practicable to provide security to the extended open spaces of the Russian boundaries as was done with the French east front by means of fortifications, the Russian army leadership contented itself with laying out forts for protecting the assembly areas and the approach marches in Lithuania (Kowno, Olita, Grodno, Ossowiez), in Poland (Lomza, Ostrolenko, Rozan, Pultusk, Novo-Georgewick, Warsaw, Ivangorod), and in Volhynia, (Rowno, Dubno, Lusk) and then Brest-Litowsk.

All Russian forts bore the form of later periods and had the characteristics of strengthened field fortifications. The constructors of the casemates provided protection only against medium calibers; armor was wholly wanting. Recognition of the weakness of their fortifications was one of the causes of failure of the Russians to commit themselves to an enduring defense of their fortifications. But notwithstanding this, the fortifications accomplished their purposes. The lines of the Niemen afforded renewed support to Rennenkamp's retreating forces. The fortified Vistula front made it possible for the Russian army leadership to shift the center of gravity of operations at pleasure

after the combats in Galicia and after the winter battle in Masuria, the forts on the Niemen, Bohr, and the Narew line prevented further advances of the Germans there. In the summer campaign of 1915, which ended in the collapse of the Russian front, the Russian fortifications on the Narew and Vistula gave retreating Russian armies the possibility of offering at least temporary resistance.

The French General Benoit, writing about the foregoing, says: ". . . the German forces rendered inactive in front of these places were much larger than the garrisons containing them and thus tended to weaken the German main strength. The few days that the several places held out permitted the Russians to release themselves from the clasp of the powerful tongs with which the Germans had seized and encompassed them between Narew-Vistula and Wieperz."

V. ITALY

The Italian fortifications were charged with the task of barring the outlets from the Alps. They consisted in part of old and in part of modern new designs; new works originating shortly before the war were inadequately completed and had insufficient cover for protection, remarkably weak armor, and were therefore subject to quick destruction by heavy artillery fire. Many of them fell before close combat assault became necessary. The break-through at Flitsch-Tolmein late in the autumn of 1917, broke down the Italian front. The fortified Tagliamento line was unable to afford the retreating Italians sufficient support to stop the retreat. The barrier forts were passed by everywhere. The frightful catastrophe that overwhelmed the Italian armies had also involved the fortifications.

VI. ROUMANIA

The Rumanians, having been warned by the rapid fall of the Belgian forts, did not even attempt any defense of the gigantic Brialmont camp fortifications at Bucharest. When Mackensen's army appeared at Sistova in front of Bucharest it was met by the bearer of a flag of truce on the morning of December 6, 1916, who announced that Bucharest was not a fortified place and did not have a commandant.

CONCLUSION

The great difficulties incident to judging and valuing permanent fortifications bear intimate relation to their age, manner of construction, and degree of active and passive power of resistance. The principal demand made on permanent fortifications was sparing living forces,

that is: *"to provide a minimum of personnel with a maximum of strength of resistance."* This requirement could naturally be secured only by a work closed in and capable of defense on all sides and situated at tactically important places. Such objects must necessarily have facilities for all necessaries required by the garrison such as storage, provisions, ammunition, quarters, workshops, etc. Every extension of the design increases the strength of the garrison and cost of construction. These are some of the reasons why permanent fortifications always represent a compromise, and there is added the further impossible condition that fortifications whose construction required years were to meet all requirements of centennials of continuous and rapid development of methods of attack and of new weapons. A fortification becomes superannuated, as does a war vessel, as time passes and both must be renewed.

It is self-evident that a fortification must eventually yield to the assault of an attacker drawing on all available resources and that one cannot demand unlimited power of endurance against the greatest means and methods of attack. All these elements must be taken into consideration in judging the value of a permanent fortification.

There is scarcely a doubt that permanent fortifications will be needed in the future as they were in the past. Only in regard to the methods of their development is there any great difference of opinion.

The German writer here diverges from his original purpose of recounting the effect of permanent fortifications on military operations of the world war and enters into an agumentative discussion of measures that will have to be taken in construction of permanent fortifications of the future to meet the conditions imposed by the introduction and progressive development of extreme long-range high-angle artillery fire, bombing from airplanes, chemical warfare, and other aggressive devices, that now enter as factors in solving the problem.

As examples of the difficulties involved he alludes to a number of tentative projects that are now under consideration by the French for fortifying the eastern boundaries of that country. One of these, brought up by the Prime Minister Poincaré, goes into the subject in considerable detail. It apparently proposes an almost continuous line of chain forts from the Riviera to the North Sea. Its estimated cost is 7000 million gold francs, and time required for construction seven years.

The Landing at Gallipoli

By LIEUT. COL. NED B. REHKOPF, F. A.

(Concluded)

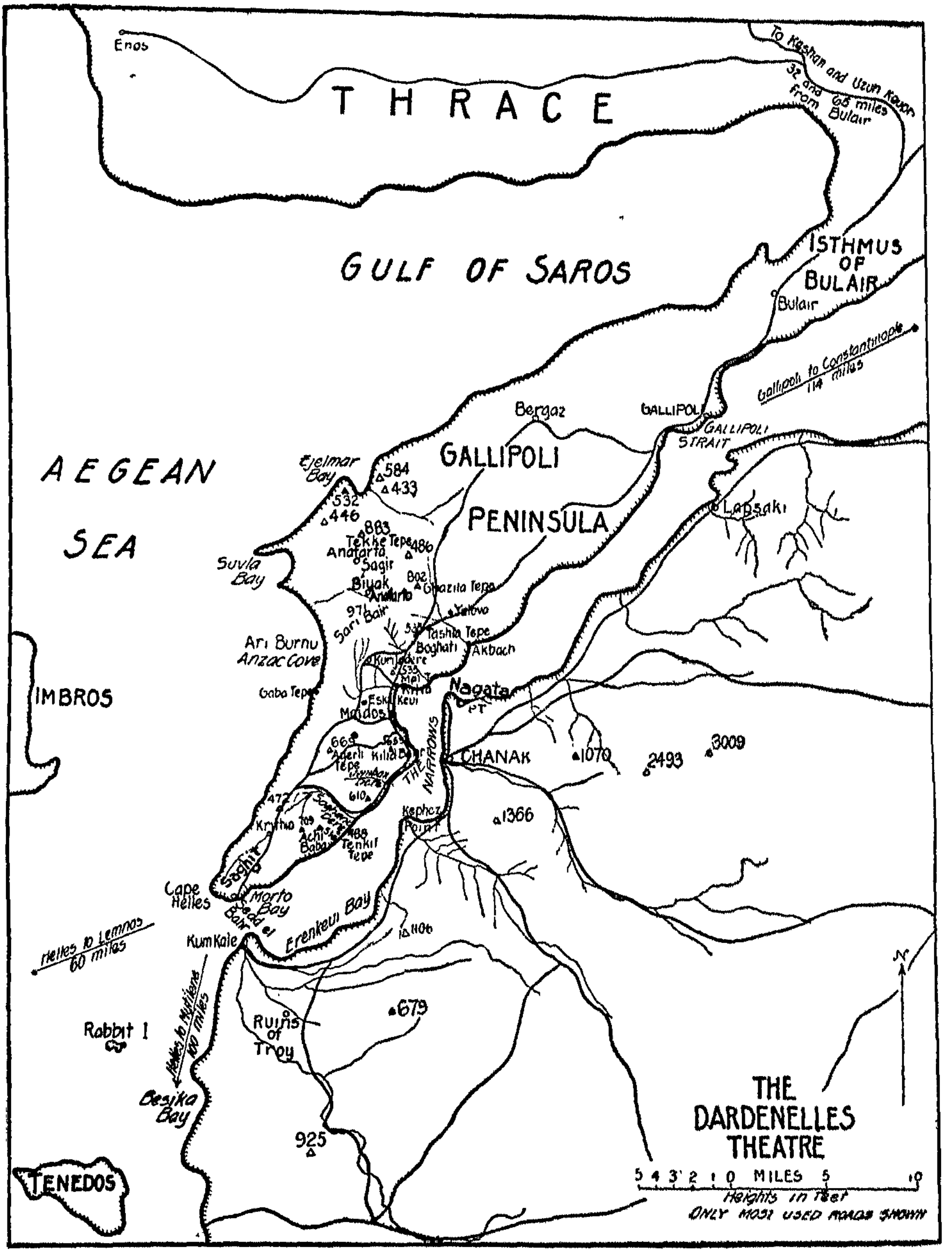
DURING this first day, with small boat accommodations for 1500 men, a total of 16,000 men and a few guns were landed. Small parties had reached points on a line through Third Ridge—Battleship Hill—Fishermans Hut, partially enclosing an area with a shore line of about 3800 yards and with a maximum depth (on a line through Hell Spit) of about 3500 yards. By local counterattacks during the early part of the day, a counterattack by the 19th Turkish Division (Mustapha Kemal, commanding) about 4:30 that afternoon, and as a result of the continued fighting on the twenty-sixth and twenty-seventh, the Anzacs were driven back to a beach head of about 2800 yards along the coast and with a maximum depth (through Ari Burnu) of about 1300 yards. On the night of April 25-26 Birdwood had sent a message to Hamilton saying that his division and brigade commanders recommended withdrawal and asking Hamilton for authority to do so. Hamilton replied that they must hold on. The losses of the Anzacs during the first week (April 25-May 2) were about 9000 (of whom 2500 were killed) out of a total of 27,000, or 33 1-3%.

This small beach head gained by the Anzacs was greatly congested with troops, supplies, and the wounded; communication with and supply of the front line troops was over rough and difficult ground. The beach was under observation of the turks from Nibrunesi Point and Gaba Tepe until those places were taken by raids on April 30 and May 4, respectively.

The landing at Anzac was intended as an effort secondary to the main landing at Helles; Hamilton called it "a strong feint which may later develop into the real thing." It attracted a large number of Turkish troops available for the defense of the peninsula during the first few days, as well as during the later stages of the operations and in this way unquestionably aided the operations at Helles. Even with the reinforcements received later and the efforts to push out during May, June, and July, the beach head was never sufficiently extended to threaten the forts at the Narrows.

THE LANDING AT Y BEACH

The operations of the 29th Division under Hunter-Weston at Helles included three main and two secondary landings. The trans-


THRACE
Enos
To Keshan and Uzun Keupri
32 and 65 miles from Bulair
GULF OF SAROS
ISTHMUS OF BULAIR
Bulair
Gallipoli to Constantinople 114 miles
GALLIPOLI
GALLIPOLI STRAIT
Bergaz
GALLIPOLI
PENINSULA
AEGEAN
SEA
Ejelmar Bay
Suvla Bay
Ari Burnu
Anzac Cove
Gaba Tepe
IMBROS
Lapsaki
Nagata PT
CHANAK
THE NARROWS
Maidos
Kephez Point
Erenkeui Bay
Morto Bay
Cape Helles
Sedd el Bahr
Kum Kale
Helles to Lemnos 60 miles
Helles to Mytilene 100 miles
Rabbit I
Besika Bay
Ruins of Troy
TENEDOS
THE DARDENELLES THEATRE
MILES
Heights in feet
ONLY MOST USED ROADS SHOWN

ports carrying the troops for these landings left Mudros on the twenty-third for Tenedos, from whence they were deployed on the night of April 24-25. The King's Own Scottish Borderers and one battalion of the Royal Naval Division were assigned to the landing at Y beach. Early on the morning of the twenty-fifth they arrived off their landing place in the Cruisers *Amethyst* and *Sapphire* and two transports, accompanied by the Battleship *Goliath*. There were small boats available to carry only half a battalion at a time. A part of the Borderers went in in the first tows at 6:00 A. M. under support of the fire from the battleship and cruisers. The steep and high cliffs near the shore at this place made it an unlikely landing beach and the Turks had not prepared to defend it. The landing was unopposed, the men seen climbed the cliffs and established themselves along the ridge at the top, about 300 yards inland. The remaining troops followed in other trips of the tows.

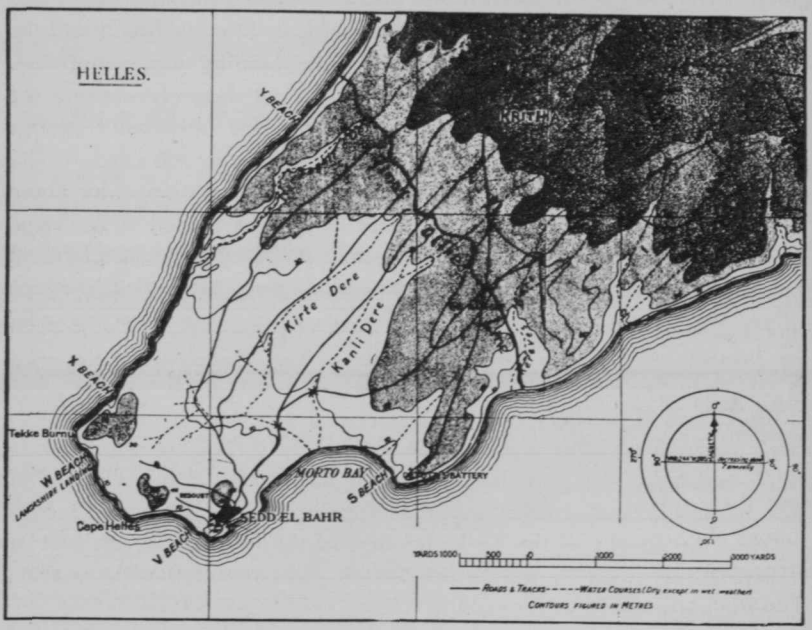
The plan provided that these troops should work their way along the ridge to the south and connect with the troops landed at X Beach, two miles to their right; but the Turks had prepared to resist a landing at the mouth of the ravine a mile and a half south of Y Beach, which place was afterwards known as Gully Beach, and a reserve regiment of infantry of the 9th Turkish Division was near Krithia. These Turkish troops opposed the southward movement of the British and with the aid of artillery fire and determined infantry attacks continued well into the night of April 25-26, forced the British to withdraw to their transports early in the morning of the twenty-sixth. The fire of the battleship and cruisers was not effective in supporting the troops against the attacks of the Turks because of the deep gully just east of the ridge occupied by the British, but it did prevent the Turks from interfering with the withdrawal.

Hamilton was greatly disappointed by the failure of this attack. He had personally selected this point for landing and the ease of the initial landing had justified his selection of a difficult and unlikely spot. Neither he nor the Corps Commander had been consulted about the withdrawal.

THE LANDING AT X BEACH

X Beach was a stretch of sand 200 yards long and 10 yards wide at the foot of a sixty-foot bank, which in turn led to a gently sloping plain. The Royal Fusiliers were brought over from Tenedos on the battleship *Implacable* and two mine sweepers, escorted by the battleship *Swiftsure*. The landing was preceded by a preliminary bombardment from the battleships, beginning as soon as it was light enough to

see. There was small-boat accommodation for but half a battalion. The *Implacable* swung an anchor out over her bows which would drag before she went aground and, with the small boats on either side of her, moved slowly in to shore as close as possible—400 or 500 yards—still keeping up her fire on the Turkish trenches. The fire of the warships did little material damage to the wire and trenches, but did neutralize the fire of the troops defending those trenches and the landing was made with but few losses. The Turks reserved their fire until the first party had reached the beach.



After landing and climbing the slope, the battalion pushed forward, trying to connect with the troops which were landing at W Beach. The high ground near Cape Tekke, however, was strongly held by the Turks and a battery near Krithia enfiladed the advancing lines. The Turks by counterattacks held up the advance until two supporting battalions (the Iniskilling Fusiliers and Border Regiment) had joined the leading battalion, when the British succeeded in capturing the knoll near Cape Tekke and joining up with the troops from W Beach. Later Turkish attacks drove the British back—at one time to the cliffs just above X Beach, but at nightfall the British held an entrenched line around X Beach and joining with the line at W Beach.

THE LANDING AT W BEACH

W Beach was naturally a favorable landing place. It was a strip of sand 15 to 40 yards wide and 350 yards long in the bay just south of Cape Tekke. The beach was sheltered from the prevailing northeast winds. On either flank the ground rose abruptly from the beach, but in the center a gradual slope led to the interior. The Turks had prepared the beach for defense by means of trenches, wire along the beach and under the water, land and sea mines, and machine-gun nests under the shelter of the high ground on the flanks.

The Lancashire Fusiliers were conveyed to this landing place in the cruiser *Euryalus*, and by 4:00 A. M. had transshipped to the ships' cutters which were to carry them ashore. Because of the difficulties expected at this beach, enough small boats had been provided to carry a complete battalion in one trip. The landing was preceded by an hour's bombardment of the defenses by the covering ships, which did not prove to be very effective. At 6:00 A. M. eight picket boats, each towing four cutters, moved in. The picket boats (drawing five feet of water) cast off when they reached shallow water and the boats were then rowed in the remaining distance. Most of the boats went straight ahead, but the company on the left veered to the northwest and pulled toward the rocks of Cape Tekke, while a few boats diverged to their right toward the high ground near Cape Helles.

The Turks held their fire until the leading boats touched the beach and then opened an effective cross fire. The losses in the boats and among the men just getting into the water were severe. The survivors struggled ahead trying to get through the wire near the water's edge. The platoons which had veered to the left were successfully landed on the rocks of Cape Tekke with but few losses and, pushing on, took the enemy machine guns which were inflicting heavy damage on the main part of the landing. This enabled the British to enfilade partly the enemy trenches facing the main beach and gave relief to the troops struggling through the wire at that place. The main body then moved off to the left, sought shelter, and was reorganized under the rocks of Cape Tekke. The troops then scrambled up and after severe fighting, reached the southern side of the high ground which the troops from X Beach were attacking from the north. The party which landed on the right of W Beach had worked its way up to the top of the cliff, where it was stopped by the Turkish defenses.

By 9:00 A. M. an additional battalion, the Worcesters, was landed under shelter of the rocks at Cape Tekke, climbed the bluff, and came to

the aid of the leading battalion. The advance thus made possible carried some of the trenches in the immediate front and made connection with the troops from X Beach. Having made the left and center of the landing secure, the troops then moved against the high ground northwest of Cape Helles. This ground had been prepared for defense by means of trenches, wire, and two infantry redoubts north of Cape Helles. Farther east was the old 9.2 battery emplacement, which had been seriously damaged by the fire from the *Queen Elizabeth* and other ships in the February naval attack, but which still afforded excellent protection for infantry and was strongly held. About 1:00 P. M. the covering ships again bombarded these strong points, and

W-Beach

additional reinforcements, diverted from V Beach, enabled the British to stage another attack against these defenses; but the Turks were also putting in reinforcements and counter attacking to regain the ground which the invaders had secured, and continued their attacks long after dark. As a result of the day's fighting the British had a grip on the left part of W Beach and had joined up with X Beach.

THE LANDING AT V BEACH

V Beach was another case where a place naturally favorable for landing had been rendered difficult by the defense system prepared by the Turks. Immediately to the left of the bluff on which the village of Sedd-el-Bahr stands, the ground opens out in the form of a semi-circular amphitheater with a radius of about 300 yards. The beach

was 350 yards long and about 10 yards wide. At the western end of the beach is another bluff on which was the old 9.2 battery emplacement. On the land side of the beach was a sandy bank about four feet high, affording some shelter for the landing troops. The old fort of Sedd-el-Bahr, the stone barracks on the ridge to the north, and the battery emplacement had been bombarded by the fleet and reduced to a mass of ruins, but those ruins afforded concealment and protection to defending infantrymen. On the edge of the beach the Turks had constructed an entanglement of very strong wire and this was paralleled by another band two-thirds the distance up the slope, the two being connected by a transverse band. The Turks' trenches were along the high ground beyond the upper band of wire and were manned by riflemen and a number of pompons.

Because of the difficulties expected in this landing, special preparations had been made by the attacking force. Three companies of the Dublin Fusiliers were transferred from their transport to small boats just before dawn, ready to be towed in by picket boats. Two and a half companies were to land on V Beach proper and a half a company was to land on the "Camber" east of the village. The remainder of the landing party (the Royal Munster Fusiliers, two companies of the Hampshire Regiment, a company of the Dublin Fusiliers, and a field company of engineers—2000 men in all) were on board the collier *River Clyde*. This ship had been specially prepared by cutting in her sides great doors, which opened on gang planks slung by ropes. Machine guns, protected by sandbags, were mounted at the bow and on the lower bridge. A similar ship had been offered to Birdwood for the Anzacs but was declined. The plan was for the *River Clyde* to be run in and beached as close to the shore as possible, after which the troops would wade ashore if they could. To provide for landing in case the water was too deep for wading, a number of lighters were brought along with the collier, by means of which it was expected to form a pier from ship to shore.

Soon after dawn the battleship *Albion* began an intense bombardment of the shore defenses, and the *Queen Elizabeth* bombarded the old castle and village, none of which proved of great effect. About 6:00 A. M. the five picket boats, each towing four cutters, started in. The *River Clyde* followed a little later but reached the beach at practically the same time as the small boats, which had to be rowed the final 100 yards. The Turks held their fire until the leading boats reached the beach and then opened a very effective fire. Only a very few of the men from the tows reached the protecting bank, many of the small boats were destroyed and in a few minutes this portion of

the landing had been defeated with loss of most of the attackers. The *River Clyde* ran in close to Sedd-el-Bahr and the water was found to be too deep for wading. Under a strong fire and against the difficulties of a strong current, which ran close to shore, the Navy attempted to form the pier of lighters. Just as the pier was completed and the first troops started ashore, the pier parted. The men of the leading company scrambled down into the water and few reached the sheltering bank. When the next company tried, the lighters had drifted even farther apart. The Navy fixed up the pier and those of the second company who had not been hit joined the others behind the sand

V-Beach from the West

bank. Shrapnel fire brought down many of the men of the next company which tried to rush ashore. Again the pier broke and the men lying on the decks of the drifting lighters were subjected to a withering fire. So at length it was decided to abandon the attempt. The *Clyde* had been hit by a number of howitzer shells, but with little damage, and her machine guns were keeping the Turks from rushing the few men behind the bank.

By evening there were about 400 officers and men spread out along the bank on the beach and 1000 were still on board the *River Clyde.* Some of the troops designated to support the landing at V Beach had been diverted during the day to W Beach. About 8:00 P. M., however, all the troops remaining on the *River Clyde* were put ashore by means of the pier of lighters and without any losses. An attempt was then

made to gain a footing in the village by a night attack, but this was quickly stopped by the Turks.

The half company landed on the "Cambor" made good their landing with comparatively small losses and tried to work their way toward V Beach, but were unable to make progress. They then tried to get a foothold in the village but were repulsed. The warships could give them but little help and they suffered heavy losses. Later in the day they were withdrawn.

THE LANDING AT S BEACH

S Beach was very limited in extent and the water to the west was shallow so that there was danger that the boats would go aground too soon if they deviated the least bit from their proper course. The ground sloped up sharply from the shore and the Turks had constructed trenches from which effective fire could be directed against troops attempting to land there. This beach was also greatly exposed to artillery fire from the Asiatic side of the Straits.

In many ways this was the best conducted landing and shows that such an operation is feasible, provided the opposition is not too formidable. Three companies of the 2d South Wales Borderers, some engineers, and a navy landing party detailed from the battleship *Cornwallis* were assigned to this task. The Borderers had fought with the Japanese at Tsingtau and was the only battalion which had had actual fighting experience during the World War. The troops were brought from Tenedos to Morto Bay in trawlers, conveyed by the battleship *Cornwallis*, and there were transferred to ship's boats. These boats were towed by the trawlers, six boats to the tow. Due to the strong current flowing out of the Straits, the trawlers were delayed in arriving at Morto Bay and the disembarkation did not begin until 7:30 A. M. The landing was made expeditiously and without great loss. The Turks held their fire until the boats were close in. After landing, the troops quickly worked their way forward, effectively supported by the fire of the *Cornwallis*, and by 10:00 A. M. had captured De Todt's Battery and the defenses covering the beach. They dug themselves in and, supported by the fire of the *Cornwallis* and *Lord Nelson*, were able to repulse a strong counterattack in the afternoon. Some artillery fire was received from the Asiatic side, but this was poorly conducted and did little harm.

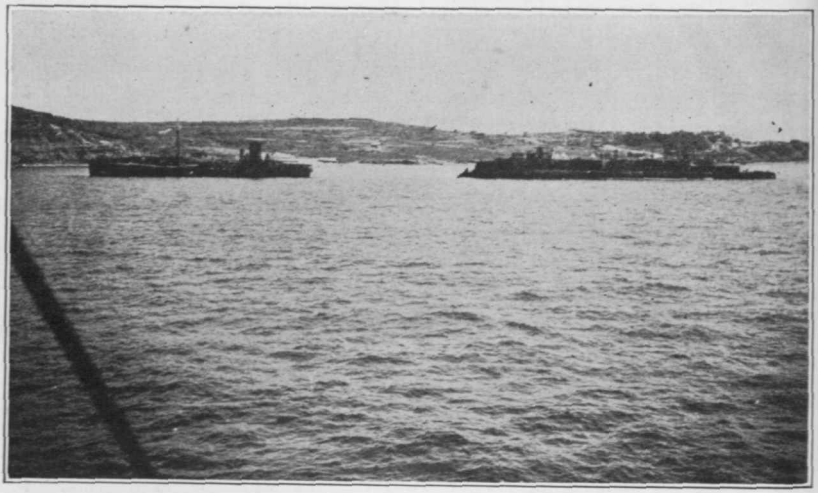
HELLES LANDINGS—GENERAL

With small boats capable of landing 2500 men in one trip, not counting the *River Clyde*, 1300 infantrymen had been landed in the

Helles area by 2:00 P. M., and it was not until after 8:00 P. M. that all twelve battalions of the 29th Division were ashore at the five landing places on the southern part of the peninsula. The landing had begun soon after dawn. This slowness was due to the cramped landing places, the stubborn resistance of the enemy, and the failure of the *River Clyde* expedient.

THE LANDING AT KUM KALE

The landing of the French on the Asiatic side of the Straits was intended to be but temporary and mainly for the purpose of preventing



V-Beach from the Sea

the guns on that side from firing on the landing places on Helles. Together with a bombardment of Besika Bay, also served as a feint. One regiment of infantry, a battery of field artillery, and a half company of engineers, conveyed in five transports and under the protection of three French battleships and a Russian cruiser, left Lemnos about nightfall on the twenty-fourth and arrived within three miles of Kum Kale by dawn. The warships opened fire on the fort and the villages of Kum Kale and Yeni Shehr. About 7:15 A. M. the transports stopped, some of the troops having already been transshipped to small boats. Due to the strong current and the weak power of the picket boats, the tows were much delayed in getting in, even though helped by destroyers and torpedo boats.

The plan was to land northeast of the fort, but at the last moment this was changed and the other side of the fort was selected. The first point selected was exposed to fire from the village and the cemetery, while the beach on the other side of the fort offered some dead space behind the wall of the fort and was concealed from view from the other side of the Mendere River. It was 9:00 A. M. by the time all the boats were clear of the transports and moving slowly in against the current. Owing to a misunderstanding, one tow attempted to go in at the point first selected. It came under a heavy fire while still some distance from shore and had to withdraw. Because of the difficulties of towing, the other strings of boats came in in column of file rather than abreast and each landed at approximately the same place—that giving the best shelter from the enemy's fire. The fire of the battleships kept the Turk's fire down and assisted the operation. The fort was soon taken and then the village was captured. The second echelon came ashore about 11:30 A. M., and rafts with field guns started in about 1:30 P. M. The French then pushed out toward Yeni Shehr, where they were opposed by the 3d Turkish Division. By dark the French were held up about half a mile from Yeni Shehr and at the cemetery east of Kum Kale.

EVENTS FOLLOWING THE INITIAL LANDING

Having gained a foothold during the first few days, the allies continued to fight to enlarge their holdings. The French were withdrawn from the Asiatic side on April 27 and took over the right (east) end of the line on Helles. The Helles front was also reinforced by two brigades of the Anzacs and concerted attacks were made here on April 28, May 6 to 8, and June 4 to 6, with Achi Baba still the objective, and the Turks continued to counterattack to regain the ground lost. By August 1 the allies held an intrenched line across the peninsula from the mouth of the Kereves Dere to a point on the west coast just north of the old Y Beach—a little more than three miles from Cape Helles.

It had early become apparent that the strength of the allied army in the peninsula was insufficient to enable them to fulfill their mission and, notwithstanding Kitchener's early warning that no more troops could be devoted to this operation, Hamilton asked for two additional army corps. By this time the British were fully committed to the enterprise and Kitchener agreed to send three divisions and the infantry of two other divisions to reinforce the expedition, these new troops to arrive during the latter part of July and the first part of August.

With these reinforcements en route, Hamilton prepared a new plan for gaining control of the Narrows. The main effort was to be made by the Anzacs, reinforced by a division from Helles and one brigade of a new division with Sari Bair as the immediate objective. The British and French were to attack in the lower part of the peninsula, with a view to holding Turkish troops in that area and of improving the allied position there. A third attack was to be made by the new IX Corps (less one division and one brigade) to be landed at Suvla Bay on the left of the Anzacs. Reconnaissance had shown that the area in the vicinity of Anafarta was held by only a small force and it was hoped that by a night landing and a prompt seizure of Lala Baba and Gazi Baba and then an advance toward the east, this corps would assist the Anzacs in taking Chunuk Bair and other parts of Sari Bair, as well as securing a better protected base in Suvla Bay.

THE LANDING AT SUVLA BAY

The conditions under which the landing at Suvla Bay was to be made differed materially from those of the initial landings in April. The allies now had the experience of those initial landings on which to build, whereas in planning the first landings they had had no historical example, under modern conditions of arms and equipment, to study. The probability of favorable weather was much greater in August than in April, though the early landings had been favored by excellent weather conditions for that time of the year. The allied air service had been increased and gave better knowledge of the terrain and the enemy situation. The supply of field guns and ammunition, though still far from satisfactory, had been improved. A number of "beetles" were provided for the new landing operation. On the other hand, the activities of German submarines, which were not a factor in April, now threatened battleships and transports coming close in to the shore.

The "beetles' were large barges, each calculated to carry 500 men with their arms, equipment, and stores (though 360 proved to be the practical number which could be carried safely), or 50 horses. The barges were covered with iron plating, proof against small-arms fire. They drew about 4½ feet of water and had a speed of five knots under their own power. A swinging door at the bow afforded, when lowered, a ramp leading ashore when the beetles were beached.

The 11th Division, which had been assembled at Imbros, was designated to make the first landing—on the night of August 6. A large part of the infantry was transferred to seven beetles at Kephalos

Bay on Imbros and each beetle was towed by a destroyer. To provide for contingencies, in case the beetles grounded some distance from shore, a number of ketches (sail boats), each in charge of a number of life boats or cutters, accompanied the swarm of beetles, and picket boats or small steamers were provided to tow the life boats in if that procedure should become necessary. The destroyers carried additional troops to be taken off by the beetles on a second trip. Two cruisers, especially protected against submarine attack, each carrying 1000 men, followed the beetles and provided the men for the third wave. Two mountain and three field batteries, with their animals, conveyed in lighters and horseboats towed by sail boats, followed in still another echelon.

The division started from Kephalos about 8:00 P. M., August 6, and the leading beetles reached shore (a distance of 17 miles) about two hours later. The two brigades which landed at B and C Beaches, south of Nebrunesi Point, met with no opposition and landed without difficulty other than that caused by darkness and an unfamiliar coast. These latter conditions slowed up the landing somewhat, and it was not until 2:00 A. M. that two battalions had moved inland and taken Lala Baba by storm, about ¾ mile from the beach. The landing of the third brigade north of the point was not so fortunate. The destroyer towing the leading beetle took a wrong direction and the landing was made near the foot of Lala Baba instead of north of the inlet to Salt Lake. Here the beetles grounded some distance from the shore and the men were forced to wade through water which was up to their necks in some places. The beetles and the men in the water were under enfilading fire from Lala Baba and Gazi Baba and the beach had been sown with land mines. The capture of Lala Baba by the 32d Brigade assisted the landing at A Beach and shortly after daylight two mountain batteries were ashore here. A little later, the 32d and 34th Brigades captured Hill 10. The 33d Brigade was around Lala Baba. Hamilton had hoped that Yilghin Burnu and Ismail Oglu Tepe, three miles inland from B Beach, would be captured before daylight.

The 10th Division which had assembled at the island of Mitylene, 120 miles from Suvla, arrived off Nebrunesi Point in trawlers and channel steamers at daylight as scheduled. This division was scheduled to land at A Beach and advance north of the 11th Division, but because of the difficulties encountered in the first landing at A Beach, the Navy diverted the division to C Beach. The debarkation, began a little after

dawn, was interfered with by Turkish shell fire and after the division had landed it had to move across the causeway at the inlet of Salt Lake.

The landings had been made with success and as a surprise to the Turks, but inertia settled on the higher commanders (corps, division, and brigade) and no material advance was made until July 9 (two days later), after the direct intervention of the Army Commander. By this time the Turks had brought reinforcements into the northern part of this theater and instead of the British merely walking to their objectives, as they might have done on the night of the landing, the Turks checked them by August 12, on a line through Baba 700—Damajalik Bair—Chocolat Hill—Kiretch Tepe Sirt. The attack of the Anzacs was successful in reaching Chunuk Bair, but they were unable to hold it against the determined Turkish counterattacks and the line at Anzac remained practically unchanged, but connected with the IX Corps.

COOPERATION OF ARMY AND NAVY

The Dardanelles Campaign was conducted by the method of cooperation between the Army and the Navy: at no time was there a single supreme commander. During February and March, the Navy had what we would call "paramount interest," during which time the Army was being assembled for the purpose of taking over and holding such gains as the Navy might make. After the naval attack of March 18, the Army had "paramount interest" and the Navy's task was to put the Army ashore and support it in an attempt to gain control of the Narrows, in order that the Navy might pass through the Sea of Marmora and continue its advance on Constantinople.

The cooperation appears to have been accomplished without great difficulty. The War Office and the Admiralty at home were frequently at odds over matters connected with the expedition, but the two commanders on the spot worked well together. This was due to the characteristics of those two patriotic British gentlemen—Hamilton and de Robeck—rather than to any merits of the method. Both of those officers rather leaned over backwards to avoid any interference in each other's affairs or even to express an opinion thereon. Braithwaite and Keyes, Chiefs of Staff of the Army and Navy, respectively, had known each other for some time and were great friends. So the conditions for successful cooperation were most favorable, so far as personalities were concerned.

As an example of the procedure, three weeks before the landing at Suvla Bay, the Army furnished the Navy with tables showing the units to be landed, the places where they were assembled, their destina-

tion, the numbers of men, animals, and vehicles in each unit, and the stores to be landed with them. The Navy was asked to state if any part of the table offered special difficulties or should be modified and to furnish the Army with a list of the vessels or craft assigned for the landing of those units. The information obtained from the Navy, showing the craft to be placed at the disposal of the corps, their capacities, and the points at which they could be disembarked was then sent by the Army to the Corps Commander. The Navy provided beach masters and the Army provided landing officers for each beach, with a principal beach master and a principal landing officer to supervise the whole. The Army also furnished beach fatigue parties.

But notwithstanding the fact that Hamilton, de Robeck, and the Dardanelles Commission, all pronounce the cooperation to have been full and complete, the great difficulties of such a system are evident in the story. Under date of July 3, Hamilton wrote in his diary:

> Have been defending myself desperately against the War Office who want to send out a Naval Doctor to take full charge and responsibility for the wounded (including destination) the moment they quit dry land. But we must have a complete scheme of evacuation *by land and sea* and not two badly disjointed schemes. So I have asked, who is to be the "Boss"? Who is to see to it that the two halves fit together? The answer is that the War Office are confident "there will be no friction" (bless them); they say "nothing could be simpler than this arrangement and no difficulty is anticipated. Neither is boss and the boundary between the different spheres of activity of the two officers might be laid down as the high-water mark." (Bless them again.) Have replied, "I struggled with your high-water mark silently for weeks and know something about it. Had I bothered you with all my troubles you would, I respectfully submit, realize that your proposal is not simple but extraordinarily complicated, even presupposing seraphic dispositions on either side. If you determine finally that these two officers are to be independent, I foresee that you will greatly widen the scope of dual control which is not only applicable to my great friend the Admiral and myself.
>
> "Either Babtie must order up the ships when and where he wants them, or Porter must order the wounded down when he is ready for them. This is my considered opinion."[10]

Again, under date of July 23, in discussing the French proposal for a new landing at Besika Bay, Hamilton wrote:

> Amphibious operations are ticklish things; allied operations are ticklish things; but the two together are like skating on thin ice arm-in-arm with two friends, who each wants to cut a figure of his own.[11]

10. *Gallipoli Diary*, I. 367.
11. *Gallipoli Diary*, I. 27.

GENERAL COMMENTS

The land campaign in Gallipoli failed of success primarily because the Turks at all times had superior strength available. The comparative strengths at the end of August, for example, was: British 68,000, French 15,000; total for allies 83,000. Turks 100,000, with 25,000 more in reserve. The British were always handicapped by the lack of replacements to keep their units up to fighting strength, by insufficient reinforcing units sent out, by shortages in guns and howitzers, high-explosive ammunition and hand grenades, and by the lack of bombing planes. A contributing cause was the inertia of the corps, division, and brigade commanders at Suvla Bay. In his estimate of the situation, written before the first landing operations, Hunter-Weston said:

> The information available goes to show that if this expedition had been carefully and secretly prepared in England, France and Egypt, and the Naval and Military details of organization, equipment and disembarkation carefully worked out by the General Staff and the Naval War Staff, and if no bombardment or other warning had been given until the troops, landing gear, etc., were all ready and dispatched . . . the capture of the Gallipoli Peninsula and the forcing of the Dardanelles would have been successful.[12]

When one considers how near the attacks did come to being successful, even under the adverse situation, the correctness of this estimate can hardly be questioned.

The greatest benefits to be derived from a study of these operations are a realization of the difficulties confronting such an undertaking and the consequent necessity for carefully prepared plans which will provide for the maximum combined use of all available forces.

Most nations, including our own, are now developing a type of landing craft based on the beetle. If the landing is to be made as a surprise, however, it seems probable that there will not be time to put the type into production soon enough to make it available for the next landing on hostile shores and that ship's boats, sampans, lighters, or some other form of small boats will have to be used.

Any large landing operation at the present time doubtless would involve the extensive use of aircraft and antiaircraft weapons by both sides. The side which gains control of the air at the important places and times will have, of course, a very great advantage, as he will in any other operation. The importance as well as the difficulty of gaining surprise will be increased.

12. *Gallipoli Diary*, I. 91.

Hamilton has been criticised for dividing his forces in the landing of April 25. His reason for this, as given heretofore, was the lack of room on the available beaches. The extent of the beaches used at Helles totals about 1300 yards; that at Anzac, about 1500 yards; a total of a little more than a mile and a half. Anzac and Helles are separated by twelve miles. A comparison of this with the landing beaches used in some of our map maneuvers and problems is of interest. The consensus of opinion, in the light of afterthought, seems to be that Hamilton should have landed his entire force on the stretch between Gaba Tepe and Ari Burnu. The distance from this shore to Kilid Bahr is just about half the distance of Kilid Bahr from Helles and there is ample beach space there for the landing; but Hamilton did not know that nearly all this stretch afforded practicable landing places and the Navy was primarily interested in the Straits and wanted Achi Baba as an observation post from which to observe and conduct the fire of its guns.

The inefficiency of flat trajectory fire against troops in trenches or in terrain cut by deep gullies or for opening breaches in wire was evident throughout the war on all fronts. It was emphasized in Gallipoli because the British forces there were so deficient in howitzers to perform those missions.

Another point forceably illustrated in these landings is the absolute necessity for prompt and energetic action after landing. The objectives assigned the first troops to be landed should not be too ambitious, as was sometimes the case with the British, but succeeding waves must be put ashore promptly and used to deepen and enlarge the beach head, so that heavy material and stores may be landed without interference and especially that there may be space in which the main body can deploy for its attack. There must be no

"Standing with reluctant feet
Where the" sea and beaches meet.

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The Military Situation of Holland

By 2ND LIEUT. CARL B. WAHLE, C. A. C.

THE military situation of Holland may be divided into three parts: (a) its geographical location and physical characteristics, (b) its political situation, (c) its system of interior economy and training of the army and navy.

Holland is bordered on the north by Germany, on the south by Belgium, and on the west by the North Sea. It is 195 miles north and south, and 110 miles east and west. Its area is equal to one-tenth that of Great Britain and Ireland. The census of 1920 shows a population of 6,865,314, and it is constantly growing. Holland has a density of population of 546 per square mile, making it one of the most thickly populated countries of Europe. Its colonies take care of some of the overflow while the United States, South America, and Africa receive most of the other emigrants.

Most of present day Holland consists of land reclaimed from the delta of three rivers of northwest Europe: the Rhine, the Maas, and the Scheldt. Holland's coast line borders on the North Sea, and is well broken up by these three streams and the smaller branches of the delta.

The whole coast line is bordered by sand bars and reefs, with few channels into the main ports. A natural seawall of sand dunes protects most of the coast from the encroaching sea, but in a great number of other places seawalls of concrete, known as dykes, hold the water back. On the northern coast there are three great gulfs, the biggest being the Zuider Zee. Behind the seawalls of sand or concrete, the country lies low and flat. In a great many places along the coast, the land bordering on the dunes is as much as twelve feet below the low-water mark of the ocean. Following up the streams, we find the same conditions. The rivers have been forced back into their channels by dykes of concrete, piles, rock, and, in many of the older dykes, earth and turf. The situation is much the same as in our Mississippi valley, the high walls with the water flowing between, and the farms of the neighboring country below, in some cases as much as 25 feet.

Besides the main dykes which hold back the sea and the larger rivers, there is a continuous chain of dykes and canals all over Holland. The canals drain the water from the marsh-land, and the dykes hold it between their banks. These smaller canals are commonly of earth and turf, but the larger ship canals are using reinforced concrete. The

smaller canals are used not only to drain the waters from the marshes, but to carry the fresh water to other parts of the country for irrigation purposes. All along the canals are the famous windmills of Holland. They are part of the government pumping system, and control the water levels in the different canals. These windmills have helped Holland drain water from the land since the 15th century. Recently, however, they are being replaced by electric pumps in the interests of economy.

The importance of the dyke and canal system to Holland cannot be overstressed. Dating from the initial wars with Spain, the canals and dykes have aided the defense of Holland against an invading enemy. Present plans call for a similar use in case of emergency. The canals form a great net of inland waterways, and much of the transportation is by water. Roads are constructed along the tops of the dykes, and form another transportation net. The Dutch government has a separate branch of government which has complete charge of the building, maintenance, and repair of all dykes and canals. Land reclamation, which in Holland is no small item, also comes under this department.

Besides the canal and road net, a railway net containing 3863 kilometers of railroad connects the principal cities and runs throughout the country.

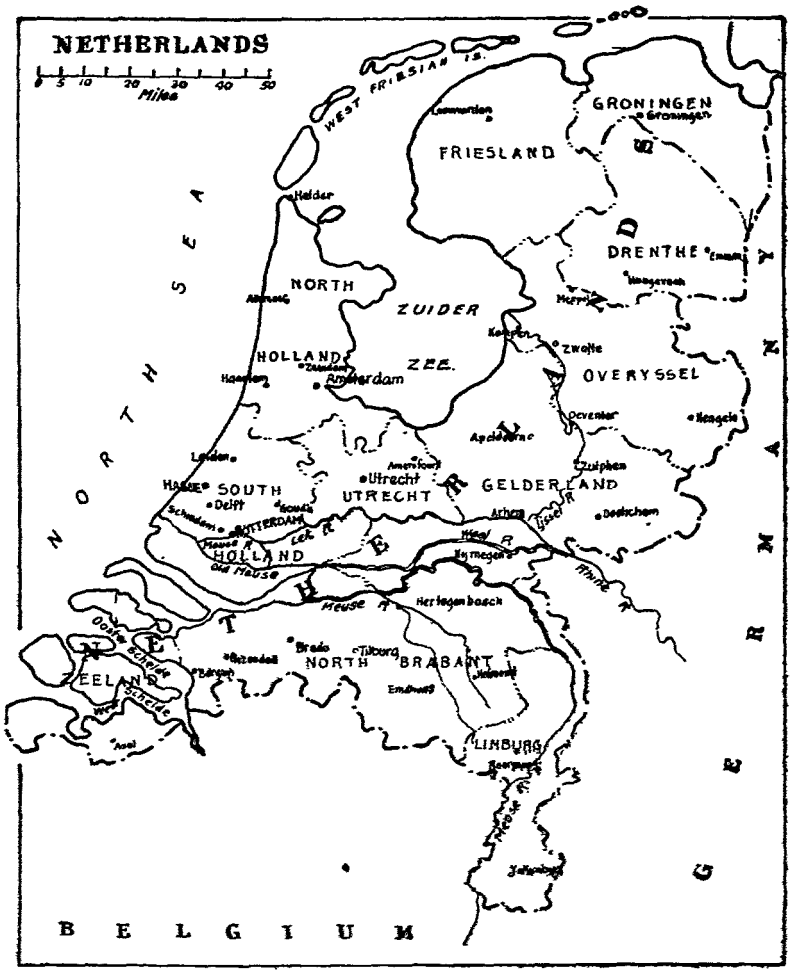
The mainland of Holland is mostly a dairy country. Fisheries along the coast, textile mills for the manufacture of cotton and linen goods, and diamond cutting at Amsterdam are the biggest industries of the country. A large percentage of the dairy exports go to Germany and Great Britain, while the Dutch colonies take care of most of the textiles exported.

The colonies of Holland comprise a great portion of her wealth. Situated in both the East and West Indies, they contribute coffee, rubber, tobacco, camphor, sugar, coal, gold, diamonds, and tropical woods. Spices from the East Indies and salt and phosphates from the West Indies form a large item in the national wealth. The Dutch colonies are of great commercial importance to Holland, and at times to the rest of the world. During the recent war, a great deal of rubber was sold to the German government by the Dutch colonies, until the British found it out and began seizing the Dutch ships carrying contraband. This discouraged the trade after a short time.

Holland's East Indian colonies lie in the East Indian Archipelago, southwest of the Philippines. The most important of these colonies is that of Java, with Sumatra and Borneo ranking next. In the West Indies, Surinam and Caracao are the only two of any importance. The

total area of Holland's colonies is 788,000 square miles. The population, white and native, is about 50,000,000

For the last eighty years the government of Holland has been a limited constitutional monarchy. The power of the throne is limited



to executive power. The power of legislation rests with a body of representatives called the States General. The organization is in some respects similar to that of our own Congress. There are two chambers, the first and the second. The First Chamber is composed of 50 members, elected by the provincial states, each state being allotted a number of members in accordance with its population. The duty of this

Chamber is either to reject the proposals of the Second Chamber or to pass them without amendment. The Second Chamber is composed of 100 members, elected directly by the people. The Second Chamber composes the bills and the laws, and passes on them before submitting them to the First Chamber.

The Colonial Government is under a separate department. Each colony or group of colonies has its governer sent out by the state. He is the executive. He has certain codes of laws for each group of possessions, and he and his secretaries, assisted by the native rulers, compose the government of the group. The tendency is naturally toward autocracy.

Each group of colonies has its own defense plan. There is a colonial army, entirely separate from the army of the mainland, and a navy, used mostly as patrol boats, which is entirely separate from the home navy. Both the colonial army and navy are under the orders of the governor.

The relations of the government of Holland with the rest of the world are good. Belgium and Holland are having a dispute over water rights which are important to both countries, and has led to the arbitration of the signatories of the Versailles treaty.

The river Scheldt is common to both Holland and Belgium. The river rises in Belgium, but its mouth is in Holland. An ancient treaty gave Holland the right to close the Scheldt, and in doing so she cut off the port of Antwerp from the sea. During this period, the ports of Rotterdam and Amsterdam grew in importance. After the Napoleonic wars, however, this treaty was cancelled, and the Scheldt was opened. A clause in the new treaty enjoined upon Holland the duty of keeping the Scheldt channel open. As soon as the river was opened, the growth of the Belgian port of Antwerp began, until, in 1924, it was the second largest port of Europe in terms of actual tons handled. Since the World War, however, Holland has become more and more remiss about clearing the Scheldt channel. The last year or two the channel has started to fill up and is now seriously interfering with the ships attempting to reach Antwerp. The Belgians have protested several times, and even offered to dredge the channel themselves, but Holland will not do the work nor allow them to do it. There are, of course, two sides to the question. As long as Holland can keep Antwerp blocked off, it means so much more trade for her ports of Amsterdam and Rotterdam. Besides that, the Scheldt is one of the important links

in her chain of national defense, and she cannot let Belgium become involved with that. Finally, Belgium submitted a treaty to Holland, with two clauses in it relative to the waterways. One clause stated that the arm of the Scheldt common to both countries should be dredged to allow the port of Antwerp to become open again. The other proposed the construction of a canal from Antwerp to the Hollandische Diepe. This canal would be paid for by both countries proportionally. The Dutch were violently opposed to this second clause. If the canal were dug, it would bring Antwerp into communication with the Rhine, and put her in direct competition with Rotterdam. The port of Amsterdam, the second port in Holland, is also connected with the Rhine by a ship canal, so that this proposed canal would put Antwerp in direct opposition to the two largest Dutch ports. Needless to say, the treaty was rejected by Holland. The Belgian government has now asked the signatories of the Versailles treaty to intervene, and at least get the Dutch to live up to their duty in dredging the Scheldt. All the shipping down the Rhine, coal and exports from Germany, must go through Holland. Any menace to the prosperity of these ports is a direct blow at the prosperity of the nation. They must be kept open.

Dutch ships leave their ports with goods for their own colonies, load at the colonies with colonial exports for Holland, and after bringing them to Holland, they are again carried all over the world in Dutch boats. Their merchant marine at present consists of 214 sailing vessels and 660 steamers. These ships range all the way from the best class of trans-Atlantic liner to ordinary tramp steamers. Any nation the size of Holland having a merchant marine of that size is well equipped for world trade.

The history of Holland will give the best indication of the temper of her people. Holland and Belgium have always been the battle ground of Europe. The famous army that "swore terribly in Flanders" was preceded and followed by a great many others who were in a like case. After a stormy history, the unorganized countries making up what are now the countries of Holland and Belgium came under the dominion of Spain in 1380. The Spaniards at the time were the most powerful nation in the world. Philip I, surnamed the "Good" for no apparent reason, came to the throne in 1500. He immediately started to build up the governments of the different cities of the lowlands and to consolidate them into a nation.

At that time the Inquisition was making itself a power in Spain, and Philip came under its sway. The general trend of the lowlands was towards Protestantism. Philip began to persecute the Protestants with vigor, burning or outlawing those of pronounced tendencies. This kept up sporadically throughout his entire reign. At his death, he had succeeded in establishing firm governments in the principal cities and lowering the morale of the populace to a marked degree.

After Philip the Good, his son, Philip II, took the throne. He not only agreed with his father's method of dealing with heretics, but improved on them. He brought the Inquisition to Holland. This not proving sufficient, he, together with his Council, devised a new edict against the Protestants. Under this edict it was not necessary to be a Protestant to be arrested; merely to display any of the habits thought to be common to Protestants, or even be accused of it, meant arrest. Under this edict a man arrested was a man dead, and the methods of inflicting death were not nice.

Philip turned the execution of this edict over to the Duke of Alva. Under Alva the edict was a great success. In one year over 20,000 men, women, and children were executed. This constant strain began to pall upon the Dutch after a time. The cities, which Philip I had so firmly organized, began to strengthen their governments and build up their fortifications in preparation for possible trouble. The last blow occurred when Alva imported an army of 10,000 men to persecute the Dutch, and then tried to collect taxes from the cities to support the army. At this stroke the Netherlands rose.

William of Orange was the leader of the rebellion. All the big cities rebelled against the Spanish government, and armies were formed to drive out the Spaniards. Some of the cities were successful against the attacking Spaniards, but some of the smaller ones fell. The nation as a whole became greatly discouraged at their slow progress against Spain. Practically all their victories had been defensive, and a number of them had only been attained by flooding out the Spaniards by breaking dykes. Each time a dyke was broken, it meant so much less land available to raise food for the towns. The first offensive was in April, 1572. A band of prescribed noblemen and fishermen, calling themselves the "Beggars of the Sea," made a surprise attack on the town of Briel, at that time occupied by the Spaniards. Attacking from the sea, they were successful in driving the Spaniards out. Their success attracted other patriots to their banner and they soon had a well

organized naval force, although their ships were only fishing boats and captured Spanish vessels. On hearing of their success, the whole country took heart and the rebellion was pushed vigorously.

William of Orange had negotiated with the French Huguenots for aid in driving out the Spaniards. The French were to attack from the south, while he, with his newly organized army, was to make a simultaneous attack from the north. Unfortunately, just before the time of the proposed attack, the massacre of St. Bartholomew's Eve occurred Practically every Huguenot leader in France was murdered, and Orange's plans fell through. He abandoned the southern portion of the lowlands, or what is now Belgium, and took up his position in the present Holland. From there he harried the Spaniards continuously. The Dutch at this time, had gained control of the sea, and soon had the Spaniards cut off from their supply base. Finally, Alva, seeing that he could make no headway against an enemy who could break a dyke and flood the Spaniards out of every position they tried to occupy, took his troops and returned to Spain.

The battles with Spain kept up sporadically until 1609, when the Spaniards finally signed an armistice. It was not until 1648, however, that the Dutch were formally acknowledged as an independent nation.

It was during this time that the great strides in Dutch exploration and colonization took place. Expeditions to America, to the East Indies, and to Africa, and finally, the formation of the great Dutch East India Company brought the new nation to its peak of prosperity and importance.

As soon as the world saw that Holland was maintaining her religious freedom against the Spaniards, Holland became the refuge of all those persecuted on religious grounds. The Pilgrims and the settlers of practically all New England sailed from Holland as refugees from England.

In 1652, England, fearful of her place on the seas, declared war on Holland. In a series of naval battles lasting until 1654, the honors were about even on both sides, and peace was then declared. In 1664, England again declared war, and again war was decided on the sea. Peace was signed with equal honors in 1667. France then made an attempt to invade Holland, but was finally beaten back in a war that lasted until 1672.

The days of prosperity continued until about 1700, when a gradual decline began. The national government became unstable, the cities grew jealous of one another, and finally the country was taken over by France. After the battle of Waterloo, the Dutch troops, who fought alongside of the British, marched to Holland and declared the country

independent. Although several styles of government have been tried since then, the country has remained unified and independent ever since.

In modern times, Holland has always been an ardent advocate of peace. Having neither the territory nor the population to support a large army and navy, her efforts have been towards international amity. During the Boer war, she had an alliance with Britain, and though her own colonists were fighting the British Government, Holland managed, with some difficulty, to remain neutral. During the World War, Holland proclaimed herself neutral, and raised an army of 600,000 men to maintain her neutrality. She kept a close patrol of her borders and arrested any member of a belligerent nation found inside her lines. There they were interned and their expenses charged to the government concerned. The sentiment of Holland during the war was about evenly divided between the belligerents, and her neutrality was preserved with some difficulty.

The military policy of Holland during modern times has been that of many of the other nations—a small, efficient, standing army, sufficient for national defense, and a large trained reserve to be used in case of an emergency.

The Dutch military policy is based on compulsory, but not universal, service. Every man in Holland between the ages of 19 and 40, is liable to military service, but it is not necessary that every man serve. The names are drawn by lot each year, and only those drawn need serve. The annual increment is about 19,000 men. The Dutch army available is as follows:

ARMY

Regulars	7,000
Organized Militia	20,000
1st Reserve	120,000
2nd Reserve	82,000
Partially trained reserve	100,000
Total	329,000

NAVY

2 Cruisers, (6″ guns)	10 Destroyers
4 Coast Defense (6″ and 11″ guns)	11 Torpedo Boats
3 Armored Gunboats	24 Submarines
4 Sloops	3 Submarine Depot Ships

Personnel, 5000 officers and men.

Note: Certain of these ships, with their crews are on permanent station with the Netherlands Navy in the Far East.

The Dutch system of compulsory service is unique in that the term of service varies with the branch in which the time is served. Men drawn for the Infantry serve for 5 months; those for the Artillery and Air Service, 8 months; those for the Cavalry, 18 months. A great portion of the training period is served in barracks, with about six weeks each year in the field. By preparing themselves in advance, men who are drawn for service may take an examination, both practical and theoretical, and if found to be on a par with men who have served the time in barracks, they will be excused from all the service except the six weeks in the field. As soon as a man has served his time, he is placed in the reserve, and kept available until he has reached the age of forty, when he is placed in the 2nd reserve.

The peace organization of the Dutch Army is one Field Army of four infantry divisions, one cavalry brigade, one regiment of army artillery, one light brigade, and field artillery. The divisions and other troops are mostly skeletonized, as practically all the Regular Army is busy training the yearly conscripts. The peace time strength of a division is 20,000 men. In case of war the organization would not be changed, but the strength of each unit in the field army would be doubled.

The navy is kept up on the same plan as the army. The skilled trades are usually sent to the navy when drawn for service.

Holland's Colonial Army is separate and distinct from the Home Forces. It is commanded by the Governor General, and works under his orders. Both white and native troops are used, although not mixed in the same companies except in the artillery. In the field artillery the drivers are usually native, while the gunners are white. In a great many instances the native regiments have white noncommissioned officers, and in all cases they have white officers.

All white citizens of Holland between the ages of 19 and 40 are available for service in the colonies the same as those in Holland. Compulsory service for natives has not been established.

The Colonial Navy is divided into two parts; the Netherlands Navy in the Far East, and the East Indian Navy. The Netherlands Navy consists of ships from the Royal Navy which are sent to the colonies for permanent station. While there, the expenses of the fleet are charged against the colonial budget, except in the case of major repairs. In that case the ships are sent back to Holland. Officers and men in the Royal Navy must serve a regular tour of duty in the Far

East. Besides the men of the Royal Navy, there are a great many native sailors in the fleet.

At present, there is no particular reason why Holland should fear an attack. There are, however, three possible causes of a war involving Holland. A nation desirous of attacking Germany could attack Holland, seize the mouth of the Rhine, and cripple Germany's southern export route. A nation wishing to attack England could seize the Dutch harbors and use them as a naval base for attacks on the English Channel ports. This was attempted by Napoleon, but failed. In case of a war between major powers in the Far East, Holland's colonies would form ideal naval bases, and she might have to fight there to preserve her neutrality.

With the exception of these possibilities, it would appear as though Holland were due for a peace of long standing.

MAXIM LXVII

To authorize generals or other officers to lay down their arms in virtue of a particular capitulation, under any other circumstances than when they are composing the garrison of a fortress, affords a dangerous latitude. It is destructive of all military character in a nation to open such a door to the cowardly, the weak, or even to the misdirected brave. Great extremities require extraordinary resolution. The more obstinate the resistance of any army, the greater the chances of assistance or of success.

How many seeming impossibilities have been accomplished by men whose only resolve was death!—Napoleon's Maxims of War.

Coast Forts of Colonial New Jersey, Pennsylvania, and Delaware

THE early events of the provinces of New Jersey, Pennsylvania, and Delaware bear such intimate relations to each other that the settlement and colonization of these colonies must be considered as a single episode in the history of the United States. This section of America was, perhaps, the most-claimed territory of the colonies on the Atlantic coast, for Spain, England, France, Holland, and Sweden all asserted their rights in this vicinity, only to be driven out in the end by the ubiquitous English.

The Spanish claim to the central Atlantic territory was based upon the Papal bull which pretended to divide the entire undiscovered or newly discovered world between Portugal and Spain, the latter country receiving, as a result of the discoveries of Christopher Columbus, all lands west of a north-south line drawn in the Atlantic Ocean. Spanish adventurers and mariners were, however, drawn toward the semi-tropical and tropical regions of the American continent, and no attempt was ever actually made to exert the authority of Spain as far north as the Delaware.

In England, young Sebastian Cabot, who had displayed considerable skill and energy in a voyage with his father in 1498, was entrusted with the command of an expedition which left England for America in 1499. By sailing along the shores of New Jersey and past the entrance to the Delaware, although without landing, he set up the original English claim to this rich and productive territory.

In 1523, Francis I. of France sent out an expedition under Giovanni Verrazano who explored the coast from the Carolinas to Newfoundland. He anchored in Delaware Bay and in New York Harbor, and gave the name of New France to the vast regions within the latitudes of the coast he had explored.

Henry Hudson, an English navigator sailing under the flag of Holland in search of a northwestern passage to China, entered Delaware Bay in August, 1609, in his fly-boat *Half Moon*, but finding sandy shoals, he decided that these waters did not lead to the Far East and so did not venture up the bay. A week later he entered New York Harbor and spent some time in exploring the waters around Manhattan Island.

The first attempt to occupy the section was made by the English. In 1584, Walter Raleigh obtained a patent which made him lord

proprietor of all lands that he might discover between the Santee and the Delaware Rivers. His grant expired with the failure of his colonies at Roanoke, and in 1606 James I. granted all the territory from Cape Fear to Halifax to two companies organized respectively at London and Plymouth. As a result, the settlement at Jamestown was established in the following year.

Following Hudson's discoveries, many commercial enterprises were formed in Holland for the exploitation of the fur trade in America, and before long Dutch operations extended from Buzzard's Bay to the Delaware River, all of this territory becoming the Province of New Netherland. In 1614, Captain Cornelis Jacobsen May entered Delaware Bay and spent some time in exploring the bay and river. Returning to Holland, he left Captain Hendricksen to continue the investigation of the resources of this part of America. It was largely upon the discoveries of May and Hendricksen, following those of Hudson, that Holland based its claim to the valley of the Delaware as a part of New Netherland. Later they were to attempt to establish this claim by occupation of the country.

All of the early voyages to New Netherland were commercial in character, the ships being fitted out by an organization of merchants in Amsterdam for the purpose of bartering with the Indians for furs and other valuables. The trade proved so lucrative that the West India Company was organized in 1621 for the purpose of colonizing, governing, and trading in the country discovered by Hudson. The company commenced its operations with vigor, its first offorts being confined to the planting of a permanent settlement and the establishment of territorial jurisdiction.

We are not informed of the precise date of the first settlement within the limits of the states bordering on the Delaware, although it is alleged that an attempt was made before 1622 by traders at Manhattan to form a transient trading settlement at Jersey City, that point being fortified. Early in 1623, the West India Company sent out an expedition of thirty families to take formal possession of New Netherland for the Company. Of these colonists, a group was sent from Manhattan under the charge of Captain May to settle upon the shores of the Delaware. May sailed up the river as far as Gloucester, and founded his colony at Red Bank. At the mouth of Timber Kill, a short distance below Gloucester Point, he built a log fort which he called Fort Nassau.

Being tradesmen, rather than farmers, these colonists neglected agriculture for commerce. They put up trading-houses, and organized

a trade in furs with the Indians in this section of the country. Unfortunately for them and for the success of their enterprise, the navigation of the Delaware was considered more difficult than navigation on the Hudson, and so the settlements on the latter river received the greater amount of attention from Holland. As a direct consequence, the settlement at Fort Nassau languished, and in a few years was abandoned by the Dutch.

Nevertheless, the idea of colonizing the Delaware region was not permitted to die, and an association was soon formed under charter from the West India Company for the purpose of establishing settlements upon the Delaware. The first expedition was organized in 1631 and sent out under Captain David Pietersen de Vries, who, upon his arrival, found Fort Nassau deserted and in the hands of the Indians. De Vries selected for his settlement a site on Lewis Creek, called by the Dutch Hoornkill, in Delaware. Here he landed his passengers and erected a fort which he named Fort Oplandt. As soon as this structure had been erected, De Vries returned to Holland, leaving Giles Osset in charge of the enterprise.

This Osset seems not to have been possessed of an undue amount of tact, for he soon incurred the deadly enmity of the adjacent Indians through his insistence upon the severe punishment of one of the tribe for a minor offense. Awaiting their opportunity, the savages secured entry to the fort, destroyed it and the buildings it contained, and killed the entire garrison. When De Vries returned to Fort Oplandt in December, 1632, he found only a mass of ruins.

In 1633, De Vries again visited Fort Nassau, but found it still in the possession of the Indians. Later in the year, however, the Dutch reoccupied it under Arendt Corssen as commissary. Director General Wouter Van Twiller, arriving in New Amsterdam to take charge of the affairs of New Netherland, had heard of the condition of the fort, probably from De Vries himself, and ordered it repossessed and rehabilitated. During the winter of 1633-34, it was again abandoned, but in the meantime, Corssen, acting under instructions from Manhattan, had purchased a tract of land on the Schuylkill River. Here Fort Beversrede was erected on the east bank of the river, near its junction with the Delaware. The fort was a simple palisaded work provided with several heavy guns.

George Holmes, with a party of about fifteen other Englishmen from Point Comfort, proceeded to Fort Nassau in 1635 and, finding it deserted, occupied it. A Dutch bark, passing that way a little later, noted the English occupants, recaptured the fort, and carried the Englishmen as prisoners to New Amsterdam. Thereupon the Dutch,

seeing in the English settlements to the south a menace to their occupancy of the Delaware region, again repossessed the fort with a small garrison. From the arrival of this force in the spring of 1636, the fort was continuously occupied by a garrison until the Dutch themselves destroyed the fort in 1651. In 1643, the garrison numbered about twenty men.

Swedish interest in the fine country along the Delaware was aroused when Usselincx, an original member of the Dutch West India Company, became dissatisfied with his associates and went to Sweden to lay before Gustavus Adolphus a plan for a Swedish colony in America. The king died before the plan could be put into execution, but the regent, acting for Queen Christina, issued a charter for the Swedish West India Company. Peter Minuit, who had been recalled from New Amsterdam in 1632, also withdrew from the Dutch West India Company and offered his services to Sweden. They were accepted, and toward the close of 1637, he sailed from Gottenburg with fifty emigrants on the man-of-war *Kalmar Nyckel* and the sloop *Gripen*.

These colonists landed on the site of New Castle in April, 1638, and purchased from the Indians the territory between Cape Henlopen and the falls of the Delaware, at Trenton. They then established their settlement on the present site of Wilmington, where they built their fort and named it Fort Christina. This work was erected in the form of a square, and in the two towers overlooking the river and in the northwest corner on the landward side were mounted cannon taken from the *Kalmar Nyckel*. At this time, the Dutch at Fort Nassau, on the other side of the Delaware, had "a sufficient garrison," "men and munitions of war."

The jealousy of the Dutch was aroused by this "intrusion" but, fortunately for the Swedes, the Dutch possessions on the Delaware were of necessity much neglected for some years. New Sweden, unmolested by the authorities in Holland, grew by immigration, and the inhabitants prepared themselves to resist any attempts the Dutch might make to oust them from their chosen country. It did not at first appear that any such attempts would be made, for Fort Nassau, the Dutch stronghold, was neglected and in decay. In 1639, the directors of the Dutch West India Company complained that "Fort Nassau is a heavy burden to the company as regards garrison, provisions, and the vessel." Nevertheless, because of the Swedes, they dared not abandon it.

Meanwhile, the Swedes spread out over the country-side. In August, 1642, Lieutenant Colonel John Printz was appointed third governor of New Sweden, and arrived, accompanied by many emigrants, early in 1643. He chose for his residence Tinicum Island, three German

miles above Fort Christina and a short distance below the present site of Philadelphia. Here he built Fort New Gottenburg "of hemlock beams laid one upon the other," and armed it with "four small copper cannon" covering the Delaware. Becoming arrogant in his control of the river, he required all passing vessels to dip their colors and to pay a tax for permission to trade on the river.

On the Jersey side, during this same year, the Swedes built Fort Elsingburg (or Nya Elfsborg) between Salem and Alloway's Creek. This fort was an earthwork, constructed "on the English plan with three angles close by the river," and the "carpenter made a beautiful portal" for it. It was armed with eight 12-pounders and one mortar, and contained a garrison of thirteen men. At about this time, Fort New Gottenburg had a garrison of eight soldiers, while Fort Christina had but three.

The site of Fort Elsingburg had been the location for a short time of an English colony. It seems that, in the winter of 1640-41, a group of Englishmen had settled on Salem Creek, but, so we are told, the Dutch and the Swedes, both contestants for the territory, united in driving them out. The Swedes then built their fort and gave the Dutch cause for complaint when they "used great freedom with their [Dutch] vessels and all persons bound up the river, making them repair to the fort, and sent persons on board to know from whence they came." This fort enabled Printz to close the river, and he started his colony on the road to its ultimate extinction by permitting no Dutch ship to pass without dipping her colors, coming to anchor, and paying toll. When De Vries sailed up the Delaware in the autumn of 1643, he was fired upon from Fort Elsingburg.

In 1645, Fort New Gottenburg on Tinicum Island was destroyed by fire.

The Dutch, alarmed by the encroachments of the Swedes, began to take notice of their Delaware possessions. The first open rupture came in 1646, but the trouble passed and a sort of armed neutrality continued until 1651. In the meantime, the Swedish settlements made slow progress. The Spaniards harried the ships sent over with aid for the colonists, and thereby obstructed the growth of New Sweden. Lack of money made it difficult for the colony to maintain its forts, and the Dutch gradually closed in upon their weaker neighbors.

By the middle of the century, the Swedes had erected six principal forts along the Delaware. Besides Fort Christina at Wilmington, New Gottenburg at Tinicum Island, and Elsingburg near Salem, they had built forts at Chester, Passayunk, and Manayunk. The settlement at Chester was fortified some time after its establishment, the fort being

named Fort Upland. At Passayunk, in the southern part of Philadelphia, was Fort Korsholm under the command of Sven Shute. This was a "fine little fort of logs," filled in with sand and stone between the woodwork, and surrounded by pallisades. Fort Korsholm was maintained for a time, but after Printz's departure for Sweden in 1654 it was abandoned by the Swedes and soon destroyed by the Indians.

To secure the trade with the Indians, Fort Gripsholm was built at Manayunk on the Schuylkill, a "gun-shot" from its mouth. This fort, erected in 1648, was more truly a trading-house, thirty-five feet by twenty feet, which "cannot control the river, but has the command over the whole creek, while this creek is the only remaining avenue with the Minquas and without it this river is of little value." The creek referred to is probably Mingo Creek.

The erection of Fort Gripsholm was a direct challenge to the Dutch, for it cut Fort Beversrede off from the water and rendered it unimportant as a station. Boyer, who commanded at Beversrede in 1648, complained that, by the New Swedish fort, "our liberty on said water [Schuylkill] is obstructed so that our vessels, which come into anchor under the protection of our fort, can discover said fort with difficulty. . . . The back gable of the [Swedish] house is only twelve feet distant from the gate of the [Dutch] fort, so that the house is placed within the water-side and our fort." Having permitted the Swedes to plant their fort in front of and twelve feet distant from Fort Beversrede, the Dutch further yielded in 1648 by reducing their garrison to six men.

The passionate Stuyvesant was not of a temperament calculated to withstand the strain of such an insult, and he accepted the challenge. Dutch affairs had so shaped themselves that the Dutch West India Company could begin to look forward to the seizure of New Sweden. Therefore, in 1651, Stuyvesant entered Delaware Bay with one hundred and twenty men, to whom he added a small naval force at Fort Nassau.

Not yet quite ready to come to blows with the Swedes, he chose rather to outmaneuver them. Selecting a point a short distance north of the present site of New Castle, Delaware, he built a fort which he called Fort Casimir; and to this point he removed the garrison from Fort Nassau, which he destroyed. Governor Printz remonstrated at the erection of the Dutch fort, but Governor Stuyvesant calmly continued his plans for the reestablishment of the Dutch on the Delaware. The erection of Fort Casimir made the Swedish Fort Elsingburg, below it, practically useless; and Elsingburg was soon abandoned. The Swedish explanation of their withdrawal, seriously repeated by some writers, says that the Swedes were driven out by the mosquitoes; but that

absurdity can be rejected, first, because the strategic location of Fort Casimir called for withdrawal from Fort Elsingburg, and second, because the site was successfully reoccupied at a later date.

Governor Printz returned to Sweden in 1654, leaving John Claudius Rising in his place. As one of the first official acts of his administration, Rising proceeded to Fort Casimir, saluted by firing two guns, and demanded the surrender of the place. This was a procedure not anticipated by Stuyvesant, and Gerrit Bikker, the Dutch commandant of a scant dozen soldiers, was unable to decide upon a course of action. Rising therefore landed the thirty soldiers he had with him and suddenly seized the fort. The affair having taken place on Trinity Sunday, Fort Casimir was renamed Fort Holy Trinity by the Swedes.

Not even Dutch phlegm could withstand this insult, and the choleric Stuyvesant at Manhatten prepared to eliminate the whole colony of New Sweden from America. The Swedes were aware of the approach of the enemy and made such preparations as were possible. Fort Holy Trinity was strengthened and the garrison increased to forty-seven men. In connection with Fort Christina, four batteries were built and named, respectively Slagenborg, Myggenborg, Rotteborg, and Fligenborg. The outcome, however, was inevitable.

In the autumn of 1655, Stuyvesant finally appeared. With seven vessels carrying between six and seven hundred men, he approached Fort Elsingburg, which had been reoccupied by a few Swedes. No difficulty was found here, so he next proceeded to Fort Trinity, where he landed his men above the fort. Starting his entrenchments, he demanded the surrender of the Swedish garrison. Sven Shute, who was commanding, asked for time so that he might communicate with the governor at Fort Christina; but when delay was refused and the garrison threatened with dire consequences in case capitulation was not forthcoming immediately he yielded and marched out of the fort with the twelve men to which his command had been reduced in the expectation that the Dutch attack would be directed at Fort Christina.

Having forced the surrender of Fort Trinity, Stuyvesant immediately marched upon the stronger Fort Christina, where Rising commanded in person. Even here the Swedes were not strong enough to resist the redoubtable governor. The fort was unprepared to withstand a land attack, for it had been built as though the designer "thought that no enemy would ever be so ungenerous as to take advantage of its situation and approach in on the land side from the rear, when the clear intent was that it should be attacked only in front from the river." Rising and his garrison of about thirty men soon surrendered, and the fall

of Fort New Gottenburg necessarily followed. New Sweden, having fallen to the Dutch, ceased to be.

The Dutch now exercised undisputed control over the whole of the Delaware valley. The names of all the Swedish forts were changed, Fort Christina becoming Altona, Holy Trinity becoming New Amstel, and New Gottenburg, although destroyed by the Dutch, becoming known as Kattenburg.

By 1657, Fort New Amstel had become very dilapidated; the magazines and fortifications were crumbled away; and some parts had been washed away by the encroaching water of the river. Fort Altona also was decaying, and had been without a garrison for some time. Repairs were ordered at New Amstel, but Altona continued to be neglected.

In 1668, Governor Alricks built a barracks adjoining Fort New Amstel, one hundred and nineteen feet by sixteen or seventeen feet. These were for the benefit of the married soldiers. Most of the enlisted men had wives and servant girls, and drew rations for themselves, their wives, and their servants from the company mess.

The English, who had never relinquished their claims to the territory in America occupied by the Dutch, now prepared to oust the Hollanders. The Dutch had but a single fort of any consequence on the Delaware, all the others having been permitted to deteriorate. In 1664, rumors of a projected Swedish invasion had led them to remove the guns and garrison of Fort Altona to Fort New Amstel. The other forts had already been destroyed.

In 1664, Charles II. of England granted the whole territory of New Netherland to his brother James, Duke of York. The Duke sent an English squadron, under the command of Colonel Richard Nicolls, to attack New Amsterdam; and in September, Nicolls effected an easy conquest of that city. He then sent Sir Robert Carr to reduce the settlements on the Delaware. Carr reached Fort New Amstel in October and demanded its surrender, but Governor O'Hinoyossa refused to give up the fort, although the burgomasters surrendered the town. Carr then landed his troops and ordered his ships to fire two broadsides. The fort, although it mounted fourteen guns, "was not tenable," and was easily captured by assault. In the attack, the Dutch lost three men killed and ten wounded, the first European blood shed in the long contest between European nations for supremacy on the Delaware.

Fort New Amstel again changed its name, becoming New Castle under the English, and Fort Altona resumed its name of Christina, but neither fort was kept up by the invaders. In 1676 both were in ruins.

In 1670-71 the English built a blockhouse at New Castle, but moved it in 1675.

So sure was the Duke of York of the capture of New Netherland that in 1664, before the expedition reached New Amsterdam, he sold the territory of New Jersey to Lord Berkeley and Sir George Carteret. In August, 1665, Philip Carteret was appointed governor and proceeded to Elizabethtown with a number of settlers.

War again broke out between England and Holland in 1672, and in July of the following year a Dutch squadron sailed up New York Harbor and took possession of the fort and the town. Following this, Fort New Castle and the Jersey and Delaware country once more came into the hands of the Dutch, although to no purpose. The treaty of peace between England and Holland, signed in 1674, provided for a mutual restoration of conquests, and the whole territory reverted to the English.

As the English now had acquired control of the continent from Maine to Florida, there appeared no further need for fortifications on the Delaware. Largely protected on the seaward side, the colonists seemed destined to lead a peaceful existence, and for a hundred years we find practically no activity in the field of coast defense. Fort New Castle was repaired in 1676, at which time it had eight guns mounted, but it appears to have fallen into disuse after the arrival of Penn in 1682.

William Penn, a member of the religious sect called Quakers, had obtained from Charles II, a grant of "three degrees of latitude by five degrees of longitude west of the Delaware," to which he added Delaware by grant and purchase. Coming to America in 1682, he laid the foundations of the commonwealth of Pennsylvania. Delaware was never entirely independent as a colony or a State until after the Declaration of Independence in 1776, but it had a separate deputy governor after 1691. New Jersey remained more or less a dependency of New York, with a distinct legislative assembly of its own, until 1738, when Lewis Morris was appointed the first royal governor of that colony.

In 1680, New York and New Jersey engaged in a dispute over the custom duties on ships entering New Jersey by way of Sandy Hook. Sir Edmond Andros, Governor of New York, said that, "it being necessary for the king's service, and welfare of his Majesty's subjects living or trading in these parts, that beacons for land or sea marks for shipping sailing in and out, and a fortification, be erected at Sandy Hook, I have resolved it accordingly." The authorities of New Jersey objected to the exercise of any authority in that colony by the officials of New York, and the dispute continued.

In 1687, Governor Thomas Dongan, of New York, decided that much of the commerce of New Jersey, entering by way of Perth Amboy, was illicit in that it deprived New York of trade and custom duties. "To prevent all which inconveniences and for the securing of this place from enemys, I desire to have an order to make up a small Fort with twelve guns upon Sandy Hook, the Channell there being soe near the shore that noe vessel can goe in nor out but she must come so near the Point that from on board one might toss a biscuit Cake on Shore." He was unable, however, to overcome the objections of New Jersey, that Colony desiring to reserve to itself the site and the right to build fortifications thereon. Consequently, no fort was built on Sandy Hook until many years later.

By the end of the century, all forts in the Delaware region, as in most of the colonies, had been allowed to disintegrate. New Jersey and Pennsylvania were entirely without forts, but Delaware had made some attempt to maintain the fort at New Castle. In 1696, Fort New Castle had seven guns mounted, but it had deteriorated to such an extent that in 1699 the inhabitants of the town complained that there was neither fort, castle or breastwork, nor militia, arms or ammunition.

In 1706, because of the war between England and France, the Assembly of Delaware passed an act for maintaining a fort at New Castle and for requiring all passing vessels to stop and, unless belonging to the river country, to pay toll. The fort, which was begun in 1707 by Captain Redknap of New York, was the last fort at New Castle, and it drops out of the records in 1752, when it seems to have been demolished by the local authorities. It received some repairs in 1745, when a Spanish privateer threatened to land on the shores of the Delaware. The fort mounted five pieces of artillery.

In 1747, during the war between England and France and Spain, rumors of the appearance of privateers in the Delaware excited the people along that river. At Philadelphia, upon a petition from the inhabitants, the Philadelphia Council passed an act approving the organization of an Association for erecting batteries, and appointed a Committee to write a petition to England for cannon. Benjamin Franklin suggested a lottery for raising money with which to build a fort. The lottery was successfully held and some guns were ordered from England. Fearing delay in filling the order, a few guns, insufficient in number, were bought in Boston, and the loan of additional guns were requested from New York. Franklin, who was on the Committee to go to New York to secure the cannon, tells us in his inimitable way that, at first, Governor Clinton peremptorily refused to lend any guns, but that at the dinner he gave the Committee, he

softened by degrees under the influence of great bumpers of Madeira wine and finally agreed to lend six pieces. After some more wine he advanced to ten, and at last he raised the number to eighteen 18-pounders. The Council at Philadelphia thereupon ordered the completion of the battery.

Society Hill Battery was built in the spring of 1748. The parapet was eight or ten feet thick, and was composed of timber and planks, filled in with earth rammed down. As built, the battery mounted thirteen guns, but it was never used. Down the river, Fort Christina was built on or near the old site, "with a bomb-proof magazine, and calculated to mount ten guns."

In the late spring of the same year, a privateer came up the bay as far as old Fort Elsingburg and created great alarm along the shores of the bay and the river. A battery was hastily thrown up at Elsingburg, and when the ship passed, "many shots were fired at her from four mounted guns 'most of which passed her.'" Immediately afterward, a battery was erected a little below New Castle.

The outbreak of the Revolutionary War in 1775 brought about a new period of coast defense construction, all of a temporary nature. All the principal towns along the seaboard organized Councils of Safety and erected or comtemplated the erection of batteries for the defense of their respective communities. At Philadelphia, the Committee of Safety commenced a fortification in 1776 at Billingsport, on the Jersey side, about twelve miles below the city, for the purpose of protecting a *cheveaux-de-frise* which was placed in the river at that point. The work was planned by Thaddeus Kosciuszko, and had not been completed by June, 1777. In October, Colonel William Bradford was stationed at the fort with about two hundred and fifty men.

Fort Mercer, at Red Bank, was also constructed as one of the defenses of Philadelphia. This fort, consisting of extensive outer works within which was an entrenchment eight or nine feet high, boarded and fraized, was designed by Kosciuszko and built by Colonel Bull in 1777. Colonel Christopher Greene was assigned to its command, and had with him about four hundred men. Upon his arrival at Fort Mercer, Colonel Greene found that his force was insufficient to man the whole works. He therefore decided to abandon about two-thirds of the upper end of the fort and, for the protection of the remaining part, to build a double board palisade across the lower thrid. He protected this with wooden pickets and an abbatis, placed cannon in position to rake the upper part of the fort, and filled in between the palisades with hay, old lumber, and other scrap material.

Mud Fort, afterward called Fort Mifflin, was commenced on Mud Island before the Revolution started. The island was purchased in 1773 and a portion of the fortifications was erected in 1774. This work constituted the principal defense of Philadelphia, although batteries were erected at other places. In 1776, the Committee of Safety built a fort on Liberty Island; and in 1777, there was a battery near Darby Creek, probably below Mud Island.

Following the defeat of General Washington at Brandywine in September, 1777, the British entered Philadelphia. To aid Sir William Howe in his occupation of the city, Lord Richard Howe appeared in the lower Delaware with his fleet, but found his way blocked by the forts and obstructions of the river and by the American galleys stationed in defense of the river works. As free navigation on the river was indispensable to the security of the British army, Colonel Stirling was sent in October with two regiments to capture the works at Billingsport. Marching to the rear of the fort, the British made an assault. The Americans, outnumbered and unable to make a successful resistance, spiked their guns, set fire to the barracks, and fled.

The British then demolished the works and opened a seven-foot passage through the *cheveaux-de-frise.* This naval stockade consisted of poles from thirty to forty feet long driven firmly into the mud of the river bottom. At the top of each pole was a long sharp piece of iron for the purpose of piercing the bottom of any vessel attempting to pass the obstruction.

Following up their initial successes, the British took six light vessels up the river where they anchored below Red Bank and prepared for the reduction of Forts Mifflin and Mercer. At the latter fort, Colonel Greene had scarcely completed his preparations when he was attacked by Count von Donop with four battalions of Hessians, numbering about twelve hundred men. On the afternoon of October 22, the Hessians on land and the British ships in the river opened a heavy bombardment. Finding the outer works abandoned, the enemy assaulted the citadel under a terrific fire from the Americans. Repulsed by the defense, the Hessians rallied time and again, but they were finally driven back and forced to retreat in disorder to the shelter of the woods. Colonel Donop and Lieutenant Mingerode, second in command of the attack, both received mortal wounds. During the three-quarters of an hour that the battle lasted, the attacking force lost about eighty-seven men killed, one hundred wounded, and twenty taken prisoners, while the Americans lost fourteen killed, twenty-two wounded, and one captured.

The next day the British fleet, consisting of the ship *Augusta*, sixty-four guns, the sloop *Merlin* eighteen guns, and four smaller vessels, renewed the attack on Forts Mercer and Mifflin. Both the *Augusta* and the *Merlin* grounded and were set on fire and abandoned by their crews.

The operations against Fort Mifflin continued. Many batteries were put up by the British so as to fire on Mud Island. On Province Island, three batteries contained a total of two 32-pounders, five 24-pounders, one 18-pounder, one 12-pounder, two 8-inch howitzers, one 13-inch mortar, and two 8-inch mortars. With these guns the British opened on Mud Island on November 10, and for six days kept the island under a constant fire. On the 15th the British ships *Isis*, *Somerset*, *Pearl*, and *Vigilant*, and an armed sloop came up and added their fire to that of the batteries on shore. The blockhouses of the fort were reduced to a heap of ruins, the palisades were beaten down, most of the guns were silenced, and the fort had become untenable. On the night of the 16th, the Americans set fire to the remains of the fort and escaped to Fort Mercer.

While the other ships were engaged at Mud Island, the *Roebuck* attacked a battery on the Jersey side near Billingsport and quickly silenced it, leaving Fort Mercer as the only remaining defensive work held by the Americans in the vicinity.

The loss of Fort Mifflin and the passage of the British fleet left Fort Mercer in an exposed position, but it was decided to attempt to retain it. Three days later, Lord Cornwallis appeared before the fort with about three thousand men; and, as the Americans had been unable to assemble a force large enough to hold the fort against the enemy, Colonel Greene was directed to evacuate it. The forts on the Delaware thus all fell into the hands of the British, and the passage of the river was opened.

Up in New York Harbor, on the Jersey side, a battery was erected at Perth Amboy in 1776, while Paulus Hook was also fortified. Paulus Hook was an island of sand and marsh at Jersey City. On it was a fort mounting three 12-pounders and one 18-pounder, a redoubt, three blockhouses, a line of entrenchments, and some minor works. In August, 1779, Major Harry Lee—Lighthorse Harry—made a surprise raid upon the position and successfully entered the place with four or five hundred men. He quickly captured the blockhouses and the fort, but was unable to take the magazine to which the British commander had retired. With the approach of dawn, Lee was obliged to withdraw, successfully evading the forces which had been sent to intercept him. In this minor engagement, the British lost nearly fifty in killed and

wounded and about two hundred prisoners; the Americans lost two killed and three wounded.

The closing scenes of coast fortifications in the Provinces of New Jersey, Pennsylvania, and Delaware were laid near Philadelphia. After the English evacuation of the city, Colonel Bull was instructed by the Council to erect a battery of eleven guns at Billingsport, where a garrison was maintained until the close of the war. In 1784, the battery contained five 18-pounders, one 12-pounder, one 4-pounder, and four dismounted guns. Fort Mifflin was also reoccupied and partially restored.

During all the time preceding the close of the Revolutionary War, the Delaware valley had had no large and important fort as had New York and Boston. Of such forts as had been built in the early days, none remained. When the Federal Government took over the military activities of the nation, these colonies, like most of the others, had no defensive works which could be transferred to the United States. Unprotected at the opening of the seventeenth century, the Delaware region was again unprotected as the eighteenth century drew to a close.

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History of the "Oozlefinch"

By COLONEL E. R. TILTON, C. A.

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A NUMBER of years ago, I think it was about 1905, a certain officer of the Artillery Corps who was more or less famed for his sayings (then Captain H. M. Merriam), spoke often about the existence of the "Oozlefinch." When questioned about this bird, he was rather close about describing either its appearance or its habits, or where it could be found. All that he ever disclosed was that "the Oozlefinch was a bird which flew tail foremost to keep the dust out of its eyes."

Any naturalist, even a nature faker, having this much of a description to work on, would probably assume that the eyes of the bird were of such prominence that it had to fly in the manner described to protect them. Hence the eyes must be important, probably large and prominent and not otherwise protected, an assumption which proved to be correct. A little while before Christmas in the year mentioned above, Mrs. Tilton, while shopping in Hampton, came across the present "Oozlefinch" in a small shop, and being struck with the prominent eyes of the animal, bought him. I then took the bird over to the Fort Monroe Club and let him perch behind the bar. He, under the loving care of Keeney Chapman, retained his place behind the bar for many years.

The bird was almost lost several times, but when a shavetail lieutenant in the Coast Artillery School tried to steal him away, he was enclosed in a glass cage for safe-keeping.

Early in 1908, the construction of the present Coast Artillery School was begun. The Torpedo School at Fort Totten, New York, was moved to Fort Monroe and consolidated with the Artillery School. When the consolidation took place, General (then Major) R. P. Davis came to Monroe as director of the combined schools and as President of the Artillery Board. The Board then consisted of Major Davis, Captain F. W. Coe (now* Chief of Coast Artillery), Captain H. J. Hatch, and Lieutenant Halsey Dunwoody, Secretary. I was then Constructing Quartermaster and Captain Curtis G. Rorebeck was Post Quartermaster. During the building of the School the offices of the Artillery Board were in the second front of casemates. The office of the Constructing Quartermaster adjoined those of the Artillery Board

*June 1919.

in the same front. It was then the custom in those days to adjourn to the Club, not far away, after the labors of the day.

The "Oozlefinch" awoke from his sleep of several years, being aroused by the noise of the constant shaking of the dice box by members of the Artillery Board and the two Quartermasters. He insisted on joining the festivities and the location of his glass cage was changed from the bar to the mantel shelf of the second room from the bar. (In those days the bar was in the west end of the second front in the bastion under the flag staff.) This room became famous, not only from the fact that the "Oozlefinch" lived there, but because the sessions of the Artillery Board were held there every afternoon until long after retreat, winter and summer. The "Oozlefinch" with his all-seeing eyes, took in all the work of the Board, and was so deeply interested in its proceedings that it practically became a member, and he never missed a meeting.

This room became known, eventually, as the "Gridiron Room" and the members who gathered there formed what afterwards became known throughout Fort Monroe as "the Club." The membership was limited, and woe betide the unfortunate who passed through the room to get a quiet drink, by himself, at the bar beyond. He generally had to pay toll, and was then allowed to proceed on his way.

It is a fact that the proceedings of the Board on Artillery matters of import in those days were discussed in that room. The present "Drill Regulations for Coast Artillery" saw the first light of day therein. It was natural for the "Oozlefinch" to absorb all the knowledge which was there, and he became the emblem of the "Gridiron Club" as well as a full-fledged member. (He has not a single feather on him.)

The Coat-of-Arms of the "Gridiron Club" came to life about this time, and after a course in Heraldry I designed the Coat-of-Arms and it was adopted. The Coat-of-Arms created quite a sensation amongst the non-initiated, and the secrets of its composition were never divulged to outsiders. There is no reason, now, why the heraldic story of the Coat-of-Arms should not be given to the Coast Artillery World.

The body of the shield "*parti per fess, dovetailed*" indicates the general woodenness, not of the Artillery Board and the other members of the "Gridiron Club" but of the passing throng who paid not their toll cheerfully in passing through the Sanctum to the bar. "*Gules and Sable*": The color of the shield, red and black—red for the Artillery and black, in mourning for those who lost at dice by throwing the lowest spots. "*In honor, a deuce spot of dice, lozenged, proper*": The honor point of the shield was given to the lowest marked dice, as it

was the one which most frequently appeared to some members, the law of probabilities to the contrary notwithstanding. "*In nombril a gridiron sable*": The lower half of the shield given over to the memory of those who did not belong to the "Gridiron Club," who were constantly roasted by it, both when present and, I regret to say also, when absent.

The motto: "*Quid ad sceleratorum curamus*," was the result of much thought and research. A visit to the Artillery School Library and a consultation with the then librarian disclosed the fact that there was no English-Latin dictionary in the Library, but they had a Lexicon which might serve the purpose. After an exhaustive examination of this lexicon for the Latin equivalent of the good old English word "Hell," the word "sceleratorum" was found. This word means the "place of the damned," which is as near as the ancient Romans came to the word desired. So the motto literally translated means: "What in Hell do we care!"

The supporters, "*two Oozlefinches, regardant, proper*," were a natural selection, "regardant" meaning looking, or better, all seeing, with the great eyes that this bird has to protect while in flight in the manner described.

The crest, "*a terrapin, passant dexter proper*," was selected owing to the great number of these animals, cooked to perfection by Keeney and served with great pomp to the members of the Artillery Board on occasions of state. This was always accompanied by libations of "*red top*," red top being a now obsolete drink made in Champagne in France and once imported into the United States, in times gone by, that now seem almost prehistoric.

The wavy bar over which the terrapin is passing, represents the adjacent waters of the Chesapeake, the natural habitat of this animal.

This Coat-of-Arms that appeared so mystifying to the outside, was once stolen by a civilian gentleman from the Klondike who visited the Fort Monroe Club as a guest. He having been roasted by the "Gridironers" for his tales of great wealth, took this petty means of revenge. The Coat-of-Arms was recovered from his room in the Chamberlin Hotel, by strategy.

I think that on the back of the Coat-of-Arms appear the names of the original members of the "Gridiron Club," but of this I am not, now, sure. In any event, it is a fitting memorial to those days in Fort Monroe when work was intermingled with joys and pleasures, and which produced as great results as can be expected even today, when the mind of the Artillerist is given great activity by absorption of cold tea, coca cola, and such other concoctions.

Through all the changes of past years and the advent of the Great War, the "Oozlefinch" has remained in deep professional thought in his home at Fort Monroe, taken care of by the ever-faithful Keeney, who has seen many a change pass through Fort Monroe in the forty-five years of his service as steward.

It is a good thing that the Coast Artillerymen who were fortunate enough to cross the seas and go to war remembered the existence of the "Oozlefinch" (though not his shape) and took him as their sacred standard, as Napoleon did his Eagles. The "Oozlefinch" never crossed the ocean to France in person. His spirit led the Coast Artillerymen who went over, and it would be by all means proper to bestow upon him the required number of Silver Chevrons indicating his war service, and it is to be hoped that he will wear them with the same feelings of devotion to duty which causes those of us who stayed at home to wear them. Wound stripes, they are sometimes called, wounds to personal feelings and professional ambitions. Perhaps the Chief of Coast Artillery might be influenced to grant the "Oozlefinch" some special type of war chevrons, say two gold and two silver, on April 6. 1919, to indicate the bird's influence on the fortunes of the Coast Artillery Corps for service "over here" in the body and service "over there" in the spirit. He is certainly deserving of it.

MAXIM XLIX

The practice of mixing small bodies of infantry and cavalry together is a bad one, and attended with many inconveniences. The cavalry loses its power of action. It becomes fettered in all its movements. Its energy is destroyed: even the infantry itself is compromised, for on the first movement of the cavalry it is left without support. The best mode of protecting cavalry is to cover its flank.—*Napoleon's* Maxims of War.

The Cruiser Question

By 1ST LIEUT. J. A. WEEKS, C. A. C.

IN the entire discussion of the cruiser question one should keep in mind the fact that the cruiser is a type of vessel for service both in war and peace. In peace it travels from port to port to develop friendly relations, to carry the flag into ports wherever the nation's interests require and to accomplish the mission of enhancing the respect and obtaining the good will of the world. In war it should be able to perform *on every sea* the numerous duties of offense and defense that vessels of this class can accomplish with better success than any other type of war vessel.

The modern cruiser is second in offensive and defensive power only to the capital ship. It should be able to fight on an equal or advantageous basis with any but capital ships.

Some of the cruiser's duties are:

1. Screening the main body during a fleet movement.

Secrecy is essential on sea to a greater degree than on land and secrecy can only be maintained through denying sight of the fleet to enemy forces. This can be accomplished only with ships of requisite speed and fighting power to destroy the enemy observing vessels.

2. Clearing the sea of enemy raiders.

It can easily be visualized how enemy cruisers or other auxiliary ships could menace our commerce. This lesson Great Britain learned during the World War when it took practically her entire cruiser strength of 114 vessels, operating several months, to rid the sea of the ten German raiders that menaced her commerce and threatened the flow of war materials between Great Britain and her Allies.

3. Battle between fleets.

Next to the guns of the opposing capital ships the destroyer with her torpedo attacks constitutes the greatest menace. We have in our Navy today a superiority of destroyers, but this superiority will vanish unless sufficient cruisers are available to protect them and break down enemy opposition.

Now, having a definite idea of the type of vessel we are considering and its multitudinous duties, we can enter our discussion of the cruiser question.

To begin at the Washington Conference for Limitation of Naval Armament, February 6, 1922, Great Britain had actual superiority in ships afloat. The United States had a navy under construction and on

paper, the completion of which would have given us supremacy of the seas for a long period. In accordance with the administration plan of economy, as well as to reassure the world of our peaceful intentions, the conference was called to reach some agreement upon which our people and the people of other naval powers would be able to reduce the cost of navies and devote their time and money to civil matters. The results of this conference are well known.

The United States gave up its superiority; construction on our capital ships ceased; those partially constructed were scrapped; steam boilers which cost from $20,000 to $30,000 to make were sold as scrap iron for $9.00 a ton; the enormous losses that would have been suffered by the contractors were paid; the *Washington*, costing $22,000,000, was sunk; the one hundred and thirty-two 16-inch guns for mounting on battleships then under construction were laid aside; the *Lexington* and *Saratoga* were converted to aircraft carriers; their 16-inch guns discarded and replaced by 8-inch guns in accordance with the terms of the treaty. In short, it resulted in our sacrificing thirty battleships and battle cruisers with a total displacement of 755,380 tons, not mentioning the cost of the *Saratoga* and *Lexington*, two airplane carriers which have cost the Government $80,000,000, when by an expenditure of $38,000,000 we could have purchased two airplane carriers of equal efficiency.

The conference delegates could not agree to doing away with submarines or upon a limitation of submarine tonnage, perhaps the only point in line with the desires of France, who has practically admitted her intent to undertake an extensive submarine program.

The failure of any agreement on submarine elimination of course reacted on destroyers and consequently on cruisers. So we find the Washington Conference closing with the knowledge that anything resembling a quasi-permanent formula adopted for battleships is quite inapplicable to vessels designed for purposes which not only may, but must, vary with the geo[illegible]aphical and economical position of the several powers concerned. Th Washington treaty was then incomplete in that it placed no limitation n ships of less than 10,000 tons, except the condition that the caliber c[illegible] its guns should be limited to 8 inches and their number per ship to ten.

We now come to the situation which obtained between the Washington Conference and the Geneva Conference.

While it is quite probable that our navy experts grasped the situation, the people and Congress remained inactive and Great Britain and Japan alone began the construction of 10,000-ton cruisers with 8-inch or 7½-inch guns—this in 1924. Congress finally passed a law author-

izing the construction of eight 10,000-ton, 8-inch gun cruisers. The first two cruisers under this authorization were laid down in 1926. This fact is important to bear in mind because at the Geneva Conference in 1927 we were accused by Great Britain of thrusting the 10,000-ton and 8-inch gun cruiser upon the world.

This huge construction program of cruisers less than 10,000 tons, the administration policy of economy, our sad shortage of shipyards, the decline of our ship-building industry, and the difficulty of obtaining the appropriations necessary to compete with Great Britain were some of the reasons for the President's invitation to England, Japan, France, and Italy to the Geneva conference for the expressed purpose of extending the Washington treaty ratio to auxiliary craft—cruisers, destroyers, submarines, and aircraft carriers of less than 10,000 tons. The invitation was accepted by Great Britain and Japan.

Before entering the discussion of this question further it is well to consider the strength in cruisers of the three naval powers concerned. The following tabulation shows all American, British, and Japanese cruisers now built, building, or for which initial appropriations have been made.

	United States		*British Empire*		*Japanese Em.*	
	No.	*Tonnage*	*No.*	*Tonnage*	*No.*	*Tonnage*
Obsolete	22	164,000	....	None	11	73,025
Modern cruisers completed with guns less than 8-inch.	10	66,000	49	246,776	21	98,015
Modern cruisers completed with 8-inch guns	....	None	3	30,000	4	28,400
Modern 8-inch cruisers building	2	20,000	11	108,300	6	60,000
Modern 8-inch cruisers appropriated for but not laid down	6	60,000	1	?	2	20,000
Total modern 8-inch cruisers	8	80,000	14	138.300	12	108,400
Total modern cruisers of all calibers built and building	18	146,000	63	385,076	33	206,415

In addition to the above figures Great Britain has five more modern cruisers projected and we have fifteen. The first thing that strikes the eye in the above tabulation is that the United States has retained twenty-two obsolete cruisers of comparatively low speed and short gun range, aggregating 164,000 tons, and the Japanese have kept eleven equally obsolete cruisers. It was generally agreed at the Geneva three-power conference that cruisers twenty years or more of age might be classified as obsolete.

The ten 6-inch cruisers are the only modern cruisers the United States has afloat. Attention is further invited to the fact that the ratio in tonnage of modern cruisers built and for which appropriations have

been made is not the Washington Conference ratio of 5-5-3, but 1.9 for the United States, 5 for the British Empire, and 2.6 for the Japanese Empire.

Entering the Geneva Conference, the three powers were able to agree on a limitation of submarines and destroyers, but when the question of limiting cruisers came up there was a deadlock. Great Britain asserted that she needed 600,000 tons of cruisers for the protection of her bread lines, and sprung a surprise on the conferees by dividing the cruisers into two classes, those of 10,000 ton and 8-inch caliber as offensive and those of 6000 ton and 6-inch caliber as defensive. This demand for high cruiser strength was based on the Empire's committance to the protection of the dominions, as well sa her far-flung trade lines. In numbers this amounted to seventy cruisers. It was numbers they required, and if a limit could have been put on the number of large (or what they called offensive) cruisers, some agreement might have been reached, for the English delegates actually came down to a total tonnage of 426,000.

The United States proposed a limitation of from 250,000 to 300,000 on the cruisers. They indicated their willingness to accept a limitation as to tonnage and a limitation as to the total numbers, but only under the condition that each country should be left free to devote that tonnage to those units best suited to their special needs, based upon geographical position, oversea commitments, and national security. The Japanese delegates appeared to be the only ones in favor of what the conference was supposed to be called for—namely, limitations on building, and not a competitive building program. They agreed with the United Sta s in that they opposed Great Britain's tonnage limitation, and, for re sons quite similar to those of the United States, favored the construction f the larger cruiser with the 8-inch gun.

The American press heralded the fact that if the British proposals had been accepted by the United States, Japan would have agreed, and had the American proposals been accepted by Great Britain, Japan would have agreed, so that Great Britain would appear to have been the cause of the failure.

In my opinion, no agreement would have been reached, for Great Britain, which has held the mastery of the seas for centuries, intends to maintain this mastery and can see no reason for a young nation like the United States wanting to build a navy equal to that of Great Britain. Mr. Winston Churchill made a speech in one of the provinces of England confirming this when he said in part:

"Therefore, we are not able now, and I hope at no future time to embody in a solemn international agreement any conditions which

would bind us in the principle of mathematical parity on naval strength."

From the point of view of the United States, it has every desire to maintain its position as a world power and to secure for its people fair and unmolested access to international markets, and in order to continue to maintain and increase these markets, it must subscribe to the ever-increasing work of upholding its Navy second to none.

Knowing, then, the factors which caused the split of the Geneva Conference on the cruiser question, let us analyze the respective contentions of Great Britain and the United States on this question.

Great Britain contends that a high cruiser strength is absolutely necessary and vital to the needs of her empire, especially to give assurance that she shall not starve because of the cutting off of her food supplies at distant points; that the United States is almost entirely secure with two ocean frontiers, of their own nature defensible; and, with her immense area self-sustaining, that the demands of the United States would leave her with no zones for her fleet not even secondary lines of superiority; further, that the United States fought for an aggressive weapon (the 8-inch gun) while they only pleaded for a defensive one. In addition the British contend a 10,000-ton cruiser is superior to the same tonnage in light cruisers, for instance, two 5000-ton cruisers armed with 6-inch guns.

The United States of course knew that an agreement with Great Britain would limit the number of cruisers which could operate with any degree of success from our own bases, due to our lack of naval bases. The United States have only five as compared to twenty for Great Britain. To attain parity with Great Britain we would have to launch a huge building program of 6000-ton, 6-inch cruisers, with a small radius of operation, which would be comparatively useless to us, whereas Great Britain would have cruisers valuable to themselves, as she has bases all over the world between which a small cruiser can operate. Great Britain, with her merchant marine, upon which could be mounted 6-inch guns under the Washington Conference, would be mistress of the seas and that was her aim in so limiting them. We felt that in case of war certain far-flung lines of communication would have to be guarded to foreign countries so that many important raw materials such as manganese for steel for our railroad systems, rubber for our transportation, tin, tungsten, nickel, coffee, sugar, and twenty-seven or more war materials could enter the country uninterrupted. An acceptance of their proposal would have placed us in a position of hopeless inferiority. The difference between our merchant marine and theirs was in the ratio of 5 to 26 and Admiral Jellicoe admitted

that potential cruiser strength of a nation with respect to that particular class of ship depends upon the size of the merchant marine.

Great Britain's actual food lines would not be threatened in case of war since her access across the North Sea and Baltic Sea, across the Channel, down into the Mediterranean, would be safe due to her home bases in case of war with us, while if the war was with a European power she could reach Canada, the United States, and South America unmolested.

In conclusion, we know that no single element of a naval force can function properly without the cooperation of all the other units. That to accomplish its mission, namely control of the sea, a well-balanced, rounded out fleet is absolutely essential.

Our policy is to have a first-class navy, second to none. Our national policy requires we obtain this Navy at the lowest cost. For this reason we hear the terms treaty navy, peace-time navy, competitive building, and relative building. There is no such navy as a peace-time navy—a peace-time navy is the navy that is available in war. Relative and competitive building are merely terms used by diplomats to disguise the real issue. Navies are built on their special or absolute needs and these needs are determined by the amount of building done by rival nations.

So the cruiser question was not merely one of limiting tonnage or guns on cruisers, but an attempt by the three powers to effect some supremacy at the expense of the other.

Our stand on the cruiser question was influenced greatly by the increase in our foreign trade of from $17,504,000,000 in 1922 to $26,722,000,000 in 1926. Our building program is in a large measure a replacement program, and if the cost of replacement can be kept down we will do it. The United States of course recognizes Great Britain's economic position, but also recognizes its own, and if it is to insist on maintaining communication with the outlying points of the earth for the same broad economic reasons as Great Britain does, we compete with her as a world power and consequently must build cruisers to function in cooperation with our fleet. The loss of our right to construct naval bases in the Pacific under the Washington Treaty certainly must lead us to realize the necessity for a cruiser capable of steaming far, and being able to meet, destroy, or prevent their (the enemy) destroying.

The problem of our foreign trade is the problem of the freedom of the seas—the inviolability of merchant shipping in time of war. Until some understanding on this question is reached, we will always have a cruiser question.

EDITORIAL

Battle Practice

THE Coast Artillery Corps is fortunate in being able once again to hold battle practices and exercises in cooperation with other branches of the service and with the navy. It has been over ten years since we have had an opportunity to hold such practices, and their revival is particularly gratifying when it is remembered that they are to Coast Artillery what field maneuvers are to Infantry. Unquestionably, they will be found to be productive of much valuable instruction, particularly along tactical lines.

Exercises were scheduled for the Harbor Defenses of Long Island Sound, Chesapeake Bay, San Francisco, Panama, Hawaii, and the Philippines, and some of them have been completed. Reports so far received indicate that the practices have been very successful and very instructive. Of particular interest, were the exercises at Chesapeake Bay, which involved the movement of railway artillery from Fort Eustis across the James River to Fort Story. It is to be hoped that the battle practices of this year are to recur annually and that their use can be extended to other harbor defenses.

Summer Camps

Once again the period of intensive training is upon us. Regulars, National Guard, Reserves, R. O. T. C. and C. M. T. camps are well under way in a program which promises to be of even greater success than those of previous years. Each year we hear the raucous voice of the pacifist spreading antimilitaristic propaganda, but each summer we see an ever-increasing demand for training. This year, in the C. M. T. C. alone, it was reported shortly before the opening of the first camp that 52,442 applications to attend C. M. T. camps had been received, of which only 33,346 could be accepted.

The attitude of the people toward these camps is well exemplified by a remark recently made by a National Guard enlisted man. He said: "I get only fifteen days vacation each year and I always take it at the same place—the National Guard Camp. Last year, I went to camp weighing two hundred and thirty pounds and came home weigh-

ing one hundred and ninety-five and feeling fine and fit. The camps ought to be longer—at least four weeks, or perhaps six."

The time for serious worry about the military future of this country has apparently not yet come.

Promotion Legislation

As was expected, Congress adjourned for the summer without having taken final action on any one of the numerous plans presented to it for a revision of the present system of promotion. From the time the subject was first broached until the day of adjournment there was evident a full appreciation of the unfortunate situation confronting the officers within and below the so-called hump, and there was a distinct effort made to enact a bill which would be fair and satisfactory to the entire Army. That no legislation was enacted was primarily the result of the attitude of the officers themselves—particularly of those within the hump—toward the proposed bills.

Two major questions—not necessarily related—were involved: modification of the existing system of promotion and revision of the present arrangement of the promotion list. Concerning promotion, there was little argument. The Wainwright Bill or the Reed amendment to the Furlow Bill would be, on the whole, very beneficial to the service and would promote practically all of the officers in and below the hump much earlier than they can anticipate under the present scheme, regardless of whether the promotion list is changed or not. Had it not been for the question of promotion-list arrangement, it is probable that either of these bills would have met with general approval throughout the Army.

So far as the JOURNAL can discover, the attitude of all officers who might be affected by a rearrangement (or no rearrangement) of the promotion list is entirely personal and highly individualistic. As a class, they divide into two major groups. The one is unwilling to accept accelerated promotion if it involves a redistribution on the promotion list; the other is unwilling to accept accelerated promotoin unless it involves redistribution on the promotion list. Conversations with many of the officers concerned indicate that the primary objection of the one group is that they would, in the redistribution, be ranked by officers to whom they had been senior for the past eight years; the primary objection of the other group seems to be that they are now ranked by officers who, they feel, should be their juniors and they will accept no solution which does not change the situation. Practically every officer who served under the system of regimental or branch

promotion encountered one or the other of these situations or both and accepted them without question.

Were the question as clear cut as this a solution satisfactory to the majority could be found, but there are numerous minor groups, each with a particular interest. These special interests conflict to such a degree that it is impossible to combine them in any manner that will permit representation of a majority, but the sub-groups, unable to agree among themselves, can unite to defeat the interests of other sub-groups. Here is the stumbling-block in the path of legislation. Unwilling to risk having the question of promotion-list rearrangement stand on its own merits, its proponents have determinedly kept it tied to the question of promotion. This would be unobjectionable if it carried a complete plan concerning which all can agree, but it is unnecessary if it carries controversial plans which can be separated from matter which is not controversial.

The JOURNAL can not admit sympathy toward any project which seeks to transfer leadership in matters of Army legislation from the hands of the military heads of the Army to the body of commissioned personnel, but, since we have embarked upon such a course, the JOURNAL suggests that the opportunity to get together and find the solution for which Congress has been seeking is now here. Congress will not reassemble for several months, and in the meantime a solution can be found if the officers concerned will forget the effort upon themselves individually and keep in mind two basic facts:

a. The good of the whole is more important than that of the individual.

b. Luck (that is, factors over which the individual can have no control) can never be eliminated from an Army career.

Individual hardship may, and probably will, result from any solution, but whatever the solution the matter will be settled and we shall be able once again to turn our attention to our daily duties.

MAXIM XXX

Nothing is so rash or so contrary to principle as to make a flank march before an army in position, especially when this army occupies heights at the foot of which you are forced to defile.—Napoleon's Maxims of War.

PROFESSIONAL NOTES

Coat of Arms of the Harbor Defenses of Southern New York

Chield: Vair, three bars *gules,* jessant from the middle one a demilion saliant, ragardant *or.*

Crest: On a wreath of the colors (*argent* and *azure*) a beaver couchant proper.

Motto: Volens et Potens.

The crest is the beaver of New York, the only charge on the original arms of New Netherlands adopted in 1623, and now on the seal of New York City.

The shield symbolizes the battle of Long Island, August 27, 1776, which took place near the present Fort Hamilton. The color of the field is vair, a fur, which is said to come from an animal called Varus, the back of which is blue, the belly white. Tradition relates that a Hungarian general displayed his cloak made of varus fur as an ensign to rally his men and succeeded in turning defeat into victory. Similarly Washington, after the battle of Long Island, by a masterly retreat across the East River, rendered the British victory fruitless. The three bars represent the three enemy forces under Grant and Cornwallis and the British fleet. The lion in a springing position issuing from the center bar symbolizes the piercing of Cornwallis' command by the American brigade under General Stirling.

Conduct of Fire at Moving Targets, Coast Artillery School

By MAJOR F. A. MOUNTFORD, C. A. C.

In connection with the practical instruction in the Department of Artillery, Coast Artillery School, of Student Officers of the Battery Officers Class in the conduct of fire against moving targets during the spring of 1928, a battery of four 75-mm. field guns, British Model 1917, was installed on the beach at Fort Monroe in front of Battery *Anderson* and equipped with a special emplacement developed by the instructors of the department providing for a traverse of about 150 degrees. Figure 1 shows the general arrangement of the emplacement.

A wooden platform of two-inch lumber is provided for each gun, to which the carriage is secured by wire from the axle to a large staple in the center of the platform. This platform provides a smooth surface for the gun wheels and with the wire and staple prevents vertical jump of the carriage. The installation of a wooden ring on the platform, inside the gun wheels (not shown in the picture), while not essential, will prevent a tendency of the carriage to move laterally away from the center of the circle of which the traversing rail is an arc.

In rear of the gun platform a circular light railroad rail, with radius equal to the distance from the center of the axle of the wheels to the center of the pintle ring on the trail, was installed, spiked down to railroad ties placed radially with reference to the rail arc. The curved rail was made from scrapped railroad rail, bent with a rail bender obtained from the district engineer officer.

The trail spade was secured to the curved rail by means of a steel shoe secured to the pintle ring by a bolt and washer as shown in Figure 2. A notch with cross section similar to the upper part of the rail, was cut in the lower portion of the shoe. A triangular-shaped block of wood was placed between the shoe and the angle formed by the spade for stability. The notch in the shoe is slipped over the upper portion of the rail at one end and then secured to the trail pintle ring as described above. With the rail covered with grease, the carriage can be readily traversed in accordance with the instructions of the gun pointer by one man using the trail hand spike. The cross wire of the panoramic sight is kept on the aiming point at the instant of firing by the gun pointer using the traversing mechanism of the carriage, limited to about 80 mils.

Firing of the four-gun battery was conducted by Case III at the moving target, using the standard seacoast fire-control system. Field lines, with field telephones,

FIG. 1

were installed from the guns to the plotting room and B. C. station of Battery Anderson. Each data line, elevation and deflection, carried five headsets at the battery, one for each gun pointer or elevation setter and one for the display board operators (the usual layout for mobile seacoast batteries).

A one-hundred-and-ten-degree board was used for plotting, and various boards used for spotting—the Cloke plotting board, the Gray board and the Cole board. Charts were obtained from the Coast Artillery Board for the range-correction and deflection boards. The standard fire-adjustment board was used by the officers adjusting the fire.

All duties in the battery, except the ammunition details, were performed by the student officers, including spotting details, observing details, plotting-room details, and gun crews. Officers were rotated from duty to duty as much as possible to familiarize them with the details of all the duties. Effort was made to have each member of the class adjust the fire at least once.

Various methods and ideas of individual students of the routine in the range section were tried out. Emphasis was placed on the use of continuous fire in which the firing of the guns was not delayed for the application of corrections, but in which the adjustment corrections applied were based on the deviations of all shots spotted up to that time. With a small firing interval, 15 or 20 seconds, the rapid preparation of a graphical record of the shoot and the application of adjustment corrections is a difficult problem and it is believed that valuable instruction was obtained by the class in this regard.

Various methods of adjustment of fire were tried, including trial fire by ranging shots and ranging salvos on the moving target. The use of ranging shots and salvos appears to be an excellent and practical method of trial fire.

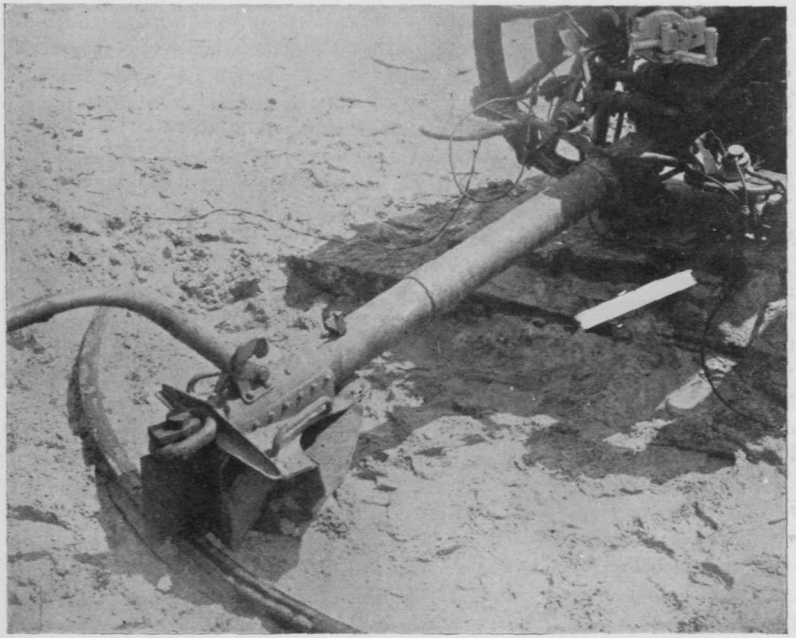

FIG. 2

It is believed that this method will be the rule in service and the use of trial shots will be the exception.

The centers of impact of four-gun salvos were readily spotted by the spotting details. Spotting with reference to both the setforward point and the target was used. With a small firing interval, spotting with reference to the setforward point greatly complicated the process and with a 15-second firing interval was almost impracticable.

While more elaborate methods of installing the 75-mm. field gun for instruction firing against moving targets could be designed using concrete, a rack and pinion, etc., it is believed that the above installation provides a simple emplacement which can be improvised at most posts. Almost the entire operation of a major-caliber battery can be simulated with this installation and, due to the

relatively small cost of the ammunition, a much larger number of rounds can be fired. The preparation by the student officers for firing the 155-mm. guns and 12-inch fixed mortars at moving targets was a simple matter when the firing of the 75-mm. guns had been completed.

Generalship in the World War

To discuss a world war only ten years after its conclusion is a dangerous business. Set up opinions and theories; ten more years pass with their additional revelations, and opinions and theories are controverted and overthrown. The danger is especially great when the discussion deals with personal equations. Who were the great leaders? Who was the greatest? Wherein did the superlative lie? A diary is published; an obscure staff officer's memoirs come to light; and it is found that it was not the commander, after all, who gave the order that led for victory, but some subordinate; or that it was the commander who deserved credit for the maneuver, having conceived it, rather than the subordinate who gained glory by carrying it out. For example, it took a decade for military historians to admit that Gaillen was at least equally with Joffre, if not the real hero of the first battle of the Marne. And it is not yet generally recognized that it was Pétain who conceived the elastic defense of the Champagne in July of 1918 and who had actually, for a week, to argue its adoption by Gouraud, in whose name the defense has gone down to fame.

Time enough has passed, however, to permit a fair balancing of the leadership between the two great national groups opposed to each other, and for it to be said that such generalship as was displayed in the World War was on the German side. That the allies won was due not to generalship, but to overwhelming numbers and resources furnished by a newcomer and to a particular type of generalship which could have been successful only under the very circumstances with which it had to deal. It was such a victory as those earlier allies had won over Napoleon a century before.

The three supreme strategic executions of the war were Tannenberg, Lods, and the attack on Gough's fifth army on March 21, 1918. They were all German victories, conceived and carried out by Ludendorff. Whatever his other frailties of character, Ludendorff, it is safe to predict, will take place in the histories of the future as the greatest general of the World War. He alone, it seemed, was able to grasp, to handle, to think clearly in the terms of a new mode of warfare where the machine counted as much as the man, at the front and behind the front, and where war was the business of nations, not alone of armies.

Foch is the more heroic, the more sympathetic figure. He burst into fame at the Marne with his, "My center yields, my right falls back, situation excellent, I attack." He is deified, almost, because he was appointed generalissimo when the allied cause appeared desperate, gathered the allied forces, struck back, and led from victory to victory until Nov. 11. The comment on Foch's forced retirement during the middle of the war is criticism of his superiors for their blindness in failing to recognize and use his genius. But it was not blindness on the part of his superiors; it was failure on the part of Foch. It was Foch's failure in that he could not modify his theory—that the sole business of the warrior was to attack and beat the adversary by force of will even against superior numbers—to conform to a system of trench warfare. When Ludendorff, by his attacks of 1918, had broken the impasse in the trenches; when America sent over its hundreds of thousands to give Foch an overwhelming superiority in numbers, then "attaquez"

was the sesame that opened the door to victory. But even then, Foch was defeated at the outset when Ludendorff out-guessed him and descended off the heights of the Chemin des Dames, May 27, and drove to Château-Thierry. And that Foch had a French army with which to fight, even a country to fight for, was not due to him. It was no will to win, no theory of attack, but the patient, saving leadership of Pétain in 1917 that preserved the French army from what might easily have grown into revolution and a defeatist peace—a service which makes it possible to condone Pétain's disobedience to the war council in the spring of 1918, a disobedience that was partly if not largely responsible for the English debacle of March 21.—*Chicago Tribune.*

The Outlawing of War

The past week has seen the celebration of the hundredth anniversary of the founding of the American Peace Society. The past month has been marked by the acceptance in principle of Secretary Kellogg's proposal of a treaty to outlaw war. And the last few days have witnessed the virtual outbreak of war between China and Japan. Both China and Japan sent messages expressive of an interest in peace to the Cleveland conference. Japan has indicated a willingness to enter into the proposed multipartite treaty renouncing war as an instrument of national policy. Thus precept and practice, in her case, diverge, as they have in so many instances in the past.

* * * * *

The question is of possibility and method. If all states subscribe to the Kellogg formula, *i. e.*, enter into a general declaration renouncing war as an instrument of national policy, the causes of war still remain. There are those who believe that diplomats bring about war to serve their own obscure ends. But the fact is that individuals are the agents through whose efforts the attempt is made to promote the power and economic well-being of the state. The industrial state seeks markets, raw materials and fields for investment of surplus capital. This search brings it into competitions with other industrial states. This competition merely changes its method, not its character, when the state resorts to war. The outlawry of war will not change the fact of competition. It only brings agreement not to use that particular method.

The causes of war remaining, there is always the possibility that some state will violate its agreement not to use the war method. Treaties, broken in the past, may be violated in the future. Thus arises the problem of sanctions—of finding the coercive power necessary to keep a state from violating its agreement, or to punish the violator. An outlawry treaty without sanctions would represent a moral gesture, and as such would have value. But it would not constitute adequate insurance against war. The Kellogg formula does not provide, except by implication, for coercing states into good behavior. Each state regains its freedom of action as against the one breaking the treaty. Consequently, except as it is otherwise committed, the state is free to resort to war or not against the treaty-breaker as its interest dictates. The conclusion seems to be that the major significance of the adoption of the Kellogg proposals, considered by themselves, would be that, whereas now war is a legal procedure, it would become illegal, but possible. The probability of war would depend, as in the past, on the balancing of possible gains against the possibly greater hazard of defeat, greater because of the increased chance that your opponent would be joined by others drawn in because of the illegality of your action.—*Cincinnati Enquirer.*

Compulsory Military Training

The movement in the Methodist General Conference against compulsory military training in schools, while inspired by idealistic motives, we believe overlooks essential, practical considerations.

There is not the slightest danger of this country becoming militaristic. The problem is to maintain forces that are at all adequate to defending the nation, and to giving it an influential voice for world peace.

The United States never will maintain a large peace army. It now has an active force of 135,000 and so is in a class with Mexico, 80,000; Jugo Slavia, 117,000; and Czecho-Slovakia, 120,000. Japan has 210,000 and Spain 218,000.

In lieu of a reasonably adequate regular army, congress has worked out a system of reserves, including as an essential factor the training of officers without whom, as the war demonstrated, no army can be organized. This plan is based on the common sense assumption that young men who are being educated at the expense of the public or of philanthropic endowments have a special obligation to prepare themselves to defend their country if the need should arise. Such an obligation toward nation or tribe has been recognized from the earliest days.—*Kansas City Times.*

The Coast Artillery

There is little to be found in available literature concerning the organization and armament of the Coast Artillery following the Revolutionary War, and that little has to be collated to enable deductions to be made. Prior to 1900 no particular distinction was made between organizations assigned to fixed artillery and those assigned to mobile artillery. To a limited extent the Artillery may be followed by combining Upton's *Military Policy of the United States,* Heitman's *Historical Register and Dictionary of the United States Army,* Ganoe's *History of the United States Army,* Birkhimer's *Historical Sketch of the . . . Artillery, United States Army,* and the Annual Reports of the Secretary of War.

Following the close of the Revolutionary War, the entire Army (except 80 men) was, by resolution of Congress, June 2, 1784, discharged. Among the eighty men, retained to guard stores, was the artillery company of Bvt. Maj. John Doughty, who had succeeded Alexander Hamilton in command.

Act of October 20, 1786, increased the Army to 2040 and organized it as a "legionary corps," which does not appear to have been raised save for two companies of artillery.

Under the resolution of October 3, 1787 the Army was organized into one regiment of infantry and two companies of artillery.

Act of April 30, 1790 brought the artillery to a battalion of 4 companies.

December 27, 1792 the Army became a "Legion" of 4 "Sub-legions," each of which contained one company of artillery.

The act of May 9, 1794 combined the artillery and the engineers into a Corps of Artillerists and Engineers, consisting of 4 battalions of 4 companies each.

The complications of 1798 caused the addition of a regiment of 3 battalions to the Corps of Artillerists and Engineers (act of April 27, 1798), and the following year another battalion was authorized (Act of March 2, 1799), giving the "Corps" 4 battalions and the "Regiment" 4 battalions.

Pursuant to the Act of March 16, 1802 the Artillerists and Engineers disappeared, their place being taken by a regiment of Artillerists—5 battalions of 4 companies each.

Act of April 12, 1808 authorized a regiment of Light Artillery (10 companies, mounted).

Under pressure of impending war, the Artillery was brought to 2 regiments (the 2d and 3d the Artillerists being the 1st), January 11, 1812. In 1813 another regiment was added, and in March, 1814, the three regiments (other than the Light Artillery) became a corps of 8 battalions, the light regiment being retained separately as such. Four of the 8 battalions were assigned to the Northern Division and 4 to the Southern Division, and battalions were numbered serially in each division. Thus it was necessary to specify, as "Company Q, 4th Battalion, Southern Division."

March 2, 1821 the Artillery was organized into 4 regiments, of 9 companies each. A tenth company was added in 1838. Two additional companies were added to each regiment in 1847. The Fifth Artillery was added in 1861.

In 1900 the Artillery was increased and designated Artillery Corps, units were assigned definitely to field or coast service, and a Chief of Artillery added. In the coast artillery, companies were numbered serially, there being no organization higher than a company.

In 1907 the Coast Artillery Corps came into being as a separate arm.

Since the World War the regimental organization has again been revived.

In 1794 interest was aroused in coast defense, and a project of fortification undertaken. This was added to or modified at various time, particularly in 1798, and many forts were constructed—Forts Sumner (Portland), Constitution, Independence (Boston), Adams, Wolcott, Trumbull, Jay, Mifflin, McHenry, Nelson (Norfolk), Johnston (Cape Fear), Moultrie, Pinckney, Johnston (Charleston), Green (Savannah), St. Louis (New Orleans), St. Charles, St. Philip, etc.

These forts deteriorated rapidly and in 1817 a new project of masonry forts was undertaken—a project which continued until the Civil War. Rifled cannon made the masonry fort valueless and we reverted to the system of detached batteries following the project of 1886—modified in 1906.

With railway artillery introduced during the World War, the system of fixed guns lost much of its value and many of our former posts have been abandoned.

Prior to 1900 artillery organizations were transferred on occasion from coast defense to field duties more or less indiscriminately, but between the Civil and Spanish wars changes of station of heavy artillery were not frequent.

In 1793 mounted guns were to be found at West Point, Fort Rensselaer, and Philadelphia. The project of 1794 called for heavy cannon to be mounted, as follows:

Portland	8	New London	12
Portsmouth	15	Groton	12
Cape Ann	8	New York	24
Salem	8	Paulus Hook	16
Marblehead	8	Mud Island	48
Boston		Baltimore	28
Castle Island	36	Norfolk	24
Governor's Island	12	Wilmington (N. C.)	12

Newport	4	Ocracoke	8
Goat Island	20	Charleston	72
		Savannah	24

In 1796 one company of artillery was on the sea coast—at Oconee and St. Mary's, Georgia, and for a number of years only a small part of the artillery manned coast defenses. In 1817 the artillery garrisoned Forts George (Castine), Preble, Constitution, Sewall (Marblehead), Independence (Boston), Warren, Wolcott, Adams, Trumbull, Columbus, Lewis (New York), Wood, Mifflin, McHenry, Severn, Washington, Pike (Sackett's Harbor), Niagara, Shelby (Detroit), Michilimackinac, Nelson (Norfolk), Norfolk, Craney Island, Johnston (N. C.), Moultrie, Johnson (Charleston), Tybee Barracks (Savannah), Point Petre (St. Mary's River), Scott (Point Petre), Charlotte (Mobile), Bowyer (Mobile Point), St. Philip, Petite Coquille (Lake Ponchartrain), and Pass Christian. From this time on the coast has always been well garrisoned except in war or Indian troubles, as in 1836 when no coast fort was garrisoned.

Rifled cannon were introduced in the Civil War but it was near 1890 before equipment of the coast artillery was brought up to date. From that time on development was rapid, and by the period 1912-1915 the American coast artillery had probably become the best in the world.

Foreign Militar Periodicals

The principal subjects of comment in the British military journals for the month of April are: Field Marshal, The Earl Douglas Haig and Mechanization in the British Army.

Army Quarterly, April, 1928

1. Field Marshal, The Earl Douglas Haig—From the British *Army Quarterly* we obtain a short eulogy to the late Commander-in-Chief of the British Armies in France written by two of his comrades in arms, Major-General Sir John Davidson, K. C. M. G., C. B., D. S. O. M. P., and Lieut-Colonel J. H. Boraston, C. B., O. B. F.

The opening paragraph of this eulogy contains the statement that much of the character of Field Marshal Haig can be read in the two mottoes which accompany his Coat-of-Arms, '*Tyde What May*,' and '*Sola Virtus Invicta*'.

The article reviews the high lights of this great English captain's career, emphasizing his habits for hard work, his strong personality, and his devotion to his life's work.

We find him entering the World War as commander of the I Army Corps of the British Army. His distinguished conduct during the battles around Ypres in October and November, 1914, brought him the rank of full general and command of the First Army of the British Expeditionary Force. Upon the retirement of Sir John French in 1915, Field Marshal Haig was appointed Commander-in-Chief of the British Expeditionary Forces.

It is claimed for him that his sense of loyalty to his Army Commanders, to his Allies, and to his Government at home was exceptional in that he continually used himself as a buffer to ease the adverse criticisms of the English Press and

in that he strove to make possible the policy of coordination under a unity of command for the Allies, assuming a heavy role for the British troops under this policy.

After the war his genius of leadership continued to be active in the creation of the British Legion and the British Empire Service League.

Although severely criticized by some Englishmen for certain of his policies during the war, he could never be persuaded into any open controversies and seemed satisfied to leave his reputation to the calmer judgment of future generations.

2. THE PROGRESS OF MECHANIZATION. By Major-General Sir J. Burnett-Stuart, K. B. E., C. B., C. M. G., D. S. O.—In this article the author undertakes to produce an intelligible statement of the problem of "Mechanization." He begins by defining the word "mechanization," militarily, as meaning that the leading role of a force functioning in battle is performed by machines.

His conception of mechanization is that it will make the conduct of war less mechanical in that it will increase maneuverability. War he defines as a scientific game. Stating that we are reaching the point where the tank can be the principal instead of the assistant weapon in battle, he believes that the foot-soldier and horseman are eventually doomed to resign the leading role in war to the mechanized force, reserving their capabilities for duties as occupiers and cleaners of the ground, or as principals where unmechanized opposition is encountered.

The article defines the objectives of the first English Experimental Armored Force as the determination of:

1. Whether a tank battalion was a suitable and practical nucleus for such a force; and

2. What auxiliary units must be associated with it to make it an independent force.

By actual test the first question was answered affirmatively, while the second question has not been fully answered, but definite conclusions have been reached through experiment. The auxiliary units must include airplanes, armored cars, light tankettes, light artillery, antiaircraft artillery, specially trained infantry carried in armored cars, engineers, a signal unit, ambulances, trains, and mobile repair units. So a force of fifty tanks has grown to about 800 vehicles, for which the most vital requirement is the fuel supply.

The intricate system of supply for a mechanized force traveling at the rate of 180 miles per day ties the force to definite limitations in its range of action. The numerous details of the organization and of the materiel of an Armored Force are apt to confuse the mind in reaching a proper perspective of such a force. For this reason the author visualizes it as a force of two R. A. F. squadrons and of some 800 cross-country vehicles of which about 300 are fighting vehicles and the rest auxiliary or maintenance vehicles.

The author then visualizes an armored force attack upon the present day infantry division on the march, and paints a sad predicament for the division commander.

The next question brought out is what is to be done about mechanization?

To this *all* important question, the author answers by explaining the financial difficulties of mechanizing the Army, the organizational difficulties, and the supply difficulties to be surmounted before the mechanization can become an accomplished fact.

Using the Air Force and the Navy as illustrations of truly mechanized services the author continues by stating that the Army is the decisive force of the three, since it fights on the ground, and should progress rapidly toward complete mechanization in order to catch up in modernization with the other two components of defense.

From here on the article theorizes on the proper method of mechanizing the British Army in an effort to promote a definite policy for mechanization.

In summing up the weaknesses of mechanization they are listed as: sensitiveness to ground, pre-occupation with defiles, insatiable thirst for fuel, and delicate mechanism. Its strong points are: its fire power, its speed, its compactness, its armor, and its great remaining energy at all times.

The closing argument for progress in mechanization is that it, together with chemical warfare and other scientific methods generally, will mean quicker and more decisive results, and therefore in the end, less expenditure of life.

Other articles of interest in this number are:

3. A TRIBUTE OF APPRECIATION TO MARSHAL DIAZ. By General The Earl of Cavan, K. P., G. C. B., G. C. M. G., G. C. V. A., G. B. E.

4. THE EVOLUTION OF THE JAPANESE ARMY. By Brevet-Major B. R. Mullaly, 10th Gurkha Rifles.

5. SOME RECOLLECTIONS OF THE ZULU WAR, 1879. Extracted from the Unpublished Reminiscences of the late Lieut.-General Sir Edward Hutton, K. C. B., K. C. M. G.

6. COERCIVE MEASURES ON THE INDIAN BORDERLAND: BLOCKADING THE MAHSUDS. By Captain C. Collin Davies, Ph. D. (Cantab.), Member of the Royal Asiatic Society.

7. THE GERMAN OFFICIAL ACCOUNT OF THE WAR. The Railway Volume.

8. EXAMPLES OF WELLINGTON'S STRATEGY. By Major-General Sir W. D. Bird, K. B. E., C. B., C. M. G., D. S. O.

The Journal of the Royal Artillery, April, 1928

1. A DIVISION IN FUTURE WAR AND ITS PROBLEMS. By Major-General Sir Edmund Ironside, K. C. B., C. M. G., D. S. O.

2. THE EXPERIMENTAL MECHANISED FORCE. By Colonel Commandant R. J. Collins, C. M. G., D. S. O.

3. N/5 R. A. IN THE ZULU WAR OF 1879. By Major-General J. C. Dalton, Colonel Commandant, R. A.

4. GROWTH OF ARTILLERY TRAINING. By Major C. A. L. Brownlow, D. S. O., R. A.

5. COMMUNICATIONS AND CLOSE SUPPORT. By Captain C. T. Beckett, M. C., R. A.

6. ARMY AND ROYAL AIR FORCE COOPERATION. By Lieutenant A. P. C. Hannay, M. C., 2/Battn. The Queen's Own Cameron Highlanders.

7. REORGANIZATION OF DIVISION ARTILLERY. By Major H. C. H. Eden, M. C., R. A.

8. THE INFLUENCE OF THE SIX-WHEELER UPON DIVISIONAL ADMINISTRATIVE QUESTIONS. By Lieut. W. B. V. H. P. Gates, M. B. E., R. A. [illegible] C.

9. SYNTHETIC PETROL. By Captain C. A. P. Murison, M. C., R. A.

10. THE ARTILLERY ARMAMENT OF AN INFANTRY DIVISION. Translated by Brig. Genl. W. Evans, C. M. G., D. S. O.

11. A Morning's Shoot in Iraq. By Lieut. Genl. Sir George MacMunn, K. C. B., K. G. S. I., D. S. O., Col. Comdt., R. A.

The Journal of the United Service Institution of India, January, 1928

1. Innermost Asia and the Story of China's Central-Asian Expansion. A Lecture, By Sir Aurel Stein, K. C. I. E., F. B. A.

2. The Suppression of Riots, By Captain and Brevet Major H. P. Radley, M. C.

3. The Fuel Problem. By Lieut-Colonel F. D. Frost, C. B. E. M. C.

4. With the Allies in Siberia, 1918-1920. By Colonel B. W. Shuttleworth.

5. Mobilization as it Affects the Regimental Officer. By Captain G. L. Mold.

6. Chemical Warfare. By Colonel A. H. C. Kearsey, D. S. O., O. B. E.

7. Educate the Soldier. By Captain G. E. Hamill.

8. The East India Company's War Medals, By Lieut.-Colonel J. Alban Wilson, D. S. O.

9. Waterloo—A Lecture, by Captain R. G. Williams.

10. Distribution in Depth, By Colonel H. Rowan-Robinson, C. M. G., D. S. O.

11. Some Notes on the Operations Leading up to the Battle of Tuz Kumatli in Mesopotamia in April, 1928, By Bt. Lieut-Colonel H. E. Crocker, C. M. G., D. S. O.

12. The Impressions of A Company Commander During Brigade Training in Egypt, February, 1925, By Captain R. J. Tuke.

13. Some More Early Articles of War, By Captain H. Bullock.

Canadian Defence Quarterly, April, 1928

1. Field Marshal Earl Haig of Bemersyde.

2. Japan and Manchuria. (With Sketch Map.) By Captain M. D. Kennedy.

3. The Canadian Militia: Universal Service. By Colonel C. F. Hamilton.

4. Air Services in Canada. (Illustrated). By Group Captain J. S. Scott, M. C., A. F. C., p. s. a., R. C. A. F.

5. Cruisers.

6. "By the Confidence Which He Inspires . . ." By Major R. H. Dewing, D. S. O., M. C. R. E.

7. Military Effort in the Great War. The British Empire and the United States. By Lt.-Col. W. Bovey, O. B. E., the R. H. of C.

8. The Vickers Light Tank. By Major T. V. Scudamore, V. D., R. of O.

9. Morale. By Captain M. F. Macintosh, P. P. C. L. I.

10. The Trench Magazine. By Captain W. W. Murray, M. C., R. of O.

11. Canadian Medical Units in the Great War. (With Sketch Map.) By Major R. M. Gorssline, D. S. O., R. C. A. M. C.

12. Canadian Educational Institutions in the Great War. IX—Dalhousie College. (Illustrated). By Archibald McMechan, B. A., Ph. D., F. R. S. C.

13. Infantry Ways of Ye Olden Days. By Major D. T. McManus, The Argyll Light Infantry.

14. The Human Element in Tanks. By Captain R. M. Jerram, M. C., R. T. C.

COAST ARTILLERY BOARD NOTES

Communications relating to the development or improvement in methods or materiel for the Coast Artillery will be welcome from any member of the Corps or of the Service at large. These communications, with models or drawings of devices proposed, may be sent direct to the Coast Artillery Board, Fort Monroe, Virginia, and will receive careful consideration. W. E. Cole, *Colonel, Coast Artillery Corps, President, Coast Artillery Board.*

Project No. 625, Comments on Reports of Test Firings, 1927, in Connection With Trial Shot Problem for Antiaircraft Artillery.—The 60th, 62d, and 63d, Coast Artillery Regiments each conducted experimental firings for the purpose of obtaining data to test various trial shot methods. The firings in the 60th and 62d indicated that for target practice purposes the method given in Bulletin OCCA July 23, 1926, is most simple and is sufficiently accurate. The report of the 63d C. A. suggests that several other methods are more accurate for use when firing at points other than the T. S. P. In this report Lieutenant W. D. Hohenthal offers an ingenious monograph for rapid calculations of corrections. These reports are under study.

Project No. 626, Proposed Revision of TR 435-55 (Anaylsis of Drill and Analysis of Reports of Target Practice) (With Especial Reference to Score)—This training regulation has been revised and submitted to the Chief of Coast Artillery with the recommendations of the Coast Artillery Board.

Project No. 627, Issue of Outpost Wire, Type W-44, Temporarily in Lieu of Field Wire Type W-40.—The Signal Corps has in stock a considerable quantity of standard twisted pair outpost wire, type W-44, with heavy insulation, as well as a small quantity with light insulation. It was suggested by the Signal Corps, in the interest of economy, that the using branches consider the use of this wire in place of field wire, type W-40, until the War stock of Type W-44 becomes exhausted. This proposal is under study by the Board.

Project No. 628, Tool Equipment, Type TE-5 (Inspectors Pocket Kit)—This study was suggested by the Signal Corps with a view to elimination of some of the tools in the Inspectors Pocket Kit. Being studied by the Board.

Project No. 629, Test of Gunner's Quadrant, T-1.—This quadrant is an improvement on the Gunner's Quadrant M 1918. It was manufactured in accordance with suggestions by the Ordnance Technical Committee. It has been used in connection with artillery drill and target practice at Fort Monroe and Fort Story.

Project No. 630, Experimental Emplacement for 155-mm. Guns.—This experimental emplacement was constructed in the Canal Zone with a view to facilitating the traversing of the 155-mm. gun when firing against moving naval targets. It is believed by the Coast Artillery Board that the design is satisfactory and should be adopted as standard.

Project No. 631, Preliminary Tests of Sound Locators, T-4.—New exponential horns, similar to those tested at Aberdeen in 1927 are now in the hands

of the 61st Coast Artillery for preliminary tests, prior to their use in the searchlight tests to be conducted at Fort Humphreys in September and October.

Project No. 632, Thompson Spotting Device for Antiaircraft Artillery.—Captain L. H. Thompson, C. A. C. (DOL) submitted plans for a device to read deviations of bursts without the laborious plotting operations now used; also, charts to use with the device permitting corrections during fire. Although ingenious, the system promises to be less accurate for calculation of hits than the present base-line plotting system; and the correction charts will require enough time to spoil this value in those rare opportunities in war when fire can be adjusted on a target.

MAXIM LXXIII

The first qualification in a general-in-chief is a cool head—that is, a head which receives just impressions, and estimates things and objects at their real value. He must not allow himself to be elated by good news, or depressed by bad.

The impressions he receives either successively or simultaneously in the course of the day should be so classed as to take up only the exact place in his mind which they deserve to occupy; since it is upon a just comparison and consideration of the weight due to different impressions that the power of reasoning and of right judgment depends.

Some men are so physically and morally constituted as to see everything through a highly colored medium. They raise up a picture in the mind on every slight occasion, and give to every trivial occurrence a dramatic interest. But whatever knowledge, or talent, or courage, Nature has good qualities such men may possess, Nature has not formed them for the command of armies, or the direction of great military operations.—*Napoleon's* Maxims of War.

BOOK REVIEWS

The A. E. F. In Battle. By Dale Van Every. D. Appleton and Company. 1928. 5¼"x 8". 385 pp. Maps. $3.00.

This book is not a tactical treatise, nor is it a compendium of individual experiences. It is an historical outline of the experiences of the units of the A. E. F., including every major engagement and all of the better known smaller operations. Scarcely three individuals are named throughout the book, since it concerns itself with organizations alone.

The A. E. F. received its first touch of fire in the Bathelémont affair when 250 picked storm troops of the German Army fell on a platoon of the 2d Battalion, 16th Infantry, who had just taken over their portion of the line, in all the fury of a trench raid. From this relatively minor raid the book leads us through Seichprey, Belleau Woods, Château Thierry, the Vesle, St. Mihiel, and other engagements and operations, up to the great effort of the A. E. F. in the Meuse-Argonne offensive. It is a record of hardship and accomplishment of which we may justly be proud. Yet, Mr. Van Every is decidedly temperate and treats friend and foe with equally just consideration. It is mostly a narrative of fact, with opinions expressed only by the use of adjectives.

Mr. Van Every writes partly from personal observation and partly from an exhaustive study of American official sources, as well as considerable German and Allied materiel. It is an authoritative work and one that General Ely commends to the general public, as well as to the student, in his introduction. It will make a valuable addition to the library of the army officer.—B. F. H.

The Legion of the Damned. By Bennett J. Doty. The Century Company. 1928. 5¼"x 7¾". 298 pp. Ill. $3.00.

The story of Gilbert Clare of the Legion, as told to the world through the Associated Press perhaps two years ago, is still remembered—the enlistment of Bennett Doty, of Tennessee, in the Foreign Legion under the name of Gilbert Clare; his desertion in Syria, followed by his capture and sentence to eight years in a French military prison; the remission of the sentence through the efforts of the American consul in Damascus and the American ambassador in Paris; and his final discharge from the Legion. When a man of foreign birth enlists in Le Légion Etrangère he forfeits all claim upon the protection of his own country, but for some reason France made an exception in the case of Bennett Doty.

When the young American legionaire was mustered out, his Colonel said to him; "Gilbert Clare, . . . I know you will write about the Legion. Try to tell the truth. It is true we are hard. But we a· just." Doty has taken the parting words of his commanding officer as his text. "Going back over my experience in the Legion, it hits me that Colonel Rollett s right. Hard the Legion certainly is; cruelly hard I found the life there. But it is just." The book rings true; it carries conviction. There is no bitterness in Doty's memory of his life in the Legion, and his story is a clear, unvarnished statement of facts

as he lived them. There are no tales of unfair, unjust or brutal treatment by his superior officers; and of his lieutenant he says; "He was a slim, stoop-shouldered Frenchman, Vernon by name, with a brilliant war record, holding the Legion of Honor and the Croix de Guerre. He was hard, as they all are in the Legion, but just, tireless in caring for his men, brave as they make them and always ready to share risk and peril. He soon gained a remarkable ascendancy over his wild crew. He spoke perfect English, and as he had a way of singling out men now and then for a moment's talk, often spoke to me in my native tongue. He was killed at Suweida, and there is not a man of his hard-boiled bunch who would not have gone into hell rather than see him die." All through the book Lieutenant Vernon moves, calm, helpful, tireless, brave—the finest type of gentleman and soldier.

There are others of the Legion who stand out in vivid pictures; Budney, the Pole, who was Doty's *copain*—his "buddy," Sergeant d'Etienne calm and efficient, who was always sent after the dangerously drunken Legionaires, and who could quiet a killer with a word; Hans, the German, who was so badly wounded he refused to be moved; Sergeant Krierisch, wounded in the mouth by a Druse bullet while he was standing on the parapet giving an order, and who had to be dragged to the infirmary by three men; Fleury, from Montmartre, marvelous sharp-shooter; and many others, who go through enough of bloodshed, of no-quarter warfare, of desperate hand-to-hand fighting, of tragic suffering, to furnish material for many books.

While there is evidence that the book was written in haste, the narrative style is clear and the descriptions well done—Bennett Doty was a student in Vanderbilt University for one year and in the University of Virginia for three years, specializing in literature and economics. Doty is naturally concerned that it be understood he did not desert until Syria was no longer in a state of war, and in the Preface he says; "At the time I 'made my promenade' . . . as the Legionaires say, the fighting in Syria was over. The French Foreign Legion, as were their Roman forebears, are great road-builders. We had been put to the construction of roads, of forts, of citadels,—a heavy, grinding, gray, monotonous work—and how they do work you in the French Legion. No fighting, no excitement, no nothing. We had what the Legion calls 'le cafard,' a mixture of half-insanity from sheer monotony, and of nostalgia and homesickness. We were fed up, and fed up. That is how we deserted."—E. L. B.

Navigation Laws of the United States. Government Printing Office, Washington. 1927. 5¾"x 9". 536 pp. $1.00.

Of special professional interest to the Coast Artillery officer is the 1927 *Navigation Laws of the United States,* issued by the Department of Commerce and sold by the Superintendent of Documents, Government Printing Office, Washington, D. C. Included in this edition are all laws actually in force. Where sections of the Revised Statutes or other laws have been repealed or amended by subsequent legislation, the repealed portions of the law are omitted, and the present, not the original, reading of the amended sections is adopted. The law has been divided into large subdivisions by subjects, called parts, of which parts there are forty-eight, and three appendices. It is a book that will be found of great value in the Mine Planter service and in every Harbor Defense Headquarters. The book is remarkably well indexed for an official

publication. To give some idea of its interest to Coast Artillery personnel the headings of a few of the parts are quoted: Vessels, Documents of Vessels, Inspections of Steam Vessels, General Pilot Laws, Domestic Commerce, Rules to Prevent Collision, Aids to Navigation, Obstructions to Navigation, Radio Communication, Offenses Against Neutrality, Mines, Torpedoes and Harbor Defenses, Panama Canal, Suits Against the United States in Admiralty, Government Owned Boats on Inland Waterways, Customs Districts, Boundaries and Ports of Entry. It is a source of valuable, authentic information, and will fill a void in every officer's library.—G. F. H.

Sam Houston; Colossus in Buckskin. By George Creel. Cosmopolitan Book Corporation, New York. 1928. 5½"x 8". 341 pp. Ill. $3.00

> Between Hernando de Soto, first to blaze a trail through the wilderness of the New World, and Kit Carson, last of the great frontiersmen, streams an endless procession of tremendous figures—Homeric in courage and achievement, flaming hugely against the dull background of uniformity. Yet not in the whole colorful story of America is there record of a more amazing career than that of Sam Houston, the Colossus in buckskin who won an empire for his country.

This eulogy, quoted from George Creel's splendidly-written life of Sam Houston, is the opening paragraph of a notable contribution to the biographies of great Americans; and as the events of Houston's life unfold under Mr. Creel's experienced and skillful pen, it is plain that the author's estimate of the great frontiersman's place in American history is fully justified by the facts.

Born in Virginia in 1793 of Scotch-Irish parentage, he spent his pioneer boyhood and young manhood in the wilderness of western Tennessee, living for three years with the Cherokee Indians, who he was afterward to befriend at tragic cost to himself. His only education came from worn volumes of great classics brought to the wilderness in saddle bags. Pope's *Iliad* was his constant companion and colored all his after life; his striking oratorical style was inspired by Pope's ringing stanzas; the fearless bravery of a Greek warrior formed his model of conduct.

Serving under General Jackson as an ensign in the Creek War, by his commanding personal appearance and his genius for leadership he became the idol of Tennessee and was senator from that state and then governor—indeed, he was favorably discussed for the presidency. But to keep a woman's reputation unstained he turned his back on his home and his promising career and once more found refuge among the Cherokees. After a period of dejection and hard drinking he decided to cast his lot with the settlers who were pioneering in the Mexican province of Texas and to "to build a new life in a new land."

From this time on the name of Sam Houston cannot be separated from the history of the development of this nation. Leader of the pitiful Texan army in the Texan War for Independence, he showed his military genius by the defeat and capture of Santa Anna in the decisive battle of San Jacinto.

> As president of the Lone Star Republic, he beat down the greeds, impatiences and vagaries of men, building firm and enduring foundations under the tottering superstructure of government; it was his shrewd statecraft, pitting European powers against America, that made annexation possible; in the Senate of the United States, although a Southerner and a slaveholder, he braved the hate and anger of the South by an unflinching stand against slavery and secession; contemptuous of threats against his life,

he returned to Texas to run for governor on a Unionist platform and won against overwhelming odds; confronted with the necessity of declaring allegiance to the Confederate States, he suffered deposition rather than surrender his principles, and walked out of office to the humble cabin that was his home, old, poor and proscribed, but with his head unbowed.

A gigantic figure, well worthy to rank with the illustrious and admired of America, yet, save in the Southwest, born of his courage, Sam Houston is but a name, known in detail only to the inquiring few. Out of the annexation of Texas, an expansion important enough in itself, came the Mexican War that added California, New Mexico, Arizona, Nevada and Utah to the Union; yet schoolbooks either ignore Houston's connection with these epochal events, or else confine themselves to casual and misleading mention. . . . Unless "Old San Jacinto" is known and understood, until he is given his just dues, there can be no clear and proper understanding of the stars that stud the flag. Leave Sam Houston out of the story, and the American chronicle is a thing of gaps and many unintelligibilities, for not only did he make history at various times, but in a great critical period, he *was* history.—E. L. B.

Kit Carson. By Stanley Vestal. Houghton, Mifflin Co. 1928. 5¾"x 8½". 297 pp. $3.50.

For more than a generation there has not been a real American boy who has not thrilled to the daring deeds of Kit Carson, the most famous of the frontiersmen, whose reputed adventures have formed the theme for many a book of the early West. However, there seems to have been one American boy who was not satisfied with what he read, for Stanley Vestal says in the preface of his life of Kit Carson that for thirty years he has felt "that something was wrong with the standard biographies . . . and as research mops up the corners and corrects the errors of the earlier accounts of his [Kit Carson's] career, it is more and more clear that the legend needs rechecking." So Mr. Vestal set himself to "retell the adventures of this great little man . . . for Kit Carson become a symbol of the American frontier, as Odysseus was of the Greek seafarings, and it is important that we understand and love the thing he represents, that Frontier which made these States a Nation."

Mr. Vestal is fortunate in having secured much of his material from original sources. Raised among the Cheyenne and Arapahoe Indians, the tribes with whom Kit Carson was most closely associated, Mr. Vestal knew many of the older Indians who remembered the famous pioneer and from them he learned of incidents in Carson's life not previously published. Mr. Vestal also knew George Bent, the son of the noted William Bent of Bent's Fort, a life-long friend of Kit Carson, and as a result the chapters on Carson's association with Bent's Fort are particularly interesting. Whatever may be said of Kit Carson's life, it was never dull nor inactive; and as one reads Mr. Vestal's biography it is easy to understand his burning enthusiasm for the unconquerable Kit, and to admit a certain amount of justification in the author's assertion that Carson was a composite of Odysseus, Robin Hood, an Arthurian Knight, a Norse hero, and Achilles.

From the time the sixteen year old Kit Carson ran away from the saddler at Franklin, Missouri, to whom he was apprenticed, and joined the Bent wagon train bound for Santa Fé, he merged into the frontier life as one who had found his intended environment. As teamster on the Santa Fé trail, trapper of the Rocky Mountains from Montana to New Mexico, Indian fighter, hunter and trailer, his name became known throughout all the Far West. As captain of the

famous band of trappers and Santa Fé trail guards known as "Carson's Men," his name became known far east of the Missouri River. As guide for Fremont's three expeditions, as scout under Kearny, as dispatch carrier and as government scout for the cavalry in the wars against the Navajo and the Apache, his name became famous all over the world. As commissioned officer in the United States army, he drove the hostile Navajos into Cañon de Chelly and compelled an unconditional surrender of seven thousand Indians; and at the Battle of Adobe Wells, where he attacked the combined camps of the allied tribes and found himself hopelessly outnumbered, he retreated in the face of a superior force after a decisive defeat and got his command safely away—"a triumph which deserves a fame which has been given to lesser men who were better advertisers."

This brave, unaffected, self-sufficient pioneer, who could neither read nor write, but who was a born leader of men, died at Old Fort Lyon in 1868, before he was sixty years old; "and the West may hold his name high above the movie cowboys, the Wild West showmen, the cruel killers, who clamor down the old, loyal, patient courage of the pioneer. For Kit was greater than them all."—E. L. B.

Great Captains Unveiled. By Captain B. H. Liddell Hart. Little, Brown & Company. 1928. 5½"x 8¼". 274 pp. $3.50.

We are told that Captain Hart was responsible for the official infantry doctrine of the British Army. If this be correct, his doctrine clashes harshly with that of our Army authorities, for in his article on Gustavus Adolphus he says:

> Infantry can disorganize an enemy force, can destroy it piecemeal, but only cavalry, because of the momentum of the onslaugh, can *shatter* it and break up its organization irretrievably—in other words, cavalry is the essential arm."

If we accept the teachings of Leavenworth such a statement bids fair to ruin our opinion of Captain Hart's judgment; if we believe him we must doubt the validity of our own doctrine which trumpets the all-importance of the man with the bayonet.

Later the author remarks:

> "Fortunately science has come to our rescue and provided us with an armored and mechanical charger—the tank; when it is realized that the latter is but the modern form of cavalry, and should be used as such, in the swift tank assault of tomorrow we shall see the rebirth of the cavalry charge—and with it the decisive warfare of the Great Captains."

This extract voices one of the key notes of the book—the glorification of the tank. To the casual reader, Captain Hart seems to be impressed with the importance of the armored tank almost to the point of obsession, and if one does not agree with him on this point distrust of the soundness of his other conclusions in this book is bound to result.

This volume is composed of five essays on the military careers of Jenghiz Khan and Sabutai, Maréchal de Saxe, Gustavus Adolphus, Wallenstein, and General Wolfe. These essays are eminently readable and their subject matter is well and interestingly presented, though we may not always be in sympathy with the "lessons" deduced. The facts set forth in these short histories should form part of the education of every officer.—P. D. B.

The Spanish-American Frontier. By Arthur Preston Whitaker. Houghton, Mifflin Co. 1928. 6"x 8¾". 254 pp. $3.50.

Mr. Whitaker's book contains a scholarly, comprehensive account of those momentous twelve years in the history of the United States, beginning with the close of the Revolutionary War and ending with the treaty of San Lorenzo, comprising the period of conflict between the Spanish empire and the newly-independent colonies for the possession of the Mississippi valley.

Immediately after the recognition of American independence by England, the more restless and the more ambitious inhabitants of the thirteen colonies began a great westward migration, crossing over the mountains into the valleys of the eastern tributaries of the Mississippi and concentrating in the frontier settlements of Kentucky and of Holston and Cumberland in Tennessee. Here they came into contact with the Spanish of West Florida and of Louisiana, with their fortified outposts of New Orleans, Natchez, Arkansas, and St. Louis, commanding the lower Mississippi valley.

Between the American frontier settlements and the thin line of Spanish posts lay four great Indian tribes—Creek, Choctaw, Cherokee, and Chickasaw, suspicious of the aggressive "Virginians" and at times openly hostile.

As the Americans continued to come in ever-increasing numbers into country tentatively claimed by Spain, and to demand free access to the Mississippi River, Floridablanca, Spain's able minister, ordered the Mississippi closed to all but Spanish ships, enlarged Spain's claim to the eastern bank of the great river, and sent Guardoqui to Philadelphia to negotiate a treaty with the Congress of the Confederation. The Congress, through its representative, John Jay, had practically decided to concede to Spain the control of the Mississippi River for a generation, a concession which would strangle the economic life of the American frontier settlements, whether Congress realized that fact or not. But before the treaty was signed the news in some way reached the frontier settlements and such a storm of protest arose that no action was taken and Guardoqui failed in his mission.

The frontiersmen felt that they had been betrayed—that they could depend upon Congress for no help whatever in their stand against either Spanish or Indian—and the most turbulent among the settlers began to agitate a movement for secession from the Union. By the end of 1786 many of these "Men of the Western Waters" were openly threatening a break with their country, and Spain, taking advantage of the situation, organized what is commonly known as the "Spanish Intrigue," although the overtures came first from the American side.

Then ensued years of plot and counter-plot, "diplomacy at Madrid and Philadelphia, intrigue at New Orleans and Pensacola," with the destiny of the Mississippi Valley as the stake for which the two sides played. "The most striking contrasts are presented by the personages who move across the stage in this drama. A hard-headed Philadelphia republican is torn from his romance with a French duchess to follow the dusty peregrinations of the Spanish court in pursuit of a will-of-the-wisp treaty about the Mississippi Valley. A suave Spaniard is sent from his master's embassy at Lisbon to keep open house for backwoods emigrants at Natchez, and to smoke the peace pipe with Choctaw headmen and warriors. A British fur trader is one of the chief bulwarks of Spanish power against the Anglo-Saxon tide sweeping down the Ohio and the Tennessee; and one of the pilots of these simple Anglo-Saxon frontiersmen comes

of a French family, plays cards, attends balls, and calls his wife his 'lady' and his backwoods clearing a 'plantation.' And yet despite this confusion of races and nationalities, despite the surface aimlessness, despite the venality or short-sightedness of many an American and many a Spaniard, there were both Americans and Spaniards who knew that out of this welter there would emerge the destiny of one of the world's richest valleys, and more than that, the destiny of a continent."

The policy followed by Spain in the Mississippi Valley showed a high degree of diplomacy, and had three objects. "First, to mollify the American West." Spain did not want to fight the frontiersmen, nor to have them ally themselves with the English. "Second, to encourage a revolution in that region [the American West] by indirect means that would not implicate the Spanish government"; hence, the "Spanish intrigue" which was carried on through Wilkinson and other American agents. "Third, to secure immigrants for Louisiana and West Florida," incidentally depopulating Kentucky and Tennessee at the same time. Spain offered liberal inducements to Americans to settle in Spanish territory, including the free navigation of the Mississippi and all the privileges of Spanish citizens, and Mr. Whitaker remarks that "this seems like a foolhardy experiment, . . . this attempt to turn the Clarks, Seviers, and Robertsons of the American West into faithful vassals of the Catholic king. When Thomas Jefferson heard of this policy of 'settling the Goths at the gates of Rome,' he wrote in high glee: 'I wish a hundred thousand of our inhabitants would accept the invitation. It will be the means of delivering to us peaceably what may otherwise cost us a war.'"

The Goths refused to settle. The establishment of a strong central government in the United States and the election of Washington as President gave them the confidence in their own country which they had previously lacked; they realized that the interests of Spanish and American were irreconcilable; and they loved those settlements they had founded at such a sacrifice.

Events in European diplomacy brought matters to a crisis. At the close of the French Revolution Spain deserted England and signed a treaty with the victorious French Republic. England retaliated by threatening to invade Mexico, and Spain, in order to get American support in such an event, signed the Treaty of San Lorenzo with the United States in 1795, a treaty which was of the greatest significance to this country. "It was a victory not only for the United States over Spain, . . . but it appeased frontier discontent, gave a mortal blow to separatism, and secured the Union from a serious menace to its integrity. . . . It established the frontiers claimed by the United States at the close of the Revolution, and . . . finally, by confirming the United States in the possession of virtually the whole of the east bank of the Mississippi and by validating the American's claim to the free navigation of that river, the Treaty of San Lorenzo laid a substantial foundation for the further extension of the new republic in North America."

It is interesting to know that Mr. Whitaker spent two years in England, France, and Spain in the preparation of this history of Spanish-American diplomacy and had access to the original letters and historical documents in the Spanish archives. Each chapter of the book has its own particular bibliography, including, beside the documents in the archives of Seville and Madrid, official papers from the files of the French Department of Foreign Affairs, Documents from the Library of Congress, colonial records of North Carolina and Georgia, the diaries of George Washington, the Hamilton papers, Jefferson's writings, and many other sources of first-hand information.—E. L. B.

Buccaneers of the Pacific. By George Wycherley. Bobbs-Merrill Company. 1928. 6"x 9". 444 pp. Ill. $5.00.

The scope of this book is outlined on the title page as dealing with "the bold English buccaneers, pirates, privateers and gentleman adventurers, who sailed in peril through the stormy straits or pierced the Isthmus jungle, to vex the King of Spain in the South Seas and the Western Pacific; plundering his cities and coasts and preying on his silver fleets and his golden galleons."

Much has been written of that picturesque group of wild adventurers who scourged the Spanish Main from the sixteenth to the eighteenth century and "performed some of the most marvelous martial feats, both by land and sea, that ever illumined the pages of history with their crimson glow, or shed the alluring light of romance." But of the equally daring and ruthless men who gathered Spanish treasure in the Pacific less had been told; and with the excepton of Drake and Cavendish, the very names of most of these adventurers are unknown to any except students of history. Mr. Wycherley's book, therefore, leads to comparatively new fields of excitement and romance, and is fascinating from the first chapter to the last page.

The author sketches briefly the the historical events preceding these raids on Spanish wealth in the New World, which grew out of the Papal decree giving one-half of the newly discovered lands to Portugal and the other half to Spain. England, France, and Holland, refusing to recognize the right of the Pope "to dispose arbitrarily of great seas, islands and continents that had never belonged to him," officially encouraged their vessels to enter the forbidden seas and to trade with the Spanish settlements in the Americas. When the Spaniards showed disinclination to trade, the guns of the heavily-armed foreign ships forced them to; and Spain, in retaliation, built forts to protect her colonies from aggression. So the foreign ships "took to plain piracy or outright buccaneering, seizing Spanish ships at sea, stealing their cargoes, burning, sinking, selling or stealing the peaceful Spanish merchant ships belonging to private owners"; or landing and looting the less protected settlements.

In time the Spanish cities in the Caribbean became too strongly fortified to be taken by hand-to-hand fighting, and plunder in that part of the world became more and more scarce. "Hence, the eyes of all up-to-snuff buccaneers turned toward the new and fabulously rich haunts of the Spaniard in the Pacific, especially along the western coast of South America. . . . Luring them on, were those grand prizes of the pirates of the Pacific—the golden galleons from Manila and the silver fleets of Peru—each ship of them worth millions in gold, silver and precious stones or rich wares. . . . No wonder that the thronging buccaneers finally burst into the Pacific. English, French and Dutch sailed thither or tramped across the Isthmus, all athirst for the piles of silver bars, the stacks of gold ingots, the fairy bushels of magnificent pearls into which one could thrust his arm up to the elbow, the caskets of gleaming precious jewels, and all the incalculable wealth that came from up and down the Pacific coasts of the Americas to the guarded bottle-neck of Panama, there to be sent across the Isthmus to the treasure-fleets of the King in the Caribbean Sea."

"English, French and Dutch—and indeed men of many other nations—flocked to the treasure lure. And tall stories are told of them all." But, as Mr. Wycherley announced in the beginning, he deals only with those stirring happenings that

have to do with Captains of English blood who sailed against Spain in the Pacific.

The pioneer of them all—and the greatest of them all—was that "Prince of Buccaneers," that "Robin Hood of the Seas," Sir Francis Drake, who sailed from England in 1577 in one of the most famous voyages ever made. Passing through the Straits of Magellan, he was the first Englishman to sail the Pacific Ocean, and his adventures along the west coast of the three Americas make the most romantic reading in the world. With his tiny *Golden Hind* of less than one hundred tons burden and a crew of forty-five men available for duty, Drake captured two of the famous Spanish treasure galleons—the Pacific Plate Ship from Chili and Peru and the State Nao, the treasure ship sailing yearly from Manila to Mexico—each fully armed and manned and each many times the size of the little *Golden Hind.* Returning to England in 1580 by way of the Cape of Good Hope, Drake circumnavigated the globe, proved to the world that the Straits of Magellan and the passage around the Cape of Good Hope were not so difficult to navigate as Spain and Portugal had led sailors to believe, and brought with him enough Spanish gold "to pay the taxes of the country for all of eight years."

Following Drake came a steady procession of expeditions under English leadership, bent on plundering the Spaniard by fair means or foul, captained by men who were humane or cruel according to their nature, but who were without exception brave, resourceful, and skillful navigators.

There was the young favorite of Elizabeth's court, Thomas Cavendish, who followed closely in Drake's path and also captured a State Nao off the coast of California after a five-hour fight. There were Captains Hawkins, Sharp, Harris, and Cook, who led the "Expedition of the Four Captains" across the Isthmus of Panama and fought the desperate Battle of Perico just ten years after the capture and sack of Panama by that fiend in human form, Henry Morgan. Then there were commanders of lesser expeditions—Ambrose Cowley, Edmund Cooke, John Eaton, Edward Davis, William Watling, Peter Harris, Captain Swan, and Captain Townley, all of whom followed the profession of buccaneering with varying success. There was William Dampier, who circumnavigated the globe three times as a common seaman under Captains Swan, Weldon, and Read, and who was given command of two expeditions which resulted disastrously because of Dampier's inability to command men. But he was considered the best sailor, geographer, and hydrographer of his day and wrote most interesting accounts of the adventures he experienced and of the lands he visited. On the second expedition he commanded he had with him a Scotch sailor named Alexander Selkirk who was left behind on the island of Juan Fernandez, was rescued four years later by Woodes Rogers, and whose Experiences gave Daniel Defoe the material for *Robinson Crusoe.*

Dampier circumnavigated the globe the sixth time as chief pilot for Captain Woodes Rogers, "able, taciturn politic," who looted Guayaquil and captured a Manila galleon, the richest prize that sailed the Seven Seas.

Of these hardy adventurers, not one suffered more continuous reverses nor greater hardships than Captain George Shelvocke, who sailed from England with a sister ship under Captain John Clipperton, but who was deserted by Clipperton the first night out of the Thames and did not meet him again until many months later, when they were both in the South Seas. Shelvocke's record includes shipwreck, mutiny, wholesale epidemics, starvation, but he managed to reach China

and get passage to England on an East Indianman, only to face court trials and prison for failing to bring back the rich plunder his financial backers demanded. It is interesting to know that Simon Hately, who was with Shelvocke, was the man who killed the black albatross and gave Coleridge the inspiration for "The Rhyme of the Ancient Mariner."

Captain George Anson of the Royal Navy, who commanded an official plundering expedition sent out by the English government during "The War of the Merchants" in 1740, was the last of the great sea rovers. Disaster followed Anson from the first, and when the expedition reached Juan Fernandez Island, on the flagship, the *Centurian,* only eight men were well enough to be up and out of a crew of nearly five hundred men; and the other ships of the command were in almost as bad a plight. After a stay at the tropical island many of the men recovered and Anson sailed to the mainland of South America, where he captured Payta, with a great treasure. But he reached Guam with one ship only, the flagship *Centurian*—all the other ships had either deserted or had been wrecked. Sailing on, near Formosa Anson captured the huge Manila treasure ship *Covadonga,* with a cargo valued at $3,000,000 and—what was worth more than wealth to the English—the Spanish charts of the North and Central Pacific, showing the direct and safe water routes, a secret Spain had guarded for centuries. Before Anson reached home again France had declared war on England, but the indomitable navigator ran through the French fleet guarding the Channel in a fog and reached London safely.

A sketchy outline of *The Buccaneers of the Pacific* can give no idea of the charm and compelling interest of Mr. Wycherley's narrative style nor of the details of the almost unbelievable adventures and accomplishments of which he tells in this Saga of the Seas. Added to the literary and historical value of the volume is a good index, illustrations reproduced from rare portraits and maps of the period, and an exhaustive bibligraphy for the benefit of those who would adventure further.—E. L. B.

The Jesuit Enigma. By Dr. E. Boyd Barrett. Boni and Liveright. 1927. 6"x 8½". 339 pp. Ill. $4.00.

If one may judge from the list of books most in demand, it would seem that biographies have passed the peak of popularity, but that books on religious subjects are steadily increasing in number and in the interest they are arousing. *The Jesuit Enigma,* by Dr. E. Boyd Barrett. is attracting as much attention as any of the very recent books on religion—perhaps more—and naturally it is meeting with both favorable and adverse comment.

Dr. Barrett was a member of the Society of Jesus for twenty years and gained considerable recognition in the order as a teacher, a writer, and an authority on psycho-analysis and psychotherapy. His writings bear the stamp of scholarship and of clear, analytical thinking; indeed. it is more than probable that it is this ability to find his own mental paths, this capacity for independence of thought, that has resulted in his separation from the order. Dr. Barrett's story shows that he has gone through a tremendous mental and spiritual upheaval and that his complete disillusionment has left him somewhat embittered—the natural result of such an experience.

The Jesuit Enigma is a most comprehensive volume. It gives, first, a history of the order, outlining the organization, the doctrine, the educational system, and

the political influence of the Jesuits; and, second, it analyzes in detail the Jesuit method of training and gives what Dr. Barrett believes to be the effect of this education, espionage, repression, and discipline on the minds and characters of the members of the order, taking his own personal experience as the basis for his conclusions.

Dr. Barrett has aimed at an impersonal, analytical estimate of the value of the Jesuit order to the members themselves and to the Catholic Church as a whole —doubtless he has honestly tried to eliminate all feeling of personal disappointment and prejudice and to present his facts with due respect to both sides of the question; but religion is the most difficult subject in the world to treat dispassionately and fairly, especially when the emotions have been deeply concerned, as is the case with Dr. Barrett. However, *The Jesuit Enigma* must not be classed among those books that have appeared from time to time and have been written with but one purpose in view—to launch a narrow-minded, vindictive attack upon the Catholic Church or some one of its institutions. Dr. Barrett's volume is not an "attack"; it is an analytical criticism, and the author himself makes his motive clear when he asserts: "The critic analyzes, and indicates characteristics, good and bad. The attacker initiates an offensive which has destruction as its aim." Dr. Barrett wishes another point understood; namely, that his criticism of the Jesuit order is not to be confused in any way with a criticism of the Catholic Church. "The Society of Jesus, though often called the 'Grenadier Guards of the Pope,' is no more an essential part of the Catholic Church than is the Horse Guards an essential part of the British Empire. No doubt it has enjoyed the favor of many Popes, just as the Horse Guards has enjoyed the favor of many English kings, but who could with justice pretend that criticism, even caustic criticism, of the Horse Guards implies treason to the British Empire? And who can fairly identify criticism of the Jesuits with disloyalty to Catholicism?" Of course, that is one way of looking at the subject. Just what stand the Catholic Church will take upon this distinction is more than problematical; but there is no doubt that Dr. Barrett has written a human document of unusual power and appeal.—E. L. B.

The Immortal Adventure. By Irma L. Lindheim. The Macaulay Co., New York. 1928. 6"x 9". 279 pp. Ill. $3.50.

Of the writing of travel books there is no end; indeed, one does not wish there should ever be an end, for it is through books that many of us do much of our traveling. Now and then a book of travel appears that carries a greater purpose than the describing of a land or a people; and *The Immortal Adventure* belongs to this limited class. It is a vivid picture of Palestine as it is today, but its purpose is to make the world understand the meaning of the Jewish renaissance in the land so long associated with the history of that race. The author's heart is so passionately with these pioneers of an "Immortal Adventure" who are turning toward the land of their fathers as a place of refuge, she feels so much pity for their hardships and hopes so greatly for their success, that she has achieved a book that is distinctive, with many pages written in a prose that is pure poetry.

The great charm of the book is difficult to analyze, but that it has charm is beyond question. There are pictures of old Palestine—crowded streets inside walled cities; sunset on the mountains of Moab; Arab women washing clothes at the Spring of Siloam; Jericho on its bare hills; the Jaffa road in the early morning;

the rocks and deserts of Judea. There are trips on horseback through the mountains of Northern Galilee and into the country of the Dead Sea; visits to Damascus and Haifa as the guest of Arab sheiks, cultured and aristocratic. But the real reason for Mrs. Lindheim's visit to Palestine is never forgotten—the motive that guides her in each adventure and in each interview—and that is the urge to see and to know just what has been, and is being accomplished in the rehabilitation of that ancient land by the Jews who are emigrating there from all over the world.

It all reads like a chapter in the winning of our own West; the heroism and devotion of talented men and women who have given up lives of ease and positions of honor and responsibility to go to Palestine as leaders of their people; the bravery, determination, and self-sacrifice of the pioneers who face privation, toil, and heat in a desert land to make an ideal come true.

The book is intensely Jewish, but it carries an appeal to people of all races and creeds who are thrilled by the peaceful conquest of a land against tremendous odds; and it will charm all who appreciate beautiful prose beautifully written. The illustrations, which are reproductions of photographs by J. Benor-Kalter, are in themselves works of art; and one cannot help but wish that everyone who felt the urge to write a book could read the preface to Mrs. Lindheim's book—and then ask themselves honestly if they had any message to give to the world that would justify the cutting of a great tree in a forest.—E. L. B.

Jungle Paths and Inca Ruins. By Wm. H. McGovern. The Century Company. 1928. 5¾"x 8¾". 526 pp. Ill. $5.00.

The Amazon Valley is one of the few remaining unknown lands of the world today. Exploration therein is adventuring of the most thrilling type, particularly when carried out by a party of two, as was the case with the author. We are accustomed to refer to the world war as "the great adventure" yet to the reading public no adventures are so thrilling as those carried out by the few rather than the mass. In this book we have real adventure.

From Manáos the explorers left civilization behind and entered the unknown and mysterious jungle regions inhabited by primitive people whose origin is obscured by the mists of antiquity. Dr. McGovern delved deeply into the languages, customs and traditions of the various tribes with which he came in contact. He lived with them, was initiated into their secret society and ate their food. When one reads that their food consisted, at times, of such delicacies as caterpillers and fried ants, one must admit that Dr. McGovern believes and practices that "when in Rome . . . etc."

The author and his companion traversed rapids—innumerable of them—faced danger constantly from the denizens alike of water, land and air and from the many fevers to which the white man is susceptible, and barring the fevers he contracted, came out of the jungle unscathed with the record of his Odessy.

Having completed his journey through the unknown land, he crossed the continent (far from a pleasure jaunt itself) and spent some time around the Inca and pre-Inca ruins of the west coast. There is just enough of the Inca story in his book to make one wish he had remained there longer and had written more, for he brings to the reader the fascination of this race and story told by the traces of its civilization.

Dr. McGovern is a scientist of note and an explorer of considerable repute. In addition he is blessed with a sense of humor and a pleasing style of presenting his experiences and discoveries. There is not a dry chapter in the book and the reader lays it aside with considerable regret.—B. F. H.

The Spirit of the Fifty-Fifth. By Pete Doster. The Star Bulletin Publishing Company, 1928. 5"x 7". 30 pp. Ill.

This small volume is a "brief narrative of the life and history of organizations of the Fifty-Fifth Coast Artillery," and in the most concise manner possible outlines the essential steps by which the old First Massachusetts, the second oldest military unit in the United States, became the Fifty-Fifth, the mobile unit of 155's at present on duty in Hawaii.

The author, a staff sergeant with the Fifty-Fifth, exemplifies the Spirit of which he writes, for he is plainly proud of the organization and the work it has accomplished on Oahu. The numerous full page illustrations are reproductions of photographs of Hawaiian scenes associated with maneuvers of the regiment, and the little book makes a pleasant souvenir of service for the officers and men who have been with the Fifty-Fifth since its formation in 1917.—E. L. B.

Strangers and Lovers. By Edwin Granberry. The Macaulay Company, New York. 1928. 5½"x 7½". 320 pp. $2.00.

A well-written story of a girl, raised in a surrounding of hound dogs, rattlesnakes, alligators, swamp negroes, and cattlemen, who finally marries the man of her choice and comes through harrowing experiences to the usual happy ending.

MAXIM LXI

It is not set speeches at the moment of battle that render soldiers brave. The veteran scarcely listens to them, and the recruit forgets them at the first discharge. If discourses and harangues are useful, it is during the campaign; to do away with unfavorable impressions, to correct false reports, to keep alive a proper spirit in the camp, and to furnish materials and amusement for the bivouac. All printed orders of the day should keep in view these objects.—Napoleon's Maxims of War.