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CARPENTER'S WORLD TRAVELS

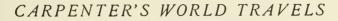
Familiar Talks About Countries and Peoples

WITH THE AUTHOR ON THE SPOT AND THE READER IN HIS HOME, BASED ON A HALF MILLION MILES OF TRAVEL OVER THE GLOBE

"READING CARPENTER IS SEEING THE WORLD"



THE SPORT OF SPORTS Among the Swedes and Norwegians is skiing, and kings and commons pride themselves upon their skill and daring in runs and leaps.



France to Scandinavia

France, Belgium, Holland, Denmark, Norway, and Sweden

> BY FRANK G. CARPENTER Litt. d., f. r. g. s.



WITH 129 ILLUSTRATIONS FROM ORIGINAL PHOTOGRAPHS AND TWO MAPS IN COLOUR

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I would also thank Mr. Dudley Harmon, my editor, Miss Ellen McBryde Brown and Miss Josephine Lehmann, my associate editors, for their assistance and cooperation in the revision of notes dictated or penned by me on the ground.

While nearly all of the illustrations in this book are from my own negatives, these have been supplemented by photographs from official collections in the countries visited, the Publishers' Photo Service, the American Red Cross, and the International Mercantile Marine Company F. G. C.

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FRANCE TO SCANDINAVIA FRANCE-BELGIUM-HOLLAND

DENMARK—NORWAY AND SWEDEN

FRANCE TO SCANDINAVIA

CHAPTER I

JUST A WORD BEFORE WE START

TN THESE travels in Europe I shall ask you to explore a new continent. The old Europe died with the World War, and then a new Europe was born. It did not rise phœnix-like from the ashes, but is still in its swaddling clothes, sprawling about on the floor and trying to grow. Like our own dear babies at home, it shows new aspects each day and the changes are many and frequent.

The social conditions are different. The new woman is rising to an equal plane with the man, and the new man thinks and acts differently from what he did in the past. The nations have new relations to us, and in spirit and fact we are fast becoming part and parcel with them, sharing in their troubles and borrowing the features in which they excel. Our social and business relations are growing closer and, with railway, steamship, and airplane joined to telegraph, cable, and radio, the world is becoming more and more one vast family where distance apart cuts no figure.

And so we are going abroad to visit our cousins on the other side of the water. We have the largest ship ever built and it will take us only six days to cross the Atlantic, travelling the while as comfortably as did the Vicar of Wakefield in his trips from the blue bed to the brown. Landing in France, we shall hire automobiles and move at will over the country, now on the farms, now in the cities, and now on the battlefields where our troops took a live part in the World War. We shall spend some time in Paris and other industrial centres and then cross over to visit our busy Belgian friends. We shall stop awhile in Brussels and Antwerp, go out to see the new library of Louvain, built by Americans, and pass through historic Bruges and Ghent.

Our first view of Holland will be from an airplane, after which we shall come down to earth and take trips along the tree-lined canals, inspecting the wonders of Amsterdam, Rotterdam, The Hague, and the quaint villages of the Zuider Zee. A step farther will bring us to the low, flat land of the Danes, with its luxuriant pastures, helpful hens, and coöperative farms. We shall visit Copenhagen, the seaport guarding the Baltic, and then go northward to the fiords of the Scandinavian Peninsula. Here we shall stop in Christiania, the capital of Norway, and motor awhile through its woods and farms before going to Sweden, where our journey ends in Stockholm, the Island City of Europe.

In these travels, as always, I have tried not to philosophize and do not predict. I have attempted only to give plain, homely pictures of what I have seen, and if these please the reader, I shall be amply repaid.



The airplane companies print guidebooks illustrated with pictures showing how the cities and towns on their routes look from the air. This is a view of Paris, the Seine River, and the Notre Dame Cathedral.



Standing on the monster 30,000 pound anchor at the nose of the ship, Mr. Carpenter is forty feet below the hurricane deck, and as far above the water as a six-story building.

CHAPTER II

A MODERN COLUMBUS

FEEL that I am the Modern Columbus. At the end of the fifteenth century the great Genoese started west across the Atlantic and discovered America. In the youth of the twentieth century I am starting across the Atlantic to discover the New World of Europe. Columbus had a fleet of three little vessels. His flagship, the Santa Maria, was only ninety feet long and twenty feet wide, and its displacement was about thirty-five tons. My ship is the *Majestic*, the biggest boat that has ploughed the sea since God divided the waters. It is more than double the length of the ark of old Noah, and thrice its depth from the hurricane deck to the keel. It is just about seventeen hundred times the size of the flagship of Columbus. To be exact, it has fifty-six thousand gross tonnage, is nine hundred and fifty-six feet long, one hundred feet wide, and a little more than one hundred feet deep.

But figures mean nothing except to an Einstein, an Isaac Newton, or a Humphry Davy. Let me give you some concrete comparisons. Take the Woolworth Building in lower New York. Let the genie who moved Aladdin's palace in the wink of an eye lift it up and lay it lengthwise beside us out here in mid-ocean. The *Majestic* is almost two hundred feet longer, and its cubic contents are, I should say, greater. When the Central Park obelisk was brought from Egypt to New York it filled the steamer upon which it was carried. You could put the Washington Monument, the greatest of all obelisks, on the deck of the *Majestic*, and there would still be two hundred feet between its aluminum tip and the prow, and a like distance from its base to the stern.

Noah's Ark, estimating the cubit at eighteen inches, was four hundred and fifty feet long, seventy-five feet wide, and the Bible says it had only three stories. This flagship of mine has nine decks, and if a ten story apartment house could be built on its keel the roof would not reach the base of the smokestacks. Two such arks could be laid lengthwise inside the *Majestic*, and there would still be three decks above and three decks below. The captain tells me it takes a nine mile walk to see all of the ship. I am sure he is right, for I make a Sabbath Day's journey every time I go from my room to my meals.

Just an item or so to emphasize these dimensions. Take a look at the great anchors which are dropped to steady the ship in the harbours. Beside them the anchors of Columbus' ships were fishhooks. Indeed, the *Majestic* anchors might serve as fishhooks for the gods, the lines being cables of wrought steel, each link of which could encircle a Georgia melon. The *Majestic* has one anchor at each side of her prow, and a third, the largest of all, sticks right out of the nose of the ship. Their total weight is thirty-five tons, and their stems are twice the thickness of a telegraph pole. In order to show you their size I have had myself photographed standing on the biggest one. It is so heavy that it would take thirty horses to haul it over the road. I am out in the open on the prow of the ship, hanging, as it were, in the air, higher

A MODERN COLUMBUS

above the keel than the roof of a six-story building, forty feet below the hurricane deck, and sixty feet above the level of the blue sea below. 1 am not a human fly, and 1 will leave it to your imagination as to how the picture was taken.

Columbus made his famous journey with sails. This ship is driven by turbines that equal the power of one hundred thousand horses all working at once. Take out your watch and feel its weight. Mine weighs five ounces. This ship weighs fifty-six thousand tons and every bit of it is built like a watch. I went in an elevator with the chief engineer down through story after story of the marvellous machinery and put my hands on the steel wheel that controls the mighty force speeding the *Majestic* through the waves faster than a race horse can trot. We are making twenty-five miles an hour as I write, and our possible speed is thirty or more. Still, with a twist of the wrist I could stop the ship, and with another twist, start it going. The captain on the bridge has a thought, and the touch of a button will turn this machinery as he directs.

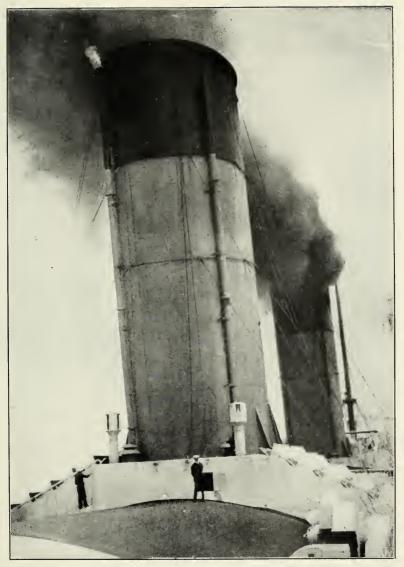
The *Majestic* is now cutting the billows at a mile every two minutes, a rate that would take away the breath of Columbus. He sailed from the Canary Islands to the West Indies in thirty-three days. The first time I crossed the Atlantic to Europe I took the largest steamer afloat. That was in my salad days before my red moustache had sprouted. We were eight days going from New York to Liverpool. To-day about the same trip has been made by airplane in twenty-four hours, while the *Majestic* has made the passage between New York and Cherbourg in five days, six hours, and thirteen minutes.

Were I the Witch of Endor I would raise the spirit of Columbus as she called for that of Samuel for Saul: and I venture that Columbus, when he saw the wonders surrounding him on this great ship, would be more disquieted than was that old prophet of Israel. I should like to show Columbus what makes the force that drives the Majestic. It is a power that was unknown until almost four hundred years after the Santa Maria was launched. It is oil, drawn from the rocky bowels of old Mother Earth. We have eight thousand tons of it aboard, and are burning more than thirty tons every hour, or a half ton a The oil is spraved into the furnaces, and the minute. turning of a screw starts the flow. If the ship were fuelled like the old-style twentieth-century steamer it would need five hundred additional men to shovel in the coal and dump out the ashes. Fuel oil is now used on all the great liners. It propels ships of our Navy from submarines to superdreadnoughts; and it is the need of such oil that is causing the struggle between the Powers for the control of the petroleum fields of the world.

I should like to see the ghost of Columbus looking at the magic lights on this steamer. We have fifteen thousand incandescent bulbs that shine every night, and there are great golden globes set into the ceilings of the palm court, the ballroom, and the dining room. A city of forty thousand people could be supplied with lights by our dynamos, and almost every one of these golden golf balls gives out more light rays than all the grease pots or lamps of fish oil which tried vainly to conquer the darkness of the *Santa Maria*.

Electricity is the Slave of the Lamp on the *Majestic*. It makes the sun shine at midnight. It does also the

t



If one of the giant stacks were laid on its side, two express trains would have room to pass through. The billowing clouds of black smoke come from oil burned under her boilers at the rate of thirty tons every hour.



The Atlantic voyager does not have to scan the horizon for mermaids they travel on the ship with him, and may be seen morning or evening in the electrically lighted swimming pool on a lower deck.

cooking and the heating. It runs the elevators from deck to deck, and in case we strike an iceberg or collide with another ship it will drop the lifeboats down to the sea. It will close, in an instant, the many watertight doors of the vessel. This electricity even penetrates the waters of the swimming tank, turning their emerald green into the richest of gold, and making the pretty girl bathers look like so many ivory mermaids, as they play about in its rays.

Indeed, excepting the lifeboats, there is hardly a thing aboard this vessel that suggests the ships of Columbus. The huge monster is made of steel, and its armour is a steel shell about as thick as your thumb, which keeps out the water. At the level of the sea and below, this shell is double, with an air space between so large that a big dog could crawl through it. But higher up there is only the single steel skin enclosing the vast complexity of machinery and furnishings.

There is nothing on the steamer that recalls the bluff old skipper and the sailors of the days of John and Sebastian Cabot and Americus Vespucius. The captain of this ship is a retired commodore of the British Navy, who has been knighted by his king. Notwithstanding his titles he is more simple and unpretentious than the steward who takes care of my room. I have chatted with Sir Bertram on the bridge and in the chartroom, and he has no more fuss and feathers about him than any of the other efficient captains I have met in a lifetime of travel.

And now let us look at the parlours. When one walks up the gangway of the modern liner he comes into a floating hotel, with elevators that glide noiselessly up and down, with walls of ivory whiteness, and with frescoed and

FRANCE TO SCANDINAVIA

decorated ceilings upheld by great columns like marble. On B deck, eight stories above the steel keel, there are three spacious rooms that run the width of the steamer and cover the length of a short city block. They are walled with plate-glass windows looking out upon the wide sea. These rooms are from twenty-six to thirty feet high, and are fitted up with furniture worth a king's ransom. At one end is the Palm Court filled with real palms whose fronds kiss the ceiling. They are set in tubs as big as hogsheads, and are bedded in flowers growing out of the earth round their roots. Indeed, Columbus might sit among these tropical trees and imagine himself in the West Indies.

Beyond the Palm Court is a restaurant where, if he is not satisfied with the table d'hôte in the dining room three decks below, one can dine at a dollar a bite. Opposite, across a wide lobby, is the lounge which is almost as long as was the deck of the Santa Maria. At one end of the lounge is a stage large enough to accommodate a dozen musicians, and there the orchestra plays for the dances that we have every evening. It is for all the world like the supper room of a New York hotel, with a big dancing space in the centre. At night three or four hundred people sit in the upholstered chairs on the red velvet carpet that surrounds the dance floor, and men in evening dress and richly clad women move over the floor. That is one of the scenes I should like to show to Columbus. The gowns worn by the dancers are as a rule of silk or filmy chiffon. The stuffs are so sheer that a full dress weighs less than a pound. But that dress is worth more than its weight in gold. If any one should doubt this, here are the figures: An ounce of gold is worth twenty

A MODERN COLUMBUS

dollars, and a pound avoirdupois would be sixteen times that, or three hundred and twenty dollars. Many of the gowns seen on this floor every night cost more, and yet one might squeeze them up in one hand and ram them into a tumbler. Nevertheless, some of the girls on this ship don a new dress every evening.

But all this is vanity! In the words of King David, "Yea, it is lighter than vanity." Christopher Columbus, with the odour of the salt junk and slumgullion of four centuries ago in his nostrils, would be more interested in the housekeeping arrangements of this mighty ocean hotel. I shall take his spirit with me down a half dozen stories and show him the kitchens, the butchers and the bakers. and the store rooms filled with supplies enough to feed fat these five thousand people who have brought their greedy stomachs aboard. I have not space to tell how Columbus cooked for his men, but the ranges for preparing the chops and the steaks on this vessel are as big as a dining table seating a dozen, and are kept red hot by electricity. In addition, there are the open fires for cooking roasts and game upon spits as it was done by Robin Hood and his band in Sherwood Forest before the days of Columbus, and there are great steel kettles for soup, each of which holds as much as a bath tub, and breathes out steam like a factory.

The spirit of Columbus would see a hundred lamb chops on the stove at one time; and, in the bakeshops, biscuits and rolls shovelled out of ovens into baskets each holding four bushels. The *Majestic* cooks six thousand pounds of meat every day; it bakes its own bread, mixing a barrel of flour at a kneading, and it cuts the bread by machinery so fast that one loaf of seventy-two slices was chopped up in just thirty seconds by the ticks of my watch.

I despair of describing the storerooms. One of them has six thousand wild birds hung up in a temperature twelve degrees below freezing. As I shivered among them, the steward told me he had on hand one thousand quail, one thousand pheasants, and five hundred snipe. His partridges number seven hundred and fifty, to say nothing of five hundred wild ducks, ptarmigan, and grouse, and genuine Egyptian quail which I dare say are of the same family as those which fed the Israelites in their Sinai wanderings. I had one of these quail for breakfast this morning. It made me think of a reed bird. It was about as big as the hand of a baby.

But let us leave the kitchens and give the ghost of Columbus a look at the linen rooms. The weekly laundry of a ship like this would cover the Santa Maria so that it would be only a needle in a haystack of linen. If it were spread out on the fields of your farm it would cover every inch of fifty acres, and if upon the roofs of New York, it would make white hundreds, yes thousands, of houses. If hung upon clothes lines there would float in the breeze eight thousand bed spreads, ten thousand blankets, and seventy-seven thousand towels. There would be also ten thousand tablecloths, forty-five thousand napkins, and more than five thousand aprons required for the cooks and stewards, as well as doilies and ship's lingerie of one kind and another. The blankets stretched on one line would reach fifteen miles, the sheets sixteen miles, and the tablecloths and napkins just about as far as from Washington to Baltimore. No washing is done on the ship, yet none of the table linen is used more than once.

A MODERN COLUMBUS

I don't know what the weekly wash costs, but I am sure it is at one with the other expenses of a great modern steamship. The liner de luxe floats upon dollars, and the thousands of us who cross the Atlantic must pay the bills. These boats are the last word in luxurious travel. The *Majestic*, for instance, has a suite costing seven thousand dollars and its occupants pay for their passage at the rate of about fifty dollars an hour for six days spent on the water. For the price of a working man's house, they get a drawing room, a sun porch, two bedrooms, a maid's room, and three baths. The charge includes passage for four persons.

Indeed, I can tell you that it takes much more money to go to Europe these days than it did only a decade ago. Then the minimum first-class fare on the great ocean liners was one hundred and twenty-five dollars, and there were comfortable ships from New York to Liverpool with a minimum charge of seventy-five dollars. I have crossed on a second-class liner, that is, a steamer without any first class, for fifty-five dollars, and I once came from London to New York on such a ship for thirty-five dollars. On that trip I had room, board, and the voyage for three and a half dollars a day, or less than the room rate at any of our best city hotels. To-day the minimum first-class passage on a liner de luxe is around two hundred and seventyfive dollars, and that of the second class is one hundred and fifty dollars or more.

And, besides, there are an infinite number of incidental expenses. We have more than two thousand passengers aboard and I venture twelve hundred at least have paid a dollar and a half for the use of a deck chair. At that rate, on every voyage the ship will net eighteen hundred dollars for its chairs alone. Think of paying two hundred and seventy five dollars as the rent of a furnished home on the ocean for six days, and then being charged one dollar and fifty cents to sit on your veranda. Furthermore, I have been told that I am expected to give two dollars more as a fee to the deck steward who folds up this chair every night and unfolds it again in the morning. He does not even move it about, for each passenger is given a place for his chair and is expected to stick to it.

And then the other fees that the steamship publicity literature informs the traveller are proper during the voyage! We are told that the average passenger on a big liner is expected to spend thirty dollars in tips. The table steward will be satisfied with a five-dollar bill, although some pay half as much more or even twice as much. The room steward's fee is another five dollars; the bath steward should have twenty-five cents every time you take a bath; the library steward must have quite as much for each book and sheet of notepaper he fetches; and the smoking-room steward expects a percentage on your profits at pool-betting or poker and the cost of your drinks. The elevator boys count on seventy-five cents to a dollar each, the lounge steward hopes for a bit more, and none but a penny-pincher would think of refusing a dollar or so for the band.

I forgot to mention the dog steward who takes care of your bull terrier or police dog in the kennels on board. We have a score of such passengers, some of them with longer pedigrees than those of their masters. One ought to give a fee also to the attendant who chalks out the diagrams for shuffle board or stretches the net across which one plays tennis with his inamorata of the voyage. A fee is

A MODERN COLUMBUS

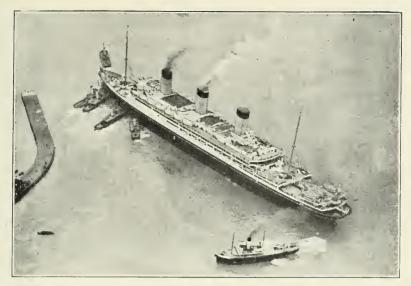
also due to the lady swimming instructor, if you are of her sex; and if not, you hand over a sum to the muscular, half-naked masseur who rubs you down after your plunge in the pool. The physical director in charge of the gymnasium on the hurricane deck also has an itching palm, and there is a multitude of others whose hungry eyes will fairly hypnotize the dollars out of your pockets as you are leaving the ship.

Speaking of money, how the heart of Columbus would swell if he could see the fortunes seemingly squandered under his eyes! You remember his trials and disappointments in persuading Queen Isabella of Spain to finance his adventure. The Queen kept him waiting for years, and in despair he had left the court on his mule for France when he was brought back with the word that she would furnish the money. And do you know how much she put up? All told, the cash was only sixty-seven thousand, five hundred dollars—a little more than small change for the millionaire financier of to-day. She took this amount from her own treasury and borrowed sixty thousand dollars additional, making her total investment one hundred and twenty-six thousand, five hundred dollars. Added to this, Columbus put in about an eighth part of the whole; and eighty thousand dollars was subscribed by the citizens of Palos, the port from which the fleet started forth on that memorable voyage. The ships and their outfits cost two hundred and thirty-six thousand dollars. I take these figures from Fiske's "The Discovery of America," and he believes them too large. They comprise the total expense of that trip of discovery.

Now let me give you some idea as to the cost of my flagship, the *Majestic*. It was constructed by the Ger-

mans at much lower wages than those of to-day, and, if built now, would cost between twenty and twenty-five million dollars. In order to pay any kind of profit on the investment, she must earn for every round trip nearly twice the cost of the fleet which Columbus took across the Atlantic. This ship can hardly last more than twentyfive years, so that in addition to its ordinary profits it has to earn enough to cover a depreciation of about one million dollars a year.

1



To manœuvre the modern giants of the sea in close quarters, a flotilla of tugs is required. They are so huge that only a few of the world's ports can accommodate them.



Along the Place Gambetta is the dock reserved for private yachts. Before the great French kings began its expansion, Havre was a fishing village with a chapel to Notre-Dame de Grâce, hence its name, Havre (harbour) de Grâce.



Including the water route from Havre up the Seine to the heart of Paris, France has more than 5,000 miles of canals. Many of the rivers are joined by canals, and together they form an important asset of French communications.



One-horse carts are the rule among French draymen, and where two or more horses are used, they are harnessed in tandem. The dray horses at Havre compare favourably with the English Clydesdales and Shires, and with the big Belgian animals.

CHAPTER III

OUR MORTGAGE ON FRANCE

HERBOURG on the English Channel is the French port of call for all the American lines, and we stepped out in France within less than six days after leaving New York. Most of our passengers went by rail to Paris direct, a comfortable trip of a few hours, but I have come across country to Havre to start my motor-car journeys at the mouth of the Seine. This port is the natural gateway for freight from the Atlantic not only to Paris, but to all France. Switzerland, southwestern Germany, and the countries beyond. It vies with Marseilles in its tonnage, and upon its docks are landed more than three fourths of the cotton and the bulk of the machinery, fuel oil, and bread stuffs we sell to the French. The sugar of Cuba, the coffee of Porto Rico and Brazil, the silk and other goods brought from the Orient through the Panama Canal, and grain and hides from South America come here.

A fishing village in the times of the Romans, Havre began its development when Francis I was king, but it was built up largely by Napoleon Bonaparte. It is now one of the well-equipped entrepôts of western Europe. The entrance to the harbour is narrow and easily fortified, but within are two hundred acres of great basins where the huge vessels can lie at the wharves and discharge their cargoes into the warehouses, or load them on trains or canal boats for all parts of Europe. The distance to Paris by the Seine is only one hundred and twenty-three miles, and a caravan of boats and barges is always moving that way. The city has eight miles of docks, including one reserved for private yachts, and a dry dock more than one thousand feet long and deep enough to accommodate vessels drawing forty-four feet. It has also a floating dry dock taken from the Germans at the close of the World War, and such good port facilities that it will steadily grow.

But before we start on our travels, I want you to look at France as an American asset. By our loans of the World War we hold a mortgage upon her of more than four billion dollars. This money came out of your pocket and mine when we put our savings into the Liberty bonds. to meet the interest upon which we shall keep on paying taxes for a long time to come. The sum of our loan to France is so large that it equals two hundred dollars from every family in the United States, and as good business people we ought to know the security upon which our mortgage is based. If you had a two-hundred-dollar mortgage on a lot or farm in your neighbourhood, would you not want to look at the property and know something about the man or woman to whom you made the loan? That is just our position as to France, and that is what I would have you remember in reading these chapters on France as 1 find her.

To begin with, what is France, by and large, and just where does it lie? I shall first take up the Republic in Europe, for that is the heart of your mortgage. France in Europe, with Alsace and Lorraine and the other patches it got as a result of the war, contains a little more than two hundred thousand square miles. It is just about equal, to Ohio, Virginia, Kentucky, Indiana, and Missouri put together. It is more than one fifteenth as big as the main body of the United States and it is a very respectable part of all the dry land on the globe. The scientists have measured the globe, and I figure that if the dry land were all gathered together into one block and divided into twohundred-and-sixty-acre farms, one acre in every one of these farms would belong to France in Europe.

But now let us take in addition the colonial possessions, including those added to France by the World War. Put them together, and they equal more than five million square miles. They are about one eleventh of all the land on the earth, so that if the division were made into elevenacre fields, France would own one acre in every such field.

Our mortgage grows better and better. France has in Asia alone a country more than ten times as large as South Carolina. She has in Guiana on the north coast of South America and in the West Indies more land than in ten states the size of Pennsylvania, and her little islands in the Pacific Ocean are larger than Massachusetts and Rhode Island combined. Her biggest possessions are in Africa, where she has, including the vast areas she got from the Germans, almost one third more territory than is comprised in the whole continent of Europe, and more than one and a half times as much land as we have in the United States, not including Alaska.

Although there are large tracts of fertile soil in Colonial France, some of her colonies are not of great value. I have set my foot upon nearly every one of them, and much of the land is not worth more than a sand spit on the ocean. The desert of Sahara, although it has oases which combined are equal in area to the state of Ohio, is for the most part barren; and the jungles of the French Congo and the overflowed lands of Cambodia at the mouth of the Saigon River are not very much better.

Much of the soil of these colonies is in such a poor condition, and occupied by such semi-civilized and mixed peoples, black, brown, and yellow, that I should not like to see Uncle Sam take them over in lieu of his mortgage. Besides, they are scattered far and wide over the world, with stormy oceans between.

It is different with this France from where I am writing. Indeed, if the gods should order a cannibal feast, and served up old Mother Earth as the *pièce de résistance*, France would be the best slice of the tenderloin roast. She is protein all the way through. Or, if I may be allowed to change the figure, she is one of the great clots of cream on the skimmed milk of the globe. Moreover, her position is such that the cream can be taken and made to bring easy money. Situated here at the crossroads of Europe, with England just over the way and perhaps soon to be joined to her by a tunnel under the Channel, with Holland, Belgium, Scandinavia, and Germany as northern customers, and with Switzerland, Italy, and Spain ready to buy at the south, France is besides only six days from America over the main travelled ocean highways.

And now let us test the cream for the butter fat it contains. It is so rich that I could fill a chapter of this book in describing each globule. With the new territories she got by the Treaty of Versailles, France obtained more coal, iron, and water power. Her citizens are of the thriftiest and most industrious of the human race. The soil of France is so fertile and so well farmed that it has been feeding the people since Julius Cæsar invaded Gaul.



From the radio station in the Eiffel Tower in Paris France talks to her colonies in North Africa, while regular airplane flights across the Mediterranean bind her possessions ever more closely to her.



When we see how every scrap is saved and how hard the people work, we cannot be uneasy about the payment of France's debt to us. It is said that a French family can live well on what an American family wastes.



The French lead the world as good farmers, and their country is blanketed with fine crops, each yielding more to the acre than any similar land in the United States. Germany and England are dependent on their imports of foodstuffs from abroad, and to-day the British are really spoon-fed by us. If the New World stopped her supplies of bread and meat for three months the fat body of John Bull would shrink to a shadow. Before the war, France raised ninety-four per cent. of her oats, and about all her sugar. Within a few years after the war her yield of wheat per acre was the highest ever noted in the country and the crop was much better than the average annual production just preceding the German invasion.

Another important item in figuring the value of the French obligations to us is the thrift of the people. There is no nation that gets more out of its soil. The French lead the world as good farmers. Every crop they produce grows more to the acre than is grown on land of the same character in any part of the United States. Where our farmers average only fourteen bushels of wheat the United States over, the French raise twenty bushels on land that is no richer.

Not a square inch goes uncultivated. I rode two hundred miles yesterday, and I could number on my fingers and toes the fences I passed. The waste of our fence corners with the unused space on each side is eliminated. I believe that if France had the land of our fence corners she would raise enough from it to pay five per cent. annually on the vast amount she owes us.

Even the roadways are made to yield money. There are no brush nor weeds lining the highways. There are no cattle running at large. The grass beside the roads is cut with a scythe and used for feed, and nearly every road grows trees of one kind or another, each of which is made to earn its own living.

CHAPTER IV

THROUGH NORMANDY BY MOTOR CAR

UR trip from the Channel to Paris is taken while the harvest is ripening. Most of the way is through Normandy, a land given up to meadows, grain, fruit, and stock raising. The country is one crazy quilt of agricultural riches, the patches of which are sewed together with hedges of the greenest of green. The patches are represented by wheat, oats, hay, and alfalfa which are interspersed with orchards and truck gardens near the big towns.

The fields are clean except for the bright red poppies showing here and there out of the green. There is no waste land anywhere. The soil has been tickled, and it laughs with the harvest. Here they are cutting the hay, using great scythes as in the days of our forefathers. They load the hay into carts drawn by huge Norman horses or put it up in symmetrical cocks that are twice as tall as those of our farmers and will surely shed rain.

I notice especially the cattle and the sheep. They pepper the meadows with white and black spots, growing smaller and smaller as they near the horizon. Normandy is one of the best cattle regions of France. From its milk comes the Camembert cheese and the province is a big dairy for both Paris and London. As I look I am reminded that France is now raising enough meat to feed almost her whole people. I see fine oxen hauling carts

THROUGH NORMANDY BY MOTOR CAR

over the roads, and am told that Brittany has record cows which produce from five to seven pounds of butter per week. I have not had a bit of bad butter during any of my travels in France.

And now take a look out of the tail of your eye as we fly in our motor car through some of the farming lands of the once devastated regions. In another chapter we shall go leisurely, stopping the automobile where we please, to study the country. This is just a snapshot. We are riding at something less than one mile per minute through what I believe to be the most wonderful agricultural display on the face of the globe. I have seen nothing like it in other parts of Europe, or in North America, South America, or Asia. The country is one great blanket of crops, without fences or weeds or any marked divisions to separate the fields, and the different shades of green alone show where one ends and the next one begins. All seem to be equally rich. Every patch is like the best show acre of one of our agricultural experiment stations. and this is so of fields small and large and for hundreds of miles on each side of the roadway.

The wonderful roads make our travel easy. Centuries before railroads had been invented, and long before America was discovered, the kings of France began to build highways. It is now more than five hundred years since the country first had public roads and a regular service for the inspection and repair of its bridges. It has been building roads from that time to this, and has enough inside the Republic, if joined together, to reach from the earth to the moon, with sufficient left over to make eight Lincoln Highways clear round the globe. The national roads of France could reach almost round the earth at the Equator, and its state roads, or those kept up by the departments, could the Atlantic be bridged, might form six lines of communication between New York and Paris, each wide enough for two motor cars to pass. The country roads alone measure three hundred and seventy-five thousand miles.

On all this great road system, there are no tolls to pay. It makes me blush when I think of my motor rides over the ruts from my country place in Virginia, where there is a toll gate every five miles and no toll is less than twentyfive cents. This is in the Blue Ridge Mountains almost within sight of the Washington Monument. I have ridden around Paris within a like radius of the Eiffel Tower and no tolls are charged. The roads are like stone floors evenly laid, and one can go "on high" over the steepest of hills.

Everywhere I go I see great piles of crushed stone laid up on the roadsides. I say laid up, for the stones, or broken rocks, are of even sizes, and they are stacked in pyramids or windrows, each stone seeming to have its particular place. Stray bits of stone are not allowed to cumber the roadway, which is kept as smooth as the paving on a street in the city.

At intervals one sees also piles of Belgian blocks corded up. Each block is four times the size of an ordinary brick, and is evenly cut. These blocks are used for the coping which walls each side of the road and keeps back the grass.

Most of the new roads are of macadam on the old roadbed, but there are also miles of these Belgian blocks laid together as on our brick roads in the States. In some places asphalt is used, but as a rule the highways are of



For more than five hundred years France has been building good roads. She now has mileage enough to reach from the earth to the moon, with sufficient left over to make eight Lincoln Highways clear around the globe.



The fruit trees of our orchards receive no more careful attention than those grown for their wood in France, which has more forests proportionately than America. All are kept clear of underbrush and dead limbs.

THROUGH NORMANDY BY MOTOR CAR

stone or macadam. So far I have seen none of concrete. There are but few towns of the United States that have pavements as good as these country roads of the Republic of France. As a result, one or two horses or yoke of oxen can haul in a two-wheeled cart twice the load of hay or grain drawn by a four-horse team in America. France is issuing bonds for making these roads, in the belief that it pays a nation better to have debts and prosperous farmers, rather than to have no debts while the farmers spend so much to get their goods to the markets that they are kept poor. Indeed, as Tristram Shandy would say: "They do these things better in France."

Another thing they do better is lining their highways with trees. In our motor car rides we go for miles between stately poplars, some of which are as big around as a flour barrel and as tall as a four-story house. The branches of the trees meet above us, overshading the roadway, and we can look on and on between two walls of green to the patch of blue sky in the distance. Japan prides itself on the wonderful avenue which stretches for fifteen miles along the road to the beautiful temples of Nikko. That road is shaded by giant cryptomerias. France has hundreds of avenues quite as wonderful, many of which recall to me the rows of royal palms in Rio de Janeiro, especially those of Rio's botanical gardens. One may still see the damage done these trees by the shells of the Germans. and it makes one's heart swell to ride through the battlefields now once more under crops. The trees are in fairly good condition for quite a distance, then dead stumps ranging from the height of a man to that of a telegraph pole break the symmetry of the

line and scar the landscape. The tops of the stumps are like gigantic toothbrushes, for the wood was simply shredded by the shells of the big guns.

But see! It has darkened! We are flying in our automobile over roads where the trees shut out the sun. There are woods at the right and the left, and the only breaks are long alleys or roads cut at regular intervals. We are passing through one of the great forests of France. How beautiful it is! How well kept! And how thrifty! There are no leaves on the ground, and the undergrowth of young trees is rich. Each one seems to be nursed. There are no broken limbs, and no logs clutter the earth.

France has vast tracts of such forest, and square mile for square mile, far more timber than the United States, notwithstanding the fact that not more than a hundred years ago the eastern part of our country was covered with forests. We have been wasting our timber as a drunken sailor wastes money during his few hours on shore. France has been saving hers. She plants more trees every year and allows none to be cut until it is just right for the market. She will probably have a good hirsute covering of woods when Uncle Sam's head is as bald as an egg.

CHAPTER V

HOW FRANCE WAS MADE NEW

INETY thousand dollars for every family in Washington! Seventy-five thousand dollars for every one in Los Angeles! Fifty-five thousand dollars for every one in Cleveland or Boston! That is what each city would have, could it divide up the sum France has spent in rebuilding since the World War left a great part of her country in ruins.

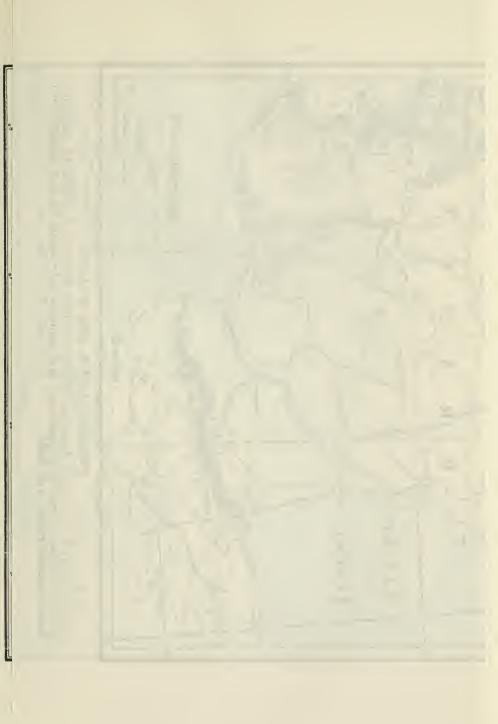
The amount is more than nine thousand millions of dollars. It equals three thousand dollars for every soul in Chicago or Paris, fifteen thousand dollars for every man, woman, and child in Buffalo, and more than that for every citizen of San Francisco or Pittsburgh.

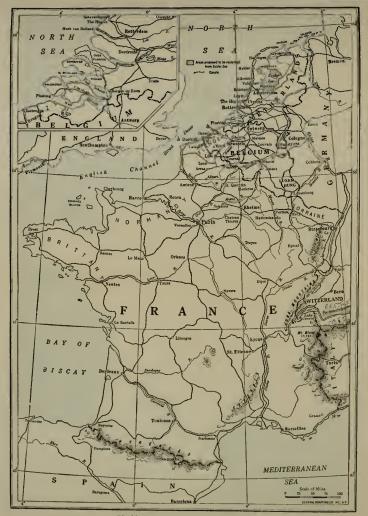
• Nine billion dollars means also an enormous amount of hard work. Had Adam had that sum when he started to earn his living by the sweat of his face, and had there been one thousand additional men outside of the Garden of Eden, all endowed with perpetual life, he could have kept that gang working at five dollars a day from then until now and still have had enough over to pay himself good wages as boss. Had Methuselah had nine billion dollars when he was sixty-nine years of age he could have employed ten thousand men at one thousand dollars a year each for nine centuries, reforming the world and perhaps preventing the flood in which at the age of nine hundred and sixty-nine he was drowned.

The money laid out equals twenty-three hundred dollars per acre for all of the six thousand square miles of the devastated territory, and so far, I believe, almost every dollar has been honestly spent. One can see the results of the work in the substantial farms, houses, buildings, factories, and roads, which will last for ages to come. France has mixed her money with brains and good business. and has built well for the far future. Take the matter of forests. At the end of the war a half million acres had to be replanted or repaired. A third of a million acres had been so utterly ravaged that it will require a half century to bring them back to their normal. France is doing her reforestation on a gigantic scale. She has set out tens of thousands of trees. One hundred million Douglas fir seeds, or enough to reforest forty thousand acres, were furnished by the president of the American Forestry Association. In the Somme department alone, the programme involved planting thirty thousand acres in new trees.

For the last week I have been motoring over the region laid waste by the World War, dictating descriptions and making photographs of the new farms, new factories, and new buildings that have sprung phœnix-like from the ashes. I have had my secretary at my elbow, taking my notes, and a young Harvard junior, who got his early schooling in France, interpreting my talk with the people. In addition, the government has given me a guide, an army officer who was wounded and gassed a dozen times by the Germans and who knows the battlefields as you know the palm of your hand.

We started at Rheims and rode back and forth, making many detours and going through Château-Thierry, along





FRANCE, BELGIUM, AND HOLLAND

Since the days of Julius Caesar these three countries have been the scenes of struggles for empire and stubborn resistance to successive invaders, yet have continued to be among the most productive and densely populated regions of the world.

the Chemin des Dames, by Soissons, St. Quentin, Arras, Albert, and a score of other cities and towns, travelling through the valleys of the Marne, the Aisne, the Oise, and the Somme, and ending our journey here at Lille in the Department of the Nord. Some of the time we were so close to the frontier that I could have thrown a stone from France to Belgium, and again as far south as the Germans got in their rushes toward Paris. Before that I had travelled through other parts of the battlefields so that I have, as it were, almost the whole of re-created France in my mind's eye.

I said re-created France, for the country I have seen is a new France that has risen more rapidly out of the ruins than did San Francisco after the earthquake, or Chicago or Baltimore after their fires. We thought those works of rebuilding enormous. Compared to the great work that has been achieved here, they were like fitting together the toy house of a baby. The reconstruction is so vast and so rapid that I despair of making you realize the marvels that began to spring up even before the peace treaty was signed.

Villages, cities, and factories appeared like magic where were the most terrible ruins! Mines, which were blown up and flooded, have been pumped out and are working again under the mighty shaft houses which have risen above them! Farms once cut up by shell holes and covered with a net of barbed wire, are now smooth and as clean as your garden and laden with crops. New roads and railways now run where there were deep gashes and piles of twisted steel. Indeed, the work recalls that mighty event of thousands of years ago when God divided the light from the darkness, and in the space of six days laid the foundations upon which man has been building since then.

But before I describe what has been done, let me give you a glimpse of the region before the Germans began their work of destruction.

In the first place, the devastated country runs through northern France, from the North Sea to the Rhine, reaching south almost to Paris. It comprises six thousand square miles. It is one sixth as big as Indiana and two thirds the size of Massachusetts. It embraces ten of the richest departments, or states, of the Republic of France and one thirty-sixth of its territory. Divide France into fields of thirty-six acres each, and one acre in every field was fought over. Collect all its people, and one in every six lived in this battle-scarred region and that sixth paid more than sixteen per cent. of the taxes. The actual number was about twice as many people as there are in Philadelphia, or as many as there are in Chicago, Detroit, and Cleveland combined.

To appreciate how dense was the population of this area, let us compare it with that of Indiana, which contains less than three million Hoosiers. You could multiply its population by nine and it would still be less thickly settled than was this section before destruction fell upon it like a thunderbolt from the skies. We have more people to the acre in Rhode Island than in any other part of the Union. There are six hundred for every square mile. These ten departments had eight hundred per square mile, which equals a family of five for every four acres, and that notwithstanding the fact that there are in our sense of the word no large cities or towns.

Four of the states, or departments, were almost as busy

as the region around Pittsburgh. They were beehives of factories and foundries, of steel works and glass works and great textile mills. From under their surface came ninety per cent. of the iron ore and more than half of all the coal produced by France. They made more than three fourths of the pig iron.

In the whole of the devastated region, not one tenth as big as Missouri, there were eleven thousand factories out of which came ninety-five per cent. of the woollen goods and sixty per cent. of the cottons which France made for export and domestic consumption. This region produced also seven tenths of the beet sugar consumed by the people. It had more than twenty-five thousand industrial establishments representing one third of the wealth of the French. In the mills about nine hundred thousand men were at work, and one hundred and fifty thousand men were employed in the mines. Several hundred thousand were engaged in spinning and weaving.

Now look at the conditions just after the Armistice, when France began to count up its losses. When the Germans left, the population of the ten departments had so shrunk that there were only two out of every five people left. Take two out of every family in Boston, Washington, Cincinnati, St. Louis, Cleveland, and Philadelphia, and those cities would be reduced to the condition of this territory at the close of the war. One thousand communes, or counties, had been completely desolated, and two thousand more had suffered great damage. Out of the whole only three hundred and seventy-four were left intact. In some of the departments not a single village was spared, and in the four principal ones two hundred and ninety thousand houses

FRANCE TO SCANDINAVIA

were completely demolished, one hundred and sixty-four thousand torn by projectiles, and more than a quarter of a million seriously injured in one way or another.

One of the greatest calamities was the ruin of the water supply. These French villages relied largely on wells or hydrants on the corners of the streets. There is no running water in the home of the average French peasant. He goes to the village well or to the hydrant to get the water he drinks and uses in cooking. I have seen men, women, and children drawing water in every town I have passed through. In the devastated regions about thirty thousand wells had been totally destroyed, over twenty-five thousand had been poisoned, and more than one hundred thousand had to be cleaned up. In addition, it was necessary to clean out five thousand acres of ponds, and so many streams that if they were joined together they would fill a canal longer than the distance from Kansas City to Paris.

Thousands of acres of farm lands were entangled in a network of barbed wire. Vast areas which had been ploughed up by shells were as hilly as a prairie dog village, and other tracts had holes so big that each would make a grave for an elephant. The mass of earth thrown out would equal the cubic contents of our National Capitol at Washington. About eight million acres of land, two thirds of which had been under the plough, were thought to be ruined. A huge territory had been sown with projectiles, some of them live shells which blew up and killed so many children who played about in the fields that when the work of reconstruction began the little ones had to be guarded and kept away from the workers. The dug-outs and the trenches formed a great net-work that



From ruins such as these northern France was recreated. Compared with the stupendous work done here, rebuilding San Francisco after its earthquake, or Chicago after its fire, was like putting together the toy house of a baby.



"Twenty-four miles from Paris, I stood on this street corner in Meaux which marks the point nearest the city reached by the German invaders in their great drive on the French capital at the start of the World War."

had to be filled. There were three hundred and thirtythree million cubic meters of these, enough to equal a ditch a yard wide, a yard deep, and more than two hundred and forty thousand miles long. If Old Mother Earth had a waist belt of dry land you might have dug a ditch around her, three feet wide and six feet deep, and the work of filling that ditch would be just about one fourth that of filling the dug-outs left here in France.

As to the roads, most of which had been in as good condition as the best tourist routes of New England, there were so many destroyed that, joined together, they would have made ten automobile highways from New York to Seattle. On these roads about five thousand bridges and viaducts were torn down and broken up and of the magnificent trees lining the highways vast numbers were cut off by shells, chopped down with the axe, or so battered that they looked like the dead forest in the Dismal Swamp of Virginia. The same sort of destruction befell the railways. Enough tracks to lay a road from Boston to the Mississippi River were torn up, and after the Armistice, fifteen hundred bridges and tunnels needed rebuilding.

And now just a word as to the factories and mines. Two thirds of the coal pits of the departments of the Nord and Pas de Calais had been blown up or flooded and two hundred and twenty had to be bored over again. The concessions of Lens, Liévin, Courtrai, Marchin, and Drocourt had been totally ruined. Most of the power plants had been systematically plundered and of two hundred gas factories one hundred and fifty were damaged. Ninety per cent. of the textile industries, valued at something like ten million dollars, were wiped out and glass works and chemical works to four fifths that amount were destroyed.

And so I might go on for an hour more giving you new figures of how France suffered in the war. The story is one horrible tale of devastation such as the world has not seen since the 17th day of November, along about 2300 B. C. when God sent the flood and destroyed every living thing upon earth, excepting the men, birds, beasts, and creeping things corralled in the Ark of old Noah.

What we are more interested in is the work of re-creation. This has gone on so rapidly that even the French do not realize the enormous changes that have taken place in the states through which I have toured. Large parts of the country remind one of the frontier towns of our West which spring up in gold-mine stampedes or oil rushes, save that these new buildings of France are substantial and put up to stay. One looks far and wide over farms richer than those of the Mississippi Valley, which at this writing are covered with crops far exceeding in their profit per acre anything we know in America. One sees everywhere on the landscapes the red-tiled roofs of farm houses. and of cities and villages. The laws prohibit any buildings of wood, and all roofs must be of tile, slate, or steel. Some of us lie awake all night before we decide to build a new France has built more than ten thousand almost barn. in one job, and they are all roofed with gray slate or red tiles.

The lands brought back by the plough are more than one eighth the size of Ohio and that state has no soil so fat. The crops are bigger than ever. The last wheat yield showed an increase of eight million bushels over that of the previous year; the oat and hay crops were enormous.

HOW FRANCE WAS MADE NEW

Before the war there were in round numbers on the farms overrun by the Germans, about nine hundred thousand cattle and more than half as many horses, donkeys, and mules. Of sheep and goats there were almost a million, and the hogs were one third as many. Nearly all of these were destroyed or carried away over the Rhine. To-day those farms have almost a half million cattle and an equal number of sheep, goats, and pigs, while new livestock is being brought in every day.

I have seen flock after flock of sheep watched by shepherds, and great numbers of cows tied by long ropes to stakes feeding on grass which reached to their knees. The cows are allowed to eat only that set before them, and they cut off a field foot by foot as though it were mowed with a scythe. There are no fences whatever, and a cow will feed upon clover, going only the length of her rope, while within smelling distance, just beyond, are wheat and oats sometimes running as high as forty bushels to the acre. After she has eaten her allotted area close to the ground, the stake is moved and she cuts down a new patch.

Let me take you across country, and show you some of the new farms of northern France. We are in a Panhard limousine with the army officer and the chauffeur on the front seat. We are going over a road as hard as stone and as smooth as a floor. Occasionally, we see windrows of barbed wire still lying by the sides of the road, while here and there it is cocked up like hay in the fields, or made up into bales to be sold as old iron. Each bale is about a foot thick, two feet wide, and three long. It weighs one hundred and twenty-five pounds and brings four dollars a ton. I can't tell you how much of this barbed wire there was, but it covered tens of thousands of acres and it will probably be years before it is all out of the way.

The greater part of the wire has been taken from the land that can be farmed, and the only places where it still lies in any quantity are in the "Red Zone," made up of the worst ravaged of the battle areas. It equals three thousand farms of one hundred acres each. It will cost more than it is worth to redeem it, and so the government has bought the land from the peasants to plant it with trees. There is no possibility of making it into farm land for another generation because it will take from fifty to a hundred years for the leaf mould from the forest to create a new top soil.

As we go on with our ride we look out at right and left through the trees. The carpet of crops reaches on and on to the wooded horizon. The fields are of all shapes and sizes, and each is as smooth as the newly woven stuffs from the silk mills of Lyons. Here and there in this beautiful blanket a town is rising out of ruins, and patches of great barns with their roofs of red tile stand high over the green.

The fields are of many colours, and just now the declining rays of the sun have turned them to velvet. There are green sugar beets and purple alfalfa. There are patches of golden-ripe wheat, lemon-hued oats, and the dark brown newly ploughed land. Now and then we pass a place where the red poppies are trying to conquer the gold of the wheat. The poppies are about the only weeds to be seen, and we ride on and on through what seems a vast garden. 1 am surprised at the good farming 1 see all over France. In our agriculture every third man is a



Millions of poppies dot the landscape and line the roads for miles at a stretch. Instead of allowing the strips of land bordering their highways to go to waste as we do, the French mow them regularly.



In the Red Zone the great shells ploughed up the chalk subsoil so that it will take fifty to one hundred years to make it fit for cultivation. Still, some of the peasants cling to their ruined land.



Every French family works early and late, and the women are doing quite as much as the men. I see them bent over, hoeing in the fields, of taking turns with their husbands in pushing wheelbarrows along the smooth roads. sluggard. His fields are half ploughed, and weeds line the roadsides. His meadows are peppered with blue thistle or daisies. In the France I am seeing, every patch is clean and of even richness.

The whole nation is working for the new France, especially on the farms. Everyone in the family is out in the fields, and they work from sunrise to sunset. I see many women at work. They hoe and weed the beets and the turnips, they labour in the havfields loading the carts, and they push wheelbarrows filled with all sorts of farm produce over the roads. They even do much of the rough work of building. This afternoon I saw four lusty maidens throwing bricks from one to another on the top of a great brick pile outside one of the towns. A little farther on, a bare-headed old woman was pushing a wheelbarrow, and in the fields by the side of the roads, boys of twelve and fourteen were aiding the harvesters. The same sort of hard work is going on in all the towns and the cities. The municipalities are buzzing like bees after swarming and men and women and boys are toiling long hours at their various iobs.

I spent yesterday in Armentières going through some of the rebuilt cotton- and linen-factories there. The city lies within a pistol shot of the border of Belgium. At the outbreak of the war it had forty spinning and weaving mills. These were all destroyed; much of their machinery as well as all of the copper and brass fittings was carried over the Rhine into Germany. Some of the smokestacks were blown up so that they fell on the buildings and thus aided in their destruction. What happened there was typical of the ruined industrial centres. The region is almost altogether given up to textiles. Before the war more than two thirds of the woollen spindles of France were in the invaded districts, and a great part of the linen spindles and looms. The Germans took away more than a half million linen spindles, and four million cotton spindles. They sent home fifteen thousand cotton looms, and a greater number of looms suited to linens. They destroyed about thirty-two million dollars' worth of combing machinery, and spinning machinery to the value of another twelve millions. They blew up or carried away the machinery of the bleaching, dyeing, and ironing plants. It is said that the loss in the textile industries alone totalled upward of two billion dollars.

I should like to give you a picture of one linen factory which I visited at Armentières. New buildings have risen out of the débris, and the spinning and weaving establishment installed is such as any town in New England might be proud to own. The mill covers several acres. The walls are of brick and glass and the roofs of glass and red tiles. The smokestack is a mosaic of red and white bricks, and as a whole the establishment is very artistic.

Before the war, that mill employed about eight hundred men, but its director tells me that the new and more efficient machinery means much greater output with less labour. In one of the weaving rooms, covering, I should say, half an acre, I found the looms all in place and above them a thicket of leather and rubber belts forming a network covering the whole. Some of the looms were weaving cloth twenty-five feet in width and others fine linens not a yard wide. I saw some looms on which girls were weaving the fine linens used in our country, and some which were turning out "pongee cloth" for lightweight suits for American men. The director says his exports at present are largely to the South American countries. He deprecates our tariff which affects the Franco-American trade.

During my trips through the devastated region I have seen something of the beet-sugar industry. The loss there was more than one hundred million dollars; and the distilleries, breweries, and other agricultural industries were damaged to the extent of hundreds of millions more.

From Armentières I went into the Roubaix-Tourcoing district, another great textile centre, which was practically destroyed, and saw something of the reconstructed plateglass and chemical factories of Chauny, Cirey, and St. Gobain. All of these industries have come back rapidly. Indeed, the recovery of industrial France has proved one of the wonders of our twentieth-century world.

I can sum up the whole in one sentence. All France is at work, the people are cheerful, and they have faith in their future; they are all saving money, and they believe that God lives.

CHAPTER VI

BRINGING BACK THE COAL MINES

AM writing to-day in Lens in the centre of the coalmining region. Before it was almost annihilated by the Germans, the town had thirty-two thousand people. The rows of new brick houses built for the miners show its recovery. These homes were constructed for half what they would cost in the States. The foundations are of stone, and the bricks are better than any we have had in Washington for years. The roofs are of red tile fit for a millionaire's home, yet a two-story, two-family house costs less than twenty-four hundred dollars.

The same sort of work has gone on everywhere, and that with efficiency methods and standardized workmanship. Every town was laid out anew according to the general plan, and the houses were built with due regard to advanced sanitation. These are comparatively new things in France. So, too, is the extermination of the mosquitoes which spread malaria over the devastated region at the time of the war and just after. This region was covered with ponds and water-filled shell holes each of which bred mosquitoes. All these holes were filled and the mosquitoes were wiped out by means of kerosene.

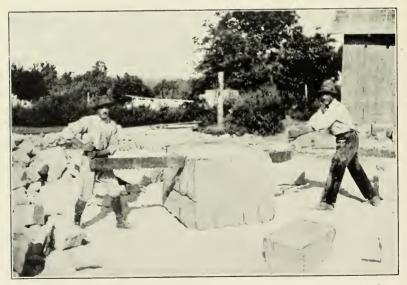
In the plans for the new Lens, generous spaces for playgrounds and parks were provided and the best sites for public buildings and monuments carefully chosen. This is true in all of the new towns, and, in cities of twenty



The Germans were sure that with water and dynamite they had ruined forever the coal pits at Lens, but to-day the mines are being worked again and with better equipment than ever before.



Through the gift of one hundred million Douglas fir seeds, America has had a part in the reforestation of the battle-scarred regions of France. In the Somme alone 30,000 acres were planted with young trees.



Many houses in northern France are built of chalk-like stone, which is so soft it can be cut into building blocks with great saws. It hardens with exposure to the air.

thousand people or more, no structure can be put up without the approval of the mayor. Every town works out its own plan, but all must follow the new regulations for buildings. The inevitable result is a northern France even more beautiful than before. The towns have widened their streets and planted new parks. In Lille the walls and fortifications surrounding the old city have been torn down, to give six hundred acres of new public playgrounds, while back of the ancient cathedral at Rheims, the plans call for a big garden for the use of the people.

As I look over some of the items of the new construction I can get a faint idea of where this vast amount of money has gone. At one time the government ordered one hundred thousand doors and ninety thousand windows, and the same purchase included three million hinges and hundreds of thousands of faucets. It bought iron beds four feet wide by the tens of thousands, and a single order was given for twelve thousand school desks and seats.

All this expenditure has been met by the national treasury. While the war was still on, the government decided that it would pay in full all of the war damages to individuals and towns and demand the money back from the enemy. Every loss was to be paid for, no matter how it occurred. This included furniture, machinery, deterioration, bills for troops quartered in the homes of the people, and the money required to bring the farms back to their old state of cultivation. The law providing for these measures is so long that it would fill about ten columns of an ordinary newspaper.

In rebuilding the factories and restoring the mines, the government furnished a large part of the capital, all of which is supposed to be repaid in the sum received for

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reparations. If the money is advanced by private parties, the government pays the overhead and five per cent. on such advances until it can repay the whole. It has bought machinery as fast as possible for the various factories. It has purchased most of the farms, and located many new boundaries. According to the realestate laws of France, property must be equally divided among all the heirs. This has resulted in tens of thousands of farms no bigger than an American garden; and one man may have in one region a hundred different patches which he has either bought or inherited. In the new locations such ownerships have been, as far as possible, consolidated, and many small farms made into one by means of exchange. Indeed, reconstruction has added enormously to the economic value and beauty of France. But all this takes work, and, with a million and a half men lost by the war, France is still short of man power. Labour has been brought in from Italy, Spain, Algeria, and Tunis. I see Poles and Russians among the workmen, and the street markets are crowded with people of all races and tongues.

The mayor here—a delightful, kind-faced old man who went with me over the town, was in office before its destruction. He was carried off to Belgium by the Germans, and was the first to get back to the ruins when the enemy left. His wife had remained in Lens. When he returned he found his city a mass of crushed bricks and mortar. Its great power plants had been reduced to a débris of broken machinery, while the mines and their workings had been systematically ruined by high-power explosives. The pumps had to work day and night to remove millions of cubic feet of water accumulated in the mine pits. To keep out the inflowing streams, many of them have been lined with concrete walls at a cost of something like three hundred thousand dollars a pit.

The homes for the thousands of men employed in the coal mines about Lens are far better than any of the miners' homes I know in our country, with the exception of those in the Minnesota iron region back of Duluth. There the profits of the municipalities from the leased mining lands are so great that they have better school buildings and public improvements than in any other part of the United States. Here each miner has a little garden, where he can raise vegetables enough for his family. Coal, electric light, and water are free; and the only lack, perhaps, is a bathroom. The average house of this country is without a bath. The mining corporation puts up a community bath house for every neighbourhood, and gives free medical service to the miners and their families. The houses belong to the company, and are rented to the miners for about a dollar per family per month.

Before the war, the mines about Lens produced about one tenth of all the coal output of France. Their annual yield was some four million five hundred thousand tons. Then the mine-owners employed eighteen thousand men, who occupied eight thousand houses. When the war ended every mine was destroyed, and there were only thirty houses left standing. This story is told as to how the destruction was started: The founder of the company was asked to go out with some officers and soldiers. The request was, of course, a command. He was led to the finest of his mines, and, as one of the Germans pressed a button, he saw plants worth millions go into the air with the noise of the terrible explosion set off for the purpose.

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It is wonderful how much concrete has been used in the construction. This is true of all sorts of buildings, and even of the telegraph and telephone poles lining the roads of northern France. These poles are thirty or forty feet high, about a foot thick one way and eight inches the other. They are usually made with great diamond-shaped holes running from the bottom to the top—to decrease their weight, I suppose. They seem very substantial.

The mine buildings are of brick, stone, and concrete. The machinery is essentially modern and beautifully finished. Most of it comes from England and France. 1 climbed to the top of one of the structures and watched the coal as it rose out of the mines. It is hoisted in elevators by steel cables wound over great drums. The cars come up two at once and at the same time two others go down. The loads are dropped into bins, from which the coal falls by gravity into the cars on the railroad tracks below.

As I stood in the shaft house I talked with the director of this great mining company, which, as I have said, formerly furnished one tenth of all the French coal. He is a fair type of the men responsible for remaking France. He is absorbed in pushing the work ahead and it is only by questions that one learns from him what was done by the Germans and what the French are doing now. France is not a great producer of coal. Before the war her output equalled only about one fifteenth of our coal production. It was not one sixth the output of Germany nor one seventh that of Great Britain. It did not supply all of the domestic need, and something like twenty-four million tons were annually imported. Most of the mines were owned by private companies operating on a large scale. Those invaded by the Germans employed one

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hundred thousand workers, or as many as those of all the other French mines put together.

The destruction began with the first days of the war, and continued up to the Armistice. As soon as the Germans came in they forbade any measures being taken to drain the mines or protect the workings. In 1017 they started systematic devastation, which continued until the end of the war. All the pits were dynamited and flooded to such an extent that about one fifth of the coal production of France was cut off. The soldiers went from shaft to shaft blowing up the works, and leaving behind not a single engine, boiler, or train. The electric machinery was taken out, and at the end of three years the destruction of the Lens mines was practically complete. Before the Germans left they set off more explosives, and practically destroyed all the coal-mining machinery of the invaded territory.

The work of reconstruction began as soon as the French were able to get hold of the region. The government organized a Commission of Invaded Mines and through a purchasing syndicate placed orders for pumps and electrical machinery to get out the water. The work went steadily on as more territory came into the hands of the French. Two years after the Armistice nineteen of the worst-damaged shafts had been inclosed in cement, and a year later more than fifty million cubic yards of water had been taken out. The most difficult and dangerous part of the work was in the restoration of the underground tunnels. These have a total length of more than eighteen hundred miles, or enough to reach from San Francisco to Omaha. They often contain asphyxiating gases, and the water-soaked walls are liable to cave in.

CHAPTER VII

AMERICAN FOOTSTEPS ON FRENCH BATTLEFIELDS

O-DAY I shall show you some moving pictures of America's service and sacrifice in the war zones of France. I am in the front seat of a French automobile, with the crank of the big camera beside me, writing the scenario while we travel along. As the finished reel is unwound you will see the most interesting of the sights that we pass. Our speed will be rapid, for these French chauffeurs are Jehus who "drive furiously." But we shall jump from place to place without regard to geography, and stop where we please, increasing the text on the screen as human interest directs.

Many feet of our film will give views of the country. Just now it is carpeted with alfalfa, wheat, oats, rye, crimson clover, and beets, and embroidered with red poppies as big as a teapot, and is of all the colours God made for the changing hues of His footstool. We shall find few blots on the landscape. Every field, road, and forest is "dressed up to the nines" and the whole is like a new Paris gown. I love my own country but I do not see how any Frenchman can help loving France.

The patches of devastation accentuate the beauty of the re-creation. On the chalky hillsides of the "Red Zone," shell holes are still left, and near the battlefields the trees are like a dead forest in Alaska where the fire has swept through.

Some places are as barren as the Sahara. By the roadside are the trunks of trees cut down by the Germans, or it may have been by the Allies themselves for military reasons. This is in old Picardy, where the Somme River flows. This department is a plateau, in some places five hundred feet high. It is a blanket of gravel and clay with chalk underneath. We can see the mine craters which are the white of the chalky subsoil. In one chalk bank, along the roadside, above some bales of barbed wire, I counted six shells.

As we ride on, we pass through village after village Some are miserable, some prosperous, but the meanest is the beloved home of a peasant who lived there before the war wiped out the town, and he is bound to come back. The government offered new land and new houses where the people would be better off than before, but many of them refused to leave. Take, for instance Belloy-en-Santerre, the village near where Alan Seeger was killed. You will remember his poems, among the best written during the war, and especially the one beginning: "I have a rendezvous with Death." It was at Belloy-en-Santerre that Death met him.

The town was reduced to a mud hole, not worth rebuilding. Instead, the government offered each of its families ten acres of land, with good barns and buildings, in a more fertile region not far away. A number of the peasants would not accept, preferring to live in shacks and dugouts until they could save enough to put up new homes. Houses of brick and stone have gone up, and the fields of wheat and oats, each of which contains fifty acres or more, are being worked on the coöperative plan. The town folk own a tractor and other farm machinery in common, and are producing larger crops than before the war. The new village is much like the old one, except that it must conform to the building regulations laid down by the government. The French peasant does not want modern houses and abominates the big windows and the sanitation which our people advise. As a result, the government has had to insist that none of the towns adopted by Americans or others shall be rebuilt except in accordance with the official plans.

I have talked with Miss Belle Skinner, of Holyoke, Massachusetts, who spent something like a quarter of a million dollars in restoring the little town of Hatton-chatel in the department of the Meuse. It was there that the men digging the foundations discovered a great pot of coins which they gave to Miss Skinner. The coins were the savings of a French peasant of centuries ago. They were of all denominations and some of them were coined in the Middle Ages. It was one of the numismatic finds of the century, and Miss Skinner has given some of the ancient pieces of money to the National Museum in Paris.

And just here I wish to end the film with a tribute to Alan Seeger and to two other young Americans who best typify the spirit of our youth during the World War. Seeger was a child of four when I first met his father and mother in Mexico City and was just twentyeight when, in a bayonet charge on the German trenches at Belloy-en-Santerre, he was killed. In the first weeks of the war he enlisted in the French Foreign Legion in which he fought to the day of his death. Reared in the



In an unshaded field of glistening white crosses lies Joyce Kilmer, American soldier-poet, who wrote: "Poems are made by fools like me, But only God can make a tree."



Quentin Roosevelt lies on the side of a hill near where he fell in his fighting airplane. The French keep his grave and monument beautifully decorated with flowers.



The banks of the Marne at Château Thierry are consecrated ground to all Americans. Here our troops hurled back the last forward rush of the Germans, and began the great push that ended in victory. lap of luxury, schooled in the United States and France, a graduate of Harvard, and closely associated with the leading intellectuals of Paris, before the war came he had become known as a poet through his "Juvenilia."

Of delicate health, and without experience or knowledge of hardships, he jumped into the thick of active field service, slept in the trenches, did sentry duty, and fought again and again until the hour of his rendezvous with Death. Some of his most wonderful poems were written on the very eve of the day on which he was killed, and his work will endure as one of the literary landmarks of the war. The royalties from his collected poems have already amounted to many thousands of dollars. Most of this sum Mr. and Mrs. Seeger have given to the Belles Lettres branch of the American Library in Paris; and the remainder they are donating to the libraries established for the French by the American Committee for the Devastated Regions. The French have so appreciated Alan Seeger that they have given three hundred thousand francs to put up, as a monument to the Foreign Legion, a statue of Seeger executed by one of the leading sculptors of France. The Place des États-Unis, where President Wilson lived while at the Peace Conference, was chosen as the site of this monument.

The spirit of Alan Seeger lives in his poem, "I Have a Rendezvous with Death":

I have a rendezvous with Death At some disputed barricade, When Spring comes back with rustling shade And apple blossoms fill the air,— I have a rendezvous with Death When Spring brings back blue days and fair.

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God knows 'twere better to be deep Pillowed in silk and scented down, Where Love throbs out in blissful sleep. Pulse nigh to pulse and breath to breath, Where hushed awakenings are dear. But I've a rendezvous with Death At midnight in some flaming town, When Spring trips north again this year, And I to my pledged word am true, I shall not fail that rendezvous.

It is now one year since I motored from Paris out to a little American cemetery not far from Château-Thierry where, under a plain wooden cross, lie the remains of loyce Kilmer, who wrote the most beautiful poem ever made to a tree. Many of you have, like me, committed it to memory. It reads:

> I think that I shall never see A poem lovely as a tree;

A tree whose hungry mouth is prest Against the earth's sweet flowing breast;

A tree that looks at God all day And lifts her leafy arms to pray;

A tree that may in summer wear A nest of robins in her hair:

Upon whose bosom snow has lain; Who intimately lives with rain.

Poems are made by fools like me, But only God can make a tree.

The cemetery where Kilmer lies is beautifully kept. The grass is green over his grave, but there is no tree within a quarter of a mile and the sun beats down upon the hundreds of small white crosses standing there. Sergeant Kilmer's grave is surrounded by the crosses of littleknown soldiers, and it was only by accident that one of our party found it and brought us to the spot. As I looked at the cross I thought of young Kilmer's poem in which he painted the agony of our Saviour on Calvary and thus made the less of his own sufferings as a soldier:

> My shoulders ache beneath my pack (Lie easier, Cross, upon His back) I march with feet that burn and smart (Tread, Holy Feet, upon my heart.) Men shout at me who may not speak, (They scourged Thy back and smote Thy cheek.)

> > * * * * *

My rifle hand is stiff and numb (From Thy pierced palm red rivers come.)

* * * * *

Lord, Thou didst suffer more for me Than all the hosts of land and sea So let me render back again This millionth of Thy gift. Amen

Could any man leave a better monument than that?

On the same day I saw the grave of Quentin Roosevelt, and bowed my head over the remains of the son of our greatest American since Abraham Lincoln. Young Roosevelt lies on the side of a hill near where he fell with his fighting airplane. There are forest trees near by, and a beautiful monument, which the French keep decorated with flowers, stands over his grave.

CHAPTER VIII

PARIS AT WORK

OME with me and take a look at Paris at work. We are accustomed to viewing the city as one only of pleasure and fashion and art, spiced with such exhibitions of vice as are nowhere else to be seen. The truth is that these are only the froth on the surface, the bubbles that sparkle in the champagne.

The real Paris is serious and sensible, home loving and modest, and engrossed beyond all other great centres in getting a living and laying a nest full of eggs for the future.

During my many visits here I have yet to find a quarter in which work is not going on. The streets are thronged with Tramcars and great motor buses with fronts like traffic. locomotive snowploughs are jammed with labourers and clerks going to and from the shops; taxicabs, rushing like fury, whiz in and out amid big motor trucks loaded with boxes and bales; great farm-carts, in from the country and drawn by two or three huge Percheron horses, fight for their places among donkey wagons and motorcycles. Even men are harnessed up and dragging goods through the streets. The vehicles are legion and all move on the run. 11 makes no difference in what quarter of the city, whether on the boulevards or the side streets, there is no safety for the foot passengers, and the visitor is on the continual dodge to avoid being run over by Paris at work.

Few people have any idea of the enormous amount of



French women have made good in business, thousands helping their husbands manage small shops, or engaging in street selling on their own account. This woman has in her cart the famous French bread, baked in loaves nearly as long as Mr. Carpenter's arm.



France makes "flivvers" of her own that are much better looking than the American car with which they compete. On account of the heavy tax on motor horsepower and the high cost of gasoline, these baby automobiles are popular.



The street merchant survives on the boulevards of Paris. He pays rent to the city for the right to set up on the sidewalk his collapsible table which he covers with eye-catching goods.

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work done in Paris. The city is looked upon as the centre of gaiety and fashion not only for France but for other nations as well; and it is a common saying that all the world comes to Paris to shop. The American sees a crowd of loafers, old and young, strutting up and down the boulevards and the fashionable, well-dressed throng of ladies and gentlemen driving on the Champs Élysées and in the Bois de Boulogne and thinks that this is Paris. The real Paris is a great beehive of industry with tens of thousands of individual workshops, and great factories outside making steel and iron, machinery, railway and building materials, airplanes and automobiles.

Only this week I visited one establishment which covers more than one hundred and twenty acres and has sixteen thousand hands as busy as nailers. It has seventy acres of buildings and is rushed with orders. It makes automobiles, trucks and buses, tractors, motorcycles, and almost everything that goes upon wheels with gasolene as a fuel. I refer to the great Renault factory, which turns out an expensive high-class car. During the war it had tens of thousands of men employed on munitions and motor transportation. Now, it has turned from the sword to the ploughshare, and, with standardized methods, manufactures for peace.

There is another motor-car factory, known as the Citroen, devoted to cars like our "flivvers," only of a lower horsepower and with a much finer body. It is running to its capacity yet cannot supply the demand. Other war factories are making typewriters, farming machinery, furniture, paper, or building materials for re-created France.

In Paris itself there are numerous manufacturing

centres, each ward having its own branch of industry. One district, for instance, has leather shops and carriage shops; and another is devoted to making new bodies and designing equipment for automobiles. At Grenelle there are chemical works, and at Saint-Denis, Clichy, Saint-Ouen, and Pantin are sugar refineries, breweries, and boot and shoe factories. Paris specializes in luxury products, such as jewellery, dresses, furs, and costly novelties. The city manufactures also clocks and bronzes, fine porcelains, wall-papers, and tapestries. It is famous for its embroideries, dress trimmings, and artificial flowers; and it has dye works, glass works, and chemical factories.

Indeed. Paris makes everything under the sun, from pins to locomotives, from buttons to flying machines, and from gloves to beautiful gowns. It has more than twenty thousand women who are engaged on parts of ladies' dresses, and they turn out a product worth about ten million dollars a year. It has thousands working on corsets, not only for Paris but for all parts of France and for shipment abroad. It has five thousand furniture shops, each employing three or four hands. The furniture does not compare in durability with ours, made by machinery; but it is exquisitely carved, and a great deal is gilded. There are two thousand shops here making watches to the value of five million dollars per annum: and other thousands making articles de Paris which means notions and fancy goods of all sorts, including jewellery, artificial flowers, and dainty bits of leather, horn, bone, and ivory. In fact, the French are producing almost anything one can imagine, and they make everything well. No wonder Paris is the world's great shopping centre.

Of course, one of the biggest and best-known industries here is the making of millinery and gowns for the rich and fashionable. Just now the best market is the United States, and every American woman who passes through carries home Parisian frocks and hats. Those who have several should watch out for the Customs. According to our tariff laws no person can bring into the United States more than one hundred dollars' worth of new, unworn clothes without paying duty. The inspectors examine one's baggage, and there is no way of avoiding the tax without lying. Smuggling to-day is more difficult than it was in the past. Formerly thousands of rich Americans came to Paris once a year to replenish their wardrobes; and the wealthiest often went back with eight or ten trunks filled with dresses. Many would not even wear the dresses before sailing, and others would put on a half dozen different frocks in a day, discarding each in a few minutes in order to declare that it had been worn. Some sewed old labels into their gowns and there were other schemes to make the new things look old. It costs one hundred dollars or more to get even a woollen gown made by one of the best Paris dressmakers, and costumes of velvet or silk range from two hundred dollars upward. Lower prices may be put on the bills which the tourists take home, but our customs officers are watchful and such frauds are usually detected.

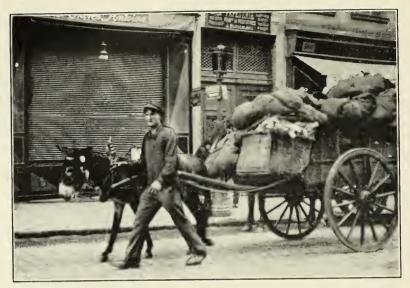
Paris sets the fashions for all the world. Most of our large stores send over their buyers for gowns, hats, and other Paris specialties, to be sold the next season. These buyers will take home only one dress or hat of a kind to show in the windows, and then seek orders for copies. Such articles are called models; and making them is a regular business. They are designed by the great artists in the famous dressmaking houses, where there are exhibitions to which the American buyers are invited by card. These occasions are quite ceremonial, and beautiful women, employed for the purpose, walk back and forth wearing the gowns while the buyers pick out those they think will appeal to the American market. One famous dressmaker this year showed his creations at a supper given in a beautiful garden, where the mannequins walked about among the tables. Later there were exhibitions of the same models for individual purchasers, and copies are subject to sale or export by the establishment in which they originate.

One can pay almost anything she pleases for a fine gown in Paris. The great dressmakers are artists and charge artists' prices for their specialized skill. The average Frenchwoman, however, does not patronize them, nor does she set her foot on the Rue de la Paix except to go window shopping among the gorgeous jewels displayed on each side of the street. Indeed, she hardly knows where Worth, Callot, Jenny, or Paquin are, unless by some lucky chance she has an invitation to their exhibitions of new styles each season. She never thinks of buying hats or gowns at the big houses. If she is fairly well off she studies the style-books and photographs of the frocks designed by these masters; and then goes to her own little dressmaker who lives three or four flights up on a court in a back street. Together they plan out and copy the famous model she chooses. In this way she gets her dress for one fourth the price.

An American woman told me this week how she waited in a dressmaking establishment while one of the Paris



In the shops and workrooms of the Rue de la Paix are born the fashions that enslave the feminine world. The average French woman, however, merely goes window shopping here, then gets her "little dressmaker" to copy the fascinating models displayed.



The Parisian rag picker is out with his donkey before the merchants have raised their iron shutters. In spite of the prevalence of whizzing trucks and motors, a donkey cart may be seen in almost any part of the city.



I he windows of the smaller Paris shops are especially inviting. A nation of individualists, the French lead the world in the creation of novelties that catch the eye and open the purse of the visitor. society leaders, the wife of a prominent French newspaper owner, explained to the dressmaker just how many steel buttons there were to be on each side and how many loops of ribbon were to be tacked on the back of the gown she had ordered. The lady had been to a Worth exhibition and picked out the design, but the little dressmaker made the costume.

The other day I went with my daughter, who has been living in Paris the last two years, to buy a new gown. She has learned thrifty methods in France, and the establishment we visited had no sign facing the street. It is just like one of thousands whence come the clothes not of the actresses, or the wives and daughters of rich profiteers, but of the French women in moderate circumstances, who must now make every franc count.

We directed our taxi to a narrow street in the business section of Paris. The dressmaker lived on a court; and we climbed up three flights of stairs, because the house had not even one of the pill-boxes that serve as elevators in many French business buildings. Madame Marie met us with a smile. She brought out her models and her pictures of the new fashions. The material of the dress had already been chosen, and the wholesale dealer had sent in a bolt of lovely brown velvet to be tried for the effect. Then the little fitter, Mademoiselle Jeanne, was called in, and under her magic, the beautiful creation grew before our eyes like the mango tree of the Hindus. Jeanne threw an end of velvet over my daughter's shoulder; she put a pin here and made a tuck there, and, presto! there sprang into being a copy of one of the most famous dresses recently designed by one of the masters. A twist of another kind of material formed a draped sleeve,

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and within five minutes, we had in the mirror the gown as it would look when completed. The French seldom have patterns, and each dress is made, as it were, on its future wearer.

I am told it is the same with fine head-gear. There are ready-made hats, such as one sees in the windows, but the artistic Paris milliner builds his hat on the head of the buyer. The scissors clip out the lines most becoming, and with a plentiful supply of pins, a bend in this place and a twist in that, the trick is done.

CHAPTER IX

SHOPS LARGE AND SMALL

OTHING shows so well how Paris is working as a visit to the shops. There are tens of thousands of stores, all full of goods and all busy. The store windows are a museum of fine stuffs, novelties, and new creations. Some tiny shops have displays worth a fortune. I stopped this afternoon on a fashionable street before a store not much bigger than a piano box in whose little window was a display of wrist watches, such as, I venture to say, you cannot find in New York or Chicago. Behind the plate glass against a background of black velvet were scores of watches, each as small as a postage stamp and many but little thicker. One, the size of my thumb nail, had a face of platinum encircled with diamonds; and the bracelet to which it was fastened was of pearls exquisitely set. Had I a sweetheart, I would have walked from Berlin to Paris to buy it for her.

Other watches were fastened to ribbons of silk. Some were set in pearls, and some hung on bracelets decorated with diamonds. In a window farther on I saw a collection of nothing but cigarette cases, gold and silver and diamond strewn. In another, that of a famous dressmaker, was a doll dressed as a model. It advertised a new costume; and the face was so artistically cast that the doll might hold an honoured place in almost any museum.

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The shop windows here are better dressed than those of America. In the larger establishments they can hardly compete with New York, but in the little places they are far more artistic than ours. This is true of even the meanest shops in out-of-the-way quarters of Paris. Take a fruit store. Each rosy-cheeked peach lies in a bed of white cotton, strawberries as big as hen's eggs are each placed on a green leaf, and half a dozen blue plums, or three or four bunches of grapes are laid out on the table as though for a banquet. It is the same in the grocery stores where squashes and turnips, green beans and peas are piled up as at one of our county fairs, and the chickens and game are dressed with their heads tucked under their The chickens lie on their breasts, with a little wings. printed price mark pinned to the centre of each rosy back. They are clean enough to kiss and I do not wonder they sell.

These displays are all hidden in the evening. The stores, which open at about nine a. m., close at seven p. m., when every window is covered with a shutter that slides down from the top, making a wall of sheet iron over the front. At the same time the clerks leave, crawling out through a little door in the iron about a yard high, a long procession of women and men issuing forth single file almost like so many dogs. They straighten up immediately, however, and walk off so jauntily that one would never imagine they had been working all day.

Paris has a hundred small shops and factories where Chicago or Philadelphia has one. The French are a nation of individualists, and every little store has its specialty. The business of such stores is often run by the whole family. The wife does not think herself too good to keep the books, serve the customers, or, in fact, manage the shop when her husband is out. And the children of more than school age help too. In fact the whole family is bound up in the little shop as a coöperative enterprise and in it they live the greater part of their home life. The French women are capable, and many a war widow is running a shop formerly kept by her husband, and running it well, too.

But there are also department stores, some of which cover acres and compare favourably with those of the States. Here the volume of business is enormous and the buildings are thronged. In the small shops there are often no price marks, but in the department stores the goods have tags with plain figures, and the foreigner need not be on his guard against paying more than he should.

The clerks everywhere are uniformly courteous and almost always well dressed. The saleswomen wear only black and the floor walkers have long coats like those of the old-fashioned preacher. Many of the clerks have luxuriant whiskers, for in France the hair grows on man's face. I may say also on his head, for we Yankees have seven bald heads where the French have one. There are quite as many young beards as old ones, and some of the middle-aged salesmen who have served me looked as though they had never been shaved. I like to study the whiskers. They are beautifully combed and now and then parted in the middle. Thousands of men wear moustaches, and some have such fierce-looking ones they make me think of Porthos or D'Artagnan, insulted and ready to fight.

There are several department stores here that do a business running into the tens of millions of dollars a

year. One of these, the Bon Marché, is run on the cooperative principle, with the salespeople among the stockholders. I understand the shares are steadily increasing in value from year to year, and that every clerk in the establishment gets a percentage above the amount paid him as wages.

The Bon Marché was founded by the son of a hatter named Boucicault, who began in a small way, but who gradually built up the business into one of the greatest in all Paris. Boucicault married a working girl, and after he died his wife took the business. When she died she made a will leaving it to her employees and assistants. All employees are fed free of charge. They have a luncheon at noon which is much like our dinner. It consists of soup, meat, vegetables, and a dessert. There were one thousand men at the tables the other day when I entered the dining room and several hundred women at meals in the room adjoining. The dining hall, which is six hundred feet long, covers about half an acre, and has eighty windows. I noticed that each clerk had a bottle of wine at his place, and that every one had coffee at the close of the meal.

From the dining rooms I was taken into the kitchens, where at least a score of cooks, scullions, and butchers were at work. When the whole store takes mutton chops for dinner the meat is cooked in grills which open and shut just like a waffle iron. If you would take two iron-barred garden gates and hinge them together so that they could be laid on the coals you might have something like one of these grills. Each will hold a hundred chops, and six hundred steaks or chops can be broiled in twelve minutes. Seventeen hundred pounds of potatoes are fried at the same time and one thousand four hundred eggs can be boiled at once.

Connected with the Bon Marché are lodging houses for the women employees, who are given rooms, linen, heat, and food free of charge. All employees after five years' service have an interest in what is called the Boucicault Provident Fund, consisting of a certain amount of the profits of the house proportionate to the salary received. Four per cent. interest is paid on the accumulations of this kind, and this is added to the capital. After a woman has been employed for fifteen years or a man for twenty, he or she can withdraw this capital, or the same right is given upon reaching fifty years of age. If a girl marries, however, she may draw the entire amount of her capital, irrespective of the term of service.

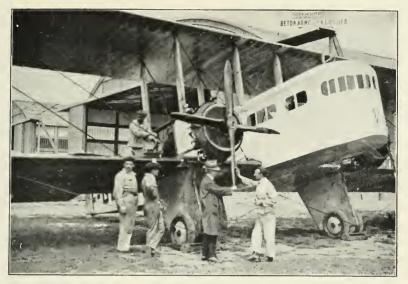
In addition to this there is another fund which provides pensions for such employees as have worked in the store for twenty years or have reached old age. The wages paid are, 1 understand, about the same as those of other establishments, but the employees' receipts largely depend on the amount of their sales, regular commissions on such sales being given.

In many respects it seems to me that the merchants of Paris have poor business methods. The average store has neither cash register nor cash carrier, nor even a cash boy or girl. When one makes a purchase the clerk must carry the article to the three or four bookkeepers who sit behind a counter at one end of the store. Here she shows the goods and her sales slip to a bookkeeper, who copies the items and prices in his ledger with pen and ink.

Just yesterday I bought at the Bazaar of the Hôtel de Ville, a basket trunk as big as a writing desk. The frail

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girl who sold it to me bent half double as she shoved it along through the aisles over the floor of the room, which covered a quarter of an acre, till we arrived at the bookkeepers on the opposite side of the store. I took out my watch and found that it took me just twenty minutes to have the purchase recorded and order the goods sent to my hotel. There is always a long queue of customers about the bookkeepers, and this clogs the business. Indeed, it seems to me that Paris often uses three people to every one in New York or Boston, and that the stores make buying a good deal of a burden.



Just in from Warsaw, halfway across Europe, the airplane express is carefully groomed by expert mechanics for the next trip. France is spending millions each year in subsidies to maintain her air service routes.



Arrivals and departures of airplanes using the Bourget Flying Field are chalked upon bulletin boards like train schedules in our railway stations, while a big map shows just where planes are flying and the air conditions on each route.



The skillful use of dried vegetables and savoury herbs in soups and stews is one of the great secrets of French cookery and kitchen economy. These are often stored in a loft under the roof.

CHAPTER X

HOW PARIS KEEPS HOUSE

EARLY all French city dwellers live in apartments. With few exceptions, there is no such thing as the individual house. Even the rich are mostly confined to one floor, although this may have gorgeous parlours, bedrooms, and all the other quarters of a fine residence. Such apartments have an infinite number of rooms equipped with large mirrors, and walls decorated with stucco designs which often surround panels of satin or silk.

The furniture is more elaborate and less substantial than ours. Indeed, I tremble whenever I sit down on one of these gilt-framed, spider-legged chairs for fear it will collapse and bring me to the floor. And then the upholstery! The colours are so delicate that I feel like spreading my handkerchief over the place where I sit. The French woman's ideal of a well-furnished parlour seems to be that it should have a great deal of furniture, including many lamps and bric-à-brac of all shapes and sizes, filling every inch of available space on piano, table, and mantel. As I look around me in one of these homes I am reminded of the terrified darky who was out ploughing when the Charleston earthquake occurred. He dropped on his knees and cried out: "Oh, Lord, come quick, dis am no place for children."

One of the difficulties in renting an apartment in Paris

is having the proper record made of the furniture. Not only must every chair, sofa, and table, every bit of bed linen and china, and even the smallest kitchen utensil be listed, but one should note the bric-à-brac item by item, and give the condition of each piece at the time of the renting. Taking an inventory of the smallest apartment usually lasts several hours, since every scratch on a chair, every worn space on the upholstery, and every spot on a cushion must be itemized. For upon expiration of the lease a heavy penalty is imposed for any damage done by the tenant. If the clock is in running order it must be itemized as *en marche*, which means that it is going, and the same is true of every bit of machinery.

A careful American housekeeper here has told me her troubles in settling with her landlord on leaving. She had rented a furnished apartment. Her servants were excellent, and consequently the agent could find practically no damage. He went over the inventory, examining every dish, knife, fork, plate, and spoon. He peered around under the furniture, running his fingers along the polished surface for scratches. Suddenly he spied a magazine lying on the sofa. "Ah!" he said as he threw up his hands, and rushed across the room. He lifted the magazine, thinking he would find a big grease spot beneath it. Alas! there was nothing, and his face fell in despair.

In fact, I am told some landlords look upon scratches and grease spots as financial assets. They are slurred over, and fines collected from succeeding tenants who have omitted to note them in making their leases.

In addition to the rent, a fixed sum is charged for cleaning an apartment. This item is often left out of the lease, but it equals five per cent. of the rent, and is a large part of the janitor's wages. Indeed, except for his lodging, the janitor gets very little out of the landlord. The French janitor is quite as powerful and dictatorial as his brother in the United States and it is well to keep on his good side; for he can omit to deliver your letters and can say you are out when visitors come. Furthermore, you are obliged to have him turn on the light in the hall when you ring the bell upon coming in late.

That matter of light is another economy. At night the lower front door of every French apartment building is as dark as a pocket, and electricity is so controlled by a mechanical device that the lights burn only long enough for you to get to your floor. This is about three or four minutes. The janitor turns them on at your ring; they go out of themselves. The electric current is weaker than in America. In many apartments one cannot use an electric iron and an electric heater at the same time.

Among the surprising economies of the French apartment is the elevator, or the lack of it. The American Embassy is in a fashionable apartment house in an excellent location. The American who calls upon our Ambassador is lifted from story to story in a tiny little elevator not as big around as a hogshead, with two seats in the corners. It will not accommodate more than two persons at one time.

My daughter rented last summer the apartment of a Bombay princess who lived in the suburbs of Paris. The princess had gone to a watering place for the health of her husband and the flat was let furnished. It was on the fourth floor of a magnificent house, but the circular eleva-

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tor was actually no bigger than a flour barrel. When two persons got in they seemed to be almost embracing. l always looked twice before l entered.

This elevator was operated by a pushbutton; but that is nothing, for even at some Paris hotels where they are charging six dollars and upwards a day for rooms the elevators are run by pushbuttons and the guest does the pushing. In the ordinary apartment house the elevators are used only in going up. You are supposed to walk down, for this saves the "juice." In many apartment houses there are no elevators and six-story buildings are now being built with nothing but stairs to the various floors. I am on the fourth story of my hotel here in Paris and I have timed the elevator going up. It takes just two minutes, or thirty seconds per floor. At the same rate it would take an hour to go to the top of the Woolworth Building and back.

Fuel is saved as carefully as electric current. There is no such thing as waste of wood or coal. Many of the railway companies run their engines with coal dust pressed into briquettes or bricks. Coal dust made into balls the size of eggs is used for cooking as well as for househeating and grate fires.

In Paris wood is sold by the bundle and the ordinary woodyard is a little store about eight or ten feet wide, facing the street, the wood and kindling being piled up on shelves. It is estimated that France spends almost seventy million dollars a year for wood. It is so costly that except for kindling it is burned only by the rich. A great deal of gas is now being used for cooking, especially in the larger establishments. The people hardly know what it is to be warm in the American sense of the word,



At the Halles Centrales in Paris is the world's largest market, where sales begin at three o'clock every morning, and include everything to eat from eggs to frogs, and even fat snails at sixty cents a hundred.



"The grandfather of all the taxi-drivers of Paris would not be smiling so sweetly had 1 not given him the expected tip of ten per cent. of the sum registered on the meter." and the luxury of a fire is dispensed with, except in the coldest weather.

Other things which we take for granted in America are done here on a most stingy basis. For example, Americans claim that the pipes of the plumbing are too small, and that they are usually out of order. That is certainly the case in this room where I am writing, which costs me six dollars a day.

And then the tips! There is a continual dribble of francs and sous. Every time your doorbell rings you had best get ready a fee, for someone will expect it for the alleged service he has performed. The boy with a telegram or the postman with a special delivery letter will want at least two and a half cents. The grocery man will expect a ten-cent tip, and the messenger from the big department store should have the same. At New Year's everyone who has served one in any way during the year comes to the door of the house and frankly asks for a present. Moreover, they get it-the man who sweeps the street in front of the house, the mechanic who greases the elevator shaft, and the girl who delivers the milk, as well as the janitor and all his family connections. Every mechanic who makes repairs must have his tip, and the taxi driver is cross unless one adds ten per cent. to the amount shown on the meter.

There are many queer features in these French apartment houses. One is that the renters often install their own gas and electricity, the landlords insisting that the pipes be put outside the walls lest they leak. At the close of such a lease the tenant takes the fixtures with him or sells them to the incoming tenant. In most cases the heating arrangements are bad. Steam and hot water

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heat are unknown to many a French household, and some apartment houses are still built without electric lights.

In comparison with ours, the cheaper dwellings are like pigeon coops. They are small flats in which cupboards have been built into the wall to save room. The door to the cupboard looks as if it leads into another room, but upon opening it one finds a bed within. There the children sleep. The floors of these apartments are good and are often kept shining with iron shavings which look like excelsior.

Just one more item about these French homes. I first saw this novelty at Lyons but 1 am told it is quite common throughout the country. It has been nicknamed the "Judas slit" and is a little brass plate about the size of a playing card with slits a sixteenth of an inch wide cut across it. This is tacked over a hole in the door in such a way that a person within can peep through and without being seen can tell who is knocking before she decides whether to be at home or not. If she does not want to receive she slips away and the servant at her side gives word that she is not at home. I do not know that this is less honest than the Judas kisses which our ladies give to unwelcome callers or the honeyed tones they send over the telephone wires.

CHAPTER XI

THE SERVANT PROBLEM IN FRANCE

HE servant problem hardly exists for an American housekeeper living in France. From her point of view, wages are not high, and, moreover, the servants expect to work for what they get. The general servant is a live institution. She often does the cooking, cleaning, and bedmaking for a family of three or four persons. She blacks the shoes, mends the linen, and presses the suits of her master and mistress. She thinks she is well treated if she has a half day off every other Sunday, and she expects no time for herself during the week.

The chambermaid does all the mending and sometimes makes dresses for the ladies of the family. She gets a commission on the clothes bought by her madame. One of these chambermaids may clean a whole house, serve the table, and take care of the children. Not uncommonly she will dress her mistress's hair, and otherwise assist with the elaborate toilet the French madame considers the thing. The French cook does the marketing, and she counts upon it because of the commission she gets from the dealer, who may pay as much as five cents for every dollar spent in his shop.

Here are some notes I made last Sunday morning while watching the servants going to market: The streets are full of women and girls, most of them without hats and all plainly dressed. Each has a basket and net bag in her hand. Wagons of green stuff move through the streets. The provision and grocery stores are open, and many of the streets are lined with stands surrounded by customers. The usual marketing time is from nine to eleven o'clock and even before nine one sees some of the servants returning. The market is their chief meeting place. They like to go at the same time every day, for it is there that they chat with their friends. The quantities bought are small. A bunch of red carrots, a white cauliflower, a dozen potatoes, a little meat, and the inevitable bottle of ordinary wine may be all that fills the net bag of the buyer.

The wages, though they are considered excessive just now, are nothing compared with those received in the United States. A cook gets from fourteen to thirty dollars a month. The latter wage is paid only by the rich, and the man or woman who runs the kitchen is expected to make fancy cakes, desserts, and elaborate dishes. In a household of four or five persons of moderate means where there is some entertaining the cook's wage is about seventeen dollars a month.

The hours for meals are different from those in America. In France business starts later and the people rise later. The average Parisian shop is not open before nine or ten o'clock, and most shops are closed from twelve until half past one or two. This is for luncheon, a very important meal because the first breakfast, of coffee and rolls, is so light. The people say the long lunch hour gives them a chance to have a visit with their families, but the American residents here miss the long evenings and the time we have for exercise in the late afternoon. Almost every French business man of affairs goes home to lunch. He expects



Cooks in France cheerfully do the family marketing—they get a commission on all purchases from the butcher and grocer, who may pay as much as five cents on every dollar spent.



Near the Opera House, which dominates one of the busiest centres of the city, are some of the high-class restaurants, which have helped make the reputation of Paris as the place where one can get the best food in the world.



"In our motor car rides we go for miles between stately poplars, which are also planted along the banks of rivers and canals. The French make these trees earn their keep by gathering dead branches every year for firewood."



"Not for nothing has my hotel porter the mustache of a brigand. With his brother highwayman he shrewdly calculates the tip he will get from the departing traveller." two hours off at that time, but when he comes back to his desk at two thirty he stays there until well after six. This makes the dining hour late, and in even modest homes the family seldom eats dinner until half past seven o'clock. Our help would consider this a hardship, but the French servants do not expect to be through with their work until around ten o'clock.

Some American housekeepers in Paris try to reform the habits of the French servants, but it is wiser to let them do things their own way. For instance, the dishes from the breakfast of coffee, rolls, and jam, which one has upon rising, are left to be washed with the lunch dishes of the middle of the day. It is hard to convince servants why they should be washed at once, and there are others of our customs which they will not adopt. They would rather get down on their knees and put superfluous elbow grease on the hardwood floors than stand up and use a longhandled polisher. They insist that the latter does not give a good finish.

Many of the housekeeping details are different from ours. An important one is the lack of ice in summer. Only the very rich have ice boxes, and there are but few ice wagons making deliveries every day. The ice for my baby granddaughter is bought from the butcher, who charges five cents a pound. My daughter tells me that many French families keep the baby's milk fresh by leaving it in running water or in the cellar if they have one. All milk is boiled the moment it is brought into the house, and such a thing as giving a baby fresh uncooked milk is unheard of.

I am interested in the washing arrangements of Paris. Most of the people living in these apartment houses have such small quarters that there is no room for a laundry. For this reason they are forced to send out their soiled linen, and the prices are surprisingly high. For a family of two the bills may be as much as six or eight dollars a week for a laundry not including the fine things washed by the cook. The laundry of the baby is always done at home. The washing done outside looks well at first, but the washerwomen put a powder into their water that rots the clothes as it cleans them.

For several years the cost of living has been steadily rising, and the large number of French families who are dependent upon fixed incomes from houses or bonds have great trouble to make ends meet, although they have cut their living expenditures in half. One sees types of this class everywhere on the boulevards. A man will carry a smart stick hooked over his arm although his well brushed clothes are shiny and his blackened shoes run down at the heel. Nevertheless, to use a common expression, he puts on a good front and buckles his belt a bit tighter.

I heard a story to-day from an American woman who has a servant that came from a family which was well-todo a few years ago. She gave up the place because she did not have enough food to keep soul and body together. The family has an elegant apartment in one of the most exclusive sections of Paris. The building is of white stone, and in the neighbourhood are many of the nobility. They had leased the apartment at before-the-war rates, and the furniture of their better days enabled them to keep up appearances. But they lack money for food. Their meals are almost Barmecidal, and the menu never varies. For luncheon each person has a slice of meat

THE SERVANT PROBLEM IN FRANCE

about two inches wide and three inches long and some rice or potatoes. For supper, or dinner, as it is called here, they have a soup and a vegetable. There is no dessert. They never taste the bits of cheese of which the French are so fond and rarely eat any of the better green vegetables. One daughter of the house who is supposed to be anaemic is given a slice of meat in the evening but the others have none. The girl said the servants had even less to eat and could not endure it. Nevertheless, this family dwells in surroundings as beautiful as those of people with ten times its income.

CHAPTER XII

RESTAURANTS AND CAFÉS-THE HALLES

ARIS has more than ten thousand hotels and there are restaurants in every block and cafés at almost every step. At nearly all the restaurants one is sure of good cooking, and he can dine well anywhere and at almost any price. In the highclass places the meals cost as much as in the best hotels of New York, and when one orders à la carte he can easily run up the bill for his dinner, even without wines, to five dollars. Half a fried chicken will cost him three dollars. I had a little side dish of asparagus yesterday at the Continental Hotel that cost fourteen francs, and judging by the price of green peas on the menu, they ought to bring the French farmer ten dollars a bushel. A small section of a cantaloupe, one eighth, I should say, is priced at one dollar, and a fat rosy peach costs fifty cents. In this and similar places one can get a table d'hôte meal for two or three dollars, but most Americans prefer to lunch and dine à la carte.

In the cheaper restaurants one gets a good dinner for fifty or seventy-five cents, including a small bottle of red or white wine. At the cafés, which are really saloons without bars, where coffee, syrups, lemonade, beer, wines, and liqueurs are served upon tables, either inside or out on the sidewalk, the prices range from ten cents upward per drink, and if one is a gentleman he will give two cents

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or more as a tip to the waiter. If he does not, the waiter may ask it. The usual tip is about ten per cent. of each order.

The cafés are one of the features of Paris. They are frequented by men and women and also by families. They are the clubs where friends meet day after day at the same hour and often at the same table. Here one reads his newspaper, or chats, or plays chess or chequers. The café is also a favourite meeting place where one can write a letter on paper provided by the establishment until his sweetheart or wife keeps her appointment. Many of them have music at certain hours, and some have songs and dances. They are to be found in every part of Paris. especially on the boulevards, near the railway stations, and on the main thoroughfares. The first breakfast, consisting of coffee or tea and bread and butter, is served in many cafés, and in some one can have a substantial meal. They are usually open as early as seven o'clock in the morning, and many serve drinks until two hours after midnight.

There is no city in Europe that eats more per person and has better food or such a variety of good things on its tables as Paris. The Parisians consume many million pounds of fish every year. They annually eat eleven thousand tons of oysters and vegetables and about thirty million pounds of excellent butter. They consume forty million pounds of fruit, a large part of which comes from Spain and Algeria, and they eat so much cheese, obtained from all parts of Europe, that it would take about thirty-five thousand horses to haul it in wagons over one of the rough roads of the States.

In order to see just how the French tables are provided,

we shall spend this morning in the Halles Centrales, which comprise perhaps the largest market house in the world. Covent Garden in London does not cover half as much ground, and the markets of Berlin, New York, and Vienna are small in comparison. And still this is not the only market of Paris. There are smaller ones scattered here and there throughout the city. There are market stores everywhere, and outside the walls all sorts of eatables are displayed for sale at lower rates than inside, as the dealers there do not have to pay the octroi tax charged upon everything that comes in.

The Halles Centrales are in the heart of the city not far from the Seine, and within a stone's throw of the Louvre. They consist of ten huge pavilions made of iron and glass, each large enough for a great exposition. They cover more than twenty-two acres, and have more than three thousand different stalls. Between the pavilions run covered streets, and under the halls are cellars for the storage of goods. The front pavilions are chiefly for retailers, while those behind are for the wholesale trade which in the early morning overflows into the streets.

The Congressional Library at Washington, one of the fine buildings of the world, cost six million dollars, and our National Capitol, which covers half as much ground as the Halles, cost about thirteen millions. The Halles are mere shells, but they cost ten million dollars when they were built, and it would take twice that to reproduce them to-day. They belong to the city, to which the market people pay rent for their stalls.

The business of supplying the Halles begins at nine or ten o'clock every night, when heavily laden wagons, carts, and trucks containing all sorts of eatables begin coming

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into the city. Not so long ago many of the farmers brought in their produce in wheelbarrows and small donkey carts. They had also huge carts holding one or two tons and hauled by Percheron horses hitched tandem. The latter are still to be seen, though they are fast being replaced by motor-trucks and by steam locomotives which haul box cars through the city.

Our visit to the Halles is made at five o'clock in the morning. We get there in time to see the wholesale selling, which lasts only from three until eight a. m. The sales are by auction, meat, vegetables, and fish being knocked down in lots to the highest bidders. As we enter the Halles we pass men carrying all sorts of things in and out. Some have on hats as big around as a parasol and resting upon them are crates of suckling pigs, fowls, and rabbits. Some carry a whole sheep or a hog on their backs. Most of these porters wear the red-stocking caps of their profession, and also long butchers' aprons, once white but now stained and bloody. Others bring in great baskets of vegetables. Everyone is pushing this way and that, and we are hustled and jostled about as we make our way through.

We stop first at the fowl hall, where chickens, ducks, and rabbits are sold by the crate. There are thousands of partridges and pheasants and other game of all sorts. About each auctioneer stands a crowd of French peasants, the men wearing short coats and long baggy corduroy trousers, and the women black shawls and long, full black skirts. All bid loudly for the various lots. The auctioneers knock down the goods rapidly. It takes thirty seconds to sell a crate of suckling pigs and less for one of chickens or ducks. In this part of the market butter and eggs are auctioned. The eggs come in great boxes which are stacked on the floor. Each box contains one thousand eggs and the stock on hand this morning totals millions. I stopped later at one of the retail stands and asked the price of eggs. They bring seven or eight cents and upward apiece, or seventy or eighty cents a dozen. On a farm eighty miles from Paris I recently bought some for half that amount.

These French know how to use eggs. They make delicious egg dishes which are hardly known in America, and as a result the egg consumption of Paris is enormous. The eggs are usually good. I have yet to get a bad one, and most of them are open to the objection of the newsboy when he refused his first fresh egg served during a trip in the country. He said.

"'Taint right! It don't smell and it ain't got no taste."

It is the same with the butter. It is made without salt and must therefore be good or it will not keep long. Here in the market it is sold at wholesale in twenty-two pound balls.

What is that smell, wafted to our nostrils from over the way? It has a cheesy nature, although it lacks the authority of Limburger. We cross over and enter another great pavilion, where the auctioneers are selling cheeses of every description. They have them made from sheep or goats' milk, Camembert, Roquefort, Gorgonzola and Brie, and the little rolls of Petits-Suisses, which are soft as unworked butter. There are also the white wagon wheels of Gruyère and the red balls of Edam cheese from Holland.

Our next walk is among the fishwives, who have a whole pavilion. Each woman has marble counters about her on



The "Cut Flower Limited" express from southern France brings fresh blossoms every day for the dinner tables of Paris. The same train also supplies flowers for the markets of Brussels and London.



Oil of lavender is distilled from the wild plants, which are gathered in the south of France when they are in blossom. For the less expensive grades both flowers and stalks are used.

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which are set out almost every eatable thing that swims in the sea or crawls on the land. The fish are laid out in neat rows and fresh mackerel is sold at twenty-five cents a pound. There are great lobsters so displayed that they look like a regiment drawn up for review; and there are also vats of running water in which eels are squirming about. If you want to buy one the woman will dip out a netful and let you take your choice. As we wait, the guide tells us that the eels are all caught outside of Paris because the River Seine here is so winding they will not enter the city for fear of breaking their backs.

You remember the old nursery rhyme:

What are little boys made of? Frogs and snails and puppy-dogs' tails: That's what little boys are made of. And what are little girls made of? Sugar and spice and everything nice: That's what little girls are made of.

Well, about all these things are for sale in the Halles Centrales. 1 will not vouch for the puppy-dog tails, although 1 know they are eaten in China, for 1 have seen them cooking over the fire in the restaurants of Canton on the ends of the dog carcasses being baked for the diners. But as to frogs and snails, nowhere are more eaten than right here in fastidious France. The frogs are brought to the market both dead and alive. In preparing them the hind legs and a part of the back are cut off and skinned. The legs are then strung by the dozen on a wooden stick to be sold at so much a bunch.

The frog industry is quite important to France. There are one hundred and seventeen different kinds of frogs;

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and the two especially edible ones are the green and the red. The green frog is the one most eaten. It is found wherever there are swamps or ponds, and on the margins of rivers and in bays that contain fresh or only slightly brackish water. It feeds on worms, flies, and insects, and especially on the spawn and small fry of fish. The Paris supply comes mostly from the neighbourhood, and from southwestern France and Lorraine.

The red frog is of a reddish brown colour, mottled with green and brown spots. It lives mainly on the land and takes to the water only in winter and during the spawning season. It loves damp locations near ponds and water courses. The American bull frog is not known here. It is larger than the French frog and the French who have tasted it say it is superior to theirs.

But come with me and look at the snails. Over there is a booth, with a great golden snail hanging above it and boxes of live snails on the counter. The smaller ones bring thirty cents per hundred but the fat ones sell for double that price. They do not look appetizing to me as they crawl about in their boxes, but the French think they are perfectly delicious when served hot with melted butter. The snails are served in the shell like oysters. They are picked out with tiny forks and well chewed before swallowing. I find them not bad to taste but for me quite indigestible.

Paris eats almost two million pounds of snails like these every year. Snail raising is a regular business, and I understand that half a million of the first quality can be grown on one acre of ground. They are fed once a day, usually in the evening. They are particularly hungry after a rain, when a bed of one hundred thousand snails will consume a wheelbarrow load of cabbage. Some of the best are fed also on wine-dregs or bran soaked in wine to give them a special flavour, just as our best chickens have a milk diet, and our finest-flavoured hams are from peanutfed hogs. The snails are kept in houses during the winter.

There are farmers in the department of Jura who raise two million snails every year. I am told they ship them to the United States and to parts of Latin America. The snails usually cross the ocean alive in November or December, and must be carefully handled to withstand the voyage. Switzerland also is a famous snail market. It has its exporters and farmers and its crop is especially popular.

Leaving the snails, we go to the flower market located between two of the largest pavilions. Here flowers are sold at prices that the ordinary customer can pay. I see roses at three cents apiece, bouquets of sweet peas for ten cents, and carnations for little more. The stalls have every kind of flower one can imagine. and they come in from all over the Republic. Many are raised in the gardens and hothouses near Paris, but during the winter a special train popularly called the "Cut Flower Limited Express" brings flowers from southern France to this city. It has ten cars at the start, and some of these are switched off here to Frankfort, Berlin, and Munich. One car goes to Brussels, and another to Calais, where it crosses the Channel on a ferry to supply the markets of London and Manchester. A great many flowers are sent by parcel post from the same region. The total is more than a million packages of cut flowers per annum, and the value is in the neighbourhood of eight million dollars.

"But how about hooch?" asks one of the bibulous men

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of our party, as he quotes from Bishop John Still, who lived at the time when the monks had great reputations as wine bibbers:

> I can not eat but little meat My stomach is not good; But sure, I think, that I can drink With him that wears a hood.

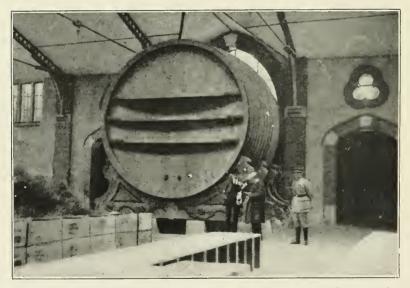
In reply we are led to a great pavilion piled high with casks, barrels, and cases of wines and liquors of every variety. The soil of much of France is just right for grapes and the wines excel any produced upon earth since old Noah "began to be a husbandman and planted a vineyard" on the slopes of Mount Ararat. A million and a half people are employed in grape-growing, and the French vintage has for years brought in more than a third of a billion dollars per year. In France almost everyone drinks wine and in employing a house servant one must provide a bottle of ordinary wine per day as a part of his or her food. Before it is taken, the wine is usually mixed with water, and it is so light that it is claimed there is but little drunkenness in France. This is true with respect to intoxication of the rip-roaring stage. One seldom sees a man reeling along the street as is common in some parts of London, and drunken women are nowhere in evidence. Nevertheless, the French peasants drink a great deal of wine, and often consume much stronger liquors. Some of them patronize the cafés and saloons to such an extent that they are sodden with liquor a great part of the time; and it is very much a question whether the use of light wines and beers is as conducive to temperance as some people claim.



The French café is like our old saloons, except that it has no bar, the patrons being served at little tables inside, or out on the sidewalk, as they prefer. Here men meet to read the papers and talk politics.



The markets of Paris are important social centres, for there the cooks, who work longer hours with fewer afternoons off than in America, count upon meeting their friends every day and picking up the latest gossip.



From Paris to Peking, good dinners the world over pav tribute to the champagne cellars of Rheims. This cask holds 20,000 gallons, and during the war was covered with sandbags to protect it from shells.

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Until recently France had practically a monopoly of the wine export trade. One of her chief markets was the United States, and our prohibition laws have seriously affected the industry. It has decreased the exports of France to America by something like four million dollars a year, and now about the only wine exports are champagnes, which have been flowing into America to the value of about one hundred thousand dollars per month on the ground that they are needed for medicine.

And this brings me to the champagne cellars of Rheims, which sheltered so many people during the war, and which for generations have supplied most of the champagne consumed in the world. During the war the buildings of the great wine factories were destroyed, but the cellars were unharmed, as the Germans occupied the city only a week, and their shells did no damage to these great cavelike excavations in the chalk rock. The result is that the cellars are practically intact, so that the industry did not suffer permanent injury.

During my stay in Rheims last week, I visited one of these wine catacombs, walking through mile after mile of the tunnels, which cross each other this way and that, forming great avenues far under the ground, each walled with bottles of champagne. The establishment was that of the Pommery company, whose champagne we all knew before our Great Drought began. It has eleven million bottles now in the making, and the underground passages in which this wine lies curing are more than ten miles in length.

I went through the tunnels with the manager of the company, and as we inspected these long avenues of bottles he told me a little about how champagne is made. His story explains the high cost of the wine. It is made of black grapes which came from forty different vineyards in the Champagne country. The grapes are first pressed and the skins removed. The white juice is then blended in a mighty hogshead, or "tun," which holds twenty thousand gallons of liquor. As I stood beside it at the entrance to the caves, it towered above me like a house. Excepting the huge tun at Heidelberg, Germany, it is the world's largest wine pot. The blending continues six months, and after that the liquor takes from four to six years to run through the processes that make it into champagne. The fermentation goes on in the bottles, which are set in racks, and which after four or five years are shaken every day for six weeks to get the sediment down to the cork. The sediment is then artificially frozen and taken out as a small cake of ice. After that some sweetening is added or some special liqueur put in to give the desired flavour. The bottle is then recorked under great pressure and packed away. One year later it is ready for sale.

CHAPTER XIII

A GHOST THAT FRIGHTENS THE FRENCH

HE ghost that frightens all France is a baby. Its first name is Hans, and it is marked "Made in Germany." There are more babies born over the Rhine every year than in this land of the Seine, and five times more births than deaths.

Moreover, the French birth rate is dropping. In the days of Napoleon the average number was four to the family. It is now two or less, and the death of the million and a half young men killed in the war will make the babies still fewer. As it is now, there are nearly two million families which have no children at all, three million which have only one child, and two and a half million each of which has but two children. The population of Germany is increasing five times as fast. In 1872 France had about thirty-six million people, and in the fifty years since then she has gained only four millions, while Germany, starting with the population France has at present, has made a gain of fifteen millions, and that in spite of her great emigration to America and other parts of the world. It is estimated that, at the present rate, in 1975 France will have only forty-one million people to Germany's one hundred million.

Even with the increased number of marriages following the war the living children born number around eight hundred thousand a year, as against one million for the year 1865. For a long time the natural increase of the Germans has been more than a million per annum. You remember that General von Moltke once said that every year the Germans gained a battle over the French by the annual addition to their population of one million souls. A member of the French Institute said not long ago that France is losing four army corps every fifteen years.

Within recent years more than one sixth of all the babies born in the Republic have not reached the age of twelve months, and one third of this sixth died during the first month after birth. The death-rate of French infants their first year is from fifteen to twenty per cent. or one baby in every five, six, or seven.

But let us look into some of the reasons of the small baby crop of France. In the first place I would say that I do not believe that the lack of babies comes from any physical weakness in the Latin races. The Latins as a rule have fewer children than Anglo-Saxons, but when the French came to Canada they brought forth as many children as the famous

Old woman who lived in a shoe, Who had so many children she didn't know what to do.

To give an illustration of the birthrate of the French Canadians: the government of Quebec, some years ago, offered one hundred acres of land to every father of a family having twelve or more living children. On the day appointed more than seven hundred claimants came forward to get the farms. As to celibacy among the Latins, from the earliest times it has been discouraged. The



From the day his birth is reported to the authorities until age releases him from the reserves, every man-child is officially listed as a potential soldier of France.



Interest in increasing the birth rate and lowering the death rate has bred enthusiasm for physical training and outdoor games. France has no exact equivalent for the word "sports," so along with the idea it has adopted the English term.



The ghost that frightens France is a baby named Hans and labelled "Made in Germany," where the population is increasing five times faster than hers. There are nearly two million childless French families and three million with only one child.

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old Romans levied fines on bachelors and adopted measures to increase marriage. Louis XIV and Napoleon both granted special exemptions and favours to parents having more than two children.

One of the great causes of the lack of babies in France to-day is the thrift of the people. Many feel too poor to marry, and some who are married do not want children on account of the high cost of living. Yesterday I talked with my taxi-driver about existing conditions. He was bitter on the subject of poverty. Said he:

"When I got married I told my wife we would never have any children. I was one of a family of eight in northern France. My father was poor, and my youth was all kicks and blows, with little to eat. I ran away from home; and now—well, here I am, driving a taxi. It's not much of a life. It is so uncertain. I earn about nine hundred francs a month, but that is hardly enough for myself and my wife. Anyway, I am not going to run the risk of making a little child suffer as I did when I was little and there are a lot of us who feel the same way. Look at those men working in that ditch over there. They earn twenty francs a day. How can they support a family on that? The rich should have the large families now. We poor cannot afford them, and, anyway, we know what the life of a poor child is like."

Speaking of the rich and the poor reminds me of a French beggar, who applied for aid to a pompous Paris philanthropist on the grounds that he had a large family of young children. The sanctimonious rich man replied:

"The Lord never sends mouths but that he sends bread to fill them."

"That is true," answered the beggar, "but He has sent the mouths to my house and the bread to yours."

The custom of giving a dowry to a daughter when she is married has an important effect on the birth rate of France. The girl who has no dot has great difficulty in getting a husband, and no couple wants to risk having more daughters than it can furnish with decent dowries.

Indeed, financial questions play a large part in the matrimonial arrangements. The French draw a fine distinction between love and marriage. Most of them regard love more or less as a personal matter whereas marriage is a social necessity. One should love his wife or her husband, but the happiness of the children and parents will be more sure if it is based upon certain rules of business and conduct. Love is a passion which may go as it came, but marriage must endure and it should have enough to support it. For this reason, a French marriage depends largely upon the consent of the family, and the state of the finances of the parties to the contract. If a man is an orphan he must get the permission of his grandparents in order to marry. They will look into the social and financial situation of the girl, and the relatives of both parties will arrange the transaction. Indeed, such consent is absolutely necessary up to the age of five and twenty. No man can marry until he is seventeen years of age, but girls may marry when they have reached the age of fifteen or sixteen. It is uncommon for a young man to get married until he has completed his term in the army.

The French laws of inheritance form another obstruction to the flight of the storks bringing new babies to France. All children, boys and girls alike, must have

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equal shares of their parents' estates. The daughters often get their portion in their dowries when they are married, and the rest of the children have theirs at the death of the parents. The greater part of the land of France is in very small holdings, and such equal division makes the patches and scraps of which I have spoken already. Often each boy will want some of his land facing the road, and what is a large field of the father, becomes mere ribbons when parcelled out to the sons. In order to prevent such division, parents keep down the number of children and thus leave a sizeable portion to each. The peasant loves his land and his ideal is a single heir married to a single heiress. Therefore, he leaves only one or two children.

Attempts have been made to change this inheritance law so as to give the father the right to will away his estate as he pleases. If this can be accomplished it is claimed that the birth rate will increase. Some authorities suggest an inheritance tax of thirty per cent. on all estates when there are only two children and of sixty per cent. when there is only one. This means that the man with one child would leave to the government all but forty per cent. of his savings.

Another load on the wings of the bird that carries the babies is, it is asserted, the great amount of alcohol consumed by the French. The average per capita is about fourteen quarts every year and in certain cities of Normandy it is twice as much. Statistics show that a large percentage of the inmates of the French insane asylums and hospitals are drunkards; and the scientists claim that alcoholism is contributing to the weakening of the race in more ways than one. Some say it is lessening the number of births, but this is questionable, for many of the nations who drink much have a far higher birth rate. The British, for instance, who are great drinkers, have one third more babies per thousand than the French, and the Russians, who are addicted to vodka, have a birthrate of forty-four to the thousand, while France has only twelve.

Other contributory causes are said to be the decline of religion, the employment of women in factories, and compulsory army service. The state watches the advent of every new infant, and as soon as it comes, a government doctor inspects it. If it is a boy, his name goes down at once as a future soldier of France. Indeed, there is no way for a boy born in France to escape. No matter if his parents be American or of any other nationality, into the army list he must go if he has been born on French soil. For this reason foreign mothers often cross the Channel to England to have their babies born there.

CHAPTER XIV

INCREASING THE BABY CROP

ALL FRANCE is now planning new ways for saving the babies and increasing the crop. The facts 1 have given in the preceding chapter have stirred up the French government, the captains of industry, the intellectuals, and even the peasants, and all are at work on the problem.

For years the government has been enacting laws with a view to increasing the French population. Some time ago it passed one which gave an annual allowance for every poor family which had more than three children. The amount of the allowance, which was fixed by the communes, ranged from eleven to seventeen dollars a head. Later on bills were introduced into the French Senate making physical education compulsory for girls as well as for boys, and this included plans to acquire lands and buildings to be used for physical training. Another law sought to modify the marriage code so that one could marry without the consent of his parents and grandparents, and another proposed that the word "obey" be taken out of the woman's part of the marriage contract. To the latter, many of the women's journals were especially hostile, declaring that it would lead to anarchy in the home.

The department of Ardennes in northern France has adopted an ordinance which is being urged elsewhere in

the country by the National Alliance for Increasing the Population of France. Under this measure, the unmarried mother may conceal her identity, for any woman may enter a public maternity hospital, have her baby, and leave the institution with her child without having revealed her name. The prospective mother need only fill out a form giving her name, address, place of birth, and age, together with the name and address of the person she wishes notified in case of her death. This is sealed up in a numbered envelope and the hospital authorities know the woman only by her number. The association takes the ground that France needs babies too badly to neglect any mothers, whether married or unmarried.

Other laws have been suggested. One is the taxation of bachelors, and another the taxation of married men who have not become fathers. There is a movement to curtail the taxes on the large families and in some places gold medals are given for more babies. For some years the Department of the Seine has been assisting poor mothers until their children reach the age of three years; and, more recently, has granted a premium of two hundred francs per annum to such women as nurse their own babies.

Almost half the illegitimate children of France are abandoned by their parents, and tens of thousands of legitimate babies die through preventable causes. For this reason the Ministry of Health has opened one large maternity hospital, and is providing funds for another. It is giving allowances for convalescent mothers and is doing much to safeguard babies against death and disease.

France has some of the largest foundling asylums of the world. There is one in Paris which, until now, has been surpassed only by the great orphan asylum of Moscow. It has many thousand times more babies than were slaughtered by Herod at Bethlehem, and it costs several million dollars a year to keep the little nobodies alive. The institution has been in existence for more than two centuries. It was once managed by the nuns but is now under the government. There is a little Moses basket, a sort of revolving tray, set in one of the windows, opening on the street, on which a mother can lay her baby and by a whirl put it inside without herself being detected. The child is then taken as a member of the institution. It is given a name, and if in any way the place of birth or the name of its father and mother can be obtained, these are put on a tag, a strip of parchment which is tied around the child's arm. The babies are kept in the refuge no longer than is absolutely necessary, and then sent out to board, or given away to those who will take them.

Wet nurses, who are in great demand, have their railroad fares paid into Paris. There are always more babies than nurses, and at one time every nurse was given a choice of six babies. Some of the babies are kept on "one cow's milk," and goats and even donkeys add to the feeding supply. Since the war, boy babies are the most popular, and the orphan children of France have been more than ever carefully nourished.

Private individuals are doing much to increase the baby supply. A notable instance is that of Monsieur and Madame Cognac, who some time ago gave a quarter of a million dollars to establish ninety awards for every large family among the poor which has had at least nine children. All the children must be living, or any who have died must have surrendered their lives for France. This man and his wife also gave another hundred thousand dollars to make one hundred awards of one thousand dollars each to couples under thirty years of age who have as many as five children.

I have heard of a landlord here in Paris who accepts as tenants only married couples with children and gives the mother of every baby born in his house the sum of two dollars, a chicken, and a supply of coal for the winter. There is another patriot in the Department of Haute-Saône, who recently called the married men of his town together, promising each twenty francs for every child after the fourth. The mother had to bring out the children, and show that all were her own. I am told that more than one hundred mothers came forward to claim the reward, and that altogether they had eight hundred and sixteen children.

There are a number of industrial corporations which are contributing to increase the birth rate. One has a fund that gives every married man among its employees an average of two francs a day for each child. An association of linen manufacturers is paying a supplementary wage of about two dollars a month to families having one child under thirteen years of age, and five dollars a month to families having two children. The extra wage goes on increasing until it reaches a maximum of four hundred and twenty dollars a year, where there are seven children or more.

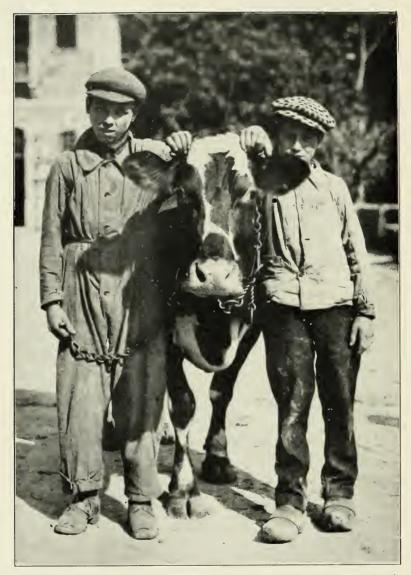
Since I came to France I have occasionally bought some of the newspapers devoted to the increase of the baby crop. One of these entitled "Marriage" lies before me. It is issued twice a month. Of the shape of the ordinary magazine, it has forty pages of which more than twenty



France has not enough people to do all her own work, and for some time has had to import labourers from Italy and Poland and even from Morocco and her other colonies in North Africa.



Twins are a novelty here. To promote larger families some employers pay extra wages to workmen with babies, while one landlord will rent his apartments only to couples with children.



The cow is a much-prized possession on the little French farm. She is staked out in the pasture, for, unlike our American farmers, the peasants of France waste none of their precious soil on fences and fence corners.

INCREASING THE BABY CROP

are taken up with advertisments sent in by the subscribers. While their subscription lasts, those who subscribe have the right to advertise for wives or husbands to the extent of fifteen words in each issue. If they wish to use more space they pay five cents for each additional word. The advertisments are numbered and all correspondence goes on through numbers and not by names, the magazine being the mail box. Since the current numbers run from 32,000 to 91,000, I judge some business is done. To show what the advertisements are like I shall translate several chosen at random:

Professor, 28, has three adopted children. Would like to correspond with marriage in view with a person interested in pedagogy.

Young nice girl, tall brunette, serious, likes house work. Would marry a serious, affectionate, hardworking man from 29 to 35.

Colonel's widow, without children, 50, young in spirit, earning 25,000 francs a year, will have 100,000. Would marry honourable man of position and fortune.

The articles in the magazine, many of which are by prominent writers, relate to marriage in one form or another, and to the necessity of increasing the French population.

CHAPTER XV

AMONG THE FARMERS

HE Rhône Valley, where I now am, has furnished the answer to my question in Paris: Where do the market men get the vast quantities of food stuffs I saw in their stalls? The land here is covered with luxuriant crops. There are no fences, and nature's great patchwork stretches out on every side as far as my eyes can Just now we are driving past a wheatfield in which reach. blood-red poppies as big around as a tea cup look out of the green. On the other side of the road is a havfield where women and girls are working side by side with the men, and farther on is a great expanse of wheat with women bent half double pulling the weeds. The women here work as hard as the men. They do all sorts of field labour, and you see them scattered over every landscape. They are even more thrifty than the men, and are the great savers of the French people.

The French are economical farmers. With them a penny saved is twopence earned, and they see that nothing goes to waste. They live as cheaply as any people of Europe. The average farmer starts out to work on black bread and vegetable soup, or he may have only bread and cheese and a glass of wine. At noon he will have a vegetable soup, and perhaps fried potatoes, and in the evening the same. He has wine at every meal, for it is one of the cheapest of drinks. Nearly everyone keeps a goat, although but few drink the milk, for goat's milk will make cheese.

The work among the farmers goes on throughout the week and often on Sunday as well. The fields are full of Sunday workers. While the church bells are ringing mechanics are plying their trades and the ordinary stores and workshops are open.

There are two million more farm owners in this little republic than in our big one over the water. The average holding is less than six acres, and thousands own little tracts upon which they live, working a part of the year for someone else.

The roads and streams and little canals of France are lined with poplars. I can see long lines of them cutting the landscape in every direction. Some of the trees are a hundred feet tall. They are bare of branches, with only a tassel left on the top. Others are full limbed, and some are just sprouting new growth on all sides. These poplars are grown for their branches and are finally cut down for wood or for furniture. The branches grow rapidly. They are cut off year after year, put up into bundles, and sold to the bakers to make the hot fires necessary for the crisp crust on the French bread. There is such a demand that raising them is a national industry. The poplars are planted in places which are good for nothing else, and after five years each will annually yield an appreciable sum. Willows are grown in the same way, and their sprouts are used for baskets.

The French make money out of chestnuts. They grow varieties from two to three times as large as the American chestnut and sell them to the fruit stands and groceries. The nuts are used to dress turkeys, geese, chickens, and game, and also for desserts. The confectioners make candy of them, and the best candied chestnuts bring high prices. There are large establishments in France which do nothing else. One at Lyons handles twenty-five million pounds of chestnuts a year. In southern France, Spain, and Italy chestnuts are ground into a meal and used for bread.

The French have one million acres devoted to gardens and fruits, and in riding over the country one passes fields of hotbeds and sees glass frames propped over plants outside the beds. In many places glass bells are used to cover the individual plants, and there are some sections which raise potatoes under glass for export to London.

The people have studied the soil and the sun and they coax as much work as possible from both. They feed the growing things and sometimes get three crops a year through intensive cultivation. Near Cherbourg cabbage is raised early in February. After it is taken off, a crop of potatoes is planted and a third crop comes on in the autumn. This is on land that has been used for generations.

And still we Americans talk of old Mother Earth's being worn out. Nothing of the kind! The old lady has all the possibilities of perpetual youth, but, coquette that she is, she must be petted and fed with the dainties she loves to make her yield her best crops. This is especially true of the vineyards which have been cultivated for centuries. The French vines are cut back every year and every vine has its own stake to grow on.

One of the odd features of fruit growing here is the method of training the trees against stone walls, which when warmed by the sun act as radiators and make the



On many French truck farms glass bells cover individual plants, and some sections raise potatoes under glass for export to London. One million acres are devoted to fruits and gardens.



In parts of the country sheep are valued for their milk as well as for their meat and wool. Cheeses are made from ewe's milk and ripened in the mountain caves at the village of Roquefort.



Though France is not so large as Texas, she has many more farm owners than in all the United States. The average holdings are much smaller than with us, but, like this wheat field, they produce more to the acre.

fruit ripen earlier. I have seen garden after garden outside big French cities walled in this way. It is estimated that there are four hundred miles of such walls in the suburbs of Paris and that they annually yield twelve million peaches. The peaches are sold singly and bring fancy prices. Indeed, I have seen peaches sell for one dollar each, but they were raised under glass.

Suburban Paris has pear orchards that produce as much as three hundred dollars per acre, and there is one fiveacre orchard noted for its early pears, which brings more than two thousand dollars a year.

Every French country community has its clubs where the farmers meet and discuss how to market their crops. The farmers combine and buy their fertilizer at wholesale and appeal to the railroads for low freight rates. Not only the farmers but the railroad officials, the bankers, and the merchants come to these club meetings. The railroad men are asked to advise the farmers as to what they should do about transportation and markets, and the bankers and merchants give their counsel about money matters. In America the farmer usually has but little to do with the city man, and seems to be jealous and afraid of him. The French farmer is willing to say there may be some brains outside his own class, and he is glad to take advantage of them.

Most of the farmers in France belong to agricultural syndicates, of which there are altogether several thousand. These syndicates are for the general furthering of the farming and commercial interests of the members. They are established under a national law, and are organized into unions which work together for the interests of their class. They have a head office at Paris, which negotiates with the railroads as to freight rates and also pushes agricultural interests before the French parliament.

Among other thrifty organizations are the workmen's aid societies, formed to give their members money in their old age. The members enter when young and at fifty-five expect to have enough saved to be able to retire and live on their pensions. The amount of pension is in proportion to the length and amount of saving, and the members range all the way from three to sixty years old. Hundreds of school children belong to such associations, and the government itself aids in their support. The societies are under the control of the Department of the Interior, and the officials believe that they help to prevent strikes and divert the members from communistic and socialistic tendencies.

These associations were created just after the French Revolution and are in a thriving condition to-day. They can be organized by any group of workmen or employees. Some of them are composed of clerks, some of salesgirls, and many of factory hands. The members are required to pay monthly dues, and the money is invested in government bonds at three per cent., which interest goes on at a compound rate and accumulates the vast amounts which are given out as old-age pensions.

There are also accident societies and associations formed by the different railroad companies and other large corporations for their employees. It is wonderful how the money grows out of these small savings. Two cents a day laid aside for sixteen years gives an income of about two dollars and fifty cents a month from that time on, and large sums produce money in the same proportion. Such societies can be formed in any community, and deposits can be made wherever there is a post office. The smallest deposit is a franc, but postage stamps are accepted, and many poor people buy savings stamps and paste away a cent at a time until they can make up the deposit for a month.

I have before me figures showing the savings of the French people during the first six months of a typical year. They amount to more than one billion gold dollars. Of this more than half has gone to the purchase of shares and bonds which, directly or indirectly, will help in the rebuilding of France. A great part of it has been invested in short-term treasury bonds at four and one half per cent. interest. Deposits in the savings banks have increased and also the number of depositors. We have in the United States a little more than eleven million men, women, and children who have deposits in our savings banks. At the end of the war France had less than eight million depositors, but four years later she had more than fifteen million, six hundred thousand. In other words, the number of savings depositors had almost doubled.

The depositors include all classes of people and persons of all ages. There are almost as many women as men among them. Many are farm hands and tens of thousands are employees in the mills and factories.

There are thousands of school children who have savings accounts and they are encouraged by the teachers to open them. In every common school a child can deposit with his teacher amounts of one cent and upward, and the agent of the postal savings banks comes around once a month and collects the sums. When the child makes his first deposit he gets a bank book and when his deposits have reached a franc a bigger one is supplied.

Parents often lay aside money in these banks so that their children may have capital with which to begin life when they reach manhood or womanhood. Mothers lay aside money for their daughters' dowries, and girls thus save for their wedding trousseaus.

No wonder De Lesseps believed he could build a great canal from the "woollen stockings" of the French people, and no wonder France has made such rapid recovery from the disasters of war.



Contributions from the children of Pittsburgh started the school at Fontainebleau, where these boys are trained as farmers. As each one graduates, a position is found for him as gardener or tenant farmer on one of the estates in the Department.



On September 8th, an annual benediction is pronounced upon Lyons from the church of Notre Dame on the heights of Fourvière, which command a fine view of the city, its surrounding hills, and its two rivers.

CHAPTER XVI

THE CITY OF SILK

AM in Lyons, the silk centre of Europe, where for more than four centuries the finest stuffs for the belles of all nations have been turned out by the French. This city makes about one hundred and twenty million dollars' worth of silks and silk goods every year, and its satins and velvets go all over the world.

Lyons is situated in the rich valley of the Rhône, five hours south of Paris. It lies at the confluence of that river and the Saône. On the other side of the Saône are the Heights of Fourvière, with a great tower upon them up which we shall climb for the view. We walk through the town, passing the site of a palace in which the most cruel of the Roman emperors, Claudius and Caligula, were born; we go over one of the Saône bridges and take a cable railroad up the heights to the foot of the tower. Another elevator takes us to the top, where we are three hundred feet above the river, and high over the city. Behind us are the Golden Mountains of Lyons, and beyond them, across a valley filled with gardens and trees, are the mighty Alps, their snowy peaks forming a ragged silver mass against the clouds. The day is clear and we can see the white cap of Mont Blanc a hundred miles away. Turn about now and look down into the valley. There is the Rhône fresh from its giacier cradle high in the Alps, and nearer still, flowing almost at our feet, is the Saône, winding about through the town side by side with its twin sister. Between the two is the greater part of Lyons, and as we look we see the silvery streams girdling the municipal maiden in her silken clothes before they go winding on together to the sea.

We are in the heart of one of the oldest parts of Europe and on the site of one of the most famous cities of France. This Rhône Valley was a trade route in the days of Julius Cæsar and in the Middle Ages great fairs were held here to which merchants from Amsterdam to Venice came to buy and sell. Six hundred years before Christ was born the Gauls had a town on this site, and at the time Jesus lived, there was a Roman city here. On this very hill one Roman emperor caused twenty thousand Christians to be massacred, while in the days of the French Revolution the Tribunal, finding that the guillotine would not kill the Lyons aristocrats fast enough, tied them together with ropes in rows of sixty, and mowed them down by wholesale with grapeshot.

The Lyons of to-day, however, is a great manufacturing centre, with almost as many people as Pittsburgh. Standing here on the tower we can see the smokestacks of its car shops, tanneries, and chemical works, and there across the valley, on the other side, is the famous Croix Rousse, the hill where the silk makers live, where the shining, costly patterns of generations have been woven and where some of the most beautiful fabrics of the world are produced. The hill looks but little like a manufacturing centre. It has no vast brick buildings walled with windows, such as one sees in the factory towns of our country; it has no smokestacks pouring volumes of black into the clouds, and it looks more like a residential section than an industrial one. Still Lyons has hundreds of silk factories and most of them are situated upon that hill.

Suppose we visit it. We descend to the Saône, cross the bridge, and take the trolley car through the city to the cable station at the foot of the Croix Rousse. Entering a box car, where a score of silk workers are standing, in a moment we find ourselves riding to the top of the hill. A few steps from the station above take us into the heart of the silk industry of Lyons. We can tell it by the click! click! click! which is heard on every street and in every hallway. The houses are lean five-story structures, built along alley-like streets, with narrow entrance doors. They look like tenement buildings and are, indeed, little more than great beehives filled with labourers and every cell in them is a small factory.

We enter one of the older buildings and walk up the narrow stone stairs. As we mount from story to story, we hear the clicking going steadily on. The building is rudely constructed and without modern conveniences. We knock at a door, pounding loudly to overcome the noise of the weaving. A shirt-sleeved Frenchman with a cap on his head opens the door and asks us to enter. He has just left his loom, but at our request he goes to work again. The loom is old fashioned and he works it with his feet, throwing the shuttle from one side to the other through the threads by hand. He is making a pattern of dress goods which may eventually enhance the beauty of an American belle at a White House reception.

Going on, we enter room after room. Each has one or more looms with bare-armed and bare-headed men and women turning out all kinds of silk. Though the wages are four times what they were in pre-war days, we should consider them low.

Some of the finest silk- and velvet-weaving in Lyons is done on the old-fashioned hand looms. Even where electrically run looms are used, much of the weaving is a house industry. Sometimes several weavers will club together in one room, each having his own loom and paying a low rate for the electric current. This is furnished so cheaply that a man gets what he wants at a few cents a day and pays for his loom in instalments. Moreover, by this plan, he can weave in the same room in which his father and his grandfather worked before him.

I visited this afternoon the biggest silk mill in France. The workers are bare-armed, bare-headed girls, well dressed and in many cases good looking. They are the daughters of the men who work on the house looms and are the descendants of many generations of silk weavers. The mill is like a great cotton factory, save that much brighter colours are used. In the reeling room the threads are of all the hues of the rainbow, and the thousands of spools make a maze of brilliant tints and shades.

I was interested in the velvet works. The finest of such goods are made by home-workers, although power looms are generally used. Much of the hand-woven velvet made in Lyons is brocaded, and that in most beautiful patterns. Some of the silk and velvet curtains turned out bring as much as eight hundred dollars a pair. I saw velvets to-day which sell for seventy dollars a yard, and was shown curtains which require four months to weave.

The velvet is woven upon wires. When the weaving is finished the threads are cut through to the wires with a knife and the wires are taken out. As each line of looped threads must be cut separately, a slip of the knife would ruin the cloth.

I was shown specimens of furniture coverings made at a cost of forty-two dollars a yard. Think of paying fortytwo dollars for a chair seat! And this is what the stuff costs in France. The price will be doubled by the time it gets into one of the Fifth Avenue palaces and is fitted on its luxurious furniture. Every time one sits down upon it he will cover a yard of it. It would make me uncomfortable to sit down on eighty-four dollars at one time.

The royal families of Europe were the principal consumers of these expensive hand-woven materials, and now that royalty is out of fashion the demand has greatly diminished.

I have gone through some of the largest of the Lyons silk stores. They are to be found in buildings not unlike the factories. Entering by an unpretentious stairway to the second or third floor, you first find a door with a little brass sign marked with the name of the merchant. You come into large rooms with long counters running through them. There is no silk on view, for the goods are stored away in cases or drawers until brought out for the customers. The rooms are walled with mirrors in order that the colours may be shown by reflected as well as by direct light. Some of the oldest patterns are the most beautiful, and these are repeated from generation to generation, but new ones are continually being designed. The French are noted for their creative artistic ability, and they have schools here at Lyons, where designing is taught. Some of the factories make pictures in silk both for decoration and for wall covering.

Lyons is doing all it can to foster its silk industry.

It has its technical schools which teach all branches of silk manufacture. Young men come here from all parts of the world to study how to make silk, and many work in the mills for that purpose. There is one school which charges from one hundred and sixty to two hundred and eighty dollars a year for tuition. The lower sum is the charge for Frenchmen and the higher that for foreigners. In this school the best of modern silkweaving machinery is used and a great part of it bears the mark of American manufacturers. An American sewing machine stitches the pattern cards together, and American methods of weaving are employed. All kinds of silks, velvets, and plain and figured goods are made here, under the superintendence of the most skilled workmen. The boys do the work themselves with the professional silk men as overseers.

I visited the Lyons municipal silk school, on the Croix Rousse. Upon the payment of a small sum any boy of Lyons who has reached the age of fifteen can enter and learn all about silk weaving, designing, and pattern making. The course of day study is ten months, and there is in addition a night school, in which a three-year course is offered.

Every boy has to keep a diary of his work, with the patterns of the silks he has made, and copies of his designs. . The school gives instruction in the breeding of silkworms, as well as in all kinds of weaving and designing. The professor in charge, a kind-looking old Frenchman, wearing a skull cap and rough clothes, took me through one department after another. He introduced me to some of the students, and had them work at the looms before my eyes.

It was not until the fifteenth century that much silk weaving was done in France. Before that time the best of the silks came from Italy. Lyons, however, was even then a great fair city, and many Italian silks were brought there for sale. Louis XI imported Italian weavers, and about forty years after the discovery of America Francis I induced many of them to settle at Lyons by guaranteeing them exemption from taxation, free lodgings, and the right to carry swords, as well as immunity from imprisonment for debt. He brought silk weavers from Genoa, Florence, Lucca, and Venice. and thus founded this business, which has done much to make France rich. The industry prospered until the persecution of the Huguenots drove more than three hundred thousand of the most skilled of the French artisans out of the country and in a few years reduced the number of looms from forty thousand to ten thousand. The Protestant weavers escaped to England, Germany, and Switzerland and started the silk manufacture of those countries.

Silk is no longer the dress of the rich and fashionable exclusively. A greater proportion of the people of the United States wear silk than do those of any other country, and year by year the demand for it grows steadily all over the world. In other countries, and especially in the United States, every effort has been made to obtain more efficient quantity production at lower cost, but at Lyons the mills have been slow to adopt the improved methods. During and immediately after the World War, when German competition hardly existed, the French failed to make the most of their opportunity to capture new markets. The manufacturers are intensely individualistic and dislike to combine. They seem each to prefer to keep up their own standards of high quality rather than get together to turn out cheaper grades in quantity production.

The beautiful silk from the German mills at Krefeld and the fine silks of Milan in Italy have won away some of the old customers of Lyons. The Italians are rapidly regaining the place they held in the Middle Ages among the chief silk manufacturing peoples of the world. It used to be that most of the raw silk brought from China came to Marseilles; a large part of it now goes to Genoa and other Italian ports, and the output of Italian silk goods has grown so rapidly that Milan is already second only to Lyons as the silk centre of Europe and bids fair to outstrip the French metropolis.

The United States is now the leading silk-making country of the world. In the last few years the value of the silk produced in our mills has increased by nearly two hundred per cent. At one time we annually contributed about thirty million dollars to the Lyons silk weavers. Now we make almost all the silk we consume, besides exporting millions of dollars' worth annually. The French claim that the falling off in their trade is due to our protective tariff, which has built up the silk industry of Paterson and other American cities. In these places the silk is made in large mills, and the cost is so reduced by up-todate labour-saving machinery and by proper organization that American commercial travellers can now sell American silks in Europe. Some of the French manufacturers have already removed their plants to the United States, and others have remodelled their mills on the American plan.



Though now forced to compete with the product of the chemical laboratories, flowers are still gathered in southern France for the essences which have made French perfumes famous the world over.



In the ribbon factories of St. Etienne, where thousands of girls are employed, the best workers come of generations of weavers. The girls must have deft, cool fingers, for perspiration spoils the delicate fabrics.



Though they still cut grain with a sickle and cling to other old-time methods, the Belgians till every inch of their land and manage to raise twice as much wheat to the acre as our farmers produce.

CHAPTER XVII

NO SLUGGARDS NEED APPLY

'Tis the voice of the sluggard; I heard him complain, You have waked me too soon, I must slumber again. I walked by his garden and saw the wild brier, The thorn and the thistle grew broader and higher.

THE ghost of Isaac Watts could be with me in Belgium to-day, he would quickly agree that the lines of his poem "The Sluggard," which I have quoted, do not apply to this kingdom. Indeed, I am amazed at the thrift I see all around me and wish that more of my countrymen would adopt the "work and save" gospel that seems the rule here.

At the close of the World War Belgium was in a situation quite different from that of France, England, or the United States. The industrial machinery in both of the last two countries as well as what was left of that in France was in full swing. It had been speeded up by the war and the foreign markets were open. Belgium, owing to the German occupation, had lost all its markets. The war had taken a large part of its workers. Some had been killed, some deported by the Germans, and many educated to idleness by the doles of their own government and the charities from the United States and other parts of the world. Before the war Belgium had depended largely on German capital to finance her industries. After the Armistice the little kingdom awoke to find herself out of money, short of men, and with most of her industrial equipment either destroyed or carried away.

What did she do? Did she play the part of the Sluggard? No! She rolled up her sleeves, took her spade and hoe in hand, bent her back, dug her bare toes into the rich alluvial soil under her feet, and went to work. She borrowed money from her own people at home, and got more from abroad, on the security of the peace treaty provision that Germany should pay Belgium's damages in advance of those due France and the rest of the Allies. She instituted new taxes and surtaxes, and a year after the war was over found that her national revenues were twenty million dollars more than had been estimated. Meanwhile. she had got back the bulk of her workers and had stopped the drift toward pauperism that charity had started. She raised wages, put her labourers to work on the highways and railroads, organized a combination of three hundred coöperative building societies, and sent men to scour Germany and bring back the machinery that had been taken away. Nearly eight thousand tons of stolen material, and ninety thousand tons of machinery were recovered from Germany. To-day the industries of Belgium have been practically restored and the country is on its feet.

But first let me say a few words of the Belgians. They are about the busiest of all the peoples on earth. They have here a country one fourteenth the size of California but so thickly populated that if California could have the same number for every square mile, it would contain more people than we have in the Union. If the main body of the United States were as thickly settled as Belgium, it would have two hundred million more people than are in the whole world to-day. The population here is six hundred and fifty-eight per square mile, or more than twice the density of the population of Germany, and just twice that of Great Britain and Ireland. The only country that approaches Belgium in density is Holland, which has one hundred and twenty-two fewer people for every six hundred and forty acres inside its boundaries.

Most of the Belgians live in villages and work on the land. There are only four cities of more than one hundred thousand inhabitants. With its suburbs, Brussels, the largest and finest, is almost as big as St. Louis. Antwerp is the size of Cincinnati, and Ghent and Liége have each about the same population as Memphis. Malines has sixty thousand, Bruges is a bit smaller, and Ostend and Louvain are smaller still.

In comparison with most of humanity these people, so closely crowded together, are rich. Before the war they put in their savings banks every year several hundred million dollars. To-day more than half of the school children have their own bank books and the deposits of the primary students amount to upward of five dollars each. The people are well clad, and however lean they may have been during the war, they look well-fed now.

These Belgian farms yield twice as much grain to the acre as ours. There are patches which produce two tons of tobacco or eight hundred bushels of carrots per acre. I am told that prior to 1914 a farmer was able to support himself, his wife, and three children on less than three acres, and any surplus of land brought in clear profit.

Belgium has also coal and iron. Before the war it was selling iron and steel to all parts of the world and its production of pig iron was half that of France. Liége was not hurt in the first military attack, but later the Germans shipped off to Germany first the copper, then the machine tools, and finally the full equipment of whole plants and factories, whose owners and operators refused to work them for the enemy. Before the war Belgium had fifty-four blast furnaces and at its close only four remained intact. Yet a good part of them are now again in operation, and through a combination in the steel industry, the country is prepared for a greater export trade than ever before. Belgium is making steel rails for Great Britain, China, South America, and the Dutch East Indies, at prices much lower than those of competing mills in England. I have travelled all over the world, but I have never been able to get out of sight of Belgian goods nor to find a country where Belgium did not have a part of its trade.

Belgium has a great textile industry which, before the Germans overran her, made goods for export to the amount of almost eighty million dollars per annum. It had a big flax industry including twenty-five factories making linen thread or tow. The linen spindles numbered three hundred and seventy-five thousand and the cotton spindles more than one million and a half. These industries were much injured during the war, but both have made a rapid recovery. A great deal more flax has been planted on account of the loss of the Russian product, and the acreage has steadily increased.

The woollen mills of Belgium were famous during the Middle Ages, and before the war the country had one hundred and ten weaving mills, from which the Germans took a great part of the machinery. Much of this was brought back and the industry is now handling more wool



"I had my shoes shined by a woman this morning. Many of them have gone into the business in Belgian cities, and judging by the bright polish they give, they should make as much at it as boys or men."



Our saying "to work like a dog" must have had its origin in Belgium, where thousands of them haul milk wagons or little carts loaded with all kinds of goods. Some, it is said, can pull as much as a ton.



Separated by only an imaginary line from France with its shrinking baby crop and decreasing population, Belgium is one of the most densely populated countries of the world. Families like this are common.

than ever. There are certain streams along which the mills are located whose waters give the Belgian wool a peculiar brilliancy and softness not found elsewhere on the continent.

Before the Germans invaded Belgium, she was exporting glass of all kinds to nearly every part of the world. Liége was making more than sixty million pounds of table glass per annum, and it had one factory that produced, on the average, a quarter of a million pieces of glass every day. This factory began working again on the day of the Armistice, and the industry as a whole has since practically equalled its former production. In plate glass, especially, Belgium was far ahead of the other countries of Europe. Most of its output went to England, Holland, and the United States. Not only has all this business been recovered, but the present exports exceed those antedating the German invasion.

These are but a few straws which show how the winds of prosperity are blowing in Belgium. Nearly every industry is improving its plants, and there are combinations of capital and movements to develop foreign trade, which make the outlook better than ever.

There is one other factor in the comeback of Belgium which deserves mention here. That is the Belgian dog. He is a live institution, and must be, I am sure, responsible for the expression "to work like a dog." The dogs are worked harder than any other animals. I see them hauling vegetable carts, pulling between shafts or hitched to the axle. Sometimes they toil along side by side with a woman, and sometimes they do all the pulling themselves. Every man who runs a push cart has a dog to help him, and the milk cart is always drawn by one or more dogs.

FRANCE TO SCANDINAVIA

It is wonderful what the dogs pull and how well they work. I tested one at a dog market in Brussels. The owner wanted to sell him and upon my asking a trial he loaded fifteen hundred pounds upon the wagon and the dog dragged it along the cobbled streets without over-exertion. He said it could pull a ton. The Belgian dogs are usually in good condition. They are so valuable that they are often fed while their owners go hungry.

CHAPTER XVIII

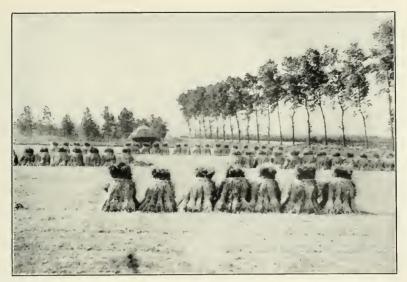
AUTOMOBILING THROUGH BELGIUM

STEP into my car and take a look at this little land as we spin over the roads. The highways are often stone paved; we can make thirty miles every hour and easily cover two hundred a day. Belgium is not much longer than from Baltimore to New York, and not much wider than the distance between Philadelphia and Baltimore. It has an area about one fourth that of Pennsylvania. It is less than one third the size of Indiana and only a little larger than Massachusetts with Delaware added thereto. For the most part the land is flat, although the Ardennes Mountains at the southeast rise in places to the height of the Blue Ridge of Virginia.

Belgium, like Holland, is made up largely of the rich earth-washings brought down by rivers and streams from the high lands, and it is cut up by canals. We crossed a canal every few miles. These necessitate bridges, which in most cases are of stone or concrete. There are more than a thousand miles of canals, and five rivers that are used as commercial waterways. The Scheldt, which would not be considered a large stream in the United States, has on its banks three cities, Antwerp, Ghent, and Tournai. It has been a water highway for centuries, and boats were paying toll upon it as far back as 1000 A. D. The freight now carried by water runs annually into the hundreds of millions of tons, and in some years to more than one billion. There are five ship canals having a combined length sixteen miles greater than that of our big ditch at Panama.

The country is one vast truck-graden cut into small fields, now covered with the richest of crops. There are no fences, and the grass, grain, and vegetables extend on and on, with green trees lining the roads as far as our eyes can reach. The crops are even heavier than those we saw in France. The shocks in the wheatfields are so thick that they stand out like soldiers dressed in the yellow uniform of Belgium. In places they have been carried to the sides of the fields, so as not to interfere with the ploughing which often results here in two crops a year.

See how well kept everything is! There are no weeds anywhere. There are no tools lying about, and the grain is protected in shock and in stack. Those oat shocks on our right are each made up of eight sheaves with cap sheaves on top. The cap is so made that it looks almost like thatch, and is tied on with straw ropes. The wheat shocks on our left are capped in the same way. The sheaves are small and the straw is long. Each sheaf is as big around as a three-gallon bucket, and when I lean one against my knees it reaches as high as my waist. The grain is exceedingly heavy, for the production per acre of wheat, oats, barley, rye, and potatoes exceeds that of any other civilized country. The wheat yield is thirty-seven bushels per acre, while our average is only fourteen. Before the war Belgium imported about three fourths of her wheat; but her production of other food stuffs, including meat, was sufficient for the whole popula-



At harvest time the flax fields of Belgium are covered with the yellow sheaves in double-headed shocks. Millions of dollars' worth are exported each year, besides the vast quantities made into linens in the factories here.



Out of every hundred persons working on the farms only sixteen are paid wages. The others are proprietors or members of their families. Many a Belgian family maintains itself on five acres.



Not even the elephants in horse-hide, for which Belgium is famous, could pull such loads of flax except for the smooth, hard roads that enable the farmer to get his crops to market at low transportation cost.



"Belgium leads the world in wheat, producing thirty-seven bushels to the acre as against our fifteen. My chauffeur and I, each five feet eight, show the size of the grain stacks, which are built like an African hut." tion, and she exported beet sugar, potatoes, draft horses, fruit, and vegetables. She now produces more than half a billion pounds of beet sugar a year.

We see also flax, another great crop of Belgium, whose linen industry is famous the world over. The flax is cut with sickles, and the little stalks, not much bigger than knitting needles, are propped up against each other so that they look like so many yellow dunce caps. After drying they are put up in double-story sheaves, all carefully capped like the wheat and oats, and later carried in huge carts to the mills near the streams in which the flax must be rotted to get out the fibre. Besides manufacturing quantities of linen, Belgium exports more than ten million dollars worth of flax in one year.

As we go on we pass fields of potatoes which are growing three hundred bushels per acre, patches of barley which yield fifty bushels, and great quantities of green hops trained on tall poles. This is a land of good beer, which now costs about ten cents a pint. It is greedily drunk, for so far prohibition has not corked up the thirsty Belgian throat.

Our automobile has stopped at the side of the road to allow a caravan of teams dragging huge wagons of wheat to pass by. Each wagon holds from three to five tons, but two horses pull it with ease over these smooth Belgian blocks. Some teams haul two loaded wagons, the tongue of the second tied to the rear of the first. The wagons themselves weigh half a ton, and some are so heavily loaded that an American team could not budge them on one of the rough country roads of the States.

The horses are enormous. They look like elephants

in horsehide, and some of the best will weigh a ton each. I have seen even bigger horses pulling drays in the cities and ports where they still compete with the motor trucks. Draft stallions to the value of millions of dollars a year are imported. Oxen also are used and even cows, donkeys, and some American mules. There are but few tractors, although they are gradually coming in to those parts of the country where the soil is heavy, and on farms of one hundred acres or more. They are employed chiefly in deep ploughing.

One of the surprising features of our travel through Belgium is the multitude of small farms. Out of less than seven and a half million acres of total area, about five million acres are tilled. Much of the ground is worked with the hoe and the spade, and no less than one sixth of the people are classed as agricultural labourers. Out of every one hundred persons employed on the farms only sixteen are paid wages. The others are proprietors or members of the farm families. Most of the farmers live in villages of one- or two-story brick houses whence they go out to work their small patches of land.

As to the size of the holdings, the average tract is only four acres, whereas in other countries it is from thirty to one hundred acres. As time goes on these farms will grow smaller and smaller, unless there is a change in the inheritance laws. I have discussed this subject with one of the leading real-estate lawyers of Brussels. He tells me that a man must leave one fourth of his property to his wife and that the rest must be divided equitably among his children. He may will away as he pleases only a fixed portion. The result is that farm lands are being continually redivided, but this does not matter so much

AUTOMOBILING THROUGH BELGIUM

with a people accustomed to till every inch of their soil and make it produce.

As we go on in our automobile we are surprised at the scarcity of motor transportation in Europe. The United States has a car or truck of some kind for every two families; France has only one for every forty, and Belgium has even fewer. Most of the cars here are of light weight and low horsepower, for the upkeep far exceeds that of our cars at home. In France gasolene sells for from sixty to seventy-five cents a gallon. On our motor trips there we sometimes filled our car from square cans as long as a stick of stove wood, each holding a little more than a gallon. It took ten of these cans to fill our tank, and the man or woman who sold them brought them out to the car and poured them in one by one. Sometimes we found gasolene pumps like those used in the States, most of which were imported from America. Gasolene is called "essence" in France, the name coming from the essence of petroleum, which is just what it is.

Many of the French cars are so small that if you put one into the tonneau of an American seven-passenger machine it would rattle around. In some of the smaller cars the body hangs down to within eight or ten inches of the roadway; and the car runs on only two or three horse power. The most popular of the cheap machines has from five to ten horse power, and the largest and best seldom have more than thirty or forty.

The speed of the motor cars of France is beyond conception, and the recklessness of drivers amazing. There are plenty of traffic rules but no one observes them and the brass-buttoned traffic policeman with his white club seems not such a czar as he is with us. Unless he causes

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an accident, no one is punished for fast driving. Even the person who is run over, if he is so fortunate as to escape death, is arrested for obstructing the traffic.

Here the bicycle takes the place of our flivver, and Belgium has more than one for every two families. The number is nine hundred thousand. They are used by men, women, and children, by the rich and the poor, for work and for pleasure. They are the chief picnic-vehicle, and the boys and girls riding tandem bring youth to my eyes. They make me think of the popular song of our own bicycle craze:

> It won't be a stylish marriage, We can't afford a carriage; But you'll look sweet upon the seat Of a bicycle built for two.

CHAPTER XIX

FROM LIÉGE TO YPRES

OR the last few days I have been motoring in my Benz limousine from town to town and from battlefield to battlefield, making notes of the rebuilding that has been going on here since the war. It began the moment the guns ceased firing, and has so transformed the country that some of the tourist organizations have stopped taking their parties through the different salients, because the signs of devastation have almost passed away.

You all know how roughly Belgium was dealt with during the World War. She incurred the anger of the Germans by holding back their armies when they were preparing to pounce down upon Paris. In July, 1914, they had one million men massed on the Western frontier, and on August 4th they invaded the country. On August 5th they bombarded the forts of Liége with the biggest guns ever known up to that time, and within a week three of these forts had surrendered. Meanwhile, the British had waked up and were pouring in soldiers, the French had concentrated along their frontier, and the five German armies were so delayed by little Belgium that Paris was saved and the war eventually won for the Allies.

After entering Belgium the German forces divided. Some came on and occupied Brussels and thence made their way to Malines and Louvain to begin the short siege of Antwerp. Another force successfully bombarded Namur in the valley of the Meuse, and on the twentysecond of August came the great Battle of Mons, where the British, with much inferior forces, engaged three hundred thousand Germans and were gradually driven back step by step until they reached the Marne. But that is a part of the story of France.

After the Battle of Mons most of Belgium was evacuated by the British and the French. Brussels had been taken over by the Germans two days before. Malines had been destroyed by big guns, the cathedral of Louvain had been battered and its library of valuable manuscripts and three hundred thousand volumes had been burned. The Kaiser's troops were besieging Antwerp which was held by the Belgians under King Albert.

During the bombardment of Malines and Louvain hundreds of business buildings and private dwellings were reduced to dust. A like fate came upon several hundred structures in Antwerp itself. During my travels I have visited each of these cities. Most of the buildings have been restored and in some cases much better ones have been put up. The new private buildings are artistic. Many of them are of white stone and some have their walls decorated with carvings. All are in harmony with the old surroundings.

Louvain's new million-dollar library, built by the funds raised by six hundred and forty colleges and universities in the United States, is not on the site of the old one, but faces the Place du Peuple, which is filled with old forest trees. The design is by Whitney Warren, an American architect, who planned it to harmonize with the typical architecture of Belgium. The inscription selected to run across the front in great sunken letters reads: "Furore Teutonica Diruta, Dona Americano Restituta," which means "Destroyed by Teutonic Fury, Restored by America's Gift." The building covers a full square of ground on the highest land in the city.

On my way to Antwerp I saw the place upon which were mounted the guns which sent shells as tall as l am a distance of ten miles into that city. The site, I am told, had been fixed by the Germans before the war. The guns were set up on the foundation of a wooden villa which covered a bed of reinforced concrete of great thickness. The villa was taken away and these huge seventeen-inch guns, whose enormous size astounded the world, were placed here. The bombardment lasted thirty-six hours and during a part of this time a shell was dropped every minute. A gun could fire only a limited number of shells before it had to be allowed to cool. The damage done to Antwerp was small, for the Germans expected to maintain the port as one of their great war stations of the future and to use it as Napoleon did when he said, "Antwerp is a loaded pistol that I hold against England's throat." Fortunately for the world, the famous cathedral was unharmed. In all only seven hundred buildings were destroyed, and some of them were so dilapidated anyhow that the city was glad to have them removed.

On October 9th, when Antwerp was surrendered by the Mayor, the Belgians and the British had left the city and fallen back upon Ghent, from which they retired two days later. The Germans went on to take Ghent and Bruges, and within less than a week had reached Ostend, at which time the Belgian army was on the River Yser. You may remember the great Battle of Yser which lasted ten days, and was fought upon the land, upon the sea, and in the air. That was the first battle in which aviators were successfully employed; and it was the one in which the Belgians shot holes in the raised banks of the river, so that its waters, increased by the inflowing tide, spread over the country and inflicted severe losses upon their enemies.

It was about the same time that the Battle of Ypres or, as the British Tommies called it, "Wipers," began. The first shell descended on that town on October 7th, and two days later twenty thousand Germans passed through it. Six days after that the first British soldiers came in, and on October 19th, the British met the Germans in a contest that lasted three weeks and resulted in the Germans losing a quarter of a million men and the Allies more than one hundred thousand. Another battle took place there in 1915, and a third in 1917, when the British advanced and pushed back the Germans. In each of these battles there was fighting throughout the surrounding country which wiped out towns and villages and caused about the worst destruction that Belgium suffered during the war.

To understand the devastation one must recall Ypres of the past. More than two centuries before America was discovered the city had two hundred thousand inhabitants and was one of the richest industrial towns of the world. Its people wove woollen cloth, silks, and velvets, and excepting the cathedrals, the Cloth Hall of Ypres was the finest building of the Middle Ages. It was used by the Drapers' Guild as its warehouse and exchange. Another great structure was the Cathedral built about the same time, and connected with the Cloth Hall was the Nieu-



Clothes washed in the rivers of France and Belgium usually come out perfectly white, but are likely also to be damaged by the rock pounding they get in this primitive laundering.



The road at Dinant runs through the cleft of a great pinnacle rock, named for an enchanted horse, Bayard, which in Charlemagne's day is said to have leaped across the chasm above with four giants on his back. werck, begun the same year that the *Mayflower* came to anchor near Plymouth Rock. All of these buildings and others were rich in carvings, paintings, stained-glass windows, and valuable archives. The city itself, reduced to less than one tenth of its former size, was a beautiful relic of artistic antiquity, proud of its history, but famous chiefly for its produce market, in which, on Saturdays, more than forty thousand pounds of butter changed hands.

At the close of the war the city was deader than Sodom after Lot and his two loving daughters ran off to Zoar. The Cloth Hall and the Cathedral were masses of ruins. The houses had vanished, and the town was a "shell-swept graveyard." There are now four hundred cemeteries scattered over the salient, and they contain two hundred and fifty thousand graves. The other day I rode by the cemetery of Poelcapelle where are buried four thousand bodies found in shell holes. On three thousand of the crosses above them are printed the words: "In memory of an unknown British soldier."

Immediately after the Armistice, the work of reconstructing Ypres was commenced. The first thing was to create a bright spot in the wilderness. This was done by clearing the public square and filling it with flowers, shrubs, and grass and planting two rows of trees along the Boulevard Malon which leads from it. At the same time the people came back. More than twelve thousand wooden structures of different types, from single-room sheds to temporary town halls, sprang up over night. Meantime brick and other materials became available and the construction of susbstantial houses commenced. During the war something like four thousand houses in Ypres were destroyed; most of these have now been rebuilt.

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Yet our hearts burn as we pass the ruined Cathedral and the Halles with their acres of still falling walls. Parts of them are surrounded by scaffolding and the masons are trying to make restorations but it seems impossible that they can succeed. The ruins look like those of Timgad or Pompeii, and in places no better than the remains of old Carthage, which was wiped again and again from the face of the earth.

CHAPTER XX

SNAPSHOTS IN FLANDERS

E HAVE left Ypres and are riding about over the country, through villages which at the time of the Armistice were in ruins. The landscape is spotted with patches of red, each patch the tiled roof of a new farmhouse or new village. Every old house has a new roof and on some of them I see the figures of the year of rebuilding painted or worked in with other tiles of black or blue. Red, in China, is the sign of good luck. Here in Belgium it is the sign of reconstruction and it means that prosperity has come back to the people. Most of the houses are of brick or stone. Nearly all have but one story with ridged roofs ending close to the walls. It is only in the larger towns that one can see two- and three-story buildings. The evidences of the devastation of war have practically disappeared. The railroads have been reconstructed, the roadways rebuilt and improved, and transportation facilities generally are perhaps better than ever before.

Belgium was the first country in continental Europe to build a railway. That was in 1834 and ever since then she has been noted for her excellent railway construction. The Germans took over a total of trackage as long as the distance between New York and San Francisco, or more railroads to the square mile than exist in any other country on earth. In addition, there were narrow-gauge lines which formed a network covering the kingdom. There were two thousand four hundred miles of them running from village to village and acting as feeders to the standard-gauge railroads. Of all this the invaders completely destroyed more than seven hundred miles and damaged so much more that altogether over twelve hundred miles were put out of operation. They destroyed in the neighbourhood of fifteen hundred bridges, and when they retreated, the country had less than three hundred locomotives and only three thousand cars in good working order. After the armistice orders were placed in America and Great Britain for new rolling stock. The only ones promptly delivered were those from America. Gradually the roads have come back, and although they are operating at greatly increased fares and at a loss to the government, the service in many respects is equal to any we have at home.

This is true also in France. In my railway rides there I frequently had express trains which made more than sixty miles an hour. I went over an excellent roadbed from Paris to Rheims, a distance of one hundred miles, in two hours, and made the one hundred and eighty-eight miles between Lille and Paris in four hours, or at the rate of forty seven miles per hour including three stops. Our best trains from New York to Washington make the two hundred and twenty-seven miles in five hours, which is only a little more than forty-five miles per hour. The French train was brand-new; the first-class cars were exceedingly comfortable, and the fare was only about two and one half cents a mile. The trip cost me four dollars and twenty-eight cents, whereas, if I remember correctly, the fare from Washington to New York on the Congres-



Belgium has kept on its original mount at Moere the German gun, "Long Max," a younger brother of "Big Bertha." This gun was used by the enemy to bombard Dunkirk, twenty-eight miles away.



We do not think of Belgium as a land of windmills, but in Flanders they are characteristic features of the landscape. There are also many canals in this part of the country.



Next to the white-curtained living room, of which these farm women are proud, is the stable. The people take living at close quarters with their horses and cows as unquestioningly as they do their hard work and long hours. sional Limited is a little over ten dollars, or more than twice as much, although the distance is only thirty-five miles greater.

My dinner in the French dining car cost eighty-five cents and was better than the meals on our trains at home. Everything was served piping hot. We began with an excellent soup served in large cups, after which came fish with potatoes, followed by a course of roast beef with green beans. The meal ended with a dessert of cheese and ripe grapes. We were charged ten cents extra for coffee, and I could have had a bottle of excellent wine for twenty-five cents. The dining-car prices are about the same here in Belgium.

In both France and Belgium there is much discussion of electrification of the railways. The French scheme is associated with the harnessing of the water power of the Rhône River, an excellent report upon which has been made by Dr. William C. Huntington, former commercial attaché to the American Embassy in Paris. He savs that the Rhône basin is theoretically capable of producing one million seven hundred thousand horse power, and that it could actually give eight hundred thousand horse power all the year round, which is equal to the importation of five million tons of coal per annum. France has a programme to electrify more than five thousand miles of railway, covering a large part of the most important French systems. The total expense is estimated at more than two and one half billion francs.

Belgium proposes to begin electrification with the Brussels-Antwerp line, and to go on from there to the Luxemburg line. It will have both self-propelling trains and trains drawn by electric tractors. The speed made will be forty-five or fifty miles per hour.

But Jules has stopped our automobile at Leugenboom, a little village near Moere, and motions to us to get out. We do so and follow him to a turnstile where by paving a franc, we enter a wood and follow a trail to "Long Max of Moere," a little brother of the "Big Bertha" that sent shells seventy-five miles into Paris. This German gun was used to fire upon Dunkirk on the English Channel, twenty-eight miles away. It is fourteen inches in diameter and its barrel is so large that when I offered a boy of twelve a franc to crawl in that I might photograph him looking out, he had no trouble in doing so. The barrel is forty-two inches in circumference, and its long shell was, I venture, much taller than the boy. "Long Max" is mounted on a great concrete foundation with a sunken pit, walled with iron, beneath it. He can be raised and lowered and swung around as though on a pivot. Close by was a dummy gun which was used with a smoke-andflash apparatus to draw the British fire.

In a dug-out, probably used for storing ammunition, I found a Belgian selling lace. He had beautiful tablecloths at a low price and lace collars of fine work which cost only two or three dollars. He brought out the pillow on which he himself had made much of his stock, telling us that the finest of his wares had required weeks of work.

Returning to our automobile, we go past windmills, tall white towers of brick or wood, throwing their red arms about. They make me think of Don Quixote and his fight with the windmill. He succeeded almost as well as the Germans. The windmills here are used to grind grain, and are operated from the farmsteads near by.

See that stack of stumps and logs near those houses of

bright yellow bricks. They came from trees along the roadside cut off by the shells. We ride on between rows of young trees newly planted. During their occupation of Belgium, the Germans cut down timber worth several hundred millions of dollars. They cut old and young trees, and in some places even the orchards were ruined. In Hainaut, Liége, and Namur, large wooded areas were entirely destroyed.

Riding on to the northeast, we go through the ancient city of Bruges. It once vied with Ypres, having one hundred and fifty thousand inhabitants, although now it is not more than one third of that size. It is a city of canals. It is nearly surrounded by them, and the waterways run through the town. A new ship canal six miles long connecting it with Zeebrugge was opened some years ago. You will remember that the latter port on the North Sea was a German submarine base during the war. It was badly damaged by the bombardment of the Allied airmen, and the Germans sank large cranes in the docks, as well as twelve ships and other small craft in the basin. In order to clear the harbour the canal was blocked and the water pumped out.

Another great canal city is Ghent, through which we pass on our ride back to Brussels. It is cut up by waterways which divide it into thirteen islands connected by fifty-eight bridges. This is a quaint old Flemish town whose mediæval buildings, great cathedral and belfry, and many museums are the delight of the tourist. About the time of Columbus it was the most important city in Flanders, and again it has on its seven-league boots and is rapidly growing. With its suburbs, its population is now in excess of two hundred thousand and it is more than sixteen miles in circumference. A wide ship canal, deep enough for all ocean-going merchant vessels, connects the town with the Scheldt.

Ghent stands next to Antwerp as the chief port of Belgium. It is noted for its imports of cotton which comes from the United States by the tens of thousands of tons, and it has great cotton and linen mills which have more than fifteen hundred thousand spindles and about fifty thousand looms. It is the Manchester of Belgium and its people have always been noted as spinners and weavers. Besides its cotton manufactures it has one of the largest linen mills of the world, while in the country near by fine lace is made, much of it by women working by hand.



If this canal at Ghent and all the other inland waterways of Belgium were joined together, they would girdle the earth at the Equator. Goods worth millions are carried on them at low freight rates.



"Some of these Belgian flower girls are almost as pretty as their wares. This one smiled broadly when 1 snapped her."



We know that southeastern Belgium has its mountains, and it would seem that she also has pyramids. But these are really the great waste heaps built up through the years in the coal-mining region.

CHAPTER XXI

A VISIT TO THE COAL PITS

AM at Wasmes in the heart of one of the richest coalmining regions of Europe. Belgium's deposits of coal and iron make it hum like a bee hive, and with its many iron and steel mills, it is one of the busiest workshops of the continent. Its annual production of coal amounts to more than twenty million tons. It uses the greater part of this at home, and also imports fuel from Germany and England. Only one of the mines was destroyed by the Germans during the war.

The mining conditions of Belgium are entirely different from those of our country. Most of our mines are near the surface, and it costs but little to get the coal to the cars. Those of Belgium are far down under the earth, and every ton has to be lifted out by machinery. Some of the mines which I visited to-day are more than half a mile deep. The water has to be fought at every turn, and mighty pumps are employed to keep the works dry. There are tunnels cutting the earth this way and that at a depth of two thousand feet. Over them are other tunnels, and the whole region has been turned into catacombs in the deep delving after the black diamonds.

The mines have to be timbered. The wood is cut from the forests near by, but most of it is not over six inches thick, and as it comes to the mines it looks like telegraph poles, each fifty feet long and tapering to a point at the end. Such timber stands in great stacks about each mine. Much of it is unloaded from the cars by women, who handle the poles like so many Amazons.

The work in our coal mines is done altogether by men. Here much of the labour above the surface is performed by women. And such women! Lusty young girls of from sixteen to twenty. Pretty girls, rosy cheeked, round armed, and plump, their faces smutted but at the same time comely! Their eyes are bright and their beauty is accentuated by the coal dust on their faces through which the red shows like that of the dark moss rose.

This coal region looks far different from those of Pennsylvania, Ohio, or Tennessee. There it is mountainous. Here at Wasmes the land is flat and the only elevations are made by the dumps of the mines. The coal is filled with waste. It has to be sorted and the refuse is carried out upon cars. There is so much of it that a pyramidal mountain soon rises up beside each mine, standing out like a black cone against the blue sky. There are such pyramids everywhere in this part of Belgium. Some of them are dead, the mines which produced them having been worked out and abandoned. Others have ladders up their backs and a framework on the top where women bush the cars along and, with a rattling sound, empty them. Some of the pyramids are smoking. There is much sulphur in the coal and spontaneous combustion often starts a fire which burns on for years. Instances are known of people going to sleep on the dumps and being suffocated by the fumes and gases.

Take your stand with me on one of these coal mountains just outside Wasmes and look about you. See the farms covered with rich crops, with these coal mounds rising above them. There is one at our right with great buglike bags crawling over it. Take my field glass and look at them. They are not bags. They are women who are picking up the coal that has been left in the waste. There comes a car along the coal mountain. Two women are pushing it and with the glass you can almost see the muscles in their bare arms swell as they cast it on the dump.

Now look at that mound at the left. It is hundreds of feet high and, like the others about it, is an evidence of the enormous waste that the miners have to deal with. Every bit of coal that is brought to the surface has to be picked over, and the amount of waste is evidently greater than the quantity of the coal itself.

Let us visit one of the mines. At the mouth of the opening stand a half dozen Belgian girls, their heads done up in blue-and-white handkerchief turbans, their sleeves rolled up high above the elbows and their shapely ankles plainly showing above their white wooden clogs. See them grasp that car as the engine stops and shove it over the rails to where it is to be dumped for the sorters. As they do so a second gang of girls takes their places to handle the next car and others shoot the empties back to the farther side of the shaft. There is no fooling about this. The women work like bees, and with the strength of horses. They do as much as the men, and they are, I am told, more conscientious in their work.

Leaving the shaft, we go to the sorters. The coal rolls down a chute into the cars. Women stand at the side of the chute and help it onward with hoes. Girls sit farther down picking the refuse and slate out of the coal with their hands. Still farther on there are more turbaned, bare-armed maidens, sooty and dirty, and in the railroad car, into which the coal drops, there are other women hoeing the coal this way and that, sorting out waste. Girls and women work as fast as fingers and arms can move, for they are paid on a piece-work basis.

The women miners of Belgium are far better off to-day than they have ever been in the past. Their condition has been notoriously bad. For a long time little children were employed in the mines. They were harnessed to carts and coal cars with straps and chains so that they crawled along on their hands and knees dragging the coal to the mouth of the shaft. Women over twenty-one used to be permitted to work underground for a twelvehour day, but this has now been forbidden by law. The work was hard and degrading. It unsexed the women and in time broke them down like so many draft animals. Indeed, in old age they became little better than the horses and donkeys with which they worked in the darkness of the underground tunnels.

The girls I saw at work on the surface were not bent and broken, but quite as well developed physically as the ahtletic young women of the United States. And still they were toiling like so many horses, pushing the cars this way and that. Some were lifting great lumps of coal weighing from fifteen to twenty pounds each, and others were doing all sorts of work which in America would be done by men.

In one place a ditch was being dug and lined with brick and cement. A girl was mixing the mortar with a hoe, and a little farther on at a brick pile three sturdy girls were loading bricks upon a wheelbarrow which a fourth girl pushed on to the car when it was full. They were working hard and the perspiration stood out in white beads on their dusty faces. I took a photograph of them, and my heart came into my throat as they smiled.

I have been interested in the life of the people. Every great mine has its dwellings about it, a collection of little two-story brick houses built together in blocks. Each house has five rooms, two on the ground floor, two above, and a little attic under the roof. The families are large, and the average number of children is six or seven. The miners are miserably poor, for they spend much of their wages for drink.

I am surprised at the number of saloons. They are known as *estaminets*, and one sees them everywhere. There is hardly a block in the city without one or more, and they are scattered along the country roads. Many of the workmen get drunk on Saturday and lay off over Monday.

CHAPTER XXII

ANTWERP AND BRUSSELS

A TANTWERP I am in the chief gateway of the centre of industrial Europe. This port has more commerce than ever before and is to-day one of the leaders of the world, being in constant rivalry with Hamburg. She outranks London, and now, with more than thirteen million tonnage of shipping using her harbour, she has even exceeded the port of New York. She not only has the bulk of the commerce of Belgium, but is an important transfer station for western Germany, Switzerland, and France, as well as a national trading centre.

Come down to the port and stand beside me on the wide concrete promenade that hangs over the Scheldt, and see what God did for Antwerp. We are at a level with the smokestacks of huge ocean liners loading and unloading goods, above warehouses and railways, in sight of hundreds of electric and hydraulic cranes, and near barge elevators which are sucking grain out of the ships by the thousands of bushels per hour. The vessels extend on for miles, and looking up stream we can see a very thicket of smokestacks. The river before us is only about as wide as the Potomac at Washington, but it is from twenty-five to fifty feet deep and at high tide often nineteen feet deeper. It is so wide and so deep, in the fifty-four miles of its winding to the North Sea, that the

ANTWERP AND BRUSSELS

biggest of the ocean greyhounds can come right up to our feet and land their freight on the quays extending for miles above and below us.

Now stop and think where we are! We are opposite the mouth of the Thames, the gateway to London. We are just above the end of the English Channel on the direct route to New York and within a short distance of Rotterdam. Bremen, and Hamburg, where ships may stop on their way to the Baltic, that great inland sea of north Europe. Steamers can go from here south through the English Channel, tapping its industrial wealth on each side; and moving on to Gibraltar, enter the Mediterranean and have all southern Europe and northern Africa of easy access. They can go on to the Suez Canal and down through the Red Sea to the Indian Ocean, and take in the great trade of south and east Asia. Those Japanese vessels we see moving out of the harbour are on their way there. Or the ships can steam down the east and west coasts of Africa calling at the trade centres, including Boma at the mouth of the Congo, whence the two large vessels at our left have just come.

There are also regular lines from Antwerp to Rio de Janeiro and Buenos Aires—a steamer with a cargo of frozen meat is now coming in from the Argentine port. There are many ships from the United States in the harbour, and the familiar red, white, and blue at their mastheads is a delight to our eyes. From where we stand it is just three thousand, three hundred and twenty-five miles to New York and that big tramp from New Orleans has come only fifteen hundred miles farther. The vessel loaded with lumber near by is from San Francisco. It came south on the Pacific, through the Panama Canal,

FRANCE TO SCANDINAVIA

and thence across the Atlantic, making a voyage of more than eight thousand miles.

But quite as important as these many sea routes, are the canals, rivers, and railways over which streams of raw materials are continually flowing from all nations through Antwerp and into these workshops of western Europe. These in turn send back over the waterways manufactured products for England, North America, South America, and Asia.

Belgium has enough interior waterways connected with her ports to make a continuous stream around the world at the Equator. Its canals alone if joined end to end would reach from Philadelphia to the Mississippi River; and some of the enormous barges below us, now taking on cotton, grain and other produce, will travel inland by water to the Rhine and by a canal to the Danube and on that stream past port after port almost to the Black Sea.

There are canals from the Scheldt and other rivers into France, so that goods can be carried to Tournai, Lille, and Paris; and there is now talk of a complete inland waterway system from Antwerp to Marseilles. The plan is to make it wide and deep enough to permit the passage of boats of ten thousand tons and fourteen feet draft. A part of this system is provided for in the peace treaty of Versailles. It includes the making of a canal from Antwerp to the Rhine, the deepening of the Rhine from Cologne to Strassburg, and the reconstruction of old French waterways from there to the Mediterranean. The Antwerp–Rhine canal awaits only money to start its construction.

There is talk also of a big ship canal from Antwerp to



The great cathedral of Antwerp is the architectural pride and glory of Belgium. It is nearly six hundred years old, and contains many famous pictures, including Rubens' "Descent from the Cross."



With the wide ocean before her and a network of rivers and canals behind her, Antwerp, one of the world's greatest ports, has a share in the trade of half Europe and of the farthest corners of the globe.



All Antwerp takes its walks on the promenade overlooking the quays and the River Scheldt. Black-robed Sisters of Charity remind the visitor he is in a country where ninety-nine per cent. of the people are Catholics. the North Sea, to avoid the necessity of using the Scheldt, whose passage through Holland is the cause of some friction between the Dutch and the Belgians.

In addition to these canals, Antwerp has railways that connect her with all parts of central and western Europe. She has three lines to Germany, and several to France, one of which goes via Alsace-Lorraine to Switzerland and Italy. By the St. Gothard tunnel, passengers are carried from Switzerland to Milan and on down to Brindisi, at the heel of the Italian boot, where begins the short water route to Asia and the Far East. Milan is more convenient of access to Antwerp than to any other great port of Europe.

Do you wonder that a city so situated has become a centre of trade? The people here say its original discoverer was Antigonus, a giant twice as tall as Goliath, who, as I figure it, was just short of ten feet. Antigonus selected this spot to prey on the traders whose ships passed in and out, cutting off the right hands of his victims and throwing them into the Scheldt. From this came "hand" and "werpen" (to throw), the two forming Antwerpen, the Flemish name for Antwerp. The coat of arms of the city still has two hands upon it.

Whatever may be the truth about the giant, we know that Antwerp was a rich commercial centre when all America belonged to the Indians. In the Middle Ages, it is recorded that five hundred wagons passed in and out of it daily carrying goods, and that five hundred ships sailed up the Scheldt every twenty-four hours, while twentyfive hundred might be seen there at anchor at the same time.

Later Antwerp surpassed Venice and Genoa, holding

fairs that attracted merchants from Europe and Asia.[®] About seventy-five years after John Cabot had discovered North America, among the city's annual imports were three million dollars' worth of grain from the Baltic, and goods from England worth several times that amount. They included also more than four million dollars' worth of spices and sugar, and twice as much in silk and gold embroideries from Italy. Antwerp then had a thousand foreign firms doing business inside her walls, among them the Fuggers of Augsburg, who were the Rockefellers of that time, and one of whom left a fortune equal to about five million dollars, then an almost inconceivable sum.

Such were the conditions when the Spaniards under the Duke of Alva, "the hangman of Philip 11," tried to rule the land. They ruined the country and within less than a generation its population dropped more than fifty per cent. In 1700 Antwerp had only forty thousand souls. Later Napoleon saw the commercial and strategic possibilities of the port and selected it as the water gateway of his future ambitions. He built docks at a cost of something like ten million dollars, and the city was rapidly regaining its place as the commercial capital of northern Europe when her progress was stopped by the revolutions that followed his death. A generation or so later, when Belgium separated from Holland, Antwerp again pulled on her seven-league boots, and she is now bigger than ever. She has to-day more than four hundred thousand people, and with such harbour improvements and such natural advantages she will inevitably continue her growth.

But we have our motor car waiting for us at the foot of the promenade with a former soldier as a chauffeur and guide. For two hours he drives us through the streets and paved roadways that wind about through the shipping and great basins on the banks of the river until we are miles above the promenade from where we started.

We are now on the opposite side of the Scheldt, where it is planned to build new docks and quays that will double the capacity of the port. We drive past acres of warehouses, by mountains of barrels of oil, in and out among long-armed cranes, and by yard after yard filled with freight of every description. The river has already more than eighteen miles of anchorages forty or fifty feet deep at high tide, and when the present plans are completed it will have more than forty miles with fifteen hundred acres of docks and forty-two thousand acres of railway sidings and warehouses. It will then be able to handle forty million tons of freight every year.

We pass railway stations and yards, covering about five hundred acres, in which twelve thousand cars can be accommodated. We stop now and then to see floating cranes and enormous pneumatic grain elevators, each of which handles five thousand bushels of wheat in one hour, or eighty-three bushels a minute. Antwerp has twelve of these grain elevators, and steamers of eight thousand tons are unloaded within the space of two days. The port has three hundred and ten hydraulic cranes handling up to two tons, eighty electric cranes, each of two tons capacity, and larger cranes that will pick up forty tons at a load. It has some one-hundred-and-twenty-ton shearlegs, a coal tipple that will lift a car to the height of a fivestory house, and pipes and tanks for loading petroleum. There are a half-dozen dry docks here and a new one has just been completed. In each a great steamer is being repaired.

We end our ride at the zoo which is again filled with animals brought in from the Congo and other parts of the world. When it was bombarded during the war, almost all of the wild beasts were killed. One reason for this slaughter was to increase the meat supply of the city, and another the fear that the shells might break the enclosure of the elephants and allow them to roam through the streets.

The Antwerp of to-day shows no signs of the war. The Germans entered the city October 9, 1914, and it was on November 19, 1918, that King Albert and the Queen came back. During the four years of their stay the Germans levied a monthly war tax of about twelve million dollars, or four hundred thousand dollars per day.

A motor ride of less than an hour will take us from Antwerp to Brussels, the financial centre of the country and the seat of the King and the government. Brussels is not among the largest of the capitals of Europe, but it surpasses most in gaiety, beauty, and art. It is bigger than Washington, and with its suburbs, equals Boston in size. It has many fine parks, including the Forest of Soignies of ten thousand acres, through which one rides on his way to the site of the Battle of Waterloo and the Bois de la Cambre, reached by an avenue as wide as Commonwealth Avenue in Boston and more than a mile and a half long. The street is lined with sumptuous mansions, for Brussels is a city of magnificent homes. The town is divided into two sections, one of which is high above the other. It is in the upper part that the King's palace and the government buildings are situated, and here too, most of the foreigners live.

l like Brussels. The fine old buildings of the Lower



Belgium is a land of flowers and every public square in the cities is bright with blossoms. The Botanical Gardens in the heart of the business district of Brussels are especially fine.



In making pillow lace, for which the women of Brussels are noted, the pattern chosen is pierced with pins, which guide the threads and also hold fast the design on the stuffed pad in the worker's lap.

Town, many of them decorated with carvings, are a delight to the eye, and the great Palais de Justice, in the Upper, compares with our Capitol as one of the finest of national structures. It is much like the Capitol, almost as large, and far more ornate. Its cost was over ten millions of dollars. If I remember correctly, the Capitol at Washington cost thirteen millions. Not far away are other public buildings, including the famous art gallery and national palace.

I like the statues of Brussels. Their name is legion and they are all sizes from giants in marble to a little green bronze naked boy about as long as my arm, known as the Mannikin Fountain. The little fellow is one of the greatest of attractions to tourists, who are daily taken in parties to see him. He is loved by the people, who call him "the oldest citizen of Brussels," from the fact that he was erected in 1619.

l like the lace shops of Brussels. The city is a lace centre of the world, and one can buy most beautiful creations in linen thread, from the size of the butterflies which the ladies now wear on their heads, their shoulders, or somewhere else on their dresses, to the fine wedding gowns that cost almost a king's ransom.

I like the store windows which are ablaze every evening, and not covered with steel shutters at night as in Paris. I like the crowds that fill the Rue Neuve every afternoon from side to side with substantial-looking people noted for the absence of snobbishness and for the general good fellowship one finds everywhere here.

I like the patriotism of the Belgians. They are proud of their country and show this in the flagstaffs which on holidays fly the national colours from every second story,

not only in the capital but throughout the country. This patriotism was the one thing the Germans could not destroy. A notable instance of this occurred in 1016 on what might be called the Belgians' Fourth of July, which they were forbidden to celebrate as a holiday. The Germans ordered "business as usual" and that all the shops be kept open. This ordinance was observed in the letter but not in the spirit. The shops were open, but the windows were empty except where cartoons or other things ridiculing the invaders were displayed. There were crowds on the streets, all dressed in green, the colour of hope. The men wore green ties and flirted green handkerchiefs. They had knots of green ribbon in their buttonholes and green bands round their hats. Many of the women came out in green gowns and some wore green hats and carried green parasols. The people came by thousands to the Cathedral where Cardinal Mercier preached a sermon denouncing the Germans; and this was followed by the singing of the national anthem to the accompaniment of the great organ. The German officials could hardly contain themselves and retaliated next day by fining Brussels one million marks, which, at the time, represented a value of almost two hundred and fifty thousand dollars.

CHAPTER XXIII

HOLLAND FROM AN AIRPLANE

AKE a seat beside me in the airplane of your imagination, while we fly over Holland. We are high up in the skies and so near Amsterdam that should we drop a stone overboard it might hit one of those canal boats entering the city. We left Brussels two hours ago and passed Rotterdam within twenty minutes. We could see The Hague, Leyden, and Haarlem on our left as we flew. The air trip from London to Amsterdam takes three and one half hours and that from Paris takes four. We can fly from here on to Denmark in eighty minutes and, as we have chartered the 'plane, shall keep on our way through the skies, moving this way and that to get a bird's-eye view of the country.

It is a big job, this cramming a kingdom into the eye of your mind in time that might be numbered by minutes. But one can fly across Holland from the North Sea to Germany in a little more than an hour and from Denmark to Belgium in less than two. The longest distance across Holland from east to west is only a little greater than that from Philadelphia to Washington, and from northeast to southwest is not much farther than from Baltimore to New York.

All Holland, including the fresh waters inside its borders, is only about as large as Massachusetts and New Jersey combined. It is equal to one third of Pennsylvania or one half of South Carolina, and if you could cut California into ten equal parts, each would be only a little larger than the great flat land below us. Nevertheless, this country supports as many people as we have in New England, and next to Belgium it is the most thickly populated country of Europe. It has an average of five hundred and fortytwo persons per square mile.

As we have come north we have flown over all the big cities. Rotterdam on the wide River Maas, which forms one of the mouths of the Rhine, is about as big as Buffalo, San Francisco, or Washington. The Hague is in the same class as Cincinnati, Kansas City, or New Orleans, and Amsterdam is nearly the size of Pittsburgh or Los Angeles. We shall see many small cities as we fly over the country. Two out of every five Dutchmen live in big towns, and the homes of the others are in villages, in farmhouses, or in houseboats and barges on the canals. Holland is like Bangkok, Siam, in that it has tens of thousands who spend their lives on the water.

We now take our field glasses and look far and wide over the country. We can see the waves of the North Sea rolling in against the sand dunes and dykes at the west, and on the east pick out villages which we know belong to the Germans. Almost everywhere between there is water. Those three great rivers at the south filled with shipping are the Rhine, the Maas, and the Scheldt. We spy lakes here and there and look down upon great sheets of silver such as the Zuider Zee where the ocean runs in at the north.

As we look we are reminded of the saying that Holland is a kingdom afloat, yet at anchor. In the time of Julius Cæsar it was a swamp and to-day one third of the land



"God made the sea, we made the shore," say the Hollanders, and rightly, too, as one third of their country would be swallowed up in the ocean were it not for the great dykes and canal embankments.



The fishwives of Scheveningen are famous for their petticoats. Sometimes to dress up for the return of the fishing fleet they put on as many as thirty. The town is chiefly noted as Holland's great beach resort. is so low that, if it were not for the embankments and dykes, it would again belong to the ocean. The fight with the sea continues day and night and every day throughout the year. The annual cost of patching the dykes is six or seven million dollars. The government has a department known as the Waterstaat devoted to the care of the dykes and a corps of engineers is kept busy superintending them. The Dutch say: "God made the sea. We made the shore."

This statement is physically true. More than one half of Holland has been reclaimed from the rivers and ocean by embankments and works of one kind or another. The Dutch began to build dykes more than ten centuries ago and they are still building them. All along the North Sea the sand hills have been connected by walls of earth that keep old Neptune out, and the government is now planning a great wall with gates across the Zuider Zee which will reclaim five hundred thousand acres of arable land.

It is proposed to divide the Zuider Zee into two parts by a heavy dyke and then make four great ponds ranging in size from fifty-four thousand to two hundred and sixty-nine thousand acres. These will be pumped out and turned into farms. The job will take seventy years and will cost over seventy millions of dollars. This seems a long time, but a decade in the sight of these Dutch is "but as yesterday when it is past, and as a watch in the night." The proposed dam includes Wieringen, the island where the Dutch interned the Crown Prince of Germany, and will make the southern part of the Zee a vast lake, with the *polders*, or reclaimed lands, in four great blocks about it. There will be a passage through the dam by locks to Amsterdam, but that city already has a short cut to the ocean at Ymuiden by the North Sea. This canal when completed some years ago was large enough and deep enough to admit the biggest ocean-going ships of that day. It is now far too small, and only second-class steamers can pass through it. The canal is to be widened and deepened, and a new lock three hundred feet longer than the longest one at Panama is to be built. Now the great ocean liners which come into Holland make Rotterdam their port of call. When the North Sea Canal has these improvements, Amsterdam shipping will revive, and the port will contend with Antwerp and Hamburg for transatlantic and other oceanic trade.

All my life I have been reading about the wonderful dykes of the Dutch. As a schoolboy 1 cried over the oft-quoted story of the little lad who, when a hole broke in the sea wall, thrust in his arm half up to the elbow and stayed there all night, keeping out the great ocean and thus saving his country until his people woke up and repaired the damage. This is one of the many misleading fairy stories on which much of our education is based. It did not come from the Dutch.

The dykes are not built in that way. Most of those along the ocean are walls of stones brought in ships from other lands and dumped into the sea, or laid up carefully like the wall of a house, except that they are sloping. Other dykes are of concrete, and others of stone banked with earth enclosed in a network of willows which take the place of the iron rods in reinforced concrete. In some places great beds of woven basketwork are stretched along the sides of rivers and canals to hold the land, and mats of willows are sunk on the sides of the waterways to be filled in with the silt, in the same way as in the jetties that border the passage from the Gulf of Mexico to New Orleans.

I have used the world *polder*. This is a term employed by the Dutch for land redeemed from the water. There are two classes of *polders*, sea *polders* and pond *polders*. The sea *polders* comprise the lands which have been reclaimed from the sea by the embankments that keep out the ocean. One third of all Holland is of this character. If you could cut down the sand dunes and break up the dykes, something like five thousand square miles, a tract of land one eighth the size of Ohio, would disappear under the billows.

To see these lands we must leave our airplane, and to keep our feet dry we must even put on wooden clogs which in some places are still the foot-gear of the peasant. We shall find most of the *polders*, however, as dry as a bone. They are kept so by continual pumping, some by hundreds of windmills and some by the most modern centrifugal steam pumps. The pumping goes on day and night, all the year through. In making a sea *polder*, after the dykes have been built, the water must be pumped out into basins and canals and carried away. More water will keep on seeping in and this must be taken out right along while the land is being built up. It is the same with pond *bolders*, which are the reclaimed lands of the swamps and the lakes made by draining off the fresh water from the small streams and rivers, building embankments around the spaces to be reclaimed and keeping the water pumped out.

But the making of a *polder*; its division into farms so that each will be at the right level to carry the water into

the basin or canal, from which it goes by two or three pumpings into higher canals and finally gets off to the sea; the transformation of the mud into arable soil; and the building up of live agricultural and municipal communities into a kingdom like this forms a story that would take volumes to tell. I can only say that the Dutch understand this science better perhaps than any other people. What they have done well deserves the respect of the world and the study of those of our own people who are concerned with problems of irrigation and drainage.

CHAPTER XXIV

THROUGH THE CANALS TO ROTTERDAM

OLLAND has more canals than any region I know except the Yangtse-Kiang valley about Shanghai, Hangchow, and Soochow in China. It has enough to make a navigable stream from New York to Denver, and other waterways sufficient to extend it three thousand miles farther. Include the mouths of the Maas, the Scheldt, and the Rhine, and also the Zuider Zee and other places where the North Sea runs into the land.

On a trip by boat from Antwerp to Rotterdam we steamed across the Belgian boundary and through the province of Zeeland where most of the land lies below the sea level and is walled by dykes to keep out the waves of the ocean. It is composed of nine islands all protected by great embankments.

We started on the river Scheldt, which, as we approached the Dutch frontier, was walled with stone held between piles. We were high above the rest of the country and the roofs of the barns and the houses were even with the top of the dykes. There were storks nesting on some of the roofs or standing on one leg on the chimneys. On the other side of the river the top branches of the tallest trees showed out like bushes even with the banks, and at times we could look down into the fields under the walls and see the cattle feeding upon them. Every field has its little waterway around it, separating it from the others, and the long lines of trees marking the roads make one think of the lines in Macbeth about Birnam Wood marching to Dunsinane.

Leaving the Scheldt, we came to the locks leading into the great canal of South Beveland. Many of these are still operated by hand by quaint Dutchmen in caps, roundabouts, and fat pantaloons, and at every stop picturesque Dutch girls still bring out fruits and knickknacks to sell to passengers. The girls wear short skirts, white clogs, and black stockings. Some have on bright vests and there are horns coming out of their foreheads. The horns are spirals of gold wire twisted about after the style of an old-fashioned bed spring. One of these little horns stands out over each eye, being fastened to a gold or silver helmet fitted tight over the hair and showing out through the lace cap. I tried to buy one of the metal headdresses, but the owner would not sell.

Some of the craft on the canals are towed by tugs and others are pulled by men and women who walk on the banks harnessed to ropes. Some are hauled along by horses. Now and then we also passed a sailing vessel, and with my glass I could see schools of black seals on the sand flats. In the fields hundreds of black-and-white Holstein cattle were lying out in the sun, grazing or eating chop-feed out of big yellow tubs.

It seemed strange to see gates standing alone in the fields without fences or anything to show why they were there. As we came closer, however, 1 found that each gate was built on a little bridge that crossed a canal, and that the water was the only thing that fenced in the fields,[†] the gardens, the farms, and even the houses. Many of the

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canals are crossed by drawbridges which are raised after the cattle go in and let down again when they are driven home to the barns. Some of the fields had wheat, oats, and flax, others were covered with potatoes or turnips, while along the roads there were lines of poplars, their trunks often trimmed so that the sprouts at the top branched out like those of a palm tree.

Here, there, and everywhere I saw willows bordering the canals and stretching out in long rows until they met the horizon. The willow trees are like nothing we have at Their trunks are as big around as a two-gallon home. They are often not so high as your shoulder, but crock. at the top they bulge out into gigantic drum-major caps of hundreds of sprouts. If you will put a green hogshead on the top of a gate post and imagine the hogshead a green porcupine showing all of his quills, you may have some idea of how a Dutch willow tree looks. There are millions of such willows all over the Netherlands. Their roots aid in holding together the banks of the canals and the sprouts are cut off year after year for weaving the mats and other material used in reinforcing the dykes.

The farms lying below the level of the sea and the canals make up a large part of the country. In many places the fish in the canals and the rivers swim about above the level of the chimneys. The whole of Holland is flat except for the southeastern portion, which slopes upward to an altitude in places twice as high as the Washington Monument. But even this section is cut up by the great rivers on their way down to the North Sea. The remainder is so gently sloping that from an airplane one can see no elevations except the embankments which surround the *polders* or join the sand dunes or carry the highways and railroads across country. The whole is a network of silvery waterways shining like diamonds under the sun and inclosing great patches of emerald fields and farms.

The Dutch canals are almost as thickly populated as the waterways of China. Every barge we passed had its family upon it. Thousands of Dutch families live and die upon boats. Babies are born upon them and many have no other homes. We frequently saw children trotting up and down the roofs of the barges within six inches of drowning, and now and then a little one tied with a rope to the mast. On many of the boats the women were cooking; on some they were hanging out the washing, and on one a little Dutch girl held up her doll baby and laughed as we went by. Usually the cargo is carried in front, and the owner and his family live in the stern. In winter the canal boats are frozen in tight, but in summer they move about all the time.

Every village along the canal has its own boats tied to the banks, and the larger towns are cut up by canals so that boats from the main canals can be taken into them by means of locks. At one of them, Dordrecht, I stopped for a time. In the Middle Ages this place was one of the richest of all the Dutch cities. It had palaces then, and to-day its buildings are mediæval and extremely quaint.

Everyone has heard of the windmills of Holland. They are to be seen everywhere and give a great charm to the landscape. Along some of the canals there are hundreds of them. They spot the farms, and one sees them on the edge of the towns, where they grind flour, saw lumber, and do all sorts of things. They look so alive that I don't wonder Don Quixote took one for a giant and wanted



The waterways of Holland are even more important arteries of commerce than her railways and roads. If joined together, they would reach as far as from New York to Denver.



Dirt has no greater enemy than the Dutch housewife, who keeps her home spotless from front door to kitchen. In some parts of the country Saturday night is devoted to giving every floor a good scrubbing.

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to fight it. These mills are all old, and it must have cost many millions of dollars to build them. Their day, however, is past, and but few new ones are being built. The gas engine and the steam engine have taken their places, and the time may yet come when we shall have a Holland without windmills.

Leaving the South Beveland canal we entered the Ooster Scheldt, a sort of branch of the sea, and then went on between the islands of Dulveland and Tholen into the Maas canal. The waters of the Ooster Scheldt are wide and spotted with islands.

We passed into the Hollandische Diep and then into the canals and mouths of the Maas, now going by villages on the banks, and now seeing the second stories of other village houses which were apparently looking over the dykes and watching us go by. Finally we came to anchor in the midst of the great canal city of Rotterdam.

I have explored the wide waterways of Rotterdam, the gateway to the Rhine, the Maas, and the Scheldt, where the huge ocean liners come to anchor in the midst of the city and something like six million tons of shipping go in and out every year. I have crossed its many bridges, a thousand times busier than was the Rialto of Venice in the days of Antonio and Shylock, and have watched the crowd going over them, including fourteen thousand bicycles and sixty thousand pedestrians each day. I have seen its great harbour, and its ship-building works which made millionaires just after the armistice. I have also gone out to the Municipal Aviation Field, from which Rotterdam expects to compete for the trade of the air as on the Maas she competes for that of the water.

Rotterdam is a city of canals and canalized rivers.

The Maas has been so dredged that it now permits the largest of ocean ships to come into Rotterdam, and its connections with the Rhine and other parts of Europe have made this city one of the chief ports on the continent. Thousands of tons of goods are here transshipped into huge barges from two hundred to three hundred feet long, in which they are carried up the Rhine. The river freights are exceedingly low and the Rhine trade is enormous. There are canals connecting the Rhine with the Seine and the Elbe, and Rotterdam is the focus of a network of waterways which embraces almost all central Europe.

The city is about sixteen miles back from the sea and is built upon piles on both banks of the Maas. The piles are driven as much as fifty feet into the soil and upon them have been constructed miles of stone quays and enormous warehouses.

Rotterdam is one of the quaintest cities of Europe and at the same time one of the most businesslike. It is somewhat like Venice but more like Venice in the height of its prosperity, in the Middle Ages. Almost the whole city is a quay or dock. It is cut up by canals which lead in and out through the Maas, and one wanders through street after street of tall, lean buildings, finding barges, launches, and sailing boats almost everywhere. Along the quay and in the islands of the Maas are enormous ships of every description, and in the canals smaller vessels abound. Venice is a town of gondolas; Rotterdam is one of business craft.

The canals have big drawbridges and swinging bridges, and when you are walking or driving along you frequently find yourself suddenly in front of a blank wall of boards twenty feet high. The whole street, car track and all,

THROUGH THE CANALS TO ROTTERDAM

has noiselessly risen in front of you to let a string of boats or barges pass through the canal over which you are going. Some of the bridges swing upon pivots, some divide in the middle and rise upward. Others are stationary or suspension bridges, in passing under which the smokestacks, masts, and spars of the barges swing back upon hinges.

What a jargon the Dutch tongue seems to an American! It is not English, it is not German or French, and it seems to be a mixture of all. For instance, when I arrived in Rotterdam and wanted my trunks brought to the hotel, I was advised to get a man from the "Nederlandsche-Maatschappy-tot-Allgemeene-Dienstver-richting." I was almost stunned when the policeman rattled out the name, and was surprised to learn that it meant only a porter with a pushcart, and that notwithstanding his title his charges were but fifteen cents for the service. About an hour later I wanted to go to see a factory making machinery and was told that the "Nederlandsche-voor-Scheeps-en-Werktuigbouw-'Fijenoord'" was one of the largest.

Some of the store signs look like English on a spree, and I have to study to make out what they mean and am proud of myself when I guess some of the easiest ones. Over a jewellery store are the words "Nieuw Zilver Metaalwaren," and a grocery store sign may read, "Boter en Kaas." Any one can see that the first sign means silver and it is not hard to translate the second as butter and cheese. It is more difficult when you spell drug store "Drogerijen," but any one could tell that "Schuwaaren" means shoes, "Koffie" coffee and "Sigaren" cigars.

A most interesting feature of this Dutch city are the "Judas glasses," or mirrors about as big as a sheet of note paper hung to the wall just outside the windows, so that one can sit within and see all who pass up and down the street. These mirrors are usually at such an angle that they show the front door, and unwelcome callers can therefore be seen and the servant told to say that the hostess is not at home.

Rotterdam has the tallest building in Holland. It is known as the American skyscraper and is actually seven stories. It is built of porcelain tiles and stands upon piles.



When he grows up he is going to be a Volendam fisherman like his father, who lives in the village of which more artists have painted pictures than of any other place in all Holland.



It was from Delfthaven that the Pilgrim Fathers set out for America, and in this little brick church Miles Standish and his companions asked the blessing of God on their great undertaking.



The Dutch fishing fleets sail forth on Monday morning and go out as far as the North Sea. But by Saturday afternoon all the ships are home again, and the harbours are forests of masts.

CHAPTER XXV

WHERE THE "MAYFLOWER" PILGRIMS PRAYED

T DELFSHAVEN, a village on the Maas near Rotterdam, l visited the church where Elder Brewster, Miles Standish, John Alden, Priscilla, and the rest of the Pilgrims worshipped before they left Holland for their voyage to the New World. You will recall how they sailed from Holland on the Speedwell to Southampton, where they got the Mayflower, which landed them at Plymouth and on its famous rock. Thev had been driven from England to Holland, where they settled at Leyden and lived for twelve years. The Dutch treated them well, but they wanted a land of their own. They bought a vessel at Delfshaven, and upon it made their start for America. They remained at Delfshaven some time before sailing and during that time worshipped in this old church.

Delft was, a few centuries ago, one of the important cities of Holland, but is now almost forgotten except for its blue porcelain dishes and tiles. Delfshaven is the port of the old city of Delft, and has to-day but a few hundred people. It is composed of two- and three-story Dutch houses, old and black and quaint in the extreme. The roofs are steep and ridge-shaped with the little dormer windows poking their heads out here and there. The houses are flush with the sidewalks. A canal running through the chief street is filled with barges and fishing boats, upon which the boat families were cooking their suppers at the time of my visit.

The old church stands facing the canal just below the drawbridge which crosses it. There are old houses on each side of it, and the street looks as though it were a slice taken out of the Middle Ages and dropped down into the present. The church is made of well-burnt brown bricks with doors and window frames painted white. The windows are arched and have many panes. The church has a clock tower and a cupola and in its day it must have been considered a fine building.

The sexton lives in a little house next door. She is a kind old Dutch lady, who would be good looking if it were not that she has lost her front teeth. She has the whitest of caps, the rosiest of cheeks, and a most pleasant smile. She took me through the church and showed me its treasures, including the pulpit Bible, which dates back to 1628, or eight years after the Pilgrims left Holland. She pointed out a stone in the wall which was sent to the church by some of the people of Chicago, and said that the Chicagoans had taken away in exchange a stone from the floor. She said that two of the gravestones had been bought by a Philadelphia man for the New England Society of Pennsylvania, and that this society also had the old alms box.

This old church has been used ever since the Pilgrims left. It has seats for about two hundred people—quaint oak benches with reading desks in front of them, upon which lie many Bibles. The Bibles are printed in Dutch and look as old as the church itself.

Underneath each bench is a little square box-like footstool with auger holes in the top. These stools are the only heating arrangement of the building. Before service the sexton puts a little pot of glowing charcoal or peat in each stool and the women put their feet on the top of the stools and thus keep them warm during the long sermon. The peat must be well lighted and glowing or it will smoke, making one think that the church is on fire. When I went up into the pulpit I noticed there were holes in its floor, and was told that boxes of burning charcoal or peat were placed below it to keep the dominie comfortable.

The collections are taken up in little black bags fastened to long poles, which the elders carry about during each service. There are always two collections, one for the poor and the other for the church and the elders. The elders have seats of honour not far from the pew of the parson. The poor are given the least desirable seats, being shoved away on benches behind the preacher.

I took a look at the records of the church, some of which chronicle the leaving of the Pilgrims on July 22, 1620, and then wrote my name in the signature book as all Americans who honour the Pilgrim Fathers and appreciate the hospitality of the Hollanders are requested to do—with a donation. I also gave the donation.

As regards church-going, the Dutch are very much like other nations. The country people attend more regularly than those of the city. The village churches are full in the morning and notwithstanding the long sermons the people usually sit out the service. The first chapter is read by the schoolmaster, and in some churches a part of the collection is given to him. The offerings are more often copper than silver, and in the poorer villages a penny is a common donation. The preachers are not very well paid, especially where they depend upon the people for their salaries.

The government gives certain yearly allowances to the different churches. The Protestants, who are in the majority, get a little over half a million dollars a year, the Roman Catholics not half so much, and the Jews only about five thousand dollars. All religions are tolerated, but the royal family and most of the people belong to the Dutch Reformed Church, which is organized rather like the Presbyterian Church.

Holland was one of the first countries to separate its schools from the Church. As early as 1806 secular schools were established, and since then, public instruction has been fostered by the government, and private instruction is paid for from public funds if approved by the state. The Dutch are noted for their intelligence and learning. Between the ages of six and thirteen education is compulsory.

Holland has five universities with more than five thousand students in attendance. Its classical schools have five thousand students and there are academies and schools of all kinds. It has a national academy of art, a royal school of music, a horticultural school, and a national normal college for drawing teachers. There are also night schools for the working classes, industrial schools for women, and in Amsterdam there is a school for the training of women chemists. Women are admitted to every profession; the Dutch feminist movement is well advanced.

The Dutch have housekeeping schools for girls, schools for butter and cheese making, fruit growing, horse doctoring, and horseshoeing, in short, schools for almost every-



The Dutch are intensely patriotic and devoted to their Queen. On her birthday all the children of Holland, even in the remote island villages, march in processions, and the grown-ups wear orange-coloured buttons.



The Hague, where the tower of the Carnegie Peace Palace points heavenward, is considered the finest residential capital in Europe. The home of the court and aristocracy, it has much the same charm as our own Washington. thing under the sun. Lectures on agriculture are given to the farmers at the expense of the government, and in Utrecht the night schools have classes for carpenters, bricklayers, stone cutters, goldsmiths, sculptors, painters, and lithographers.

Holland has also schools for the training of boys who expect to enter the government service, especially in the colonial branches. In these schools the languages of Sumatra, Java, and others of the Dutch East Indies are taught. The boys learn all about the chief religions of the natives. They study their laws, their prejudices, and customs, so that when they are sent out to govern them they are able to do so intelligently. I doubt, in fact, whether any government service has men so well educated and so efficient as that of the Dutch East Indies.

Take for instance a retired colonial official who was with me during this trip to Delfshaven. As we were riding back to Rotterdam he told me that he spoke German, French, and English as well as Dutch, and that he could write and speak two of the languages of Java. He had to pass an examination in these languages before he was sent out to the East Indies, and this is the case with every man who represents Holland in her Asiatic colonies.

CHAPTER XXVI

THE QUEEN AND HER REALM

AM enjoying a week in The Hague, the most beautiful capital in Europe, where the Dutch government has its headquarters, and where Andrew Carnegie's redbrick and white-stone palace points its crimson finger toward Heaven, crying out as did Jeremiah the Prophet: "Peace! Peace! when there is no peace" in all the world.

Many of the richest merchants and bankers of Rotterdam and Amsterdam have homes here and go daily to their places of business by train. It is only a half hour from Rotterdam and about an hour from Amsterdam, and the railroad service is excellent. This city has no factories to speak of and is much like Washington—a residence, social, and official centre. It has been called the largest village of Europe, but it is growing like a green bay tree, and it now has almost as many people as Minneapolis.

The Hague has wide canals running through it, and many of its public buildings face on a great expanse of water covering several acres and known as the Fish Pond. It is within two miles of Scheveningen, the famous Dutch seaside resort, and so situated as to get the benefit of the tonic breezes from the North Sea.

Holland is nominally a monarchy governed by a queen, but it is practically a republic with a congress much like

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ours. This congress, known as the States-General, has' an upper and a lower branch and makes all the laws just as our Congress does. The States-General sits at The Hague in the Binnenhof, a great building looking out on the Fish Pond.

I went through the two houses to-day. The first chamber, which corresponds to our Senate, has fifty members elected by the provincial states. The second chamber, corresponding to our House of Representatives, is elected by the people; it has just twice as many members as the Senate. All citizens, both men and women, twenty-five years of age or over, can vote for members of the lower house. Only the ministers and the members of the second chamber can introduce new measures. The upper house can reject or approve, and has not the privilege our Senate abuses of adding amendments to bills that come in from the popular body.

It is considered a great honour to sit in the Dutch congress, and as far as I can see the members get little more than honour out of it. The senators receive about four dollars a day while they are in session, and the representatives have two thousand dollars a year and their travelling expenses. The senators are elected for nine years and the elections are held so that one third of the body goes out every three years. The representatives are elected for four years. Women are eligible for election to both houses. The Queen can dissolve either house at will. but must then call new elections within forty days. The executive branch of the government consists of the Queen with her cabinet. The Queen is rather a figurehead. and the cabinet of eleven ministers, each of whom is paid seven thousand five hundred dollars a year, does the work.

You have all heard of the burgomasters. They have a part in nearly every Dutch story. The usual idea of them is that they are old fellows in long coats, full pantaloons, short vests, and quaint hats, with pipes a yard long in their mouths. It is supposed that they preside over the cities or villages rather than the country districts, as they actually do. The real burgomaster, or mayor, of to-day is more likely to be a man of thirty or forty than sixty or seventy years of age, and dresses like any American business man. The burgomasters are appointed by the Queen, although they are paid by the localities which they govern. They do not make the laws but merely aid in carrying them out.

The real local government of Holland is much the same as that of the United States. The country is divided up into communes or local districts according to population. Sometimes a commune will be only a part of a city, like one of our city wards, or it may be a village, and again it may be village and surrounding country combined. There are more than eleven hundred such communes, each of which has its own council elected by its citizens. These councils have to do with certain classes of taxes. Thev issue licenses and levy petty dues. They control the streets and the roads, and for the uses of the commune can add to the taxes on property and on rents or on the number of chimneys or the number of servants a man has as well as on the many other things for which the Dutch are taxed.

There are also provincial or state councils. Holland has eleven provinces, each with its own representative body to deal with provincial matters. Thus you have in Holland a congress much like ours, a set of provincial assemblies much like our state legislatures, and a set of communal councils much like our city councils—all elected by the people.

Holland seems to be very well governed. One finds perfect order everywhere. There are no beggars and few poorhouses. Vagabondage is treated as an offense, and persons convicted of vagrancy are placed in some of the state workhouses.

The government runs the railroads, the telegraphs, and the telephones, and it makes money out of them, giving good service at comparatively low cost. The state railway receipts are steadily increasing.

The Dutch are a nation of patriots. They are a free people governing themselves, although they love and respect their Queen, "The Good Wilhelmina." I have called her "The Good," I might almost call her "The Pious," for it is said that she now and then opens her cabinet councils with prayer. At any rate, the people adore her. Her birthday occurred during my stay, and every town and village was covered with flags. The people went about wearing orange-coloured buttons, and everywhere there were processions of school children carrying flags and singing songs in praise of the Queen. That day I had the good luck to be in Vollendam and Marken on the Zuider Zee, where I photographed the little ones in their gala-day costumes.

The love of the people for Wilhelmina began when she was a baby, and it increased when, at the age of ten, upon the death of her popular father, William III, she became Queen, although her great mother, Queen Emma, directed the government for eight years thereafter.

Even as a girl, Wilhelmina was democratic. They tell how at five years of age when she was rolling a hoop over the paths of the park which surrounds her palace just outside The Hague, she met another little girl in clogs trundling a hoop. The two were soon busy chatting, and they rolled their hoops together, although neither had any idea with whom she was playing.

At another time one of her ministers was lecturing her on some matter of conduct. She had a doll in her hand at the time. She listened to the great man's complaint and then showed him the doll, saying:

"Sir! You had better take care, my doll has the measles!"

I am told that the Queen has great personal magnetism and that she knows just how to do the right thing at the right time. Her Majesty speaks English, German, French, and Italian. She is well read in history and knows all about her country, including the Dutch East Indies, where she has about seven times as many subjects as in Holland itself.

I first saw Wilhelmina just after her marriage. As the fruit of the wedding she has had only one child, the Princess Juliana Louise Emma Marie Wilhelmina, or, as she is sometimes familiarly called, "Juliana Lou." She is said to be quite as democratic as her mother and full of the common sense characteristic of her family. She is greatly beloved by the people and at the time of her birth celebrations took place throughout Holland and in the Dutch colonies. We have in the United States villages named "Juliana" in honour of the future Queen of the Netherlands, and I may be pardoned for quoting this little poem from one of our newspapers published at the time of her birth. It is entitled:

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JULIANA LOU

The Holland folk are tickled much Because they've got a princess Dutch-A brand-new, blue-eyed baby girl To keep their loyal hearts awhirl: An heiress for their little throne That they can call their very own, Who soon will rule them as she likes As little Princess of the Dikes. And for her name This very same Is christened by her subjects true As Juliana, Juliana, Juliana Lou! O Juliana Lou, We doff our caps to you! A princess fair You truly air! O Juliana Lou!

Some day you'll come into your place As ruler of the Holland race: And as a Queen serenely calm, You'll rule o'er giddy Amsterdam. And Rotterdam And Potterdam And all the other dams there be Along the beauteous damson sea. And as you walk your regal ways May all your sauce be Hollandaise; And may you never use a crutch Because somebody's beat the Dutch; But rule serene, A happy Queen Your days all through-O Juliana, Juliana, Juliana Lou! O Juliana Lou. We doff our caps to you! A princess fair You truly air! O Juliana Lou!

CHAPTER XXVII

AROUND ABOUT THE ZUIDER ZEE

HE man on the street thinks it takes a whole bolt of cloth to make a pair of Dutch trousers, and that all the men here wear short jackets and wooden clogs. The truth is the Hollanders of the cities dress just as we do, and they are so like us that an Amsterdam or Hague crowd dropped down in New York would not be out of place. The men are tall, big boned, and husky, and the women especially large and fine looking. The people look capable and are most intelligent.

The quaint Dutch characters shown in the advertisements and pictured so widely in all travel books are confined largely to the fishing villages along the ocean and in the islands of the Zuider Zee where the customs change but little from generation to generation. I have visited most of these places during my stay. Each village has its own costumes, and a common headdress is a helmet of thin beaten silver or gold that fits over the hair and comes out to the front of the ears. To this, in some districts, are added gold cork-screws or spirals that fasten the lace cap on each side of the eyes, and also high collars of coral beads and great silver or gold brooches at the neck and sometimes at the waist. They are very similar to the headgear I have described in the story of my trip from Antwerp to Rotterdam. Along the Zuider Zee the girls wear short and very full skirts coming half way down the calf, below



"I was so fortunate as to get two beauties of Marken to pose with me. Their embroidered jackets, striped sleeves, and close-fitting caps are the costume of their island, one of the best places to see the 'picture book Dutch'."



The fishermen of the Zuider Zee have the reputation of smoking more and saying less than all other Dutchmen. When Holland's big drainage project is completed some of its fishing villages will become inland hamlets.



The island of Marken, the home of these little maids, consists of seven tiny villages built on the mounds of the earth dug out in making its drainage canals.

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which are woollen stockings and great wooden shoes. The skirts are often numerous, reminding one of the song in "Miss Hook of Holland":

> I have one little petti from Peter, And another little petti from John, And another bright yellow From some other fellow, And one that I haven't got on.

On the island of Marken, where I spent some time, the men wear bloomers so full at the hips that a dress skirt could be made out of one pair of them. Men and boys have roundabouts, or short waistcoats of black wool, with silver buttons as big as the saucer of an after-dinner coffee cup. The trousers stop just above the ankles and below are woollen stockings and clogs.

As to clogs, they are worn very generally by both the poor and the well-to-do outside of the cities. I bought a pair the other day for forty cents and expect to take them home to use as flower pots. They are made of light wood cut out by a carpenter and whitened with chalk. The Dutch tell me that clogs are warmer than boots, and as they are perfectly waterproof they are especially desirable in a country below the level of the sea where the earth is often moist and spongy.

The clogs are clumsy and noisy and therefore are not worn in the house. They are slipped off on the doorsteps and the people walk over the spotless floors of the kitchen and other rooms in their stockings. School children leave their clogs in the hall and sit at their desks in their stocking feet. It is wonderful how the boys and girls play in these wooden shoes. I have seen them riding bicycles in them and racing each other on foot along the canals. Just vesterday I saw one climbing a pole in his clogs.

These wooden shoes do not mean that the Dutch peasant is poor. He is rich. Holland has more than two and one half million savings accounts, which means that more than one in every three of the whole population is laying up money. Our proportion is not one in nine. The accountsin the Dutch Postal Savings Bank alone equal more thanone hundred million dollars. The national debt is less than a billion, whereas Belgium, of about the same size and not many more people, owes four times as much, and France staggers along loaded with bonds that exceed fifty billions. In other words, we Americans owe just about \$240, the Belgians about \$533, and the French \$1250 for every man, woman, and child in their country. The debt of little Holland is not quite \$123 per capita. It is one tenth as much as that of the French, one fourth that of the Belgians, and only a little more than one half as much as our own.

The houses of Marken are low, one-and-a-half-story buildings, with ridge roofs painted black, built along narrow streets in little villages here and there over the island. I entered one at the invitation of the owner, an old Dutchman who wore a pair of trousers each leg of which was as big as a two-bushel bag. His whole house, which was not more than twenty-four feet square, was so clean that you could see your face in everything in it. The floors were scrubbed like a kitchen table on Saturday night and the plates on the walls fairly shone. About the room were cupboards, each containing a bed with the whitest of pillows and quilts beautifully embroidered. The kitchen utensils were of copper, and two brass candlesticks, which shone like gold, stood on a shelf under the plates.

On my way to Marken I stopped at Broeck, a little farming town in the midst of the meadows, to see a cheese factory. The factory was house, stable, and cheesemaking establishment combined, which is characteristic of the dairy regions of Holland. The hay was stowed away in the garret and one half of the house was given up to the cows, which are brought indoors during the winter. The stable part of the house had accommodation for thirty cows, two for each stall, and it was cleaner than the average American kitchen.

The cows were out during my visit, but I walked with clean feet from stall to stall, making notes of the arrangements. The walls of the stalls were painted black to the height of the cows and white above that. In front of each stall there was a window with lace curtains over it, and at the back a drain six inches deep, which was flooded daily with water and kept so clean that there was little odour perceptible. But as for that, the Dutch say that cow smells are healthful and the farmers do not mind them at all.

Every Dutch cow is well bedded and has a rope the size of a clothes-line with a strap loop at its end to hold up its tail. One end of the rope is fastened to the rafters just over the cow, so raising the tail that there is no danger of its being flirted through the milk or into the eye of the milker.

Adjoining the stable was the cheese room with a hundred balls of fresh Edam cheese on the racks. The cheese was of a rich yellow colour and more delicious than any we get in the United States. The cheeses are painted red before they are exported. More than half of the farmers of Holland own the lands which they farm, but the holdings are comparatively small. There are not in the whole country two hundred farms of more than two hundred and fifty acres. Indeed, a large part of Holland is made up of tracts of heath or of swamp and water, which are good for nothing. There are two and one half million acres in pasture and more than six hundred thousand acres in forests, so that the land actually cultivated does not comprise more than one third of the country.

The people are more interested in stock farming and dairying than in tilling the soil. The country raises excellent grass, and there are now here something like a million and a half cattle, chiefly Holsteins. There are a million and a quarter hogs, more than a half million horses, and seven hundred and fifty thousand sheep.

Some of the chief dairy regions are in the north, and at Alkmaar is a famous cheese market to which the people from seventy or eighty villages bring in their cheese for sale. Each cheese is marked with the initials of its maker. The stock is spread out on waxed cloths and is bought by wholesale merchants, who ship it to all parts of the world. Thousands of tons are sold at Alkmaar, the cheeses being brought in in wagons, on barges up the canals, and by the small farmers in dog carts. The price of cheese makes good or bad times in the dairy regions and the rise or fall of a cent or so a pound makes the farmer happy or miserable.

The farmers are everywhere thrifty. Nothing goes to waste. The haystacks are roofed with boards or thatched in such a way that the thatch can be lowered as the hay is



When the clock in the cheese weighing house of the market at Alkmaar strikes the hour, small mounted wooden figures appear and race round and round for a few minutes, while above a little wooden man blows a bugle.



Queen Wilhelmina "The Good" is perhaps the most democratic ruler in Europe, and keeps in close personal touch with her subjects, with whom she is tremendously popular. Here she is visiting the cheese market at Alkmaar.



More than ten million pounds of cheeses change hands annually in the market at Alkmaar, to which every Friday the farmers bring in the golden balls. Purchase is not complete until both parties have "struck" hands on the bargain.

AROUND ABOUT THE ZUIDER ZEE

fed out. All woodwork is painted and rot and rust are nowhere to be seen.

The Dutch make money out of gardening, and especially flower gardening. They raise vegetables and fruits for England, but their peaches and pears lack flavour, though they are full of juice. They taste to me much like the fruits of Japan, which has about the same climate. There are parts of Holland, however, where "the earth laughs in flowers" more splendid than Solomon in his glory. In the region about Haarlem more bulbs are raised than in any other place in the world, and fifty million pounds of them are sent every year to England and the United States. The Dutch are competing with the greenhouses of Brussels, Paris, and London, and they now send cut flowers by airplane, reaching those cities each morning in time for sale side by side with the blossoms clipped from the gardens hard by.

The soil around Haarlem is a mixture of sand and loam just fitted for the best tulips, hyacinths, and gladioli. There are syndicates and individuals at Haarlem who do a big business in bulb raising. They have fields of tulips, hyacinths, and other bulbs acres in extent. The hyacinths load the air with their perfume and, at certain times of the year, passing through the fields on the railroad is like travelling over a crazy quilt more gorgeous than any ever put together in reality.

There are in all about two thousand different kinds of tulips raised here, two thousand varieties of gladioli, and seventeen hundred hyacinths. The bulbs are planted in trenches, with the large plants in the centre and the small ones at the side. The varieties are kept separate and each row is labelled.

FRANCE TO SCANDINAVIA

It was at Haarlem that the best tulips were raised when the great craze for them swept the country and many bulbs brought their weight in gold. That was about the only time that the Dutch lost their heads and went wild over speculation. During the tulip mania which came along about the time when Boston was started, one Haarlem tulip bulb brought fifteen hundred dollars, with a team of gray horses and a carriage thrown in, and an Amsterdam bulb was sold for twelve acres of land. Both of these bulbs were of the variety known as the Semper Augustus, of which there were only two in existence. At the same time other varieties brought enormous sums. Tulip buying was a regular business and men grew rich or poor from the trade. Some Dutchmen mortgaged their houses to buy tulips, and the loss of a peck of bulbs caused one man's ruin.

The Dutch tulips now sell for ordinary prices, but they are still handled on business principles, and both cultivation and marketing have been reduced to a science. The bulbs are set out in September and October. They are carefully cultivated by skilled workmen, many of the farms employing hundreds of hands. They are well packed for the market and are shipped to seed and flower dealers all over the world.

CHAPTER XXVIII

DIAMOND CUTTING IN AMSTERDAM

MSTERDAM is one of the richest cities of Europe. It has some of the chief banking firms of the world, and its stock investments are almost as varied as those of New York or London. The foundation of the wealth of this city was laid when the Dutch gained control of the spice trade with the East Indies, and to-day the bulk of the stocks of the great corporations developing the riches of Netherlands India are held here.

The Dutch are also making fortunes out of diamonds. They buy them in the rough and cut and polish them for jewellers in every country on earth. They have been doing this for generations and have made Amsterdam the chief diamond market of the world. This is a matter of much interest to us, for the United States buys more diamonds than any other nation. Before the World War our purchases of diamonds ranged from twenty to thirty million dollars a year, but following the peace they went up enormously. In a single year we bought sixty-five million dollars' worth of diamonds from Amsterdam alone, exclusive of those imported from the dealers in Antwerp. Though the big diamond firms here look on America as their probable best customer for some years to come, our purchases fluctuate with good and bad times, and in periods of depression shrink to a fraction of those of fat years.

The war, which sent the prices of everything else to the heavens, flooded the market with precious stones. It impoverished the stable old families of Paris. Berlin. and Vienna, and their heirlooms found the way to the pawnshops. It threw kings, queens, and princes out of a job, and they pledged their crown jewels to keep soul and body together. More than all else, the Bolsheviks stole the great store of diamonds from the palaces and churches of Russia and surreptitiously scattered them far and wide over the earth. But the flood from these various fountains finally ran its course, and just now the demand again exceeds the supply. Moreover, there is serious talk of a combination of the cut-diamond dealers into a trust like the great rough-diamond syndicate, which, for decades, has controlled the output of the mines of South Africa and other diamond fields of the world. This information comes to me from the diamond magnates of Amsterdam and Antwerp, the two great centres where the finest and most costly stones are cut for the principal markets.

It was at Amsterdam that the great Cullinan diamond, the largest ever discovered, was cut up and polished, and 1 have had the good fortune to meet the man who did the work on the magnificent stone. Also when in South Africa I had a talk with the Irish labourer, Wells, who found the Cullinan diamond in the Pretoria mine. 1 met, too, Mr. Cullinan, the owner of the mine. The gem was found shortly before the time of my visit. The miners were just ending their work for the day and the last rays of the sun were shining on the side of one of the excavations when Wells saw a ball of fire as big as his fist in the midst of the stones. He rushed across the great hole where he was standing, climbed up, and grabbed the huge crystal in his two hands. He then ran with it to the office of the company and gave it to Mr. Cullinan. It was weighed and pulled the beam at three thousand twenty-five carats. Mr. Cullinan told me that they sent the diamond to Europe through the mails. It was registered and arrived safely.

The next thing in order was the cutting of the huge stone. This was done here at Amsterdam by the firm of I. J. Asscher Company, who have, perhaps, the largest and best-known diamond factory in the world. It was first split into two large and several smaller stones. The largest was polished first, and from then the work went steadily on, the several pieces being sawed and ground and polished into the shapes they now have in the collection of the crown jewels of old England.

The splitting was performed by Joseph Asscher himself, whom I met to-day, and it was with his brother that I went through their establishment and saw scores of experts at work transforming rough stones into gems for the market. Before starting I was shown a model of the Cullinan diamond as it came from South Africa. The stone was about the size of a large dinner goblet. It was of the colour of frosted glass, and had a rather greasy appearance; but Mr. Asscher said that one could see the fire shining out through the rough surface. He says the model is a fair representation of the diamond when found.

It seems strange to think of sawing and splitting diamonds like so much stove wood. But that is what they really do here in the Asscher factory. At least they saw and split the rough stones, which all agree are the hardest things known to man. I watched the whole process to-day from the making of the saws and axes to the cutting of the diamonds. The saw is circular in shape. It is a disk as thick as a playing card and about four inches in diameter. The metal is phosphor-bronze and looks just like copper. This thin saw is fastened between two round metal plates beyond which the disk extends perhaps one fourth of an inch. There is a hole in the centre of the saw and when put on the wheel it flies around at the rate of over three thousand revolutions a minute or more than fifty times between watch ticks.

But only a diamond will cut a diamond. It is the prince of gems, and can be cut only by a member of its own royal family. One must have a diamond-saw to cut a diamond, and the bronze disk must have a diamond edge before it can cut. This is put on by dipping it into diamond dust mixed with oil. The diamond to be sawed is embedded in wax on the end of a stick as thick as a broom handle and pushed against the revolving cutting edge until the saw gradually works its way through. This may take hours, or even several days, depending on the size of the stone. I watched the saws working. They went so fast that I could see no motion whatever, and was tempted to touch one to see if it were actually moving. Mr. Asscher warned me, however, that if I acted on this impulse I would lose my finger.

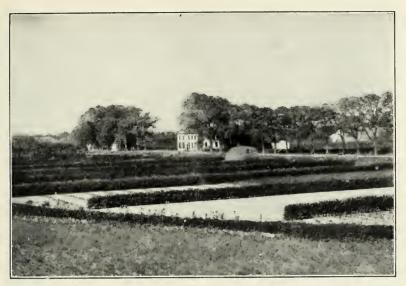
It surprised me to learn that diamonds are like wood in that the grain runs but one way, and that the sawing is done across the grain and the splitting is done with the grain. Any boy who has had to split kindling for the family fire knows what splitting with the grain means. Diamonds, as they come from the mine, are more or less irregular in shape. They often have flaws, and must be divided into two or more parts to make the beautiful, regularly shaped gems sold by the trade. It is necessary first to study the diamonds, to see how each can be cut to the greatest advantage. The stone must be divided at the flaws so that they may be cut out. After flaws are split off, the diamond is shaped and polished. It may be again sawed or cleft. The artist who studies the stone draws the dividing lines upon it with black ink. The splitting is done through the flaws and with a diamond axe. Or, at least the axe makes the notch by which, with a soft metal chisel, the diamond is split.

The axe used for cutting the notch has a blade on a wood handle. The blade is a diamond stuck in cement on the end of a stick which is not unlike the handle of a shoemaker's awl. The stone is so inserted as to leave a sharp surface exposed. As the cement hardens, the diamondaxe is firmly held. The rough diamond to be split is next fixed into a similar tool, and the cutter scratches the latter again and again at the flaw, making a noise as though sharpening a gritty slate pencil. Within a moment or so a notch is cut. The man then sets the stick with the rough diamond on it into a hole in a lead plate on the table before him. He picks up a blade of steel about an inch wide and about three inches long and fits its blunt edge into the notch. He gives the blade a slight tap with a steel bar about a foot long, and the wedge splits the diamond in two.

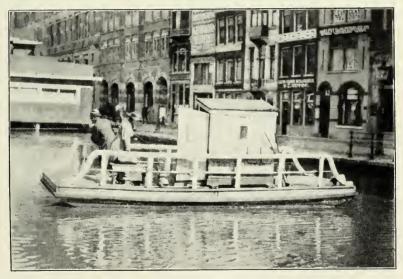
After a diamond has been split it must be cut or rubbed into facets so that it may have the greatest brilliancy when the light strikes it. Here again one diamond is made to cut another, the polishing being done on a flat round plate covered with oil and diamond powder. This plate is a sort of grindstone. It flies around more than thirtythree times in a second and the diamonds are fixed in frames so that they rest just at the right angle upon it. The stones are so inclined that they are ground by the diamond dust into the shapes best adapted to each individual gem. Some are made into rose diamonds, some into square or irregular cubes, and some into the emeraldcut. A normal stone, even one of infinitesimal size, has fifty-eight sides, or facets. About half the weight of each stone is lost in the cutting and polishing.

During my stay I handled some great diamonds as thick as the thumb of a giant, and others down to the size of the point of a pin. Mr. Asscher told me that their value ranged from three hundred and fifty dollars to seven thousand dollars a carat. He laid before me a small teaspoonful of diamonds each no bigger than the smallest crystal of sugar. Looking at them through a strong microscope I saw that they had been accurately and symmetrically cut. I was shown cube diamonds no larger than the head of the smallest pin you have in your cushion, but nevertheless each had fifty-eight sides. Some of these cubes are so small that it takes two hundred of them to weigh one carat.

After the stones are cut and polished they must be marketed. This brings buyers from all parts of the world to Amsterdam to look over the stock of gems and consult experts in making their purchases. Some of the experts tell me that diamonds are as different as apples, potatoes, or even human beings; there are no two alike. Each stone has its own value, its own characteristics, its own colour, and its own points of excellence. The experts are like the



Many Dutch farms are literally sunken gardens lying below the level of both roadways and canals. The government now has a twenty-year programme for reclaiming still more land by removing much of the water from the Zuider Zee.



Even the great cities of Holland are cut up by canals, which are often crossed, as here in this business district of Amsterdam, by little ferry boats pulled along a cable by hand.



One of the few remaining monarchs able to sit comfortably on his throne is the King of Denmark, who lives in a palace with a smartly uniformed sentry at the gate.

DIAMOND CUTTING IN AMSTERDAM

tea tasters, who can tell at a sip just where the tea comes from and what it is worth. They know diamonds as the tea men know tea. They are called in by buyers and sellers and one of them presides at every transaction. He is supposed to protect both parties and to answer any questions either may ask. He gets one per cent. commission from each party, or two per cent. of all the money that passes.

The diamond cutters of Amsterdam are much more trusted than the men who work in the mines of South Africa. Of course, great care is taken in admitting strangers to the factory, but the cutter himself gives only a receipt for such diamonds as he is to handle during the day and this must be checked up when he leaves. The factories are not surrounded by guards day and night as are the floors, or great fields, in South Africa where the diamond-studded clay lies out under the sun. The cutters are not compelled to live in the works, as in the Kimberley diggings, nor are they stripped to the skin and searched from toes to crown when they leave. In fact, thefts of diamonds by the men and women who cut and polish these valuable stones amount to less on the average than the losses through the clerks of our banks.

CHAPTER XXIX

A SANE NATION IN THE MADHOUSE OF EUROPE

HE Danes are one of the few sane peoples in the great Madhouse of Europe. The Russians seem stark crazy, the Germans but little better, and almost every other nation is cutting fantastic pranks before high heaven. Here in Denmark the people are buying and selling and getting gain from their farming, manufacturing, shipping, and merchandising as they have done in the past. They are taxed a bit more, and have had to raise their wage level to meet the high cost of living, but are paying their debts in good golden kronen. They are still thrifty and cheerful and expect to continue upon the wonderful course of prosperity they have pursued during the last two generations.

The story of this country's rise from the ashes should bring hope to every people in the dumps of despair. At the close of our Civil War the condition of Denmark was so desperate that no nation in Europe was poor enough to do her reverence. Like the Germany of to-day, she had long since fallen from her place as one of the richest and most powerful nations of the world. More than one hundred years before Columbus discovered America, Denmark had swallowed Norway which she kept until she sided with Napoleon and the Battle of Waterloo sounded what seemed to be her death knell. In the revolution that followed Norway was taken from her and given to Sweden. The wars had ruined her trade and her debt was enormous. Then her people were half slaves, as were the peasants all over Europe, and the kings and nobility ruled.

As time went on matters grew worse; and in 1864 Prussia, that glutton of kingdoms, gobbled Schleswig-Holstein, part of which, by the Treaty of Versailles, she has had to disgorge. The country grew poorer and poorer, and at the time of the Franco-Prussian War it seemed hopelessly bankrupt. The land was suited to nothing but farming, and the United States was supplying Europe with great quantities of its farm products at cheap prices. Germany had shut out Danish exports by a high protective tariff, and even God seemed to frown, for He sent droughts and floods and cattle diseases. The condition of Denmark then was really almost as bad as that of Austria and Hungary after the peace. Indeed, it was worse, for these countries are naturally rich in good soil and other resources.

Now look at the Danes of to-day. They are among the richest, healthiest, and happiest people of the whole world. They stand high in education and culture. Their women have equal rights with the men and hold a place in every profession and are a part of every university. Their king has lost his power and become a figurehead, and the people have a democracy as free as that of our Union, although their country is only a patch compared to ours.

It would take two hundred Denmarks to equal the United States. Including the lands of Schleswig brought back by the plebiscite, it is half the size of Indiana and a little more than twice that of Massachusetts. It exceeds Belgium and Holland by only a state or so as large as Rhode Island, and it has less available good soil than either. The country is low and flat. It floats, as it were, on the sea, almost blocking the entrance to the Baltic.

Geographically, Denmark belongs to Norway. Nine or ten thousand years ago, at the time of the glacial period, the site of Copenhagen was a part of the great reef of chalk and lime upon which now stands the Kingdom of Denmark. Then the whole country lay under the sea, but the huge ice sheets, as thick as those that cover the Greenland of to-day, moved down from Norway, carrying earth and stones with them. They were several miles thick and when they struck this chalk reef they dropped the earth and stones upon it and thus built up the land. To-day the scientists can follow the furrows ploughed by the rocks in the beds of the glaciers all the way from Norway to Germany; and in my motor travels across country I have looked down through the green waters of many of the lakes and seen the original white chalk of that mighty reef of the past.

A land formed in that way could not have very good soil, and were it not for the fertilization and intensive cultivation practised by the Danes, many of their farms would be producing as little as the worst patches of our Rocky Mountain highlands. For a long time much of the country was like the marshes between New York and Newark and it was about the worst of all the starve-crow farms of continental Europe. Much of the soil was too poor to grow trees and even now only about one twelfth of the country is wooded.

Yet the great success of the Danes has come from the

land. They are a nation of intensive farmers who, like the good servants in the parable of the talents, have taken what the Master has given them and by brains, industry, and business efficiency, have multiplied it many fold. They have thrown off the shackles of the nobles, reduced the great estates to small holdings, and by scientific farming and stock raising have made every one of their two hundred and fifty thousand farms produce exports which equal fifty dollars a month all the year through. The land not only supports the farmers and gives the country its food, but yields a surplus worth seventeen dollars per annum for every farm acre.

This the Danes have done by team work in which the whole nation has gone into the harness and laboured together. They have studied their land and the markets and have raised only the things they could produce at a profit. When Denmark found that with her limitation of soil and area she could not compete with the United States and other lands in the production of oats, wheat, rye, barley, and such crops, she did not sit down and whine and ask other countries to help her, but only buckled in her waist belt to make her stomach the smaller. counted her assets, and figured out what she could do. Her people did not even ask their government to help them by protective tariffs, but every one did his part, and all worked together. She had several great thinkers and with them, in time, she planned out a scheme of agricultural production that has made the whole country rich. She looked at her location. It was just across the North Sea from London, the biggest city on earth, and from Great Britain, full of factory workers who for years have been spoon-fed by outsiders. It was just over the border from Germany with its vast standing army that needed horses and its many industrial labourers who were consuming far more foodstuffs than the German farms could supply.

Denmark studied the wants of these neighbours. She enriched the soil with the gray matter in the heads of her farmers and decided she could make a living in supplying Great Britain with bacon and butter and eggs and Germany with cattle and horses. She at once sent out commissions to these and other countries to study the markets and the methods of producing these commodities, and at the same time began to reorganize the country on the new basis.

The commissions reported that England was getting breakfast supplies largely from Ireland. They looked into the Irish production and suggested new methods, with the result that in a short time the Danes were offering better bacon, better butter, and better eggs than the Irish. It was the same with the German and other markets all over the world. Denmark, in proportion to her size and population, is now selling more and better bacon, butter, and eggs than any other country. Within less than a generation she has increased her annual exports of farm products from a value of about twenty-five million dollars to more than three hundred and eighty million dollars, of which nearly half go to England.

I have not yet tried the bacon, although I have visited the piggeries and the slaughter houses where it is killed, but I eat a lot of the butter with the two eggs that I get for my early breakfast each morning. This is the first country I have visited in my tour where I have been given

A SANE NATION

enough butter to supply the appetite of even the daintiest American girl. Here in Europe the hotels serve one's first meal in his bedroom. This consists of a little pot of coffee and some bread and butter, with eggs upon order for an extra charge. In Paris my butter consisted of three or four shavings no bigger than the corkscrew curls with which some of our girls adorn their foreheads; or instead, as many balls of butter, each as big as the end of my middle finger. This, it must be remembered, was at the highpriced hotels where one's room and meals cost as much as in the first-class hotels of New York. They do it far better in Denmark.

CHAPTER XXX

COPENHAGEN, THE GATE TO THE BALTIC

The sea is a big factor in the success of the Danes, the descendants of the Vikings. For more than one thousand years they have been "going down to the sea in ships and doing business in great waters." Turn to the map in this book and see just where Denmark lies. It consists of a long narrow tongue known as Jutland, extending out from the northwestern part of the continent, almost blocking the entrance to the Baltic, that great Mediterranean Sea of the north, and licking with its tip the gulf into which one steams up to Christiania, the capital of Norway. In addition to this tongue, the country consists of about five hundred islands on one of the largest of which stands the capital, Copenhagen.

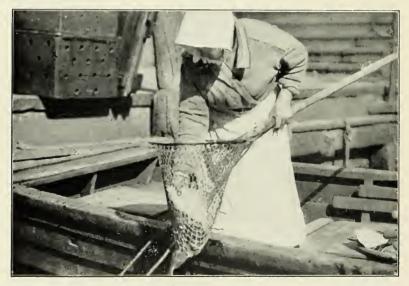
There are straits around the tongue through which all ships must go in entering the Baltic except the few that pass through the Kaiser Wilhelm Canal. Thus they pass right by Copenhagen, making it the natural stopping place for the shipping of Scandinavia, Finland, Russia, Latvia, Esthonia, Lithuania, Poland, and north Germany. Copenhagen is a port of call for all these countries, and it does an enormous business in transferring goods. It has weekly sailings to and from the United States, and I have seen ship after ship from New York discharging passengers and freight which are here transferred to other ships for the lands farther east. Denmark itself has nearly four



The Danes consider Copenhagen the centre of the universe. One fifth of the population of Denmark is already here and most of the rest want to come to "the happiest capital in Europe."



For more than a thousand years the Danes have been "going down to the sea in ships." Copenhagen is a port of call for the shipping of all northern Europe, and the Danish merchant flag flies to-day on every ocean.



Denmark gets a part of her income from the fish taken from the waters surrounding the five hundred islands and long neck of land of which the country consists. Over fifteen thousand vessels are engaged in this trade.

COPENHAGEN, THE GATE TO THE BALTIC

thousand vessels and she owns steamships that go regularly to North and South America, Asia and Africa, and to most of the ports of this continent of Europe. Every year more than twenty-three thousand vessels from foreign countries come here. I drove for several hours along the quays yesterday and saw everywhere quantities of United States goods. The ships were unloading grain, cottonseed oil, raw materials of many kinds, farming machinery, automobiles, automobile parts—in fact, nearly everything we make or produce.

More than a thousand tons of automobile parts come from New York to Copenhagen each week. They are sent by the company that makes the "flivver" and are assembled here before trans-shipment to the lands of the Baltic. Its Copenhagen factory puts together one car every six minutes all the day through.

This is done in the Free Port, which allows the selling and transfer of goods without payment of duty, an arrangement by which Copenhagen hopes to compete with Hamburg. The Free Port is a great factory and warehouse as well as an international merchandising district. It includes almost one hundred and thirty acres of land and eighty-three acres of anchorage, and has scores of electric cranes and other modern equipment for loading and unloading goods. There are grain elevators which cover acres and factories making goods for both domestic and foreign consumption.

Copenhagen is one of the liveliest cities of northern Europe. Most of its half million people are as well dressed as any you will find on the continent. It has some magnificent buildings and the cleanest streets outside of Holland. Every man here has to see that the street and the pavement in front of his house is kept clean. The asphalt is brushed several times every day, and a regiment of able-bodied paupers is always at work on the squares.

The capital of Denmark is full of red blood and the vigour of youth. The people on the streets go about with a smile and seem to be prosperous. I have been here for a week and have not yet seen a beggar. There are no blind men on the corners peddling matches and notions and no haggard old women selling newspapers. The shops of Copenhagen are full of fine goods, and their window dressing compares with that of our principal cities. Walking through the chief business centres is like visiting an exposition, and, moreover, all of the prices are marked in plain figures. I spent this afternoon in one of the big department stores here. It reminds me of those of Boston, Philadelphia, Detroit, Cleveland, and other American cities of the same size. It has an abundance of everything and the finest wares from all over the world are displayed. It has a book section with books in all languages and especially English, including poetry, fiction, economics, and travel.

The Thorwaldsen Museum is one of the finest on the continent and, singularly enough, it is devoted to the works of one sculptor. Thorwaldsen was educated at the Academy of Copenhagen and later on in Rome. He soon developed into a great sculptor. His works, which are of wonderful beauty, are famous all the world over. Among the exhibits in the museum here is a model of the Swiss lion, which he carved out of the rock at Lucerne in memory of the Swiss guards' defence of the Tuileries.

Another great man of Copenhagen was Hans Christian Andersen, whose fairy stories delight every child. There is

COPENHAGEN, THE GATE TO THE BALTIC

a monument to him in the heart of the city, on one side of the pedestal of which is engraved a picture from the "Ugly Duckling," and on another side is the figure of a little child riding on the back of a stork.

Andersen was born in the small Danish town of Odense. His father was a shoemaker, and his mother wanted to make her boy a tailor. Young Hans, however, had a bookish bent, and his ambition was to become famous by writing. He left home with five dollars in his pocket, and with that as a start worked his way through school in Copenhagen. He had some talent for singing, and hoped to make a place for himself on the stage. He tried for one of the theatres of Copenhagen, but was rejected. His talent was brought to the notice of the King through whom he was placed in an advanced school at public expense. Later on his poems and stories became noted, and during his latter years he received an annuity from the Danish government. The people here are very proud of him, and tell many stories of his simplicity and kindness.

CHAPTER XXXI

WHERE THE FARMER IS KING

N THE reference books, Denmark is recorded as under the sovereignty of Christian X. This is a mistake. Christian X is only a figurehead. The real ruler of Denmark is the farmer. He owns the country. He elects the congress. He makes the laws. The Germans call the United States a "monarchic democracy." This land is a farmers' democracy. Denmark does not bow down to the farmer, for the farmer is Denmark. His union is stronger than any labour organization of our country or England. He combines for everything and all of his class work as one.

There is no country in the world so built up on agriculture as this; and none in which the science and ethics of farming have so firm a foundation. The people worship three gods. Like Jeroboam, the King of the Jews, they have erected two golden calves at each end of their country; and, like the ancient Egyptians, they worship the Cow. They bow down also to the Chicken. The cock whose third crow made Peter weep had not a greater place in the conscience of that saint than that which the Danish hen occupies in the minds of the thrifty poultrymen of Denmark. The third and last god is the Pig, a Yorkshire of the bacon variety; for it is his streak of lean and streak of fat, produced largely from the skimmed milk



Out of villages like this have come the men who have revolutionized the government of Denmark. They shape its policies on taxation, landholding, and transportation, and have built up a rural-life unequalled elsewhere in the world.



With only forty acres to farm the owner of this barn is making a profit. Under the thatched roof of the stables are lights and machinery run by electricity developed at a great waterfall in Sweden.



Expert management of cows, chickens, and pigs enables the forty-acre farmer to live in a house like this. He belongs to his local coöperatives and both he and his wife have taken courses at a People's High School. of the cow, that brings much of the money which supports the Danes.

Danish bacon and butter and eggs bring in annually hundreds of millions of dollars; and from England in one year alone Denmark has received thirty-eight million dollars for bacon, forty million dollars for butter, and thirty-five million dollars for eggs. The land, in fact, is one great factory devoted to turning out these three special products. This factory has more than a quarter of a million owners, each running a little branch independent of the others. Yet all are joined together in four thousand coöperative agencies and other coöperative societies, the whole being better organized than any By this I system of chain stores in the United States. mean that every farm is a plant that works according to rules made by the farmers themselves. They buy and sell only in combination, and have such common standards of production that all of the output is equally good. ln short, they operate as though the whole country were a single big farm.

The Danes have often been called a nation of farmers. Their little country is divided up into a quarter of a million farms, or one farm for every twelve persons. If the United States were apportioned according to its area in the same ratio, it would have about fifty million farms instead of a little more than six million as now.

Nine out of every ten farms in Denmark are owned and operated by the men who live on them, and most of the owners have no other means of support. There are seventy thousand holdings of less than two acres, and I have seen statements that a man can live and support his family on three or four acres. This I believe to be a mistake. My information from the government officials and from farmers, large and small, is that he needs two or three times this amount of land; but all agree that ten acres is quite enough to enable a man to make a decent living and educate his children. They say that the farmer who has thirty acres is well-to-do, while one who has from fifty to one hundred may be called almost rich. The men who live on the very small holdings, say, of two acres, thrive by raising several cows, a dozen pigs, and a good flock of chickens, but they must work also for their neighbours to piece out their incomes.

More than half the farms are of less than thirteen acres and comprise about three fifths of the land. There are more than a hundred thousand farms which range between thirteen acres and one hundred and fifty acres, the owners of which might be called the backbone of the country. Most of them are scientific agriculturists. They know all about plants and plant breeding. They are skilled mechanics and often good chemists. Many of them are graduates of agricultural schools, and socially and politically they are of a higher grade perhaps than any other farmers on earth.

They are usually men of some means. They are interested in the savings and credit associations and to a large extent run the coöperative societies. They control the politics of the sections in which they live. It is through the farmers that the railroads are operated in the interest of the farmers, not to make money, but to haul passengers and freight as cheaply as possible. It is through the farmers that the land has been broken up into small holdings, that credit banks have been established, that only two in one thousand of the people are unable to read and write, and that most of the homes, even out in the country, have telephones and electric lights.

The climate and soil are such that only a small part of the feed of the live stock can be raised on the land. For five months of every year the cattle can sometimes be grazed in the fields, and for the other seven they must be kept all the time in the barns and stall-fed. The country is so thickly settled that there is not enough land to raise hay or grain for the animals, and a great part of the feed is brought in from the United States and other countries. Every week ships from New York bring grain, especially corn and cotton-seed meal cakes, as food for the cattle, and in addition there must be tank-food, bonedust, and other articles which help in the production of eggs. Every farmer knows the feeding value of all he buys, while through the cooperative associations the purchases are made at wholesale prices and so distributed that the farmers practically eliminate the middleman and have all the profits themselves.

It is the same with the sales. There are coöperative egg societies, coöperative butter societies, and coöperative bacon societies through which almost all the selling is done. These associations have their agencies and branch houses scattered over Denmark and their representatives in London and all the chief markets. In this way farmers get the highest prices for everything, while their rules require that the products be standardized and of a high quality throughout. There are about four thousand coöperative associations, and of the two hundred and fifty thousand farmers, more than two hundred and fortyfour thousand belong to these selling societies. There are fifteen coöperatives devoted to the purchase of goods, and they have seventy thousand members. There are seventeen hundred breeding societies interested in the various kinds of stock, from chickens to cattle. The net business of the coöperative societies of the country amounts to a quarter of a billion dollars a year, and there is a baker's dozen of credit associations which have outstanding loans to the amount of more than five hundred million dollars.

The farmers buy all their goods through the wholesale associations and the goods are distributed through retail coöperative societies in such a way that the farmers get the profit made on all their own purchases. There are about seventeen hundred of these retail coöperative stores with a total membership of three hundred thousand. This means that there is about one store membership to every two families, or twice as many as in England, and three times as many as in Germany, in proportion to the population. There is one of these coöperative stores in every village.

The coöperative wholesale society in Copenhagen sells in the neighbourhood of twenty-five million dollars' worth of goods per year. It has acres of warehouses and factories. The business of its factories amounts to five million dollars per annum, and it makes a net profit of five per cent. and a gross profit of seven or eight per cent. This wholesale organization is made up of representatives elected by the retail coöperative associations. It has no individual or personal owners, and its profits all go to the retail societies. So far, I am told, none of the stockholders has had to put up any money for shares in this wholesale association. Each retail association, after careful investigation, is allowed to subscribe for a certain





THE SCANDINAVIAN PENINSULAS

Several thousand years before Christ, and not long after the ice cap of the Glacial Period had disappeared from its southern borders, Scandinavia began to be peopled by the race of bold, blonde seafarers whose descendants are the Danes, Swedes, and Norwegians of to day. amount of the stock, and the subscription is carried on the books until the profits pay for it.

Since I have been in Denmark I have gone through the buildings of this big wholesale coöperative association at Copenhagen. They are situated near the wharves and the railroad cars come right to the factory so that freight is most economically handled. This association sells no feeding stuffs, grain, or farm tools, which are dealt in by other associations. The establishment is much like a wholesale department store, and serves about sixteen hundred local stores scattered over Denmark.

In the sample rooms I was shown every sort of household utensil and all kinds of things in wood, china, and glass. There were ready-to-wear goods of every sort, dolls and toys for the Christmas tree, and even cameras and opera glasses. A large building is devoted to seeds of everything from clover to wheat, rye, and oats, and especially to rutabagas and mangel-wurzel beets, both of which form a large part of the food for the cattle.

Another great building is filled with coffee and tea, for the establishment has its own coffee roasters; and a third has a large force making shoes. The latter covers about an acre, and is equipped with American machinery. The shoes turned out are of every grade and style from those of coarse hide to fine high-heeled shoes for women. The workmanship is excellent and the prices are considerably lower than in the United States.

The society has factories for making candy and chocolate, tobacco, cigars, and cigarettes. It has chemical works. It makes hosiery and ready-made clothing, as well as bicycles and soap.

One of the most important factories of this wholesale

FRANCE TO SCANDINAVIA

association is devoted to margarine, an article which takes the place of butter for most of the people of Denmark. Although the Danes make about the best butter on earth, and export tens of millions of dollars' worth, the farmers eat margarine that they may have more butter to sell. One of the officials tells me he estimates that ninetyeight per cent. of the dairy farmers sell all the butter they make.

CHAPTER XXXII

HOW THEY DO IT IN DENMARK

HIS morning I invite you to join me in a trip into the country to see how the Danish farmer gets fat on forty acres. Valdemar Hansen, who was brought up on a farm, will be our chauffeur. We ride out of Copenhagen over a brick-paved road with a bicycle path on each side. There is also a car line and a way for foot passengers. We pass many beautiful villas, and on the edge of the city see great tracts of truck gardens, each having a shack put up by the municipality for the poor people to come out and live in during the summer. Every family has its garden and house free, and thousands are accommodated in this way.

Going on, we drive through the suburbs of the capital, and finally reach the country where there are farmsteads large and small, with grain fields and pastures covering the landscape. The buildings are all painted white; many of the houses and barns are covered with a straw thatch turned velvety brown by the weather. The thatched roofs, which are often a foot thick, extend out over the white walls below. The brick chimneys, which come up through the thatch, are white.

The barns are all built around yards. They often consist of a single long, low building, with wings at each end. Most of the barns are of but one story and cover a great deal of ground. Others are smaller, but all are well kept and scientifically arranged.

Let us visit one of these farmsteads, a place of forty acres. The owner keeps nine cows in full milk and has five calves growing up. He has also chickens and pigs, and is laying by money. We go with him first into the cow stable. Like thousands in Denmark, it has large windows and most of it is floored with thick concrete. The cows stand upon boards with their heads in stanchions and behind runs a drain that saves every bit of the manure. The stalls are washed out every morning and the water and dirt go into the farm cistern, whence the contents are pumped out and taken directly to the fields. Over each stall is a blackboard about as big as a school slate on which we see in chalk the cow's diary. It is a record of the amount of milk she gave the previous day together with the butter fat it contained. This is kept for every cow and each one must earn her living. If she falls off, the farmer may change her feed, and if she does not come up, she goes to the scrap heap, by which is meant she is sold. The authorities tell me that the average life work of a cow in Denmark covers only five years. At the end of that time she is sold and probably goes off to Germany. Fully ten per cent. of all the dairy cows are disposed of in that way every year.

Our next visit is to the piggery. This is of concrete and kept so well drained that the pig pens are dry. Like the stable, and indeed all the other buildings on the farmstead, it is lighted by electricity, the current coming over a long-transmission line from Sweden. The pigs are Yorkshires, clean, fat, and roseate white with the complexion of a newly washed baby shining through the



Every agricultural college is a service station for the farmers in its district, to which they may come for practical courses of study, for advice, or to get the results of the latest experiments.



Denmark is a leader in developing the "teacherage", the rent-free home for the country school teacher near the main building. Each teacher is entitled to a garden planted at community expense.



Danish girls are brought up to work, but when they are grown they have more freedom than the women of any country in Europe and can enter any profession they please, from politics to dentistry.

HOW THEY DO IT IN DENMARK

silvery bristles. When Denmark started in the dairy business and began to raise pigs for export she was selling less than two million pounds per annum outside her own country. Now her exports of bacon and ham amount to nearly two hundred million pounds, and her hogs number almost one million and a half. Nevertheless, she raises no corn or other hog food to speak of and the pigs are fattened on skimmed milk and chop. We are the greatest hog food producing country on earth and have on our farms just now sixty or seventy millions of swine. If, in proportion to our area, we had as many hogs as has Denmark, the number would be three hundred millions, and we could probably produce many more.

Leaving the piggery, we go to the barn proper where are stored the grain and other produce raised by the farmer. This building has a thick roof of gray thatch, and although of but one story, in most parts it is filled to the roof with food of one kind or another. At the side of the door is what might be called a baby threshing machine with a portable electric motor in a box by its side. The motor is run by electric current generated in Sweden, and as it is raining and he cannot work outside the farm hand is threshing wheat. He stands at one end of the machine and feeds in the sheaves which he has pulled down from the loft. The electricity does the work and the clean, brown wheat rolls out of the funnel into a sack below.

Before leaving I took a picture of the farmer and his wife standing in front of their dwelling. It was a picturesque, white one-story cottage, with a roof of red tiles, looking out on the barns. There were lace curtains in the windows, flowers in the yard, and ivy, which had crept up, hugging each side of the door. When I went in I found the house well furnished and equipped with books and magazines and many farm journals. It seemed a most comfortable home and far better than that of the average forty-acre farmer of the United States.

It is no wonder that the Danish farmer and his wife do so well on forty acres, for both have been specially trained for their jobs. The Danes go to school more than any other people in Europe, and, as I have said, there are only two in a thousand of them who cannot read and write. This is a better showing than in England, Germany, France, or Switzerland, and much better than in the United States where seventy-seven in every thousand are illiterate.

The Dane is a good farmer because he has studied the expert production of the thing he sells. In the words of Pope, he "holds the Eel of Science by the tail."

The country has schools of every kind. All children are compelled to go to school until they are fourteen years of age, and their teachers are better paid and more respected than with us. The average farm boy has a course in an agricultural college after he leaves the common schools, and there are also the People's High Schools for the grown-ups.

The People's High Schools are a special institution of Denmark. They are attended by the men in the winter when the farm work is light, and during the summer by women and girls. The winter term is from November to May. Most of the pupils live in or near the schools and may have rooms and board in the establishments at very low rates. About three fourths of the students are middle-class farmers and small land-holders. Four fifths of the students are from nineteen to twenty-five years of age, but there is no age limit. A farmer can start in at any time and take a special course in almost any branch he chooses. There are more than a hundred of these high schools in Denmark, and in addition there are nineteen agricultural schools.

There are also schools for wives, or schools of household economics. These are attended largely by girls preparatory to or in anticipation of marriage. They are taught everything connected with housekeeping and the purchase of domestic supplies. The schools are, in fact, somewhat like the domestic-science schools and colleges of the United States. They are large and small, and public and private. I have visited several during my motorcar trips. One, situated about twenty miles from Copenhagen, is surrounded by a beautiful garden. It consists of a large two-story house divided up into living rooms, class rooms, and a large number of bedrooms. It has a commodious and well-lighted kitchen in which at the time of my call thirty young Danish girls of from eighteen to twenty-one years of age were engaged in the preparation of dishes of one kind or another. Some of them had their sleeves rolled up above their elbows and the faces of others were rosy from hanging over the stoves. Three were cleaning fish, a half dozen were peeling potatoes, and others were compounding the ingredients of sweetmeats and cakes with meticulous care.

One of the teachers took me through the house and showed me the rooms of the girls. Every one was exquisitely kept, and all were beautifully furnished and without the knickknacks and crazy bric-à-brac affected by the American college girl. Indeed it seemed to me that a man must be very particular if he could not be satisfied with such housekeeping, and---when I think again of how the girls looked---with such sweet, good housekeeping wives.

Upon leaving, my young secretary took a photograph of the kitchen class on the front door steps and he would not be contented until the teacher allowed him to pose one maiden, especially attractive, with her bread-mixing bowl in her hands.



It is not so hard for Denmark to keep her young men on the land when country girls, as soon as they become engaged, go off to housekeeping schools to learn how husbands are fed.



Most of the butter from the coöperative creameries is exported. The farmers have their own agents in London and other big markets to look after the selling and do not let middlemen eat up the profits.



The coöperative egg goes to England packed in wooden boxes of sixteen pounds each by girls from the farms. Every egg is tested, and farmers are fined if they send any bad ones to the packing house.

CHAPTER XXXIII

1

THE HELPFUL HEN AND THE COÖPERATIVE COW

N THE little old town of Hilleröd, in the heart of the Island of Zealand, under the shadow of the mighty castle of Frederiksborg, erected by a king of Denmark when the Pilgrims were climbing out of the *Mayflower* onto Plymouth Rock, I write of an egg.

It is a big egg, a fresh egg, and, moreover, an egg of pure gold. It is not, however, the golden egg celebrated in fiction by that Danish creator of fairies, Hans Christian Andersen. That egg was laid by a goose. This one is laid by a hen. I do not know whether she is a black Langshan, a Minorca, a Leghorn, or a white Wyandotte, but she is one of the eighteen million hens each of which keeps dropping into the pockets of the Danes from two hundred to two hundred and fifty eggs every year.

The helpful hen lays in one year more than six hundred million eggs for export in addition to those consumed in Denmark, and she has increased her annual product more than one third in the last decade. There are now something like sixty thousand chicken farmers belonging to the Egg Export Association, who raise their chickens according to rule and ship the product in common. They are combined into more than five hundred local societies, to which they must deliver every egg laid except those used on their tables, and to which each pays a fine of one dollar and thirty-eight cents every time he lets a bad one slip in. The constitution of every society provides that the members collect the eggs daily from the nests and deliver them weekly, and that no egg delivered shall be more than seven days old. Each society is numbered, and the number must be stamped on each egg so that every bad egg can be traced back to the farm and almost to the nest in which it was laid. The result is that the eggs sold are uniformly good and command the highest price on the market.

Along about two generations ago one could buy two eggs for a cent here all the year through. A little later steamers began to run direct from Copenhagen to England, and these cheap Danish eggs found favour there. Shortly after our Civil War one million eggs were exported, and they brought eight thousand dollars. Within twenty years the number had multiplied one hundred times, and now the figure is around six hundred and twenty-five million eggs, bringing seven or eight cents apiece. To-day Danish eggs are used all over England, and millions go to other countries as well.

During my motor trips over Denmark I have visited the egg farms. The chickens are kept in yards surrounded by high fences of wire closely woven. Each pen is about fifty feet square. It is carpeted with grass, and in its centre is a little red henhouse made of boards, about six feet in height, six feet wide, and eight feet long. This contains roosts and nests. It has a number upon it, and by this number the chickens within are recorded in the stock books of the farm. Each pen contains a rooster and perhaps one dozen hens, and every hen has a little metal anklet about her right leg upon which is stamped her number so that the farmer can tell exactly to what

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extent she is earning her living. The chickens are fed on grain and chopped feed. They have also cooked potatoes and tankage and just the right proportion of crushed bone to supply the lime for egg shells. The business is carefully studied and the best breeds are chosen. One of the farmers I visited tells me his best layers are the White Leghorn, although he keeps also Plymouth Rocks, White Wyandottes, Black Langshans, and Minorcas.

Here at Hilleröd I have visited the packing establishment of one of the egg-export societies. It is a long, low. one-story building filled with cases of eggs, each egg in its little pasteboard compartment like those used for shipping eggs in the United States. These cases come in from the farms. As soon as they arrive, the eggs are taken out by young women and laid on a network of woven wire fitted into the top of a barrel over two incandescent light globes of one hundred candle power. Except for these globes, the room is dark, and as the powerful light shines through the eggs, it shows the least age or defect. Every egg which has not a translucent red colour is taken out, and those which are not perfect are set aside by themselves. If they are bad they are destroyed, and the farmer must pay his fine. Some of the imperfect eggs are used for pickling, which means that they are packed away in vats of lime water, which serves the same purpose as cold storage, enabling them to be sold as pickled eggs during the winter. After candling, the good eggs are sorted according to size and packed in excelsior. First comes a layer of excelsior and then a layer of eggs, followed by another of excelsior and another of eggs until they fill the box, which is about two feet wide, one foot high, and perhaps five feet in length. The eggs are sold by the pound or by the score, and not by the dozen as with us. They are sometimes packed in small cases of sixteen pounds each. They are then ready for shipment to England.

The manager of the society tells me he can easily decide the approximate age of an egg by its appearance over the electric light. He showed me how, in a perfectly fresh egg, the yolk lies in the centre, and how each egg contains a little pocket of air which he says is placed there by the Lord to give breath to the baby chicken before it expands its lungs in the open. After the egg attains an age of a week or so the yolk is apt to leave the centre and drop down to the side of the shell, and there are other indications which show the number of days since the egg left the hen.

It was just after twelve to-day when Valdemar Hansen shut off the gas and put on the brakes of our automobile in front of one of the Danish coöperative creameries. The employees, several men and a half-dozen women, were seated on the grass outside eating their lunch. We photographed them and then went with the manager inside to look at the separators in which the cream is taken out of the milk, and at the great churns, each of which makes four hundred pounds of butter in about twenty-five minutes. The cream is chemically soured, and churned the same day it is received. The manager tells me he handles milk brought in by three hundred and thirty farmers and that the amount he received this morning was just twenty thousand six hundred and twenty-seven pounds. The milk is paid for according to the butter fat it contains, and most of the farmers test their own milk and some even keep a record of the percentage of butter fat in the milk of each cow. After separating, the skim



"Nothing will grow on the heath but the heather," said the Danish peasant when the rehabilitation of Denmark began half a century ago. But irrigation routed the heather, and trees and farm lands at last flourish where once were only barren wastes.



A look at my big chauffeur, Valdemar Hansen, convinces one of the truth of the statement that the Scandinavians have the fairest hair, the bluest eyes, the longest skulls, the broadest chests, and the longest lives of any race on earth.

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milk is taken home to be fed to the hogs which later are sold to the coöperative bacon societies for export to England.

Leaving the churning room we went into the steaming compartment in which cream, after sterilization, is put up in half-pint and pint bottles for export. By this time the women had come back to work, and we could see how the packing was done. Everything was exquisitely clean. The concrete floors are flooded and scrubbed every morning; the manager and the employees wear wooden-soled shoes.

There are more than twelve hundred coöperative dairy associations in Denmark, and the farmers belonging to them number about two hundred thousand. They produce in a year more than two hundred million pounds of butter which is sold through the coöperative societies. It brings in over two million dollars a week or more than one hundred million dollars a year.

Nevertheless, it is only a few decades since Danish butter had the nickname "Forty-Rod." This came from the fact that it was so bad that the smell could be detected a city block away from where it was kept. The butter was not then known as Danish butter. It was sold to German middlemen of Kiel and Hamburg, who exported it under the name of "Kiel Butter" to England where it brought about twelve cents a pound. To-day, except for New Zealand, no land exports butter so uniformly good as Denmark, and none has cows that produce so much all the year round.

The Danes pride themselves on the high average production of all of their cows rather than on that of any individual animal. Everything is measured by butter fat and the average yield of all these cows entered on the official records is now about four hundred and forty pounds per cow for every twelve months The average proportion of butter fat exceeds four per cent.

Still, Denmark has some good record cows. I have before me the reports of two which competed for a silver cup prize some years ago. Each of these gave more than forty thousand gallons in the first three years of her milkproducing life, and one, named Silke, yielded two pounds of butter a day for every one of the three hundred and sixty-five days of her third year, with thirty-three pounds to spare.

If they are out in the fields, the cattle of Denmark wear overcoats when it rains or the weather is cold. I have mentioned how they are kept in the stables day and night for seven months every year, and fed occasionally out of doors during the day in the other five months of the year. In their grazing they are not allowed to run wild. As in France, each cow has her halter to which is attached a chain eight feet in length fastened to a stake in the ground so that she can feed only to the length of her chain. After she has cropped her circle as clean as though the grass had been cut by a lawn-mower, she moos loudly and I am told that the farmer knows from this signal that it is time to change her location. At any rate, he then comes out with a maul like that with which one drives steel wedges in splitting logs. He pulls up the stake and leads the cow to a fresh feeding ground, where he pounds the pin down into the ground again. I took photographs to-day of ten cows and one bull feeding that way in an unfenced meadow. Each animal had a blanket of canvas covering all of its body but its head, neck, tail and legs below

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the knees. The cows mooed as we photographed them, thinking, I suppose, that we might be about to give them new circles of pasture.

The chief breeds of cattle here are the Red Danish and a black and white breed especially adapted to Jutland. The first is the better. There are also a few Jerseys and some milking Shorthorns. I saw some of the best Danish cows this afternoon during a visit to the Kolle-Kolle Farm within ten miles or so of Copenhagen. There were perhaps one hundred in the stable and each weighed, I judge, under twelve hundred pounds. I saw there also some high-pedigreed Danish bulls. None of them was half as heavy as the ten-thousand-dollar Shorthorn bulls on the Carpenter-Ross farm near Mansfield, Ohio.

CHAPTER XXXIV

THE ALASKA OF EUROPE

HAVE come from Copenhagen to Christiania* to write of the Alaska of Europe. Away up here at the northwestern end of the continent, hanging down like a bulbous nose over the cold face of the new Republic of Finland, is a peninsula that corresponds to the territory nicknamed by Secretary Seward's opponents the "Ice Box of America." This peninsula includes Norway and Sweden and with Denmark is called Scandinavia. It lies in about the same latitude as Alaska. If I should take an airplane and fly west round the world at just the same distance from the North Pole as where I am now, I could look down upon Juneau. Stockholm, in Sweden. is not far above Skagway, while Trondjem in Norway, a few hundred miles above Christiania, is almost as far north as Hammerfest, the city of Europe nearest the Pole, Nome. has a location corresponding to Point Barrow on our Arctic coast of Alaska, and Scandinavia has proportionately about as much land north of the Arctic Circle as we.

Our government has bragged of its new line from Seward to Fairbanks as the railway of the North Pole. Scandinavia has a steel road hundreds of miles farther north. It crosses the head of this peninsula, tapping great iron mines inside the Arctic Circle, and ending at Narvik, a Norwegian port, which, although much nearer the Pole than Bering Strait, has open water all the year round.

^{*} On January 1, 1925, the name of the capital of Norway reverted from Christiania back to the ancient name, Oslo.

This Alaska of Europe is only half the size of the Alaska of America. Still, it is four times as large as New England. It is so long that if it were laid upon the United States it would reach from the Gulf of Mexico nearly to Canada, and its southern part is as wide in some places as the distance from New York to Pittsburgh. Sweden alone is more than four times as big as the State of Ohio, with Massachusetts added thereto, and Norway only a bit smaller than Minnesota and lowa taken together. It is as far from Vardo on the Arctic coast of Norway to Lindesnes on the south coast as the latter port is distant from Rome, and the trip around the Norwegian coast takes as long as to cross the Atlantic.

This great body of land is a mass of some of the oldest rocks known to man, with patches of earth here and there and with many lakes and rivers and a vast area of forests. The Norwegian part is mostly a stony plateau cut by long fiords, or arms of the sea, and the Swedish part is a plain sloping down from this plateau to the Gulf of Bothnia and the Baltic. The two countries, including Denmark, which consists of the islands and a patch of land at the foot of the peninsula, have about eleven million people, making up what might be called the Scandinavians of to-day.

Compared with Alaska, Scandinavia is thickly populated. It has twenty thousand people where Alaska has one, and, although it is in the same latitude, it supports them all and gives them a good living. Our Alaskans belong to one of the youngest races on earth. These European Alaskans have come down from the oldest. According to some archæologists, their ancestors were in northern Europe when Cheops built the Great Pyramid. They were alive on this spot in the Stone Age, and in the Iron Age that followed they sold their wares in other countries of Europe. It was only shortly after Christ came that Scandinavian ships were trading with the Romans and the Caliph of Bagdad. They exchanged amber for bronze at just about the time the Chinese began to make literature. They were sowing grain, weaving cloth, and making weapons of metal when Queen Dido laid out her ancient city of Carthage, and centuries before Romulus and Remus, fed by the wolf, had started Rome. They were old when Solomon built the temple and when Confucius first saw the light on the hills of Shantung.

There are scientists who claim, indeed, that the Scandinavian race, which pure and undefiled we have with us still, dates back to more than ten thousand years before Christ. Some even believe that the Aryan race started here on the shores of the Baltic and that this, rather than Asia, was the first home of the whites.

At any rate, we have very definite records of what the people have done since the days of the Middle Ages. More than a thousand years ago the Vikings, who lived in the coves along the Scandinavian coast, went out in their ships to trade and fight with the other nations of Europe and sailed as far south as Gibraltar. They were converted to Christianity before the year 1000 A. D., when they had their first Christian king.

And what is of more importance to us, it was at about that time that a Norwegian crossed the Atlantic and discovered America, beating Columbus by five hundred years! The man who made the discovery was a Viking named Leif, the son of Eric the Red. He crossed over to Iceland and Greenland, and from there went down the mainland of America and established a settlement which he called Vineland, or the Happy Land. There is in Christiania to-day a ship which is perhaps the exact counterpart of the vessel commanded by Leif. Indeed it may be the very same ship, for it is more than eleven hundred years old. It was dug out of the blue clay of the Cogstad farm a generation ago. This farm is only four hours from where I am writing, and is easily reached by automobile.

The ship was brought here from its burial place, not far from the sea, and it is now installed in a shed in the rear of the University Building. It is of oak, and the hull and the keel are still in good preservation. By my American tape measure it is seventy-seven feet from bow to stern and just sixteen feet wide. In the third plank from the top there are sixteen oar-locks and the rudder was on the right side. There is no anchor shown with the ship but I venture the one which held it was only a toy in comparison with the one on the bow of the Majestic on which I stood before starting for Europe. You could put this boat into the ballroom of the Majestic, and a hundred couples or so could still fox-trot round it. Nevertheless, it was in such a vessel that Leif Ericson crossed the Atlantic and established the first settlement on the American coast.

It was a Scandinavian who first came to America, and if you will examine our records you will find that they continued to come. The Swedes settled on the Atlantic coast almost as soon as the Dutch. They had a colony on the Delaware River known as New Sweden within fifteen years after Manhattan Island was bought of the Indians, and for two centuries thereafter the Swedish language was spoken in American churches of the Swedish foundation. Many of the first families of Pennsylvania,

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Delaware, and New Jersey trace their descent from these Scandinavians.

About a century ago the Norwegian Quakers began to come to the United States, and a little later there was a great immigration of the Swedes and then of the Danes. We have in the United States eleven hundred thousand of these people born in Scandinavia, and with their children they probably number five millions, or one person in every twenty living under the American flag. There are more Norwegians in the United States by one hundred thousand than there are in this city of Christiania, and we have two hundred thousand more Swedes than has Stockholm.

These Scandinavians are among the best of our citizens. They are far above the average of our other foreign born in education and in mechanical and literary ability. We have no better farmers; and as every one knows, they take naturally to politics and have almost as much to do with governing our country as the Irish. Like the Irish, they have earned a reputation as fighters. Just now the Scandinavians are at peace, but they have had many wars in the past. Until about 1814 the Danes ruled the Norwegians, but when Napoleon was conquered, they lost out and Norway joined Sweden. These two countries kept together until 1905 when Norway split away and became independent, electing the brother of the present King of Denmark as ruler.



The women of Scandinavia, where for generations they have worked shoulder to shoulder with men in agriculture, education, and business, were the first in Europe to gain political equality.



Every Norwegian child between seven and fourteen must go to school at least thirty hours a week for twelve weeks in the country and fifteen weeks in the cities.

CHAPTER XXXV

IN CHRISTIANIA

O WONDER the Norwegians feel at home in the United States. Their country is much like our pine lands of Michigan and Wisconsin. The farmhouses are not collected into villages, as they are in France, Belgium, and Germany. They stand out alone on the fields, and most of the buildings are of wood, just as with us. The houses of the towns and cities are largely frame and the villas about Christiania have their counterparts in St. Paul and Minneapolis. Indeed, the best residential section here is not at all unlike the best streets of St. Paul. There are many houses with gardens about them and the frame cottage, with a multiplicity of gables, such as is common all over America, is everywhere in evidence. The chief difference is in the roofs. Most of them are of shining tiles, usually red, but often black or yellow.

The store buildings in Christiania are similar to ours as they were before we began to erect skyscrapers. They are of four, five, or six stories and built in much the same way. The shops look the same, except that they are smaller than in cities of the same size in the United States, but their windows are well dressed and the merchants are business-like.

Indeed, if you could take an airplane and drop down into Christiania out of the darkness you might suppose yourself in an American city. You would find the people big-boned and husky, and the women tall and mostly blue eyed, fair haired, and attractive. You would find American goods in the stores, American tools on the farms, and see that nearly all of the motor-cars and motorcycles are of American make. Moreover, you would meet more motor-trucks out in the country than in almost any other land of western Europe.

Christiania is situated at the head of a wide and deep fiord which winds its way in and out from here to the North Sea. At the head of the fiord are many little bays forming excellent harbours. These bays are filled with shipping, and one may see goods loading for and unloading from different parts of the world. Norway is one of the leading maritime nations of Europe. The Norwegians are natural sailors, and their boats ply on all the seas of the globe. They have an enormous carrying trade. They own several thousand steamships and about six thousand sailing vessels, which earn every year many millions of dollars in carrying cargoes for traders in all countries.

But come to Holmenkollen and see with your own eyes the capital of Norway. We can go there on an electric trolley, with a reel on the roof as big as a flour barrel. It will lift us into the air higher above Christiania than the top of the Eiffel Tower is above Paris, and we shall have the city and harbour spread out before us. Our way up is past villas and patches of woods, and we land in one of the chief pleasure resorts of the Scandinavians. It is evening. The sun is just setting and we have below us one of the fine city views of the world. I have looked down on the capitals of all the great nations. I have stood on the

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Eiffel Tower and photographed Paris, I have described Rio de Janeiro and its wonderful harbour from the Sugar-Loaf, a mighty rock that rises out of the sea facing the city, and have taken snapshots of Santiago de Chile from Santa Lucia, the high bluff crowned with gardens and trees that rises almost straight up in the midst of magnificent buildings encircled by the silver-topped Andes. I have looked down on Constantinople from the hills above Pera, upon Cairo with its wilderness of mosques from the Citadel, and last, but not least, upon our own national capital from the Washington Monument. Each of the cities has its own beauty, but Christiania compares favourably with all. The mighty fiord on which it is built is here studded with green islands and has many bays backed by forest-clad hills. The houses begin near the water. They rise out of the green, their white walls and roofs of red tile forming a wonderful picture.

Such is the view from Holmenkollen in summer. In the winter, when everything is covered with snow, it is far finer and the surroundings are then the gayest of all the homes of Jack Frost. On Holmenkollen is held the skiing Derby. This is a great Olympic meet of snowshoers and skiers to which sportsmen come not only from Norway but from all other parts of north Europe. The Holmenkollen leap is made from a ledge not far from the site of the view I have described. The man on his skis jumps from this ledge, high over the heads of the spectators gathered on the frozen lake and on the hillsides below, and then shoots down the slope. The jump is one of more than a hundred feet, and is watched by about forty thousand spectators who have seats in the grandstand put up on each side of the course, or stand in the bleachers, which the space under the ledge may be called. The leap is always attended by the royal family, by the members of congress, and by the high society of Norway.

The King himself is fond of skiing and he and the Crown Prince frequently engage in the sport during the winter. In this they are like some of the monarchs of the Norwegian past who, even before the discovery of America, were noted for their contests in jumping and gliding on these wooden runners over the snow. By whom the sport was originated no one knows, but six hundred years before Christ these people were spoken of in the records as those who run on the ski.

Skiing might be called the national sport of the Norwegians. I am told that the children are taught to ski when very young. They practise jumping over small things at first, increasing the extent of their leaps and slides as they grow up. Many of the villages have their ski clubs and every little town has a tourist hut on the hills near by where the skiers take shelter. There are skiing parties during the winter and young men and women go off together on long ski excursions. This means of locomotion is much used by the farmers of some parts of the country, and it is said that the snow is often so deep that from November until March the country folk must go about their business in this way.

Skiing forms a part of the training of the Norwegian army. The soldiers must be able to run upon skis and they practise being drawn on them behind a fast horse. Sometimes one man may ride the horse and have behind him several soldiers on skis, each of whom holds on to a strap tied to the saddle. The soldiers make charges on skis and run and jump and slide in formation



In no other land, except perhaps Alaska, has the ocean gnawed so deep into the shore as in the fiords of Norway, where also, as in Alaska, falls of fresh water tumble into the sea from sheer heights.



In the Holmenkollen Leap, the great event of Norway's annual ski tournament, the jumper takes off from a ledge on the steep hillside and shoots over the heads of the thousands of spectators. The distance from ledge to landing place sometimes exceeds 130 feet.



Built in the twelfth century, before window glass was known, the ancient Norse churches were dark and gloomy inside. They usually contained a room near the door where the men left their battle-axes during the service. over the snows. When one remembers the winter fighting of the Italians and Austrians, he can see how, in a mountainous country like Norway, such training might be almost invaluable.

I have asked some questions as to just how skis are made. They are not like the snowshoes, which might be called a framework of strings fastened together somewhat like a tennis racket, but are long strips of wood five inches wide and about seven feet in length. The best wood is the ash, which can be easily bent so that it turns up a bit at the toe. The ski varies in thickness throughout its length. In the middle, where the foot rests, it is an inch thick but it grows thinner toward the front, curving up at the tip. It is fastened to the foot by straps and it should be well buckled on.

On the down grade the skis are held parallel. The feet must be kept close together and the body well balanced. Sliding down hill the speed may be that of an express train, and there are Marathon races in which one man has made the record of one hundred and thirty-eight miles in a little more than twenty-one hours. This man was a Lapp.

Their outdoor sports and their mountain climbing have helped to make these Norwegians among the healthiest people in the world. They are also prosperous-looking. While one sees little display of wealth there is a general look of thrift about them. Pauperism seems non-existent. Yet Christiania, like other cities, has its charitable institutions. The most famous of these is its great Steam Kitchen, which I have visited. It was established sixtyodd years ago by benevolent people to provide wholesome food for the poor at low prices. The charter granted the company limited profits to six per cent. of the capital invested, with a provision that any balance should be paid into the poor fund of the city. For awhile there was a deficit every year, which was made up by the stockholders, but at last the kitchen grew popular and began to pay dividends. It became one of the most profitable enterprises in Europe for the capital involved. But that does not change the fact that it has been most beneficial to the poor. Thousands of bachelor students and single working women take their meals there regularly and hundreds of poor families are supplied with wholesome, well-cooked food at nominal cost.

I found the Steam Kitchen in an ugly brown building not far from the business centre of the city. It was noon when I entered, and there were then five hundred men, women, and children eating at its marble tables. The men had their hats on, although many of the women were bareheaded. They were all well dressed for labouring people, and all well behaved. Each person waited upon himself, taking his plate to the counter to have it filled with soup or meat. At the same time boys and girls were coming in and going out carrying buckets of soup and meat home for dinner.

Dinner is served from ten in the morning until six in the evening to an average of more than two thousand people. Some come twice, and their food for a whole day will cost them not more than thirty-five cents. Tickets are sold for the meals to be taken away from the building and these are often bought in bundles by charitable people and given away. Sometimes, if a man does some odd job around a house, he is paid in cash and meal tickets. It is considered better to give beggars meal tickets than money.

IN CHRISTIANIA

In the fruit season the company runs a canning department. At the butcher shop meats are sold and the baking department sells bread at wholesale or retail to the general public. One effect of the Steam Kitchen is that it has practically abolished the lowest class restaurants, which used to make money by selling inferior food to poor people.

CHAPTER XXXVI

THE LAND OF THE MIDNIGHT FARM

OW would you like to farm in a land where the sun works for you all night long? Where you can harvest oats or dig potatoes at one o'clock in the morning, and where the long days make the crops fairly leap from the ground?

That is what they have here in Norway, where in summer the sun shines at midnight and the twilight is working when the rest of the world is asleep. In the northern part the sun stays up till twelve o'clock. I have seen the same thing on the Yukon in the heart of Alaska, and I have read newspapers in both countries by sunlight between night and morning. The shortness of the summer is compensated by the long light and the fact that nature works sixteen or more hours every day.

This is one of the advantages of Norwegian farming. There are disadvantages as well. One is that there is not much land to farm. The country is so covered with rocks and trees that in every one hundred acres only three have been put under the plough, and seventy-five produce nothing of value. There is only one large area of good farming land, and that is not half so big as Rhode Island. It lies at the southwestern end of Norway near Denmark, which country it greatly resembles. This region is smooth and gently rolling and it produces good crops.

Coming northward from Copenhagen to Christiania I



The shortness of the Scandinavian summers is offset by the long hours of sunshine and light. At the summer solstice Stockholm has eighteen and a half hours of sunshine. On the North Cape the sun does not set between the 12th of May and the 29th of July.



Norwegian girls take their full share of hard work in the fields. They not only help with the oat harvest, but also gather young shoots and leaves for winter fodder for the cattle and sheep.

THE LAND OF THE MIDNIGHT FARM

rode for four hours through southern Norway. The whole way was spotted with what might be called handkerchiefs of land in the midst of the rocks. In some places the handkerchiefs lay amid half-buried boulders of granite and fat black-and-white cattle were feeding upon them. Some were cultivated and had little crops of oats and potatoes.

I was nowhere out of sight of the primeval rock, and the land made me think of the half-bald head of old Mother Earth, with patches of hair, the pine trees, scattered here and there over it. The rocks had been scoured by the great ice sheet which rolled from here down over Europe and it reminded me of the Matoppos Hills in South Africa where Cecil Rhodes is buried. Every few miles we passed lakes and streams. The latter were filled with logs of pulp wood floating down to the mills to be made into paper. Now and then we went by a sawmill or a pulp factory and in many places they were shipping lumber and pulp.

Since I have been in Christiania, I have motored out through the country. The farmers are now gathering in their crops for the winter, harvesting oats and digging potatoes. The potato is the chief root crop that can be grown here at a profit, and the annual yield is about twenty-five million bushels. I stopped at a field where men and women were gathering the tubers into barrels for the market. The field contained sixty acres. It was the largest body of farm land I saw during the trip.

The chief grain crop of Norway is oats. It is grown all over the country and a large part of it comes from little patches surrounded by rocks. In this ride, it seemed to me that every patch of good soil was yellow with oats. Some of the fields made me think of an octopus, its back containing the body of the crop and its yellow arms stretching out into the rocks. Where the grain was cut, the shocks were no bigger around than my waist and about eight feet in height. There would be scores of these tall golden figures standing like ghosts in one single field. In other places the grain, tied in lean sheaves, was hung upon racks like so much laundry to dry in the sun and the wind. Posts with projecting pins on them are driven into the ground and long poles are laid on the pins to form racks ten or twelve feet long. On these the oat sheaves are hung, overlapping one another so as to shed the rain. Some of the racks ran across the length of the fields, making walls or fences of oats as high as my head.

You all remember the poem of the Judge and Maud Muller:

Maud Muller on a summer's day, Raked the meadow sweet with hay-----

That is the American version. In Norway it would read:

When the young judge was seeking votes, He saw Maud Muller binding oats.

Every farm in Norway has its Maud Mullers and they all vote. They are blonde damsels who work bare-headed and bare-armed side by side with the men. The whole family of the farmer helps with the harvesting. I stopped at a grain field to-day where a father, his son, and two daughters were reaping oats. The son was a husky sixfooter and the girls, fifteen or sixteen years of age, were fair-haired and blue-eyed. The boy was cutting the oats with a scythe, and the girls followed behind and

THE LAND OF THE MIDNIGHT FARM

raked it together, binding it in small sheaves with the straw as a binder.

At the same time the father was shocking. He **d**id this by making a hole in the ground with a crow bar and then driving down a pole about eight feet in height. When this was fixed firmly, he took the first sheaf of oats and pulled it down around the pole to the ground. He then put on another, and so continued until the sheaves reached the top of the pole, which he capped so that the shock would shed the rain.

In the United States, most of our oat crop is cut by machinery and often bound and threshed by the reaper. The fields here are too small for heavy farm implements, although on the larger estates some reapers and iron hayrakes are used. The first American tractor which was brought here created a sensation and there are now about three hundred of them in use. Most of the crops, however, are still cultivated and harvested by hand. In some parts of the mountains the hay, rolled up into bundles, slides down on wire ropes to the barns far below.

A famous institution among Norway mountaineers is the summer dairy, called a *saeter*. This consists of a sodroofed hut and cowshed on a mountainside close to a lake or stream. In June or July the farm girls drive the family cows and goats to these pastures and settle down to two or three months of lonely milking and butter- and cheese-making. The girls are considered by their families to be quite as safe on the mountain-sides by themselves as in their own homes, while occasionally, for company, their sweethearts will climb up on Sunday to see them. In the cool days of September they return to their homes with a winter's supply of fine cheese and good butter. But the wages prevailing in tourist hotels are winning Norwegian girls away from the farm and the *saeter*, while every year thousands of them emigrate to the United States and Canada, where they are in great demand as housekeepers and farmers' wives.

Another farm task in Norway usually turned over to the women is the stripping of mountain ash trees for fodder. In August, the leaves and red berries are pulled off and carefully stored away for the cattle to eat during the winter. In much the same way young birch shoots are gathered and fed to the sheep.

CHAPTER XXXVII

NCRWEGIAN WOODS AND WATERS

SHOULD like to write fully concerning farming on the edge of the fiords and the beauties of this European Northland, but scenic Norway is another story. There is no other country on earth where the teeth of old Neptune have so gnawed the gigantic rocks lining the shore until the ocean runs far into the land with cliffs on each side a half mile or more high. None but Alaska has such a necklace of islands, and few have pine woods which compare with the forests that half cover this country.

In my rides through the farm regions I have been in the woods almost all the time. The pines grow right up to the edge of Christiania, and there is scarcely a place where the birch and the fir are not to be found. One acre in every five is covered with woods and among the chief exports are logs, lumber, wood-pulp, and paper.

During the World War, Norway furnished a great deal of cellulose, an extract of wood pulp used for making explosives. At that time an industry sprang up in Germany based upon a wood-wool that might be woven into textiles of one kind or another. The paper clothing used by the Germans was made in this way. The patent for artificial wool has been acquired by Norway, so we may yet have paper coats and trousers from her pines and firs.

More recently cellulose has been used as cattle feed.

and the industrial chemists have found a way to make alcohol out of the waste. A number of the cellulose mills now have alcohol factories in connection with them and these, it is believed, will greatly advance the industry, which already employs some thousands of the best workers of Norway.

On this trip to Europe I have found every country through which I have passed wide awake to its hydroelectric possibilities. The coal shortage during the war stimulated the study of replacing coal with electricity wherever possible, either by establishing electric works at the mines or by harnessing the waterfalls. I have already written of the great scheme for making the River Rhone run the railways and factories of France, and told how Belgium expects to electrify some of her trunk lines. "White coal" projects are being considered even in Holland and Denmark, countries which have no coal and are so flat they can have no waterfalls of great value. Here in Scandinavia, where the whole peninsula is flecked white with falling water, it is one of the live questions of the hour.

In her available water-powers Norway leads Europe. Taking population or area into account, she leads the world. According to reliable estimates, she has enough falling water to generate twelve million horse-power. This is distributed over less than one hundred and twenty-five thousand square miles occupied by a little more than two million people. That means an average of nearly one hundred horse-power to every square mile and more than five horse-power to every person in the kingdom. Compare these figures with our own. The United States has around thirty million available horse-power, or more than any other country on the globe. Yet this is only about ten horse-power to the square mile and less than half of one horse-power to a person.

Twelve million horse-power! These are figures for the "white coal" of this land of granite and pine where the black coal is so poor that it runs out in peat. Twelve million horse-power! Some engineers estimate that it takes ten tons of black coal turned into steam to produce one horse-power throughout every day for a year, so that this white coal must be multiplied by ten to appreciate its value as compared with that of the black coal of the world. On this basis it is annually worth just one hundred and twenty million tons of soft coal, or eight per cent. of all the coal product of the whole world to-day. We produce more coal than any other country, turning out annually something like six hundred million tons, or five times as much in power as Norway's possible product in her waterfall value. England produces only half as much as we do and the other lands of the world produce less. This white coal of Norway lies in waterfalls all over the country, and the rainfall and the reservoirs, in the shape of lakes and basins which can be filled by inexpensive dams, insure a steady supply of electricity the whole year around. In many other countries the hydro-electric power can be used only six or eight months, and for the rest of the year the streams are so low that steam must be used. This is true at the Zambesi Falls, the Niagara of South Africa. At times, it is said, they could produce what would be thirty-five million horse-power if the Zambesi kept up, but the flow dwindles almost to nothing when the river is low.

As to the horse-power already developed, Norway

has more than sixteen hundred thousand. This, although only about one fourth our development, far exceeds that of any country of Europe. Many of these waterfalls are right over the ocean. They compare with some we have in southeastern Alaska. The water plunges from the high cliffs directly down into the deep fiords, so that the largest steamers can dock near the power stations. The fiords are free from ice throughout the year and the opportunities for large factories are many. Some of the falls on their course from the hills to the sea have a drop of from sixteen hundred feet to more than a mile and the many large lakes enable their discharges to be easily regulated.

The falls are scattered throughout the country so that long transmission lines will not be needed to bring the electricity right into the homes of the people. Of the sixteen hundred thousand horse-power already developed, one fourth is devoted to supplying electricity for lighting, for street-car systems, and for household and farm use while the remainder is consumed by large industries. There are more than two thousand hydro-electric stations in all and few buildings in town or country are without electric light and a great many homes have electric stoves and heating apparatus.

The greatest future development will be, perhaps, in the electro-chemical and electro-metallurgical industries. Norway is now taking nitrogen from the air, and by means of her waterfalls, is turning it into artificial fertilizers that will compete with the nitrates of Chile. Nitrates of lime and cyanide are also produced in large quantities. There is one firm which uses a quarter of a million horse-power for such purposes. They are making a great deal of calcium carb de, and the electro-chemical products have



Twelve million horsepower have slept in the falls of Norway for thousands of years. Harnessing their power has hardly begun, yet it has already created new industries that are helping to keep her young men at home.



From goat's milk the people make a chocolate coloured cheese to be eaten with their "flat-bread," a great paper-thin oatcake made in summer and stored for the rest of the year. reached an export value of more than one hundred million dollars.

Among the largest of the resources of Norway are those contained in the sea. One of these is fish. These sons of the Vikings are expert fishermen, and before the war they were shipping almost two and a half million pounds of dried fish to America. The Norwegian dried cod, or split fish, goes everywhere. As far back as 1812 Norway exported three million pounds of dried cod, and she now sells to other countries more than thirty times that amount. The government considers the business so important that it sends men to lecture to the fishermen and tell them how to split the cod and dry them best for the market.

Another big fish export is the herring and just now the whale fishing is paying well. These Norwegians go all over the world hunting whales. Recently their best grounds have been in the Antarctic Ocean, where as many as ten thousand whales have been caught in one year. The ships use the harpoon grenade which was invented by a Norwegian. This is a bomb with a time fuse so set that it explodes inside the whale. The harpoon is discharged from a gun mounted on the prow of the ship. The bomb either kills the whale outright, or so wounds it that it can be easily taken.

A large part of the profit is now coming from the whale oil which, by a new invention, is hardened into a fat that takes the place of butter and margarine. Scientific tests have proved that this fish butter can be absorbed into one's system quite as easily as other edible fats. It is due to this hardened whale butter that Norway was spared the fat famine common to most of the countries of Europe during the war.

CHAPTER XXXVIII

AN ISLAND CITY OF THE NORTH

ORE than a thousand miles north of Boston, about four thousand miles east of New York, and one hundred and fifty miles nearer the North Pole than Sitka, Alaska, lies a city of islands. It is founded on granite ground smooth by the glaciers when all northern Europe was covered with ice, and the rocks upon which it is built are divided by mighty It has sixty miles of islands between it and one of rivers. the greatest salt seas of the world, and behind it is a freshwater lake whose islands by actual count number sixteen hundred and thirty. The islands in front extend on and on to the Baltic and run north and south and eastward to Finland. The picturesque scenery surrounding this city, created by God and improved by man, has its counterpart nowhere else in the world.

This island city has been called "The Venice of the North." But the name Venice is much overworked. It has been tacked on to Amsterdam, to Bangkok, Siam, to Soochow, China, and to every other municipality that has a dozen or more little waterways in it. The city of which I write has no river narrower than the Grand Canal at Venice and the streams that roll around it and through it are so broad and so deep that steamers plough their course to its heart. The name of this city is Stockholm, the capital of Sweden.

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Venice stands on a marsh. Amsterdam rests upon piles which as they have sunk have made its houses lean backward and forward as though they were drunk. Bangkok. built on the windings of the Menam, has houses which float, and the same is true also of Petrograd which, owing to the negligence of the Soviet government, is fast sinking back into the morass out of which it rose at the command of Peter the Great. There is nothing unstable about the foundation of Stockholm. Its granite base dates back thousands of years to the days when the great ice sheet melted and left these rocks bare. Therefore the buildings are massive. Those near the water are so heavy they could not keep their heads above it in any of the half-floating cities I have mentioned. The palace of the King is a huge structure of granite covering more than three acres and surrounding a square court. It was built on an island sixteen years before we declared our independence of England.

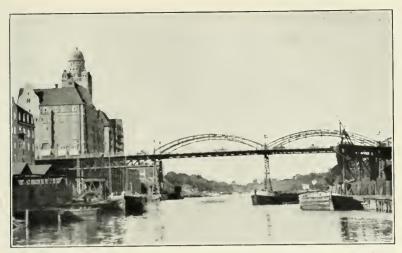
Sweden is older than any other state in Europe and has been a kingdom for about twelve hundred years. The government to-day is a constitutional monarchy with a Riksdag or congress of two chambers. The first has one hundred and fifty members, who are elected by certain town and county councils for terms of eight years, and the second has two hundred and thirty members, chosen in general elections every four years. Women have the right to vote and there are some in the Riksdag.

On another island, a pistol-shot away, are the houses of Parliament, which cost several million dollars. A few more islands beyond is one which has the new city hall with a high tower surmounted by a Greek temple of copper ending in a great ball of gold hanging like a full moon in the sky. Above this golden ball, at the end of a golden staff, are the three gold crowns that form the coat of arms of the nation.

The city hall is a massive ten-million-dollar structure of red brick with a roof of bright copper here and there turned green by the weather. The copper was laid on in plates, each of which represents the patriotic spirit of the citizens. During the World War, when taxes went up and the price of copper rose to the skies, the city council decided that the red metal roof must be abandoned on account of the cost. Thereupon the Stockholmers began to subscribe. Individual after individual put his hand in his pocket and brought out six dollars to buy one of these copper shingles, as we might call the plates which cover the building. Nobody was allowed to give more than one plate, but thousands contributed, and thus the building was roofed. The name of each donor is engraved on the plate he paid for.

It was in the motor-launch of the United States Minister, with the American flag flying at the stern, that I made my way through this city of islands. Suppose you sit down beside me and we shall make part of the journey over again. The launch is what is called an outside archipelago boat. This means that it is big enough and strong enough to travel the seas, and that in it one could, if he would, venture across the Baltic to Finland. The launch is about forty feet long and ten or more feet in width, with a gasoline engine not far from the centre. It uses its sixty-cent gasoline without a carburettor, and it is run by a Swedish engineer.

We start at the Grand Hotel Royal, an immense building facing the quay, and go upstream past the palace. We pass a dozen little steamers in from the Baltic, and glide



Because of its great waterways and islands Stockholm is sometimes called the "City Within Bridges" and the "Venice of the North." Besides being the capital and chief port of Sweden, it is the centre for art, learning, and recreation.



In Ulriksdal, the fashionable suburb of Stockholm, are châteaus of the royal family. While both king and government are really democratic, the Swedish court is rather more formal than those of Denmark and Norway.



Mother and baby wear the costume of Leksand, in Dalecarlia, where the people have their own dialect and the old customs and costumes persist. Until a girl is married she wears a red ribbon bound in the hair.

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under the granite arches of the bridge to the island of Staden. We just graze the boat of a fisherman who is using a windlass to cast a net ten feet in diameter into the water. Scores of men like him may be seen fishing here at any hour of the day. On the right we can see the Royal Opera House where last night we heard Battistini, the successor of Caruso, in "Rigoletto," and beyond it the King's Garden, the chief winter promenade of the capital. Still farther on are the foreign offices, banks, and other large structures, while in the rear along narrow streets is the business section with its many stores filled with fine goods.

As we move onward, we go by island after island, each rising from its smooth rock of granite. On some there are factories, on others warehouses and great lumber yards. On one we see the city prison and on another the military academy, or West Point, of Sweden, which here faces the water as does our great school on the Hudson. There are private schools on the same island with an athletic ground near the water where twoscore blue-eyed, light-haired children are playing. We stop and photograph the girls in their "ring-around-the-rosy" and snap the boys running back and forth in association football. The children look and act the same as our school children at home, only they are much more polite. Every boy raises his cap when we leave, and as we chug away from the wharf they give us a hearty class yell of "Rah! Rah!! Rah!!!"

The Swedes are a cultured people. The University of Upsala was founded before Columbus discovered our hemisphere and has two thousand five hundred students to-day. There are all sorts of schools and academies, and a common school education is compulsory. The percentage of illiteracy is far lower than in the United States and one may travel for days and not find a man or a child who cannot read and write.

The women are well educated and some have made their mark in literature. Selma Lagerlöf is one of the leading women writers of to-day. One of her stories has been translated into twelve languages, and her fairy tale "The Wonderful Adventures of Nils", which tells how a Swedish boy turned to a pigmy and took a ride over Sweden on the back of a wild goose, ranks with the stories of Grimm and Hans Christian Andersen. It is now used in the reading and geography classes in the primary schools. Miss Lagerlöf has been awarded the Nobel Prize for literature, and is the only woman among the eighteen immortals elected to the Swedish Academy.

Besides viewing the city from the waterways, I have spent much of my time on the streets. Among the things that I like here are the telephones of Stockholm. Many of them stand alone on the street corners or in the parks, looking like sentry boxes walled with glass. Each has slots for small coins and in each is a printed card giving the rates for Stockholm and all Sweden.

There are telephones in the restaurants, where some of the tables have telephone extensions. Suppose you are sitting there and want to send a message home or to ask a question of someone in another part of the country. All you do is to crook your finger, the waiter brings a phone to your table, and you call up whom you please.

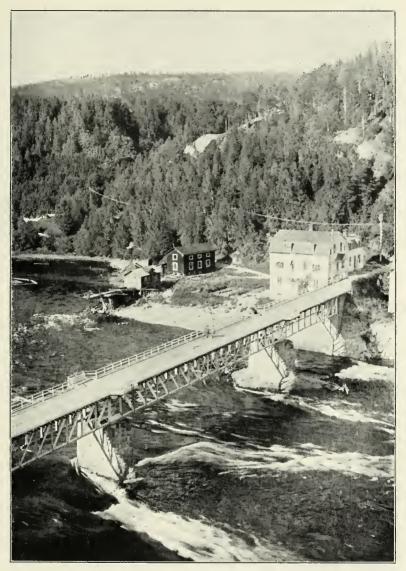
The "hello girls" here are government employees, for the government runs the telephones. They are very polite, and you don't have to ring more than once. They pronounce the word "hello" as though it were spelt "haloo," with the accent on the last syllable, and they never tell you the line is busy when it is not.

Another thing I like here in Stockholm is the food. These Swedes are among the best livers of modern humanity. They eat early and late and take snacks between times. One curious feature of their gastronomy is known as the *smoergasbord*, a sort of an appetizer eaten before the regular luncheon and dinner. This is sometimes served at the dinner table and sometimes at a separate table in another room or in the dining room itself. Imagine a long board covered with scores of dishes filled with all sorts of relishes, salads and salt meats, fish and cheese. The guests are supposed to step up and help themselves to any or all of the dishes set out, the idea being to work up an appetite for the real meal to come. I dined the other day at the Opera House restaurant, and paid a small extra charge for the *smoergasbord*. Besides hams, pickles, and dried fish there were dried reindeer meat from northern Sweden, caviar from Russia, half-a-dozen salads, bread and butter, and four kinds of drinks.

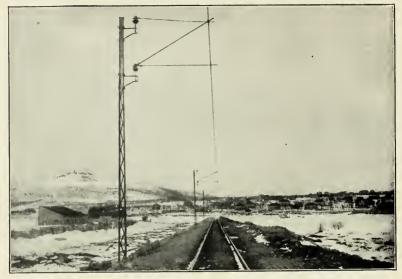
The Swedes are great eaters, indeed, but they are now trying to decrease their drinking. They have worked out a new method of regulating the sale of intoxicating liquors which they think is much better than our form of prohibition. The country has had different kinds of temperance legislation in the past; and recently on a straight referendum for or against prohibition fifty-one per cent. of the votes cast were wet and forty-nine per cent. dry. The result of that vote was to continue the system of strict regulation which many conservative Swedes consider preferable to ours. This is to sell no drinks except to those who have what are known as *mot-books*. These are given out by local liquor societies authorized by law to decide just who may have the right to buy liquor and how much he may buy. The most any one can have is four litres, or less than a gallon, per month, and he has to be beyond suspicion to get that.

The mot-book, which is about the size of a savings-bank pass book, is issued only upon application and investiga-The applicant must write down full information tion. concerning his birth, antecedents, and residence, and record the amount of his assessed income and the rent he pays. If he is behind in his taxes, he will not get a book. and if he has been arrested for drunkenness, his chances are slim. If his application is granted, he fills out and signs a card which is filed in the store where he buys his liquors. Each time a sale is made, a detachable slip, upon which the owner signs his name, is left as a receipt for the liquor delivered and his signature must be verified with the card in the store bearing his name. His book shows the record of just how much he has bought and there is no chance for him to run over the quota allotted to him. Only one of these mot-books is given out to the head of a family, husband or wife, and none to any one under twenty-one years of age. The law also provides regulations for the restaurants and cafés selling liquors.

I am told that drunkenness has greatly decreased since the inauguration of the *mot-book* system and that the amount of alcohol sold illicitly has dwindled more than one half. I have before me a card giving a diagram of the decline in street drunkenness, in the number of hospital alcoholic cases, and in the cases of chronic alcoholism in the city of Stockholm over an eight-year period. The street drunkenness declined sixty-seven per cent., the hospital



Sweden has one thousand acres of woods to every hundred of her population. Four of her big industries, lumbering, pulp and paper making, and the manufacture of matches depend on her great forests. Her many , rivers carry the logs downstream to the mills.



The railway the Swedes have built across the Scandinavian Peninsula from Lulea to the ice-free port of Narvik is the farthest north of any on earth. Half of its three hundred miles have already been electrified.



In the days of the Hanseatic League, when Visby was so rich that it was said the swine ate from silver troughs and the women spun with gold distaffs, this was the town house of its lordly burgomaster.

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cases an equal amount, and chronic alcoholism was reduced by eighty per cent. The first figures were taken from the books of the police and the last two from hospital records.

A curious condition was produced here by the almost absolute prohibition caused by the blockade in those war years when almost no liquor could be brought in and legally sold. This, the authorities claim, had much the same effect of increasing drunkenness as our own "wets" maintain that prohibition has had in the United States. As soon as the people here found they could not buy all the liquor they wanted at reasonable prices, illegal stills were set going and the private manufacturer and bootlegger flooded the market so that drunkenness increased by leaps and bounds. It kept going up until liquor was supplied by the *mot-book* system and then drunkenness began to decline. Now that the people can get liquor legally the bootleggers have vanished.

Dr. Ivan Bratt, who is the originator of this *mot-book* system and at the head of the movement for the regulation of liquor in Sweden, tells me that because of the illegal selling always arising out of total prohibition he believes strictly controlled legalized trade in liquors is best. He says there are many factors that prevent prohibition from being entirely prohibitive, and that no law can be enforced unless there is a general sentiment in its favour. Otherwise, he says, it will have the opposite effect from what was intended. He does not believe prohibition as it now exists in the United States can be a permanent success.

CHAPTER XXXIX

INDUSTRIAL SWEDEN

HESE Swedes have business ability. They know how to make money and save it, although, like us Americans, they are always trying to get something for nothing and oftentimes fail. They are good farmers and have been manufacturers and traders since long before the days of the Hanseatic League. About half of the population are farmers, and the other half are engaged in manufacturing and in buying and selling.

Sweden is one of the big countries of Europe. It is not quite equal to France or Germany, and it is small in comparison with Russia, but it is about three hundred miles wide and almost as long as the distance from Cleveland to New Orleans. It is about half as large again as Great Britain and Ireland and if you could cut it into patches and lay it on the United States, it would cover Pennsylvania, Ohio, Virginia, and New York. It has about as many people as Belgium and more than twice as many as Switzerland.

The latitude of Sweden corresponds generally with that of Alaska. Our "Ice-box of the North" dips farther south but Sweden reaches also into the lands of the Midnight Sun and there is one town, Lulea, from which the railroad starts on its way to Narvik in Norway, which has a summer day twenty-three hours long. And still Sweden supports just about six million people, who live better than most of the inhabitants of Europe. They have comfortable homes. As in Norway the houses of the cities are much like those of the United States, and those of the country are frame cottages which compare favourably with the homes on our farms. The people are famous for their health and longevity and the population is increasing almost as fast as that of any country of Europe. According to statistics, the Scandinavians live longer on the average than any other people of the world. They are a big people and look like giants compared with the French and Belgians and the sawed-off inhabitants of the Balkans and some parts of Poland. They have the fairest hair, the bluest eyes, the longest skulls, and the best lungs of any race on the face of the earth.

In going through the country I have been surprised at the small extent of farm land in Sweden in comparison with the number of farms. There are altogether four hundred and twenty-eight thousand agricultural holdings. and of these one fourth are under five acres and more than two hundred thousand range from five to fifty acres in size. As far as I can see, the soil is rich. It is black and it raises big crops of clover and oats. Wheat, rye, and potatoes are grown. There is plenty of hay, but there is so much rain that the hay is often put on racks to dry and then stored away in barns. Every haycock has a stick in it to give it air, and in some places the hay is dried on wire fences like clothes on a line. Everything looks thrifty. There are many red wooden houses with white shutters and trimmings, and along the railroad are fences of stones, boards, and rails.

One thing that has had a great effect on farm and

country life is the revival of home industries. Throughout the Middle Ages the cottages of Sweden hummed with all sorts of handicraft—spinning, weaving, basket- and lacemaking, and metal working. But modern conditions tended to discourage these cottage industries until Arthur Hazelius devoted himself to the revival of what he feared were becoming lost arts. He gave all his money to the cause and went about asking others to give with so much earnestness and such good results that he was called the "prince of beggars." There was set up at Stockholm the Northern Museum, in which are reproduced the household life, furniture, dress, customs, and arts of practically every part of Sweden.

In the park of Skansen on the heights overlooking Stockholm is a kind of annex to the museum. Here farmhouses transplanted from the various provinces have been fitted up with the typical products of home handicraft, and are occupied by people living and working just as they would in their own homes. In a special camp there are even Lapps, settled here with their reindeer and dogs and making knives of horn and shoes of deer skin. Skansen, the first open-air museum of the sort in Europe, is the model for like ethnographical collections in other countries.

As a result of Hazelius's efforts, interest in the old home industries has revived and they are now taught in the schools. One course of instruction gives sixty-eight exercises in carpentry to boys from ten to fourteen, and weaving, working in iron, and all kinds of embroidery and needlework are taught. In some villages men, women, and children now go to church every Sunday in garments woven and dyed at home, and one of the Swedish princesses favours peasant costumes for her ladies in her summer home. Tens of thousands of kroner are earned by the country people every year, by the sale of baskets, lacework, and carvings made in their homes, and there are more workmen engaged in the industries of the rural districts than in the shops of cities and towns.

As to the big industries, the country has a number of centres such as Gothenburg and Eskilstuna, where manufacturing has been carried on for generations. Eskilstuna is the Sheffield of Sweden. It is famous for the knives, razors, and locks which it has been turning out for a hundred and fifty years. One of our presidents had seven razors sent him by a friend from the steel factories at Eskilstuna. Each was marked with his name and a day of the week and he was supposed to use a different one every morning. I don't know whether he ever made a mistake and shaved with Thursday's razor on a Monday.

I have taken the trip over to Gothenburg, Sweden's chief seaport. It is also the terminus of the Gotha Canal, which goes right through Sweden, crossing Lakes Vener and Vetter, the two largest lakes in the country. Gothenburg has as many people as Atlanta and it grows like one of our big towns of the West. It is a manufacturing centre, making iron, steel, and machinery as well as sugar and beer. It has cotton factories, and also shipbuilding works. The town is perhaps the most enterprising in Sweden, and in many respects surpasses Stockholm.

Sweden has glass factories and porcelain factories famous all over the world. There is a famous factory at Jonkoping which started making matches about the time we were fighting the Mexican War and is still working. It has now one machine that produces forty thousand boxes of matches an hour. That town is at the head of the match-making industry of the world.

This country makes Diesel engines and ball-bearings, and it is going into electro-chemicals, increasing its output of the latter product by millions of kroner a year. It makes powder, dynamite, and munitions and all sorts of woodwork as well as wood pulp and paper. It is one of the great timber countries of the world and ships logs and boards to all parts of northern Europe.

Many pages might be devoted to telling what Sweden has done in her manufactures of fine iron and steel. She has some of the purest ore in the world and that still available is said to be more than eleven hundred million tons. which should yield about three quarters of a billion tons of metallic iron. Some of her ore grades more than eighty per cent. pure and she has great beds of new deposits in the north which are far above the ore values of the best of our iron about Lake Superior. The Swedes have been making iron since long before the days of the Crusaders and in the eighteenth century they were supplying four fifths of all of that metal used by mankind. At that time the ore came from central Sweden and ran from fifty to sixty per cent. pure. The smelting was done with charcoal. The veins were from fifteen to thirty-six feet in thickness and as a rule about seven hundred feet long. Iron is still being mined in the same region and it will be long before the ore is exhausted. To-day Sweden makes ninety-two per cent. of all the highest-grade iron of Europe.

The most important Swedish ore of the future, however, will come from the new mines under the North Pole.

Away up above the Arctic Circle in Lapland there are beds of iron like those we have about Lake Superior, where the ore is dug out with giant steam shovels. There is one place where it lies on the top of a mountain. The ore field is more than a hundred yards wide and three miles in length. The percentage of iron in this ore is even higher than that of central Sweden. About two years ago more than thirty million tons had already been taken out of some of these mines, and the total deposits are said to equal more than a billion tons.

The railway the Swedes have built to bring out this iron is the farthest north of any on earth. It runs from the port of Lulea, at the head of the Gulf of Bothnia, a long arm of the Baltic, across the Scandinavian Peninsula to Narvik in Norway where, owing to the influence of the ocean currents, the harbour is open all the year, although it is farther north than Arctic Alaska. This road is almost three hundred miles long and is run entirely by electricity. It is the second longest electric road in the world, being surpassed only by the electrified stretch of the Chicago, Milwaukee, and St. Paul in the United States.

The power comes from the Porjus Falls, which serve the iron mines also, and they furnish enough power to run the whole road with plenty to spare. The Porjus plant is one of the giant hydro-electric stations of the world. It has an eighty-thousand volt transmission line and can develop fifty thousand horse-power for the greater part of the year. The construction of the dam and power station, which was accomplished in the space of a few months, was one of the great feats of hydro-electric engineering. The long darkness of the winter days was dissipated by a perpetual glare of electric light over the dam and the mushroom town of red frame houses. The intense cold and the ice were fought by running electrically heated rods through the backwater of the dam and by heating shelters for the army of workmen employed. There are other waterfalls near by which will yield one hundred and eighty thousand horse-power, and the Lulea River alone, it is said, can develop more than three hundred thousand horse-power in turbines.

Around Kiruna are some of the largest and richest iron deposits of the world. The town lies at the foot of an iron mountain and the ore veins run down under a lake which thus may be said to have an iron bottom. The length of the ore vein is about three miles, and the deposits are more than three quarters of a million tons.

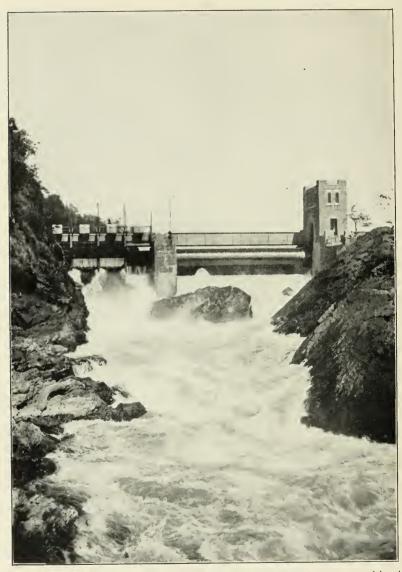
Thirty years ago Kiruna had not a single house. Now it is a town of ten thousand people, and has moving-picture shows, the farthest-north trolley cars in the world, and a Salvation Army headquarters. Most of the people were brought in from the south, as the Lapps who live in this region cling to their nomadic life in the open.

The Laplanders are scattered all the way from Russia to Norway. Their total number is probably less than ten thousand. They are Mongols but shorter than the Tartars of northern China. The women are less than five feet in height. The Lapps have yellowish brown skin but their eyes do not slant.

Some of these people have permanent habitations but their dwellings are usually huts of mud or turf or of birch trunks set close together and covered with earth. Some of the sod huts have glass windows, and in those close to the towns or railroad one sometimes finds a sewing machine or an alarm clock.



Most of the Lapps of Sweden cling to their nomadic life, shunning the centres of the iron industry in their midst, and living mostly on milk and dried reindeer meat. The government is teaching them to handle their reindeer better and to raise larger herds.



The six falls at Trollhättan, the largest in Sweden, have a combined drop of 108 feet, and are already producing 80,000 horsepower, which is only one third of their total capacity.

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In their wanderings the Lapps usually make a wide swing around Kiruna and other settlements, putting up their tents of skins and living largely on milk and dried reindeer meat. The Swedish government makes little effort to get them to change their ways, but is teaching them how to handle the reindeer and to raise larger herds, somewhat as the United States Bureau of Education is doing with the Eskimos in Alaska. Most of the Lapps in Norway have been induced to settle down as small farmers, but of the six thousand of these little people living in Sweden more than half are still nomads.

Sweden has practically no black coal worth while, but its "white coal" is equal in energy-producing value to sixty-seven million five hundred thousand tons per annum. This alone is equal to more than one tenth the annual product of our coal mines. Sweden has available waterpower approximating seven million horse-power, of which more than one million horse-power belongs to the state. The country is undergoing an extensive hydro-electric development, and plans have been made for its gradual electrification. The southern part, which includes the best farmlands, is covered with transmission lines which give power and light to most of the people. The development is now being extended throughout central Sweden, and later it will go on to the settlements of the north.

There are few countries so blessed in water-power. Sweden consists of a plain sloping from the Norwegian plateau down to the Baltic, with streams running across it like the ribs of a leaf. These rivers roll over rocks and can be made to yield water-power every few miles. There are tens of thousands of lakes and ponds which serve as basins and the streams can be easily dammed.

On my trip to Gothenburg I visited at Tröllhattan the falls of the Gota Alv River considered by many the finest in Europe. This river forms the outlet of Lake Vener, and the falls are far superior to those of the Rhine at Schaffhausen. There are six different cataracts and numerous rapids distributed over a distance almost a mile long. The fall is only one hundred and six feet in all, but the water foams and boils as it dashes over the rocks into the cauldrons below. Here there are great pits of boiling waves speckled with foam. A little farther on the torrents dash down mighty cliffs with a deafening roar, and then flow on into the green river below. The force is so great that it gives a water-power equal to two hundred thousand horses all pulling at once, and the biggest power plant of south Sweden is located here. A number of factories have been built to take advantage of this power, and Trollhattan is fast becoming an industrial centre.

Just after the World War many people of Sweden found themselves in severe financial straits. Shortly after its outbreak the country was swept by tidal waves of gold from Russia and Germany. A neutral, she sold to the Allies as well as to the Kaiser, supplying raw materials in the way of iron and timber, as well as steel bars and other stuff for munitions. To Germany she sent wrought iron, cast iron in pigs, and cellulose which was made into clothing.

The result was that all the industrial stocks rose in value, and speculation was rife. New companies were organized by the hundreds and the market was flooded with millions of new shares. During the four years of the war the bank clearings increased five hundred per cent., the deposits were doubled, and the savings accounts grew by hundreds of mil-

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lions of dollars. The people were shut off from investing abroad and bought local stocks. They kept on buying, thinking that the higher the stocks rose the more money they were making. Then the war neared its close. Sweden was cut off from the rest of the world and its business dwindled to nothing. Everything fell, the companies stopped paying dividends, and those who owned shares were forced to sell to be able to live. There was no demand for the stocks outside of Sweden. They dropped lower and lower and thousands were ruined.

The money of Sweden is on a gold basis, and for this reason the lands of inflated paper currencies could not trade with her. And so, good hard money here caused ruin, while just across the Baltic cheap paper was bringing a like condition to Germany. Truly the economic situation of Europe "passeth all understanding."

But a country like this cannot be permanently injured by any temporary money depression. Swedish business is based upon gold, and the national debt is only three hundred and fifty dollars per family. The country has assets of three or four billions of dollars, and obligations of only about one tenth that amount. The government has a surplus of more than five hundred million gold dollars. The farm products of Sweden bring in half a billion dollars per annum, and its ten thousand factories annually make goods approximating three quarters of a billion dollars in value. The forest industries of Sweden alone produce something like one hundred million dollars every year and from its waterfalls it is now getting about a million and a quarter horse-power with upward of five million more horse-power yet to be developed. The government itself has properties which are valued at more

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than eight hundred million dollars, and before the World War these were annually yielding a revenue of about half a billion dollars. The income from them was then equal to two and one half times the interest on the national debt. At that time the national wealth was increasing, and inasmuch as it lies largely in natural resources and national thrift it is bound to continue to grow.

THE END

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